

The Policy Environment of Vegetable-Agroforestry in the Philippines and Vietnam: A scoping study

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ABSTRACT

The viability of *Vegetable-Agroforestry (VAf) system* is constrained by various factors, including farmers' inability to invest in the system, inadequate institutional structures for facilitating information flow, and lack of market incentives. This paper reports on a scoping study of the policy environment of VAF in Vietnam and the Philippines. We hypothesised that policy incentives are needed to stimulate smallholder investments in VAF.

In both countries, the policy environment for VAF is generally encouraging with entrenched incentives to boost the contribution of the forestry and agriculture sectors to national economic growth. However, in both situations, the benefits to smallholders have been limited. Policy incentives for smallholders exist albeit limited, but disincentives persist—in Vietnam, only commercial fruit and vegetable producers are actively involved in the growth of the sector; similarly, large farmers in the Philippines benefit more from national policies than smallholders because not only that most policies are inherently partial to their interest, they are also capable of leveraging policy implementation. In both countries, smallholder investments in VAF require policy actions that address issues impeding the growth of the vegetable industry including price regulation and control, commodity protection, cost reduction across the value chain, removing non-tariff barriers, and global trading regimes; and transaction costs, high capital outlay in developing forest areas, and uncertainties in timber prices for the forestry sector.

There are distinctive differences in the policy development process between the Philippines and Vietnam, which suggest different ways of promoting VAF in these countries. Philippine local governments have policy-making powers, and could formulate incentive-based policies to stimulate local investment in VAF, whereas in Vietnam, the impetus for policy change emanates from the peoples' National Assembly. Policy efforts to encourage smallholder investment in VAF in the Philippines can thus be initiated at the local level, while central government takes the lead in Vietnam.

The profitability of vegetables and agroforestry products is grossly affected by precarious market conditions at the national and international levels, where smallholders have no influence or control; hence targeted policy incentives are needed if smallholders are to invest in VAF. Finally, regardless of differences in governance features, institutional capacity, and size of economy in both countries, the overall viability of VAF depends on a whole set of policy support that both national and local governments can provide. The future of smallholder investment in VAF is therefore a political imperative.

KEYWORDS

Agroforestry, incentives, disincentives, smallholders, non-commercial farmers, policy instruments

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ABBREVIATIONS

AFMA	Agriculture and Fisheries Modernization Act
AFTA	ASEAN Free Trade Area
ASEAN	Association of South East Asian Nations
CSC	Certificate of Stewardship Contracts
DA	Philippines' Department of Agriculture
DARD	District of Agriculture and Rural Development in Vietnam
CBFM	Community-Based Forestry Management
F&V	Fruits and vegetables
GA-HVCCP	Gintong Ani-High Value Commercial Crops Program
GAP	Good Agricultural Practices
GATT	General Agreement on Tariff and Trade
GoV	Government of Vietnam
HVC	High Value Crops
HVCDA	High Value Crops Development Act
IFPRI	International Food Policy Research Institute
IFMA	Industrial Forest Management Agreement
ISF	Integrated Social Forestry
LGC	Philippines' Local Government Code
LGU	Local Government Units
MARD	Ministry of Agriculture and Rural Development in Vietnam
MRLs	Maximum Residue Levels
NGOs	Non-Government Organizations
NRM	Natural Resources Management
NTP	Non-Timber Products
PD	Presidential Decree
PhP	Philippine Peso
RA	Republic Act
R&D	Research and Development
SANREM-SEA- TMPEGS	Sustainable Agriculture and Natural Resources Management-South East Asia- "Technology-Marketing-Policy-Economic/Environmental Impacts-Gender-Scaling UP"
SAFDZ	Strategic Agricultural and Fishery Development Zones
SFEs	State Forest Enterprises
SIFMA	Socialized Industrial Forest Management Agreements
SPS	Sanitary and Phyto-Sanitary
UAfP	Upland Agroforestry Program
USD	United States Dollar
Vaf	Vegetable-agroforestry
VND	Vietnamese Dong
WHO	World Health Organization
WTO	World Trade Organization

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1.0 INTRODUCTION

The World Development (2008 Report) reports that using agriculture as a basis for economic growth in rapidly-transforming economies such as the Philippines and Vietnam requires both productivity revolution in smallholder farming and innovative policies and political commitment. Further, the Report mentions that agriculture for development could benefit the poor if governments and donors were to reverse years of policy neglect and remedy their underinvestment and mis-investment in agriculture, which can be best implemented with better-designed policies and decision-making processes most suited to each country's economic and social conditions, by utilizing political support and improving the governance of agriculture.

Philippine agriculture is dominated by smallholders in terms of number. Between census years 1971 and 1991, the average farm size of smallholders decreased from 3.6 to 2.1 hectares, as the number of farms increased from 2.3 to 4.6 millions, with the total farm area increasing from 8.4 to 9.9 million hectares (Philippine Department of Agriculture 2006). Legally, "smallholders" are defined as natural persons cultivating in not more than five hectares¹, whose livelihood depends on small-scale subsistence farming with sales, barter or exchange of agricultural products not exceeding a gross value of one hundred eighty thousand pesos (PhP180,000) per annum.² In aggregate terms, small farmers, including fisherfolks constitute over 90 percent of all farmers, which is around 21 percent of the country's total labor force.

In Vietnam, the notion of smallholders is unknown, yet household farms are typically characterized by small and fragmented land holdings, which vary greatly across different regions and provinces and between types of crops planted.³ Unlike the Philippines, there is no legal or formal definition with which to identify smallholders in Vietnam. Regardless of farm size or landholding, farmers are typically identified as either commercial growers or non-commercial/subsistence/home gardeners. The former refers to farmers who plant crops and market their produce either for the domestic and international markets, while the latter refers to farmers who plant crops for home consumption or for limited local trade. Another distinguishing feature between the two is their relative distance to markets-- commercial farmers are generally located near the market centers or in urbanizing areas, while non-commercial farmers are located in remote rural areas.

Agroforestry, the planting of trees on farms, is a superior land use that enhances food security and protects the natural environment. However, the economic benefits of agroforestry need to be induced. Income from trees is not immediate, and cereals and grains may not provide sufficient profit for farmers converting into agroforestry, hence, specialty cash crops like temperate vegetables (e.g. cabbage, cauliflower, broccoli, pepper, etc.) are needed. Studies in developing countries have shown that profit by vegetable farmers were higher than farmers engaged in cereal production (SANREM-SEA LTRP 5 2005). Therefore, there is an incentive for cereal farmers, in the context of agroforestry, to diversify with

¹ As defined by the Philippines Agrarian Law

² As defined by Republic Act (RA) 7607 or the Magna Carta for Small Farmers. This figure was based on 1992 constant prices.

³ The average farm size in the Mekong Delta is 1.2 hectares, whereas in the Red River Delta, farms typically comprise eight or nine non-continuous plots with about 200 to 500 sq. meters each (World Bank in Vietnam 1998). A coffee farm of 1.5 hectares or less is also classified as a "small farm", whereas low value vegetables planted to the same farm size can be considered a large farm.

vegetables. Vegetable-Agroforestry (VAf), the integration of vegetables in tree-based systems or vice versa, offers multiple benefits, including provision of micronutrients to the diet of rural communities and enhancement of on-farm biodiversity and environmental sustainability. Thus, VAf is a viable farming system in the uplands; however, its viability is constrained by various factors, including the inability of smallholders to invest in the system, inadequate institutional structures for facilitating information flow, and lack of market incentives. Policy incentives are thus needed to stimulate smallholder investments in VAf system. Correspondingly, disincentives to adoption must be identified and addressed, if smallholders are to adopt the system. In this study, we assumed that farmers are disproportionately benefiting from national-level policies, in that, targeted policy incentives are needed if smallholder investments are expected to have significant impacts on rural livelihoods and the environment.

This paper is a synthesis of studies conducted for the Philippines and Vietnam, which are reported in Catacutan and Duque-Piñon (2007) and Dang Thanh Ha and Le Thanh Loan (2007), respectively. It discusses the “incentives and disincentives” of VAf-related policies at the national level, in the context of small farmers.⁴ It concludes by rationalizing the need for adequate policy responses at both national and local levels, to encourage smallholder investments in VAf. Throughout this paper, we used “smallholders”, as a general term for small farmers defined by the Philippines’ Magna Carta for Small Farmers and for non-commercial farmers in Vietnam.

2.0 AIM, QUESTIONS AND METHODS

The study aimed to describe the policy environment of VAf in the context of smallholders. The study was guided by three key questions: 1) what national-level policy incentives exist to promote tree growing and vegetable production? 2) are there locally-crafted policies that promote VAf? and 3) what are the policy perspectives of local stakeholders in relation to VAf? An intensive review of key national policies and issuances related to tree growing and vegetable production was conducted.⁵ Incentive provisions and disincentives to smallholder investment in VAf were examined. Farmer interviews and focus group discussions with policy-makers were also conducted at different times, between January 2006 to December 2007 in the SANREM-SEA-TMPEGS focused sites: 1) the Municipality of Lantapan in southern Philippines (Figure 1); and 2) Binh Phuoc Province in southern Vietnam (Figure 2).

⁴ In this study, “policy instruments” are programs embodied in the policy to achieve its objectives.

⁵ A summary of policy incentives and disincentives related to VAf in both the Philippines and Vietnam are presented in Annex A in this report.

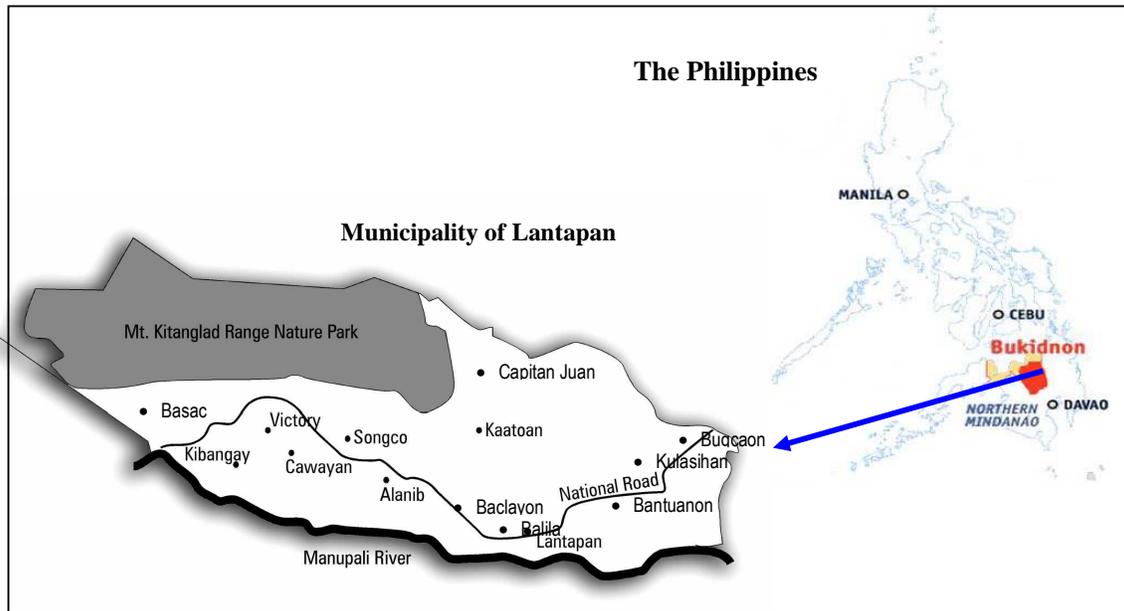


Figure 1- Philippines' local study site

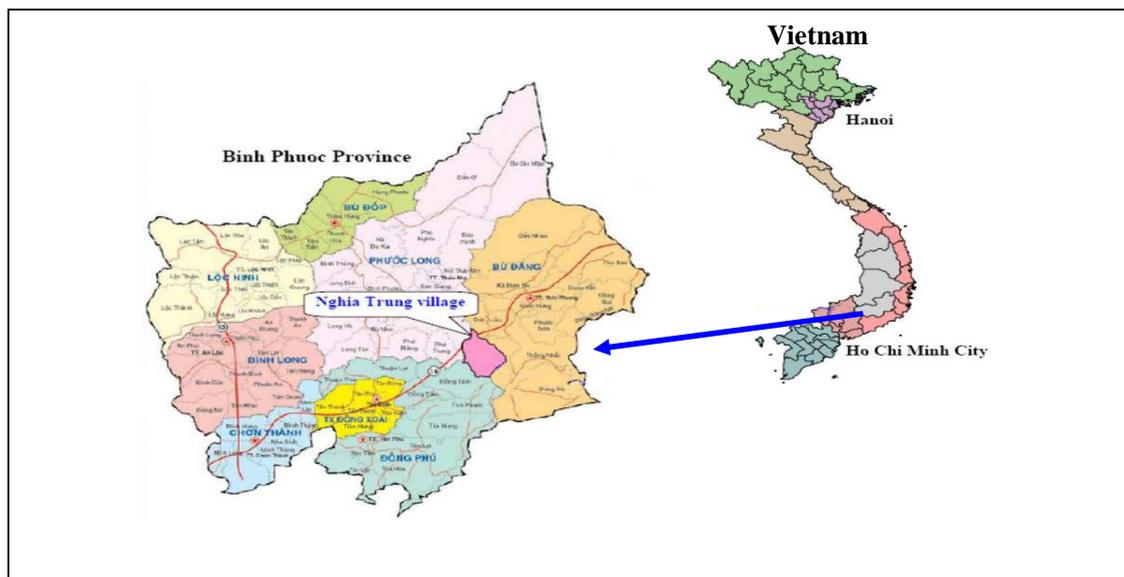


Figure 2- Vietnam's local study site

3.0 CONTEXT: SMALLHOLDERS AND INCENTIVES

3.1 Why Smallholders?

We were motivated by the seminal work of Tinsley (2004) on smallholder agriculture, which presents an analysis of global perspectives on smallholder agriculture, rationalizing the importance of appreciating and understanding the limited resources available to smallholders

viz a viz their roles in meeting societal expectations in terms of sustainable production of food and fiber and provision of environmental services.⁶ Accordingly, interest turned to small-farm families in less-developed countries because they form the most numerous farmer-group in the world (about 80% of the world's total). However, despite their number, they often do not represent the majority of the cultivated land, and because of their level of production⁷, their contribution to national food security is often less regarded. Often, national governments concentrate on large farmers when it comes to national food security and self-sufficiency issues, because large farmers have operational resources to manage their land, are assumed to be easier to work with, and are more able to respond to suggestions (Tinsley 2004). With this, Tinsley (2004) says that "assisting smallholders has become an effort for enhancing social welfare than substantially increasing national agricultural output". Because of this, some scholars (also activists) accused national governments of underestimating the enormous potential of smallholders to aggregate and meet the requirements of economies of scale of production, if they are enabled to do so.

