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From Policy Messages to Rural Markets: Institutional Communication and Sustainable Agribusiness in Vietnam and India

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ABSTRACT

Sustainable agribusiness depends not only on the quality of agricultural policies but also on the institutional and communication systems through which those policies are interpreted, disseminated, implemented, and adapted at the grassroots level. This study examines the relationship between policy communication and institutional frameworks for sustainable agribusiness through a comparative analysis of Vietnam and India. Drawing on the Institutional Analysis and Development (IAD) framework and Strategic Communication Theory, the study employs Strategic Policy Discourse Analysis (SPDA) of a defined corpus of 45 primary policy documents issued between 2015 and 2025, comprising 23 Vietnamese and 22 Indian documents. The corpus is organized into three analytical groups: macro-level strategic and legislative frameworks; climate-smart agriculture and bio-economy directives; and dissemination networks, digitalization, and agricultural extension mechanisms. A four-dimensional communication matrix examines Source Authority, Message Framing, Dissemination Channels, and Feedback Mechanisms. The analysis identifies a structural divergence between the two countries. India has developed a comparatively decentralized and digitally enabled communication architecture, including e-NAM, digital agriculture initiatives, farmer-oriented information platforms, and Farmer Producer Organization mechanisms, thereby expanding the potential reach of policy information while remaining exposed to digital exclusion and institutional fragmentation. Vietnam combines formal governmental authority with comparatively cohesive socio-political and agricultural organizations, particularly the Vietnam Farmers' Union and community agricultural extension structures, enabling locally embedded dissemination while creating risks of predominantly one-directional communication. The study argues that policy communication should be understood as implementation infrastructure rather than as a supplementary public-relations function. It proposes an Institutional-Communication Framework (ICF) that integrates policy authority, institutional translation, multi-channel dissemination, agribusiness action, and upward feedback. The framework provides a comparative basis for strengthening policy implementation, rural entrepreneurship, institutional learning, and sustainable agribusiness resilience in emerging Asian economies.

Keywords: Agricultural policy; Agribusiness; Institutional communication; Policy implementation; Sustainable development; Vietnam and India.



1. INTRODUCTION

Agriculture occupies a distinctive position in the economic, social, environmental, and political development of emerging Asian economies. It provides livelihoods, supplies food and industrial inputs, supports rural communities, and increasingly functions as a site for entrepreneurship, technological innovation, environmental management, and value-chain development. Yet contemporary agricultural transformation cannot be understood solely in terms of production technologies or farm-level productivity. Sustainable agribusiness requires institutional arrangements capable of connecting national policy objectives with the decisions and capacities of farmers, producer organizations, entrepreneurs, extension agents, markets, and rural communities.

This challenge is particularly significant as agricultural policies become more complex. Contemporary policy agendas increasingly combine productivity, market access, and income with climate resilience, organic production, circular-economy principles, digitalization, resource efficiency, environmental protection, and inclusive rural development (Food and Agriculture Organization of the United Nations [FAO], 2017, 2022). These objectives require not simply that policies exist, but that their meanings, expectations, opportunities, responsibilities, and implementation procedures reach relevant actors in forms that can be understood and acted upon.

Policy communication therefore represents more than the transmission of official information. It is part of the institutional process through which public policy acquires practical meaning. A national agricultural strategy may establish ambitious sustainability objectives, but those objectives become economically and socially consequential only when institutional actors translate them into accessible messages, programmes, incentives, procedures, market opportunities, technical guidance, and mechanisms through which rural actors can communicate their experiences and concerns back to decision makers. Communication is therefore embedded within implementation rather than positioned outside it.

The institutional dimension is equally important. Institutions shape the rules, incentives, information structures, and collective-action arrangements within which economic actors operate (North, 1990; Ostrom, 2005). Agricultural producers do not encounter policy as abstract legislation. They encounter it through ministries, local governments, extension services, cooperatives, farmer organizations, digital platforms, markets, financial institutions, producer organizations, and other intermediary structures. The architecture connecting these institutions can determine whether a policy

message becomes actionable knowledge or remains a distant administrative directive.

Vietnam and India provide useful comparative cases because both have pursued major agricultural transformation while confronting climate change, rural inequality, market restructuring, technological transition, and the need for sustainable production. Both countries have developed extensive policy frameworks concerning agriculture, climate adaptation, organic production, digitalization, rural development, market reform, and agricultural innovation. Their institutional architectures, however, differ considerably.

India's agricultural policy environment combines national programmes with a highly plural and decentralized institutional system. Digital platforms such as e-NAM, *Kisan Suvidha*, *mKisan*, and wider digital agriculture initiatives seek to expand information access and connect farmers with markets and public services. Farmer Producer Organizations and other collective arrangements provide additional institutional channels through which agricultural actors can engage with markets and public programmes. At the same time, India's scale and institutional diversity create challenges involving uneven digital access, differences in state-level implementation, information asymmetry, and fragmentation.

Vietnam presents a contrasting configuration. National agricultural and sustainability policies are supported by a comparatively cohesive institutional structure involving central government, provincial and local authorities, agricultural ministries and agencies, agricultural extension structures, cooperatives, and the Vietnam Farmers' Union. Such arrangements can facilitate coherent dissemination and institutional coordination. However, institutional cohesion does not automatically guarantee effective two-way communication. Where policy messages primarily move downward through established organizational channels, opportunities for systematic upward feedback may remain comparatively limited.

The central argument of this article is therefore that sustainable agribusiness policy becomes economically and socially meaningful only when institutional systems allow policy messages to travel in both directions: from public authorities to rural actors and from rural actors back to institutions. The argument does not imply that communication alone determines policy outcomes. Rather, communication is treated as one component of the institutional infrastructure that conditions whether policy objectives can be interpreted, adopted, adapted, and sustained.

The study addresses three questions:

1. How do Vietnam and India structure policy communication for sustainable agribusiness through their institutional frameworks?
2. What differences emerge in Source Authority, Message Framing, Dissemination Channels, and Feedback Mechanisms?
3. What institutional-communication architecture can strengthen the translation of sustainability policy into rural economic and agribusiness action?

The study contributes in three ways. First, it places communication within the institutional analysis of agricultural policy rather than treating it as a peripheral dissemination activity. Second, it develops a structured comparative interpretation of two major Asian agricultural economies. Third, it proposes an Institutional-Communication Framework that connects policy authority with institutional translation, dissemination, action, and feedback.

2. BACKGROUND AND LITERATURE CONTEXT

2.1 Sustainable agribusiness as an institutional problem

Agribusiness extends beyond agricultural production to encompass input supply, production, aggregation, processing, logistics, marketing, finance, technology, entrepreneurship, and consumption. This broader perspective makes agricultural sustainability an institutional problem because value creation depends upon coordination among multiple actors and organizations.

