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RESEARCH ARTICLE

How Institutional Arrangements Shape the Governance of Agricultural Advisory Services in Benin's Agroecological Transition

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ABSTRACT

Despite institutional reforms since the 1990s favoring pluralistic agricultural advisory systems, advisory services across sub-Saharan Africa continue to face persistent governance challenges. These constraints become particularly critical for the agroecological transition, which requires adaptive, participatory governance grounded in collective learning. Drawing on historical institutionalism and governance theory, this study examines how institutional arrangements shape the governance of agricultural advisory services in Benin's agroecological transition, through a content analysis of a documentary corpus (2017-2023) and ten semi-structured interviews. The findings show that, despite an apparently decentralized and pluralistic architecture, the system remains marked by strategic centralization of decision-making power and persistent overlap of territorial mandates, limiting Territorial Agencies for Agricultural Development real autonomy and sustaining a top-down steering logic poorly suited to agroecological transition. The study concludes that this transition cannot be achieved without transforming governance itself, through an effective redistribution of decision-making power towards territorial structures and farmer professional organizations.

INTRODUCTION

Despite the major institutional reforms in the agricultural sector during the 1990s, in the context of economic liberalization, which fostered the emergence of pluralistic agricultural advisory mechanisms involving public and private sector stakeholders, civil society organizations and public-private partnership agreements (Davis et al., 2025; Olayemi et al., 2021), agricultural advisory structures across sub-Saharan Africa continue to face persistent governance challenges. These challenges include overlapping institutional mandates, fragmented coordination mechanisms, a reliance on donor funding and limited participation by farmers' organizations in decision-making processes (Nwafor et al., 2021). A review of the literature across several sub-Saharan African countries illustrates this overlap of mandates (Birner et al., 2009), a phenomenon documented in detail in Uganda (Rwamigisa et al., 2018).

In Benin, the state's gradual withdrawal was later followed by renewed engagement through national agencies and funds, but this hasn't resolved the coordination tensions between public, private, and civil-society actors (Moumouni, 2019). Research into the pluralization of agricultural advisory ecosystems in East Africa shows that this pluralization may remain largely 'superficial': the increase in the number of service providers is not necessarily accompanied by a genuine redistribution of decision-making power, with a managerial approach taking precedence over a deliberative approach that genuinely involves producers (Wandeto, 2026).

Such governance constraints become particularly critical in the context of the agroecological transition, which requires inclusive, long-term learning processes, collective experimentation and adaptive forms of governance. Recent research emphasizes that the agroecological transition relies

on deliberate and collaborative processes of knowledge co-production, bringing together scientific, experiential and local knowledge (HLPE, 2019; Muñoz-Araya et al., 2024), and that reflexive governance is key to institutionalizing participatory approaches without diluting their transformative potential, particularly when participation becomes a mere façade as agroecology is integrated into mainstream public policy (Subejo et al., 2025; Averbuch et al., 2026). These frameworks encourage us to view governance mechanisms as tools for supporting agricultural innovation systems that must combine direction, diversity, distribution and democracy (Kok and Klerkx, 2023).

The role of agricultural advisory services in supporting agroecological practices has been extensively documented, notably through a critical re-examination calling for the humanization of agricultural advice by moving beyond strictly technical and top-down approaches (Cook et al., 2021). In the Global South in particular, despite a stated commitment to strengthening agricultural advisory services so that they better meet current requirements (Bonilla et al., 2024), their effectiveness remains limited in relation to farmers' needs (Magesa et al., 2025), with most of these countries developing instruments focused on supporting farmers in conventional farming rather than policies that promote the transition to agroecology (Kiptot and Franzel, 2019).

However, the establishment of a governance framework for agricultural advisory services that supports the agroecological transition depends largely on the existence of an institutional framework, understood as a coherent set of rules, standards, incentive mechanisms and organizational arrangements (Anderson et al., 2020). Beyond this framework, such governance requires a network-based understanding of the interactions between actors, which the article explores further through the theory of governance networks (Tega et al., 2025).

