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Good Agricultural Governance for Transition to Sustainable Production Intensification in Smallholder Farming

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Abstract: This paper introduces the concept of good governance in smallholder agriculture as attempts are being focused on redirecting the agriculture development paradigm from the model of the green revolution to sustainable crop production intensification (SCPI). It reviews the evolution of the concept of SCPI since the time FAO elaborated the concept in "Save and Grow" approach and highlights the context in which good governance is poised to play vital role in sustainable intensification of smallholder agricultural production systems. It discusses the features of SCPI initiatives and reviews the principles of good governance and methodological approaches to measuring quality of governance. The paper lays out the strategies for improving agricultural governance in the backdrop of ongoing institutional efforts for improving overall governance systems aimed at stimulating economic development. It proposes a number of tools that can be used in improving governance of food and agriculture sector in efforts to make transition of smallholder agriculture to sustainable production systems.

Key words: Agricultural governance, sustainable intensification, smallholder farming.

1. Introduction

Governance is about exercising authority within a framework defined and protected by law with the goal of delivering public goods and services as efficiently as possible. Traditionally, it used to be the domain of the State embodied by the government, its executive branch and bureaucracy. The quality of governance is traditionally seen through the prism of the capacity of government both in terms of its institutions and the quality of its civil bureaucracy. Accumulation of capacity remains equally applicable to the private sector and it is the responsibility of the public sector to assist capacity development in the private sector. When the government agencies withdraw from direct provision of agricultural inputs and support services to farmers, it doesn't imply that they are abdicating their responsibility; rather their roles are redefined emphasizing, among others, regulations, standards, inspection, and quality control which are critical to supporting healthy growth of the private sector.

The concept of governance is relatively new and evolving. Its theoretical premises are in a state of flux and various approaches to its measurement are subject to critical assessment with regard to their validity for application at micro levels. Originally, the idea of the "State" (and its representative, government) was associated with "predator" that prompted many thinkers to look at options for getting rid of the state. Karl Marx envisioned abolition of the state as final goal for perpetuation of proletarian power. At other extreme of the economy school, the state is seen as obstacle to realization of aspirations, ambitions and entrepreneurial spirits of individuals and thus a roadblock to economic growth and prosperity driven by private enterprise. Progressive dismantling of the state and curbing its presence in the society became a sine qua non of economic reforms undertaken since the beginning of the 1980s by Ronald Reagan in the US and Margaret Thatcher in the UK. The ideological underpinnings of those reforms were assiduously

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adopted the World Bank and IMF in their lending portfolio to developing nations which compelled the recipient countries to undertake similar type of reforms through structural adjustment of their economies. The idea of "governance" was brought from the realm of theoretical discourse to frequent practical use to create a conceptual framework for diminution of the state and enabling of the non-state actors in provision of public goods, services, and essential preconditions for continued economic growth. But the success of realization of this goal to a large extent depended on the maturity of the public services and socio-economic contexts of any country.

The distinction between "governance" and "government" remains so subtle that in public consciousness in many socio-economic settings both terms are often perceived as synonymous. One approach to drawing a line of distinction is to look at the range of actors engaged as the focus shifts from the *means* (application of power) to *results* (delivery of goods and services). Government is an actor, the predominant one among others, in executing the functions of governance. While the notion of *government* invokes state capacity to deliver, *governance* is more about the quality and the degree of fulfilment of citizens' demands and aspirations.

Both state (represented by government—civil bureaucracy, public sector organizations, and local government institutions) and non-state actors (represented by non-government organizations, civil society organizations, producer organizations, cooperatives, and the private sector) are involved in governance. The state creates enabling conditions in terms of rules, regulations, economic incentives and infrastructure building in order for the private sector to take root, grow and prosper. As the size of the state sector shrinks and its roles, approaches, and methods are redefined, new institutional arrangements emerge to increase the capacity and contribution of the non-state sector to governance. But it is also true, as experiences of less democratic and authoritarian regimes in East Asia suggest, downsizing the role of the state is not an essential precondition, rather the opposite, expanding its pervasive presence and ruthless application of unaccountable authoritarian power may also lead to good governance outcomes.

Agricultural governance is a concept coined to validate the idea and apply the principles of governance across the sectors of national economy. It is defined as augmentation of growth and development of a country's agriculture sector and managing the consequences of this process through the effective functioning of its institutions, the application of technology and scientific innovations, and the implementation of policies, adherence to acts and regulations, and active participation of all involved stakeholders [1].

In designing the tools of good agricultural governance, the recognized principles of governance are taken into account. Yet the need to look at good agricultural governance separately from overall good governance is prompted by the need to developing approaches and methods that are sound and effective in managing the transition of the development paradigm of smallholder agriculture from "green revolution" to "sustainable intensification".