Tinsley (2004) characterizes smallholders as individual entrepreneurs extracting a marginal living from their limited lands (typically between 1-2 hectares) and resources, and that they should be respected as such. He identifies the key determinants that define the various agricultural enterprises that smallholders undertake, namely physical, economical, social and biological. In particular, he categorized "government policy" as an economic determinant that defines the economic environment in which smallholders operate. He finds that government policies are normally intended to benefit smallholder producers, but often have ambivalent results. This happens because government policies normally encompass all other economic sectors, and without careful analysis of tradeoffs, they end up disfavoring one sector over another. Finally, Tinsley (2004) suggests reviewing government policies, particularly on the use of ceiling price policies, to enable small farmers harness their full potential to advance with viable agricultural enterprises.

Given the significant presence of smallholders, there is ample scope for government to lend special attention to this important sector, because not only that it comprised a significant segment in society, it is also most vulnerable to rapidly changing economic, social, political and environmental conditions.

3.2 The Meaning of Incentives

The concept of "incentive" is complex, and different definitions have been used in the literature. Its description is as varied as the people who have used it in different contexts. For Giger (1999), incentives refer to anything that motivates or stimulates people to act. In the context of project management, it is synonymously used with "motivation" and "reward" (Wideman 2002), but for development projects, incentives are referred as "bribes" or "sweeteners" (Smith 1998). Furthermore, in economics, incentives are either "financial or non-financial factors" that motivate actions (Laffont & Martimort 2001), and is interchangeably used with "wage", "compensation" and other forms of material incentives in the medical profession (Grant & Sugarman 2004). In other contexts, it refers to "incitement or inducement of action" (Enters 2001). These definitions imply that incentives contribute to, or serve as motivation to accomplish a task, which may lead to rewards.

⁶ In his book, "Developing Smallholder Agriculture"

⁷ Despite the growing participation of small farmers in the cash economy, their production level is still regarded at "subsistence" level, which means that their production output is without surplus, or is only equivalent to the level of meeting household consumption needs.

Incentives need not be always monetary. Incentives as motivation also entail emotional aspects, such as recognition and self-image. Hence, incentives are divided into two categories: remunerative and moral. Remunerative incentives are some form of financial or material rewards in exchange of acting in a particular way. Moral incentives on the other hand, are particular moves that are regarded as acceptable, which results to increase in self-esteem or recognition from the community. As shown, the term “incentive” is used so widely and indiscriminately that the boundaries of the concept have become blurred. It is only by maintaining a clear view of the context that its boundaries can be better understood and applied in specific setting. Finally, incentives are also used in the policy arena, as ingredients of various types of policy instruments (Enters 1999). An example of this is the tax concessions enjoyed by Australian farmers for better land management.

Incentives can either be direct or indirect (Enters et al. 2004). The distinction between the two is quite unclear. In some literature, direct incentives influence return to investments directly, while indirect incentives have an indirect effect in changing the overall situation. For example, subsidised farm inputs (e.g. seedlings, fertilizers, etc.) for smallholders are considered direct incentives, whereas general price reduction of farm inputs are considered indirect incentives as they lower the production costs, for instance, to VAF farmers. Enters et al. (2004) further categorized indirect incentives into “variable” and “enabling”. Variable incentives are economic factors that may be implemented to affect the net return of an investment. These include price stabilization, maintaining or increasing exchange rates, trade restrictions, regulating interest rates, and taxation adjustments and subsidies. On the other hand, enabling incentives are factors that affect decision-making with greater impact because of wider coverage. These include land tenure and resource use rights, provision of infrastructure, enhancing research and development, and many others. Figure 3 presents the types and examples of incentives.

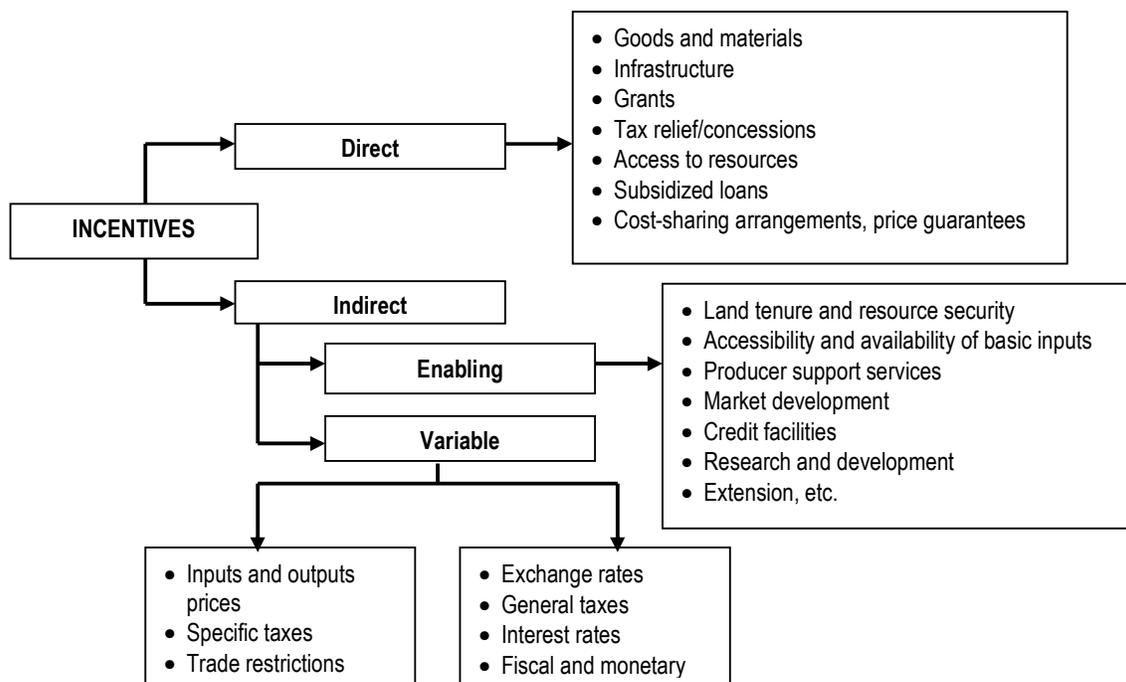


Figure 3- Types and examples of incentives
Source: Enters et al. 2004

Basically, incentives are external prompts of many forms provided by the government through policies and programmes to which farmers respond, either positively or negatively. On the other hand, disincentives refer to those that discourage, hinder, or deter positive responses or actions to occur. In this study, incentives are considered elements of policy instruments that increase the comparative advantage of VAF system, and thus stimulate adoption and investment among smallholders.

4.0 OVERVIEW OF GOVERNANCE AND POLICY-MAKING IN VIETNAM AND THE PHILIPPINES

The policy-making process in Vietnam follows a top-down approach with a unique combination of grassroots consultation and consensus building (Babu 2003; Article 03, Law No. 02-2002-QH11 by the National Assembly). Policy-making is integral to the National Party, where policy strategies are standardized and legislated through laws, ordinances and resolutions through the workings of the National Assembly, the State President, the Prime Minister, the Government of Vietnam (GoV), Ministries and relevant government agencies (Table 1). Provincial and district governments have no policy-making powers, but they implement, and respond to national policies by creating orders and decisions. The notion of “policy-making” at the district and commune level is thus non-existent. However, central and local authorities generate policy feedback, which is incorporated in subsequent policies (Conway 2004). This consensus policy-making model tends to result in compromised solutions; however the process of reaching a decision is tedious if not slow (Conway 2004). As a result, some opportunities for economic growth are inadvertently missed. A common critique to this process is the lack of reference to standard methods of policy analysis and to evidence-based data from the field (Babu 2003).

Table 1- The legal hierarchy of legal normative document

Legal normative document	Issued by
Constitution, Law, Resolution	The National Assembly
Ordinance, Resolution	The Standing Committee of the National Assembly
Orders and Decisions	The State President
Decrees, Resolutions and Directives	The Government, the Prime Minister
Circulars, Decisions and Directives, Resolution and Joint Circulars	Ministers, Heads of the ministerial-level agencies, Supreme Peoples’ Court, and the Supreme Peoples’ Procures
Resolution, Orders and Decisions	Provincial/Municipal People’s Council, Provincial/Municipal Peoples’ Committee
Orders and Decisions	District People’s Council, District Peoples’ Committee
Orders and Decisions	Ward/commune People’s Council: District Peoples Committee

Source: Law on Promulgation of Legal Instruments, 12 November 1996.

The process of policy change in Vietnam occurred swiftly in the last decade, but innumerable issues impede successful implementation. Many policies did not benefit from research and lacked implementation guidelines, resulting in mis-interpretation and poor execution by implementing agencies. Previous studies suggest that policy-making should be based on problem-solving and pragmatic analysis of intertwined issues affecting poor people, and impacts should be evaluated at different levels. A broader analysis of challenges and opportunities that globalization, privatization, and liberalization present to the agriculture and rural development sector was also suggested (Babu 2003).

The Local Government Code (LGC) of 1991 marked the departure of the Philippine government from centralized governance to decentralization and devolution of functions to local governments. Local governments units (LGUs) were created as partners of the central government in nation-building by handling powers of rule-making, income generation and political administration. LGUs are categorized into three levels: 1) provincial governments; 2) cities and municipal governments; and 3) village governments (Figure 4). National policies such as decrees and acts, executive and administrative orders, circulars and memorandum on the other hand, are passed through the Office of the President, the house of Congress and Senate, and national government agencies (Figure 5). National-level policies provide a legal basis, an enabling environment, and a sense of national direction and purpose, while LGUs, in consonance with the principles of the Constitution of the Republic, promulgate local policies that address local needs, thereby contributing to the achievement of national goals.

