Rapid Sector Scoping for Green Jobs in Asia Project Philippines

FINAL REPORT

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The errors remain with the authors.

The Study Team

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List of Acronyms and Abbreviations

ACIW	Association of Construction and Informal Workers
AGTALON	Agro-Technical Assistance and Livelihood Opportunities in the North
ASEAN	Association of South East Asian Nations
BERDE	Building Ecologically Responsive Design through Excellence
BLES	Bureau of Labor and Employment Statistics
BLR	Bureau of Labor Relations
BWI	Building Workers International
CBAs	Collective Bargaining Agreements
CBFM	The Community-Based Forest Management
CBOs	Community Based Organizations
CIAP	Construction Industry Authority of the Philippines
CITC	Construction Industry Tripartite Council
COA	Commission on Audit
CREBA	Chamber of Real Estate and Builders' Associations
CSR	Corporate Social Responsibility
DA	Department of Agriculture
DAO	DENR Administrative Order
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
DILG	Department of the Interior and Local Government
DOF	Department of Finance
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
DOT	Department of Tourism
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
ECOP	Employers' Confederation of the Philippines
EO	Executive Order
FC	Final Certificate
FFCCCII	Federation of Filipino-Chinese Chambers of Commerce and Industry Inc.
FFW	Federation of Free Workers
GBO	Green Building Ordinance
GAA	General Appropriations Act
GDP	Gross Domestic Product
GNP	Gross National Product
GOCCs	Government Owned and Controlled Corporation
GSIS	Government Service Insurance System
HGC	Housing Guarantee Corporation
HDMF	Home Development Mutual Fund
HLURB	Housing and Regulatory Board
HUDCC	Housing and Urban Development Coordinating Council
IEQ	Indoor Environmental Quality

ILO	International Labour Organization
LGUs	Local Government Units
MASIPAG	Magsasaka at Siyentipiko para sa Pagunlad ng Agrikultura
MPFD	The Master Plan for Forestry Development
MSMEs	Micro, Small and Medium Enterprises
NAPC	National Anti-Poverty Commission
NHA	National Housing Authority
NHFMC	National Housing Finance Mortgage Corporation
NEDA	National Economic and Development Authority
NGOs	Non-Government Organizations
NLRC	National Labor Relations Commission
NTEIB	National Tripartite Efficiency and Integrity Board
NTIPC	National Tripartite Industrial Peace Council
NUBCW	National Union of Building and Construction Workers
NUDHFS	National Urban Development Housing Framework
OCCP	Organic Certification Center of the Philippines
OITWG	Organic Industry Technical Working Group
OPTA	Organic Producers and Traders Association
OSH	Occupational Safety and Health
PAC	Project Advisory Council
PC	Preliminary Certificate
PCA	Philippine Contractors Association
PCA	Philippine Coconut Authority
PDAP	Philippine Development Assistance Programme
PDP	Philippine Development Plan
PNSOA	Philippine National Standard on Organic Agriculture
RA	Republic Act
ROAD	Regional Organic Agriculture Development
SMEs	Small Medium Enterprises
SSS	Social Security System
SHFC	Social Housing Finance Corporation
SIP	Structural Insulated Panels
TESDA	Technical Education and Skills Development Authority
TIPC	Tripartite Industrial Peace Council
TOR	Terms of Reference
TUCP	Trade Union Congress of the Philippines
UDHA	Urban Development Housing Act
UN	United Nations
UNEP	United Nations Environmental Programme

Rapid Sector Scoping for Green Jobs in Asia Project Philippines

1. Background

1.1 Rationale

A robust economic growth over the long term period is achievable only with the sustainable management of the environment and natural resources. With the emerging issues of global climate change, nations now need to transform the manner of pursuing economic development to ensure that strong development happens not at the expense of environmental degradation and resource depletion. This requires transitioning into green economies inhabited by green industries employing green jobs.

The International Labour Organization's (ILO) initiative of Green Jobs in Asia project is its contribution in the "transformation of economies, enterprises, workplaces and labour markets into a sustainable, low-carbon economy." ILO proposes that "**green jobs** can be created in all sectors and types of enterprises, in urban and rural areas where the creation of direct jobs comes with the production of green goods and services and the creation of indirect jobs flows from the required inputs in the making, handling and selling of these goods." ILO aims to directly contribute to the national programs and initiatives relating to employment, climate change and environment and recovery from the economic crisis as set out in paragraph 21(3) of the Global Jobs Pact. Through enhanced capacity of ILO constituents in the Philippines, sound policy guidance, the undertaking of gender-responsive activities on green employment (decent and environmentally friendly) in a specific economic sector, the project aims to build the capacity of constituents to deepen their understanding and commitment to assist the Philippines in shifting to a low-carbon, environmentally friendly and climate resilient economy that helps accelerate the jobs recovery, reduce social gaps, support development goals and realize decent work (ILO, 2011).

The Green Jobs Demonstration project in the Philippines is a one year ILO project which aims to showcase a sector and demonstrate a pilot case that is manageable and would have the highest impact and cooperation for greening jobs which shall be limited to the introduction of green products or greening of products, greening of standards, upgrading of skills and strengthening of decent work.

Green Jobs are, according to the International Labour Organization and the United Nations Environment Program (UNEP), "works in agricultural, manufacturing, research and development (R&D), administrative, and service activities that contribute substantially to preserving or restoring environmental quality. These include jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution. (UNEP/ILO, 2008).

According to ILO, green jobs should also be decent work. Decent work, as defined in the Philippine Labor and Development Plan (LEP) 2011-2016, is "a concept whose primary goal is to promote opportunities for all women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity. It has four strategic objectives in the following areas: employment (promotes the creation of sustainable enterprises and increased efficiencies in the economy) , workers' rights (strengthen observance of the constitutionally protected rights of workers and ensure the ratification of core & governance conventions & respect for fundamental principles and rights at work), social protection (improve access to social protection mechanisms, improved wages, better working conditions and expanded employment opportunities for all) and social dialogue

(strengthen tripartism and broaden representation of workers as a tool for attaining employment goals)." (DOLE, 2011).

1.2 Objectives

ILO commissioned a short study to scan three economic sectors for greening of jobs. The objectives of the study are to:

1.2.1 Identify a shortlist of possible sectors for the rapid sector scoping study which should be considered for the Demonstration project of Green Jobs in the Philippines;
1.2.2 Establish the profile of each sector according to the seven criteria proposed, looking at both the environment sustainability and decent work aspects.
1.2.3 Identify links of the sectors to significant experience in promoting sound and environmental practices through supply chains and green job drivers.
1.2.4 Identify key issues and challenges in green jobs creation/promotion among these sectors.
1.2.5 Summarize the standards and regulations that are applicable to Green Jobs and provide overview of those that are followed in the sectors.
1.2.6 Identify existing tripartite practices especially in incorporating decent work concerns and greening practices in the sector
1.2.7 Investigate in-depth the current practices and approaches on Green Jobs promotion and green skills in greening products and standards in the top three sectors ; and
1.2.8 Recommend a focus sector from a shortlist of options for the demonstration project of greening jobs in the Philippines, which shows the highest potential for the creation of green jobs (either in the creation of new green jobs or the greening of existing brown jobs.

1.3 Scope of the Study

The Study envisions to describe in detail according to the seven evaluation criteria the three focus sub-sectors from each of the top three ranking sectors that emerged from the preliminary sector overview: manufacturing, construction and agriculture and fishing.

1.3.1 Economic Viability

Economic viability refers to the degree of economic benefits to be gained in the sector including the volume of potential jobs created as well as greening of existing jobs. This criterion shall be measured by the Gross Value Added (GVA) per sector, percentage contribution to the Gross Domestic Product, employment percentage relative to other sectors; and volume of job creation potential as well as degree of demonstration of greening of existing jobs. Other qualitative aspects to be perused are: creation of direct and indirect jobs, up-skilling of jobs, and minimization of jobs reduction, gearing towards substitution, or horizontal movement and re-training on green job, if job reduction is inevitable.

1.3.2 Greening of Products and Job Potential

The greening of products and job potential refers to the trend of how products and services are being transformed into green, the potential and prospects of developing new green products and the volume of potential of green jobs creation due to the advent of certain green products in the sector.

1.3.3 Regulatory framework and green standards

The regulatory environment and green standards refer to the presence of regulatory frameworks and the existence of green standards, both enforced and voluntary. This criterion also assesses the scope of promotion of green standards in the sector.

1.3.4 Existing government policy framework and priority

This criterion points to the existence of government policy framework where green jobs are promoted in support of existing government development thrust and priority. This criterion will assess if green jobs are articulated in the over-all government priorities as reflected in the Philippine Development Plan (PDP), in specific government development and action plans and existing government policies. This also includes current and existing plans and programmes of the government including public-private partnership initiatives and role of local government in generating economic development.

1.3.5 Scaling-up of Impact and Cooperation

This criterion looks at the potential of increasing the level of impact, coverage and promotion of green jobs in the employment activities in the sector. Existing interest, and buy-in from the ILO constituents which are government, employers and trade unions/workers groups are already articulated, as manifested in existing greening programmes, including budget allocation and investment. Impact also considers where the sector industry is not too much spread-out, as well as it supports local government initiatives and local economic development.

1.3.6 Entry point towards decent work pillars

Entry point towards decent work pillars refers to the possibility of being a pioneer sector for decent work where vulnerability issues can be addressed through the project. This indicator also considers strengthening existing decent work initiatives of the sector. The four pillars of decent work are employment, worker's rights, social protection and social dialogue.

The employment pillar promotes the creation of sustainable enterprises and increased efficiencies in the economy which are the requisites for countries to move out of poverty. It also explores opportunities for increased investments in human resource development and improved working conditions and seeks to achieve full and productive employment.
The worker's rights pillar aims to strengthen observance of the constitutionally protected rights of workers. It seeks to ensure the ratification of core & governance conventions & respect for fundamental principles and rights at work. The social protection pillar seeks to improve access to social protection mechanisms, improved wages, better working conditions and expanded employment opportunities for all. The social dialogue pillar seeks to strengthen tripartism and broaden representation of workers as a tool for attaining employment goals.

1.3.7 Tripartism and ILO/ donor priorities and experience

Tripartism and ILO/donor priorities and experience refer to the evidence of integrated and synergistic collaboration among government, employers and workers in the sector. This criterion shall qualitatively assess through focus group discussions and anecdotes the existing social dialogue structure available as a platform to discuss green jobs related issues and look at the openness from tripartite players to actively and meaningfully engaged in consensus building processes. This will ascertain if government programs and activities are present to support the sector initiative, if employers' organization have strong counterpart with clear mandate to support the sector, and check if trade unions have mandate and where their agenda are being promoted and advanced in this sector.

For each of these evaluation criteria, quantitative indicators were identified. Assessment of alternatives versus criteria should not be redundant, thus, indicators were identified in the criterion where its logical validity is best placed.

1.4 Methodologies, Respondents, Process and Time Frame

A set of evaluation criteria defined in section 1.3 was crafted to be utilized in comparing sector options. These criteria embodied the definition of green jobs and ILO's strategy for achieving multi-objectives geared towards sustainability and decent work.

The sub-sectors were chosen by the Project Advisory Council from each of the top three major industry groupings. The rationale behind their choices are these three sub-sector have existing and potential green products that can easily be introduced in the market; there have already been some initial buy-in among stakeholders and social players for the implementation of the demonstration products; and these sectors have high potential for scaling up.

Focus group discussions (Annex 4) among industry stakeholders were conducted for the socialized mass housing sector and organic farming sector in June 14, 2011. FGD for the wood and cork products sector was held in June 17, 2011.

2. Executive Summary

The Green Jobs Demonstration project in the Philippines is a one year ILO project which aims to showcase a sector and demonstrate a pilot case that is manageable and would have the highest impact and cooperation for greening jobs which shall be limited to the introduction of green products or greening of products, greening of standards, upgrading of skills and strengthening of decent work.
In line with this initiative, the ILO has initiated a rapid sector scoping of the sectors in the Philippines to determine which among them is best suited for the demonstration project for green jobs given the seven evaluation criteria set by the ILO : economic viability, greening of products and job potential, regulatory frameworks and green standards, existing government policy framework and priority, scaling of impact and cooperation, entry point towards decent work pillars, and tripartism and ILO/donor priorities and experience.

In a preliminary sector overview, top three sectors emerged: manufacturing, agriculture and fishery, and construction sector, representing 22%, 18% and 5% of the country 2009 GDP respectively, all exhibiting increasing growth trends in the long-term with manufacturing and construction growing more aggressively in the short-term. Employment contribution are at 8%, 29% and 6% respectively, from the total labor force.

The Green Jobs in the Philippines project advisory council members selected the socialized mass housing subsector for the construction sector, organic farming subsector for the agriculture sector, and the wood and cork subsector for the manufacturing sector. Secondary literature review and primary information collection through conduct of Focus Group Discussions (FGD) were done to help in analyzing the potential for green jobs among the sectors.

The socialized mass housing construction industry has institutional linkages that are very strong among public and private agencies framed by the Urban Housing Development Act of 1992 (RA 7279) and managed by the umbrella government agency, Housing and Urban Development Coordinating Council (HUDCC), chaired by the Vice-President of the Philippines. From the forecasted 2010 total housing needs of 3.7million, there is a growing product demand in the sector, not to mention the burgeoning informal settler population of the country, currently estimated at 2.4

million households. Current direct accomplishment is estimated at only 10% of current socialized housing needs.

Furthermore, the sector also has a high potential for green products through the green construction and green building initiative of the Philippine Green Building Council, the use of eco-friendly materials (such as engineered woods, insulation panels, roofing shingles and tiles, and indigenous construction materials), green design of houses, and ensuring materials and energy efficiency in building the houses. Most of these green products are already in existence in small quantities in the sector. This market demand and potential green products translate to a high potential impact on employment generation, with green skills envisioned to be created from this endeavour: energy efficiency managers, green architects, certification professionals, marketing professionals, green building trainers, sustainability officers and ecologists, among others. It stands to benefit the whole society via sustainable communities design through the upgrading of urbanization interventions.

Existing regulatory framework was in place since 1992. Green standards, though currently at advocacy level seem to be actively observed by the industry players. The National Green Building Rating System known as Building Ecologically Responsive Design through Excellence (BERDE), also developed by the Philippine Green Building Council has caught on. Workers in the construction sector, in general, seem to be suffering from the lack of decent work and the lack of meaningful participation in the existing tripartite structure in the government, in spite of the Department of Labor (DOLE) having set up a Construction Industry Tripartite Council (CITC) in 2003. The presence of the Alliance of Construction and Informal Workers (ACIW) and National Union of Building and Construction Workers (NUBCW) to promote alternative forms of organizing to seek protection for the workers through mutual-aid welfare-enhancing projects in the sector indicate that the socialized mass housing sector can be a good entry for decent work. The socialized mass housing sector is a very promising demonstration case for green jobs given its highly positive features on all the seven evaluation criteria.

The Organic farming subsector is a thriving industry with increasing demand for organic products domestically and moreso, internationally. Out of the total 9.6million hectares of agricultural land, distributed among 4.8million farms, being populated by 11.8 million farm workers, only 1-2% is estimated organic. This sector has green products as all agricultural produce are green and its green by-products are endless: palay, corn, herbal crops, all vegetables, all fruits, muscovado sugar, coconut oil, livestock poultry, cattle, bio-control pestisides/fertilizers, wine, condiments, beverage, healthcare, household and wellness products. Scaling up of impact and cooperation in the organic sector at present is minimal as most of the organic farms are dispersed in the country, however it has a future promise with the very recent proclamation of Negros Occidental and Oriental as organic sites and the Organic Agriculture Act (OAA) of 2010 granting tax incentives and subsidies for organic certification and support services for SMEs and farmers engaged in purely organic agriculture. Green jobs abound in the sector: farmers, farm managers, farm marketer, soil analysts, organic fertilizer specialists, and agriculturist/horticulturist. Green and decent work is very promising in the organic farming sector, specially that in this sector, the farmers are actually self-employed workers. This should also taken in the context of land justice and agrarian reform for the work to be green and decent.

The green standards for this sector is the Philippine National Standard on Organic Agriculture (PNSOA) of 2003 which is in force. The passing of the OAA of 2010 (RA 1007681) as a law, necessitates this set of standards to be updated to establish equivalence with international standards such as International Federation of Organic Agriculture Movement (IFOAM)'s Organic Guarantee System which have been recently revised. Tripartism is minimal in the sector but farmers'

organizations exist such as MASIPAG (Farmer-Scientist Partnership for Development), PAKISAMA (Pambansang Kilusan ng mga Samahang Magsasaka), OPTA (Organic Producers and Traders Association), ROAD Network (Regional Organic Agriculture Development) and BUGAN ECO-MOVEMENT working with the PDAP (Philippine Development Assistance Programme).

The wood products sector accounts for 0.48% of the manufacturing sector. Its forward and backward industry linkages are many, including furniture and fixtures, paper and paper products, rubber products, publishing and printing, the construction industry, ownership of dwellings and real estate. It has been faced with multiple problems, barriers and constraints mainly because its input industry: the forestry sub-sector has experienced a logging moratorium for the past years. Innovative alternative wood products such as bamboo products, veneer products, engineered wood and eco-plastic materials have surfaced as the market continued increasingly to require wood products. These green products are existing in the country. Potential green jobs in this sector are wood cutters, carvers, finishers, carpenters, shippers, designers, purchasing managers, production crew, quality crew, manufacturers of equipment and researchers. Regulatory frameworks exist for the forestry sector but are absent in the wood sector. Barely unionized, there are no reports of any tripartite discussion or social dialogue on the work conditions in the industry. Some green advocacies exist but are not too strong. Still, choosing the wood products sector for the demonstration project may just be the impetus it needs to lift it from its current declining state.

3. The Three Sectors

3.1 The Construction Sector Profile

The Construction Industry is the sector of the national economy which is engaged in the preparation of land and construction, alteration and repair of buildings, structures and other real estate property. The Philippine Statistical Yearbook classifies the sector by the nature of the organization- as public or private sector. Construction may be defined in various ways: (i) based on scope of activities, (ii) by type of establishment or (iii) by product scope. Table 1 lists the different aspects of construction which define the scope of the Industry.