This paper reviews the evolution of the concept of sustainable intensification and the context of the role of good agricultural governance in mainstreaming sustainable intensification in smallholder production systems. It next highlights the features of sustainable production intensification initiatives and the principles and measurement of good governance. Then it focuses on designing good agricultural governance tools for sustainable production intensification in smallholder farming.

2. Sustainable Intensification: The Concept and Its Evolution

Toward the end of the 1990s, the shortcomings of the widely-acclaimed green revolution started becoming apparent with deceleration of growth rates of

yields of major cereal crops, falling factor productivity, and mounting evidence of degradation of natural resources. It was evident that this development model had exhausted its potential to meet the future challenges of sustaining food production that has to come from a shrinking natural resources base and crop growing environments experiencing climate change-driven stresses in ways that increasingly constrain physiological processes of growth and development of crops planted in conventional crop calendars and cropping cycles.

This set the stage for search of an alternative mode of agricultural development that conserves and economizes the use of natural resources but still allows continual growth of agricultural production at par with rising demand. The focus was directed at finding suitable approaches and methods for accommodating intensification of agricultural production and its sustainability over long term in a framework for policy actions and scientific interventions.

The Food and Agriculture Organization (FAO) of the United Nations at the twenty-second session of its Committee on Agriculture (COAG) held in 2010 put forward the concept of "*sustainable crop production intensification (SCPI) through an ecosystem approach and an enabling environment: capturing efficiency through ecosystem services and management*" [2].

The concept views the ecosystem (land, water, and living resources) and harnessing the range of services that it provides and complement them with other external interventions as central to fostering sustainability in agricultural production. The policy document also outlined an FAO strategy for sustainable crop production intensification encompassing four major elements—technical, economic, governance, and investment. This was followed up by publication of a manual titled "Save and Grow: A Policymaker's Guide to the Sustainable Intensification of Smallholder Crop Production" in which FAO elaborated the concept and provided an outline of programme framework for its implementation at country levels [3]. Identified as a paradigm shift, SCPI was defined as *production of more from the same area of land while conserving resources, reducing negative impacts on the environment and enhancing natural capital and the flow of ecosystem services*. The framework encompassed six broad areas to design SCPI interventions—farming systems, soil health, crops and varieties, water management, plant protection, and policies and institutions.

In the light of the experience gained in implementing SCPI strategies over 2010–2012, FAO broadened the concept of SCPI taking into account emerging issues, such as market linkages and value chains, reducing food losses and wastes, sustainable diets and nutrition. At the twenty-third session of the COAG held in 2012, these issues were incorporated in the scope of SCPI and the strategy was broadened and renamed as "Sustainable Production Intensification (SPI)" [4].

The notion of sustainable diets and nutrition gradually evolved into "Sustainable Food Systems (SFS)". It came to be defined as *a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised*" [5]. The move to a more comprehensive platform for sustainability based on SFS was prompted by other parallel initiatives, particularly the work of FAO and other agencies and intergovernmental agencies, such as the Zero Hunger Challenge presented by the UN Secretary-General at Rio+20 Conference, the High Level Panel of Experts (HLPE) on food security and nutrition, FAO-UNEP Sustainable Food Systems Programme, etc.

At the twenty-fourth session of the COAG held in 2014, FAO embedded the concept of SPI into a common vision of "Sustainable Food and Agriculture (SFA)" and outlined five principles to guide actions to supporting the transition to SFA [6]. These principles are: (a) improving efficiency in the use of resources is crucial to sustainable agriculture; (b) sustainability

requires direct action to conserve, protect and enhance natural resources; (c) agriculture that fails to protect and improve rural livelihoods, equity and social well-being is unsustainable; (d) enhanced resilience of people, communities and ecosystems is key to sustainable agriculture; and (e) sustainable food and agriculture require responsible and effective governance mechanisms [7].

It is thus evident that the concept of sustainability in agriculture since its genesis is moving beyond intensification of crop production rooted in better understanding and manipulating of biophysical environments toward a broader base incorporating concerns for food and nutrition security, resilience to climate change, and economic wellbeing of farmers and producers across commodity value chains and their integration into local and global markets.