Similarly, various studies have examined the influence of institutional frameworks on agricultural development and the agroecological transition, most of which focus on the capacity of policies to remove the technological, cognitive, financial, social and institutional constraints faced by stakeholders (Arshad et al., 2026), or on the institutional barriers limiting the large-scale adoption of agroecological practices (Ebile et al., 2026; Triboulet et al., 2019). As for the question of how formal rules actually shape the governance of agricultural advisory services (division of roles, coordination, participation and steering) this remains in the background (Gava et al., 2025). Most studies focus either on policy design at the macro level or on service delivery outcomes at the farm level, leaving a limited understanding of the governance processes linking institutional structures and advisory practices (Averbuch et al., 2026).

Nevertheless, persistent concerns remain regarding coordination between stakeholders, the allocation of responsibilities, institutional capacities and accountability mechanisms (Halley des Fontaines et al., 2021), governance issues that are found, in similar forms, in several pluralist advisory schemes in sub-Saharan Africa (Wandeto, 2026). These constraints, which limit equitable access to advisory services and the dissemination of sustainable agricultural models (Subejo et al., 2025), raise important questions about the extent to which current institutional arrangements effectively support governance processes capable of facilitating the agroecological transition.

These findings thus raise key questions: why have successive institutional reforms failed to enable the emergence of governance suited to the agroecological transition? Which institutional mechanisms are responsible for this situation, and how do institutional legacies limit the expected transformations? This study therefore examines how formal rules, organizational structures, institutional capacities and coordination mechanisms shape the governance of agricultural advisory services in Benin, and discusses the implications of these governance dynamics for the agroecological transition.

Theoretical framework

Agricultural advisory services play a strategic role in agroecological transition processes by facilitating the dissemination and exchange of knowledge, building trust between stakeholders, and

fostering the forms of cooperation necessary for the collective management of resources and innovations (Gava et al., 2025). However, agroecology is not limited to the introduction of new agricultural practices; it involves a more profound re-examination of conventional modes of production, relationships between stakeholders, and the mechanisms governing the production and circulation of knowledge (Oteros-Rozas et al., 2019). This transformation calls for a rethinking of the coordination, participation and decision-making processes that underpin agricultural systems. The literature emphasizes that the success of the agroecological transition depends less on the availability of technical solutions than on the ability of stakeholders to develop forms of governance that foster collective learning, the coordination of actions and adaptation to local contexts (Meynard et al., 2017; Barrios et al., 2020), and to balance sometimes conflicting objectives in contexts characterized by a wide diversity of stakeholders and interests (Newig et al., 2010).

Indeed, governance defined as the set of mechanisms for guiding collective action, coordinating stakeholders and organizing decision-making processes within a given system (Pierre and Peters, 2020), is the result of interactions between a variety of actors who participate, directly or indirectly, in defining, interpreting and implementing collective policies. It requires mechanisms capable of guiding decision-making, mediating between sometimes conflicting objectives and fostering collective action in contexts characterized by a wide diversity of actors and interests (Pretty et al., 2018; Herrero et al., 2020). Consequently, an analysis of governance raises questions about the stakeholders involved, the modes of participation, the distribution of decision-making power, the coordination mechanisms, the interests served, and the forms of accountability that structure collective action (Anderson et al., 2019). As a result, the governance of agricultural advisory services emerges as a central issue in the agroecological transition. From this perspective, historical institutionalism and governance theory are particularly relevant theoretical frameworks for explaining the governance of agricultural advisory services, especially the influence of the institutional framework on the governance of these services.

The use of historical institutionalism is justified on two grounds. On the one hand, Benin's agricultural advisory system is the result of successive reforms, each of which builds on previous configurations; consequently, understanding its current governance requires reconstructing its historical trajectory. Secondly, the capacity of institutional arrangements to support a transformation as profound as the agroecological transition depends on their ability to deviate from previous trajectories, through either radical or incremental changes (Capoccia and Kelemen, 2007; Streeck and Thelen, 2005), even in the absence of clearly identifiable critical junctures (Manica et al., 2025).