Barrett et al. (2001) demonstrated the importance of market participation and commercialization for rural development, while Devaux et al. (2009) emphasized the role of institutional arrangements in linking small producers to markets. Belcher and Schreckenberg (2007) similarly showed that commercialization and sustainability require attention to the institutional conditions within which local economic activities occur.

Sustainable agribusiness consequently involves more than introducing environmentally desirable production techniques. Farmers and rural entrepreneurs must know what is expected, understand available incentives, access appropriate technologies, identify markets, establish credible relationships with buyers, and navigate regulatory requirements. Institutions mediate each of these processes.

Climate-smart agriculture illustrates this complexity. Climate adaptation may require changes in production practices, crop choices, water management, insurance, infrastructure, market organization, and information

use. Similarly, organic and circular agriculture require standards, certification, knowledge, market differentiation, consumer trust, and institutional support. Policy communication connects these components by making policy objectives interpretable and operational.

FAO (2017) emphasizes that long-term transformation of food and agricultural systems involves interacting economic, social, technological, and environmental pressures. More recent attention to automation and digital transformation further demonstrates that technological change can reshape the organization of agrifood systems, while its benefits depend upon institutional capabilities and access (FAO, 2022). An entrepreneur cannot build a sustainable rural enterprise simply because a government policy declares sustainability a priority. The entrepreneur needs institutional access to knowledge, finance, infrastructure, markets, networks, and regulatory information.

The resulting analytical question is therefore not merely whether governments communicate policy, but how institutional structures shape the movement of policy information and meaning across the agricultural system.

2.2 Institutions and collective action

Institutional analysis provides an appropriate theoretical foundation for examining this process. North (1990) conceptualized institutions as the rules and constraints that structure human interaction, while Ostrom (2005) emphasized institutional diversity and the importance of understanding rules-in-use governing collective action.

The IAD framework is particularly relevant because agricultural policy implementation involves multiple actors operating within institutional settings characterized by formal rules, informal norms, information structures, incentives, and decision-making processes. The same policy statement may produce different practical effects depending upon the institutional context through which it is interpreted.

Collective organization is especially important in rural economies. Producer organizations, cooperatives, extension groups, and farmer associations can reduce transaction costs, aggregate information, strengthen bargaining power, and facilitate market participation. Collective action can also support innovation in agricultural value chains when organizations provide mechanisms for coordination and knowledge exchange (Devaux et al., 2009).

Collective organization is especially important in rural economies because social relationships, trust and shared norms can influence the capacity of communities to

manage resources and coordinate economic activity. Social capital can therefore complement formal institutional arrangements by facilitating cooperation, information exchange and collective problem-solving (Pretty, 2003). Producer organizations, cooperatives, extension groups, and farmer associations can consequently function not only as economic intermediaries but also as communication intermediaries.

Such organizations function as communication intermediaries. The institutional question therefore extends beyond the existence of organizations. It concerns their position within communication flows. An organization may disseminate government information effectively while providing limited opportunities for rural actors to influence policy interpretation. Conversely, decentralized digital systems may expand information access without necessarily producing meaningful institutional dialogue.

This distinction between reach and reciprocity is central to the present comparison.

2.3 Policy communication and message framing

Strategic Communication Theory contributes a second analytical dimension. Policy communication involves decisions about what information is communicated, how it is framed, through which channels it travels, and how audiences are positioned in relation to policy.

Entman (1993) demonstrated that framing influences which aspects of an issue are emphasized, interpreted, and prioritized. Agricultural sustainability can consequently be framed as productivity enhancement, environmental protection, climate resilience, economic opportunity, rural modernization, food security, or social inclusion. Different frames can influence how farmers and entrepreneurs understand policy relevance.

The distinction is important because policy messages do not reach rural actors in a vacuum. Intermediaries translate policy language into practical terms. A climate strategy, for example, may become a recommendation concerning water management, crop diversification, insurance, or low-emission production. A digitalization policy may become a mobile application, market platform, registration procedure, or electronic transaction mechanism.

Communication therefore has both a semantic and an institutional dimension. It determines not only what is said but also how policy meaning is translated into practical action.

Policy change also involves learning. Hall (1993) demonstrated how policy paradigms and social learning influence the way governments define problems and adjust policy instruments. This insight is relevant

to sustainable agribusiness because institutional communication should not terminate once a policy has been disseminated. Feedback from implementation can contribute to policy learning and subsequent adjustment.

2.4 Communication channels and digital transition

Digitalization has transformed the potential geography of agricultural communication. Digital platforms can reduce information-search costs, connect producers with markets, facilitate transactions, distribute extension content, and provide access to public services. Klerkx et al. (2019) argue that digitalization is reshaping agricultural innovation systems by altering relationships among actors, knowledge flows, and innovation processes.

The wider literature on rural development in the digital age similarly emphasizes that digital technologies can reshape access to information, markets, services and economic opportunities, while their developmental effects remain dependent on institutional and socio-economic conditions (Ma et al., 2023). Digitalization should therefore be understood not simply as the introduction of technological tools but as a transformation of the relationships through which agricultural knowledge, services and market information circulate.

The digital transformation of rural and agricultural development also involves changes in skills, institutional capacity, and access to information (Liu et al., 2026; Ma et al., 2023). Technology can therefore expand communication possibilities without eliminating the social and institutional conditions required to use those possibilities effectively.

India provides a particularly important example of this transition. The policy corpus includes e-NAM, digital agriculture initiatives, the India Digital Ecosystem of Agriculture and AGRISTACK consultation framework, *Kisan Suvidha*, *mKisan*, and other digital mechanisms. These initiatives indicate an institutional shift toward digitally mediated agricultural communication and service delivery.

Digital reach, however, is not equivalent to universal accessibility. Differences in connectivity, digital literacy, language, device ownership, trust, affordability, and institutional capacity can influence who can use digital systems effectively. A digitally enabled communication architecture may therefore democratize information for some groups while reproducing exclusion for others.

The issue is consequently not whether digital communication should replace traditional agricultural communication. Rather, the question is how digital and interpersonal channels can complement one another.

2.5 Local organizations and social embeddedness

Vietnam provides a contrasting institutional configuration in which formal government communication operates through comparatively embedded organizational structures. The Vietnam Farmers' Union represents a significant institutional intermediary within the agricultural system, while agricultural extension groups provide localized channels for knowledge and programme dissemination.

Such structures can increase trust, contextual relevance, and organizational cohesion. Social embeddedness is particularly important where agricultural decisions depend upon community relationships, collective practices, and locally shared knowledge. Pretty (2003) highlights the significance of social capital and collective relationships in enabling communities to coordinate the management of shared resources.