3. Good Agricultural Governance: The Context of Its Role in Sustainable Production Intensification

A long-term perspective lies at the core of sustainability. In smallholder agriculture in developing countries, sustainability is also about undertaking corrective measure to restore the ecosystems degraded as a result of past approaches to crop production intensification. In these agricultural systems, sustainability must also encompass prudent forward looking measures to protect the more marginal environments disproportionately at risk from the impacts of climate change and revitalize their productive capacities. The actions that are undertaken today to foster sustainability should pave the way for numerous other initiatives that would have synergistic and complementary effects to reach the targets on the path to sustainability. Not only the mechanisms for planning and design of those actions should be robust, but equally important is how they are implemented so as to achieve results that in turn create new preconditions for addressing other emerging challenges.

It is in this context that a major focus in efforts to implement the strategies of sustainable production intensification is shifting to good governance. As stated above, governance was identified as one of elements of the FAO strategy for sustainable crop production intensification reflected in the programme of work over the period 2010-2025 adopted at the twenty-second session of the COAG. In this policy document governance was viewed as a tool to promote an enabling policy and institutional environment to ensure productivity while maintaining or improving the natural resource base.

The key aspects of policy and institutional changes to drive SCPI were described in detail in the document "Save and Grow" to help governments craft interventions to catalyze changes in policy and institutional environment. The emphasis on responsible and effective governance mechanisms was reaffirmed as one of the underlying principles for fostering sustainable food and agriculture at the twenty-fourth session of the COAG.

The recognition of the importance of governance is growing as the concept of sustainability is being scaled up toward a more comprehensive and complex holistic approach encompassing consumption of resources and production of output and services to meet the evolving needs of human societies adequately and equitably. This was reflected in adoption of "*transforming governance and technologies for sustainable development* "as one of the ten goals of the proposed "Sustainability Development Goals (SDGs) in the post-2015 global framework to replace the Millennium Development Goals [8].

While at the global level, there is a clear focus on good governance in driving the agenda of sustainable production intensification, at the national level in many developing countries; it is still treated mostly as a concept pursued within the confines of traditional administrative bureaucracy. There is lack of clarity on understanding the contemporary processes driving change in smallholder agriculture and developing

robust governance tools for successfully managing this transformation toward advancing sustainability in the agriculture sector.

4. Features of Sustainable Production Intensification: Entry Points for Good Agricultural Governance

Sustainable production intensification initiatives are distinguished by several common features. An understanding of these features and the evolving environment shaping them allows application of the principles of good governance in developing tools of good agricultural governance to steer the transformative changes in smallholder agriculture towards sustainable intensification. These are as follows:

4.1 Emergence of Multiple Stakeholders

Investment in smallholder agriculture to boost production was mostly a public sector affair viewed as provision of public good. This phenomenon came into sharp focus with launching of the green revolution in the 1960s. The spectre of looming shortages of food with the prospect of engulfing developing countries in widespread public discontent and turmoil drove home the need for dramatic increase of food production. This was followed by concrete actions with unprecedented mobilization of public resources, both internationally and nationally, for building research institutions, creating other infrastructure and provision of necessary inputs and support services to farmers at subsidized costs.

The green revolution had its zenith until the 1980s when the rock solid consensus for publicly-funded agricultural research and extension systems started fraying. In order to sustain access to funding from international financing and lending institutions, most developing nations had to embark on structural adjustment of their economies throughout the 1980s and mid-1990s.

These adjustments led to sizeable dismantling of the public sector and paved the way for the emergence of the private sector to take on supposed role of the engine of economic growth. In the agriculture sector, public agencies responsible for input supply gradually withdrew from direct provision of services and private sector traders, companies, and a variety of NGOs came forward to fill the vacuum. Although the results were mixed and the private sector didn't always live up to expectation in assuming the supposed role, in many developing countries private sector companies and businesses now account for a major share in seed production and supply, agricultural mechanization and irrigation and provision of fertilizers and other inputs.

At the global level, publicly-funded agricultural R&D centered on the Consultative Group on International Agricultural Research system was also affected by the sweeping wave of privatization. This global network underwent a series of structural transformation, including review of organizational mandates, budgets and had to reorient to a range of collaboration and partnerships with private sector companies, trust funds and charities. Global private sector investment in agricultural R&D was spurred by greater protection of intellectual property rights (IPRs) though the World Trade Organization (WTO). The advent of IPRs also affected hitherto unhindered access to plant genetic resources for food and agriculture. These resources came under the purview of FAO-administered international treaty on plant genetic resources for food and agriculture since the turn of this century that put in place an untested and innovative mechanism for regulating access based on the concept of multilateral system of access and benefit sharing. Countries also swiftly moved toward claiming their stake of IPRs on farmers' traditional knowledge and the diversity of genetic resources for food and agriculture under their jurisdictions through adopting relevant legislations and establishing national authorities for their enforcement.

