



Policy Brief

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Local Incentive-Based Policy for Vegetable-Agroforestry: a locally-appropriate adaptation and mitigation action (LAAMA) to climate change

Background:

This policy brief series is developed for policy-makers, to help improve their understanding on existing gaps between national and local policies in relation to smallholder investments in Vegetable-Agroforestry (VAF) in the Philippines. In the first brief, we presented a snapshot of the policy environment surrounding VAF. We highlighted the importance of developing local policies to address particular needs of smallholders, where national policies are slow to address. In the second brief, we discussed the roles of smallholders in national economic development as embodied in the Magna Carta for Small Farmers. In this brief, we highlight the experience of Lantapan Municipality in developing an incentive-based policy to promote VAF as a locally-appropriate adaptation and mitigation action (LAAMA) to climate change.

As global attention turns to international negotiations to deal with climate change, an equally important task is turning to local communities whose decisions on the land impacts the environment. Scientists at the World Agroforestry Centre (ICRAF) are working to understand the linkages and interaction between LAAMA and Nationally Appropriate Mitigation Action (NAMA), and between NAMA and Globally Appropriate Mitigation Action (GAMA), and in developing strategies to resolve scientific, institutional and economic challenges surrounding carbon mitigation at different levels. Articulation on these linkages includes recognition of efforts of international institutions in designing multi-national incentive system for carbon mitigation, with individual countries developing institutional frameworks required at the national level, and analyzes and development of various reward mechanisms at the implementation level. We argued that NAMA, as part of international agreements (GAMA), should be based on locally-accepted, endorsed, and supported actions on the ground (LAAMA).

An example of LAAMA in agriculture is Vegetable-Agroforestry (VAF) system. It is a viable land use that could simultaneously meet livelihood goals and environmental protection, and is a candidate land use for mitigating climate change. However, the scale of smallholder adoption of VAF is limited by the weak implementation of national policy incentives, aggravated by socio-economic and institutional factors. If current weakness in policy implementation is left unchallenged, national governments will hardly meet their obligations to global agreements (GAMA).

We reviewed key national policies surrounding VAF, and found that, while policy incentives at the national level exist, their benefits rarely trickle down to smallholders for two reasons: i) they have limited access to information on new policies and hence, the limited opportunities brought by policy change; and ii) they do not have resources to leverage policy implementation. Correspondingly, benefits from national policies are often exclusively captured by elite farmers since they have more access to information and have more resources to complement implementation. We recommend that local government units (LGU) provide adequate policy actions to address the needs of smallholders in a timely manner.

The Local Government of Lantapan became interested on the idea of policy incentives to encourage smallholders to invest in sustainable land use systems, such as VAF. In 2009, the Local Government promulgated a Local Incentive-based Policy, with a 5-year Development Program. While it is new, the Incentive Program attracted significant interest and support among farmers and partner agencies. Currently, the LGU is mobilizing its own resources and is vigorously seeking partnerships to implement the Program.



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“The road to success is not easy, but we are excited about this innovation—we will acknowledge our mistakes and learn from them, and continue to learn to achieve our purpose—we hope to inspire and encourage others to follow our path—but we also hope that others join us in this endeavor”.

-Lantapan Local Chief Executive-

Sustainable Farming Practices in Lantapan

The Municipality of Lantapan is a river valley that is wholly contained in the Manupali watershed, which is located in the southeastern side of the Mt. Kitanglad Range Natural Park (MKNRP) in Bukidnon province, in the southern Philippines. Several streams and rivers flow from this biodiversity-rich mountain range, which runs into a network of irrigation canals for rice production, and ultimately drains into a reservoir used for hydroelectric power generation.



Soil and water conservation technologies adopted by farmers in Lantapan, Bukidnon.

In 1999, the first major wave of conservation farming began through the Landcare Program, with more than 1,000 farmers adopting soil and water conservation technologies. By 2002, the total area applied with conservation technologies was almost 1,300 hectares representing 11% of the total farmed area. However, the adoption ceiling was easily met with the proliferation of banana plantations. Thereafter, tensions among stakeholders heightened, particularly with competing water use.

Research has shown that the conditions of the watershed can be stabilized, if competing demands for land and water as a scarce resource is reconciled, through regulated land use and wider adoption of conservation practices, with agreements of all stakeholders involved. Rapid Hydrological Appraisal (RHA) has been conducted, and results show the current condition of the watershed as a consequence of land use and land cover change. Unregulated land use, through expansion of cultivation in steep slopes and banana plantations, would result to a demise in water supply and heightened competition between different user-groups, including rice-irrigators, agri-business and hydropower.