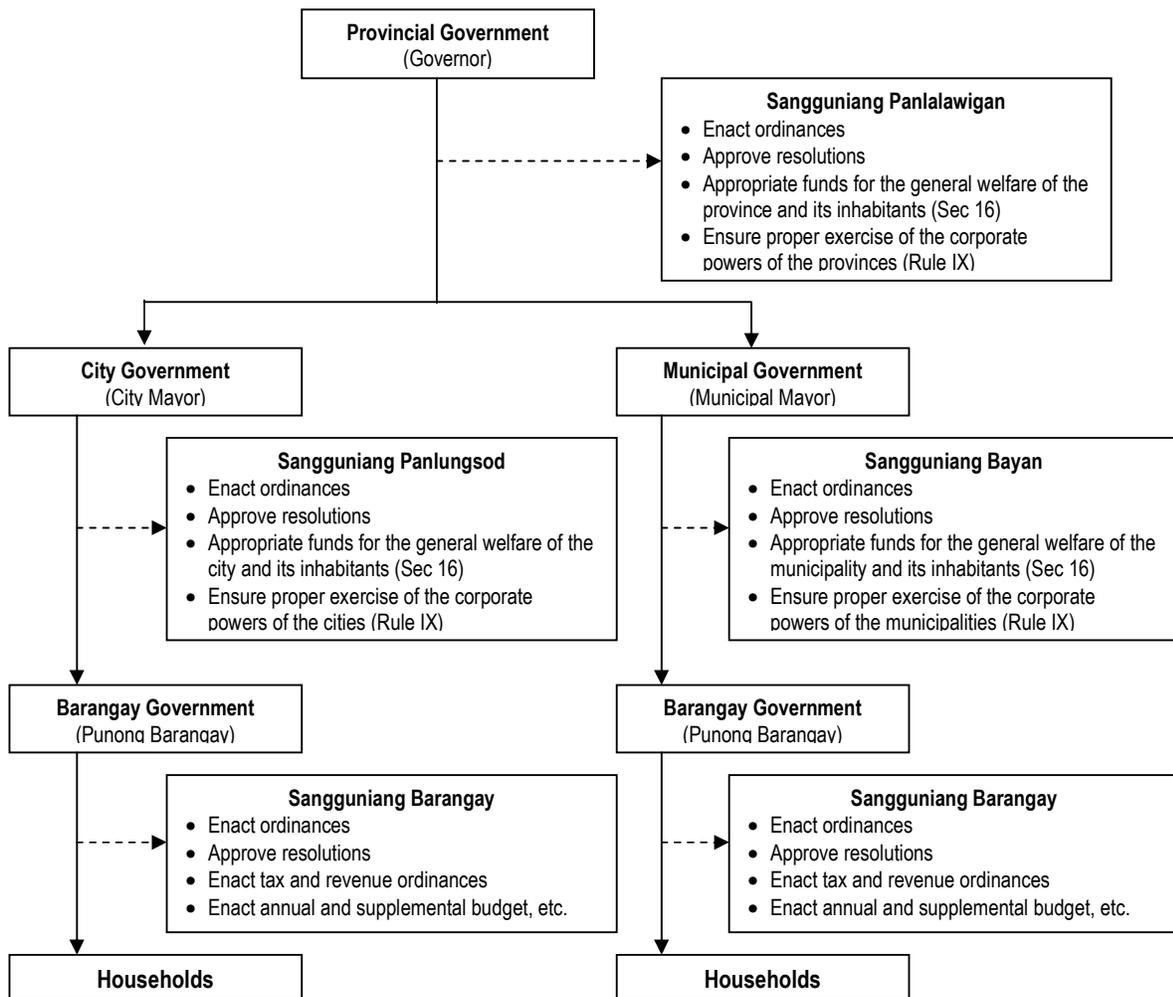


Figure 4- Governance structure of local governments in the Philippines

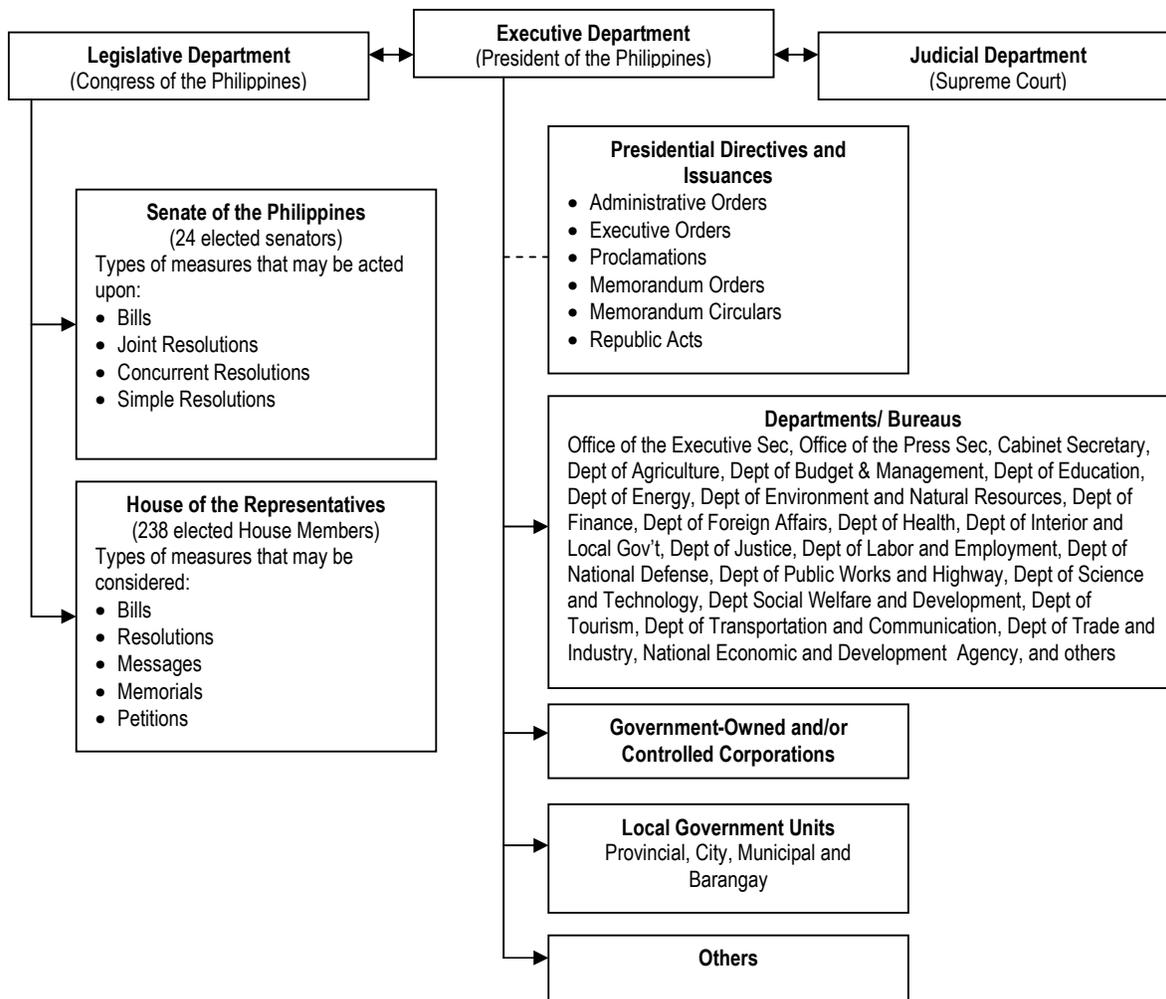


Figure 5- Governance structure of the Philippine Government

5.0 OVERVIEW OF THE VEGETABLE INDUSTRY AND TREE GROWING IN THE PHILIPPINES AND VIETNAM

5.1 Vegetable Production in the Philippines

Demand for vegetables domestically and abroad is expanding, and organic vegetables command better price. There is an off-season vegetable export window from Asian neighbors during the cold season, and the increasing number of Filipinos living abroad also created markets for indigenous vegetables. However, vegetable production in the Philippines is hampered by numerous problems, including high costs in controlling pest and diseases, lack of quality seeds, high cost or inavailability of post-harvest equipments, low adoption of post production technologies, inadequate storage facilities, unstable prices, and limited market access particularly for smallholder producers.

Despite these difficulties however, the vegetable industry, particularly in Mindanao, in the southern Philippines⁸ have successfully “break-in” the domestic and export markets. In 2002, Mindanao’s share of the country’s total vegetable production was 42 percent. In 2005, the total area planted to vegetables was 35,390 hectares with Region 10 (northern Mindanao)⁹ having the largest planted area of 14,263 hectares and Region 11 (southern Mindanao) with 9,099 hectares, respectively. In the same year, Region 10 marked a total vegetable outflow of 280,271 metric tons, and contributed 62 percent to the overall volume of vegetable production in Mindanao (Figure 6). In terms of over-all demand and supply, Region 10 marked a surplus of about 352 percent. Surplus commodities include carrots, tomato, white potato, cabbage, squash and gourds, and were shipped to major cities throughout the country¹⁰ and as far as Japan.

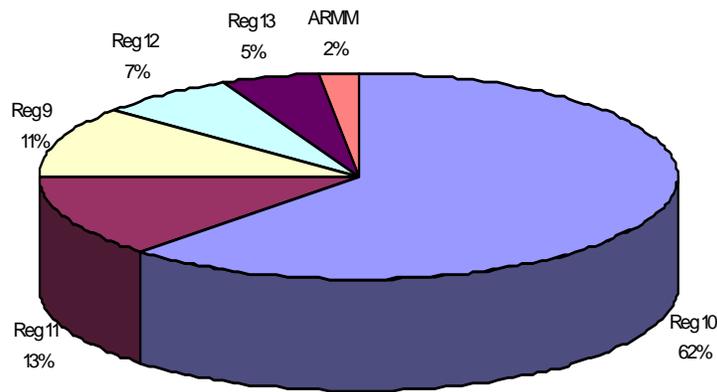


Figure 6- Vegetable production in Southern Philippines
Source: DA Regional Field Units 2006

In light of this huge potential, both in the domestic and international markets, the vegetable sector needs strategic investments in terms of providing technical assistance for producers to improve production techniques and maintain product quality. Post-harvest facilities, better roads, and more access to various credit and institutional market infrastructures are needed before the vegetable industry can successfully percolate in the export market.

5.2 Forest Management and Timber Production in the Philippines

Historically, all of Philippine forests were government-owned, but successive policy reforms have led to the transfer of management and ownership of production forests to the private sector, communities, and people’s organizations, especially indigenous peoples through various kinds of tenure instruments. To encourage private-sector investment in forest plantations, Socialized Industrial Forest Management Agreements (SIFMA) and Industrial Forest Management Agreements (IFMA) were implemented through performance bonds (from 1996 to 1999). In 1996, the Philippine government launched the Community-based Forestry Management (CBFM) program, as a national framework for forest management with strong emphasis on community participation in many forest development

⁸ The island of Mindanao

⁹ A region within Mindanao where the municipality of Lantapan, the local study site is located.

¹⁰ Metro Manila, Cebu, Iloilo, Bacolod, Bohol, Tacloban, Dumaguete, Ormoc, and key cities in Mindanao

activities. Furthermore, President Arroyo initiated the Green Philippines Program in 2005, which aimed to plant 20 million trees across the country. Tree planting activities have been integrated in various programs, including protected areas restoration, watershed rehabilitation, agroforestry development, plantation establishment, roadside planting and urban forestry, and mangrove planting. In light of government devolution, LGUs share the responsibility of managing forestlands within their administrative boundaries.

However, despite government efforts to promote tree planting, the Philippines' timber industry has remained undersized and volatile. From 2000 to 2007, log production has been unsteady for sawn log/veneer, pulpwood, and poles and piles. 2006 hit the highest production record of 1,035,000 m³ but this dropped to 803,000 m³ immediately in 2007. The worst case was recorded in 2003, with log imports reaching 787,000 m³. For timber, 2004 recorded the highest production with 386,000 m³ while 2007 had the least, with only 282,000 m³. In aggregate terms, the supply and demand ratio of timber in the country is hardly traceable due to lack of systematic monitoring on both sides. In some regions however, the supply and demand scenario is much clearer, for instance, northern Mindanao has recorded a continuing deficit and a growing demand of timber since the last decade. In 2003, the annual log requirement of regular sawmill, mini-sawmill and plywood plants in the region was 528,575 m³ while log production was only 35,166 m³. This large deficit means that many sawmill plants were operating far below their capacity. This does not include shortage of raw materials in other processing mills, including pulp and paper mills, furniture and matchstick producers. Nonetheless, wood processors have modified their operations to deal with large deficits in timber supply, by linking more closely with smallholder tree growers to supply them with logs of *Gmelina arborea* and *Paraserianthes falcataria*. There is thus, a steady market for various types of tree products from smallholder agroforestry if smallholders are encouraged and supported.

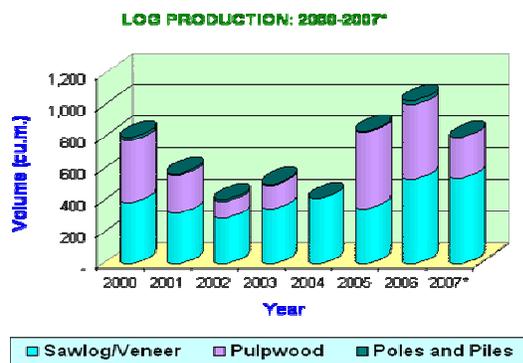


Figure 7- Log production 2000-2007
Source: FMB-DENR 2008

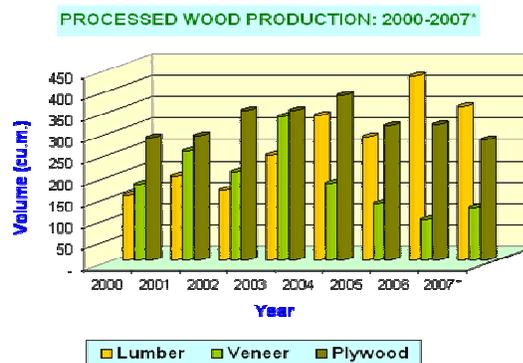


Figure 8- Processed wood production 2000-2007
Source: FMB-DENR 2008

5.3 Vegetable Production in Vietnam

In Vietnam, the total vegetable production area covers only a small proportion of the total cultivated area. The shares of vegetables and beans in total cultivated areas were 7.15 percent in 1999 and 8.48 percent in 2006 (Table 2). The largest area planted to vegetables are the Red River delta with 29.6 percent in total output and 24.9 percent in total area, and the Mekong delta with 28.3 percent outputs and 25.9 percent in total area (Vegetables–Flowers–Fruits of Vietnam, 2006).

The dominant industrial crops in Binh Phuoc province are coffee, cashew, pepper and rubber. Vegetable production is limited only to a small proportion of most household farms. Although there have been a steady annual growth in terms of planted area and overall outputs of fruits and vegetables (F&V) (Table 3), the value of outputs remained stable in 2003-2006. The percentage in total cultivation value has declined from 2.35 percent in 2000 to less than one percent (0.93) in 2006. The same trend is happening in Bu Dang district (Table 4).

Table 2- Outputs and areas planted to vegetables and beans in Vietnam, 1999 - 2007

Year	Planted area (‘000 ha)	Output (‘000 ton)	Output* (‘bil VND)	% in total cultivation value
1999	459.1	5792.2	6179.6	7.15
2000	464.6	5732.1	6332.4	6.97
2001	514.6	6777.6	6844.3	7.37
2002	560.6	7485.0	7770.8	7.92
2003	577.8	8183.8	8030.3	7.89
2004	605.9	8876.8	8284.0	7.78
2005	635.8	9640.3	8928.2	8.27
2006	853.4	10,300.2	9400.9	8.48
2007	910.0	11,153.1		

Source: MARD; *: constant price in 1994 (Note: separate statistic data on vegetable is not available)

Table 3- Outputs and areas planted to vegetables and beans in Binh Phuoc Province, 2000-2006

	2000	2003	2004	2005	2006	2007
Planted area (ha)						
+ Vegetables	1,342	2,158	2,050	2,326	2,348	2,489
+ Bean	5,330	4,052	4,053	3,988	3,616	2,943
Output (‘000 ton)						
+ Vegetables	10,320	15,942	14,859	16,634	16,993	18,190
+ Bean	3,350	2,593	2,601	2,627	2,383	1,978
Output (‘mil VND)						
+ At constant price in 1994	26,786	28,210	27,232	29,034	28,193	NA
+ At current price	38,160	39,471	37,895	40,713	51,761	NA
% in total cultivation value						
+ At constant price in 1994	2.07	1.41	1.17	1.14	1.05	NA
+ At current price	2.35	1.64	1.15	0.91	0.93	NA

Source: Binh Phuoc GSO, 2006; NA= not available

Table 4- Area and outputs planted to vegetables and beans in Bu Đang District, 2000-2006

Year	Planted area (‘000 ha)		Output (‘000 ton)	
	Vegetable	Bean	Vegetable	Bean
2000	298	404	2,442	237
2003	291	269	2,633	186
2004	246	294	1,868	196
2005	224	267	1,668	177
2006	230	327	1,636	220

Source: Bu Dang GSO, 2006

Overall, the export volume of F&V in Vietnam is lean. Even before the country joined the ASEAN Free Trade Area (AFTA) in 1995, the export value of F&V to Russia and other socialist countries has always been low. Exports started only in 1995, reaching 330 million USD earnings in 2001, however this declined in subsequent years; F&V contribution to the

total agricultural export is overall decreasing (Table 5). Vietnam’s main export in horticulture products are cabbage, mushroom, dried bamboo shoots, and spicy vegetables like saffron and hot pepper, mango, dragon fruit, pomelo and lychee. Currently, the main export markets are Taiwan, China, Hong Kong, Malaysia, Singapore and Indonesia whose requirements for food safety and quality are not as strict as the European countries. But with a saturated Asian market, some Vietnamese exporters are now slowly penetrating into the European markets.

However, there is also a huge domestic market for F&V. The study of IFPRI (2002) revealed that most Vietnamese households consume a substantial volume of F&V as part of their daily diet (93 percent households). The highly consumed vegetables and fruits are water convolvulus, tomato (88%) and banana (87%). On average, a household consumes 71 kg of vegetables and fruits per year.¹¹ F&V are produced mainly by small farmers whose farm size is less than a third of a hectare (0.3) for vegetables and less than one hectare for fruits.

Table 5- Vegetable and fruit exports in Vietnam (1000 USD)

Year	Agricultural products	Fruits and vegetables	%
2000		213,100	
2001	2,139,293	329,972	15.42
2002	2,079,829	201,156	9.67
2003	2,361,776	151,470	6.41
2004	3,312,849	178,840	5.40
2005	4,190,275	235,482	5.62
2006	5,081,378	259,082	5.10
2007 (est)	6,223,000	298,000	4.79

Source: GSO (2006), (Note: separate statistic data on vegetable is not available)

To harness the emerging opportunities of the F&V industry both domestically and abroad, several issues and crucial challenges need to be overcome:

- *Scattered and small scale production.* The government should take extra effort in linking and building farmer capacities in collective marketing, and assigning areas of crop specialization in order to meet economies of scale, by poor farmers who are sporadically located in remote parts of the countryside.
- *Lack of high quality varieties of fruits and vegetables.* This issue indicates the need for increased efforts in research on promising vegetable lines, and improved linkages and collaboration between and among extension agencies, research, producer groups, and regulatory bodies.
- *Proactive product standardization and certification.* The Viet-GAP certification process is still in its embryonic stage, and needs more push from concerned stakeholders. Firstly, local producers need to benchmark their products in terms of international standards like the EUROGAP in order to permeate the international markets.
- *Improved post-harvest management and adequate infrastructure.* To take advantage of the promising F&V export industry, product quality should be maintained from the supply chain, by increasing government investment on modern post-harvest facilities, including packaging, handling and transportation. Although exports have substantially increased, F&V exporters are hampered by high marketing costs. Some exporters were tempted to apply chemicals to preserve product quality, but without proper

¹¹ Three quarters of these are vegetables.

advice on chemical preservatives, their actions lowered product quality, and considerably increased the overall cost.