While at the dawn of the green revolution, government agencies, farmers, and their cooperatives were the only stakeholders in smallholder agriculture,

the spectrum of stakeholders now expanded to include a broad range of actors in the public sector, private sector (companies, traders), non-government organizations, and civil society organizations, farmers' organizations, consumer groups, industry organizations that are active at local, regional and international levels. This proliferation of stakeholders in smallholder agriculture, from the viewpoint of governance, presents the challenge of effectively engaging them in SPI.

4.2 Emphasis on Integrated Holistic Approaches

Improved management of natural ecosystems and harnessing ecosystem services is central to sustainable production intensification. Transforming this proposition into a set of approaches and practices applicable at farm level is beset with myriad of challenges given that underlying biophysical processes in natural ecosystems are subdued and the chain of these processes is disrupted when external inputs and farming practices are applied to mould natural resources in a way that suits the goal of agricultural production. One approach to redress this is viewing smallholder farming as a system rather than an enterprise focusing on only staple food crops. Such an approach seeks to optimize productive functioning of all components typical of smallholder agriculture—crops, livestock, fisheries and agro-forestry. It, therefore, contemplates interventions drawing on a range of interactions among the components in their location-specific contexts that eventually translates in improved utilization of ecosystem services. This, in turn, permits reduction in the use of external inputs leading to improved efficiency of resource use, minimizing negative impacts on natural ecosystems and boosting resilience of these systems.

The success of interventions linking components of smallholder agriculture in an integrated holistic approach requires that their design take into account a broad multi-sectoral perspective with improved managerial capacities for cross-sectoral decision-making and implementation.

4.3 Focus on Value Chains

Sustainable production intensification initiatives take into account the total output of products through the prism of boosting overall incomes and welfare of farm households. A key focus of SPI is therefore on capturing efficiencies along the continuum from production of primary commodities to consumption of end products. This continuum is viewed as a sequence of steps linked in a chain, where a certain value is added to the product as it leaves the farm, enters the marketing channel accumulating new attributes and finally turns into a finished product at the end of the chain and becomes available for consumption. The increasingly growing role of markets in the wake of economic reforms undertaken over the past decades in developing countries has brought to the fore the need for improving market linkages of smallholders.

The price differential of the commodity at the beginning of the value chain (raw product) and at the end (finished) is substantial, but smallholder producers typically capture a fraction of this because of the absence of adequate mechanisms that could link them with the markets and help establish their sway over value chains (VCs). Apart from benefitting smallholders financially, VCs also offer a range of efficiency gains, for example, cutting post-harvest losses and wastages occurring at different stages of the marketing chain, incorporation of improved food safety measures matching industry standards that allows access to premium prices in upscale markets. The promotion of a value chain approach provides a sound platform to design SPI initiatives.

4.4 Reliance on Partnerships, Networks, and Institutional Capacities

A key aspect of sustainable production intensification programmes is the complexity of the design because they are not "one-size-fits-all" and

must address location-specific opportunities and constraints of agricultural production. Typically, they have multi-sector components and hence rely on cross-sectoral approach for implementation, monitoring and evaluation. This requires establishing various mechanisms for engaging a wide range of stakeholders, as noted above, in policy making, programme planning and implementation processes. These mechanisms envisage forging partnerships and networks that spread from local to national to global level and from field to policy levels. Effective functioning of partnerships and networks and efficient delivery of programmes and services through them require capacity building at all levels.

4.5 Platform for Broad-Basing Sustainability

Sustainable production intensification initiatives should be dynamic evolving in response to changes in the external environment and emergence of new challenges. The external policy environment is in a state of flux as international agencies, including financial institutions are grappling with devising appropriate responses as established order in many countries is collapsing under the weight of local wars fuelled not only by internecine conflict and tribal animosity but also by unprecedented degradation of natural resources, such as land and water. The impact of climate change is becoming conspicuous across a broad range of agricultural ecosystems impacting on their abilities to support agricultural production at higher levels of productivity. Sustainability should therefore have appropriate technological support, such as climate smart agriculture and conservation of natural resources.

5. Good Governance: Overview of Principles and Measurements

Attempts to provide an empirical basis to measurement of the quality of governance began with the emergence of the concept and the increasing importance the international development agencies started attaching to *governance* as a tool to improve performance of programmes and projects funded by them.

The United Nations identified eight major characteristics of good governance [9]. It is participatory, consensus-oriented, accountable, transparent, responsive, equitable and inclusive, effective and efficient, consistent with the rule of law. It assures that corruption is minimized, the views of minorities and marginalized groups are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

This definition attempts to incorporate the principles of good governance beginning from the design of programmes (*participatory, consensus-oriented, responsive, equitable, inclusive*), mode of delivery (*accountable, transparent*), provision of enabling environment (*consistence with the rule of law, minimization of corruption)* to achieving objectives and goals (*effective and efficient*).