Localizing Policy Incentives

National forest and agriculture policies are available to provide a common framework and enabling environment, but are often faced with implementation challenges due to diversity and complexity of circumstances that local farmers face, not to mention the ineptness of the national government in policy implementation and the inherent flaws of many policies. In terms of VAF, incentive policies are pervasive at the national level, but are more favorable to large holders or elite farmers, while LGUs are either uninformed of new policies or lacked the resources to support local implementation. Smallholders have particular needs from elite farmers due to differing socio-economic conditions, and therefore, locally-tailored policies should be in-place to address their specific needs in a timely manner. Local governments therefore, need to provide adequate policy response at their level, to enable their local constituency to significantly contribute to national economic progress, and to climate change mitigation.

Facilitated by ICRAF scientists, the Local Government of Lantapan underwent a process of "problem-policy framing", where policy research results were communicated and interpreted, and policy actions were negotiated by everyone involved. In 2009, the Local Government enacted Municipal Ordinance

No.114, which outlines an incentive mechanism for smallholders to adopt and invest on sustainable land use, to improve their livelihoods, maintain environmental services (ES), and to adapt and mitigate climate change. In addition, it aims to build social capital amongst the local people, as well as build the institutional capacity of the LGU to broker between local communities and external ES buyers.

Under this policy, provision of any type of support available through the Local Government's regular and special programs are provided in form of "incentive" to farmers and farmer organizations that meet the conditions required (Table 1), resulting in increased productivity, profitability, sustained ES, and increased adaptation to climate change. The Local Government allocated funds for building the capacity of the Agriculture Extension and Municipal Planning office, linking with ES buyers, and investing in seven types of incentives (Table 2).

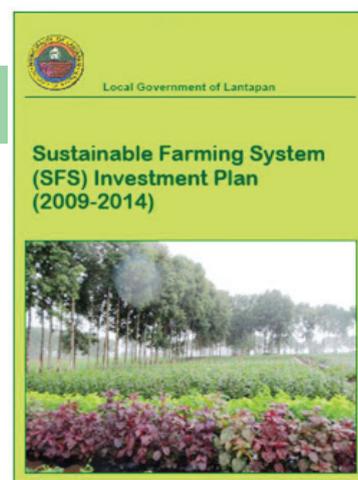


Table 1- Sustainable agriculture practices adopted by the Incentive Program

Key areas of concern	Standard practices
1. Farm productivity	<ul style="list-style-type: none"> Reduce dependence of inorganic fertilizer inputs, pesticides, insecticides and other chemicals Employ integrated crop management, including biological control and integrated pest management Increase production of, and application of organic fertilizer, such as animal wastes, green and vermi-composts, etc. Diversify farm crops with trees and livestock (e.g. application of Vegetable-Agroforestry [VAf] system) Plant crops that are resistant to drought or excessive rain Develop cropping calendar based on market demand
2. Soil management	<ul style="list-style-type: none"> Apply crop rotation, green manure, cover cropping, mulching, etc. to build-up soil nutrients In sloping farms, reduce soil erosion by applying various soil and water conservation (SWC) techniques, such as contour plowing, hedgerows (e.g. Natural Vegetative Strips [NVS], minimum/zero ridge tillage and other contour barriers) No burning of crop residues Reduce tillage/cultivation
3. Water management	<ul style="list-style-type: none"> Apply efficient water management techniques, such as rainwater harvesting during wet season and drip irrigation during dry season Small farm reservoir
4. On-farm biodiversity	<ul style="list-style-type: none"> Provide areas for natural regeneration of native plants/species Provide corridors of biodiversity
5. Capacity-building	<ul style="list-style-type: none"> Farmer undergo training, attend seminars on sustainable farming, and the likes

Table 2- Categories of incentives

Incentive categories	Description
1. Provision of input subsidies for crop production and NRM-based livelihood projects	Financial and material input subsidies, such as planting materials (e.g. timber and fruit seedlings, banana tubers, corn and vegetables seeds, etc.).
2. Provision of improved extension services	Accessibility to Agricultural Technologists (ATs) for readily available assistance and facilitation (e.g. School on Air, demo farms, exposure trips, Farmers' Field School, Technology Training, etc.)
3. Subsidized crop insurance	Facilitation between farmers and the Crop Insurance Program; subsidies in insurance premium payments
4. Micro-financing support	Credit assistance in cash or in-kind; reduced transaction cost in processing credits and loans; farmer linkages with financing institutions
5. Infrastructure support	Farm-to-market roads, pre-and-post harvest facilities, solar driers, etc. for organized farmers
6. Awards and recognition	Cash rewards and recognition of individual farmers and farmer organizations; support for trainings and field visits.
7. Support for marketing	Access to market information, linkages and network, price monitoring, technical assistance on enterprise development, production and marketing analysis services (PMAS)

Implementation Scheme

The Municipal Agriculture Office (MAO) is tasked to implement the Incentive Program with Agricultural Technologists (ATs) in the frontline. A Technical Advisory Committee (TAC) was also established, mainly to: i) provide implementation oversight; ii) serve as recommendatory body at the municipal level; and iii) monitor and evaluate activities. Fourteen village or Barangay Agriculture and Fishery Councils (BAFCs) were organized and federated at the municipal level (Municipal Agriculture and Fishery Council or MAFC). The BAFCs assist the ATs at the village level, while the MAFC assist the MAO and the TAC at the municipal level.