Unlike approaches that view institutions as mere static constraints notably rational-choice institutionalism, which focuses on the strategic equilibrium between actors (Hall and Taylor, 1996; Kushnir, 2023), and sociological institutionalism, which focuses on the normative and cognitive conformity of actors (DiMaggio and Powell, 1983; Pirrolas and Correia, 2025), historical institutionalism seeks to explain how institutional configurations form, stabilize and transform over time as a result of past choices, power relations and specific historical contexts (Schmidt, 2010; Pierson and Skocpol, 2002). Historical institutionalism, whilst drawing on North's (1990) definition of institutions as constraints devised by actors to structure their interactions and reduce uncertainty in collective action, emphasizes their situated and cumulative nature: institutions are not simply given rules, but the product of historical trajectories (Pierson, 2000).

From a functional perspective, institutions guide the behavior of actors by defining the rights, obligations and rules that govern their relationships; however, they do not operate in isolation, but are organized into coherent configurations that structure sequences of actions and interactions between actors within a given system (Olivier and Schlager, 2022). The institutional framework (or architecture) can thus be understood as a configuration of rules that structures collective action and governs relations between stakeholders.

However, historical institutionalism is not sufficient to explain how institutions produce effects on collective action on a day-to-day basis. Governance theory is therefore drawn upon to understand the mechanism by which an institutional framework, shaped by a historical trajectory, translates into practices of coordination, participation and decision-making (Pierre and Peters, 2020; Anderson et al., 2019). These two theoretical frameworks are applied sequentially: historical institutionalism explains the formation of the institutional framework, whilst governance theory enables an analysis of how this framework structures the governance of the agricultural council. This framework leads to the distinction of three levels of variables: the institutional framework (explanatory variable), understood as a configuration of formal rules, organizational architecture, institutional capacities and coordination mechanisms; governance (intermediate variable), operationalized through coordination, participation, accountability, resource allocation and decision-making autonomy; and the capacity of the agricultural advisory system to support the agroecological transition (outcome variable). The article posits that the institutional framework shapes the governance of agricultural advisory services, which in turn determines the system's capacity to support this transition. While the empirical presentation below is organized around the institutional framework's four components, each component is systematically discussed in terms of its effect on the governance dimensions identified above (coordination, participation, accountability, resource allocation, decision-making autonomy), consistent with the explanatory model set out here.

RESEARCH METHODOLOGY

The study draws on secondary data from Beninese institutional documents covering 2017-2023 (Table 1), a period of major agricultural-sector reforms and growing visibility of the agroecological transition in public policy. The corpus includes legislative frameworks, national strategic documents, and reference documents likely to influence the organization of agricultural advisory services; a reading grid identified orientations relating to agroecology's integration, the institutional organization of advisory services, and actors' roles.

Table 1: Overview of the institutional documentary corpus used

Elements of the institutional framework	Content
Law No. 2022-14 on Agricultural Orientation, Food and Nutritional Security	Defines the institutional architecture of the agricultural sector
CNOS Decree (2021-376), MAEP Decree (2021-563), ATDA Decree (2017-101), FNDA Decree (2017-304)	Establish the strategic steering bodies, ministerial mandates, territorial structures, and the sector's financing mechanism
PSDSA (2017-2025), SNCA (2018-2025), SNADEB (2023-2030), PNIASAN (2017-2025)	Strategic frameworks defining sector governance, the role of advisory services, the integration of agroecology, and the territorial (PDA) approach
PNA (2022-2030), SNIF (2023-2027), e-Agriculture Strategy (2020-2024)	Integrate climate, financial, and digital issues into agricultural policy

To enrich the documentary analysis, 10 semi-structured interviews were conducted with officials from the Directorate of Agricultural Advisory Services, Innovation, and Entrepreneurial Training (DCAIFE- Direction du Conseil Agricole, des Innovations et de la Formation Entrepreneuriale), ATDA staff, Departmental Directorates of Agriculture, Livestock, and Fisheries (DDAEP-Direction Départementale, de l'Agriculture, de l'Elevage et de la Pêche), and advisory service-providing organizations (Table 2). This number, though modest, is justified by the interviewees' status as elite interviews holding expert information (Natow, 2020), and by a sample size reasoned from

information power rather than saturation alone (Malterud et al., 2016), consistent with Hennink and Kaiser (2022), who find saturation often reached between 9 and 17 interviews in a homogeneous population. No new code category emerged from the 7th interview onward.