The World Bank through its Worldwide Governance Indicators (WGI, accessed 29 April 2015 from http://info.worldbank.org/governance/wgi/index.aspx#home) project adopted a quantitative approach to translating governance principles into a set of broad measurable indicators. These indicators reflect the state (annually updated) of six dimensions of governance across 215 countries– voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption.

Each of these dimensions is aggregate of a number component indictors compiled on the basis of the views of a large number of enterprise, citizen and expert survey respondents in each country (WB, 2015). These six aggregates can be categorized into two groups: democratic governance (*voice and accountability, rule of law*) and state capacity including the quality and degree of autonomy of civil bureaucracy (*political stability and absence of*

violence, government effectiveness, regulatory quality and control of corruption).

Although WGI presupposes democratic governance and state capacity building as unidirectional and mutually reinforcing in support of the quality of governance, this assumption remains largely hypothetical and not tested by empirical evidence. Rather human history abounds with experiences that confirm the opposite. When in 1985, Mikhail Gorbachev initiated a process of political and economic reforms in the then-USSR based on greater openness and accountability, a phenomenon widely known by its Russian name *Perestroika*; it stimulated an irreversible decay and erosion of state capacity eventually leading to chaotic dismantling of the Soviet state triggering political violence, local wars and human tragedy unfolding across a vast swathe of Eurasian landmass not seen since the end of world war II. The process of decay and disintegration of the state in new Russia under the leadership of Boris Yeltsin accelerated with his zealous pursuit of democratic transformation and took an alarming turn threatening the very survival of the newly born Russian state. The process was halted, reversed and the Russian state underwent a process of recovery and renewal with the arrival in power of President Vladimir Putin who introduced a measure of authoritarian rule and imposed curbs and limits on democratic freedoms. Far from being disenchanted, the Russian people gratefully accepted the bargain and showered President Putin with the kind of approval and adoration envied by any elected president in established western democracies. In more recent times, the *Arab Spring* revolutions that swept across middle-eastern societies in North Africa and West Asia produced a very similar result. While the established political order was abolished, not only democracy failed to take root in these countries, but had to backtrack and in certain cases the state collapsed breeding unending violence and human disaster.

While these are examples from the destructive side, China serves an example from the constructive side. Back in 1990, inspired by Gorbachev's *perestroika* reform, a section of Chinese youth galvanized a similar movement that was later brutally suppressed. But to draw its political legitimacy, the Chinese Communist Party embraced a series of deftly managed reforms focused on state capacity building and improving the quality of government that helped it to engineer the transformation of the Chinese economy and society on such a grandiose scale and complexity and in a short span of time that it remains a marvel of political engineering in recent times.

While not debating the appeal and attractiveness of democratic governance on moral grounds, it is tempting to argue, keeping in view comparative socio-economic development of India and China—two neighbouring countries embarking on the path of autonomous development almost concurrently at the beginning of the 1950s that too much democracy often creates a chaotic and dysfunctional political landscape in which decision-making is stalled and implementation is painfully slow hindered by competing political interests and bureaucratic wrangling. The contrast of two different models of governance is vividly reflected in the record of socio-economic development of these two countries, particularly in the speed of uplifting the number of people from poverty, expanding the size of the middle class and building infrastructure for transformative industrial and human development.

At more micro-level, hybrid rice research and development in Asia is a case in point. Hybrid rice, an advanced technology invented and pioneered by China since the 1970s currently accounts for about 58 percent of the country's rice cropped area. While it was a tremendous success in China, other rice growing countries in Asia failed to emulate the Chinese experience, despite substantial domestic investment in hybrid rice R&D since the 1990s with technical assistance from FAO and the International Rice Research Institute. This is because China provided a highly enabling environment for hybrid rice

introduction through concerted institutional support including research, technology generation, subsidies to seed companies and free distribution of hybrid seed to farmers. This was possible because of the unique governance system that couldn't be realized through market-based economic systems of other Asian countries [10].

Apart from WGI, there are other assessments that provide both quantitative and qualitative data on governance. These are either country or involve several countries: ODI's World Governance Assessment, UK DFID's Country Governance Assessment, USAID's Democracy and Governance Assessment Framework, Netherlands' Strategic Governance and Corruption Assessment (SGACA), etc.