Table 1. Construction Sector By Classification

Classification by Activity[1]	Classification by Type of Establishment[1]
• Site preparation • Building of complete constructions or their parts • Residential and non-residential building construction • General engineering construction • Plumbing and related works • Building components installation contractors • Electrical and mechanical work at site of construction • Water well drilling and water pump installation • Building installations and completion (finishing and repair) • Painting and related work • Floor and wall tiling or covering with other material • Interior decoration • Carpentry • Renting of construction or demolition equipment with operator	• General engineering construction • Building installation • Electrical and mechanical work at site of construction • Residential building construction
Classification by Product Scope[2]	
Wood-Based Products • Doors • Windows • Joineries / moldings • Door and window frames • Plywood and veneer • Parquet panels / wood tiles • Panels / boards of waste wood **Metal-Based Products** Iron and Steel Products • Doors, windows and frames • Staples • Nails • Screws, hooks and rings • Chain parts • Bars, rods and profiles • Washers • Rails • Junction boxes • Tubes and pipes • Sheets • Others such as electrical parts used in buildings **Other Metal Products**	**Non_Metallic, Mineral-Based Products** Clay and Ceramic Products • Chimney-pots • Liners • Cornices • Roofing tiles • Floor tiles • Insulators • Bricks • Sanitary wares Glass Materials • Laminated glass • Float/surface glass • Cast and rolled glass • Paving block slabs, art-pressed/molded glass • Insulators • Multi-cellular glass • Foam glass Cement Products • Building blocks and bricks • Refractory pipes • Pozzolan cement

Aluminum Products • Rods, bars and profiles • Plates, sheets and strips • Ingots and pigs • Doors, windows and frames • Tube/pipe fittings • Hollow profiles Copper Products • Wires and cables • Screws • Bolts and nuts • Plumbing fittings Base Metals / Metal Carbides • Wires • Mountings / fittings Lead Products • Tubes and pipes **Non-Metallic, Mineral-Based Products** Marble and other Stone Products • Tiles and slabs • Kitchen and bathroom countertops • Columns • Fireplaces • Mosaic for floorings, walls and borders	• Portland cement • White cement • Cement fiberboard Asbestos • Sheets/panels • Tiles • Gaskets • Tubes, pipes and fittings • Electrical parts used in buildings **Chemical-Based Products** • PVC / Plastic and Vinyl Products • Lavatory covers • Shutters, blinds • Boards, panels, consoles • Moldings • Switches • Electrical parts used in buildings • Insulators • Doors • Windows • Door and window frames • Baths • Wash basins and sinks • Floor coverings • Faucets • Junction boxes **Paints and Varnishes** **Other Resource-Based Products** • Pre-fabricated buildings and modular-type structures of materials other than metal • Fiber-based products • Shell products • Rubber products

[1] After Construction Sector Analysis Report (Cruz et al, 2010)

2 Source: 1994 Philippine Standard Industrial Classification: Philippine Exporters Confederation Inc.

3.1.1 Development Priorities

3.1.1.1 Philippine Development Plan (PDP)

The Philippine Development Plan 2011-2016 targets for the housing sector to provide 1.47 million units of direct housing assistance from 2011 to 2016 and envisions to increase this volume to 5.7

Million houses by 2016. Corollary to the global Millenium Development Goals (MDG) on ensuring environmental sustainability which aims to achieve significant improvement in the lives of at least 100 million slum dwellers worldwide by 2020, the National Slum Upgrading Strategy is formulated as a key component of the socialized housing program. The identification and development of new relocation/resettlement sites for the marginalized and vulnerable sectors will also be adopted." (NEDA, 2011).

3.1.1.2 National Labor and Employment Agenda

The National Labor and Employment Plan (LEP) 2011-2016 has strong reference and support plans for the construction sector, specifically on greening these jobs and increasing employment in the sector. It aims to "focus policies and programs on key job generating areas toward increasing productivity and employment, to wit: to increase exports and encourage foreign and domestic investments and thus spur employment generation, the government will pursue intensive promotion, industry development and a more focused incentives package in key areas, ..housing identified as one of these areas and "other high-potential industries including production of homestyle products" construction and related materials, highlighted as one of these products.

The National LEP aims to "formulate through social dialogue sectoral, trade and investment policies that promote employment-rich growth, through strategies, and developing and harmonizing green programs." A strong reference to greening initiatives is embodied in the plan, to quote: "The enhancement of productivity and efficiency will be undertaken through the development and implementation of green programs and promotion of sustainable consumption and production patterns. These programs will include public-private initiatives and will also entail investments promotion. Government agencies will also harmonize their green programs toward the promotion of green jobs. Initiatives to promote green jobs and industries will be pursued particularly in automotive, manufacturing, MSMEs, construction, housing, shipbuilding, mining, solid waste management, community contracting for employment-intensive green infrastructure, natural resource management and renewable energy. Local value added of renewable energy, such as local manufacturing of supply and materials and infrastructure development, will be promoted to ensure local employment generation. Alternative fuel industries will also be promoted, consistent with the goals of food security, protection of tenurial rights and environmental protection and conservation." (DOLE, 2011).

3.1.2 Economic Performance

3.1.2.1 Gross Domestic Product (GDP)

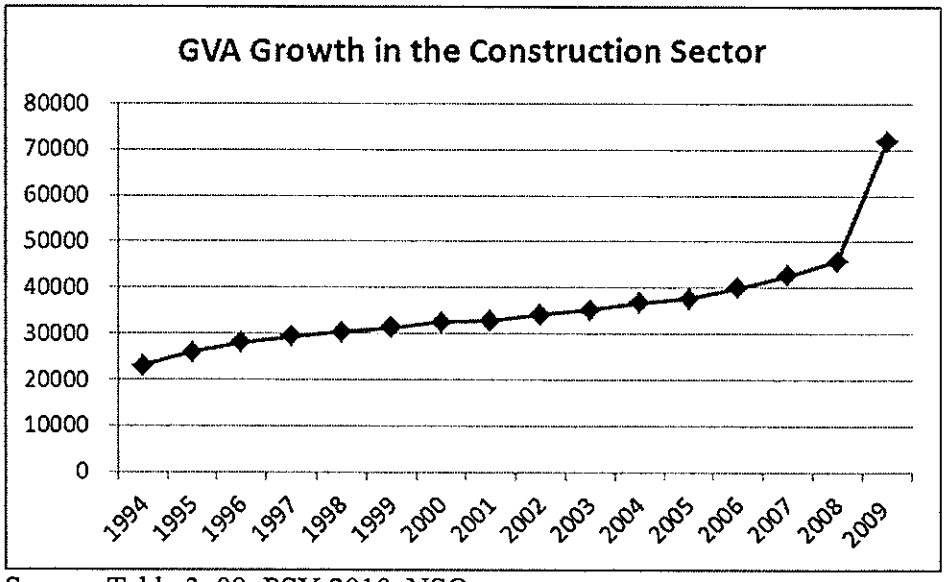
The Construction Industry has generated PhP 390 Million (in current prices) of gross value added (GVA) to the domestic economy in 2009 which represents about 5% of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 71 Million as shown in Table 2. Gross Domestic Product by Industrial Origin in 2009 (In million pesos).

Table 2. Gross Domestic Product by Industrial Origin in 2009 (In million pesos)

		At current prices		At constant 1985 prices	
	Industry	GVA in Pesos	% to GDP	GVA in Pesos	% to GDP
1.	AGRI., FISHERY & FORESTRY	1,138,334	14.82	259,424	18.11
	a. Agriculture & Fishery	1,134,036	14.77	258,102	18.02
	b. Forestry	4,298	0.06	1,322	0.09
2.	INDUSTRY SECTOR	2,318,882	30.20	460,205	32.13
	a. Mining & Quarrying	119,160	1.55	29,354	2.05
	b. Manufacturing	1,566,738	20.40	314,399	21.95
	c. Construction	390,449	5.08	71,908	5.02
	d. Electricity, Gas & Water	242,535	3.16	44,544	3.11
3.	SERVICE SECTOR	4,221,702	54.98	712,486	49.75
	a. Transportation, Communication and Storage	514,266	6.70	126,530	8.84
	b. Trade	1,115,432	14.53	239,119	16.70
	c. Finance	443,521	39.21	88,305	6.17
	d. Ownership of Dwellings & Real Estate	426,150	5.55	66,746	4.66
	e. Private Services	1,147,890	13.03	129,860	9.07
	f. Government Services	574,442	7.48	61,926	4.32
	Gross Domestic Product	7,678,917	100%	1,432,115	100%

Source: Table 3.3 and 3.4, PSY 2010, NSO

While it may not be as big a contributor to GDP as manufacturing and agriculture, the construction sector is an aggressively growing sector. It has shown consistently increasing growth throughout the stretch of 1995-2009. Its annual average growth registered at 8.2 % in the long term, grew at 8.25% in the medium term and registered a very high rate of growth at 32.04% in the short term as seen in Figure 1.



Source: Table 3_09, PSY 2010, NSO
Figure 1 GVA Growth in the Construction Sector

The construction sector has many forward and backward linkages: it gets inputs from many industries (agriculture and fishery, forestry, mining and quarrying, manufacturing and electricity, gas and water,

and service industries) and provides its outputs for the ownership of dwelling and real estate industry and many others.

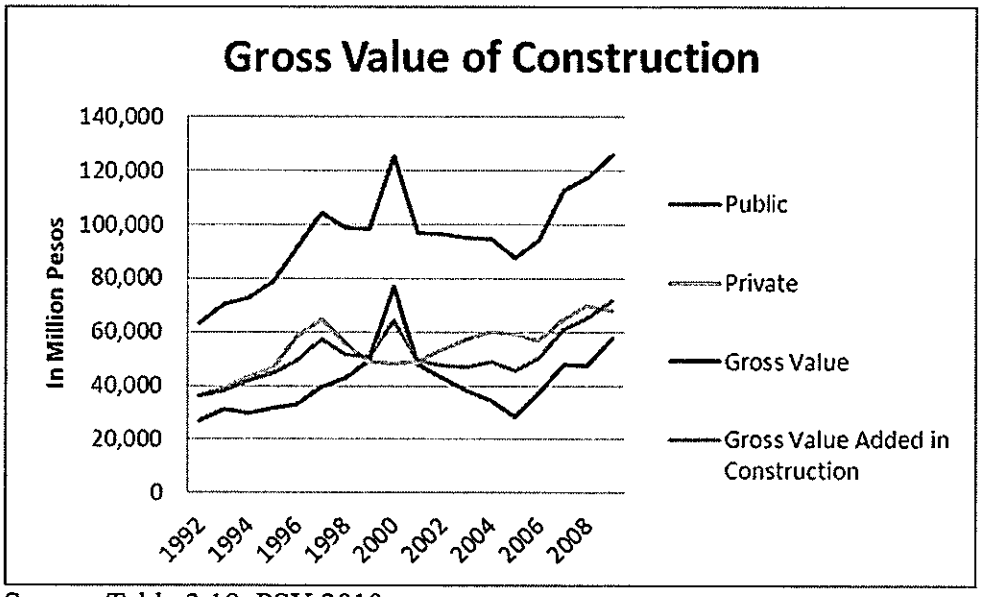
There is almost a 50-50% contribution between public and private construction to the total GV in the construction industry. The public construction sector contribution ranged from 40% to 61% while the private construction sector ranged within 49-64% for the past 18 years from 1992-2009 as shown in Table 3.

Table 3. Gross Value of Construction and Gross Value Added In Construction 1994-2009 (In Million Pesos: at constant 1985 prices)

Year	Public Construction Industry	% Share in Gross Value of Public C	Private Construction Industry	% Share in Gross Value of Private C	Gross Value	Gross Value Added in Construction
1994	29,735	40.81%	43,123	59.19%	72,858	41,774
1995	31,872	40.54%	46,755	59.46%	78,627	44,492
1996	32,888	36.10%	58,227	63.90%	91,115	49,339
1997	39,755	38.08%	64,649	61.92%	104,404	57,322
1998	42,919	43.43%	55,912	56.57%	98,831	51,791
1999	49,469	50.19%	49,102	49.81%	98,571	50,988
2000	76,960	61.40%	48,388	38.60%	125,348	64,377
2001	48,132	49.61%	48,887	50.39%	97,019	49,487
2002	42,859	44.49%	53,478	55.51%	96,337	47,498
2003	38,016	39.95%	57,138	60.05%	95,154	47,113
2004	34,498	36.54%	59,904	63.46%	94,402	48,718
2005	28,274	32.31%	59,227	67.69%	87,501	45,852
2006	37,141	39.43%	57,047	60.57%	94,188	50,271
2007	47,948	42.59%	64,638	57.41%	112,586	60,826
2008	47,347	40.36%	69,969	59.64%	117,316	65,462
2009	58,001	46.02%	68,034	53.98%	126,035	71,908

Source: Table 3.19, PSY 2010

The gross value of construction is increasing to the same level of its peak in 2000 when government spending was highest (Figure 2).



Source: Table 3.19, PSY 2010
Figure 2 Gross Value of Construction

Industry Players

There are 2,488 establishments in the construction sector: 54.3% in micro enterprise category, 39.3% in small enterprise category , 3.4% in medium enterprise and 2.9% in large enterprise category, as per 2006 NSO estimates (Cruz et al, 2010). The construction sector is responsible for 0.3% of total establishments in the country.

Thirty two construction companies made it to the Top 1,000 Philippine corporations in 2007 (Business World, 2008 as quoted by Cruz et al, 2010). At the top five were Hanjin Heavy Industries Construction, Makati Development Corp., EEI Corp., DM Consunji and Daelim Philippines.

3.1.2.2 Employment Generation

The Construction Industry has employed about 5.7% of the entire Philippine labor force numbering 60.7 million population over 15 years of age in 2010, generated 2,014,000 employment or about 1.79 % of total employment as compared to other sectors in Table 4.

Table 4. Employed Persons By Major Industry per Year (In Thousands)

Major Industry Group	2008	2009	2010
ALL INDUSTRIES	34,089	35,061	36,047
Agriculture	12,030	12,043	11,974
Agriculture, Hunting and Forestry	10,604	10,582	10,505
Fishing	1,426	1,461	1,469
Industry	5,048	5,093	5,394
Mining and Quarrying	158	166	199
Manufacturing	2,926	2,894	3,031
Electricity, Gas and Water	130	142	150
Construction	1,834	1,891	2,014
Services	17,011	17,925	18,680
Wholesale & Retail Trade,	6,446	6,736	7,040
Hotel & Restaurants	953	1,010	1,063
Transport, Storage and Communications	2,590	2,779	2,721
Financial Intermediation	368	369	399
Real Estate, Renting and Business Activities	953	1,064	1,147
Public Administration & Defense, Compulsary Social Security	1,676	1,749	1,846
Education	1,071	1,138	1,175
Health and Social Work	392	421	450
Other Community, Social and Personal Service Activities	833	977	913
Private Households with Employed Persons	1,729	1,880	1,925
Extra-Territorial Organizations & Bodies	1	2	2

Source: Table 11.5, PSY2010, National Statistics Office and Table 3.11 PDP 2011-2016

These figures may be higher considering the numerous unrecorded informal construction activities all over the country (Annex 4). Employment rates increased by an average of 6.08% for the three year period 2008-2010.

3.1.3 The Socialized Mass Housing Sub sector

The socialized mass housing sub-sector of the construction industry is divided into two: public and private construction. There are many stakeholders and industry players in the sector: originators (groups that start to organize communities and financing schemes for the clientele), financiers (financing agencies that provide the money for the housing projects), enablers (agencies that provide support throughout the construction period of the projects), producers (the builders and contractors of the projects) and consumers (the beneficiaries of the housing projects). The Urban Development and Housing Act (UDHA) of 1992, RA 7279, gave powers and mandates to these stakeholders: the Housing and Urban Development Coordinating Council (HUDCC) is in charge of providing secure tenure; the National Housing Authority (NHA) resettles informal dwellers, upgrades the slum communities, chooses sites and provides corresponding services, core housing, medium-rise housing and other housing assistance; the SHFC is in charge of the Community Mortgage Program (CMP); the

HDMF does end-user financing together with government financial institutions like the Land Bank of the Philippines, SSS, GSIS and the Development Bank of the Philippines; and the NGOs help these government agencies to deliver housing to the poor sector of the society. Support private and public organizations work with these stakeholders at various phases of the process. Their linkages are shown in Figure 3 The Stakeholders in the Socialized Mass Housing Sector and their functions and mandates are differentiated in Table 5 and 6.

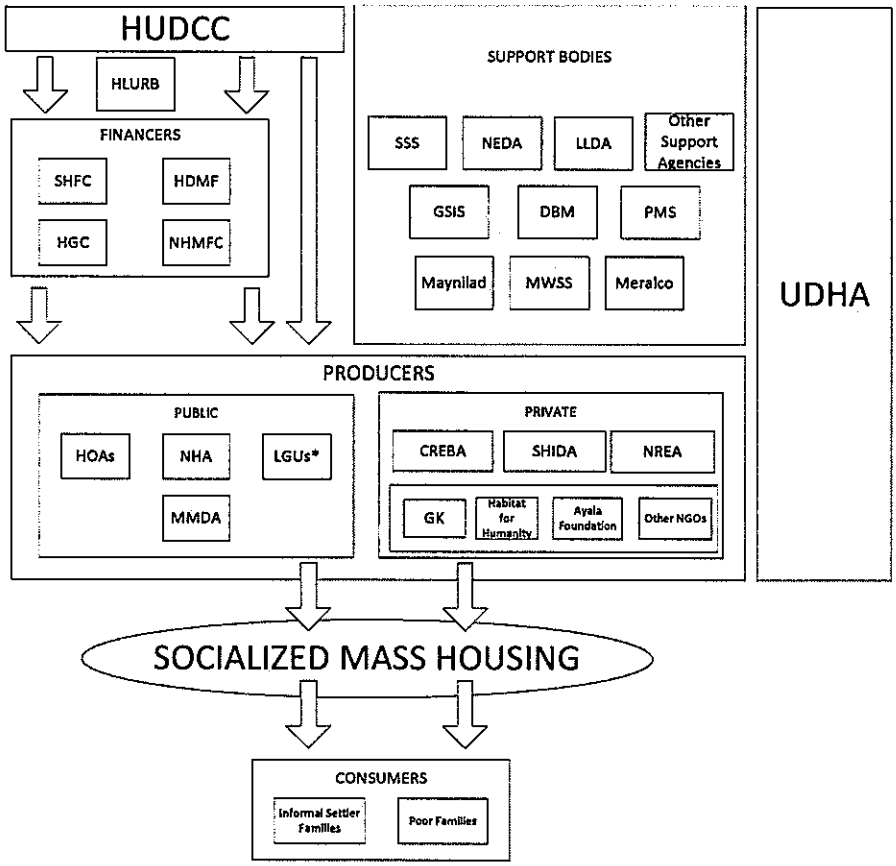


Figure 3 The Stakeholders in the Socialized Mass Housing Sector

Table 5 Functions of Public Agencies in the Socialized Mass Housing

Public Agencies		Functions and Mandate
HUDCC	Housing and Urban Development Coordinating Council	The HUDCC was created by President Corazon C. Aquino by virtue of Executive Order No. 90 dated 17 December 1986 and serves as the highest policy making body for housing and coordinate the activities of the government housing agencies to ensure the accomplishment of the National Shelter Program. Its powers are: 1. To formulate national objectives for housing and urban development and to design broad strategies for accomplishment of these objectives; 2. To determine the participation and coordinate the activities of the key government housing agencies in the national housing program; 3. To monitor, review and evaluate the effective exercise by these agencies of their assigned functions; 4. To assist in the maximum participation of the private sector in all aspects of housing and urban development; 5. To recommend new legislation and amendments to existing laws as may be necessary for the attainment of government's objectives in housing; 6. To formulate the basic policies, guidelines and implementing mechanisms for the disposal or development of acquired or existing assets of the key housing agencies which are not required for the accomplishment of their basic mandates; 7. To exercise or perform such other powers and functions as may be deemed necessary, proper or incidental to the attainment of its purpose and objectives.
	The following are attached agencies:	
	National Housing Authority	Provide responsive housing programs primarily to homeless low-income families with access to social services and economic opportunities while ensuring corporate viability. Its objectives are: 1. To provide and maintain adequate housing for the greatest possible number of people. 2. To undertake housing development, resettlement or other activities that would enhance the provision of housing to very Filipino. 3. To harness and promote private participation in housing ventures in terms of capital expenditures, land, expertise, financing and other facilities for the sustained growth of the housing industry.
	Home Guaranty Corporation	The HGC is a government-owned-and-controlled-corporation (GOCC) mandated by law (Republic Act 8763) and promotes sustainable home ownership by providing risk coverage or Guarantees and tax/fiscal incentives to banks and financial institutions/investors granting housing development loans / credits, and home financing
	National Home Mortgage Finance Corporation	The NHMFC is the government's major secondary mortgage institution, able to attract long-term funds to provide strong and sustainable housing finance. It is a provider of home financing for socialized and informal sectors through securitization and other fund sourcing mechanisms
	Housing and Land Use Regulatory Board	The HLURB is a national government agency tasked as the planning, regulatory and quasi-judicial body for land use development and real estate and housing regulation. These roles are done via a triad of strategies namely, policy development, planning and regulation.
	Home Development Mutual Fund	The HDMF through its arm, the Pag-IBIG fund, gives housing loans to all members: SSS, GSIS, and OFWs. It introduced innovative benefit programs that heeded the calls for expansion of membership to include self-employed groups with informal income, overseas Filipino workers, and non-earning spouses. It also launched other novel programs such as the Multi-Purpose Loan for its short-term loans program, and shelter programs that address both individual and institutional housing requirements (HDMF,2010).