In light of the above challenges, the GoV has created a number of policies that aim to support the growth of the F&V industry, including policies on safe production, reduction of negative environmental externalities, and acquiring international certification. These policies are the government's response to public requirements on food safety, and its commitment to building farm enterprises and enabling farmers to become active players in the process of integration in the World Trade Organization (WTO).

5.4 Forest Classification and Management in Vietnam

Significant changes in forest management occurred following the French departure in Vietnam in 1954. Forestlands were nationalized through the creation of State Forest Enterprises (SFEs). Reconstruction after the war resulted in massive logging to provide materials for rebuilding houses, schools, hospitals and other infrastructure. The rapid population growth necessitated clearing of large areas of forests for agriculture. This resulted in over-exploitation of forests, since production quotas were set, based on the State's needs rather than the forests' productive capacity.

Beginning 1968, local governments were given authority over forest management albeit; emphasis remained on expanding the size of industrial forests, watershed protection, and agricultural production. The role of local governments was strengthened with the enactment of the Forest Protection Law in 1975, which regulated forest exploitation and encouraged replanting and protection efforts.

Historically, about 60 percent of the country's total land area is classified as forests, however recent estimates of the Ministry of Agriculture and Rural Development (MARD) showed a significant reduction to 37 percent or 12.6 million hectares, covering about 10.3 million hectares of natural forest and 2.3 million hectares of production forests. Today, the forests in Vietnam are classified into three categories: 1) special use forest (6.2 M hectares of national park, natural conservation, historical area, etc.); 2) protection forest (1.9 M hectares of watershed, sandy, sea wave, etc.); and 3) production forests (4.5 M hectares). Forests are home to many Vietnamese ethnic groups who contributed to the country's post war reconstruction efforts by supplying many valuable forest products and providing income to the national treasury.

Under the direction of the National Party and the Government, and in collaboration with various sectors and local communities, the forestry sector has so far, been changing in a positive direction, shifting from exploitative forestry to social forestry, with forest protection and development as core tasks. Forest management has further improved through a legal framework that support sustainable forestry, and through strengthened decentralized forest governance. Today, it is claimed that the forests are better protected and developed, than they were in the past, with supplementary economic incentives to improve the livelihood of rural mountain regions, which in turn, ensures national security.

6.0 RESULTS AND DISCUSSIONS

6.1 The Policy Context of Vegetable-Agroforestry in the Philippines

6.1.1 Major Policies in the Forestry Sector

From the comprehensive forest policies in 1970s to the more nascent policy reforms, an assortment of “incentives” has been used by the government to entice private sector and civil society participation in forest development undertakings.

Since 1970s, a repertoire of policy instruments has been promoted, beginning with the Forest Occupancy and Communal Tree Farm programs, to the most comprehensive forest policy which was enacted through Presidential Decree (PD) 705 in 1975. PD 705, otherwise known as the Revised Forestry Code of the Philippines contains a bundle of incentives, and calls for a nationwide reforestation effort, through partnerships with the private sector and civil society. Several policy instruments followed, including the National Forestation Program¹², Community Forestry Program, Forest Land Management Agreement, and the Integrated Social Forestry (ISF) Program. The latter was more popular, since it provided land tenure through a Certificate of Stewardship Contract (CSC) to forest occupants for a renewable period of 25 years. Foreign donors funded many of the projects implemented in line with the ISF program (Pulhin et al. 2004).¹³ These projects focused on small-scale agroforestry to meet the livelihood needs of smallholders while addressing deforestation and environmental degradation. As mentioned earlier, the government later adopted the CBFM as a national strategy for sustainable forest management, which involves agreements entered between the government and local communities (Nera 1997), in addition to the land tenure security that was first covered under the ISF program. In other words, both ISF and CBFM provided land tenure security to forest occupants. The only difference between the two is that, the ISF used the individual approach and issued individual contracts, whereas the CBFM program employed the group approach, not only to remove individual transaction costs but also to promote collective management and community empowerment.¹⁴ Subsequently in 2005, the Upland Agroforestry Program (UAfP) was launched, with the aim of promoting equitable distribution of opportunities, income and wealth in developing open and unproductive forestlands through agroforestry.

6.1.2 Incentives and Disincentives in the Tree Sector

In summary, the government’s policy measures have incentive tendencies which had evolve from direct to indirect (Figure 9). The provision of direct incentives was common from 1970s to 1980s, but beginning in late 1990s, the notion of incentive gradually shifted to more indirect ones, such as comprehensive land and resource use rights through various land tenure instruments.¹⁵ Security of tenure is perhaps, the most significant incentive provided to smallholder farmers. Indirect “enabling” incentives (e.g. land tenure) have created an attractive environment for investments towards 2000. Early government efforts in engaging communities have focused on providing direct material and financial incentives (e.g.

¹² A project implemented with funding from the Asian Development Bank and the Philippine Government (Pulhin et al. 2004), which contracted forest communities for reforestation activities for a period of three years. After the contract period, the area was to be returned to the Department of Environment and Natural Resources.

¹³ Ford Foundation, World Bank, USAID and GTZ

¹⁴ The CBFM program issued Community-Based Forest Management contracts.

¹⁵ Land tenure is considered as an indirect “enabling” incentive.

distribution of free planting materials and fertilizers, subsidized loans, and wage-based employment and contracts). Giving free inputs was favourable to government because these are straightforward incentives, are easy to monitor, and are less complex compared to grants and subsidized loans, which involve transaction costs. However, material incentives (e.g. free seedlings) do not always stimulate planting as effectively as cash grants because the latter is more attractive and provide more flexibility than bulky material inputs. However, in general, direct incentives offer more scope for abuse— free seedlings and vegetable production inputs were resold, while cash grants were used for other purposes. Cash grants and concessionary loans became popular during the ISF period, which was followed by direct financial incentive in form of tax concession. Tax breaks have been relatively successful because this helps to bridge the long gap between the initial plantation investment and the harvest revenue collection. However, only rich farmers and industrial plantations benefited from cash grants, concessionary loans and tax holidays.

Learning from government experience, the private sector (non-government organizations [NGOs], etc.) picked up where the government failed. The private sector gradually changed the use and provision of incentives, which were perceived to be more of a dole out (e.g. free inputs, to grants and loans, to tax concessions and joint ventures), towards creating an enabling environment, leading to more indirect incentives.

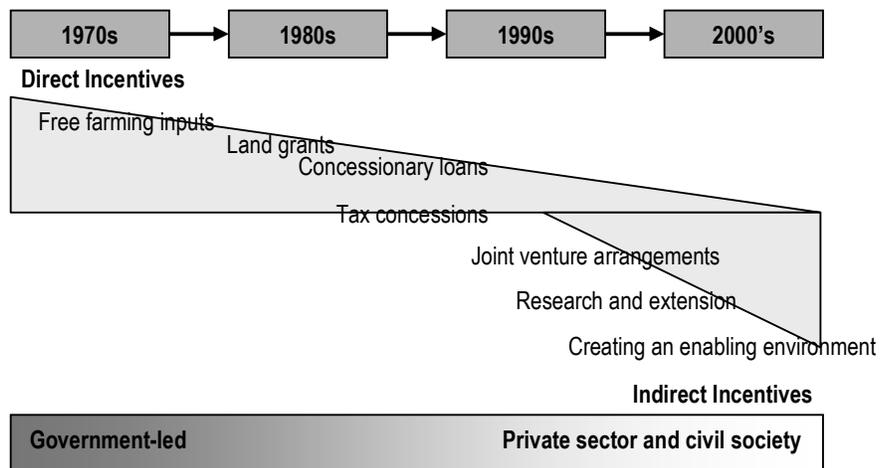


Figure 9- Shift from direct to indirect incentives

However, despite the variants of policy incentives, disincentives for small farmers persist. For instance, under the ISF program, the minimum forest area that can be applied by a farmer is 100 hectares for agroforestry and 10 hectares for tree farming. Obviously, only a rich farmer or an industrial company can develop such a large forest area—by default, small farmers are thus excluded from this incentive. In the case of CBFM areas, even if poor farmers received credit assistance, the lack of regular cash flow between planting and harvesting often leads to problems in liquidating the investments. The initial technical and financial support provided by the government was also inadequate to make small farmers self-sufficient. There were also uncertainties about future prices of timber and other tree products. Furthermore, many of the awarded CBFM areas were either logged-over, grasslands, or relatively forested, and converting these areas into agroforestry or tree farms requires immense capital. Small farmers are eking out a living, and could not incur the

upfront costs of clearing the area for crop production (unless, slash and burn is allowed), much more, to procure seeds or seedlings to establish an agroforestry farm; hence many farmers end up idling the area. Many policies have more disincentives than incentives, and much less designed for smallholders. One example is the UAfP, where the smallest area that can be applied by a farmer should be no less than 50 hectares. The applicant is also required to submit a proof of financial and technical capability to undertake agroforestry, and should incur the costs of survey, mapping, and formulation of agroforestry development plans. In the end, the national government is entitled to a share of the gross revenue and other benefits from the agroforestry farm.

In sum, despite the stable demand for various tree products in the domestic and export markets and the well-intended forest policies, some disincentives could not be removed, such as uncertainty of timber prices at both national and international markets, the large capital outlay required in establishing plantations or agroforestry, and the complex process and transaction costs involved in obtaining permits for cutting, transporting and processing timber. If these are not addressed, tree growing will remain a risky investment for smallholders.

Nevertheless, the policy environment at the national level is by and large, conducive to widespread investment in reforestation, farm forestry or agroforestry development. Without hinting on the government's inefficiency in policy implementation, the shift from direct to indirect incentives manifest a reasonable dedication on the part of government, to improve its policy practice. However, disincentives and/or gaps remain, due to the inherent weakness of some policies¹⁶ not to mention, the ineptness of the government to sustain implementation. The underlying reason for this is the overall weakness of the state, perpetuated by its political economy—this however, is beyond the scope of this study.

6.1.3 Major Policies, Incentives and Disincentives in the Vegetable Sector

Similar to the tree sector, the vegetable industry is also undergoing change, with incentives largely framed within changing international trade regimes. This change entails both opportunities and challenges, particularly for smallholder producers. Smallholder producers in particular, are adversely affected, as market requirements in terms of product standards have become more stringent and trade barriers and trade-distorting support in agriculture remain. The Department of Agriculture (DA) consulted the private sector and identified the following challenges and opportunities in promoting high value crops (HVC):¹⁷

1. Lack of appropriate and quality planting/genetic materials;
2. Need to upgrade and adopt viable and sustainable technologies for both fresh and processed products;
3. Huge post-harvest losses due to lack of appropriate post-harvest handling facilities; cold chain distribution systems as well as processing and packaging technologies and facilities;
4. Huge marketing costs due to high transportation and handling costs;

¹⁶ Some policies are by nature “selective”, favoring more to rich farmers and commercial growers than to smallholders.

¹⁷ Based on the High Value Crop Development Act of 1995, HVC include crops other than traditional crops, which include, but are not limited to the following: coffee and cacao, fruit crops, root crops, vegetable crops, legumes, spices and condiments, and cutflower and ornamental foliage plants.

5. Imperatives of matching government support services with private sector needs;
6. Inadequate market information particularly on gaining entry to local national and export markets;
7. Need to expand protocols with foreign markets, particularly removing non-tariff trade barriers;
8. Need to develop internationally acceptable grades and standards as well as sanitary and phyto-sanitary (SPS) measures;
9. Need for focused and aggressive domestic and export market promotions;
10. Need to expand and institutionalize linkages between and among producers, financiers, processors/marketers and consumers;
11. Urgency to strengthen cooperatives through incentives and opportunities that draw them towards achieving the economies of scale required by buyers, and forging producer linkages with users of HVC;
12. Need for favorable competitive foreign exchange, interest, wage and taxation policies;
13. Exigency of establishing consumer protection policies covering food safety, manufacturing, and distribution standards;
14. Need to work within or make progressive and investment-friendly, the rules and regulations governing the Comprehensive Agrarian Reform Program and devolution of public administration; and
15. Need for responsive government bureaucracy and governance to private sector needs.

As part of government's risk management strategy, the Crop Insurance Law (PD 1467) was enacted in 1989 to protect agricultural producers against loss of crops, livestock and agricultural assets on account of natural calamities, plant pests and disease, and other hazards. The initial coverage was cereals and grains, tobacco, and high value commercial crops (e.g. temperate vegetables), but later expanded to credit guarantee, loan repayment protection, and comprehensive life and accident insurance for agricultural producers and stakeholders. The policy embodies direct incentives to vegetable growers and farmers in general, but the disincentive remains in the inability of small farmers to cash-out the premium payment. The Philippine Crop Insurance Corporation administers this program, but with very little capital, a good proportion of the targeted 5.2 million poor farmers in remote areas have not been served, and instead, it focused on farmers who are patronizing formal credits with financing institutions, such as Land Bank of the Philippines. The Crop Insurance turn out to be selectively serving richer farmers, in the same way, as government subsidized credits favored large or rich farmers, since small farmers do not have the capacity to meet the credit requirements.

The vegetable sector is also covered by the Seed Industry Development Act of 1992, which supports the development of the seed industry by encouraging the private sector to engage in seed research and development (R&D), and in mass production and distribution of good quality seeds, and protects the local seed industry against unfair competition with imported seeds. Key incentives include: 1) entitlement to technical assistance on seed technology, procurement of seeds, and access to research results; 2) exemption from duties and taxes of imported equipments during the first five years of operations of businesses owned by Filipino individuals, farmers organizations, cooperatives and corporations; and 3) 200% deduction from gross income for expenses incurred in R&D and extension activities by private Filipino seed producers. This policy is obviously beneficial for richer farmers and export/import businesses. The disincentive is that, there is no incentive for using locally-innovated seed processing equipments, which can be developed by smallholder farmers if they are being supported.