6. Good Agricultural Governance Tools for Sustainable Production Intensification in smallholder Farming

A governance tool is viewed as an instrument or vehicle for delivery of public goods and services and can be evaluated based on its suitability for galvanizing public action most effectively and efficiently. In designing the tools of good agricultural governance, it is important to contextualize the governance principles taking into consideration country-specific socio-economic systems; the external environment shaping smallholder production systems; the quality of public services and the maturity and capacity of the non-state sector to interact with public agencies and assume responsibilities in delivery of public goods and services.

A strong code of corporate ethic and responsibility is needed in order for the private sector to emerge in the role of credible partner of the state, where good governance is seen not just as a delivery mechanism but also as an input for driving changes in smallholder production toward sustainable intensification. Leaving the process of private sector emergence in smallholder-dominated agricultural sector to the whims of market without adequate support, oversight and control by government agencies often produce unintended results that rather than improving farmers' access to inputs and services create new roadblocks in terms of cost, timeliness, availability and quality.

6.1 Building Capacity and Competence

This governance tool is meant for developing and maintaining in public agricultural services a pool of new set of management skills and technical competence. This is important for effectively addressing the challenges that emanate from the external environment shaping the evolution of smallholder farming, structural features of SPI initiatives, and organizational complexities of their implementation. In a sharp deviation from vertical projection of authority in a command/control mode, characteristic of the green revolution era, this will require from public administrators different skills that replace power projection with horizontal enabling of environment for engaging with a broad range of stakeholders at different levels and fostering innovative mechanisms that lessen the burden from the government and promote their role and incentives in provision of public goods and services. Such managerial skills are facilitation, networking orchestration, and modulation. Technical knowledge of public agricultural officials must also be adequate to manage policy analysis, draw new perspectives and seek effective participation in the global governance of food and agriculture which is now more complex and multi-dimensional driven by market-oriented economic reforms and emergence of new concerns to be addressed in the framework of sustainable food and agriculture.

Managerial competence is also needed for forging effective inter-departmental and inter-ministerial linkages in civil bureaucracy because as the concept of sustainability is widened to encompass the broad agriculture and food sector, the SPI initiatives and programmes typically cross-cut responsibilities of various government ministries and departments. This necessitates effective inter-ministerial mechanisms for developing integrated programmes, overcoming

bureaucratic delays in decision-making and accelerating implementation of programmes. The capacity of the public agricultural service to draw on support and collaboration of other relevant public sector entities will also be critical to success as SPI programmes and initiatives become platforms for incorporating other concerns such as market linkages and value chains, diets and nutrition, impacts of climate change.

Capacity building in public services is an on-going process that starts from recruitment with a strong emphasis on merit rather than on patronage and political connections. As the public service officials move through the service ladder, they should be exposed to a wide range of training aimed at building technical competence, management ability, and leadership qualities—honesty, integrity, and commitment. Public service capacity and competence building in the long term depends on deployment of trained officials with these attributes at strategic decision-making hierarchy.

6.2 Participatory and Accountable Programme Planning and Delivery

Participation, as a principle of good governance, aims at enabling stakeholders articulate their views and perceptions in designing specific initiatives, particularly with regard to identification of suitable interventions and their components, ranking priorities and allocation of resources for implementation. This creates necessary preconditions for buy-in by stakeholders and sustainability of outcomes upon expiry of external support. Stakeholder participation also allows incorporating accountability, another principle of good governance, in design and delivery of programmes.

Sustainable production intensification programmes, as discussed before, are increasingly holistic with location-specific contexts, and reliant on cross-sectoral approaches involving a wide variety of stakeholders. This governance tool is designed to create suitable institutional structures at different levels to formalize stakeholder participation and facilitate deliberation and consultation to arrive at a consensus with regard to the type of proposed actions and modalities for implementation that best address the goals and objectives and hold the promise for achieving intended results from proposed interventions. Enhanced stakeholder participation entrenches democratic governance by allowing women and other marginal groups a larger voice in setting the agenda of SPI programmes. It also opens up new directions for mobilizing additional efforts and resources as the concept of sustainability is scaled up to embrace emerging concerns that affect people's livelihoods, health, income that truly contribute to sustainable human development.

As stated above, as a governance tool participation is secured through various institutional structures. But those structures while promoting broad representation should also be effective at balancing diverse views, seeking consensus and expediting decision-making. At local levels, participation can be secured individually (farmers, men and women) or through legitimate institutions (farmers' organizations, agribusinesses, NGOs, civil society organizations, etc.). To advance the agenda of SPI, farmers' participation can be fostered through such institutional structures as farmer field school, climate field school, integrated crop management clubs, research-extension-farmers' linkage committees, and various community-based organizations, etc.