Table 5 Functions of Public Agencies in the Socialized Mass Housing (continuation)

Public Agencies		Functions and Mandate
SSS	Social Security System	The SSS has an arm, the Housing Development Loan which is designed to support the social housing project of the government as well as to provide affordable and decent houses to all homeless SSS members (SSS,1997).
GSIS	Government Service Insurance System	The GSIS through its Housing Loan Program is offering its members a basement low interest rate of only eight percent per annum compounded annually, regardless of the approved loan amount, fixed during the whole repayment period from a minimum of five years to 30 years.
LGUs	Local Government Units	UDHA Sec. 6, 7, 8, 13, 18, 17, 18, 21, 23, 27, 28, 30-, 33, 34,39 and 41 stipulate the LGUs mandate in the socialized mass housing.

Source: various sources and websites

Table 6. Functions of Private Agencies in the Socialized Mass Housing

Private Agencies		Functions and Mandate
HOA/CA	Home Owners Associations/ Community Associations	HOAs and CAs organize the communities and create legal personality in order to represent the constituents as a single entity in the financial transactions for land acquisition and house building with all the government and private agencies.
GK	Gawad Kalinga Community Development Foundation	Gawad Kalinga, a Philippine-based poverty alleviation and nation-building movement, is building empowered communities by people with faith and patriotism; driven by a culture of caring and sharing, dedicated to eradicate poverty and restore human dignity. Its mission is to end poverty for 5 million families by 2024. .
HFH	Habitat for Humanity	Since 1988, Habitat for Humanity (HFH) Philippines has played an active role in providing decent, durable and affordable housing for families in need. . Through a network of project offices in rural and urban areas, HFH Philippines has built and repaired tens of thousands of homes. Habitat has also assisted more than 5,000 families displaced by typhoons, fire and landslides.
CREBA	Chamber of Real Estate and Builders' Associations [CREBA], Inc.	An association of businesses with a social conscience. Its goals are: 1. To instil, encourage and promote awareness among its members that ownership, development, construction, conservation, management and disposition of land and real property are imbued with public interest, and that in all relations with the public the members should at all times temper self-interest with concern for the general welfare. 2. To integrate, correlate, harmonize and mage the activities of the Chamber in a manner that would best promote national growth and economic stability. 3.To initiate and undertake studies on ways by which the homeless may be provided with homes of strength, durability, form, function and utility at reasonable cost. 4.To initiate, encourage, and maintain effective cooperation with Government and other economic and social sectors towards formulation of programs and policies that would foster national development and provide a conductive environment for members to effectively participate in nation building.
SHDA	Subdivision and Housing Developers Association	Produce 400,000 affordable and decent housing units annually.
NREA	National Real Estate Association	NREA is a one-stop trade organization in the real estate industry. Members of the Association belong to major real estate economic contributors and participants; government agencies that regulate, license and oversee the industry; and the group of legislators who are supportive of the urban and housing developments. It hopes to achieve the provision of the basic need for shelter to the poorest of the poor and the neediest of the needy.

Source: various sources and websites

3.1.3.1 Justification for sub sector selection

The socialized mass housing construction sector has been chosen to be the focus in the construction sector because of the following reasons (Annex 4):

- Greening housing answers the perennial problem of lack of affordable housing for the poor;
- It shows a promising increase of potential jobs;
- Partnership with existing government initiatives enable a demonstration project in this sector already doable within a year, with sustainability already addressed;
- It has other forward and backward linkages such as energy efficiency, livelihood, local government participation, financing and others;
- Green socialized housing can be constructed within 6 months to a maximum of one year, it is also tangible and non-perishable, thus, it can be show cased;
- The commitment of social partners can hasten the implementation process ; and
- It addresses enhancing role of community and other multi stakeholders/tripartism in the delivery of the demonstration project especially there is an existing manifestation of commitment both from workers groups and civil society to collaborate for a demonstration project.

The Socialized Housing Market

The socialized mass housing, a component of both public and private construction, is designed for the urban poor market of the country. The Philippine urban poor, as officially defined by UDHA, refers to people in urban and urbanizable areas who are without houses and whose income falls within the poverty threshold set by the government (2006 national annual per capita poverty threshold was set at PhP 12,309.00, while at NCR, the value is at PhP 16,737.00, NSCB, 2010).

Additionally, the NGOs and the urban poor themselves use the absence of security of tenure as the principal defining characteristic of the urban poor aside from a state of "shelterlessness" and an income below the poverty threshold. Using this definition, the nationwide urban poor population is estimated at 14 -17 million people or 2-3 million households. The principal explanation for this huge mass of people in the urban areas according to the National Economic and Development Authority (NEDA) is "urbanization" caused by the massive migration of the rural folk to the urban areas due to "extreme rural poverty" (Ngolaban, 1999).

The Philippine government pegs the total housing needs in the country, which includes housing backlogs and housing for new households, at 3.7 Million houses in 2010 (Table 7).

Table 7 Total Housing Needs in 2010

Region	Annual Backlog	Backlog + New Households[1]						
		2005	2006	2007	2008	2009	2010	TOTAL
NCR	58,412	82,182	82,434	82,689	82,946	83,206	83,469	496,928
CAR	1,309	6,494	6,589	6,685	6,783	6,882	6,984	40,416
I	5,556	25,027	25,446	25,874	26,310	26,757	27,212	156,626
II	4,078	17,725	18,032	18,346	18,667	18,995	19,330	111,094
III	12,569	71,938	73,837	75,798	77,821	79,909	82,064	461,368
IV	23,827	127,872	131,742	135,757	139,920	144,239	148,718	828,248
V	12,267	28,288	28,557	28,830	29,109	29,392	29,679	173,855
VI	16,816	36,941	37,255	37,574	37,898	38,227	38,561	226,455
VII	10,578	45,880	46,865	47,877	48,918	49,988	51,087	290,616
VIII	7,281	18,766	18,940	19,116	19,294	19,476	19,660	115,252
IX	7,642	21,824	22,133	22,449	22,772	23,101	23,438	135,717
X	5,912	18,880	19,164	19,455	19,751	20,054	20,364	117,668
XI	11,158	41,922	42,722	43,542	44,384	45,248	46,134	263,952
XII	6,661	18,033	18,270	18,511	18,758	19,009	19,266	111,847
ARMM	5,126	22,800	23,482	24,190	24,926	25,691	26,484	147,574
CARAGA	5,942	12,791	12,902	13,016	13,131	13,248	13,367	78,456
Total	195,133	597,362	608,370	619,708	631,389	643,422	655,821	3,756,072

Source: HUDCC

The Low-cost and Socialized Mass Houses and Their Prices

There are two types of products for the poor and informal settlers market: the low cost housing and the socialized mass housing. Low cost housing ranges from PhP400,000 to PhP 2.1 Million per house (SHFC, 2011) while socialized housing located in resettlement areas, industrial estates and economic zones range from PhP 150,000 for each 36 sqm. house for outside Metro Manila areas to PhP 180,000 for each house within Metro Manila at 9% interest rate payable in 25-30 years, translating into approximately less than P1,500 monthly amortization (CREBA, 2011).

Total direct housing assistance accomplishment for 2010 amount to only 149,270 housing, detailed across public agencies in Table 8, which is barely 4% of the total housing needs quoted in Table 7.

Table 8. Direct Housing Accomplishment

Program (In households assisted)	Agency	Year							
		2004	2005	2006	2007	2008	2009	2010	Total
Direct Housing Production									
1. NHA Housing Production	NHA	20,180	39,786	37,601	41,528	47,112	29,413	23,276	238,896
Resettlement		11,760	16,960	15,390	28,655	36,830	22,044	18,740	150,379
Sum Upgrading		1,395	4,136	1,338	3,707	6,231	2,187	2,068	21,062
Sites and Services		2,036	1,192	2,061	4,036	1,361	1,463	1,142	13,291
Core Housing		2,871	1,033	927	721	41	456	572	6,621
Medium-Rise Housing				105	60	-			165
Other Housing Assistance		2,118	16,465	17,780	4,349	2,649	3,263	754	47,378
2. Community Mortgage Program (CMP)	SHFC	14,129	14,199	13,783	11,819	9,169	10,022	7,109	80,230
3. Retail and Developmental Financing		44614	39,138	33,427	48,020	62,846	75,328	118,785	422,158
End-user Financing	HDMF	39,562	37,175	33,066		62,507	74,973	56,696	351,346
GFIs End-User Financing					103				
	LBP	78	37	65	37	186	281	243	993
	SSS	187	91	47	220	62	74	50	548
	DBP	66			293	16		11,300	11,602
	GSIS		1,835	249		75		50,496	57,669
4. Provision of Secure Tenure									
Proclamations	HUDCC	44,248	11,784	15,082	51,668	6,504	5,286	100	134,672
Total Direct Housing Provision		23,171	104,907	99,893	153,035	125,631	20,049	149,270	875,956

Source: Chapter 8, PDP 2011

3.1.4 Greening Readiness and Potentials

3.1.4.1 Existing and Potential Green Products

There is an existing green product idea in the construction sector which integrates many other existing and potential green products and services: ***green building***. It encompasses siting and structure design efficiency, water efficiency, materials efficiency, indoor environmental quality, operations and maintenance optimization, and waste reduction. Table 9 presents the other green construction products.

Greening construction involves any or all of the following strategies:

- elimination of virgin material requirements
- use of bio-based products
- use of recovered materials

- reuse of product
- life cycle cost
- recyclability
- use of environmentally preferable products
- waste prevention (including toxicity reduction or elimination) and
- ultimate disposal.

Siting and structure design efficiency
Designing environmentally optimal buildings would require the ways to minimize the total environmental impact associated with all life-cycle stages of the building project. However, buildings are much more complex products and they require a multitude of materials and components, each constituting various design variables to be decided at the design stage. A variation of every design variable may affect the environment during all of the building's relevant life-cycle stages (Hegazy, 2002, Pushkar, Becker, & Katz 2005).

Energy efficiency
Various strategies employed to reduce operating energy use are the installation of high-efficiency windows and insulation in walls, ceilings, and floors which increase the efficiency of the building envelope, (the barrier between conditioned and unconditioned space), passive solar building design, which is often implemented in low-energy homes, placing awnings, porches, and trees (Simpson, 2002) to shade windows and roofs during the summer while maximizing solar gain in the winter, effective window placement (day lighting) to provide more natural light and lessen the need for electric lighting during the day, and solar water heating which further reduces energy costs.

Water efficiency
Water conservation/efficiency strategies include the design for dual plumbing to use recycled water for toilet flushing or a gray water system that recovers rainwater or other non-potable water for site irrigation and minimizing wastewater by using ultra low-flush toilets, low-flow shower heads, and other water conserving fixtures.

Materials efficiency
Green building materials include lumber from forests that have been certified to a third-party forest standard, rapidly renewable plant materials like bamboo and straw, insulating concrete forms, dimension stone, recycled stone, recycled metal, and other products that are non-toxic, reusable, renewable, and/or recyclable (e.g., trass, linoleum, sheep wool, panels made from paper flakes, compressed earth block, adobe, baked earth, rammed earth, clay, vermiculite, flax linen, sisal, seagrass, cork, expanded clay grains, coconut, wood fibre plates, and calcium sand stone. The use of recycled industrial goods, such as coal combustion products, foundry sand, and demolition debris in construction projects has also been recommended (USEPA, 2010). Building materials should be extracted and manufactured locally to the building site to minimize the energy embedded in their transportation.

Indoor environmental quality
Buildings rely on a properly designed ventilation system to provide adequate ventilation (passively/naturally- or mechanically-powered) and air filtration as well as isolate operations (kitchens, dry cleaners, etc.) from other occupancies to reduce volatile organic compounds, or VOC's, and other air impurities such as microbial contaminants . During the design and construction process choosing construction materials and interior finish products with zero or low emissions will improve indoor air quality. Many building materials and cleaning/maintenance products emit toxic gases, such

as VOC's and formaldehyde. These gases can have a detrimental impact on occupants' health and productivity as well. Avoiding these products will increase a building's IEQ.

Operations and maintenance optimization
Ensuring operations and maintenance (O&M) personnel in the project's planning and development process will help retain the green criteria designed at the onset of the project (WBDG Sustainable Committee, 2009). Every aspect of green building is integrated into the O&M phase of a building's life. Operations and maintenance optimization happen when new or additional green technologies or processes are applied or utilized. Although the goal of waste reduction may be applied during the design, construction and demolition phases of a building's life-cycle, it is in the O&M phase that green practices such as recycling and air quality enhancement take place.

Waste reduction
"Greywater" wastewater from sources such as dishwashing or washing machines, can be used for subsurface irrigation, or if treated, for non-potable purposes, e.g., to flush toilets and wash cars. Rainwater collectors are used for similar purposes. An alternative to costly centralized wastewater treatment process is converting waste and wastewater into fertilizer. By collecting human waste at the source and running it to a semi-centralized biogas plant with other biological waste, liquid fertilizer can be produced. Practices like these provide soil with organic nutrients and create carbon sinks that remove carbon dioxide from the atmosphere, offsetting greenhouse gas emission. (Lange, J., Grottker, M., Otterpohl, R., 1997).

Table 9. Other Green Construction Products

Kinds/Uses	Particulars	Description
1. Engineered Woods for Sheathing & Framing	Particle board	made from 100% recycled wood; no added urea formaldehyde (NAUF); resin is used as a binder in the production of particleboard.
	Oriented Strandboard	made of compressed wood strands arranged in perpendicular layers and bonded with phenolic formaldehyde resin.
	Omniboard	Omniboard is a wood wool board and uses a renewable fast-growing local wood species and other fibre materials that may be used for Omniboard (e.g., bamboo, corn husks, etc.).
2. For ceilings and walls	Cement board	Fiber cement boards are made of Portland cement in significant amount, ground sand, tiny cellulose fibers and water.
	Concrete Interlocking Blocks (CIBs)	made of cement, sand and water and are a very good material to build with in the country's climatic conditions. It is also a very good material for core constructions and is very sustainable.
3. Insulation	Structural Insulation Panels	Panels are made of engineered woods such as OSB, are bonded to a core of expanded polystyrene, high-performance rigid insulation to create a panel strong enough to resist loads; manufacturing process uses little energy; does not contain urea formaldehyde, CFCs nor HCFCs
	Mineral fiber insulation	It includes slag wool, which is made from melted industrial or steel mill slag that is spun into fibers treated with oil & binders.

Table 9 Other Green Construction Products (continuation)

Kinds/Uses	Particulars	Description
	Cellulose Thermal Insulation	made from finely shredded newsprint that is chemically treated to resist fire, corrosion, vermin and fungal growth; contains at least 70 percent post-consumer paper waste.
	Vermiculite	mineral closely related to mica; when heated, it expands to form a lightweight material with insulating properties.
	Rigid foam insulation	Good to use where space is very limited but a high R-value is needed. When the joints between panels are properly sealed, rigid foam insulation can act as both an air and vapor barrier.
4. Roofing	Composition Shingles	Can be based on a number of materials, including slate, shake, laminate, wood, and slate; require low maintenance
	Roofing tile	Does not rot or burn, and it cannot be harmed by insects; requires little maintenance.
	Slate	very long lifespan, good fire protection, low maintenance, and an invulnerably to rot and insects
	Concrete	long lifespan, require low maintenance, offer good fire protection and are resistant to rot and insects.
	Metal	They are made from between 60 percent to 65 percent recyclable material.
5. Indigenous materials	Bamboo plywood	naturally stronger and harder than wood, making it perfect for use in countertops, shelving, cabinetry, and cutting boards in residential and commercial applications
	Straw	Straw bale construction uses bales made from the leftover stems of harvested grain, mostly rice. Straw bale buildings have highly insulated walls and boast low building and maintenance costs.

A Compendium of Indigenous Building and Materials was produced by a project undertaken by the Department of Science and Technology (DOST) along with the Philippine Council for Industry and Energy Research and Development (PCIERD) coordinated with the University of the Philippines Building Research Service (UP BRS). The said resource contain technology entries that may either be commercially available or products of research, aimed to promote the use of indigenous building materials and technologies in the construction of low-cost houses.

3.1.4.2 Identification of existing green standards and recommendations

The Philippines has established a nationally recognized and industry accepted rating system in order to measure the environmental impact and performance of buildings. BERDE (Building Ecologically Responsive Design through Excellence) is the National Green Building Rating System developed by the Philippine Green Building Council (PGBC), a national non-profit organization and is an alliance of building and construction industry leaders from both the public and private sectors which is a non-partisan venue to develop a nationally accepted and recognized green building rating standard.

BERDE is consensus driven. It is a third party certification, monitoring and verification scheme that enables all property market players to benchmark against a single green building rating system, thus levelling the playing field. It guides decision makers in the industry in designing, constructing and operating greener buildings. Businesses use BERDE as a recognizable environmental branding tool that enable property buyers to easily identify buildings that are performing environmentally well.

3.1.4.3 Existing government policy framework and initiatives and identification of scaling up potential

There are existing government policy frameworks at the national and local levels on greening the sector. These legislative policies at the national level are the green public procurement and ecolabeling , while at the local level, there exist green building ordinance and green roofs ordinance in QC.

The Green Procurement (Executive Order 301) which was issued by the President in 2004 is an attempt to steer the economy into the transition to a green economy could be accelerated if a large number of government units (at the central, regional and local level) were to decide to adopt sustainable, development oriented procurement policies, as it would create a huge *pull factor f*or sustainably produced and energy efficient products. , Ecolabeling programs (RA 9003) have to be established and implemented. The objective of ecolabeling programs is to eliminate the least efficient products from the market, by informing consumers which products can help them reduce their monthly electricity bill. This change in demand will again encourage manufacturers to improve product efficiency, thus contributing to reduce GHG emissions. Green Choice Philippines is the national ecolabeling program. It is recognized by the Global Ecolabeling Network 45, a non-profit association of third party, environmental performance labeling organizations which aims to identify environmentally responsible products in the market.