Table 2: Distribution of interviewees

Actor category	Level	Function/role	Number
DCAIFE	Central	Heads of Agricultural Advisory and Operational Training	2
DPAF	Central	Environment and Gender Unit	1
ATDA	Territorial	Director and heads of capacity building, monitoring & evaluation, and programs	4
DDAEP	Territorial	Head of monitoring & evaluation (Borgou)	1
Service providers	Operational	NGO coordinators (Grader NGO, Sojagnon)	2
Total			**10**

The data were subjected to a four-step content analysis, namely decontextualization, recontextualization, categorization, and compilation (Graneheim et al., 2017; Devi Prasad, 2019), identifying underlying governance logics, power relations, and institutional mechanisms. Triangulation of sources was central: every major finding rest on at least two independent sources (official texts and converging interviews).

RESULTS

Institutional Trajectories and the Evolution of Benin's Agricultural Advisory System

Agricultural advisory services in Benin are part of an institutional trajectory characterized by gradual changes in policy frameworks, organizational structures and modes of governance. Following independence, agricultural policies were primarily geared towards agricultural modernization, the promotion of cash crops and the establishment of a centralized agricultural advisory system modelled on Western examples. This approach was reinforced under the Marxist-Leninist regime with the adoption of the Integrated Rural Development paradigm and the widespread establishment of Regional Action Centres for Rural Development (CARDER- Centre d'Action Régional pour le Développement Durable in 1975, thereby consolidating the state's monopoly on agricultural advisory services. However, the limitations of this model gradually led to liberalization reforms from the 1990s onwards, marked by the Letter of Declaration on Rural Development Policy (LDPDR- Lettre de Déclaration de Politique de Développement Rural) in 1991 and the emergence of organizations promoting sustainable and organic agriculture, such as REDAD and OBEPAB.

From the 2000s onwards, reforms shifted towards a more explicit transformation of agricultural advisory services, with the drafting of the White Paper on Agricultural Advisory Services, the adoption of the first generation of the National Agricultural Advisory Strategy (SNCA 1- Stratégie Nationale de Conseil Agricole 2008) and the recognition of pluralism amongst advisory stakeholders. This trend has, however, coexisted with the continued application of the Green Revolution's productivity-focused framework, as set out in the Strategic Plan for the Revitalization of the Agricultural Sector (PSRSA-Plan Stratégique de Relance du Secteur Agricole, 2011). Since 2016, the abolition of the CARDERs and their replacement by the Territorial Agricultural Development Agencies (ATDA- Agences Territoriales de Développement Agricole), combined with the second generation of the SNCA (2018-2025) and the drafting of the National Strategy for the Development of Ecological and Organic Agriculture (SNDAEB- Stratégie Nationale de Développement de l'Agriculture Écologique et Biologique, reflect a commitment to the

regionalization of agricultural development and the gradual integration of the agroecological transition into public policy.

This shift from a centralized state model to a pluralistic system relying on private service providers is directly corroborated by those working on the ground. As the coordinator of an agricultural advisory NGO interviewed pointed out, «in the days of the CARDERs, we spoke of extension officers, and there were between 80 and 120 of them per commune, covering all sectors». Whilst the close relationship between these officers and producers was recognized, he noted that this was accompanied by numerous shortcomings, with some officers engaging in personal activities without their duties being properly monitored or subject to disciplinary action. According to the same respondent, «today, with the ATDAs, we have moved towards a liberalized system where advice is provided by private organizations, including NGOs, and the number of advisers formerly known as agents has fallen significantly to between 5 and 6 agents per municipality, which makes it difficult to achieve the desired results».

This growing reliance on private service providers also entails, according to the same coordinator, a structural limitation linked to the duration of the contracts governing their work: «The current approach is sound, but it has its limitations, notably the lack of continuity in the support provided to producers. NGOs win contracts for one or two years, and when the contract ends, there is no longer any support for the producers. There is a lack of continuity, which creates a never-ending cycle in the support provided to producers». This account offers a concrete illustration, right from the study's historical background, of a tension running through all the findings set out below: between the density and continuity of the past's public regulatory framework and the flexibility, but also the precariousness, of today's pluralist and contract-based system.

