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Resource Governance and Sustainable Solid Mineral Development in Nigeria: The Challenge of Federal-State Coordination

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Abstract

Nigeria's shift toward solid mineral development represents a strategic response to declining oil dependency and the urgent need for economic diversification. Notwithstanding its vast mineral endowments, the sector continues to underperform due to persistent governance inefficiencies and weak federal-state coordination structures. This study examines the relationship between resource governance, intergovernmental coordination, and sustainable solid mineral development in Nigeria, with emphasis on how institutional arrangements shape sectoral outcomes. The study is anchored on Fiscal Federalism Theory, which explains the distribution of authority, responsibilities, and resources between federal and subnational governments in a federal system. A mixed-methods research design was adopted, combining quantitative survey data from 305 respondents with qualitative insights from key stakeholders in mining governance. The findings reveal that stakeholders perceive mining governance as highly centralized, with weak collaboration between federal and state institutions. This lack of coordination is associated with inefficiencies in regulatory enforcement, limited community benefits, and the proliferation of illegal mining activities. Empirical results further indicate that poor intergovernmental coordination significantly undermines transparency, accountability, and sustainable development outcomes in the solid minerals sector. Existing literature has largely focused on the economic potential of mineral resources and environmental consequences of mining, while paying limited attention to the institutional and federal governance dynamics shaping sectoral performance. This study addresses this gap by providing empirical evidence on how federal-state coordination failures affect sustainable mineral governance in Nigeria. The study concludes that without stronger institutional collaboration and clearer delineation of responsibilities between federal and state actors, Nigeria's solid minerals sector risks replicating the governance inefficiencies observed in the petroleum industry. Strengthening intergovernmental coordination is therefore essential for achieving sustainable, inclusive, and economically viable solid mineral development.

Keywords: Resource governance, federal-state coordination, solid minerals, fiscal federalism, Nigeria, sustainable development.

Introduction

Nigeria's pursuit of economic diversification has become increasingly urgent in response to the vulnerabilities associated with prolonged dependence on crude oil revenues. Fluctuating global oil prices, declining production outputs, oil theft, and the accelerating global transition towards renewable energy have significantly reduced the reliability of petroleum as the primary driver of national economic growth. Consequently, the solid minerals sector has emerged as a strategic alternative within the country's broader development agenda. The sector possesses substantial potential to generate revenue, attract foreign direct investment, create employment opportunities, stimulate industrialization, and contribute to sustainable economic development. Recent government initiatives aimed at revitalizing the sector reflect growing recognition of its capacity to serve as a viable pillar of a post-oil economy.

Despite these prospects, the realization of the sector's developmental potential continues to be constrained by persistent governance challenges. Illegal mining remains widespread across many mineral-producing regions, resulting in considerable

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revenue losses, environmental degradation, insecurity, and weakened regulatory oversight. The expansion of informal and unregulated mining activities has not only undermined government efforts to maximize mineral revenues but has also created opportunities for criminal networks and illicit mineral trade to flourish. These developments raise concerns regarding the effectiveness of existing institutional mechanisms responsible for regulating and monitoring mining activities across the country.

Equally significant are the growing tensions surrounding the governance architecture of mineral resource management in Nigeria. Under the existing constitutional framework, ownership and control of mineral resources remain vested exclusively in the Federal Government. While this arrangement is intended to ensure centralized regulation and national coordination, it has increasingly generated concerns among state governments and host communities regarding their limited participation in decision-making processes and benefit-sharing arrangements. In several mineral-producing areas, stakeholders have expressed dissatisfaction with perceived exclusions from resource governance structures, inadequate developmental benefits, and weak mechanisms for addressing local grievances. These concerns have intensified debates on resource control, fiscal federalism, and the appropriate distribution of authority among federal, state, and local actors.

The governance challenges currently confronting the solid minerals sector bear striking similarities to those that historically characterized Nigeria's petroleum industry. Experiences from the Niger Delta demonstrate how weak institutional coordination, limited community participation, inequitable resource governance arrangements, and inadequate regulatory enforcement can generate social conflict, environmental degradation, and developmental stagnation despite the abundance of natural resources. As Nigeria increasingly relies on solid minerals to advance its economic diversification agenda, there is a growing risk that similar governance failures could emerge within the sector if existing institutional deficiencies remain unaddressed.