Green Building Ordinance (GBO) 2009 in Quezon City is Ordinance No. SP-1917, series of 2009 gives tax cuts in real property taxes as incentives for building owners, covers buildings/structures classified by the National Building Code, namely: hotels, office buildings, malls, dry markets, wet markets, and slaughterhouses (commercial); schools and office buildings. The ordinance also gives emphasis on site conservation and sustainable planning, water conservation and efficiency, energy efficiency and renewable energy; conservation of materials and resources and indoor environmental quality and human health. Under the Green Roof Ordinance (Ordinance 1940) signed into law in Quezon City by former Mayor Feliciano R. Belmonte, Jr. last 10 September 2009, new commercial/residential buildings are required to devote at least 30% of their roof area for plants and trees.

Table 10 provides a list of the laws that influence the growth of the Green Building Industry.

Table 10. Various Laws Relevant to the Green Building Practices

Law	Titles
1. Presidential Degree (PD) 1151	The Philippine Environmental Policy
2. PD 1152	The Philippine Environmental Code
3. PD 1586	The Environmental Impact Statement System
4. RA 8749	Philippine Clean Air Act of 1999
5. RA 9275	The Philippine Clean Water Act of 2004
6. Department Administrative Order No. 35	Water quality effluent standards
7. RA 9003	Ecological Solid Waste Management Act
8. RA 6969	Toxic Substances and Hazardous and Nuclear Waste Control Act
9. Department Administrative Order No. 26	Guidelines in the appointment or designation of Pollution Control Officers (PCOs).
10. RA 9729	Climate Change Act of 2009
11. RA 4850	Creation of Laguna Lake Development Authority
12. RA 10121	Philippine Disaster Risk Reduction and Management Act of 2010
13. RA 9513	Renewable Energy Act of 2008
14. EO 879	Creating the Philippine Bamboo Industry Development Council (PBIDC) of 2010
15. Presidential Decree No. 856	The Philippine Code on Sanitation of 1975
16. Presidential Decree No. 1746	Creating the Construction Industry Authority of the Philippines
17. RA 7279	Urban Development and Housing Act, UDHA, of 1992
18. Executive Order No. 131	Disposing of government-owned lands that have not been used for the purposes they have been reserved to be used in the development /establishment of socialized housing for the underprivileged and homeless citizens in the urban areas and providing basic services and employment opportunities therein.
19. Presidential Decree No. 442	Labor Code of the Philippines

Scaling up will be easy in this sector. The public and private players in the sector have existing initiatives that the demonstration project can latch onto.

First, NHA has two ongoing housing projects. The first one was on the North and South Railway Project Affected Communities Resettlement Project and the second one is the Resettlement Project for Flood Prone Areas in Metro Manila. The second project expects to resettle within the next six years a total of 125,000 families with a target of constructing 25, 000 houses for year 2011.

The Resettlement Project adopts the community development approach. Aside from building core houses through partnership with local private developers, it also provides site development, including basic service facilities and creation of employment/livelihood for the relocated families. NHA also partners with other national government, private sectors and civil society groups to provide other community development assistance. Local job creation in the private-public partnership is included in existing Housing Regulations where it stipulates hiring of 30% unskilled workers and 50% skilled workers from the community residents themselves. Financing comes from the National Housing Authority. The Housing Technology Development Office of NHA provides technical assistance to the resettlement project by accrediting construction materials and technologies.

Second, Gawad Kalinga has built 8,378 houses in 317 villages in the NCR in 2009. In the whole country, they have built a total of 33,439 houses in 1,400 villages by June 2009. (GK, 2009). The ABS—CBN Foundation works with HFH to help resettle 4,000 informal settlers in Pasig River to the *Bayanijuan in Calauan* where 800 houses have been built in 2010.

3.1.4.4 Green skills

As a response to the climate change events, environmental challenges and the recent passage of environment and climate –related laws and policies in the country, innovation and the development of new technologies and processes is expected to create new opportunities for investment and growth, both in traditional and new business sectors. Jobs in the area of research and development of low-carbon technologies, and also in traditional jobs, which in future are likely to be geared increasingly towards green growth, will require new skills. There is more likelihood that the greening of jobs would be based on specialist knowledge and expertise, especially in the fields of science, technology, engineering and mathematics. These areas are vital in the process of making the transition to more environmentally sustainable jobs, and will help to secure availability of skilled workers in key economic sectors.

Green skills in this sector include jobs typically found in construction related activities, household manufacturing, design and remodelling services, and remediation services. Based on the Focus Group Discussion conducted last 14 June 2011, certain jobs and competencies have been identified that have potentials in the light of the Green Building promotion. Table 11 lists the possible jobs that may experience increase in demand as a consequence of Green Building promotion.

Table 11. List of Jobs with Potential in the Green Building Promotion

Jobs/Positions	Competencies
Energy Efficiency Manager	With engineering background; or with several years experience or skills in running energy audits, maintaining energy use records, planning and implementing improved processes; ability to communicate in a technical manner as well as a simplified and functional manner to other aspects of the business; Ability to analyze energy use, identify opportunities for energy improvement; experience and ability conducting energy audits
Green Architects	Knowledge about effects of structures to human health, environmental impact, loss of resources, waste, air/water/indoor pollution, energy/water/material consumption; while designing a building. Knowledge and skill in making a structure energy efficient and nature friendly.
Ecologists	Design, supervise and mentor complex and large geographical scale ecological surveys, which are fit for a specific ecological purpose; Ability to collect, monitor, record, analyse and present data as well as identify plants and animals and carry out scientific research
Sustainability Officer	Must have university degree in environmental planning/studies; Must have environmental, health and safety experience and knowledge for understanding the core sustainability principles; Must have skills in evaluation; must have business development skills; community leadership skills; community organizing skills; excellent communication skills; familiarity with technological and process development;
Marketing Professionals	Marketing professionals with knowledge on sustainability are seen as key in the promotion of greener buildings. There is the challenge of hiring professionals who are able to articulate the benefits of green building and increase awareness.. For green building as an environmental solution to work, there should be enough marketing professionals who are able to help in creating market demand that will push building developers to sell more of this building type
Green Building Trainors	The industry now slowly accepting green building as part of their corporate mandates, there is a remarkable demand for green building trainers, speakers, and facilitators. Building technologies, being very dynamic, a roster of professionals abreast with the latest in building trends are very much in needed in industry. These professionals have to exhibit a high-level of communication skills.
Certification Professionals	Third party certification and verification systems and standards are essential in identifying green buildings. Green building rating schemes are also becoming popular to building professionals in measuring environmental performance of building. These increase the credibility for projects claiming green credentials. Building a national roster of green building professionals and assessors with auditing skills is vital. Also crucial is the development of green material specialists who has a very high understanding of standards and other specific skills and knowledge that may be required include life cycle assessments, material science, and construction workflow.

3.1.4.5 Green Jobs and Decent Work

It is not clear what is the percentage of the industry and what is the number of workers involved in the socialized mass housing. Over 40 percent of the construction projects in the country, value-wise, are in infrastructures, e.g., roads, bridges, airports, and others. Commercial buildings also occupy a big percentage. As to housing, the bulk of housing funds raised by the private sector are naturally targeted for the middle-class and upscale housing projects for those who can afford to buy housing units, e.g., OFWs, workers with regular jobs and stable incomes, and rich families.

Among the estimated 3.7 millions of Filipinos who have no adequate and decent dwellings are included, ironically, many formal and informal construction workers who are hired on a project basis, who do not have continuous job contracts, and who do not get decent compensation for their work.

But as to decent work challenges in the socialized mass housing, one can argue that the decent work challenges that apply to the industry in general also apply, in particular, to the socialized mass housing segment.

Unionism and collective bargaining are not forbidden and are even cited in DO No. 19, which clarifies the two types of construction workers: project and non-project. The problem is that the non-project who enjoy some job security constitute a distinct minority in the construction firm's payroll. They are usually the professionals, engineers and the highly skilled workers whose services the firm can not afford to lose to other competitors and the overseas labor market. Sometimes, these workers are kept on the payroll even if there are no projects. The skilled welders, in particular, are the most in-demand construction workers and are often the subject of local and global poaching.

On the other hand, the project employees are usually the semi-skilled and non-skilled cement mixers, masons, carpenters, painters, electricians, laborers, plumbers and others. They can be found in virtually all towns of the country.

Thus, the thrust of Alliance of Construction and Informal Workers (ACIW) and National Union of Building and Construction Workers (NUBCW) to promote alternative forms of organizing to seek protection for the workers through mutual-aid welfare-enhancing projects makes sense. The associations themselves can articulate grievances and complaints of the workers, just like what ACIW and NUBCW are doing in the Construction Industry Tripartite Council (CITC) meetings, e.g., proposed investigations of accidents and deaths. The thrust of ACIW and NUBCW to negotiate for skills upgrading and trade/skills certification (especially for experienced workers with no formal education) as protection to the workers also makes a lot of sense.

ACIW and NUBCW have also raised other forms of abuses, e.g., non-remittance of social security contributions, underpayment, long hours, absence of protective gear, etc. The problem is most intense in a situation where project workers are not hired directly by a principal but by sub-contractors doing part of the construction project for the principal (in the Hanjin death case, Hanjin simply keeps denying the dead workers are their employees because work is being done by subcontracting companies). For workers in informal or unreported construction projects, e.g., repairs at home or a building, there are simply no protective labor laws at work. Sometimes, a worker can be in a protected project, in a subcontracted project and in an informal project, one after the other.

Studies show that the professionals and skilled workers can negotiate for better terms and conditions of work. If there is a demand for their services overseas, their negotiating power, even if done individually, rises. However, the unskilled are hardly able to do such negotiation and are often paid on a minimum wage basis, which is barely enough to sustain a family of five and build a decent home. In fact, in a 2004 "Occupational Wages Survey" conducted by the DOLE's Bureau of Labor Statistics, it was found out that the hiring rates for most of the unskilled construction workers were "below the existing minimum wage rates". Verily, they are the "piyons" of society, doing the 3D (dirty, dangerous and difficult) and barely paid jobs.

3.1.4.6 Level of Support of Social Players and Tripartism

The social players in this industry are actively pursuing joint projects in many levels and in many areas in the country, especially in the fringe urban areas: NHA, HFH, GK and other NGOs.

Despite the marginal existence of unions in the industry, DOLE set up in 2003 a Construction Industry Tripartite Council (CITC). This Council meets almost quarterly and has the NUBCW and ACIW as labor representatives, and the Philippine Contractors Association(PCA) as the employers' representative. The government has several agencies and departments in the Council – DOLE, Occupational Safety and Health Center (under DOLE), Technical Education and Skills Development Authority (TESDA), Construction Industry Authority of the Philippines or CIAP (attached to the Department of Trade and Industry or DTI), and the Department of Public Works and Highways (DPWH).

An examination of the minutes of the CITC shows that most of the topics discussed are occupational safety and health (OSH) concerns, skills upgrading and trade/skills certification and general upgrading of the industry. Unionism and collective bargaining agreements (CBAs) are hardly discussed, precisely as these hardly exist in the industry. However, workers' concerns such as accidents, workmen's compensation, underpayment of wages and so on are often raised by ACIW and NUBCW.

The government also came out in 1993 with Department Order No. 13, ostensibly to strengthen the enforcement of health and safety standards in the construction industry. The Occupational and Safety health standards specify that every construction project shall have health and safety programs, workers shall use personal protective equipment and safety personnel must be hired per project. The Bureau of Working Conditions of DOLE and its Regional Offices are mandated by the DO to monitor observance of these standards and work closely with the Construction Industry Authority of the Philippines (CIAP) and the association of private sector construction companies.

Despite DO 13, however, the industry still has the highest rate of industry accidents. In fact, the 14th Congress spent hours hearing on the abnormally high number of construction worker deaths, at least over 20, in just one construction project, in the Hanjin ship-building project in Subic, Zambales.

Given the structure and nature of employment and the absence of traditional unionism in the industry, the next best thing in the promotion of decent work for the sector is the promotion of alternative forms of worker organizing such as what ACIW and NUBCW are doing, the upgrading and certification of skills in the overall context of industry upgrading, the strict enforcement of labor and OSH standards and the development of welfare-augmenting mutual-aid projects.

As to having green and decent jobs in the socialized mass housing sector, it is proposed that the foregoing decent work challenges be integrated in the promotion of the identified green products and services for the socialized mass housing program.

Also, the construction of socialized mass housing units can be undertaken by groups of informal construction workers under the concept of "community contracting". ACIW and other groups have been pushing for community renewal and community adaptation measures to climate change through "community contracting" involving the informal construction workers. The idea is to mobilize and utilize the underemployed and idle construction work force for work to be done right in their own communities or for programs benefiting these communities such as socialized mass housing using labor-intensive technology such as those being advocated by ILO for job creation via labor-intensive infrastructure development. Groups or cooperatives of construction workers can be tapped as contractors with the help or assurance of the local government units (LGUs). If the resources are limited and workers can not be fully compensated under the existing labor standards, community contracting for the foregoing projects can be declared as purely voluntary for member co-operators. Project organizers should work for ample compensation and for continuous improvement of construction practices, for this is what being green and decent means.

The construction project workers should be given some priority in the availment of socialized mass housing. At the same time, they should be given maximum opportunity to participate in the construction of these socialized mass housing projects. Why not a special CITC or tripartite workshop on how to do make community contracting work? And why not a special TESDA "Training Regulation" on community contracting?

3.2 The Agriculture Sector

The agricultural sector consists of agricultural establishments (i.e., farm) which produce or sell agricultural crops. Agricultural crops are classified according to cereals, major crops and other crops. Palay and corn belong to Cereals while coconut, sugarcane, banana, pineapple, coffee, mango, tobacco, abaca, rubber, cassava, camote, peanut, mongo, onion, garlic, tomato, eggplant, cabbage, and calamansi belong to Major Crops while the rest would fall under Other Crops.

The top four crops with the highest hectarage are coconut (3.33 million hectares), followed by rice (2.47 million hectares), corn (1.35 million hectares) and sugarcane (0.36 million hectares). (NEDA, 2011). Figure 4 **Error! Reference source not found.**shows the top four crops or sub sectors with the highest volume of production are palay, corn, coconut including copra and banana. Palay is the most aggressively growing sector, though there is a sharp decline in the most recent couple of years. There is a slightly increasing trend of growth in GVA in corn, coconut, sugarcane, banana, other crops and agricultural activities and services from 1994 to 2009.

Ever Rich Farms/ Delifresh Farms/Eva Rose Pua	Organic Free Range Chicken	Santiago Isabela
Altermed Corporation/ Alexander Parducho	Organic herbs	Nueva Ecija
	Organic and wild collection of Herbs	Bagac, Bataan

Sources: Pearl 2 Report. State of the Sector Report on Philippine Organic and Natural Products 2004;
PHILDRRA, 2004. Philippine Organic Rice: Industry Orientation paper. Paper presented during the National Forum on Organic Rice Industry, November 18, 2004, Quezon City;
Development Path of Organic Certification: Building Partnerships in Strengthening Organic Agriculture in The Philippines. Proceedings of workshop held April 7-8, 2005;
Organic Certification Center of the Philippines

Table 14 shows that organic vegetables have dominated organic farm production in 2004-2005, followed by organic herbs, fresh fruits, virgin coconut oil and other commodities.

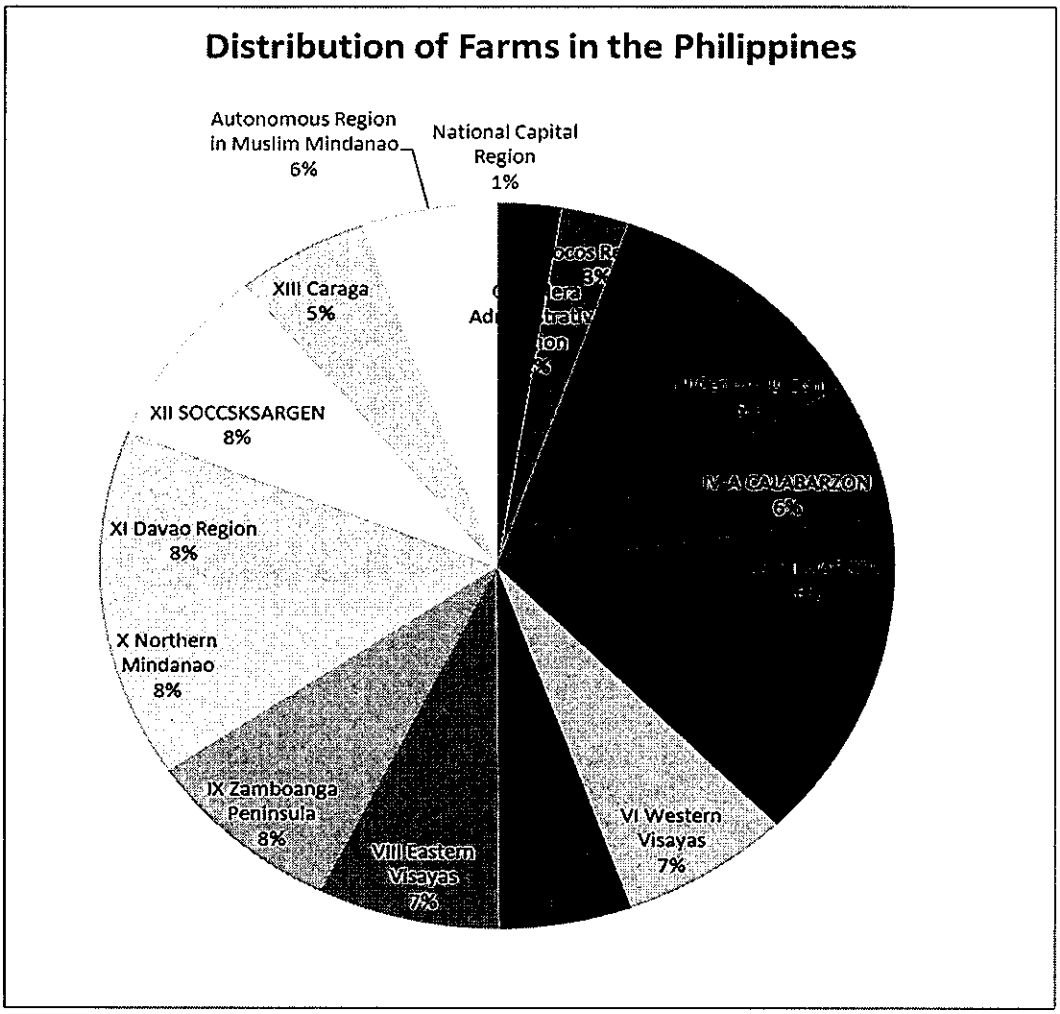
Table 15 presents the local organic producers, products, volume of production, and market outlets as of 2005.

Table 15. Local Organic Producers, Products, Volume of Production, and Market Outlets, 2005.