The General Agreement on Tariffs and Trade (GATT) aims to open market access worldwide and reduce distortions in world commodity prices. It was expected that exporting countries, like the Philippines, will benefit through greater trade opportunities and better agricultural incentives. It promises to pursue economic liberalisation of both developed and developing countries. For the agriculture sector, the major areas that GATT has promised to work on are: 1) expanding market access; 2) reducing distortions in agricultural production; 3) minimising international dumping of agricultural exports; and 4) removing biases in SPS measures (David 1994). For the Philippines however, only the expansion on market access and harmonization of SPS apply.

There were many apprehensions from different sectors when the Philippines joined the WTO in 1995 (Reyes 2007). According to Pascual and Glipo (2002), the Philippine membership into WTO imperilled the country's food security and exacerbated long-running social inequities. In response to WTO, Republic Act (RA) 8178 on Agricultural Tariffication provided the replacement of quantitative restrictions on agricultural products with tariffs at an initial bound rate of 100 percent for sensitive products. In 2004, this was reduced to 40-50 percent and was offered as the final bound rates.¹⁸ Because of this, the entry of imported goods outpaced the products of small farmers; hence RA 8178 repealed the aim of the Magna Carta for Small Farmers, which is to protect the products of small farmers. While technocrats argued that the Act will open the global market and will provide benefits to the vast majority of farmers, some farmer groups were vocal in opposing the move, arguing that since poverty is highest in the agriculture sector, the government's decision was premature, in that, poor farmers have so much to lose in a liberalised economy. In response to these arguments, the government provided various types of incentives, such as provision of irrigation, farm-to-market roads, post-harvest facilities, credit, R&D, marketing infrastructure and information, training and extension services and other support to the agricultural sector.

However, after more than a decade of membership in the WTO, Philippine agriculture is still stifling its ability to increase its contribution to the national economy. Agricultural imports have outpaced exports, transforming the country into a net food importer. For vegetables alone, imports have grown sevenfold from 1996 to 2002 (Macabasco 2004), putting competitive pressure on smallholder producers. This is due to the reduction of tariff rates and the changing market dynamics of the vegetable supply chain. Imported vegetables are said to be cheaper by 30-50 percent compared to locally-produced ones, which are better packed and generally, of better quality. These attributes make them more attractive to local consumers. Another challenge is in responding to non-tariff barriers in terms of environmental and health requirements and SPS measures, which are impeding local products to enter the international export market.

With a tottering agriculture sector, the AFMA was signed into Law in 1998.¹⁹ The new Law aims to promote countryside growth by providing credit assistance to small farmers and fisher folks, and support R&D, particularly on developing irrigation and water management technologies. It also provides for the identification of Strategic Agriculture and Fishery Development Zones (SAFDZ). However, many SAFDZ plans were not materialized because they were mostly developed without sufficient stakeholder consultation, and were extremely expensive to implement without external funding. In the end, AFMA did not fully take-off as the national government could not even meet the annual budgetary requirements

¹⁸ Corn, sugar, onions and garlic are considered sensitive products.

¹⁹ Republic Act No. 8435

of the DA (Pascual & Glijo 2002). To encourage agricultural modernization through private investments, AFMA was amended through RA 9281 in 2004, providing for an extension of tax incentives to producers who import agricultural inputs and equipments. The extent to which this has been applied remains to be seen, but definitely, poor farmers did not benefit from the amended Law.

Prior to this, the HVCDA (RA 7900) promotes high value crop production and provides a market orientation in developing the industry. In support of HVCDA and AFMA, President Arroyo launched the program, “Gintong Ani-High Value Commercial Crops Program” (GA-HVCCP), which outlines the national framework for harmonizing local initiatives with international market opportunities. The program adopts a major shift towards market-oriented production systems by introducing the Commodity Producers Linkages with Users as the basic reference for addressing the gaps in the commodity marketing systems. This includes commercial testing and technological demonstration of integrated systems²⁰ and privatization of post-harvest and processing facilities.²¹ In addition, the program adopts a “home consumption-led” strategy to promote backyard production of fruits and vegetables. F&V were identified as a cheap source of healthy food that improves the nutritional status of Filipino families. While there are specialty F&V for high end markets, there are more that can be easily grown for home consumption and/or marketed to average consumers (DA 2006). The five program components of GA-HVCCP entail many forms of direct and indirect incentives to vegetable producers.²² The program however, requires huge investments and the only way to make this possible, is to generate counter-part funds from LGUs.

Moreover, the guidelines on Good Agricultural Practices (GAP) were adopted to encourage agricultural exports (Hobbs 2003).²³ Basically, GAP certification involves the setting of standards on agricultural producers to promote sustainable agriculture on the basis of environmental protection, improved food quality and safety, and improved production techniques. It aims to put premium value to standard products, open up the export market, and improve the supply chain infrastructure. There are direct and indirect incentives attached to GAP, but there are also apprehensions that the newly set international guidelines will marginalize small producers because of the high costs involved in meeting GAP standards.

In 2005, DA passed the guidelines for GAP Certification of fruit and vegetables (Administrative Order No. 25). Compliance to GAP “standards” pertains to farm structure, environmental maintenance, farming practices and management, and diligent observation of the regulations on the certification. Upon compliance of the above, the producer can then apply for a GAP certificate, and can stamp the official mark, “GAP on vegetable farming” on the products. The direct benefit of the producer is the potential value-added opportunities and greater access to international markets. However, smallholders are constrained in complying with GAP standards because of the associated costs to adopting new production techniques, the additional labor and record-keeping requirements, and lack of resources for expensive environment-friendly inputs. Documentation also poses a problem because many smallholder

²⁰ This includes establishing techno-demonstration and commercial testing of agro-based oriented enterprises, post harvest and processing technologies. These can be transferred to the private sector including cooperatives under the various privatization modalities.

²¹ Facilities may be established and privatized under an appropriate modality from among the following: Build-Operate and Own, Build-Lease and Transfer, Build-Transfer and Operate, Build-Operate and Transfer Contract at and Operate, Develop, Operate and Transfer, Rehabilitate, Operate and Rehabilitate, and Own and Operate.

²² Including farmers that plant fruit trees classified as “high value” crops.

²³ GAP standards were initially developed by the FAO Committee on Agriculture.

farmers are illiterate. Without a comprehensive support system, meeting GAP standards by poor farmers will thus remain an exemption rather than a rule.

In addition to GAP certification, Organic Agriculture was promoted to put premium-value to organically-produced agricultural exports and local consumption products.²⁴ The potential economic and environmental benefits of organic farming are widely known to farmers, but generally, poor farmers are unwilling to lose their income when yields fall, during the initial adoption of organic farming techniques. In addition, the supply of organic inputs in the market is still limited, making them very expensive for small farmers. Currently, the organic farming sector remains relatively small covering only 2000 hectares or .02 percent of the total agricultural area (Vossenaar & Wyner 2004), making the country, a net importer of organic products. An obvious gap of the Organic Farming Law is that, it did not provide direct incentives and support to promote wider adoption of organic farming techniques. It did not also consider sustainable supply of organic inputs.

In sum, the policy environment of the vegetable sector is rapidly transforming due to changing international trade policies, but similar to the tree sector, smallholder producers are lagging behind the industry, despite their significant presence. The main disincentive to smallholder producers is the high costs across the value chain. The main challenge is removing both economic and policy barriers not only at the level of the producer, but within the whole vegetable enterprise.

6.2 The Policy Context of Vegetable-Agroforestry in Vietnam

6.2.1 Major Policies, Incentives and Disincentives in the Forestry Sector

In Vietnam, the most common policy incentives in the forestry sector are access to forest resources, land tenure and use rights, and participation in forest enterprise ventures such as ecotourism by forest dwellers. These incentives are stipulated in various declarations and circulars, which are discussed in turn.

6.2.1.1 Forest Allocation Program and Regulations

Prime Minister Decision No. 184-1983 embodies the Forestland Allocation Program where local people are either contracted as waged forest guards but without forest use rights, or given forest use rights through Land Use Certificates (Red Book) (Nghị undated), including rights to use, exchange, mortgage, lease and inherit the land. Recipients could also convert forests for agricultural production, receive technical assistance and access training and credit support from responsible agencies. However, the disincentive to forest families is that, some basic support such as start-up capital, extension services, and infrastructure, to develop forest areas were not available. Following this, agroforestry was promoted through the National Conservation Strategy in 1984.

Furthermore, Decree No. 02/CP allocated forestlands to various economic sectors for long-term management through sustainable forestry. This was followed by Decree 01/CP, which allocated agriculture, forestry and aquaculture production only to SFEs. Furthermore in 1998, through Prime Minister Decision No. 245/QD-TTg, local authorities were mandated to protect forests within their jurisdiction. In the same year, Prime Minister Decision No. 661/QD-TTg (Program 661) (1998-2010) set the objectives, tasks, and policies for the

²⁴ Through Executive Order 481 issued in 2005.

establishment of a new 5-million hectare forest (5MHRP). Article 2 in this Decision states that the “people are the driving force for the establishment, protection and regeneration of forests and are entitled to enjoy benefits from forest-related activities”. This was to be achieved through forestry projects, education and direct involvement of local people. It provided incentives, especially employment, planting materials, extension and technology transfer, investment and credit for developing production forests, management of forest tree seeds, and collateral for taking loan, tax favors and land lease (Jong et al 2006).

In 1999, Government Decree No. 163/1999/ND-CP provided for the allocation and lease of forestlands to organizations, households and individuals for long-term forestry purposes. The regulations on forest protection and development by villages and communities were developed through MARD Circular No. 561/1999/TT/BNN-KL, which includes provision of credit and extension services and opportunities for local people to participate in the management, protection and maintenance of forests.

In 2001, Prime Minister Decision 08/2001/QD-TTg issued regulations on the management rules of special-use, protection and production forests.²⁵ This was revised by Decision 186/2006/QD-TTg in 2006 and strengthened the Decision of Prime Minister 245/1998/QD-TTg, which stipulated the need to facilitate organizations, households and individuals to actively participate in forest protection and development. In the same year, Prime Minister Decision No. 178/2001/QD-TTg provided the rights and obligations of individuals and households involved in protection, forest management and reforestation. Farmers can already participate in the management of special use, protection and production forests by being contracted with forest owners (e.g. SFEs and Management Boards of special use and protection forests). They have the right to exploit forest and non-forest products within protection forests, and to decide the management and operation of their own plantations, and market the products freely. Farmers planting in fallow and denuded areas are given preferential taxation, as stipulated in the Law on Investment Encouragement. Timber sold from regenerative natural forests is not levied, as well as those from plantations (Jong et al 2006). Under Decree No 129/2003/ND-CP, farmers engaged in forest rehabilitation are exempted or granted with discounts in agricultural taxes, while commercial plantations were given a 50 percent tax reduction.

In 2006, Decree No. 23/2006/ND-CP defined the implementing rules of Forest Development and Protection Law. Management of each forest category, as well as the institutional structures were clearly identified in the Prime Minister’s Decisions No. 245/1998/QD-TTg and No. 186/2006/QD-TTg. The aim was to prevent illegal activities and facilitate organizations, households and individuals to actively participate in forest protection and development. The GoV also provided grants for R&D projects, education and awareness raising programs. Recently, several environment-oriented taxation programs were applied, such as reduction in import taxes for the installation of clean technology, and in sustainable extraction of forest and mineral resources, and others.

6.2.1.2 The “*doi moi*”

In 1989, Vietnam passed a reform known as “*doi moi*”, which is a shift from centrally-oriented planning to the use of a more market-oriented approach to planning (MARD 2004). Through the *doi moi*, some central government functions, particularly development planning were devolved to provinces and districts. Under the *doi moi*, large

²⁵ Defined in Article 72 on Forest Protection and Development Law.

tracks of agricultural lands were allocated to farmers, which resulted in significant increases in agricultural production.

6.2.1.3 National Forestry Action Plan

The National Forestry Action Plan of 1990 provided the guiding principles to increase public participation, restructure forestry institutions to be responsive to local initiatives, protect the environment, and increase household incomes. In the same year, the National Plan for Environment and Sustainable Development was developed, which provided a comprehensive framework for environmental planning and management.

6.2.1.4 Forest Protection and Development Law

In 1991, the Law enabled the transfer of commercial State forests to private owners (GoV 2001) involving seven types of land ownership: 1) management boards for protection and special use forests; 2) economic or business organizations; 3) households and individuals; 4) arm units; 5) organizations for scientific research, technology development, training and education; 6) Vietnamese overseas; and 7) foreign investors. Correspondingly, the following rights were transferred: 1) forest use and possession in commercial plantation; 2) long-term use of forests according to allocating or leasing duration; 3) possession of production outputs; 4) carrying out scientific research, landscape business, etc.; 5) compensation entitlement in case government revokes the rights for special purposes; 6) access to technical and financial assistance for forest protection; and 7) entitlement of State protection, legal rights and benefits. Correspondingly, recipients have the following obligations: 1) preserve forest capital; 2) organize protection and development activities based on approved land use plans; 3) timely reporting on resource utilization; 4) willingness to return the forestland when the government decides to withdraw the use rights; 5) comply with any type of financial obligation as prescribed law; and 6) compliance to rules and sanctions. Benefit-sharing schemes on jointly produced forest incomes were also observed. The allocation of forests for multiple uses results in multiple types of forest ownership in Vietnam.²⁶ Forest owners of protection and production forests can organize or cooperate with other organizations, households or individuals in developing business ventures, including food shops, hostels and ecotourism.

6.2.1.5 National Programme for Upland Development

Prime Minister Decision No. 327/CT of 1992 defines the 5-year National Programme for Upland Development (Programme 327), which aims to reforest 5 million hectares in the uplands in five years (Sam & Trung 2001). It implemented 1,200 projects to increase household incomes through improved land use practices, coupled with social and infrastructure support (e.g. construction of school, health stations, minor roads, markets, etc.). Despite this, a World Bank report (Fortech 1998) pointed out several issues, including the top-down bureaucratic approach employed by Vietnamese officials, lack of transparency in allocating the lands, poor silvicultural practices, lack of inputs from local people and undermining indigenous knowledge in forest management. The incentive for farmers in this program is that, they take 50 percent of the proceeds of harvested trees, but the disincentive is that, they lose access to their land while waiting for the trees to be harvested.

²⁶ There is a wide variety of forest owners in Vietnam including state forest enterprises, the management boards of special-use and protection forests, Provincial People's Committees, District People's Committees, Commune People's Committees and other organizations such as schools, cooperatives, village communities and households and individuals.