This trajectory reveals a recurring mechanism of change through superimposition rather than rupture, in a process where each generation of reforms builds upon previous arrangements without entirely replacing them, with the result that the legacies of the productivist and centralizing model continue to shape current dynamics. This inherited institutional framework is examined below in terms of its four components: formal rules, organizational structures, institutional capacities and coordination mechanisms.

Institutional Arrangements and their Effects on Governance

Formal Rules

The institutional framework of Benin's agricultural council is underpinned, first and foremost, by a set of formal rules that define the mandates assigned to the institutions involved, the division of responsibilities between organizations, and the level of accountability required of stakeholders. These rules are primarily set out in Law No. 2022-14 on agricultural policy, food security and nutrition, and in the resulting sectoral strategy documents. They structure the division of roles across three levels: at national level, the Ministry of Agriculture, Livestock and Fisheries (MAEP-Ministère de l'Agriculture, de l'Elevage et de la Pêche), through the DCAIFE, is responsible for defining strategic directions and ensuring the quality of the national agricultural advisory system; at regional level, the DDAEPs carry out statutory functions of inspection, regulation and phytosanitary monitoring, whilst the ATDAs are tasked with promoting agricultural sectors and agricultural development within the development clusters.

However, these mandates, as set out on paper, do not always translate into fully operational implementation, particularly for the DDAEPs, whose regulatory oversight function has encountered practical difficulties in its implementation. The head of the monitoring and evaluation unit at a DDAEP explains that «when the DDAEPs were first set up in 2017, we had to acquire the necessary knowledge through training courses funded from our own resources. There was no really standardized approach at the outset to how monitoring and evaluation should be carried out, which is why processes varied from one DDAEP to another». The same head also highlights a lack of institutional recognition regarding projects operating within the department: «The projects

operating in the department did not recognize our institutional authority. They felt they had obligations towards the ministry, but did not feel accountable at departmental level». Added to this is a chronic shortage of staff, which limits the organization's ability to exercise effective oversight, as the official explains: «We are also severely understaffed. There are only two or three of us in the entire evaluation department responsible for all the projects in the department, which means we cannot be effective on the ground, as we cannot cover the whole department».

In line with a policy of decentralizing power, the principle of outsourcing entrusts private service providers (NGOs, consultancy firms, professional agricultural organizations) with the operational delivery of advisory services at local level, through contractual arrangements; the State retains the steering role, whilst the ATDAs are responsible for planning, financing and monitoring the interventions. To date, only the cotton sector has managed to self-finance its own advisory services. Furthermore, these rules provide for several mechanisms designed to strengthen producers' direct involvement in the advisory system. These include free and voluntary membership, which is linked to an approach based on on-demand advisory services and spaces for learning, exchange and experimentation: the Participatory Approach at Village Level (APNV-Approche Participative au Niveau Village), the Agricultural Advisory Units and the Farmers' Field Schools. Also, they define explicit accountability mechanisms: the adoption of Results-Based Management links the responsibilities assigned to organizations to performance obligations, with the directors of ATDA and DDAEP being subject to periodic appraisals, whilst private service providers are bound by performance contracts that now include criteria relating to agroecology.

These various rules thus formalize a growing specialization of mandates and an increasingly contractualized accountability framework. They also institutionalize several formal channels for producer participation, which provides a regulatory basis conducive to more inclusive governance. However, this same body of rules establishes a structural hierarchical dependency. Indeed, the performance of service providers and regional bodies is assessed according to criteria defined at central level, which directs accountability primarily towards the upper echelons of the institutional chain rather than towards the local beneficiaries of the advisory services. This top-down orientation is reflected in practice, as explained by the Director of an NGO service provider: «Agricultural advisory services are influenced by the objectives of technical and financial partners, and often the action plan followed by service providers is not that of the farmers they support, but one that meets the needs the donor wishes to address within its implementation timeframe». This account illustrates how performance-based contracting, which is supposed to strengthen accountability, can in practice make the very content of the advice dependent on donors' timetables rather than on locally expressed needs.