PRODUCER/ ADDRESS	PRODUCTS	PRODUCTION AREA/VOLUME /VALUE	MARKET OUTLETS
Alter Trade Corporation Block 6 A, Lily St. Bata Subd., Bacolod City	Muscovado sugar (certified organic by Institue for Market Ecology, Naturland and BioSuisse)	198.27 ha	Exported to Germany (under Fair Trade), Switzerland, Japan (under Fair Trade), Austria, Malaysia, South Korea
		217.80 ha @ 500 mt/yr upgraded to produce 1,500 mt/yr	Domestic (Bacolod, Manila, Cagayan de Oro, Bukidnon, Cebu and Iloilo
	Banana	250 ha (Negros Occidental, Mindanao, and Northern Luzon)	Exported to Japan
	Rice ((certified organic by Institue for Market Ecology, Naturland and BioSuisse)	5 ha	Local consumption
	Yellow corn for feeds (certified organic by NOAPA)	40 ha @ 50 mt/yr in Northern Luzon	Feed producers in Japan
Full of Grace Nueva Ecija	rice	6,000 cavans	OPTA organic shops, supermarkets, distributors, household, restaurants, schools, institutions, weekend organic market and local market
	Upland vegetables	P600,000/yr	OPTA organic shops, supermarkets, distributors, household, restaurants, schools, institutions, weekend

Table 15. Local Organic Producers, Products, Volume of Production, and Market Outlets, 2005 (continuation)

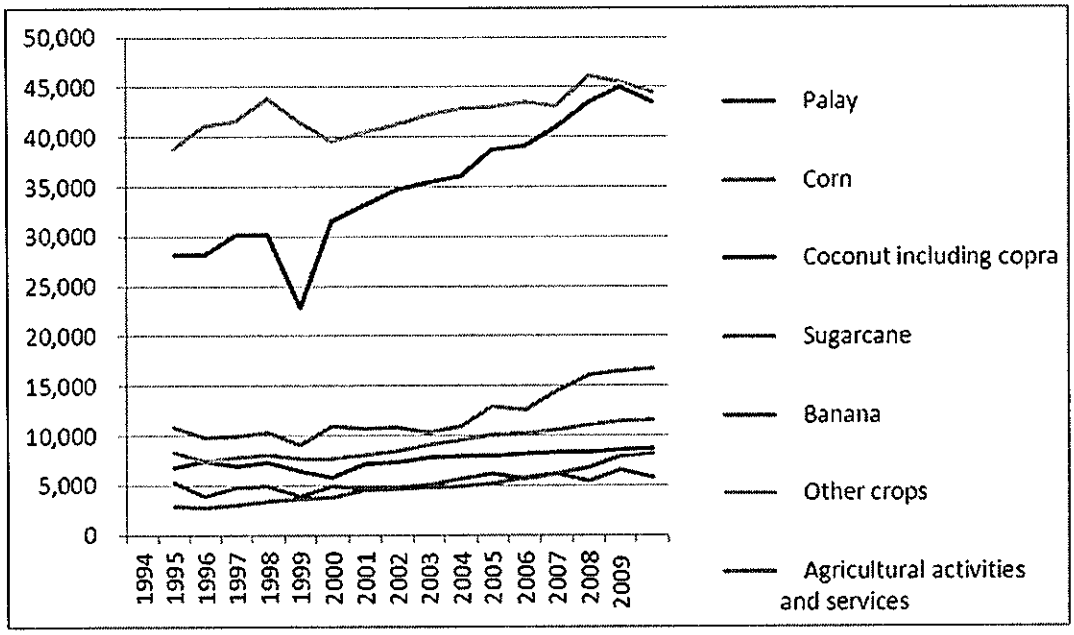
			organic market and local market
	Lowland vegetables	P400,000	
	Mango	2,000 kg	
	Papaya	2,400 kg	Supermarket
	Poultry and poultry products	6,000 heads/yr 15,000 eggs/yr.	Supermarkets and local market
	Processed products (coffee, tea, vinegar, juice)	P200,000	Local and supermarket
AGTALON	Rice	5,000 cavans	Hospitals, distributors, schools and local market
Manaoag, Pangasinan	Mango	20 tons	Manila
	Papaya	1,500 kg	Local market
CABIOKID	Rice	300 cavans	NGOs in Manila
Cabiao, Nueva Ecija	Lowland vegetables	1,200 kg	
EEP	Lowland vegetables	4,800 kg	
Zambales	Papaya	100 kg	Local market
	Beef cattle	15 heads/yr	Local market
MAPISAN c/o PDG Office, Sitio Mohon, Kabangkalan City, Negros Occidental	Rice	80 has @ 70 cavans/ha	Local members of the coop
	Soya milk	100 liters/wk	Local members of the coop
Foundation of Agrarian Cooperatives in Mindanao (FARM Coop)	Banana (Bungulan and Cavendish)	50 has with available 250 has for expansion	Exported to Japan
Panay Rural Development Center, Inc.	Rice	5 mt/yr	For consumption
	Vegetables	10 mt/yr	Private traders
Makakabos	Rice	22 has @ 80 cavans/ha	Bukidnon organic products
Cooperatiba Sto. Nino South Cotabato	Rice	90 has @ 80 cavans/ha	Retail store of the coop and institutional buyers in Polomolok
Don Bosco Cooperative Makilala	Rice	3,000 has	Retail outlet in Kidapawan, 2 outlets in Davao and institutiona markets in Davao and Cotabato
	Assorted fruits (processed mixed fruits, puree)		Supermarkets in Davao and Cotabato
Kablon Farms Tupi, South Cotabato	Tablea (OCCP-certified)		Supermarkets in Davao and Cotabato
	Black pepper		Supermarkets in Davao and Cotabato
	Asparagus		Exported to Europe
Bukidnon Organic Farmers Association	Rice	50 has @ 50 cavans/ha	Local and government agencies
KASAMA - Cotabato North Cotabato	Rice	50 has @ 40 cavans/ha marketable surplus	Local and line agencies, churches and schools



Source: Table 5_9, PSY 2010, NSO
Figure 5 Distribution of farms in the Philippines

Philippine agriculture is characterized by a mix of small, medium and large farms. Majority of the farms in the country are all small farms averaging about 2 hectares. These are simple farms which are owned and managed by single families ranging from subsistence to commercial production.

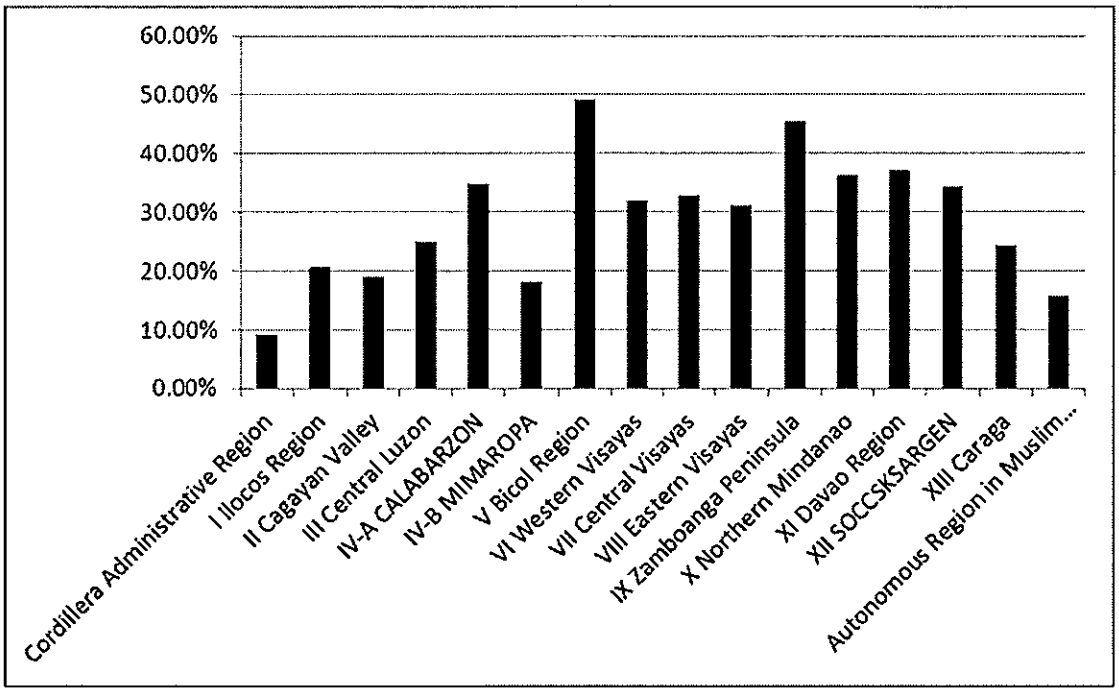
Farming is generally undertaken on small farms. Two-thirds of all farms in 1988 were no larger than three hectares. Eighty-five percent of all farms were no more than five hectares. Over a period of ten years ending in 1996, the proportion of small farms had been expanding. The Philippine Agrarian Reform Council Secretariat reported that the government had acquired and distributed about 4.1 million hectares of agricultural lands to agrarian reform beneficiaries. Under the comprehensive agrarian reform program, a farm household cannot own a farm larger than five hectares. A typical farming system consists of a major crops, with rice, corn and coconut as common base crops, and a few heads of livestock and poultry. Rice, corn, coconut and many crops are principally produced by small farms. Prior to CARP, there were large plantations in rubber, coffee, oil palm, cacao, banana, pineapple, etc. Contract growing schemes operate in corn seeds, banana, tomato, cucumber, oil palm, asparagus and broiler chicken. (DA, 2011).



Source: Table 3_13, PSY 2010, NSO

Figure 4 GVA Growth in Agricultural Sub-sectors

According to the 2000 agricultural census exhibited in Table 6, there are 4.8 Million farms occupying a total of 9.6 Million hectares in the whole country. These account for almost 32 percent area of the total land area of the country. These farms are dispersed throughout the country, the distribution of which is shown in Figure 5 About half (42%) of the country's farms are in Mindanao while more than a third (34%) are located in the Visayas and the rest are in Luzon. The NCR has the least land area allocated for farm use.



Source: Table 1_1 and Table 5.9, PSY 2010, NSO
Figure 6 Percentage of Land Utilized for Agriculture

The Bicol region has the highest land area allocated for agriculture at about half of its total land holdings, followed by the Zamboanga Peninsula at 46%. Figure 6 shows that the NCR, MAMIROPA, CAR and ARMM have the least areas for agriculture while the rest exceed the 20% mark.

Table 12. Number and Area of Farms in the Philippines

Region	Number of Farms		Area of Farms	
	1991	2002	1991	2002
Philippines	4,610,042	4,822,739	9,974,871	9,670,794
National Capital Region	15,136	22,820	53,646	71,632
Cordillera Administrative Region	108,251	120,104	155,581	177,839
I Ilocos Region	311,758	276,766	324,501	270,664
II Cagayan Valley	285,721	321,755	530,143	540,812
III Central Luzon	350,786	341,466	632,493	552,104
IV-A CALABARZON	319,865	282,746	703,256	588,516
IV-B MIMAROPA	209,248	220,967	569,814	542,218
V Bicol Region	377,791	384,801	936,174	891,955
VI Western Visayas	411,572	429,456	754,386	666,917
VII Central Visayas	424,825	430,043	549,895	522,433
VIII Eastern Visayas	321,456	330,750	695,711	723,048
IX Zamboanga Peninsula	235,674	252,659	675,723	785,294
X Northern Mindanao	289,468	319,157	768,290	746,901
XI Davao Region	267,224	299,966	795,893	758,335
XII SOCCSKSARGEN	264,095	330,571	746,702	775,309
XIII Caraga	189,600	210,184	517,446	523,407
Autonomous Region in Muslim Mindanao	227,572	248,528	565,220	533,410

Source: Table 5.9, PSY 2010. National Statistics Office.

3.2.1 Development Priorities

3.2.1.1 Philippine Development Plan (PDP)

The Philippine Development Plan frames an integrated and comprehensive set of strategies for the agricultural sector. It envisions to a) improve food security and increase rural incomes, b) increase sector resilience to climate change risks and c) enhance policy environment and governance. The corresponding legislative agenda that shall enable these goals and strategies to be achieved have been identified as well: passage of National Land Use Law, Rationalization for the convergence of DA, DAR and DENR, Accelerated Irrigation Act, and Food Safety and Food Labeling Law. (NEDA, 2011).

3.2.1.2 National Labor and Employment Agenda

Capital investment opportunities are highlighted for the agricultural sector. " As employment in agriculture comprise one third of total and where the bulk of vulnerable groups are found, sector policies with regard to the transformation of agriculture will receive high priority. Policies on children and women in agriculture, creation of mutual or provident funds for agricultural workers (especially in banana, pineapple and rubber industries) are among its top priorities." (DOLE, 2011).

3.2.2 Economic Performance

3.2.2.1 Gross Domestic Product (GDP)

The agricultural sector (bundled with fishery) has generated PhP 1,134 Million (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 15 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 258,102 GVA which is about 18.02% of the total GDP (as shown in Table 2. Gross Domestic Product by Industrial Origin in 2009 (In million pesos)). This sector is the second biggest contributor to the GDP, after the manufacturing sector.

The agriculture and fishery sector has shown an annual average growth of 2.99 % in the long-term, slower growth by 2.93% in the medium-term, but much slower rate at 1.61% in the short-term as exhibited in Figure 7.

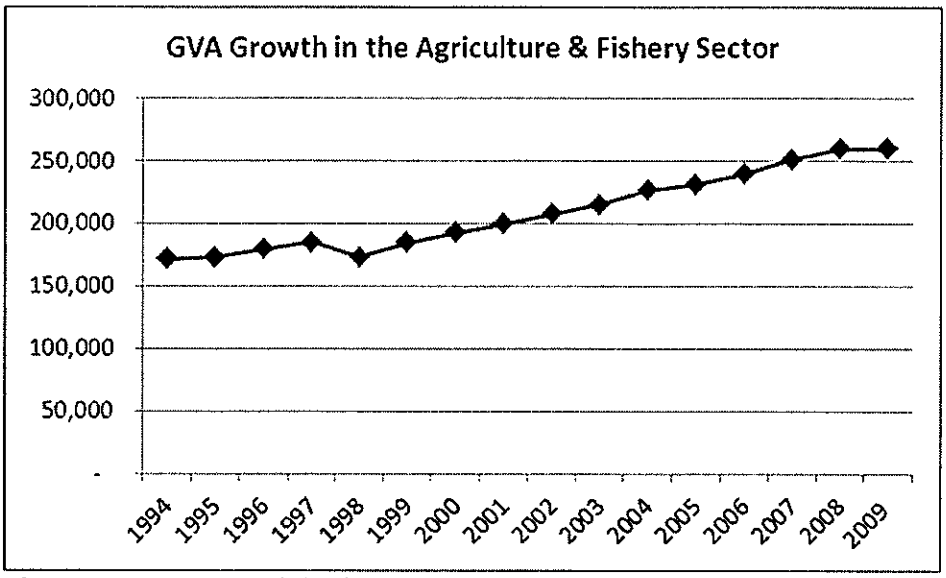


Figure 7. GVA Growth in the Agriculture and Fishery Sector

3.2.2.2 *Employment Generation*

The agricultural sector employed an average of 11.8 Million people which account for about 35% of the total workforce. Table 13 may show a decreasing level of employment in the agriculture and fishing sector but the sector has been responsible for more than a third of the total labor force and thus, plays a major role in the country's economic growth.

Table 13. Employment (In Thousands) in the Agriculture and Fishing Sector and Share to Total Employment

	2004	2005	2006	2007	2008	2009	2010	Average
Employment (In 1000 persons)	11,381	11,628	11,682	11,785	12,030	12,043	11,974	11,789
% Share to Total Employment	36.0	36.0	35.8	35.1	35.3	34.3	33.2	35.1

Source: PDP 2011, NEDA

3.2.3 *The Organic Farming Sub sector*

3.2.3.1 *Justification for sub sector selection*

The organic farming sector has been chosen to be the focus in the agricultural and fishing sector because of the following reasons (Annex 4):

- It has forward and backward linkages to the food manufacturing sector,
- There are already existing initiatives on the ground.
- The incumbent Secretary of the Department of Agriculture is pro-organic farming, thus much support is expected from the government.
  The sub sector shows bi-partism, which is between farmers organization and business groups.
- It supports local employment generation, and

- This subsector is included in the economic, infrastructures and social development priorities of the government.

Organic Farming as a Thriving Industry

Organic farming employs methods that are regenerative because they restore nutrients and carbon to the soil, resulting in higher nutrient density in crops and increased yields. .

A regenerative system improves the capacity of the farming systems. When properly managed with respect to local conditions, a natural, organic system will:

- Increase global yields.

- Empower the world's poorest farmers through a sustainable system that does not depend on unaffordable chemical and petroleum-based inputs.

- Promote human health and well-being through greater access to more nutrient-dense food from a wider variety of crops.

Organic farming has become increasingly popular in the light of the environmental, health and climate-related issues that have arisen in the country as a consequence of rapid urbanization and industrialization. . Through a study conducted by the UNEP (UNEP "Organic Agriculture and Food Security in Africa," 2008), potentials of organic agriculture as a better alternative or a more viable option to unsustainable agriculture were uncovered. Empirical evidence would show that organic farming indeed brings a host of benefits, not only environmental but also economic benefits.

Table 14 shows the existing certified farms and organic products grown in the various farms and marketed locally and/or abroad in 2004 and 2005.

Table 14. Farms Certified by the Organic Certification Center of the Philippines, 2004 & 2005

Company Name/Contact Person	Product	Location
Leonie Agri Corp/ Alexander Parducho	Organic herbal crops	Sta. Rosa, Nueva Ecija
Leonie Agri Corp/ Alexander Parducho	Organic and wild selection of herbal crops	Antipolo, Binukawan Bagac, Bataan
Leonie Agri Corp/ Alexander Parducho	Organic vegetables	Sta. Rosa Nueva Ecija
Kablon Farms/ Ernesto Pantua, Jr.	Fresh fruits and processed products	Brgy, Kablon, Tupi, South Cotabato
Atikha Inc. / Mai Anunuevo	Organic Vegetables	San Francisco Calihan San Pablo City
Laguna Coco product/ Linda Ochoa	Virgin Coconut Oil	San Vicente Biñan, Laguna
Ecological Earth Planners/ Jacqueline Alleje	Organic Vegetables	Tanauan City, Batangas
Plantation Hills/ Jude Serrano	Organic vegetables	Tanauan City, Batangas
Makakabus/ Deodelita Diaz	Organic rice	Valencia City, Bukidnon
Pecuaria Dev't Cooperative Inc./ Miller Bocaldo	Organic rice Organic muscovado	Bula, Camarines Sur
Gina Oil Corp/Gina Bartholomi	Organic virgin coconut oil	Agdangan, Quezon
Multi-Sectoral Alliance for Dev't – Negros/ Reynic Alo	Papaya, banana, watermelon, upland rice, guava, calamansi and vegetables	Brgy, Alijis, Bacolod City
Sanyken Corp.	Organic henna powder	
Poms Ventures Corporation	Organic cooking oil	
Mosser Environment Corporation	Organic Vegetables	Negros Occidental

Table 15. Local Organic Producers, Products, Volume of Production, and Market Outlets, 2005 (continuation)

Davao Sur Masipag Farmers Association (DASUMAFA)	Rice	8 has @ 70-80 cavans/ha	Local and line agencies, churches and schools
	Banana (Lakatan)	500 kg/mo	Manila
TACDRUP Davao City	Rice	200 has	Davao City and some institutional buyers
	Banana	2 has @ 2,000 pcs/2 weeks	Local
Green Minds Inc Cagayan de Oro City	Peanut	1.5 mt/ha	Local, Cheding's Peanut
	Wine (Agkod)	(experimental stage)	Local
	Fruits	150 trees	Local
Davao Provinces Rural Development Institute (DPRDI) Tagum, Davao del Sur	Banana	1 ha	LGUs and religious sectors
Delifresh chicken	Chicken (OCCP-certified)		Delifresh Restaurant
Leonie Agri Corporationm (LAC)	Organic rice, lettuce, cucumber, tomato, ampalaya, okra, camote, kangkong, mustard, pechay, squash, eggplant, egg		SM (brand: LAC Farm), Shopwise (brand: Simply Organic)
Sorsogon Foods Enterprises (SFE)	Vinegar		Exported to U.S., U.K., Malaysia

Sources of data:

- *Workshop outputs and papers presented during the Workshop on "Development Path of Organic Certification: Building Partnerships in Strengthening Organic Agriculture in the Philippines" held April 7-8, 2005.*
- *United Coconut Association of the Philippines (UCAP) website (for SFE organic vinegar)*

From Table 15, organic rice tops the organic farm produce grown and sold locally in 2005 while organic fruits (banana) and vegetables (including culinary herbs) come second and third. Muscovado sugar and coconut-based products (virgin coconut oil, vinegar and cooking oil) also comprise the major organic products sold locally.