However, strong institutional mediation can also produce vertical communication patterns. A channel that efficiently carries information downward may not automatically provide equally effective mechanisms for transmitting information upward. Participation therefore needs to be distinguished from dissemination.

Arnstein's (1969) classic participation framework remains relevant here. Participation involves more than receiving information. It implies opportunities for affected actors to influence decisions. Although Arnstein's typology was developed in a different institutional context, its distinction between information and meaningful participation provides a useful conceptual lens for examining policy communication.

2.6 From communication to implementation

The literature suggests that effective policy implementation requires institutional coordination, usable information, credible incentives, and mechanisms for learning. Hall (1993) emphasizes the importance of policy paradigms and institutional settings in shaping policy change, while Teece (2010) highlights dynamic capabilities for adaptation and innovation.

Applied to sustainable agribusiness, these perspectives imply that communication should be understood as an institutional capability. Institutions must be able to communicate policy clearly, translate it into practical opportunities, coordinate different actors, receive feedback, and adapt programmes based on experience.

Agricultural innovation similarly depends upon interactions among farmers, researchers, extension services, entrepreneurs, public agencies, markets, and technology providers. The World Bank (2012)

conceptualizes agricultural innovation systems as networks through which knowledge, institutions, and actors interact to produce and apply innovation. Communication is therefore a capability of the innovation system itself.

The central proposition developed in this article is:

Policy communication functions as implementation infrastructure when it connects policy authority with institutional translation, accessible dissemination, rural action, and feedback-based institutional learning.

This proposition guides the empirical analysis.

3. METHODOLOGY

3.1 Research design

The study employs a qualitative comparative policy-analysis design. Vietnam and India were selected because both represent major Asian agricultural economies experiencing simultaneous pressures for agricultural modernization, sustainability, climate adaptation, digital transformation, market integration, and rural development.

The research does not attempt to measure farmer adoption rates or establish causal relationships between individual policies and agricultural outcomes. Instead, it examines the institutional communication architecture represented in primary policy documents. The unit of analysis is therefore the policy communication structure embedded in the documentary corpus.

The analysis combines the Institutional Analysis and Development framework with Strategic Communication Theory. IAD provides the institutional lens through which authority, rules, actors, and implementation arrangements are interpreted. Strategic Communication Theory provides the communication lens through which Source Authority, Message Framing, Dissemination Channels, and Feedback Mechanisms are examined.

3.2 Corpus construction and Appendix documentation

The study draws on a defined corpus of **45 primary policy documents issued in Vietnam and India between 2015 and 2025**. The corpus comprises **23 Vietnamese documents and 22 Indian documents**.

The documents were selected to capture the institutional progression from strategic and legislative authority to sustainability-oriented interventions and, finally, dissemination, digitalization, and agricultural extension. The corpus is organized into three analytical groups:

1. Macro-level Strategic and Legislative Frameworks
2. Climate-Smart Agriculture and Bio-Economy Directives
3. Dissemination Networks, Digitalization and Extension

Appendix A provides the complete Vietnam inventory, while **Appendix B** provides the complete India inventory. Each entry identifies the issuing organization, document number or title, year, and official source. The appendices therefore function as the documentary audit trail of the study and provide transparency concerning the underlying corpus.

The Vietnam corpus includes legislation and strategic instruments concerning crop production, animal husbandry, environmental protection, agricultural and rural development, green growth, agricultural restructuring, organic agriculture, circular economy, climate adaptation, agricultural standards, digital transformation, farmer organizations, and community extension. The India corpus includes legislation and strategic instruments concerning agricultural markets, contract farming, agricultural exports, sustainable agriculture, organic and natural farming, climate action, irrigation, insurance, digital agriculture, e-NAM, farmer information services, Farmer Producer Organizations, and agricultural infrastructure.

The documentary inventory is not treated as a simple list of equivalent instruments. Different documents perform different institutional functions. Some establish authority or legal rules, some define strategic objectives, and others establish operational mechanisms or communication channels.

3.3 Strategic Policy Discourse Analysis

The study applies Strategic Policy Discourse Analysis (SPDA) to the documentary corpus. SPDA is used here as a structured qualitative approach for identifying how

policy documents construct problems, define institutional responsibilities, frame desired behaviours, and establish mechanisms for communicating and implementing policy.

Four analytical questions were applied:

1. Who possesses or represents policy authority?
2. How are sustainability and agribusiness objectives framed?
3. Through which institutional or technological channels are policies communicated?
4. What mechanisms exist for feedback, participation, monitoring, or institutional learning?

The purpose is not to treat policy language as a direct representation of implementation outcomes. Instead, discourse is examined as evidence of institutional design and communication intent.

3.4 Four-dimensional communication matrix

To operationalize SPDA, the study developed a four-dimensional communication matrix integrating insights from the IAD framework and Strategic Communication Theory. The matrix examines not only what policy institutions communicate, but also how policy messages are framed, through which institutional and technological channels they are disseminated, and whether mechanisms exist for feedback from rural stakeholders to policy and implementing institutions. The four dimensions provide a common analytical structure for comparing the Vietnamese and Indian policy corpora. The four dimensions and their corresponding analytical questions are presented in Table 1.

Table 1 establishes the analytical logic used throughout the comparative analysis. Source Authority captures the institutional location of policy communication and identifies who possesses formal authority to define policy priorities. Message Framing examines how those

Table 1. Four-Dimensional Communication Matrix Used for Strategic Policy Discourse Analysis

Dimension	Analytical question	Principal focus
Source Authority	Who communicates policy and with what institutional authority?	Government, ministries, political institutions, farmer organizations and implementing bodies
Message Framing	How are policy objectives communicated and justified?	Sustainability, productivity, climate resilience, markets, modernization and rural development
Dissemination Channels	Through which institutional or technological mechanisms does policy information travel?	Extension, farmer organizations, digital platforms, programmes and intermediary institutions
Feedback Mechanisms	How can information, experience, concerns, or responses move back toward institutions?	Participation, consultation, monitoring, organizational representation and institutional learning

Note. The matrix was developed for the present study by integrating the institutional perspective of the IAD framework with concepts from Strategic Communication Theory. The dimensions were applied consistently to the 45-document comparative corpus.

Source. Authors' analytical framework based on the study's documentary corpus and theoretical framework.

priorities are translated into policy narratives and implementation expectations. Dissemination Channels shifts attention from policy content to the institutional and technological pathways through which information reaches intended beneficiaries and intermediaries. Finally, Feedback Mechanisms assess whether communication extends beyond one-way transmission by providing channels through which rural actors can communicate information, concerns, experiences, and implementation needs to institutions.