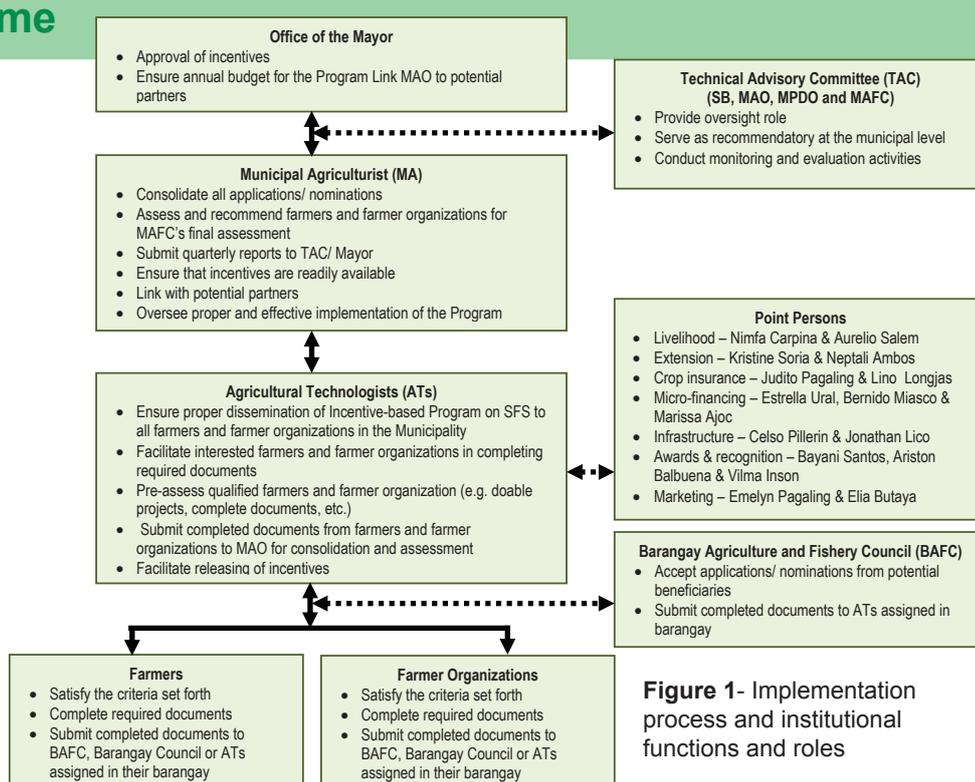


Figure 1- Implementation process and institutional functions and roles

Examples of Incentives

Recognition and Awards

During the culmination program of the weeklong celebration of Araw ng Lantapan on June 18, 2009, the Local Government awarded farmers with certificates and cash rewards, in the following categories: Multi-Cropping, Agroforestry, Livestock, Rice Production, Corn Production, Agri-Livestock and Vegetable Production.



Recognition and Support for NRM-Based Livelihood Projects

The Nagkahiusang Pundok sa Kababayin-an sa Sungco (NPKS) is a women group involved in collective marketing of vegetables and cut flowers, and has been collaborating in various research. The women were concerned on the lack of sustainable supply of cheap organic inputs to improve soil fertility. As an incentive, ICRAF provided them a training on vermi-composting, and was later awarded a small start-up capital to establish household vermi-composts. They are now producing vermi-casts, which they use in their vegetable gardens. Researchers from De La Salle University (DLSU) are looking at marketing and gender issues in this project.

Challenges

Considerable work remains, in terms of moving the Incentive-based Policy to achieve its purpose. The challenge is that, local communities, particularly farmers and local politicians have different interests and priorities, and often operate at different temporal and spatial scales, and do not necessarily speak the same language. But the lesson learned is that, “informed decision-making” through combination of knowledge derived from research and local expectations and knowledge create opportunities for collaborative actions. Ultimately, local governments can effectively provide adequate response, where national policies do not effectively meet the needs of smallholders. Science-policy linkages are extremely important in fostering local government capacity to develop LAAMAs— Undoubtedly, implementation of this type of LAAMA is dwarfed with challenges, but with a mechanism in-place to clarify and reconcile knowledge differences and expectations by all stakeholders, it will no longer be impossible for local communities to reach a high-carbon stock development pathway.

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