Products exported abroad are muscovado sugar (Germany, Switzerland, Japan, Austria, Malaysia and South Korea); banana and yellow corn for feeds (Japan); asparagus (Europe); and vinegar (U.S., U.K., Malaysia).

Other organic products grown and sold in the domestic market include poultry and poultry products, coffee, tea, vinegar and juice (in processed form), beef cattle, soya milk, processed fruits (mixed fruits, puree), Tablea, wine (Agkod), and free range chicken.

Based on DTI statistics on Organic and Natural Products (2008), demand for organic products from other countries, notably Japan and Singapore, has increased. Patrons of organic products are mostly health-conscious, educated, affluent, and with strong concern on environment. There is also an increasing demand for alternative health products (i.e., organic-based cosmetics and herbal products, etc.). With the passage of the Organic Agriculture Act (OAA) of 2010, it is expected that production in organic products will increase.

3.2.4 Greening Readiness and Potentials

3.2.4.1 Existing and potential green products

The FGD held last 14 June 2011 identified some existing products from organic farming for further support. These include:

- Processed fruit products (strawberries, etc.)
- Processed bamboo shoots
- Free-range chicken
- Native pigs/ free-range swine
- Herbal tea products (Sambong, Lagundi, etc.)
- Health and wellness products
- Organic-based (fruit/herb-based) cosmetics and other beauty and personal care products (personal skin care and hair products, body and oral hygiene, insect repellant agents, etc.)
- Non-toxic organic fertilizers
- Vegetable-enriched products (e.g. seaweeds enriched which is mixed in cup noodles, etc.)
- Yakon wine (as supplement for diabetic patients, etc.)
- Mangoes (fresh and processed)
- Bio-control pesticides
- Household care items (room scent, etc.)

3.2.4.2 Identification of existing green standards and recommendations

Philippine National Standard on Organic Agriculture

In 2003, the Philippine Department of Agriculture (DA) issued the Philippine National Standard on Organic Agriculture (PNSOA). The Bureau of Agriculture and Fisheries Product Standards (BAFPS) serves as the implementing arm of the DA for the said policy/guidelines. The PNSOA prescribes a uniform approach to the requirements for (a) conversion to organic agriculture, (b) crop production, (c) livestock, (d) agriculture processing, (e) special products, (f) labeling and consumer information servings as the guide for organic agriculture producers. In the same year, Administration Order (AO) No. 13 was issued, providing for the accreditation guidelines for certifying bodies which requires accredited certifying bodies to comply with the PNS requirements.

Organic certification in the Philippines, based on the PNSOA, was formulated in conformance with IFOAM Basic Standards and the Codex Guidelines for Production, Processing, Marketing and Labeling of Organically Produced Foods (CAC/GL 32). Executive Order No. 481, "Promotion and Development of Organic Agriculture in the Philippines", issued in 2005 has facilitated the creation of the National Organic Agriculture Board (NOAB) and its supporting National Technical Committee (NTC), wherein BAFPS serves as the secretariat.

Its implementing Rules and Regulations (IRR) was issued in 2006. The IRR placed the mandate upon the DA to establish a National Organic Agriculture Programme which focused on regulations and guidelines, certification and accreditation, market promotion and networking, organic information, R&D and extension.

Under the IRR, sale of products with organic labels or claims without the approval of the certification body was prohibited. The same applies to imported products. Likewise, in the IRR under the Organic Accreditation ruling, international certifiers operating in the Philippines must secure clearance from BAFPS prior to any business transaction related to organic certification.

Under the rationalization programme of DTI, a new office was created - the Philippine Accreditation Office (PAO) - which integrates all accreditation system. DA-BAFPS serving as the chair of the Organic Accreditation Committee must resolve their mandate with DTI-PAO.

To enforce the OAA of 2010, there is a need to review the standards to update and harmonize it with the present international standards in order to establish its equivalence with the said standards.

The Organic Certification Center of the Philippines (OCCP)

Through the assistance of the Department of Trade and Industry- Center for International Trade Exhibitions and Missions (DTI-CITEM) and the Organic Industry Technical Working Group (OITWG), a multi-sectoral body which provides direction for the industry, the OCCP was established in 2001 and was legally registered in 2001. OCCP is the only accredited 3rd Party Certifying Body in the Philippines. Their certification, however, is only recognized locally. To assist in certifying organic products for exports, OCCP has established a partnership with foreign certifying bodies such as Ceres-Cert (A foreign certifying body based in Germany and a partner of the OCCP for international certification of Organic Products) and Certification Alliance (An international partnership of organic certification bodies, inspectors and supporting development organizations.

3.2.4.3 Green skills

Based on the FGD participants invited last 14 June 2011, the farmers cannot be put in the context in which they are deemed as laborers because they are, in fact, considered as self-employed. The green skills in this sector are as follows: farmers, farm managers, farm marketers, soil analysts, organic fertilizer specialists, agriculturist/horticulturist.

However, new skills have to be developed in order for organic agriculture to become a more progressive and productive industry. Table 16 presents some of the job skills that may be needed to increase its viability as an industry.

Table 16 Emerging Job Skills in Organic Agriculture

Job/Position	Description of Skills
Farmers	Must be very observant and patient; must have a good understanding of the ecological system; must have developed extremely good marketing skills and must have the ability to seek out strong market outlets. must be able to practice biodynamic farming/gardening, animal husbandry, perennial food crops/orchards, greenhouse production, etc.; must know better use of locally available natural resources (such as water harvesting, irrigation scheduling, and reclamation of formerly unproductive land); must have the knowledge in the intensification of microenvironments in the farm system (such as gardens, orchards, and ponds); must be able to promote diversification through adding new and natural regenerative components; must have capacity to increase total farm production by using intercropping and manuring, biopesticides and biofertilizers, as well as harvesting enough water for an extra irrigated crop during formerly unproductive seasons.
Farm Managers	Must know all aspects of farm management, tractor work and maintenance, greenhouse management; must be knowledgeable in creating and executing planting scheduling; must have knowledge in caretaking of all buildings on the property, over seeing and arranging for repairs and services to buildings (property management); must have a thorough knowledge on organic/sustainable farming; must have excellent work ethic and a hands-on approach; must be committed to the practice of sustainable agriculture. Must have the following skills: Operation and Control ; Operation Monitoring ; Judgment and Decision; Critical Thinking ; Equipment Repairing machines or systems using the needed tools.
Farm Marketer	Must have an academic and/or professional background in marketing and communications; must have the skills in active listening, critical thinking, persuasion, complex problem solving, judgment and decision making (considering the relative costs and benefits of potential actions to choose the most appropriate one), negotiation, coordination social perceptiveness (being aware of others' reactions and understanding why they react as they do); and skills in website design and management, as well as graphic design would be an advantage.
Soil analysts	Must have the following knowledge and skills: sample collection (soil, water, industrial wastewater, etc.); conduct of tests on pollutant levels and identification of sources of pollution; recording of test data and preparing reports, summaries, and charts that interpret test results; developing and implementing programs for monitoring of environmental pollution; discussing test results and analyses with customers; developing testing procedures or directing activities of workers in laboratory; preparing samples for testing and analysis; calibrating microscopes and test instruments; examining and analyzing material for presence and concentration of contaminants using variety of microscopes.
Organic Fertilizer Specialists	Able to identify plant needs & diseases and offer organic solutions; capable of allocating responsibilities to workers and managing their work. Specifically, he/she must possess the following: knowledge on production of bio-bacteria fertilizer & pesticides; knowledge on quality control of organic growth promoters & bio fertilizers; ability to supervise and command over manufacturing staff appointed in production & lab; must be able to take responsibility in the order of supply; must be capable of providing guidelines regarding application of the products to marketing staff.

Job/Position	Description of Skills
Agriculturist/Horticulturist	Must have knowledge/skills in the following: setting up cropping systems, rotation records, composting systems and managing the soil fertility at the farm; recording all inputs onto site, organic matter, seeds, mineral supplements, soil conditioners and water; communicating, through example, excellence in horticulture to apprentices, other staff and volunteers; maintaining the site to give maximum visitor enjoyment; providing support to Site Coordinator in of all aspects of the site – fencing, buildings, equipment, tools – ensuring that appropriate measures are in place, and are reviewed regularly; providing support in promoting and monitoring good health and safety practices in relation to all horticultural activities; maximizing income-generation potential from sales or contracts; training and developing the skills of volunteers and clients; marketing and public relations to support and assist in Farm promotion and advocacy; and identifying opportunities for Farm-related events and assist with their organization, promotion and implementation.

3.2.4.4 Existing government policy framework and initiatives and identification of scaling up potential

The policy and regulatory framework serves to induce or facilitate actions towards the shift from conventional farming practice to sustainable agriculture. In addition to relevant laws such as PD 856, 1151, 1152, and 1586, RA 4850, 6969, 8749, 9513, 9003, 9729, and 10121, and DAO 26 & 35 as detailed in Table 10, Table 17 further identifies the other various specific laws and policies that promote Organic Agriculture in the country.

Table 17. Existing Regulatory Framework Relevant to Organic Agriculture

Law	Relevant Provisions
RA 1007681 (Organic Agriculture Act of 2010)	The law has provided a concrete step towards institutionalizing both government and private sector thrusts to further develop and implement organic agriculture in the Philippines. It also includes formulation on regulation, registration, accreditation, certification and labeling of products.
Implementing Rules and Regulations for the Philippine Organic Act of 2010 (Republic Act 10068)	Provided an opportunity to settle perennial issues on operationalizing accreditation of organic certifying bodies, certification of organic farms and products and labeling of organic produce.
RA 8435 (Agriculture and Fisheries Modernization Actof 1997)	AFMA stipulates the government's policy to ensure the development of the agriculture and fisheries sectors in accordance with the principles of poverty alleviation and social security; food security; rational use of resources; global competitiveness; sustainable development; people empowerment; and protection from unfair competition. AFMA called for the formulation of medium and long term plans aimed at the reduced use of agro-chemicals that are harmful to health and the environment. called for the reduction of agro-chemicals utilization. It mandates the Bureau of Agriculture and Fisheries Products Standards to strictly enforce standards of quality in processing, packaging and labeling of organic produce.
Executive Order No. 481 (Promotion and Development of Organic Agriculture)	Significant policy advancements in terms of promoting and sustaining organic agriculture and organic products certification and standards. Institutionalized the National Organic Agriculture Program and the National Organic Agriculture Board.

While laws and policies on Organic Agriculture are already in place, compliance with the organic farming standards and requirements are yet to be seen because most of the farmers are either not educated or have low education. There is a need to train the farmers on the standards or develop materials that could be easily understood by the farmers to increase their capability to comply with the standards. There is also a need to revise the PNSOA in order to harmonize the Philippine standards with the existing international standards, as recently revised, in order to ensure equivalence with the said standards.

The Organic Agriculture Act grants tax incentives and subsidies for organic certification and support services for SMEs and farmers engaged in purely organic agriculture, thus, more jobs are being created in sustainable agriculture e.g. organic sugar production and banana production.

3.2.4.5 Level of Support of Social Players and Tripartism

In the FGD dated June 17, 2011, the Magsasaka at Siyentipiko para sa Pag-Unlad ng Agrikultura (MASIPAG) or Farmer-Scientist Partnership for Agricultural Development, reported on its long struggle to propagate organic farming since 1985-86, at the height of the political-economic crisis during the Marcos era. Masipag has a pool of scientists, who teach farmers on how to engage in organic rice farming, how to breed and cross breed organic rice seeds, how to keep a seed bank of traditional and chemical-free rice varieties, and how to teach other farmers and farmer-groups on the benefits and technology of organic rice farming. In 2001, Masipag has expanded its program to include organic corn farming. And recently, it has also diversified into organic livestock raising. It claims that is has a partnership program with over 600 farmer groups with a total membership base of around 35,000 farmers distributed in 49 provinces.

On the other hand, the Pakisama, or Pambansang Kilusan ng mga Samahang Magsasaka, a national farmers' group fighting for land justice since EDSA I has gone into sustainable agriculture or organic farming as a natural complement to its land reform campaign. It has a pool of organic farming technicians who help Pakisama's affiliates in around 25 provinces on how to do organic farming, including organic chicken raising.

The major players in the Organic Farming movement come from the private sector, NGOs and farmers' organizations. Some of the large ones, based on the number of member organizations and individuals members, are:

- MASIPAG (Farmer-Scientist Partnership for Development): network of 456 POs, 42 NGOs and 15 researchers in Luzon, Visayas and Mindanao
- OPTA (Organic Producers and Traders Association): association of the private sector (individual/family business), NGOs and farmers' organizations
- ROAD Network (Regional Organic Agriculture Development): a network of NGOs, farmers' organizations, consumer groups, and local government units supported by SAC Xavier University's and the provincial agriculturists of the Department of Agriculture
- BUGAN ECO-MOVEMENT: a network of NGOs, church-based organizations, farmers organizations and student groups in Northern Luzon; a recently formed network that adds aspiritual dimension to the ecological and organic movement (Food for the Body, Mind and Spirit); made up of members which have many years of work in the OA mo vement, such as Agro-Technical Assistance and Livelihood Opportunities in the North (AGTALON) and PLAN-Pangasinan, and
- PDAP (Philippine Development AssistanceProgramme) has national development programmes following the principles of sustainable development in the Philippine context.

These social partners can play a key role in the scaling up of initiatives in the sector.

3.2.4.6 Green Jobs and Decent Work

Most of the participants in the Masipag organic farming program and in the Pakisama's sustainable agriculture above are small farmers, cultivating an individual farm area of one (sometimes less) to two hectares. These small farmers use their own labor, supplemented by the contributions of family members and paid groups of workers (less than 10) during harvest and planting seasons.

In short, there is no space for traditional unionism based on the collective interests of a large group of wage workers to prosper. However, there is space for farmer "unionism" via the formation of like-minded small farmers joining together in an association seeking land justice and adopting organic farming culture together. On the latter, farmer associates can work together on how to develop, with the help of scientists and farm technicians, organic seeds and grow organic plants.

Broadly defined, decent work is work obtained in conditions of freedom, equity, security and dignity. This does not say that work must be paid or compensated by wage or salary. So organic farming job--freely chosen and embraced by the farmers, promoted in the context of land justice or agrarian reform, and succeeding in increasing the productivity and incomes of the farmers and his/her family – can be interpreted as decent as well as green.

Making the shift to organic farming succeed

The challenge is how to ensure that a shift to organic farming can lead indeed to higher incomes and higher prosperity. While there are stirring anecdotes shared by the FGD participants on the financial success stories of a number of organic farmers, the sad fact that organic farming still constitutes 1-2 per cent of total agriculture does not speak well about its desirability. There is no royal road to a financially-successful organic farming. Aside from the opposition by the chemical agricultural lobby, there are real constraints such as :

- unfinished land reform program (which prevents farmers in making the decision to shift to organic farming),
- lack of skills (the Masipag and Pakisama experiences point to the need for scientists and technicians to guide farmers),
- more farmer efforts (organic farming is labor intensive, especially the cross-breeding of seeds and the propagation and development of friendly organic pests, organic pesticides and organic fertilizer), and
- difficulties in establishing a reliable value chain that is oriented not only to successful organic production but also successful organic product marketing.

Hence, there is a clear need for an "integrated approach" to organic farming (involving land reform, seed technology acquisition, business skills development, etc.) and full mobilization of the farmers into a farmers' union for organic agriculture. A shift to organic agriculture requires culture change and mass mobilization.

The ILO's campaign for decent work can be very supportive of this shift or transformation. Organic farming job can very well be decent work, which is defined as work obtained in conditions of freedom, equity, security and dignity. This is especially so if organic farming job is freely chosen and

adopted, is pursued in the context of land justice, and leads to greater prosperity for the farmer. The problem is how to ensure that such a vision of green-decent work in organic farming will happen.

More social dialogue

One of the guiding principles in the ILO's decent work program is critical: the need for social dialogue, that is constructive and sustained dialogue among society's stakeholders. For example, the government (at all levels) and the farming community should get their act together on organic farming propagation. The academe and the farming community should have more intensive consultation on theory and practice of organic farming. This kind of dialogue defies the traditional concept of tripartite social dialogue involving a union, a labor ministry and an employer. But the essence and spirit of what a social dialogue remains the same – constructive and sustained consultation among the union of farmers, concerned government agencies and the consuming public on the advantages of going green in agriculture.

3.3 The Manufacturing Sector

The Manufacturing Industry is the sector of the national economy which is engaged in the production of products. This sector is subdivided into 20 subsectors:

(1) Food manufactures,
(2) Beverage industries,
(3) Tobacco manufactures,
(4) Textile manufactures,
(5) Footwear & wearing apparel
(6) Wood & cork products,
(7) Furniture & fixtures,
(8) Paper and paper products,
(9) Publishing and printing,
(10) Leather & leather products,
(11) Rubber products
(12) Chemical and chemical products,
(13) Products of petroleum and coal,
(14) Non-metallic mineral products,
(15) Basic metal industries,
(16) Metal industries,
(17) Machinery except electrical,
(18) Electrical machinery,
(19) Transport equipment, and
(20) Miscellaneous manufactures.

3.3.1 Development Priorities

3.3.1.1 Philippine Development Plan (PDP)

The Philippine Development Plan 2011-2016 acknowledges that the country already figures prominently in almost all categories and products of the worldwide coconut industry. It aims to undertake efforts to further develop the coco-coir and coco-peat segments to export higher value products such as geo-textile for soil erosion control or green architecture projects, rubberized coir products for car seats, mats, bed mattresses, and air filters." It cites support for wood products under

home-style products, and construction and related materials (specifically wood-based products such as doors, windows, plywood and veneer, joineries/moldings). It "targets annual growth of 7% in the design homestyle products, which includes furniture and furnishings, holiday décor, houseware and ceramics, woodcraft, giftware (excluding toys), shellcraft and basketwork. (NEDA, 2011).