6.2.1.6 Land Law

The Land Law of 1993 instituted long-term, private land use rights, where lands could be bought, sold, mortgaged, inherited and traded. Land was allocated for 20 years for agricultural production and 50 years for forestry. In 1991, the Tropical Forest Action Program and the Forest Resources Protection and Development Act were implemented, while the first National Forestry Policy also allocated forestlands for households and individuals, as well as devolved implementation and management responsibilities to provincial and district governments. The Land and Forest Protection and Development Laws, which were enacted in 2003 and 2004, further define local responsibilities and administrative control over forestlands, in terms of land use, transfer, concession, lease and mortgage (Jong et al 2006). While general land use rights were given consideration in these Laws, property rights as incentive for sustainable use of forest resources needed more scrutiny. In Sikor's (2001) study on land allocation in north western Vietnam, he found that these forest policies had minor effects on actual property rights because agricultural production was restricted, particularly swidden farming, which is the main farming system of forest dwellers. Nonetheless, forest openings expanded due to availability of new farming technologies and market demand for agricultural products. Changes in markets and technologies have apparently motivated smallholders to intensify crop production.

6.2.1.7 Environmental Protection Law

The Environmental Protection Law of 1993 provided measures to address environmental pollution and degradation. It introduced economic instruments, which required organizations that use natural resources to contribute financially to environmental protection. These are: 1) selection of priority polluting industries; 2) compatibility with regulatory instruments; and 3) institutional capacity and administrative feasibility.

6.2.1.8 Forest Pricing

Furthermore, the GoV instituted ways of pricing forests. The 2003 Land Management Law and the 2004 Law on Forest Protection and Development describe two kinds of prices on each forest type. The first price pertains to land use rights, while the second pertains to the right of forest use. These two kinds of pricing are independent to one another, but are closely related when the GoV allocates, lease, or convert the land into other uses. For instance, local people can account the price of the right to use plantation forest by clear cutting the forest and setting the new price of ownership right by replanting the forest. However, in case of natural forests, felling activities must be based on the principle of restoring the natural capital, though in many cases, clear cutting is not allowed (GoV 2004). With this, it can be posited that community participation in pricing the value of a forest including the resources therein, is an incentive for good forest management. The process of valuing and pricing of forests are presented in Table 6. Valuating and pricing forests, including commercial products and environmental values is a revolution in forest management in Vietnam.

Forest provides direct products, such as timber, fuelwood, bamboos, medicines and others. However, forests also provide enormous values in terms of environment protection, mitigating harmful effects of CO₂ and other green house gas emissions, and ecotourism. Forest products and services have expanded tremendously and they are increasingly recognized by central government, local communities and the private sector. These forest values are reflected in the Forest Protection and Development Law in 2004. Pricing and regulating forest prices is important in marketing the indirect benefits of forests. This also provides a good basis for developing mechanisms for payment of environmental services in Vietnam.

Table 6- Forest valuation and pricing

Valuating and publishing forest price	<ul style="list-style-type: none"> • Central government defines the principles and methods in valuating forest price. • Based on those principles and methods, provincial governments regulate the price of forest and submit this to the People’s Council at equal levels before deciding and publishing the price (GoV 2004)
Basis of pricing the forest	Prices of forest are determined by: <ul style="list-style-type: none"> • provincial or city peoples’ committee • auction • owners of forest land with consent form other partners when they ceding, leasing, mortgaging the forest land
The forest price is used as bases for:	<ul style="list-style-type: none"> • accounting the money to use and make the lease without auction • calculating taxes and fees • calculating the price of the right to use forest when the government allocates the forest • compensating the person concerned/group when the government revokes the right of forest use • calculating penalty rates for people who violates the Law of forest protection and development

Decision 08/2001/QD-TTg and Decision 186/2006/QD-TTg outlined management measures for sustainable use of indirect forest values. Ecotourism in a special-use forest is defined by Article 53 of the Law on Forest protection in 2004 and Decree No.23/2006/ND-CP. In these areas, forest owners have the right to use the forest for economic purposes, such as establishing ecotourism businesses and receive environmental rents, or enter into special agreements with investors. Decision No. 186/2006/QD-TTg also provides concrete guidance for land use planning and setting ecotourism measures in special-used forest areas (GoV 2004; 2006; Prime Minister 2006). Recently, the MARD passed Decision No. 2366²⁷ approving a project on “Conservation and Development of Non-Timber Products (NTP)”. Its main components are:

1. Reinforce in situ and ex situ conservation, rational use of NTP based on strict enforcement of guidance, norm and regulation for sustainable exploiting NTP;
2. Establish NTP material zone connecting with processing, creating typical products of each zone;
3. Prioritize rattan and bamboo products, oil extracting, medicine, foodstuff, etc;
4. Recreate NTP from natural forest, reclaiming NTP in agriculture land;
5. Prioritize small scale processing of NTP, traditional handwork villages, carrying on trade for NTP; and
6. Improve mechanism, policies to encourage resources of all economic components, strengthening scientific research, education of NTP.

In general, the GoV has developed a positive legal framework for environmental protection and natural resources management with a range of policy incentives reflected in many laws, legislations, and directives. However, policy implementation is far more complex and challenging. Many of these policies are not effectively implemented due to lack of technical capacity, coordination and budget. This is partly a result of the lack of human resources or trained staff and inadequate facilities and equipments. Insufficient public

²⁷ On August 17, 2006

participation in policy-making, implementation and monitoring also contributed to poor implementation. Efforts to raise public awareness and improvement of environmental education and training have not progressed and public participation, as well as NGO involvement is still below par. Hence, many policy incentives have not trickled down to the local level. Nam (2001) revealed that low public participation is the result of poor provision of incentives such as training, education and access to credit and agricultural extension services. It was also found that along with poverty, low education and awareness on environmental protection and lack of economic incentives for forest protection are the main causes of forest destruction.

6.2.2 Major Policies in the Fruit and Vegetable Sector

6.2.2.1 Export Subsidy and Financial Support for Export Enterprise

Decision 195/1999/QĐ-TTg was enacted in 1999, outlining the government's Export Support Fund for a period of three years (1999-2001). The Decision provides rewards to Vietnamese export enterprises based on the export value of agricultural products including F&V. The Fund expanded its services, covering credit provision at lower interest rates²⁸, export insurance²⁹, and rewards for annual increases of export values. In line with this, the 10-year National Export Development Program for F&V was developed (2001-2010), with the aim of increasing F&V exports to 1 billion USD in 2010. The program has included projects in seeds and post-harvest technology, plant protection, trade promotion and financial support through the small and medium enterprise development fund. In addition, a National Trade Promotion Program was developed, with the Ministry of Tourism incurring 50 percent of the operating costs for conducting overseas trade promotion surveys. For the F&V sector, "Vinafruit", an F&V association, has in the past three years, been one of the 28 units³⁰ that successfully executed the National Trade Promotion Program for F&V in Vietnam.

However, since 2001, under the pressure of the nation's agreement to WTO, there has been growing concerns on this policy due to its bias on export enterprises. The government has been criticized for lack of support to non-commercial producers, and this Law was blamed for disenfranchising local F&V enterprises.

6.2.2.2 Farming Contracts

The GoV encourages farming contracts through Decision 80/2002/QĐ-TTg³¹ with the following incentives:

Infrastructure support: In order to support production and marketing of agricultural products, the GoV has given priority investment in building warehouses, electrical system, market information system, and wholesale market system among others. The capital requirement for these infrastructures is met through contributions from local producers and from the city/provincial People's Committee. Credit can also be accessed from the central government without interest.

²⁸ Under Decision No. 133/2001/QĐ-TTg in 2001.

²⁹ Under Decision 110/2002/QĐ-TTg in 2002.

³⁰ These are other associations and governmental institutes under the Decision No.30 /2006/QĐ - BTM dated 28th September 2006 for the 2007 implementation (Vietnam trade promotion agency, 2006).

³¹ Signed on June 24 2002 by the Prime Minister, and supported by Circular No. 04/2003/TT-BTC dated 10th January 2003 by the Ministry of Finance, and Circular No. 05/2002/TT-NHNN on detailed relevant financial supports.

Credit support: Credit can be accessed by participants in farming contracts through the GoV's Development Fund. In remote areas, the interest rate is as low as three percent per annum. The government incurs 30 percent of the initial working capital of state-owned companies. In addition, the GoV also made provisions to bear the losses in farming contracts due to market shocks, natural disaster and force majeure. However, until recently, there has not been any detailed regulation on this.

Technology dissemination, market information and trade promotion: The GoV provided funding to import and disseminate high-yielding crop varieties, and to enhance the accessibility of farming-contract participants to improved extension services. Furthermore, Decision 80/2002/QĐ-TTg aims to create linkages among stakeholders in the supply chain. However, its performance remains to be seen, as implementation faces various challenges, including the participants' complacent attitude towards contract agreements and the stringent requirements in accessing the contracts.

6.2.2.3 Policies on Extension Activities

Decision No. 1838/QĐ-BNN-KN pertains to devolved administration of extension activities. Under this Decision, the MARD directs provincial staff at the district level (DARD) to monitor, adjust, and revise extension models and programs implemented in the province.³² In addition, the GoV provided funding to improve extension activities in dissemination, training, conducting experiments, communication, and equipment investment.³³

The GoV also ordered the Ministry of Tourism to coordinate farm associations in developing rural enterprises, conduct training on new technologies, disseminate government policies and programs, develop linkages among farmers, traders, and enterprises, and create pilot cooperatives for rural commercial ventures.

6.2.2.4 Policies and Programs on Rural and Agricultural Development

Decision No.135/1998/QĐ-TTg (135 Program) targeted extension services to more than 1000 communes in remote and mountainous areas all over the country, utilizing both State budgets and local resources, including funding from foreign donors and international organizations, to provide credit loans and capital to remote communes. Furthermore, Decision No. 20/2007/QĐ-TTg on Hunger Eradication and Poverty Reduction and joint-Circular No. 102/2007/TTLT-BTC-BLĐTĐBXH on financial mechanisms allocated a total budget of 43,488 billion VND (USD 2,718 M) to support poor people in the following areas:³⁴

- Promoting production and income generation through preferential credit, agricultural production, job training, and infrastructure development;
- Enhancing accessibility to social services such as health, education, housing and water supply by the poor; and
- Improving communication and capacity of local cadres and communities.

6.2.2.5 Subsidies and Financial Support

The GoV gives priority to investment in infrastructure for forest development and agricultural production. The State subsidizes some agricultural inputs and the transport costs

³² Dated 27/06/2007

³³ Under the joint-Circular No. 30/2006/TTLT-BTC-BNN&PTNT-BTS

³⁴ This includes 28.68% from the central GoV budget, 5.2% from the provincial budget, 5.66% from the communities, 0.7% from international organization and 59.79% from credit.

of agricultural products of households in communes with special difficulties. The State also provides financial support for: 1) traffic network development; 2) construction of power projects (e.g. electric transmission lines, mini-hydro-electric projects); 3) building waste water supply points; and 4) free health-care and medical treatment at State medical establishments.

6.2.2.6 Human Resource Development Policies

The GoV has provided funding for training and fostering cadres in mountainous and rural communes, providing textbooks and stationeries, exemptions from school fees, skills training for farmers on agricultural production and forest development, and job training for income generation and livelihood improvement. Both Decision Nos. 134/2004/QĐ-TTg and 198/2007/QĐ-TTg also provided poor ethnic minorities to develop the following:

- *Production land and residential lands.* Financial or material support varies by province, depending on their capacity to match national government funds, but at the minimum, support is provided to 0.5 hectare of farm in a mountainous area, 0.25–0.15 hectare per household for a rice field, and 200 m² for a residential land;
- *Residential houses.* The central government supported the construction of 6 million houses, using timber harvested from forest areas; and
- *Water system.* The central government provided funds for water development projects, amounting to 400,000 VND/household for digging wells or building tanks in areas where water pipes and standard waterworks are not available.

6.2.2.7 Safe Vegetable Production and Good Agricultural Practices

Decision No. 67/1998/QĐ-BNN-KHCN defines the regulations on safe vegetable production and Decision No. 04/2007/QĐ-BNN outlines the administration and certification of safe vegetables. Both policies respond to public demand for food safety.³⁵ Quality standards were set using both internal and external criteria. The Maximum Residual Levels (MRLs) is adopted as an internal criteria based on standards set by Food and Agriculture Organization (FAO) and the World Health Organization's (WHO) Codex Alimentarius Residue in Food. In addition, producers are also required to use integrated pest management technologies to produce safe vegetables. The movement for safe vegetable production has been spreading out since late 1999.

Safe vegetables are certified following a certification process performed by an authorized local government agency. The certification process varies by province, but the criteria are standardized as follows: 1) clean soil and water resource at the place; 2) sound technical procedures (e.g. use of good seeds); 3) appropriate use of organic and in-organic fertilizers; 4) limited use of growth stimulants and pesticides and appropriate pre-harvest intervals; and 5) use of standard inspection and testing methods to analyze pesticide residues (e.g. chemical residues are below the MRLs). The certificate has to be renewed annually or bi-annually, based on actual production results (95% below MRLs and 95% farmers trained on safe vegetable production) or satisfactory results of the laboratory analysis of vegetable samples (Loan and Tam 2005). However, this certification scheme is not always reliable due to some problems encountered in the testing process. These are: 1) the number of samples for residue analysis and the frequency of testing is low (1-2 times per year) due to budget constrains; 2) variation in inspection methods could give different or inconsistent results; and 3) quick testing can detect only few types of pesticide (e.g. organic phosphor and carbamat).

³⁵ By definition, "safe vegetables" include all vegetables having authentic characteristics, with toxic chemicals and micro organism levels below the MRLs, and safe for consumers and the environment.

Thus, a negative test result does not assure vegetables safety or product quality. In the end, the weak quality control of the government has led to public mistrust on the safety of vegetables (Gia, Bui Thi et al. 2003; Moustier et al. 2005; Loan and Tam 2005). The weakness of this certification scheme is that, it did not take account other externalities arising from poor post harvest practices and field sanitation such as disposing farm wastes in water bodies. Post harvest losses are also high with poor infrastructure. Other policies that support safe vegetable production and consumption are: 1) Circular No. 2571/BNN-TT; 2) Decision No. 106/2007/QĐ-BNN³⁶ on the regulation and administration of production and trading of safe vegetables under the GAP framework³⁷; and 3) Decision No. 379/QĐ-BNN-KHCN³⁸ on the issuance of GAP certification for fresh fruit and vegetable production in Vietnam (VietGAP). Prior to these policies however, the GoV has initiated efforts to set up GAP standards, through community consultations, use of participatory approaches, and recognition of the roles of associations and farm organizations.