These institutional models accumulated considerable experiences that demonstrate their validity for field-testing and replication of holistic and integrated approaches inherent in sustainable intensification of smallholder production systems. The design of SPI initiatives, many of which are delivered through regional and global networks, also requires effective participation of countries in the global system of governance for food and agriculture.

Participation at programme planning is also needed at regional and international levels through the global system governance of food agriculture in the form

partnerships, networking and other collaborative structures. Countries have various options to devise suitable structures in the public agricultural administration systems for participation in the global governance system in a way that promotes collaboration and cooperation, simplifies and expedites decision making and follow-up. The strength of participation as a governance tool depends not so much on exchanging views with as broad a number of stakeholders as possible as a protocol to gain legitimacy but on the capacity to foster a creative process of ventilation and cross-fertilization of ideas to gain new insights and inputs useful for planning and design purposes.

With participation comes accountability, a key governance principle for making government officials, private sector, and civil society organizations answerable to the public and their institutional stakeholders for their actions and decisions. The purpose is to ensure that those actions and decisions meet their stated objectives and are benefitting the stakeholders in a way they were supposed to benefit.

The framework for accountability can be built in programme planning at the design stage by presenting a results framework with specification of actions, resources, measurable indicators of success and the tools of verification. It also includes explicitly outlining criteria for recruitment of personnel – project director and other staff and putting in place transparent procedures for procurement of goods and services, and also financial and accounting procedures (bookkeeping and audits, financial statements).

Accountability in programme delivery can be ensured by streamlining implementation arrangement (monitoring and implementation by implementing ministry and executing agency, independent external monitoring, external evaluation, performance audit, and ex-post evaluation). Accountability is bolstered by transparency—measures that demonstrate visibility of actions and results.

6.3 Design and Enforcement of the Regulatory Framework

This governance tool is designed to incorporate conformance to rule of law and regulatory capacity. These two dimensions reflect state capacity to provide the enabling environment for stakeholders to act with a long perspective, orchestrate and implement actions most effectively and efficiently. It includes laws, rules and regulations, codes and standards, policies and institutional arrangements for enforcement of the regulatory framework that support the food and agriculture sector. In smallholder agricultural systems, regulatory framework in the context of transition to sustainable production intensification demands updating particularly with regard to farmers' access to seeds and improved genetic resources, fertilizer, irrigation water, small-scale mechanization, secure land tenure, etc.

In designing this tool, concerned government agencies with a stake in the broad agriculture and food sector may undertake periodic review of the existing regulatory capacity for its robustness to eliminate unnecessary bureaucratic hurdles to decision making in public agencies and create favourable environment for emergence of the private sector and its capacity building. With mainstreaming of SPI in agricultural development, there will be new interfaces between the agriculture and food sectors, for example, good agricultural practices and enhancement of food safety in the food supply chain, value chains, sustainable diets, and nutrition. In many developing countries, these two sectors are run under separate government ministries/departments that lead to overlapping of responsibilities and conflicts. This requires adoption of fresh approaches and building new capacities in the regulatory framework to address the issues of integration of food and agriculture sectors.

At the global level, regulatory capacity should be adequate to meet country obligations to various international treaties, conventions and protocols to which they are signatories. Where opportunities exist,

public sector agencies should support the private sector and industry organizations to develop their own standards for self-regulation.

Strengthening the role of policy in the regulatory framework will require new capacities at the top level of agricultural bureaucracy. This is needed to help decision makers understand how the new approach of sustainable production intensification works and how to align national agricultural development goals plans and programmes with the principles of sustainable production intensification. New capacities and analytical skills will also be needed to support policy formulation in the public sector agricultural research and extension system, particularly in development of strategic and action plans , methodologies for planning, monitoring and evaluating initiatives in sustainable crop production.

6.4 Control of Corruption

Of all governance tools, control of corruption is seen as most vital and in many countries, citizens' perceptions of good governance are mainly about fighting corruption. Corruption plagues not only the public sector, but also the private sector, where government agencies lack necessary controls to exercise regulatory oversight on the private sector institutions. Smallholder farmers in developing countries remain vulnerable to corruption in a number of ways.

The well-documented cases of corruption impacting smallholders relate to land administration with respect to land ownership, settlement of disputes in demarcation of land boundaries, registration, tenure and sales. Disbursement of seasonal crop loans to smallholders by specialized agricultural and rural development banks also suffers from corrupt practices, where farmers are forced to pay a share of the allocated loan as bribe.