Organizational Structures

Beyond the rules that establish them, organizational structures follow a three-tier architecture (MAEP/DCAIFE, DDAEP, ATDA) complemented by multi-stakeholder governance bodies: the National Steering and Monitoring Council (CNOS- Conseil National d'Orientation et de Suivi du secteur agricole, mirrored at departmental and communal level), and, for ecological and organic agriculture, a Steering Committee (COP- Comité de Pilotage) and Technical Monitoring Committee (CTS- Comité Technique de Suivi) bringing together sector ministries, national technical bodies such as Benin National Institute for Agricultural Research (INRAB- Institut National des Recherches Agricoles du Bénin), Benin Food Safety Agency (ABSSA- Agence Béninoise de Sécurité Sanitaire des Aliments), the ATDA, and organic-sector organizations. ATDA boards reproduce a similar representational logic (MAEP, farmer organizations, local governments, civil society).

Board composition has, however, evolved restrictively towards farmer organizations. As the DCAIFE's advisory head explains, «initially, the Professional Agricultural Organizations sat on the ATDA's board of directors, but they were removed to prevent them from being both judge and jury, as they were both beneficiaries of agricultural services and, in some cases, service providers themselves, if they were authorized to offer consultancy services, which created a conflict of

interest in terms of their membership of the decision-making body». This removal illustrates a tension between representation and decision-making independence: excluding the organization most directly representative of farmers favors participation that is representative in form rather than genuinely decision-making.

The proliferation of multi-stakeholder bodies formally broadens representation, consistent with pluralistic orientations proclaimed since the 2007 White Paper, but this participation remains largely representative rather than decision-making in substance. Nor has this architecture eliminated redundancy: DDAEP and ATDA both operate territorially with roles not always clearly divided, while the central state remains the ultimate authority over creating, restructuring, or dismissing sector leadership. As one ATDA official notes «board orientations remain closely aligned with state priorities, and even when their personal convictions differ from the state's choices, the decisions taken still conform to the expectations of the authority that appointed them». Territorial autonomy thus appears more formal than substantive.

Institutional Capacities

Institutional capacities are directly conditioned by financing and steering instruments. The National Agricultural Development Fund (FNDA- Fonds National de Développement Agricole) channels financing towards state-set priorities within a Planning-Programming-Budgeting-Monitoring cycle; while the ATDA formally enjoy management autonomy, their real capacity to launch agroecology-related programs remains constrained by the public financing structure they depend on. This even blurs the separation the *faire-faire* principle, under which the state defines orientations and finances while private and civil-society actors deliver services, is meant to guarantee between state steering and private implementation: the DCAIFE's training officer notes having had to organize joint training for ATDA and private-sector advisors alike "because funding is limited."

As one ATDA capacity-building director explains, *«the state budget is made up of an operating budget (20%) and an investment budget (70 to 80%), and the funding granted to the ATDA is treated as an operating expense»*. The ATDA thus remains financed from the smaller share of the public budget, with most investment resources structurally out of reach, restricting their decision-making autonomy and preventing formal management autonomy from translating into real autonomy, particularly for agroecology-related investments. These findings on rules, structures, and capacities together support the conclusion of persistent strategic centralization and weak territorial autonomy.

Coordination Mechanisms

Coordination rests on complementary mechanisms institutionalized by formal rules: consultation bodies (CNOS, CDéS, CCoS) are complemented, at hub level, by communal units of advisors and technicians, meeting on a regulated schedule (CNOS: twice yearly; communal councils: quarterly; hub actors: monthly). The Engineering and Support Department (B2A- Bureau d'Études et d'Appui) harmonizes interventions, the National Climate Change Management Committee (CNCC- Comité National de Gestion des Changements Climatiques) ensures climate-action coherence, and information-sharing mechanisms such as National Strategy for Artificial Intelligence and Big Data (SNIA- Stratégie Nationale d'Intelligence Artificielle et des Mégadonnées) and Agricultural Geographic Information System), SIGA- Système d'Information Géographique Agricole) complete the architecture.

This formal regularity creates conditions for multi-level coordination that meets, on paper, agroecology's synergy requirements. But the juxtaposition of bodies with closely overlapping mandates (the general CNOS, climate-focused CNCC, operational B2A) without clear hierarchy tends to generate institutional redundancy rather than genuine synergy, the system having been built by accumulating successive arrangements rather than rationalizing a single one. As one NGO

coordinator puts it, poor coordination means *«you find two partners doing the same thing in the same village or commune»*.