3.3.1.2 National Labor and Employment Agenda

The Philippine LEP aims to "focus policies and programs on key generating areas toward increasing productivity and employment," woodcraft being cited as one of them. (DOLE, 2011).

3.3.2 Economic Performance

3.3.2.1 Gross Domestic Product (GDP)

The Manufacturing Industry has generated about PhP 1.56 Billion (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 20.4 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 314 Million which comprises 21.95% of GDP (see Table 2. Gross Domestic Product by Industrial Origin in 2009 (In million pesos)).

The manufacturing sector is the fastest growing sector: annual average growth of 30.65 % registered in the long term while medium term growth registered a higher level of 32.06% and the short term rate of growth is highest at 193.28%, growth trends shown in Figure 8 .

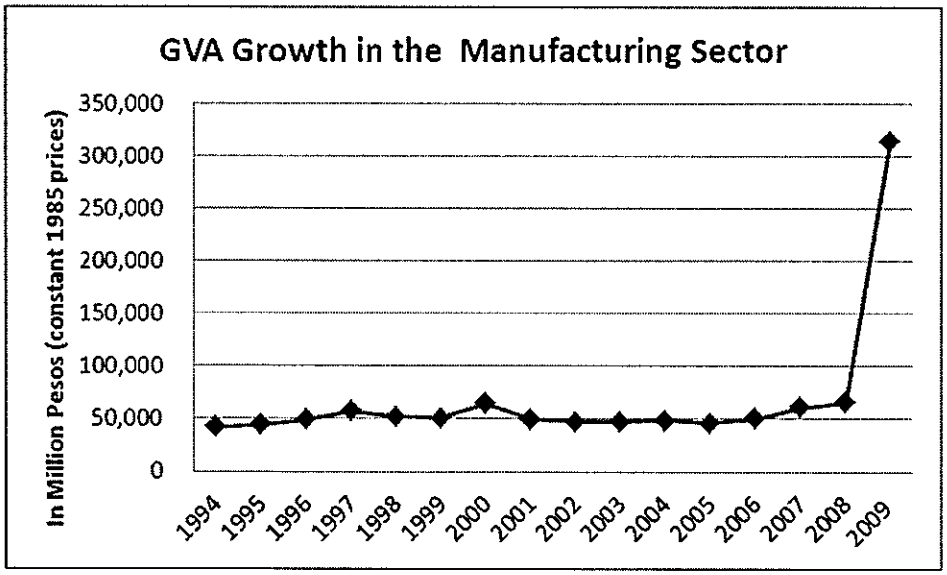


Figure 8. GVA Growth in the Manufacturing Sector

It represents the largest business segment both in terms of employment and establishments. Approximately 39% of the manufacturing establishments in the Philippines are located within the National Capital Region. The semiconductor devices and components manufacturing led the top contributors to the value added output with 50% of all manufacturing output being associated with the top 10 manufacturing sub-sectors.

3.3.2.2 *Employment Generation*

It has employed 8.25% of the entire Philippine labor force population in 2010 (Table 4. Employed Persons By Major Industry per Year (In Thousands) and has increased annually at an average of 1.18% from 2008-2010, shown in Table 18.

Table 18. Employment in Manufacturing from 2008-2010

	2008		2009		2010		Growth Rate		
	Number	%	Number	%	Number	%	2008-2009	2009-2010	Ave 3YG
ALL INDUSTRIES (In Thousands)	34,089		35,478		36,285		4.07	2.27	3.17
Manufacturing	2,926	9%	2,937	8%	2,995	8%	0.38	1.97	1.18

Industry classification is based on the 1994 Philippine Standard Industrial Classification
Preliminary Source of basic data: National Statistics Office, Labor Force Survey

It is the second highest job generator among all the sectors, generating 1,311,536 jobs or about 23% of total employment in 2009. Labor productivity in 2009 for this sector is the third highest among the major industry groups, registering at PhP 108,676/employee.

3.3.3 *The Wood and Cork Products Sub sector*

The wood and cork products sub sector contributes only 0.48% to the entire manufacturing sector's GVA (Table 19).

Table 19 GVA Contribution of subsectors in the Manufacturing Sector

Manufacturing Industry/Industry group	2009	% to GVA in Mfg
(In million pesos : at constant 1985 prices)		
Food manufactures	142687	45.38
Beverage industries	11,887	3.78
Tobacco manufactures	2,663	0.85
Textile manufactures	3,921	1.25
Footwear & wearing apparel	10,143	3.23
Wood & cork products	1,501	0.48
Furniture & fixtures	4,588	1.46
Paper & paper products	2,257	0.72
Publishing & printing	3,020	0.96
Leather & leather products	105	0.03
Rubber products	1,803	0.57
Chemical & chemical products	17,951	5.71
Products of petroleum & coal	37,361	11.88
Non-metallic mineral products	8,142	2.59
Basic metal industries	8,539	2.72
Metal industries	6,663	2.12
Machinery except electrical	3,136	1.00
Electrical machinery	34,283	10.90
Transport equipment	3,262	1.04
Miscellaneous manufactures	10,486	3.34
Gross Value Added in Manufacturing	314,398	

Source, PSY 2010, NSO

When extracting wood and timber, extraction forests can either be natural forest or plantation forest. Extracted wood can be soft timber, veneer timber or pulp wood. Intermediate forms are saw milled soft timber, veneer plywood and pulp paper. Its first products are lumber, plywood and paper. These are used directly as lumber and plywood in the construction sector or become inputs to downstream industries such as furniture and fixtures, paper and paper products and publishing and printing. (Figure 9)

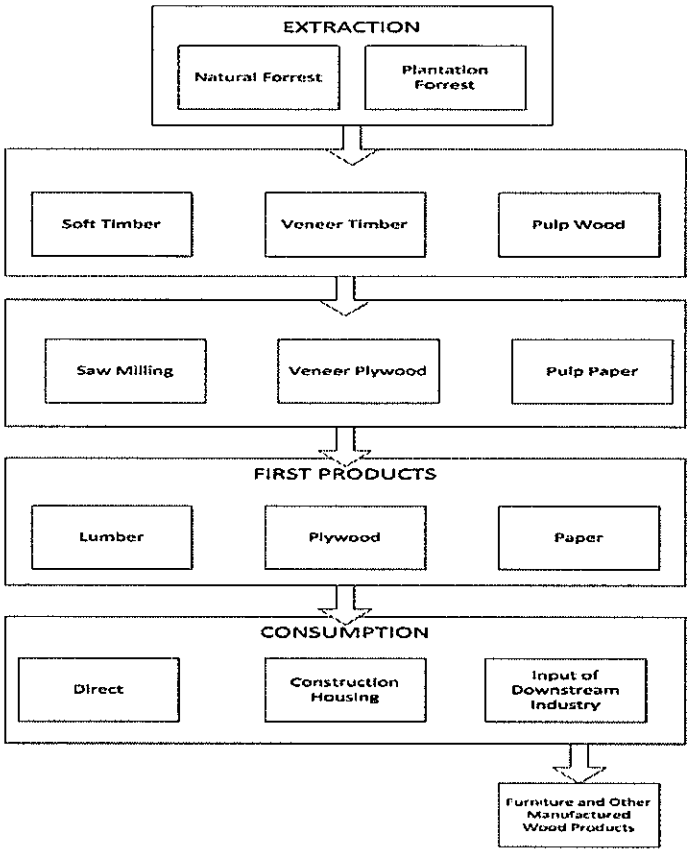


Figure 9 Forward and Backward Linkages of Wood Products Manufacturing Sector with other Sectors
Source: FGD, 2011

3.3.3.1 Justification for sub sector selection

The wood and cork manufacturing sector has been chosen to be the focus in the manufacturing sector because of the following reasons (Annex 4):

- It has forward and backward linkages to the construction sector and their outputs are raw material inputs supporting local suppliers in various sub sectors.
- Even if the GVA contribution to the Manufacturing sector is only 0.48% and not as big the food manufactures, the products are tangible and non- perishable, thus, can also be showcased.
- The potential for jobs is very high and it can combine with other sectors such as furniture and paper as these subsectors also depend on wood.
- Inputs to product are locally available and not seasonal, with already existing demand on these products both locally and internationally,
- It encourages local skills and entry to strengthen decent work advocacy of workers' group.
- Life span of production process can be done within a year, with a tangible result.

Circa 1960s up to 1970s, the Philippines was a major exporter of timber and wood-based products, primarily destined towards the Japanese market. Today, the country's wood working industry is in crisis due to shortage (and, if imported, high price) of wood materials. The Philippine forest cover, about 90 per cent during the Spanish conquest, is now less than 10 per cent, which is the reason for the policy of a total log ban, as reaffirmed recently by President Benigno Aquino. In the post-war decades, the Philippines exported timber and wood-based products such as furniture, paper, articles of paper board, veneer, plywood, plywood veneered panels and many others. Today, the Philippines is a major and growing importer of these products.

The forest situation in the Philippines has significantly declined over the last 50 year, just as the other countries in the Southeast Asian region. Table 20 characterizes the rate of change forestry resources have undergone from 1981 to 1997 (comparative data of land use and forest type cover between 1981 and 1997 official statistics).

Table 20. Comparison of Data on Land Use / Forest Types

Land Use/Forest Type	1981[a]	1997[b]	Change in hectares (1981-1997)[c] (decrease) (+/-%)
Total Forest	8,350,000	5,391,717	(2,958,283) (-35%)
Dipterocarp	6,268,000	3,586,017	(2,681,983) (-43%)
Old Growth	2,794,000	804,900	(1,989,100) (-71%)
Residual	3,474,000	2,731,117	(742,883) (-21%)
Pine	193,000	227,900	34,900 (18%)
Sub-marginal	1,430,000	475,100	(954,900) (-66%)
Mossy	329,000	1,040,300	711,300 (216%)
Mangrove	130,000	112,400	(17,600) (-14%)
Brushland	3,903, 000	2,232,300	(1,670,700) (-43%)
Other Land Uses	17,747,000	22,375,983	4,628,983 (26%)
TOTAL	30,000,000	30,000,000	0

a Philippine Council for Agricultural Resources Research & Devt.as cited in the Farm Study, World Bank 1982
b FMB 2000Philippine Forestry Statistics
c After UNDP Forest & Water Resources Management Sectoral Framework Plan, 2007

The diminishing forest resources resulted in the decline in the volume and quality of local wood supply. Increasing migration to upland areas, widespread practice of shifting cultivation both by indigenous and migrant population, destructive and unsustainable logging methods employed by concessionaires, and other consequences of development led to the destruction of forest resources. Consequently, the rapid depletion of forest resources adversely affected the supply and hence threatened the viability of the wood industry in the country. The plight of the wood processing industry was even exacerbated by the problems that beset the industry such as the lack of investments, aging technology, and shrinking markets (UNDP, 2007).

While local log production dropped significantly because of dwindling forest resources, imported logs increased to satisfy local demands in 1995. Table 21 shows the increase in the import of logs from 1990 to 1995 and major exporters of logs to the Philippines.

Table 21. Import of Logs

	Import Amount (m3)		CIF Price/m3 (US$)	
m3	1990	1995	1990	1995
Australia	0	10,879		93.6
Brazil	0	19,498		122.0
Ghana	0	22,163		91.2
Japan	13	16,517	1066.8	92.7
Peninsula Malaysia	86,138	80,085	84.5	105.7
Sarawak	201,923	134,559	94.4	119.2
NZ & Western Samoa	16,940	104,634	87.5	70.3
Papua New Guinea	0	113,602		134.3
Solomon Islands	0	72,694		121.5
South African Rep.	0	74,131		132.0
U.S.	55	32,263	529.0	225.6
others	35,941	13,929		
total	341,010	694,954		

Source: Foreign Trade Statistics of the Philippines

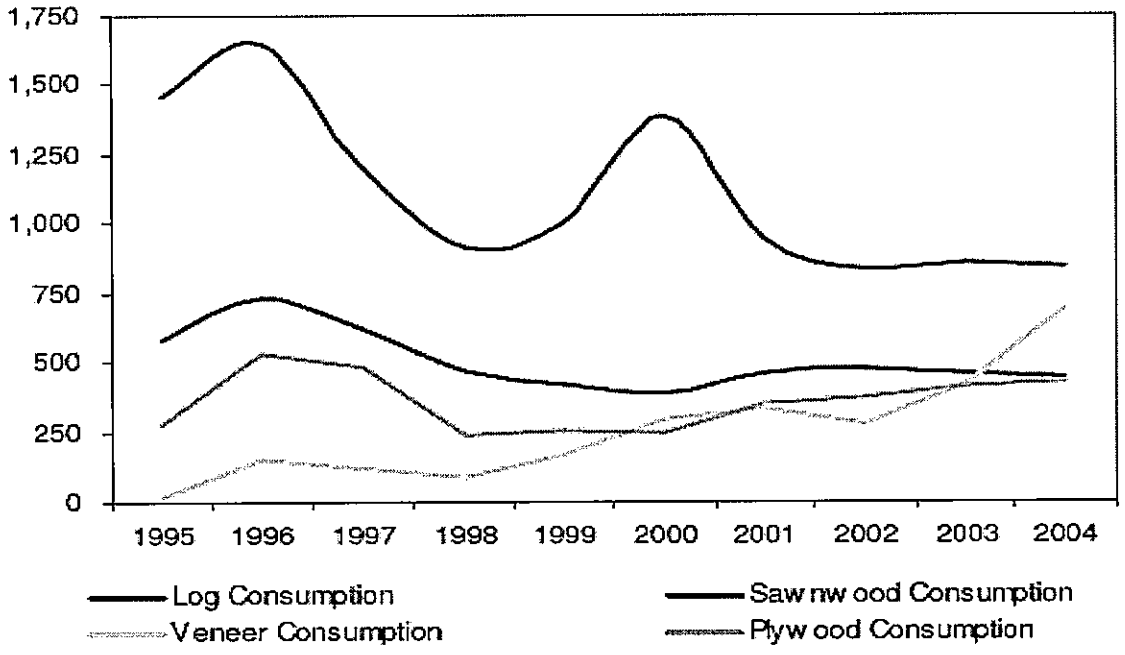
The number of active sawmills in the country also decreased from 325 in 1976 to 61 in 1996 due to inadequacy of supply of raw materials. Table 22 indicates the declining trend of the wood-based industry in the country.

Table 22. Number of Active Sawmills and Production Capacity, 1976-1996

	total		with concession		without concession	
Unit= 1000m3	number	daily rated capa*365days	number	daily rated capa*365days	number	daily rated capa*365days
1976	325	6570	153	3285	172	3285
1980	209	4015	124	2555	85	1460
1985	174	2920	89	1825	85	1095
1990	152	2555	51	1095	101	1460
1995	78	1460	29	730	49	730
1996	61	1095	21	730	40	365

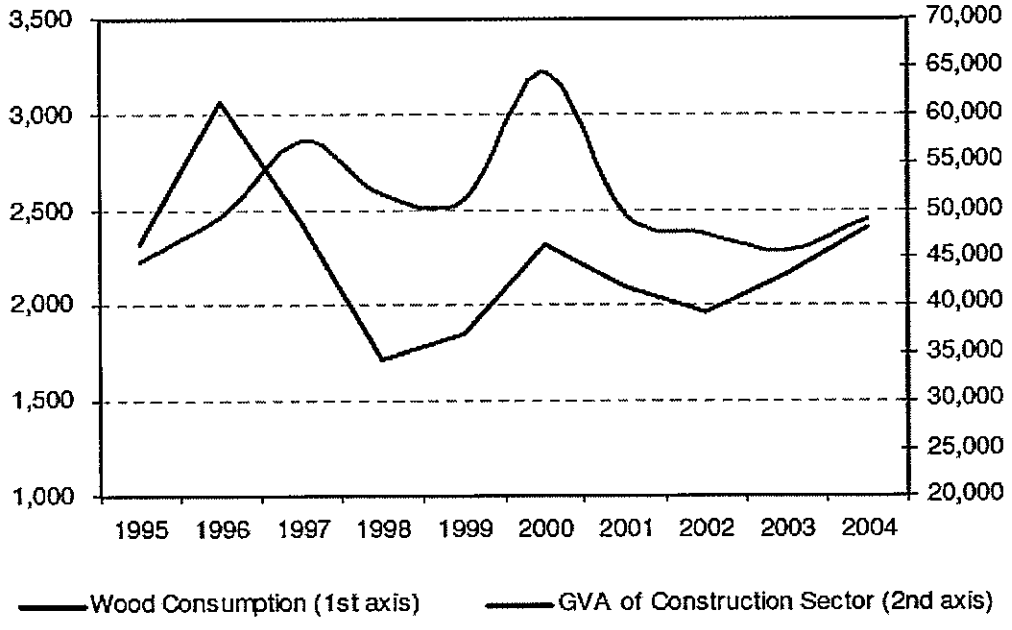
Source: Philippine Forestry Statistics

From 1995 to 2004, the domestic demand for primary processed woods grew at an annual rate of 0.4%. Figure 9 shows that while log consumption has been decreasing at an average annual rate of 5.8% from 1995-2004 and the domestic demand for sawnwood has also been declining at an average annual rate of 2.9%, the demand for plywood consumption grew at an average rate of 5.0% and veneer consumption increased at an annual rate of 55.5%. Veneer comprised about 28.8% of the country's total consumption of wood products in 2004. The real estate and construction sector were the largest consumer of wood products.



Source: International Tropical Timber Organization

Figure 10 Timber Consumption of the Philippines (in 000 cu.m.)