Taken together, these dimensions allow the study to distinguish between the existence of a policy communication mechanism and the quality of the institutional communication architecture supporting implementation. The presence of digital platforms, extension networks, or organized stakeholder channels does not, by itself, demonstrate effective participation or policy adoption. The matrix therefore provides the basis for examining institutional conditions under which policy communication may facilitate sustainable agribusiness development while avoiding claims about actual farmer behaviour that cannot be established from documentary evidence alone.

3.5 Comparative interpretation

The analysis proceeded in three stages. First, documents were interpreted within their national institutional context. Second, recurring communication characteristics were identified across the four dimensions. Third, the resulting patterns were compared between Vietnam and India.

The comparative analysis emphasizes structural characteristics rather than ranking one country as categorically superior. The purpose is to identify complementary strengths and vulnerabilities and to determine what lessons may be transferable across institutional contexts.

Because the study is documentary, conclusions about communication architecture should not be interpreted as direct evidence of actual farmer behaviour. The corpus establishes how policy systems are designed to communicate and implement agricultural objectives. It does not independently establish whether farmers receive every message, understand it in the intended manner, adopt recommended practices, or experience particular economic outcomes.

4. FINDINGS AND DISCUSSION

4.1 Structural divergence in communication architecture

Analysis of the 45-document corpus reveals a marked difference in the institutional architecture through which

policy communication is designed to reach agricultural actors.

Vietnam's policy architecture combines centralized policy authority with comparatively cohesive intermediary structures. The documentary corpus moves from national legislation and government strategies to agricultural directives, extension arrangements, digital transformation programmes, Farmers' Union instruments, and community agricultural extension groups. This configuration creates a relatively identifiable institutional chain between national policy and local agricultural actors.

India's architecture is more plural and distributed. Its corpus combines parliamentary legislation, national strategies, ministry guidelines, mission-based programmes, digital platforms, market systems, farmer-oriented information services, and collective producer organizations. Communication therefore occurs through multiple institutional and technological channels.

The difference can be characterized as institutionally cohesive communication in Vietnam versus institutionally plural and digitally distributed communication in India. Neither configuration should be interpreted as inherently superior. Cohesion can improve consistency and organizational reach, while plurality can improve flexibility, choice, and access to diverse channels. Each also produces distinctive vulnerabilities.

4.2 Source Authority

The first dimension concerns the institutional source of policy messages.

In Vietnam, source authority is strongly visible in national laws, Central Committee resolutions, Prime Ministerial decisions, government decrees, and ministry directives. The policy corpus demonstrates a clear vertical architecture of authority. Strategic agricultural and rural objectives are translated into specific sectoral and implementation instruments.

This arrangement can support policy coherence. Where multiple levels of government and associated organizations work within a common policy framework, policy messages can be communicated with relatively clear institutional legitimacy.

The Vietnam Farmers' Union adds an important organizational layer. Its national resolutions and institutional role indicate that farmer representation is embedded within the wider policy communication structure rather than existing entirely outside it. The presence of community agricultural extension arrangements further strengthens the connection between formal policy and local agricultural actors.

India also demonstrates strong central policy authority, particularly through Parliament, national

ministries, NITI Aayog, and centrally designed agricultural programmes. However, the Indian system distributes communication across a broader range of instruments and institutional channels.

The result is greater communication plurality but potentially more complexity. A farmer may encounter agricultural policy through a ministry programme, digital platform, market mechanism, producer organization, extension service, or other institutional interface. The breadth of channels can increase access but may also create inconsistent levels of awareness, interpretation, and implementation.

Thus, Vietnam's relative strength lies in institutional coherence, whereas India's lies in institutional plurality and scalability.

4.3 Message Framing

The second-dimension concerns how sustainable agribusiness is represented in policy discourse.

The Vietnamese corpus frames sustainability through an interconnected vocabulary involving agricultural restructuring, environmental protection, climate resilience, organic agriculture, circular economy, green growth, rural development, and low-emission agricultural production. Instruments concerning organic agriculture, climate adaptation, circular economy development, and the one-million-hectare high-quality, low-emission rice initiative illustrate the increasing integration of environmental and economic objectives.

This framing is significant because it places sustainability within agricultural transformation rather than presenting it solely as environmental regulation. Sustainability becomes associated with production quality, market positioning, resilience, and rural development.

The Indian corpus similarly connects sustainability with natural farming, organic farming, climate action, irrigation, crop insurance, renewable energy, infrastructure, market reform, and digital agriculture. Its policy architecture therefore frames sustainable agriculture through a broader portfolio of programmes and missions.

A major difference is the degree of institutional integration. Vietnam's policy sequence presents sustainability within a relatively coherent strategic framework. India's sustainability discourse is distributed across numerous schemes and operational guidelines.

From the perspective of agribusiness, both approaches have advantages. A coherent policy narrative can improve understanding of long-term objectives, while a diverse programme architecture can create multiple entry points for farmers and entrepreneurs.

4.4 India: digital reach and unequal access

India's communication architecture demonstrates a pronounced movement toward digitalization.

The inclusion of e-NAM, the Digital Agriculture Mission, the IDEA/AGRISTACK consultation framework, PM-KISAN operational guidelines, *Kisan Suvidha*, and *mKisan* demonstrates that digital communication is not an isolated technological intervention. It is becoming embedded within agricultural policy infrastructure.

e-NAM is particularly relevant because it connects policy communication with market participation. Digital information concerning markets can potentially affect decisions concerning where and when agricultural products are sold. Digital platforms can consequently connect communication with economic value creation.

The broader literature supports this interpretation of digital agriculture as a transformation in relationships among rural actors, information, markets, and institutions (Klerkx et al., 2019; Ma et al., 2023). Digital transformation may also alter the skills required by agricultural actors and the institutional capacity required to support effective participation (Liu et al., 2026).

The Digital Agriculture Mission and associated digital ecosystem initiatives indicate a broader transformation in the relationship between farmers, data, public administration, and agricultural services. Information can potentially move faster and across greater geographical distances than through exclusively interpersonal extension systems.

However, digital reach must not be confused with universal access. The rural digital divide can involve connectivity, device ownership, digital literacy, language, affordability, and trust. Institutional fragmentation can further complicate the user experience.

This produces a central paradox:

The more communication is digitized, the greater its potential scale, but scale does not automatically produce inclusion.

Evidence concerning digital development in rural Vietnam similarly illustrates that technology's economic effects depend upon actual access and use, rather than technological availability alone (Nguyen et al., 2023). Research on digital agricultural extension further reinforces the importance of adoption conditions and intermediary support (Uy et al., 2025).

For sustainable agribusiness, the implication is that digital systems should complement rather than simply replace local institutional communication. Digital information becomes more actionable when supported by trusted intermediaries capable of explaining, contextualizing, and adapting it to local circumstances.