Implications for Agroecological Transition

Linking these four components to agroecology's requirements: on formal rules, agroecology shows growing institutionalization: the SNCA2, SNADEB, and PSDSA now reference Climate-Smart Agriculture, advisory providers must integrate these principles, and performance contracts include agroecology criteria, alongside organizational moves such as the MAEP's Environment and Gender Unit. This, however, runs up against the governance effects already identified: ATDA financial dependence restricts autonomous agroecological programming (only cotton self-finances), subordinating the transition's pace to partners' priorities rather than local agronomic needs. Similarly, the mechanisms most compatible with agroecology's co-construction principles (foremost the Participatory Guarantee Systems, involving farmers, consumers, and other stakeholders in defining standards themselves) remain confined to organic agriculture. Finally, redundant coordination bodies do not, alone, guarantee the cross-sectoral articulation agroecology needs.

In the end, Benin's institutional framework has produced a real but partial and centralized institutionalization of agroecology: strategic texts increasingly embed its principles and steering bodies have multiplied, but the underlying governance dynamics (decision-making autonomy constrained by financial dependence, participation still largely representative rather than deliberative, multi-body coordination without clear hierarchy) limit the system's capacity to support a transition that, by nature, demands adaptive, participatory governance grounded in collective learning rather than the mere accumulation of formal arrangements.

DISCUSSION

Path Dependence and the Persistence of Centralized Governance

The CARDER replacement by the ATDA in 2016, did not eliminate the centralized logics of the previous system: appointment power over ATDA directors remains centrally concentrated, the FNDA's budget structure keeps territorial structures financially dependent much as under direct state administration, and accountability mechanisms still direct responsibility upward. This fits historical institutionalism, whereby surface-level organizational change can coexist with the reproduction of prior power logics when reform proceeds by layering rather than rupture (Streeck and Thelen, 2005): the CARDER disappeared, but the vertical-control logic they embodied was redeployed into new institutional vehicles rather than transformed (Pierson, 2000). This suggests that an institutional framework's capacity to generate governance favorable to a socio-ecological transition depends less on the technical instruments used than on inherited, largely irreversible institutional logics. It illustrates the difficulty of transforming centralized governance outside of critical junctures, absent which incremental change tends to reproduce pre-existing power relations in new forms (Mahoney, 2001; Capoccia and Kelemen, 2007).

Institutional Overlap and Governance Inefficiencies

Beyond persistent centralization, mandates overlap between structures with closely related functions, notably the DDAEP (core state functions) and ATDA (value-chain promotion), and among coordination bodies (CNOS, CNCC, B2A) without clear hierarchy. Peters (2015) shows that growing specialization of public programs almost mechanically produces redundancies and coordination costs once programs must be articulated together, a dilemma Benin illustrates near-paradigmatically, each reform adding a structure without always clarifying respective mandates. This aligns with Kasunda (2026): overlapping mandates do not mechanically produce synergies, depending on how organizations' articulation is designed, overlap can strengthen coordination or fragment public action, reproducing the same layering pattern already identified for rules and structures. This blurs accountability too: when several structures each claim partial competence

over the same issue (agroecology spans the Environment and Gender Unit, the COP-CTS, the ATDA, and the CNOS), responsibility for a policy's success or failure becomes difficult to attribute.

Why Agroecological Transition Requires a Transformation of Governance

These centralized, overlap-fragmented governance patterns stand in direct tension with agroecology's requirements: collective learning, ongoing experimentation, flexibility, and local autonomy (Meynard et al., 2017; Barrios et al., 2020). Governance network theory holds that complex, cross-cutting problems like agroecology cannot be effectively steered by administrative hierarchy alone, but require network governance in which the state's role shifts from direct control to light-touch coordination among autonomous actors. In practice, though, Benin's multiplied multi-stakeholder bodies (CNOS, CTS, ATDA boards) remain largely hierarchical: representative in composition, but with decision-making power centrally concentrated, funding tied to central priorities, and territorial directors appointed by the Council of Ministers. Eidt et al. (2020), studying Kenyan agricultural innovation platforms, show that such configurations risk producing tokenistic participation, where farmers have formal access to decision platforms while dominant actors set priorities and control resources, exactly as the ATDA official confirms in describing board orientations that "remain closely aligned with state priorities" even amid personal disagreement, a gap that justifies calling Benin's system hierarchical governance disguised as network governance.