The idea of VietGAP was then, discussed based on the principles and criteria used by ASEAN-GAP, EUROGAP/GLOBAL and FRESHCARE. VietGAP now serves as a legal guideline for the certification of F&V in Vietnam. Furthermore, Decision No.106/2007/QĐ-BNN regulated the criteria used by certifying agencies/organizations, instead of just the DARD setting the criteria in previous provincial programs.

Through Circular 195/TT-CLT³⁹, the MARD assigned the DARD to implement activities that increase safe vegetable production at the local level such as identifying a special area for safe vegetable production, encouraging trading enterprises to invest in production, and creating linkages among enterprises, farmers and other stakeholders. Under Decision No. 52/2007/QĐ-BNN, the government set forth its targets on vegetables, fruits and flower production by 2010 (Table 7), with bamboo shoots, mushroom, sweet potato, tomato and taro as main export crops.

Table 7- Fruit, vegetable and flower production targets for 2010

Target	Volume/Value
Area in hectare	7,000 hectares
Production output	14 million tons
Export	200,000 tons
Export value	155 million USD

The special areas for vegetable production are in the Mekong Delta River, Red River, Southeast region and Lam Dong Province. The GoV also provided incentives as follows: 1) provision of credit and loans for safe vegetable production; 2) support to about 30 to 75 percent in expenditures of research and extension activities. The provincial People’s Committee and the DARD were also ordered to identify special production areas and one or two potential vegetables for promotion.

³⁶ Dated 28/12/2007

³⁷ Good Agricultural Practices (GAP) is defined as “guidelines established to ensure a clean and safe working environment for all employees while eliminating the potential for contamination of the food products” (UM 2002). Specifically, GAP involves issues such as production site selection, land use, fertilizer and water usage, pest and pesticide control, harvesting, packaging, storage, field sanitation and product transportation (UM 2002).

³⁸ Dated 28/01/2008

³⁹ Dated 06/03/2008, supports safe vegetable production and benchmarking for VietGAP.

6.2.2.8 Seed Improvement and Fertilizer Control

Historically, Vietnam's F&V seeds have been plenty and their provenances are easily known, but today, they are scattered and undocumented, with a few becoming extinct. Usually, farmers use seeds for different purposes, yet many types of seeds are not purely bred, but hybrid from previous generations. As a result, the F&V industry suffers from sub-standard product quality. In response, the MARD standardized several F&V seeds through Decision 68/2006/QĐ-BNN, creating the legal basis for seed quality control.⁴⁰ This includes seeds of tomatoes, potato, water convolvulus, cabbage, cucumber and others. Furthermore, Decision No. 56 /2007/QĐ-BNN issued the protection of 12 horticultural crops, and experimentation of four vegetables based on difference, uniformity and stability performance, namely *Capsicum annum L.[ớt]*, *Cucurbita maxima Duch, [Bí ngô]*, *Zingiber officinale Rosc. and [Gừng]*, *Daucus carota L.[Cà rốt]*). Government regulations on tradable seeds, seed quality standards and certification of qualified seeds have been legislated and enforced under Decision Nos. 47/2007/QĐ-BNN, 54/2003/QĐ-BNN and 41/2007/QĐ-BNN respectively. Production, trading and fertilizer application have also been regulated under Decision No. 36/2007/QĐ-BNN.

In summary, from years of policy-bias towards State-owned enterprise development, the GoV has now shifted its policy agenda towards the interest of farmers not only because they are now increasingly recognized as important players in the agricultural sector, but also because of pressures from the WTO. At least in theory, policy responses are now targeted to address issues from the supply side (producers). As forerunners of the value chain, farmers are now prominently featured in the government's policy agenda. However, the prevailing policy incentives are still skewed towards commercial growers and exporters. While small-scale vegetable producers or home-gardeners⁴¹ receive encouragement and support from local authorities, the incentives are trifling if not blurry. Nonetheless, recent changes in policies have had initial positive results, especially in terms of land allocation to farmers and distribution of irrigation water.

Similar to the Philippines, there is no specific policy for VAF in the Vietnamese policy literature. At best, agroforestry is featured in policy statements, and various agroforestry systems are being tested in field experiments. But, the linkages between policymakers, researchers and educators, traders and producers, with which to build efforts to promote VAF, or target policy incentives for smallholder investments remain weak.

6.3 Local Policies and Perspectives of Stakeholders in Lantapan Municipality and Binh Phuoc Province

6.3.1 Perspectives of Local Stakeholders in Lantapan and Binh Phuoc

The Local Government Code of the Philippines devolved many forest management functions to LGUs, including supervision of ISF areas. The Municipality of Lantapan for example, has been supervising 152 CSC holders covering 322 hectares together with the Bukidnon Environment and Natural Resources Office, as well as one CBFM project covering 517 hectares. The LGU also enacted local environmental policies, albeit the implementation of these policies is somewhat weak. Five local policies were found to be related to VAF but in general, these policies did not have clear incentives (Table 8).

⁴⁰ Dated 13/09/2006

⁴¹ Typically poor households in remote areas

With decentralized governance, local communities are at least, informed and consulted on new local policies and their endorsement are sought.⁴² Interviewed farmers believe that their voices are important in the policy development process, and their contributions are crucial to successful policy implementation. Farmers identified some benefits from NRM policies such as acquisition of new technologies and improvement of farming systems (44%) and participation in trainings and seminars (24%). Interviewed farmers were asked to rank the importance of some policy aspects relative to VAF. It was noted that the top-three policy aspects are functions of effective extension, suggesting the need for improvement in extension services (Table 9).

Table 8- Local policies related to VAF

Municipal Ordinance	Date Legislated
Requiring all farm tillers and all land owners to adopt contour farming and sustainable agricultural technologies in sloping areas.	January 2001
Regulating bio-prospecting activities in the Mt. Kitanglad Protected Area, particularly within the vicinity of the Municipality of Lantapan	October 1999
Prohibiting garbage disposal (household waste, dead animals and hazardous chemicals) in rivers and creeks.	September 1999
Imposing fines/penalties for acts, which endanger the environment such as the conduct of illegal logging/cutting within Lantapan in support to illegal logging law of the Philippines.	July 1996
Sanitary inspection of all vegetables transported from Lantapan to other areas.	-

Source: Lantapan Legislative Council, 2006

In Vietnam, guidelines are set to ensure that all policies are comprehensive, coordinated and approved through a central agency. The legislation and implementation of rural policies and programs follows a central mechanism from national, provincial and district, and ward/commune levels. Local level orders and directives are created in response to, or in compliance with central government policies. For example, the issuance of land use rights certificates is being carried out at the commune level following directives from the national government. Under this program, households are granted with formal land tenure in form of land use right certificates (or Red Book). Most households in the Nghia Trung commune have already received the Red Book of their cultivated lands. In terms of policy support for VAF, we asked farmers in the Nghia Trung commune to determine the policy areas that need to be prioritized. Table 10 shows three priority policy incentives, namely technological provision, extension, and improvement of market system. Surprisingly, other financial support such as subsidies, tax concessions and preferential credits were not top priorities. This implies that local stakeholders are keen on enabling indirect incentives.

⁴² In “barangay” assembly meetings, which are held once a month. These meetings serve as platforms for information dissemination, consultation, planning and decision-making. Under the Philippine Local Government Code (1991), the policy development process includes a “public hearing” to allow local people to deliberate on, provide inputs, and seek support of the proposed policy. Public hearings are usually conducted in conjunction with barangay assemblies where higher attendance of villagers can be expected.

Table 9- Ranking of policy incentives by farmers in the Municipality of Lantapan

Incentives	Relation to smallholder farmers to adopt VAF
Promotion of sustainable farming technologies	Provision of appropriate upland farming technologies, access to technical assistance (e.g. model farms, training, etc), including promotion of farmers' indigenous knowledge.
Enhancing marketing and price support system	Farmers benefit from marketing schemes or arrangements with product buyers; they are also ensured of regulated market price
Improving LGU's extension support program	Development of technologies and mechanisms that improve land productivity and farmers capacity to substantially participate in decision-making processes.
Subsidies/Tax concessions	Subsidies as payments or services provided to reduce the costs or raise the return of farmers' activity.
Infrastructure support	The most common is farm-to-market road as support infrastructure to transport farmers' produce to the market; others include post-harvest facilities, farm machineries and equipment.
Credit assistance	Farmers are given access to agencies that provide credit assistance, like Land Bank of the Philippines, Quedancor, etc.
Land/Resource use rights	Farmers' assurance of future benefits from current investments; incentives to obtain products from own farm.
Institutional arrangements	Farmers are linked to networks of service providers to improve land productivity or enhance their capacity.
Financial/Material support	Farmers are given seed capital to venture into new species of trees or vegetable varieties; provision of planting stocks (seeds, seedlings, etc).

Table 10- Ranking of policy incentives by Nghia Trung Commune, Binh Phuoc Province

Policy Incentives	Ranking					
Promotion of sustainable farming technologies	1	2	2	1	6	5
Improvement of extension support	2	3	3	2	5	6
Enhanced marketing system	3	1	1	4	1	2
Subsidies/Tax concessions	8	6	6	6	8	7
Infrastructure support	5	5	4	3	7	3
Credit assistance	4	4	5	5	3	4
Land use rights	6	7	7	7	4	7
Institutional arrangements	7	8	8	8	2	1

Source: Interview with local stakeholders

In Binh Phuoc Province, a Provincial Extension Center was established in 1997 with three divisions: 1) technology division in charge of building up models and conducting technology transfer; 2) information division responsible for preparing brochure and collecting information; and 3) administration division. The Center also manages a 100-hectare seed center for seed development, an information center operating under the MARD project, and a market information project. Under the Provincial Extension Center are district extension networks (2 officials in each district) and communes (1-2 officials in each commune). In 2007, the extension center has organized 500 courses, which were participated by 20,000 farmers and 160 workshops, distributed 13,887 booklets to disseminate various technologies, maintained the operation of 84 peoples' clubs and conducted several technical experiments.

6.3.2 Vegetable Policy Performance in Binh Phuoc Province

Vegetables are not the main crop in Binh Phuoc Province. Vegetables are grown on a limited scale, mostly for home consumption and local trade. However, with public concerns on vegetable safety and the national direction on safe vegetable production and consumption,

the DARD has started to identify special areas most suited for vegetable production, and has conducted trainings on safe vegetable production. So far, 17 courses on vegetable production have been conducted with 536 farmers participating in 2007. The DARD also extended financial support for vegetable production to 33 households in four urban districts namely, Dong Xoai town, Dong Phu, Binh Long and Phuoc Long. As reflected in provincial plans, the DARD should prioritize helping commercial vegetable producers in populated urban areas to meet the domestic demand.

Through document No. 2438/UBND-SX⁴³, the provincial People's Committee has assigned the DARD to develop solutions, monitor and coordinate implementation in Binh Phuoc Province. Under the management of the DARD, the extension center has conducted the following activities related to safe vegetable production:

1. Planning specialized areas for commercial vegetable production in Dong Xoai town, Bu Dop and Dong Phu districts. These are either traditional areas for vegetable production in the province or areas near the stream and/or river for water supply;
2. Promoting private investment in safe vegetable production, the production organization in form of an enterprise for large commercial scale and creating the linkage among input companies like seed companies, producers and buyers like supermarkets (Coopmark); and
3. Conducting an urban extension program with the GoV's budget (20% in total budget) of 100 million VND (equivalent 6,250 USD) to promote safe vegetable production in surrounding urban areas for prompt delivery to markets in the town.

Accordingly, the Extension Center promotes vegetable production only on the basis of market demand. Currently, a total area of 7,000 hectares in the entire Binh Phuoc province is being planted to watermelon for marketing in other provinces, while cucumber, eggplant and red pepper are for domestic consumption. In nearby forest areas, bamboo shoots and *Nhip*, an indigenous vegetable, have higher commercial value due to higher market demand compared to other vegetables. In remote communes, the limited volume of vegetables produced by farmers is consumed at the household level, and so far, there has been no encouragement or incentive for commercial vegetable production from government.

6.4 Policy Issues and Gaps

In general, the policy environment in both countries is encouraging with entrenched incentives to boost the contribution of the forestry and agricultural sectors to national economic growth. However, farmers are disproportionately benefiting from national policies, with large holders or commercial growers benefiting more. Incentives for smallholders, albeit limited exist; correspondingly, disincentives persist.

Even before Vietnam's membership to the WTO, agricultural incentives have always been biased towards enterprise development in greater urban areas, resulting in under-investment in rural areas. The government's preferential treatment to commercial growers in highly developed areas has discouraged small farmers in rural communes. For instance, the Nghia Binh commune were dis-interested in improving F&V production because there was no incentive for shifting to good practices--in the first place, the province' promotional efforts are focused only in urbanizing districts. As a result, non-commercial growers or small farmers are lagging behind the industry, despite the overall growth of F&V exports in the

⁴³ dated 10/10/2007

Asian market. Although parallel efforts are underway to uplift the lives of small farmers or non-commercial, subsistence farmers in remote communes, the path towards transition to commercial farming and integration in the broader economy, is no doubt long and winding.

In the Philippines, well-meaning policies produce negative results because often, their intentions are either too general or in-conflict with other sector policies. Conflicts are also prevalent within the same policy sector. For example, the laudable intent of the Magna Carta for Small Farmers is superseded by policy instruments that are anti-poor or partial to the needs of smallholders. Some policies are good at providing incentives to their intended sector, albeit disproportionately, but at the same, these policies create disincentives to another sector. It was clear that large holders tend to benefit more than smallholders because many national policies are skewed to their side, and they can leverage the associated cost of policy implementation. Not surprisingly, without proper analysis of tradeoffs, national-level policies promoted selective development.

Behind a colourful facade of policy transformation in both countries, the gap between policy intention and practice remains wide. The difficulty with national policies is that they convey generic incentive packages that are subject to different interpretations at the local level, while local authorities are stifling its ability to implement them. Many national-level policies are barely understood by implementing agencies, because they are inherently complex, or they are either not communicated or poorly disseminated at the local level.⁴⁴ Policy failures are also due in part to the disparity between policy goals and the realities on the ground. Overall, national policies suffer from structural, institutional and funding constraints. For instance, the Philippines' GA-HVCC program was hampered by inadequate funding. Similarly, the ambivalent performance of VietGap was caused by limited capacity to improve the residue testing methods used on vegetables.