4.5 Vietnam: institutional cohesion and one-way communication

Vietnam's policy corpus demonstrates a different strength. The combination of government policy, agricultural extension, Farmers' Union structures, and community-level organizations creates a comparatively embedded communication system.

The Vietnam Farmers' Union is particularly significant because it provides an organizational bridge between national agricultural priorities and farmers. Community agricultural extension groups similarly create mechanisms for local interaction and knowledge dissemination.

Such arrangements can reduce communication distance. Policy messages can be translated through organizations that understand local agricultural contexts, thereby reducing the gap between formal policy language and practical action.

The Vietnamese evidence should likewise be interpreted with caution. Digital agricultural communication can expand access to information, but adoption is shaped by farmers' capabilities, access conditions, and the suitability of digital extension approaches to local circumstances. Evidence on smallholder farmers in Vietnam indicates that digital technology adoption has implications for the design of agricultural extension strategies, reinforcing the need to consider adoption conditions rather than assuming that the availability of a digital channel guarantees effective use (Uy et al., 2025).

Nevertheless, institutional cohesion can also create a communication asymmetry. Where organizations are strongly integrated into formal policy structures, their capacity to transmit official messages may exceed their capacity to transmit critical feedback upward.

This distinction is important. Effective dissemination is not the same as effective participation.

A communication system can achieve high levels of message consistency while still providing limited opportunities for farmers to shape policy interpretation or implementation. The challenge is therefore to transform institutional networks from predominantly transmission mechanisms into two-way learning systems.

4.6 Communication versus participation

The comparison reinforces the distinction between information and participation.

Information provides actors with knowledge of policy. Participation provides opportunities for actors to influence decisions. Arnstein (1969) demonstrated why the distinction matters: communication can remain tokenistic if affected communities have no meaningful influence over outcomes.

This does not mean that every agricultural policy decision must be collectively negotiated with every farmer. Rather, sustainable agribusiness requires institutional mechanisms through which local knowledge, implementation barriers, market experiences, and unintended consequences can enter policy-learning processes.

India's consultation-oriented digital ecosystem initiatives demonstrate the potential for broader information exchange, while producer organizations create collective mechanisms for aggregation and representation. Vietnam's Farmers' Union and community extension structures offer established organizational channels for farmer interaction.

The policy challenge in both systems is to move beyond the simple question of whether information reaches farmers toward the more demanding question of whether institutional systems learn from farmers.

Kumar and Basu (2022) make this issue particularly relevant to India's agri-digital transition by emphasizing the importance of end-user feedback in the policy landscape. The implication for the present comparison is that digital platforms should not be evaluated only according to the quantity or speed of information disseminated. Their institutional value also depends upon whether users can communicate problems, needs, and experiences back into policy processes.

4.7 Information versus institutional asymmetry

Information asymmetry is a longstanding issue in agricultural markets. Farmers may lack information about prices, buyers, standards, technologies, finance, or policy eligibility, while governments and market actors may lack timely information about local constraints and farmer experiences.

Digitalization can reduce some forms of information asymmetry. Market platforms can increase price visibility, while digital government systems can improve access to programme information. Yet digitalization can also create new asymmetries when data, technological skills, and platform access are unevenly distributed.

Institutional intermediaries can therefore remain important even in digitally advanced agricultural systems.

The Vietnamese model demonstrates the value of organizational embeddedness, while the Indian model demonstrates the value of technological reach. Combining these strengths may offer a more robust communication architecture than relying exclusively on either.

The issue is also relevant to social inclusion. Rural populations are internally differentiated by gender, age, education, income, landholding, location, market orientation, organizational membership, and digital

access. Communication systems designed around a technologically connected or commercially oriented “average farmer” may therefore leave significant groups underserved.

4.8 Communication as an agricultural innovation-system capability

Agricultural innovation depends upon interactions among farmers, researchers, extension services, entrepreneurs, public agencies, markets, and technology providers. The World Bank (2012) conceptualizes agricultural innovation systems as networks through which knowledge, institutions, and actors interact to produce and apply innovation.

From this perspective, communication is not merely an information-service function. It is a capability of the innovation system itself.

A new technology becomes an innovation only when it is understood, adapted, used, and embedded within economic and social practice. This requires communication across institutional boundaries.

The same principle applies to circular agriculture. Circularity involves new relationships among producers, processors, waste streams, energy systems, consumers, and regulators. Policy communication must make these relationships intelligible and coordinate expectations.

The Vietnamese and Indian cases therefore illustrate two dimensions of innovation-system communication. Vietnam demonstrates the potential of institutional embeddedness and organizational coordination. India demonstrates the potential of digital scalability and diversified channels.

The analytical significance is that technological innovation and institutional innovation cannot be separated. Digital platforms may expand reach, but organizational arrangements determine how information is interpreted and acted upon. Conversely, strong intermediary institutions may provide trust and contextualization but require scalable channels to reach increasingly diverse rural populations.

4.9 Agribusiness entrepreneurship and communication

Entrepreneurship is frequently discussed in terms of opportunity recognition, innovation, risk-taking, and value creation (Mair & Martí, 2006). In rural environments, however, entrepreneurial opportunity is partly dependent upon institutional information.

A farmer or rural entrepreneur may identify an opportunity in organic products, low-emission production, digital marketing, processing, aggregation, renewable energy, or value-added food products. Turning that

opportunity into an enterprise requires knowledge about standards, markets, finance, infrastructure, technology, and policy incentives.

Communication therefore affects entrepreneurship at several stages.

First, policy communication can make entrepreneurs aware of new opportunities. Second, institutional intermediaries can translate technical or regulatory information into practical business decisions. Third, market communication can connect producers with buyers. Fourth, feedback from entrepreneurs can reveal implementation barriers and opportunities for policy refinement.

The communication architecture should therefore be assessed not only by how efficiently it disseminates policy but also by whether it reduces uncertainty for rural entrepreneurs.

This is particularly important for value-chain development. Commercialization does not occur automatically when policy encourages market participation. Producers require institutional mechanisms that connect production with aggregation, processing, logistics, market information, finance, and buyers (Barrett et al., 2001; Belcher & Schreckenber, 2007). Collective action can further support market-chain innovation by enabling producers to coordinate resources and information (Devaux et al., 2009).

4.10 Social inclusion and the “average farmer”

A further concern is the tendency of policy communication to imagine an “average farmer.” Rural communities are heterogeneous. Farmers differ in age, gender, education, landholding, market orientation, connectivity, income, location, and organizational membership.

A communication mechanism that works for a commercially oriented, digitally connected farmer may not work for a smallholder with limited connectivity or digital literacy.