This also converges with agricultural innovation systems theory: Kok and Klerkx (2023) assess system maturity against directionality, diversity, distribution, and democracy. Benin's system partially satisfies the first two but falls short on the latter two, its democratization of decision-making remaining embryonic. Finally, in Geels's (2026) multi-level perspective, an agroecological transition requires niche innovations (networks like FAEB or PNOPPA) to destabilize the dominant productivist regime inherited from the Green Revolution, still shaping financing priorities through the PSDSA and PNIASAN, requiring a governance space flexible enough for niche actors to experiment and feed learning back to the regime level (Isgren and Ness, 2017). Benin's continued hierarchical, centralized, overlap-fragmented governance narrows precisely this space, subordinating local initiatives to centrally-defined validation and funding channels.

These four theoretical strands point to the same conclusion: the agroecological transition cannot be achieved in Benin without a transformation of governance itself, a shift from vertical steering to genuinely distributed, network-based governance capable of distributing decision-making power, recognizing the autonomy of territorial structures and farmer organizations, and opening real institutional space for the bottom-up experimentation any socio-technical transition requires.

CONCLUSION

This study examined how the institutional framework shapes the governance of agricultural advisory services in Benin's agroecological transition, combining historical institutionalism and governance theory. Despite an institutional architecture designed to be decentralized and pluralistic, the system remains marked by strategic centralization of decision-making power and overlapping competencies between national and territorial structures, a duality that limits ATDA autonomy and sustains a top-down steering logic incompatible with agroecology's flexibility and co-construction requirements.

Theoretically, the study makes a twofold contribution: it empirically confirms historical institutionalism's prediction that the disappearance of a structure (the CARDER, replaced by the ATDA in 2016) does not eliminate the power logics it embodied, which reconstitute through layering; and it shows that Benin's stated advisory pluralism amounts less to genuine collaborative governance than to hierarchical governance disguised as network governance, with multi-stakeholder bodies proliferating absent real delegation of power. This points to a system structurally ill-equipped for a transition demanding the opposite of what it currently produces: autonomy rather than control, circulation rather than concentration of power.

This diagnosis clarifies the lock-in mechanisms holding back the transition on the ground: despite growing recognition through the SNADEB (2023-2030), the conventional model's continued dominance and dependence on time-limited external funding create a gap between stated ambitions and operational realities, a fragility stemming from institutional centralization and overlap, not simply a shortage of means. Success will ultimately depend on a genuine transfer of power and resources to farmer organizations and local structures, an integrated advisory system where research, training, financing, and market access converge, and existing multi-stakeholder bodies (CNOS, CTS, ATDA boards) holding real decision-making power rather than a purely consultative role.

Three recommendations follow from this study. First, the ATDA's financing mechanisms should be reviewed: a dedicated mechanism or budgetary reallocation giving direct access to a share of the investment envelope would strengthen their real decision-making autonomy. Second, the decision-making power of multi-stakeholder bodies should be strengthened, shifting the CNOS, COP-CTS, and ATDA boards from a consultative role towards genuine co-decision power over territorial orientations would turn representative participation into deliberative participation. Third, participatory mechanisms such as the Participatory Guarantee Systems should be institutionalized beyond the organic sub-sector; extending them to other ATDA-supported value chains would offer a concrete lever for moving the transition beyond strategic texts alone.

This study has certain limitations: the analysis rests on a documentary corpus confined to 2017-2023 and ten interviews with high-level institutional actors, without direct documentation of farmers' own perceptions. Future research could add field surveys of beneficiaries, a systematic comparison with other West African trajectories, or a longitudinal follow-up of the SNADEB's implementation.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORS' CONTRIBUTIONS

AMS and ASCG conceived the idea, designed the study and developed the methodology. AMS collected the data. AMS and ASCG analyzed these data. AMS, ASCG, MMI and NGS contributed to the critical revision of the manuscript. ASCG and AMS edited the final version of the manuscript. All authors read and approved the final manuscript

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