In the Philippines, smallholders support the notion of locally-crafted policies because, at least, the opportunity is there to participate in the design process. The same view was indicated by farmers and researchers in Vietnam due to power asymmetries even with a consensus-building approach to policy-making. In both countries, improving the local extension system is a policy issue, especially in terms of improving technology dissemination, providing a comprehensive support system for linking producers to markets, and providing adequate physical and institutional infrastructure. These indicate the need for a vibrant local extension system that can effectively provide training, facilitate local producer groups, and effectuate locally-designed incentives, such as credit, subsidies, technical assistance, crop insurance and rewards for good practices. These incentives are better negotiated at the local level than at the national level. The advantage with locally-designed policy incentives is that, monitoring policy outcomes is more convenient, with the use of evidence-based criteria and indicators by local monitoring teams. This also promotes local ownership, accountability and empowerment.

Nevertheless, the importance of national-level policies is equally recognized. National-level policies are needed to address cross-cutting issues that have national and international implications. In the vegetable sector, producers are often badly hit by high costs; hence issues such as reducing costs across the value chain, price regulation and control, commodity protection, removing non-tariff barriers, and global trade are within the turf of

⁴⁴ We were surprised to find out a “low-level” awareness among interviewed agricultural technicians about the Magna Carta for Small Farmers—very few at least have “heard” about it, while the majority has not heard about it at all.

national policies. Trade and price policies are particularly crucial, as land use decisions by upland farmers are commonly responsive to relative prices and to price variability (Coxhead and Demeke 2005). For the tree sector, issues regarding restrictive policies, transaction costs, high capital outlay in tenured forest areas, and uncertainty in timber prices are also likely to be addressed through national-level policies.

7.0 CONCLUSION

Clearly, farmers are disproportionately benefiting from national policies, with smallholders or non-commercial farmers in the losing end. Nonetheless, the evolution of different types of direct to enabling incentives manifests a responsive attitude on the part of the Philippines and Vietnamese governments to address clamours for long-term, sustainable policy impacts. The weakness of national level policies in addressing local specificities is unmistakable, yet responses at the local level are limited in both countries. At best, local extension services are viewed as “incentives”, albeit inadequate. National level policies provide a general framework, but are not able to fully address the complex, diverse and unique conditions of small farmers. Where national governments are unable to remove policy and economic barriers, and national policies do not effectively address the needs of smallholders, local policy responses are needed to offset this gap, to target realistic incentives for smallholders.

The en route for promoting VAF in the Philippines and Vietnam varies according to their own unique conditions. Philippine local governments are imbued with policy making powers; hence policy efforts to stimulate smallholder investments in VAF can be initiated at this level. In contrast, policy efforts to stimulate adoption of VAF will more likely have to be initiated at the national level, since the GoV’s policy making process emanates from the National Assembly and the organs of the central government.

Finally, the profitability of vegetables and agroforestry products is grossly affected by precarious market conditions at the national and international levels, where smallholders have no influence or control; hence targeted policy incentives are needed if smallholders are to invest in VAF. And, regardless of differences in governance features, institutional capacity, and size of economy in both countries, the overall viability of VAF depends on a whole set of policy support that both national and local governments can provide. Policy linkages between national and local levels need to be strengthened, and policymakers need to mobilize adequate responses at both levels. The future of smallholder investment in VAF is therefore a political imperative.

8.0 REFERENCES

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Annex A- Incentives and disincentives of VAF-related policies in the Philippines and Vietnam

A. Philippines

Table 1. Tree growing

Incentives	Disincentives
PD 705 (1975) - Revised Forestry Code of the Philippines	
<ul style="list-style-type: none"> Ownership rights of planted trees Rights to sell, contract, convey or dispose planted trees Discounted fees, rentals & forest charges Tax exemptions & credits Free technical assistance Credit assistance & use of facilities Exemption from export log ban Market for timber products Unrestricted export of plantation products 	<p>The disincentives to smallholders are:</p> <ul style="list-style-type: none"> The minimum area that can be applied for tree farming is 100 hectares and 10 hectares for agroforestry. Lack of regular cash flow between planting and harvesting Uncertainties with future prices of tree products
LOI 1260 (1982) - Integrated Social Forestry	
<ul style="list-style-type: none"> Grants & land tenure Priority in wage-based employment Extension & information services, community organizing Research & development support Share of forest income Exemption from forest charges Technical, legal, financial, marketing assistance & others 	<ul style="list-style-type: none"> Incomplete support system provided by government Farmers are unable to defray the initial cost of investment in forest areas
EO 263 (1995) - Community-Based Forestry Management	
<ul style="list-style-type: none"> Security of land tenure Right to use & manage forest resources Exemption from land use rental & forest charges Right to be consulted on government projects Authority to enter contracts Access to technical assistance Right to receive all incomes & proceeds of the area 	<ul style="list-style-type: none"> Many CBFM areas are either logged-over or relatively forested, requiring huge capital to develop Inadequate technical and financial support during the initial stage High transaction costs involved in securing permits for harvesting and transporting Lack of support in marketing timber
DENR-AO 05-25 – Upland Agroforestry Program	
<ul style="list-style-type: none"> Promotes equitable distribution of opportunities and income in developing agroforestry systems Encourages public-private partnerships 	<ul style="list-style-type: none"> Minimum area that can be applied is 50 hectares Farmers shall incur the cost of survey, including mapping and survey Farmers need to show proof of financial and technical capability to undertake agroforestry (e.g. credit lines from financial institutions)

Table 2. Vegetable production

Incentives	Disincentives
PD 1467 (1989) - Crop Insurance Law	
Protects agricultural producers against loss of crops and assets.	The premium payment is hardly affordable to small farmers, and the requirements are not easy to follow, e.g. following the cropping calendar. Due to limited funding, the program focused on big farmers patronizing formal credits with financing institutions. Smallholders also find it difficult to comply with credit requirements and procedures.
RA 8178 - Agricultural Tariffication Act	
<ul style="list-style-type: none"> Subsidies for irrigation Farm-to-market roads Training and extension services Post-harvest facilities Credit, others. 	The entry of imported goods outpaced the production potential of small farmers. Although it provides many incentives, it subverts policy support for smallholders, which is to protect their products.
RA 8435 (1997) - Agricultural and Fisheries Modernization Act	
<ul style="list-style-type: none"> Credit assistance to smallholders & fisherfolks Promote research & development Training & extension services Information & marketing support 	The implementation of this Law was poor and scanty, because the national government was unable to match the policy with necessary funding on the ground.
RA 7900 – High Value Crops Development Act	
<ul style="list-style-type: none"> Market development & promotion Infrastructure support Investment & financing Technology development, training & extension support Program advocacy, information networking & dissemination 	<ul style="list-style-type: none"> Requires huge investments. The only way to make this possible is to generate counter-part funds from local governments. There is no price regulation, stabilization and control on many vegetable commodities; hence the market for high value crops is highly precarious.
DA-AO 25 (2005) – Good Agricultural Practices (GAP)	
<ul style="list-style-type: none"> Product differentiation and premium price of crops Access to market/supply chain Stabilization of yield/revenue Reduction in wastage Increased in farm assets Protection against market externalities Subsidies & recognition Skills improvement 	<ul style="list-style-type: none"> Too costly for smallholders to meet GAP standards, (e.g. use of new production techniques and more expensive environment-friendly inputs, etc.) No assurance of international markets because of strict phytosanitary rules imposed by importing countries
EO 481 (2005) – Organic Agriculture	
<ul style="list-style-type: none"> Puts premium value to organically produced agricultural products. 	<ul style="list-style-type: none"> Insufficient supply of organic inputs and the price is very high for small farmers Tedious organic certification process Meeting standards means economic sacrifice for small farmers

B. Vietnam

Table 1. Tree growing

Incentives	Disincentives
Forest Protection and Development Law (1991) (rev 2004)	
<ul style="list-style-type: none"> Transferred commercial forests from the State to private owners Transferred the ff forest rights: <ul style="list-style-type: none"> ➢ Forest use and possession in commercial plantation ➢ Long-term use of forest according to allocating or leasing duration ➢ Possession of production outputs ➢ Carry out scientific research, landscape business ➢ Get compensation if government withdraw the forest ➢ Get farming technology guidance and support budget for forest protection ➢ State protection, legal rights and benefits Implemented benefit-sharing schemes from forest income 	
Decision 327/1992/CT – National Programme for Upland Development (Programme 327, 1993-1998)	
<ul style="list-style-type: none"> Increase household income through improve land uses (e.g. social and infrastructure components – construction of school, health stations, roads, markets, etc.) Social and economic development program for uplands focused on conservation 	Programs were implemented through top-down bureaucratic approach, land allocation does not involve local people, poor silvicultural practices, imposed projects without local people's inputs impeding the use of indigenous knowledge, and limited land available for large-scale tree plantations. Benefits were limited only when trees were cut down where farmers receive 50% of the income. While waiting for the harvest, farmers lose access to their land and have to resort to other livelihood for sustenance.
Land Law (1993, 1997, 2001 and 2003)	
<ul style="list-style-type: none"> Instituted private land use rights that could be bought, sold, mortgaged, inherited and traded Devolved implementation and management responsibilities to provincial and district governments 	
Law on Environmental Protection (1993)	
<ul style="list-style-type: none"> Introduced economic instruments requiring organizations that use natural resources to contribute financially to environmental protection 	
Decree 02/CP (1994) – Regulating forestland allocation to organizations, households and individuals for sustainable and long-term use	
<ul style="list-style-type: none"> Allocated forestlands to various economic sectors for management and use for long-term and sustainable forestry 	
Decree 01/CP (1995) – Land allocation for farming cultivation, forest production and aquaculture by state-owned enterprises	
<ul style="list-style-type: none"> Allocated agriculture, forestry and aquaculture production to State Forest Enterprises 	

Table 2. Fruit and vegetable production

Incentives	Disincentives
Decisions 195/1999/QD-TTg; 133/2001/QD-TTg; and 110/2002/QD-TTg – Export subsidy and other financial support for exporting enterprises	
<ul style="list-style-type: none"> Credit support with lowest interest possible Exportation insurance Exportation rewards based on the annual increase in exportation value 	Bias towards exporting enterprises instead of the farmers as agricultural producers.
Decision 80/2002/QD-TTg; Circulars 04/2003/TT-BTC and 05/2002/TT-NHNN – Farming contract and national trade promotion program	
<ul style="list-style-type: none"> Infrastructure investment Credit support Supports on advanced technology, market information and trade promotion Projects in seeds, post-harvest technology, plant protection, trade promotion and financial support Financial support for overseas trade promotion program 	
Decision 1838/2007/QD-BNN-KN; Joint Circular 30/2006/TTLT-BTC-BNN & PTNT-BTS – Extension activities	
<ul style="list-style-type: none"> Devolution of extension activities to provincial DARD Provide funds for extension services (e.g. dissemination, training, experiments, communication, equipment investment, etc.) Build linkage between and among farmers, traders, enterprises and pilot cooperatives 	
Decisions 67/1998/QD-BNN-KHCN – Temporary regulations on safe vegetable production; and 04/2007/QD-BNN – Production administration and certification of safe vegetables	
<ul style="list-style-type: none"> Safe vegetable scheme is voluntary to farmers with assistance from GoV Approval conditions include: <ul style="list-style-type: none"> ➢ Clean soil and water resources ➢ Sound technical procedures (e.g. applies good seeds, appropriate use of organic and inorganic fertilizers, limit use of growth stimulants and pesticides and appropriate pre-harvest intervals) ➢ Satisfied inspections (e.g. chemical residuals are below MRL and farmers taking training on safe vegetable production) 	There are weaknesses in the certification process. For example, the number of samples for residual analysis and the frequency is low due to budget constraints. Inconsistent results of residual analysis depend on quick testing method, which can only detect limited pesticides. Thus, weak quality control led to public mistrust on safe vegetables. High price of safe vegetables is another concern. Appropriate field sanitation is not given much attention. Post harvest loss is due to poor technology and infrastructure.
Circular 2571/2007/BNN-TT – Encouragement of safe vegetable production and consumption; Decisions 106/2007/QD-BNN – Regulation on production and trading administration towards GAP; and 379/2008/QD-BNN-KHCN – Issuance of GAP for fresh fruit and vegetable production in Vietnam	
<ul style="list-style-type: none"> Promote participatory approved and good governance, increasing the roles of association and farm organizations 	
Decision 52/2007/QD-BNN – Vietnam's development planning on vegetables, fruits and flowers to 2010 and the vision in 2020	

Decision 245/1998/QD-Tg – Implementation of the State’s management at different levels on forest and forestlands	
<ul style="list-style-type: none"> Local governments to protect forests within their jurisdictions Facilitate organizations, households and individuals to actively participate in forest protection and development 	
Decision 661/1998/QD-TTg – Objectives, duties, policies and implementation organizations of the 5 Million Hectares of New Forests (5MHRP) (1998-2010)	
<ul style="list-style-type: none"> Implemented forestry projects, education and direct involvement of local people Provided incentives, such as employment, planting materials, extension and technology transfer, credit fund for forest production and processing projects Investment and credit, including beneficiary policies towards production forests, forest seed policy, collateral for taking loans, tax favors and land lease 	
Decree 163/1999/ND-CP – Forestland allocation, lease and lending to organizations, households and individuals for sustainable and long-term use	
<ul style="list-style-type: none"> Provided for the allocation and lease of forestlands to organizations, households and individuals for long-term forestry purposes 	
MARD Circular 561/1999/TT/BNN-KL – Regulation on forest protection and development in communities and villages	
<ul style="list-style-type: none"> Policies on credit and extension services for local people to participate in managing, protecting and maintaining forests 	
Decision 08/2001/QD-TTg (revised thru Decision 186/2006/Qd-TTg) – Regulation on management of special-use forests, protection forests and production	
<ul style="list-style-type: none"> Facilitate organizations, households and individuals to actively participate in forest protection and development 	
Decision 178/2001/QD-TTg – Beneficiary rights and obligations of households and individuals who have forest and forestland allocated, leased and lent	
<ul style="list-style-type: none"> Individuals and households to participate in managing special use, protection and production forests through contracts with forest owners Right to exploit forest and non-forest product under protection and production forests 	
Decree 129/2003/ND-CP – Regulation of the enforcement on reduction and exemption of agricultural land use tax	
<ul style="list-style-type: none"> Farmers engaged in forest rehabilitation are exempted or given reduction in agricultural tax Commercial plantations are given 50% tax reduction 	
Decree 63/2006/ND-CP – Implementing the Law on Forest Development and Protection	
<ul style="list-style-type: none"> Promulgated to implement the Law on Forest Development and 	

<ul style="list-style-type: none"> The Policy Bank gives priority in providing credits for safe vegetable production The GoV gives financial supports of 30-75% expenditure for experiment model and other extension activities like training and dissemination The GoV assigns the provincial People’s Committee and the DARD to identify specialized vegetable areas for promotion 	
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