India’s multiple communication channels create potential opportunities for segmentation but also create risks of exclusion. Vietnam’s organizational channels can support social embeddedness but may similarly fail to capture all forms of rural diversity if institutional representation is incomplete.

The inclusion issue also extends to value chains and entrepreneurship. Interventions designed to strengthen market participation may distribute benefits unevenly across social groups. Evidence from value-chain interventions suggests that gender and other dimensions of social position can influence the distribution of economic opportunities (Malhotra et al., 2024).

Sustainable agribusiness communication should therefore be designed as a multi-channel architecture rather than a single communication pipeline. Digital systems, extension, producer organizations, community institutions, training, and interpersonal communication should operate as complementary components.

4.12 The Institutional-Communication Framework

The comparative findings lead to the proposed Institutional-Communication Framework (ICF).

The framework contains **five** connected layers:

Layer 1: Policy Authority

National political institutions, governments, ministries, and other authorized bodies establish policy direction, legal requirements, strategic objectives, and institutional responsibilities.

Layer 2: Institutional Translation and Mediation

Policy objectives are interpreted and translated by ministries, local administrations, extension services, farmer organizations, cooperatives, producer organizations, universities, and other intermediaries.

Layer 3: Multi-Channel Dissemination

Information reaches rural actors through digital platforms, agricultural extension, farmer organizations, market systems, mobile communication, community groups, training, and interpersonal networks.

Layer 4: Agribusiness Action

Farmers and entrepreneurs interpret information and make decisions concerning production, investment, marketing, innovation, organization, and sustainability.

Layer 5: Feedback and Institutional Learning

Experiences, barriers, market signals, local knowledge, and unintended effects move back through intermediary institutions toward policy authorities, enabling adaptation and institutional learning.

The framework can be represented as:

Policy Authority → Institutional Translation → Multi-Channel Dissemination → Agribusiness Action → Feedback → Institutional Learning → Policy Adaptation

The circular rather than linear structure is deliberate. Sustainable agribusiness requires policy systems capable of learning from implementation.

The ICF combines the complementary strengths revealed by the comparison. Vietnam illustrates the importance of institutional mediation and organizational embeddedness. India illustrates the possibilities created by digital scalability and plural communication channels. The framework does not seek to reproduce either national architecture in another context. Rather, it identifies institutional functions that can be combined according to local conditions.

4.12 Comparative synthesis

Table 2 synthesizes the principal differences identified across the four communication dimensions. The comparison indicates that Vietnam's principal institutional strength lies in organizational cohesion and local embeddedness, whereas India's principal strength

Table 2. Comparative Institutional-Communication Architecture of Vietnam and India

Dimension	Vietnam	India	Principal implication
Source authority	Strongly centralized and institutionally cohesive	Strong national authority combined with plural and distributed channels	Cohesion supports consistency; plurality supports flexibility
Message framing	Integrated sustainability, rural development, climate resilience and agricultural transformation	Sustainability distributed across missions, schemes, market and digital initiatives	Integrated framing may improve coherence; diversified framing creates multiple entry points
Dissemination channels	Government structures, Farmers' Union, extension and community groups	Digital platforms, market systems, extension, schemes and producer organizations	Vietnam demonstrates embeddedness; India demonstrates scalability
Digitalization	Increasingly integrated into rural development and agricultural systems	Strong and highly visible component of agricultural policy architecture	Digitalization can expand reach but requires inclusion mechanisms
Feedback	Organizational and institutional channels exist but may remain comparatively vertical	Consultation, digital and producer-organization mechanisms create opportunities for broader feedback	Both systems need stronger systematic upward learning
Agribusiness implication	Institutional coordination and local embeddedness	Market connectivity, digital reach and institutional plurality	Complementary strengths can inform hybrid policy architecture

Note. The comparison summarizes patterns identified through analysis of the 45-document corpus. It represents institutional communication architecture rather than measured farmer behaviour, adoption rates, or causal policy effects.

Source. Authors' analysis of the Vietnam and India policy corpora documented in Appendices A and B.

lies in communication plurality, digital reach, and market connectivity. Neither configuration is sufficient by itself. The findings instead point toward the value of combining institutional mediation with scalable and reciprocal communication mechanisms.

The comparison suggests that neither country provides a complete model. Vietnam's strength is its ability to connect policy with organizational structures. India's strength is its ability to create multiple and scalable communication pathways.

The most productive comparative lesson is therefore not to choose between centralized and decentralized communication but to combine institutional trust, local mediation, digital reach, market connectivity, and reciprocal feedback.

4.13 Toward a two-way policy communication architecture

The central conceptual contribution of the study is the proposition that agricultural policy communication should be evaluated through two directional flows.

The first is the **downward flow**:

Government → Institutions → Intermediaries → Farmers and Entrepreneurs

This flow concerns authority, clarity, interpretation, dissemination, and implementation.

The second is the **upward flow**:

Farmers and Entrepreneurs → Intermediaries → Institutions → Government

This flow concerns experience, feedback, market signals, implementation barriers, innovation, and policy learning.

A sustainable communication architecture requires both.

The comparison suggests that India has developed considerable potential for expanding downward reach through digital systems, while Vietnam possesses comparatively strong organizational structures for institutional mediation. Each can learn from the other's strengths.

The significance of the two-way architecture is that communication becomes part of an adaptive policy system. Downward communication provides coordination; upward communication provides learning. Without the former, policy objectives may not reach intended actors. Without the latter, institutions may have limited capacity to identify how policies operate in diverse rural settings.

5. IMPLICATIONS FOR SUSTAINABLE AGRIBUSINESS

5.1 Implications for policymakers

Policymakers should treat communication architecture as part of policy design rather than as a post-policy dissemination exercise.

Every major agricultural policy should identify:

1. intended audiences;
2. institutional intermediaries responsible for translation;
3. multiple dissemination channels;
4. accessibility requirements;
5. feedback mechanisms; and
6. indicators for assessing communication effectiveness.

This approach would make communication measurable as an implementation capability.

Policy design should also distinguish between information delivery and institutional learning. A digital platform that distributes information but does not capture meaningful user feedback may improve reach without improving policy responsiveness.

5.2 Implications for rural entrepreneurship

Rural entrepreneurship benefits when policy communication reduces uncertainty. Entrepreneurs require timely information concerning markets, standards, finance, technology, incentives, infrastructure, and regulatory procedures.

Digital systems can improve access, but local institutional intermediaries remain important for interpretation and trust. A hybrid communication model could therefore combine digital information with extension support, producer organizations, universities, cooperatives, and local business networks.