Although a growing body of literature has examined the economic potential of Nigeria's solid minerals sector, the environmental consequences of mining activities, and the prevalence of artisanal and illegal mining, relatively limited scholarly attention has been devoted to the governance mechanisms that shape sustainable mineral development outcomes. Existing studies have predominantly focused on resource availability, investment opportunities, policy reforms, and environmental concerns, often treating governance as a peripheral issue rather than a central determinant of sectoral performance. Furthermore, few studies have systematically examined how governance effectiveness, institutional coordination, regulatory enforcement, community participation, and federal-state relations collectively influence sustainable solid mineral development within the context of Nigeria's economic diversification strategy.

This gap in the literature is particularly important because the success or failure of mineral-led economic diversification depends not only on the availability of mineral resources but also on the effectiveness of the governance structures that regulate their extraction, distribution, and utilization. Without a clear understanding of these governance dynamics, policy interventions may fail to address the underlying institutional challenges that undermine sustainable sectoral development.

It is against this backdrop that this study investigates the role of governance mechanisms in promoting sustainable solid mineral development in Nigeria. Specifically, the study examines how governance effectiveness, institutional coordination, regulatory enforcement, community participation, and federal-state collaboration influence the achievement of sustainable developmental outcomes within the sector. The aim of this study is to examine the influence of governance mechanisms on sustainable solid mineral development in Nigeria within the context of the country's economic diversification agenda. By addressing these issues, the study seeks to contribute to both scholarly debates and policy discussions on resource governance, economic diversification, and sustainable development in Nigeria.

Literature review

The Concept of Intergovernmental Relations (IGR)

Intergovernmental Relations (IGR) is a fundamental concept in federal and decentralized governance, referring to the interactions, collaborations, and power dynamics between different

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levels of government within a political system. It encompasses the formal and informal mechanisms through which national, regional, and local governments coordinate policies, share responsibilities, and resolve disputes (Wright, 1988). IGR plays a crucial role in governance, ensuring that different tiers of government function cohesively to achieve national development goals while maintaining subnational autonomy (Agranoff & McGuire, 2001).

In federal and decentralized systems, where authority is constitutionally distributed across multiple levels of government, IGR serves as the operational framework for cooperation and negotiation between central, state, and local governments (Anderson, 2010). The effectiveness of intergovernmental relations determines how well government institutions respond to socio-economic challenges, implement policies, and manage public resources. However, it can also be a source of friction when there are overlapping responsibilities, jurisdictional conflicts, or power struggles between different governmental entities (Elazar, 1987).

Scholars have provided various definitions of intergovernmental relations, emphasizing its role in governance coordination. Wright (1988) defines IGR as "the network of formal and informal interactions between different levels of government within a political system." This definition highlights the structured and unstructured mechanisms through which governmental institutions engage with one another.

Similarly, Agranoff and Radin (2015) describe IGR as "the administrative, financial, legal, and political processes that guide interactions between national, subnational, and local governments." This perspective underscores the multifaceted nature of IGR, which involves legislation, fiscal management, and bureaucratic negotiations.

From a broader governance perspective, Elazar (1987) views intergovernmental relations as "the framework through which governments operate within federal or decentralized systems, balancing autonomy and cooperation to ensure efficient service delivery." This definition captures the essence of IGR as both a mechanism for collaboration and a potential arena for conflict resolution. In the African context, Suberu (2001) notes that "intergovernmental relations are critical in managing ethnically diverse federations where multiple levels of government must negotiate power, resources, and policy implementation." Nigeria, for example, operates a complex system of intergovernmental relations influenced by ethnic, political, and economic factors.

Types of Intergovernmental Relations

Intergovernmental relations manifest in various forms depending on the structure of government and the level of collaboration required. The major types include:

1. Vertical Intergovernmental Relations – This occurs between different levels of government, such as the national and state governments or state and local governments. It involves policy coordination, fiscal transfers, and regulatory oversight (Wright, 1988).

2. Horizontal Intergovernmental Relations – This refers to interactions between governments at the same level, such as coordination among states or among local governments. It often involves regional development initiatives and interstate agreements (Wright, 1988).

3. Collaborative Intergovernmental Relations – In this model, multiple levels of government work together on shared policy goals, such as infrastructure development, healthcare, and environmental protection (Wright, 19881).