Smallholder farmers rely on institutional structures in both public and private sectors for acquisition of production inputs—irrigation water, seed, fertilizer, and pesticide. The input supply and distribution systems in many countries present considerable potential for corruption. Access to irrigation water in smallholder irrigation projects is riddled with corruption. Owners of irrigation pumps often levy higher than normal charges for delivery of irrigation water. Smallholders often have no means of verifying the fairness of delivery and there is no clarity and transparency in the system. Farmers also have to pay bribes to input dealers where sales of inputs are restricted by quotas.

In countries, where the state was slow in developing and enforcing adequate regulatory regime in the wake of the private sector stepping in agri-business and assuming a prominent role in provision of farm inputs, there had been instances of corruption by private traders trying to sell adulterated and mislabelled product using brand name and attractive packaging. This often happened when farmers bought quality seed, particularly hybrid seeds paying a premium price. Private sector corruption in distribution and sale of sub-standard and adulterated chemical inputs, such as fertilizers and pesticides not only deprives smallholders of a fair share of their income but also compromises health and environmental safety in food supply chains.

Control of corruption assumes particular importance in the context of sustainable production intensification. The transition to SPI entails considerable institution building—upgrading and revitalizing existing institutions and, where necessary, building new institutions to fill the gaps in terms of innovation and research, technology development and diffusion; and farmers' training; improving processing, marketing and value chains; linking primary production to consumption with a focus on improving efficiency and reduction of wastages and losses in the food chain.

For most developing nations, funding assistance from the international financial institutions and donors will be crucial in mobilizing necessary resources for

investment. Such assistance will be forthcoming and unhindered if proposed SPI investments have adequate built-in controls and transparent mechanisms in place to demonstrate how the money will be spent; who will make the decision on how the money is spent, and how the target beneficiaries will be involved and given a role. It is in this context, corruption features prominently as an issue to be addressed in design of SPI programmes and projects.

The design of anti-corruption tools is based on three types of intervention, namely prevention, detection, and a regime of appropriate sanctions. Prevention seeks to put in place control measures to eliminate the grounds that encourage corruption. It starts at the time of project design. The measures can be formulated both at the level of donors providing funding assistance and implementing agencies through their administrative, financial, and legal procedures. Many international development partners have put in place their own systems to protect their funds and to ensure that those funds are spent in line with the goals of their development assistance.

At the programme/project level, prevention can be achieved through a variety of tools based on transparency, codes of conduct, and internal integrity management systems (procedures for procurement, financial management systems, etc.) that ensure staff adhere to the highest standards of integrity. Detection-based anti-corruption tools generally include third-party audits, independent external monitoring, complaints handling and protection of whistleblowers, who bring out specific cases of corruption. Sanctions involve applying zero tolerance to corruption cases that come to light. The goal is to change the most prevalent perception of corruption: from a “low-risk” activity to a “high-risk low-reward” activity.

7. Conclusion

In smallholder farming the transition to sustainable intensification of production systems, envisioned by FAO as a new paradigm to replace green revolution, is a slow and incremental process. As new approaches and methods of sustainable practices are tested across locations and countries, new opportunities and challenges are emerging that demand broadening the concept of sustainability to include new concerns, such as food and nutrition security, resilience to climate change, economic wellbeing of farmers and producers across commodity value chains and their integration into local and global markets. The concept of Sustainable Crop Production Intensification (SCPI), elaborated by FAO in 2010 as an alternative to Green Revolution in smallholder agriculture, has evolved into Sustainable Food and Agriculture (SFA).

Good agricultural governance has emerged as a key input in efforts to shape the transformation of smallholder agriculture in the direction of sustainable intensification. While at the global level, governance systems for food and agriculture are fast evolving to match the emerging challenges; agricultural governance in many developing countries is still pursued within the framework of public sector institutions and administrative bureaucracy. There is lack of clarity on understanding the contemporary processes driving changes in smallholder agriculture and the challenges emerging as efforts are being focused on mainstreaming sustainable intensification through policy and institutional levels. This is a major constraint to applying the principles of good governance in developing the tools of good agricultural governance for guiding the paradigm shift of agricultural development to sustainable intensification.

Sustainable production intensification initiatives are characterized by several common characteristics: emergence of multiple stakeholders, emphasis on integrated holistic approaches, and focus on value chains, reliance on partnerships, networks, and institutional capacities, and platform for broad-basing sustainability. An understanding of these characteristics in specific contexts is important in tailoring the principles and measures of good

governance to the design of robust tools of good governance. This study identified the following four categories of good governance tools to support the transition of smallholder agriculture to sustainable intensification. These are building capacity and competence; participatory, accountable programme planning and delivery; design and enforcement of the regulatory framework; and control of corruption. Depending on specific socio-economic contexts, a range of concrete measures can be developed to apply these tools of good governance.

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