Such an approach is particularly relevant where entrepreneurship involves new sustainability-related opportunities. Organic production, low-emission agriculture, circular enterprises, renewable energy, processing, and digital market services all require entrepreneurs to interpret multiple forms of institutional information.

5.3 Implications for agricultural innovation

Innovation requires interaction. Governments should therefore strengthen mechanisms connecting farmers, researchers, entrepreneurs, extension agents, technology providers, and markets.

Universities can play an important role as knowledge brokers. Their contribution should extend beyond research

production to policy translation, capacity development, innovation incubation, and evidence-based feedback.

Agricultural innovation systems are particularly dependent upon communication across institutional boundaries because knowledge must be translated between scientific, administrative, commercial, and local contexts (World Bank, 2012). Strengthening these connections can improve the likelihood that technological innovations become usable innovations.

5.4 Implications for sustainability

Environmental sustainability becomes more likely to generate durable economic value when it is communicated as part of a broader value proposition.

Organic production, low-emission agriculture, circular-economy initiatives, climate adaptation, renewable energy, and resource-efficient production should be connected with market opportunities, entrepreneurship, resilience, and rural livelihoods.

Communication should consequently avoid presenting sustainability solely as compliance. It should also communicate opportunity.

This is consistent with the broader transformation of agrifood systems described by FAO (2017, 2022), in which environmental, economic, social, and technological considerations increasingly interact.

5.5 Implications for universities and knowledge institutions

Universities occupy an important intermediate position between policy, knowledge, markets, and communities.

They can contribute by:

- translating technical research into accessible policy information;
- evaluating communication effectiveness;
- developing agricultural entrepreneurship programmes;
- supporting digital literacy;
- facilitating farmer-researcher interaction;
- documenting grassroots innovations;
- creating evidence-based feedback mechanisms.

For universities engaged with rural development, communication should therefore be treated as a component of knowledge transfer and institutional engagement.

6. CONCLUSIONS

This study examined the relationship between policy communication and institutional frameworks

for sustainable agribusiness through a comparative documentary analysis of Vietnam and India.

Analysis of the 45-document corpus indicates that both countries have developed substantial policy architectures addressing agricultural transformation, sustainability, climate resilience, rural development, market integration, digitalization, and agricultural extension. Yet the institutional pathways through which policy meaning is communicated differ substantially.

Vietnam demonstrates comparatively strong institutional cohesion. National policy authority is connected to agricultural ministries and agencies, extension systems, farmer organizations, and community-level structures. This architecture can support consistent dissemination and local mediation. Its principal vulnerability is the possibility that strong vertical communication may not be matched by equally systematic upward feedback.

India demonstrates comparatively broad institutional and technological plurality. Digital agriculture, e-NAM, farmer information platforms, producer organizations, and national programmes provide multiple routes through which information can reach agricultural actors. Its principal vulnerabilities include the rural digital divide, differences in institutional capacity, and fragmentation across programmes and channels.

The comparison demonstrates that communication should not be treated as a secondary activity occurring after policy formulation. It is part of the institutional infrastructure through which policy becomes actionable.

The study's principal conceptual contribution is the Institutional-Communication Framework, which links five stages:

Policy Authority → Institutional Translation → Multi-Channel Dissemination → Agribusiness Action → Feedback and Institutional Learning

The framework shifts attention from the question "Was the policy communicated?" toward more consequential questions: Was the policy understandable? Was it accessible? Could actors act upon it? Could they respond? And did institutions learn from implementation?

The implications extend beyond Vietnam and India. Many emerging economies face similar challenges involving agricultural modernization, climate change, digital transformation, rural entrepreneurship, and institutional fragmentation. The comparative lesson is not that one communication model should replace another. Rather, effective sustainable agribusiness policy requires the complementary strengths of institutional coherence, local mediation, digital reach, market connectivity, and reciprocal feedback.

The study nevertheless has an important limitation. Because it is based on documentary analysis, the findings describe policy communication architecture and institutional design rather than actual farmer behaviour or measured adoption outcomes. The analysis cannot independently establish whether individual policy messages reached particular farmers, how they were interpreted, or whether they produced specific economic or environmental effects.

Future research should therefore complement documentary analysis with field-based evidence. Surveys, interviews, focus groups, digital-platform analytics, case studies of producer organizations, and longitudinal assessments could test whether the communication structures identified here translate into actual changes in knowledge, adoption, entrepreneurship, market participation, and sustainable agricultural practice.

Ultimately, sustainable agribusiness requires more than sustainable policy. It requires institutions capable of communicating sustainability, actors capable of acting upon it, and governance systems capable of learning from those actions. Policy communication becomes transformational when it ceases to function as a one-way transmission of government intentions and becomes an institutional process of shared learning between policy systems and the rural economies they seek to transform.

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Declaration of Conflicting Interests

The authors declare no conflict of interest.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this manuscript, the authors used generative AI and AI-assisted technologies in a limited editorial capacity, primarily for language refinement, grammar correction, and clarity. These technologies were not used to develop the research questions, theoretical framework, research propositions, substantive arguments, interpretation, or conclusions. The authors independently developed the conceptual framework and scholarly arguments and remain fully responsible for the accuracy, originality, and integrity of the manuscript.

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Appendix A.

Primary Policy Documents of Vietnam (2015–2025)

Group I. Macro-level Strategic and Legislative Frameworks

No.	Issuing organization	Document number and title	Year	Official source
1.	National Assembly	Law on Crop Production (No. 31/2018/QH14)	2018	Cổng TTĐT Chính phủ
2.	National Assembly	Law on Animal Husbandry (No. 32/2018/QH14)	2018	Cổng TTĐT Chính phủ
3.	National Assembly	Law on Environmental Protection (No. 72/2020/QH14)	2020	Cổng TTĐT Chính phủ
4.	Central Committee of CPV	Resolution No. 19-NQ/TW: On agriculture, farmers, and rural areas to 2030	2022	Báo Điện tử Đảng Cộng sản
5.	Government (Prime Minister)	Decision No. 150/QĐ-TTg: Strategy for Sustainable Agriculture and Rural Development	2022	Cổng TTĐT Chính phủ
6.	Government (Prime Minister)	Decision No. 1658/QĐ-TTg: National Green Growth Strategy (2021–2030)	2021	Cổng TTĐT Chính phủ
7.	Government	Resolution No. 120/NQ-CP: Sustainable and Climate-Resilient Development of the Mekong Delta	2017	Cổng TTĐT Chính phủ
8.	Government (Prime Minister)	Decision No. 255/QĐ-TTg: Restructuring the Agricultural Sector (2021–2025)	2021	Cổng TTĐT Chính phủ