4. Competitive Intergovernmental Relations – This occurs when different levels of government compete for resources, authority, or political influence, often leading to conflicts over jurisdictional control (Anderson, 2010).

Mineral Resource Governance and Sustainability

The governance of mineral resources is a crucial aspect of modern economic and environmental policy, particularly as global demand for raw materials continues to rise. It encompasses the legal, institutional, and policy frameworks that regulate the exploration, extraction, and utilization of mineral resources to ensure economic growth, environmental protection, and social responsibility (Hilson, 2002). Mineral resource governance is especially critical in resource-rich countries, where the effective management of these resources determines whether they serve as a tool for national development or

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contribute to the well-documented "resource curse" (Auty, 1993).

Governance in the mining sector refers to the policies, laws, institutions, and processes that guide how mineral resources are allocated, extracted, and utilized. It involves multiple stakeholders, including governments, private mining corporations, local communities, and international regulatory bodies (Lindahl, 2014). Effective governance structures are necessary to ensure transparency, accountability, and environmental stewardship in the mining industry.

Humphreys et al. (2007) define mineral resource governance as "the set of formal and informal rules, policies, and practices that determine how mineral resources are accessed, exploited, and shared among various stakeholders." This definition highlights the role of both legal frameworks and informal socio-political dynamics in shaping mining governance. Similarly, Campbell (2009) describes mineral resource governance as "a system of institutions and policies that regulate the development and utilization of mineral wealth while addressing social and environmental concerns."

In many countries, mineral resource governance is embedded in broader natural resource management policies, which seek to integrate economic growth with ecological sustainability. This is particularly important in nations where mining serves as a primary economic driver, such as Australia, Canada, and South Africa, where strong regulatory frameworks ensure that resource extraction does not come at the expense of environmental integrity or community welfare (Bridge, 2008).

Empirical review

A substantial body of literature has examined the relationship between governance quality and extractive sector performance. The dominant argument within this literature is that governance effectiveness determines whether natural resource wealth translates into sustainable development or contributes to economic inefficiency, corruption, and conflict. Kaufmann et al. (2011) demonstrated that countries characterized by strong governance institutions tend to achieve better developmental outcomes from natural resource exploitation than countries with weak regulatory frameworks. Their analysis identified government effectiveness, regulatory quality, accountability, and rule of law as critical determinants of successful resource management.

Similarly, Acemoglu and Robinson (2012) argued that inclusive and accountable institutions are essential for transforming resource wealth into sustainable development outcomes. According to the authors, resource-rich countries frequently experience developmental challenges when institutional weaknesses permit elite capture, corruption, and ineffective resource management. Focusing on African extractive industries, Campbell (2012) found that institutional fragmentation, weak enforcement mechanisms, and inadequate stakeholder participation significantly undermine mining sector governance. The study observed that regulatory agencies often face capacity limitations that restrict their ability to monitor compliance with environmental, fiscal, and operational standards.

In Nigeria, Hilson and McQuilken (2014) investigated governance challenges associated with artisanal and small-scale mining activities. Their findings indicated that weak regulatory enforcement and inadequate institutional coordination contributed significantly to the persistence of informal mining operations. The study further revealed that ineffective governance structures facilitated illegal mineral extraction and reduced government capacity to capture revenue from mining activities. Likewise, Ovadia (2016) examined governance dynamics within Nigeria's extractive industries and concluded that institutional weaknesses remain a major obstacle to achieving sustainable resource-based development. The study emphasized that governance reforms aimed at enhancing transparency, accountability, and stakeholder participation are critical for improving sectoral performance.

While these studies establish an important relationship between governance quality and extractive sector outcomes, many focus broadly on extractive industries without specifically addressing the governance dimensions of Nigeria's emerging solid minerals sector. Furthermore, relatively few studies examine governance as a multidimensional construct encompassing regulatory enforcement, institutional coordination, community participation, and intergovernmental collaboration.

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Federalism, Resource Control and Sustainable Resource Governance

Questions surrounding resource ownership, revenue allocation, and intergovernmental relations have occupied a central position within debates on resource governance in federal political systems. Existing empirical studies suggest that tensions between national and subnational governments often shape the effectiveness of resource management institutions. Ross (2015) observed that disputes over resource control frequently emerge in federations where natural resource ownership is centralized while extraction activities occur within specific subnational jurisdictions. According to the study, governance challenges become more pronounced when host communities perceive that they bear disproportionate environmental and social costs without receiving corresponding developmental benefits.