Group II. Climate-Smart Agriculture and Bio-Economy Directives

No.	Issuing organization	Document number and title	Year	Official source
9.	Government (Prime Minister)	Decision No. 1490/QĐ-TTg: Scheme on 1 million hectares of high-quality, low-emission rice	2023	Cổng TTĐT Chính phủ
10.	Government (Prime Minister)	Decision No. 687/QĐ-TTg: Scheme on Circular Economy Development in Vietnam	2022	Cổng TTĐT Chính phủ
11.	Government (Prime Minister)	Decision No. 885/QĐ-TTg: Scheme on Organic Agriculture Development	2020	Cổng TTĐT Chính phủ
12.	Government	Decree No. 109/2018/ND-CP: On Organic Agriculture	2018	Cổng TTĐT Chính phủ
13.	MARD	Decision No. 431/QĐ-BNN-KH: Action Plan for Climate Change Adaptation in Agricultural Sector	2021	Cổng TTĐT Bộ NN&PTNT
14.	MARD	Circular No. 18/2018/TT-BNNPTNT: Guiding Good Agricultural Practices (VietGAP)	2018	Cổng TTĐT Bộ NN&PTNT
15.	MARD	Directive No. 8084/CT-BNN-KHCN: Promoting bio-circular economy in agriculture	2020	Cổng TTĐT Bộ NN&PTNT
16.	Government (Prime Minister)	Decision No. 340/QĐ-TTg: Strategy for Collective Economy and Cooperatives	2021	Cổng TTĐT Chính phủ

Group III. Dissemination Networks, Digitalization and Extension

No.	Issuing organization	Document number and title	Year	Official source
17.	Government	Decree No. 83/2018/ND-CP: On Agricultural Extension	2018	Cổng TTĐT Chính phủ
18.	Government (Prime Minister)	Decision No. 749/QĐ-TTg: National Digital Transformation Programme	2020	Cổng TTĐT Chính phủ
19.	Government (Prime Minister)	Decision No. 924/QĐ-TTg: Digital Transformation in New Rural Development Programme	2022	Cổng TTĐT Chính phủ
20.	Central Committee of CPV	Resolution No. 46-NQ/TW: Upgrading the quality of operations of the Vietnam Farmers' Union	2023	Báo Điện tử Đảng Cộng sản
21.	Vietnam Farmers' Union	Resolution of the 7th National Congress of Vietnam Farmers' Union (2018–2023)	2018	Cổng TTĐT Hội Nông dân
22.	Vietnam Farmers' Union	Resolution of the 8th National Congress of Vietnam Farmers' Union (2023–2028)	2023	Cổng TTĐT Hội Nông dân
23.	MARD	Decision No. 3444/QĐ-BNN-KN: Consolidating Community Agricultural Extension Groups	2022	Cổng TTĐT Bộ NN&PTNT

Note. The appendix constitutes the documentary audit trail for the Vietnam component of the 45-document corpus. It records the issuing organization, document number or title, year, and official source. The documents are organized according to the three analytical groups used in the study.

Appendix B.**Primary Policy Documents of India (2015–2025)****Group I. Macro-level Strategic and Legislative Frameworks**

No.	Issuing organization	Document number and title	Year	Official source
24.	Parliament of India	The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act	2020	The Gazette of India
25.	Parliament of India	The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act	2020	The Gazette of India
26.	Parliament of India	The Essential Commodities (Amendment) Act	2020	The Gazette of India
27.	MoA&FW	Model Agricultural Produce and Livestock Marketing (APLM) Act	2017	Department of Agriculture and Farmers Welfare
28.	NITI Aayog	Strategy for New India @ 75 (Agriculture Chapter)	2018	NITI Aayog Portal
29.	Ministry of Commerce & Industry	National Agriculture Export Policy	2018	Ministry of Commerce
30.	MoA&FW	Model Contract Farming Act	2018	Department of Agriculture and Farmers Welfare

Group II. Climate-Smart Agriculture and Bio-Economy Directives

No.	Issuing organization	Document number and title	Year	Official source
31.	MoA&FW	National Mission for Sustainable Agriculture (NMSA) Operational Guidelines	2015	NMSA Portal
32.	MoA&FW	Paramparagat Krishi Vikas Yojana (PKVY) Guidelines for Organic Farming	2015	PKVY Portal
33.	MoA&FW	National Mission on Natural Farming (NMNF) Guidelines	2022	NMNF Portal
34.	MNRE	PM KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) Guidelines	2019	Ministry of New and Renewable Energy
35.	MoA&FW	PM Fasal Bima Yojana (PMFBY) Operational Guidelines (Crop Insurance)	2016	PMFBY Portal
36.	MoA&FW	PM Krishi Sinchayee Yojana (PMKSY) Guidelines (Sustainable Irrigation)	2015	PMKSY Portal
37.	MoA&FW	National Action Plan on Climate Change (NAPCC), Agriculture Component Framework	2018	Department of Agriculture and Farmers Welfare

Group III. Dissemination Networks, Digitalization and Extension

No.	Issuing organization	Document number and title	Year	Official source
38.	MoA&FW	e-NAM (National Agriculture Market) Operational Guidelines	2016	e-NAM Portal
39.	MoA&FW	Digital Agriculture Mission (2021–2025) Framework	2021	Department of Agriculture and Farmers Welfare
40.	MoA&FW	India Digital Ecosystem of Agriculture (IDEA) / AGRISTACK Consultation Paper	2021	Department of Agriculture and Farmers Welfare
41.	MoA&FW	PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) Operational Guidelines	2019	PM-KISAN Portal
42.	MoA&FW	Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs) Guidelines	2020	Department of Agriculture and Farmers Welfare
43.	MoA&FW	Agriculture Infrastructure Fund (AIF) Operational Guidelines	2020	AIF Portal
44.	Ministry of Electronics & IT / MoA&FW	<i>Kisan Suvidha</i> App Development Framework	2016	Digital India
45.	MoA&FW	<i>mKisan</i> SMS Portal Guidelines	2015	<i>mKisan</i> Portal

Note. The appendix constitutes the documentary audit trail for the India component of the 45-document corpus. It records the issuing organization, document number or title, year, and official source. The documents are organized according to the three analytical groups used in the study.

Abbreviations:

MoA&FW = Ministry of Agriculture and Farmers Welfare, India; MARD = Ministry of Agriculture and Rural Development, Vietnam; CPV = Communist Party of Vietnam; MNRE = Ministry of New and Renewable Energy; NMSA = National Mission for Sustainable Agriculture; PKVY = Paramparagat Krishi Vikas Yojana; PMFBY = Pradhan Mantri Fasal Bima Yojana; PMKSY = Pradhan Mantri Krishi Sinchayee Yojana; e-NAM = National Agriculture Market; FPO = Farmer Producer Organization; AIF = Agriculture Infrastructure Fund.

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