Within Nigeria, Suberu (2001) examined the political economy of resource control and fiscal federalism. The study found that centralized resource ownership arrangements generated recurring tensions between the Federal Government and resource-producing regions. Although the analysis focused primarily on petroleum resources, the identified governance dynamics remain relevant to emerging debates surrounding solid mineral development. Similarly, Ikelegbe (2005) argued that resource governance conflicts often arise when local communities perceive exclusion from decision-making processes and benefit-sharing arrangements. The study demonstrated that inadequate stakeholder participation can undermine the legitimacy of governance institutions and increase the likelihood of resource-related conflicts.

More recently, Ayoade and Agiobenebo (2022) examined resource governance challenges within Nigeria's mining sector. Their findings indicated that overlapping institutional mandates, weak coordination among governmental actors, and limited community involvement continue to constrain effective mineral resource management. The study recommended greater collaboration among federal institutions, state governments, and host communities to enhance governance effectiveness. Likewise, Ejiogu and Okeke (2023) investigated governance challenges in selected mining communities across Nigeria. Their findings revealed widespread concerns regarding inadequate consultation, limited developmental benefits, and weak community participation in resource governance processes. The study concluded that sustainable mineral development requires governance frameworks capable of balancing national interests with local developmental priorities.

Although existing studies have contributed significantly to understanding resource governance and federalism-related challenges, relatively few have examined how federal-state collaboration, governance effectiveness, and stakeholder participation collectively influence sustainable solid mineral development. This omission becomes particularly significant given Nigeria's recent efforts to reposition the solid minerals sector as a cornerstone of economic diversification.

Empirical Gap

The reviewed literature demonstrates substantial scholarly interest in economic diversification, extractive sector governance, and resource federalism. Existing studies have examined the economic potential of Nigeria's solid minerals sector (Ajakaiye et al., 2018; Lawal & Akinrinola, 2020), the importance of governance quality in extractive industries (Kaufmann et al., 2011; Ovadia, 2016), and the implications of resource control within federal systems (Suberu, 2001; Ikelegbe, 2005). However, several important gaps remain.

First, much of the existing literature examines solid mineral development primarily from economic and investment perspectives, with limited emphasis on governance mechanisms as determinants of sustainable development outcomes. Second, studies addressing governance within extractive industries often focus broadly on natural resource management without specifically examining the governance architecture of Nigeria's solid minerals sector. Third, existing studies frequently investigate governance variables in isolation, paying insufficient attention to the interconnected roles of governance effectiveness, institutional coordination, regulatory enforcement, community participation, and federal-state collaboration. Fourth, despite increasing policy attention on solid minerals as a vehicle for economic diversification, limited empirical evidence exists regarding how governance mechanisms influence the sustainability of this diversification strategy.

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Accordingly, this study seeks to fill these gaps by examining the influence of governance mechanisms on sustainable solid mineral development in Nigeria. Unlike previous studies, it adopts an integrated approach that combines governance effectiveness, institutional coordination, regulatory enforcement, community participation, and federal-state collaboration within a single analytical framework. Through this approach, the study contributes to ongoing debates on resource governance, fiscal federalism, and economic diversification in Nigeria.

Theoretical Review and framework

Resource Curse Theory (Rentier State Theory Variant)

While Fiscal Federalism Theory focuses on how resources should be managed among different levels of government, Resource Curse Theory (also known as the Rentier State Theory) explores why many resource-rich countries, despite their vast natural wealth, suffer from economic stagnation, corruption, and weak governance. This makes it a highly relevant framework for analyzing why Nigeria's abundant mineral resources have not translated into national prosperity. The Resource Curse Theory was first introduced by Richard Auty (1993), who observed that many resource-rich countries paradoxically experienced lower economic growth compared to resource-poor nations. Terry Lynn Karl (1997) later expanded on this idea through the Rentier State Model, explaining how countries that rely heavily on resource revenues tend to develop weak institutions, authoritarian governance, and corruption-driven economies. Michael Ross (2001) further argued that resource wealth reduces government accountability, as governments with access to large mineral revenues often have little incentive to tax citizens, leading to weaker democratic institutions.

The Resource Curse Theory suggests that mineral wealth can become a curse rather than a blessing due to overdependence on Resource Revenues as Countries that rely heavily on mining revenues often fail to develop other sectors, such as agriculture and manufacturing, leading to economic instability. Having abundant natural resources does not automatically translate to prosperity; rather, it often leads to economic mismanagement and social unrest.

Limitations and Criticisms

Not all resource-rich countries suffer from the resource curse. Nations such as Norway, Canada, and Botswana have successfully managed their resource wealth through strong institutions, transparency, and economic diversification. Critics argue that the problem is not resource wealth itself but poor governance and policy choices. Furthermore, the theory does not fully account for global economic structures, such as international trade, market manipulation, and geopolitical interests, which also influence how resources are managed.

Methodology

This study adopts a mixed-methods research design, integrating both qualitative and quantitative approaches to comprehensively analyze the governance of mineral resources under Nigeria's federal system. The mixed-methods approach is appropriate because it allows for an in-depth exploration of the institutional, economic, and socio-political dynamics affecting mining governance while also providing measurable insights into stakeholder perceptions and policy outcomes. The qualitative component relies on Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and non-participant observations to gain insights from government officials, miners, regulatory agencies, security personnel, and community stakeholders. This approach is essential for capturing policy conflicts, governance challenges, and community perspectives on mining activities. The quantitative component employes structured questionnaires to collect data from artisanal miners, mining cooperatives, host communities, and regulatory bodies. This aspect will allow for the measurement of key governance indicators such as policy effectiveness, regulatory compliance, and intergovernmental cooperation. The use of descriptive and inferential statistics will facilitate the analysis of trends and correlations in the data. By combining qualitative narratives with statistical analysis, the study ensures a holistic and policy-relevant understanding of the subject matter. The approach also aligns with Creswell's (2014)

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recommendation for using mixed methods in complex governance research, where institutional structures, political interests, and local realities intersect

Result and data

SECTION A: EFFECTIVENESS OF FEDERALISM IN ARTISANAL MINING GOVERNANCE

Table 4.1: Frequency and Percentage Distribution of Responses (n = 305)

S/N	Item	SA f(%)	A f(%)	N f(%)	D f(%)	SD f(%)	Mean	SD
1	The division of power among federal, state, and local governments has improved artisanal mining governance.	28 (9.2%)	62 (20.3%)	54 (17.7%)	96 (31.5%)	65 (21.3%)	2.63	1.23
2	Overlapping responsibilities between federal, state, and local governments create confusion in regulating artisanal mining.	126 (41.3%)	118 (38.7%)	23 (7.5%)	22 (7.2%)	16 (5.2%)	4.04	1.06
3	Federal control over mining licenses limits the ability of state and local governments to regulate artisanal mining effectively.	112 (36.7%)	101 (33.1%)	40 (13.1%)	32 (10.5%)	20 (6.6%)	3.83	1.14
4	Conflicts frequently arise between federal and state agencies over mining regulations.	135 (44.3%)	109 (35.7%)	25 (8.2%)	21 (6.9%)	15 (4.9%)	4.08	1.04
5	These conflicts negatively impact miners' operations and community relations.	120 (39.3%)	113 (37.0%)	28 (9.2%)	25 (8.2%)	19 (6.2%)	3.95	1.10

Source: Researchers Survey, 2025

INTERPRETATION OF RESULTS (SECTION A)

This section evaluates perceptions of federalism's effectiveness in governing artisanal mining across North-Central Nigeria. The findings reveal broad dissatisfaction with how federalism currently structures mining governance, with respondents emphasizing regulatory overlaps, inter-agency conflicts, and limited state autonomy. Overall, Section A demonstrates that respondents overwhelmingly perceive Nigeria's federal structure as a constraint rather than an enabler of effective artisanal mining governance. The data points to systemic coordination failures, legal ambiguities, and political contestations at the federal–state interface.

SECTION B: FEDERALISM AND INSTITUTIONAL EFFECTIVENESS

Table 4.2: Frequency and Percentage Distribution of Responses (n = 305)

S/N	Item	SA f(%)	A f(%)	N f(%)	D f(%)	SD f(%)	Mean	SD
6	Federal government agencies are effective in regulating artisanal mining.	34 (11.1%)	61 (20.0%)	48 (15.7%)	92 (30.2%)	70 (23.0%)	2.66	1.28
7	State and local governments effectively monitor and regulate artisanal mining.	28 (9.2%)	57 (18.7%)	52 (17.0%)	102 (33.4%)	66 (21.6%)	2.61	1.24

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8	The lack of coordination between federal, state, and local governments weakens artisanal mining governance.	124 (40.7%)	118 (38.7%)	30 (9.8%)	18 (5.9%)	15 (4.9%)	4.04	1.01
9	There is active communication and cooperation among different levels of government in artisanal mining governance.	22 (7.2%)	44 (14.4%)	61 (20.0%)	102 (33.4%)	76 (24.9%)	2.44	1.20
10	Local communities and miners have a significant role in policy decisions affecting artisanal mining governance.	30 (9.8%)	52 (17.0%)	64 (21.0%)	96 (31.5%)	63 (20.7%)	2.63	1.23

Source: Researchers Survey, 2025

INTERPRETATION OF RESULTS (SECTION B)

Section B assesses how effectively federal, state, and local institutions function within Nigeria's federal structure in regulating artisanal mining. The overall pattern shows weak institutional performance, poor coordination, and low community participation. Section B demonstrates that respondents view Nigeria's institutional arrangement in artisanal mining governance as weak, poorly coordinated, and insufficiently participatory. This weakness is structurally linked to Nigeria's federal system, where the Constitution centralizes mining while states and local governments lack fiscal and administrative capacity to supervise operations effectively. The repeated themes of poor communication and low local inclusion further emphasize governance gaps that allow illegal mining, unsafe practices, and disputes between operators and host communities to flourish.

Conclusion

This study examined resource governance and sustainable solid mineral development in Nigeria, with particular emphasis on the challenge of federal-state coordination. The central concern of the study was that although Nigeria's solid minerals sector is increasingly positioned as a viable pathway for economic diversification, its performance remains constrained by fragmented governance structures and weak intergovernmental collaboration. The empirical findings indicate that mining governance in Nigeria is highly centralized, with limited effective coordination between federal and state institutions. This governance arrangement has resulted in regulatory inefficiencies, weak enforcement capacity, and overlapping institutional responsibilities. Stakeholders further perceive that inadequate federal-state coordination contributes to the persistence of illegal mining activities, weak transparency in resource management, and limited developmental benefits for host communities. The study also established that poor intergovernmental coordination undermines the effectiveness of resource governance by reducing accountability, weakening institutional synergy, and limiting the responsiveness of regulatory frameworks to local mining realities. In theoretical terms, these findings reinforce Fiscal Federalism Theory, which emphasizes that optimal governance outcomes in resource-dependent federations depend on a functional balance between central authority and subnational participation. Overall, the study concludes that the sustainability of Nigeria's solid mineral development agenda is significantly constrained by coordination failures between federal and state actors. Without institutional realignment, the sector risks reproducing governance inefficiencies similar to those experienced in the petroleum industry.

Recommendations

Based on the findings, the following recommendations are advanced:

1. **Strengthening Federal-State Coordination Frameworks**
   A formalized intergovernmental coordination mechanism should be established to enhance collaboration between federal and state mining institutions. This should include joint planning, shared monitoring systems, and harmonized regulatory procedures.
2. **Clarification of Institutional Mandates**
   There is a need to clearly define the roles

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and responsibilities of federal and state governments in solid mineral governance to reduce duplication, institutional conflict, and administrative inefficiencies.

3. **Decentralized Operational Enforcement**
   While policy direction may remain centralized, operational enforcement responsibilities such as monitoring, inspection, and compliance tracking should be partially devolved to state authorities to improve responsiveness and effectiveness.
4. **Integrated Data and Information Management System**
   The establishment of a unified national mineral resource database accessible to both federal and state agencies will improve transparency, reduce information asymmetry, and enhance decision-making processes.
5. **Strengthening Anti-Illegal Mining Institutions**
   Coordinated enforcement task forces involving federal, state, and security agencies should be institutionalized to address illegal mining activities more effectively.
6. **Enhanced Community Inclusion Mechanisms**
   Federal-state coordination frameworks should incorporate structured community participation to ensure that host communities are adequately represented in decision-making processes affecting mineral resource governance.

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