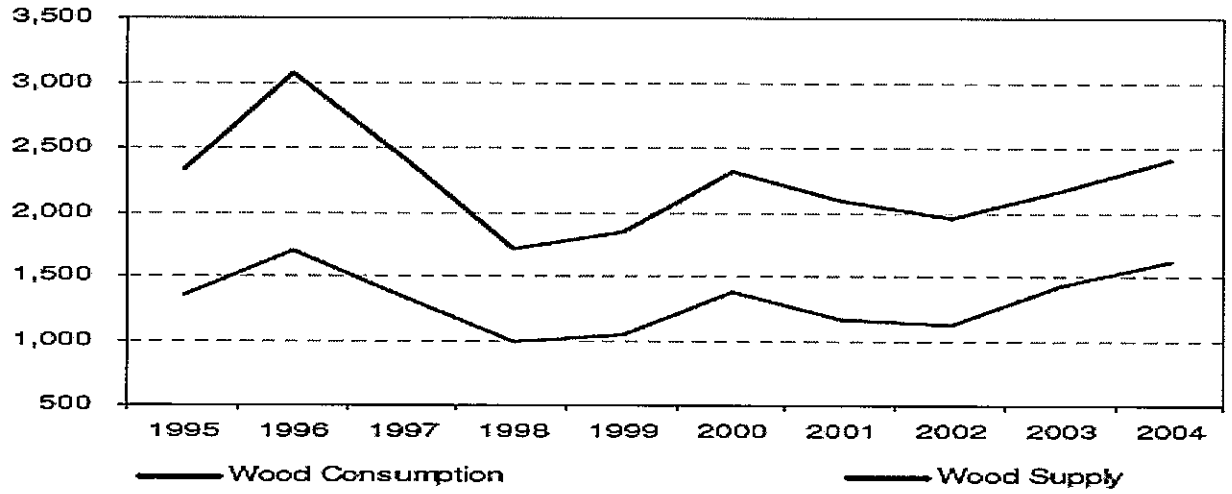


Source: International Tropical Timber Organization and National Statistical Coordination Board

Figure 11 Timber Consumption (000 cu.m.) vs. Construction Sector

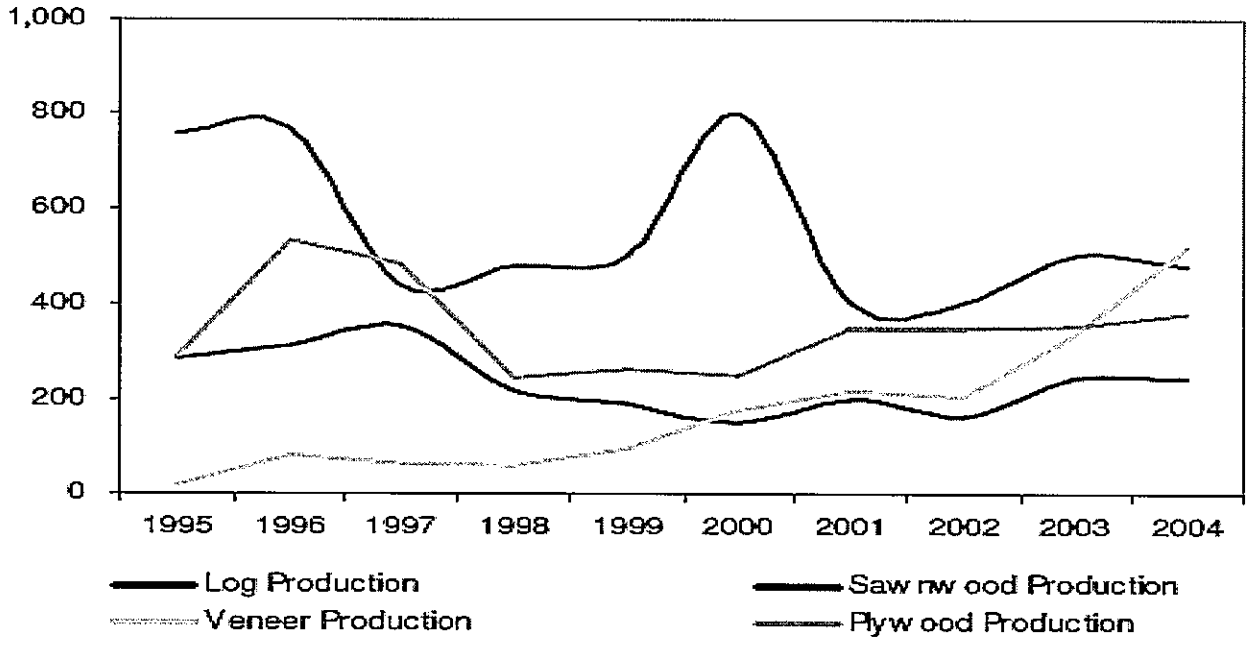
On the supply side, veneer production increased at an annual rate of 44.4% from 1995-2004 while plywood production had an annual rate of increase at 3% for the same period. Figure 11 and Figure

12 show the trend in timber consumption as against production as well as the breakdown of timber production.



Source: International Tropical Timber Organization

Figure 12 Timber Consumption vs. Production (000c cu.m.)



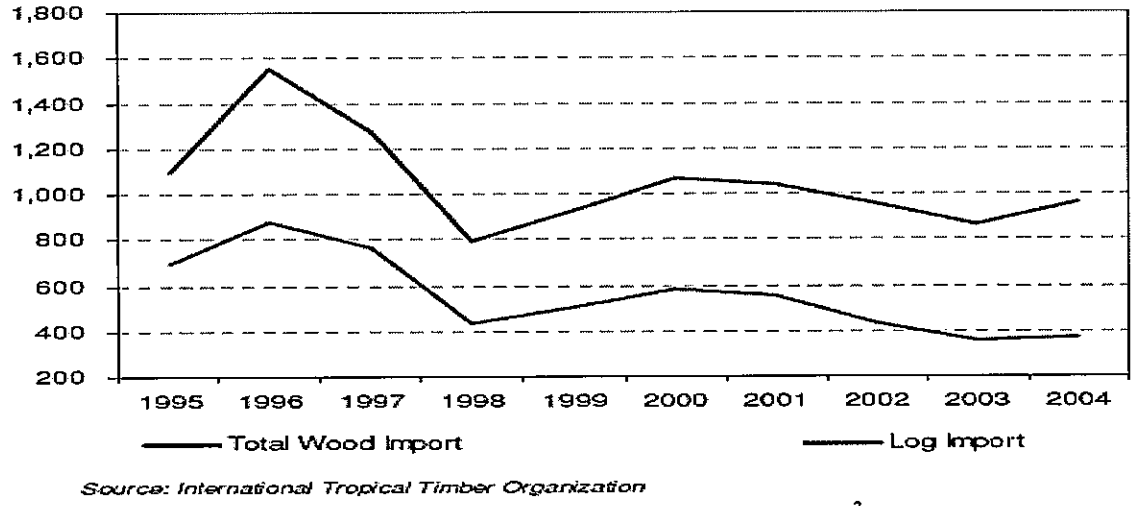
Source: International Tropical Timber Organization

Figure 13 Breakdown of Timber Production

With regard to the Wood Industry imports, the following wood products were sourced out to fill in the gap between consumption and production: logs, lumber/sawnwood, veneer and plywood.

Logs

Hardwood logs dominate the wood product imports as it has the highest consumption-production gap. However, from 1995-2004, a declining pattern on the wood product imports at an average annual rate of 6.8% may be noted **(Figure 14. Log Imports (in 000 m3)**Figure 14).



Source: International Tropical Timber Organization

Figure 14. Log Imports (in 000 m^3)

Table 23. Log Imports by Country of Origin, 2003

Commodity/Country of Origin	Quantity (in m^3)	Value (in $US)	
		FOB	CIF
Total	355,787	27,067,969	33,107,917
New Zealand	140,908	9,462,204	11,256,521
Solomon Islands	125,824	8,692,572	11,109,880
Malaysia	30,753	2,397,258	2,661,718
Australia	7,772	1,760,196	1,966,041
Papua New Guinea	15,775	1,311,558	1,998,409
Others	34,755	3,444,181	4,115,348

Source: National Statistics Office

Log products from New Zealand had the largest share of imported wood products in 2003, accounting for about 39.6% of the total volume of log imports with a total value of $33.1M. Other major sources include Solomon Islands, Malaysia, Australia, and Papua Guinea.

Table 24. Lumber Imports by Country of Origin, 2003

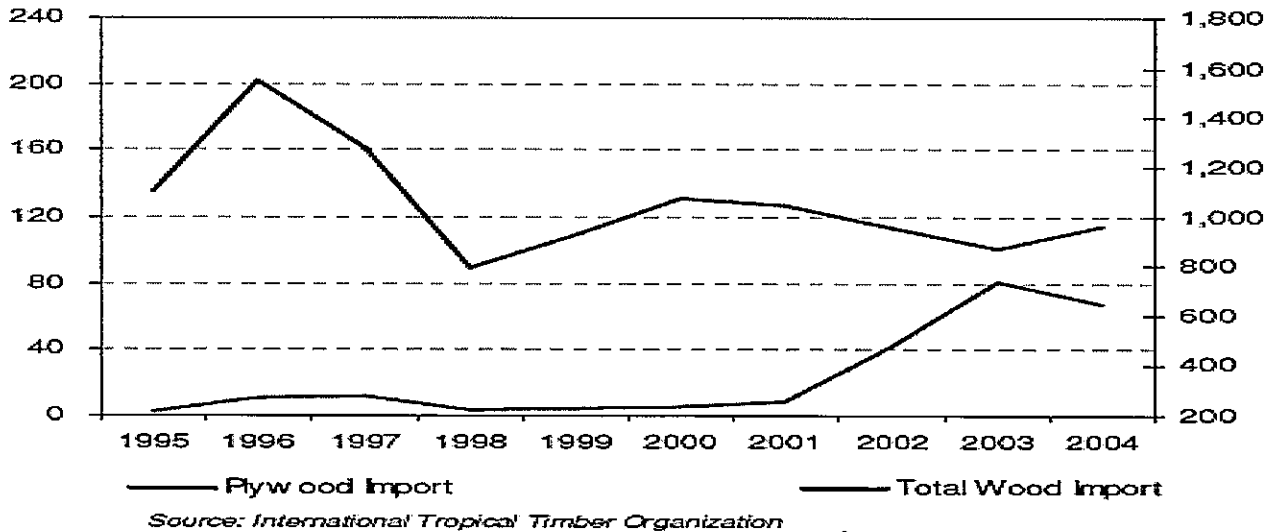
Commodity/Country of Origin	Quantity (in m^3)	Value (in $US)	
		FOB	CIF
Total	338,064	94,740,910	105,403,457
Canada	69,016	33,019,555	35,787,062
United States of America	41,265	21,927,678	24,088,683
Malaysia	117,082	14,400,236	16,785,375
New Zealand	51,176	9,910,684	11,371,279
Singapore	7,574	3,698,416	3,987,415
Others	52,184	11,875,309	13,483,808

Source: National Statistics Office

The housing/construction industry is the largest consuming sector accounting for 80%-85% of the domestic lumber consumption.

Plywood

Plywood exhibited the highest growth in the wood imports among the four primary wood manufactures, accounting for an average annual rate of 92.6% from 2001-2004. Malaysia topped the source accounting for 66.1% of the import value and 68.7% of the volume in 2003. The construction industry tops the domestic user of plywood accounting for 80%.



Source: International Tropical Timber Organization

Figure 15 Plywood Imports (000 m^3)

Table 25 Plywood Imports by Country of Origin, 2003

Commodity/Country of Origin	Quantity (in m3)	Value (in $US)	
		FOB	CIF
Total	48,557	26,233,304	28,416,223
Malaysia	33,384	17,340,953	18,773,077
Indonesia	4,281	2,509,443	2,705,689
Japan	1,720	2,029,002	2,178,884
Canada	2,434	1,186,704	1,289,512
Singapore	2,290	1,118,283	1,220,570
Others	4,451	2,046,759	2,246,115

Source: National Statistics Office

Private and government housing projects and building construction are the primary end users - in frameworks, ceilings, partitions, panelling, and side panels, built in cabinets and flush doors. In order to promote wood as a preferred construction material, there is a need for market development programs to be formulated, changes in design trends and training seminars directed at educating the sector on the many uses, properties, and suitability of wood for construction applications.

The second largest user of sawn timber, the furniture manufacturing and woodworking industry, is with an estimated 10% share respectively of lumber and plywood consumption. A recent report reveals that exports of Philippine furniture earned US$ 304 million or Php 16 billion in 2005, a slight improvement of 3.2% over 2004 total value of US $ 294 million. According to the Chamber of Furniture Industries of the Philippines (CFIP), wood continues to account for the largest share (over 40%) of furniture exports. The US remains to be the largest market for Philippine furniture in 2005. Industry contacts reveal that the furniture industry will be focusing on the high end market to avoid competing on the basis of price with suppliers from China, Vietnam and other low cost producers (New Zealand Trade and Enterprise- Manila, 2006).

In the FGD, the Philippine Wood Producers Association (PWPA) blames this sad state of affairs on the "tragedy of the commons", meaning nobody took care or took responsibility for the care of the forest commons. A more realistic assessment is that this is simply a consequence of the lack of a coherent program of developing the forest-wood industry in an integrated manner as well as a lack of coherent program of implementing various policies in support of forest management and reforestation.

Meanwhile, the shortage of forest materials has led to the collapse of the country's once vibrant saw mill industry, plywood industry, pulp and paper industry, rattan furniture industry and other wood-based industries. A number of Philippine pulp and paper plants have closed down, and those which are still standing are dependent on imported materials, including imported recyclable paper materials from other countries. Even some large furniture investors-locators in the economic zones such as Maitland Smith in Cebu are no more.

In the meantime, towns once known for their wood-based industries such as Butuan City, Zamboanga City and Davao City in Mindanao get easily flooded during rainy seasons – a stark reminder to all that there is a price to be paid for any reckless harvesting of exhaustible forests. There is utter lack of decency among those responsible for the rape and de-greening of the Philippine forests.

3.3.4 Greening Readiness and Potentials

3.3.4.1 Existing and potential Green Products

During the last several decades, because of the problems of decreasing raw material supply, reduced availability of large-sized timber, increasing responsiveness to environmental pressures, and government policies to develop domestic wood-based industries, forest product processing technologies have undergone extraordinary advances. Improvements have been achieved in terms of recovery rates, higher qualities in terms of durability and protection, higher utilization of non-timber forest products (NTFPs) such as bagasse, various grain stalks and bamboo, as well as the development of new products such as reconstituted wood-panels.

Sustainable methods, processes and technologies developed by the Wood Industry have made the industry resilient against the challenges of dwindling forest resources. The forest products industry needed to operate under increasing competition, both domestically and internationally, because of the scarcity of the raw materials. It has to contend with stringent regulations that limit access to raw materials (resource protection or environmental preservation policies) and those that regulate environmental impact of the industry. Increased efficiency, increased yield, and improved information exchange through application of technology will become issues of growing importance throughout the industry.

In the light of these circumstances the Wood Industry, therefore, needed to resort to technological innovations to increase efficiency in the use of resources while reducing environmental impact in order to remain competitive and maintain its viability as an industry. As a result, innovations in the wood industry gave rise to development of new products which are considered sustainable or "green" products.

A Focused Group Discussion (Annex 4), conducted last 17 June 2011 among wood industry stakeholders identified the following as potential green products in the Wood Industry (Table 26).

Table 26 Potential Green Products in the Wood Industry

Kinds/Uses	Particulars	Description
Eco-friendly or green materials	Recycled Wood	Recycled wood is a by-product of other manufacturing processes, such as sawdust, veneer backer boards and peeler cores, and so forth. According to general usage of terms to describe recycled-content, this type of content is described as "pre-consumer" or "post-industrial".
	Reclaimed Wood	Wood materials, components, fixtures, etc. (including doors, windows, cabinets, etc) that have been reclaimed from demolished buildings.
	Engineered Wood	Engineered wood describes wood products that are engineered for construction applications. They evolved with improvements in lamination technology, development of adhesives, and improvement in lumber and veneer drying processes.
Eco-Plastic Materials		Eco-plastic products are made of non-toxic recyclable plastic waste generated by factories engaged in the production of different plastic products. Wood-plastic composites mix fiber and plastic into pellets, then extrude "wood" sheets and lumber to specified dimensions which are then used for housing construction.
• Wood Products – Rapidly Renewable	Bamboo	Fastest growing wood type; one of the strongest building materials; abounds in tropical countries; essential structural material in earthquake architecture.
	Veneer Products	The milling process of hardwood veneer effectively reduces waste. It is not cut from the log but is sliced with a knife into leaves or sheets that produces 42 veneer surfaces. For every veneer sheet that is derived from a board, no wasted wood ends up as sawdust.

Bamboo Products' Potential

In 2010, when EO 879 was issued, it served as a stimulus in developing the Bamboo Industry in the country. The Bamboo Network of the Philippines (BambooPhil), an organization composed of Filipino bamboo scientists, advocates and entrepreneurs, said that bamboo is great for erosion control and carbon dioxide control. It can also be tapped as a cash crop because it is fast-growing and easy to propagate. According to BambooPhil, cost-wise, bamboo is cheaper than wood and, therefore, a good substitute for the wood the country imports from Malaysia and Indonesia.

Recognizing the big potential of the industry due to the multitude of benefits ---environmental and socio-economic---that may be derived from the said resource, the Department of Trade and Industry (DTI) deemed fit to adopt the clustering approach in bamboo production and processing in every island in the country. In fact, before the EO was issued, the DTI had identified engineered bamboo projects under its one-town, one-project (OTOP) program. Bamboo production and processing was considered as a strategic industry for its potential not only in the domestic but also in the export market. For the Industry to advance, technical assistance and capacity building is needed.

As regards island clustering, Pampanga has been identified as a pilot area and hub for Central Luzon; Abra for Northern Luzon, Laguna for Southern Luzon, and Tarlac, Palawan, and Camarines Sur, among other provinces, as nodes. In the Visayas, Iloilo and Negros Oriental are hubs and the whole island of Panay is a site of nodes. In Mindanao, General Santos City is the hub with Sarangani, South Cotabato, Davao del Norte, Compostela Valley, Bukidnon, Lanao del Norte, Zamboanga del Sur and Zamboanga Sibugay as nodes.

According to DTI, large-scale bamboo plantations will enable the local government units to participate more actively in processing various products, creating jobs and livelihood. At present, the program has established 11 new nurseries while about 900 new hectares have planted on the propagation side.

With regard to business development, some 25 nodes and eight hubs and one Bamboo Negosyo Village have been set up. In this regard, "big bro-small bro" subcontracting partnership was one of the strategies adopted. Bambu International Corp. in Iloilo has been subcontracting from eight medium- and small-scale producers and sells bamboo products to the local and export markets.

In Southern Leyte, about 45 families in Barangay gather bamboo poles and deliver chips and slats to a bamboo treatment and processing facility operated by the Southern Leyte Employees Multi-Purpose Cooperative in Barangay Ibarra. Through assistance from the Department of Science and Technology (DOST) under the Small Enterprise Technology Upgrading Program (SET UP), the Cooperative was able to establish and operate a bamboo plywood factory in 2008. The DOST assists in the conduct of further researches on bamboo furniture production in order to increase the Cooperative's output with better quality products.

Previous attempts to put up bamboo nurseries in the country had been unsuccessful because of the absence of a market to sell the bamboo harvested and the lack of processing facilities for higher-end applications. With the EO already being implemented, bamboo production is expected to increase. Demand for bamboo (bamboo plywood and bamboo tiles, etc.) in Green Buildings / Green Construction may also increase as a consequence of the production boost.

3.3.4.2 Identification of existing green standards and recommendations

In the absence of a sustainable forest management bill, green standards are wanting in the Wood sector.

3.3.4.3 Green skills

The FGD identified Green skills that may be required for the jobs to be generated for the Green Wood Industry. Table 27 shows the job potentials for the Green Wood Industry.

Table 27 Prospective Green Products, Job Potentials, Volume of Jobs to be Generated and Reasons

Potential/Prospective Green Products/Initiatives	Jobs that can be Generated	Volume of Jobs	Reasons for Volume of Jobs
1. Eco-Friendly Materials		Medium Potential	Heightened awareness for clean environment processes
2. Composites (eco-plastic materials, etc.)	Wood cutters/carvers Finishers/carpenters Shippers Designers	High Potential	Carbon credits especially in European Union
3. Wood Products from sustainable logging	Purchasing Managers Production crew /quality crew; Manufacturer s of Equipment; Researchers	High Potential	Awareness for need for renewable source of energy locally thru media; Strict LGU code for waste/toxic management

3.3.4.4 Existing government policy framework and initiatives and identification of scaling up potential

In addition to relevant laws such as PD 856, 1151, 1152, and 1586, RA 4850, 6969, 8749, 9513, 9003, 9729, and 10121, and DAO 26 & 35 as detailed in Table 10, Table 28 presents the laws and policies that may direct the course of the development of the Sustainable Wood Industry.

Table 28 Regulatory/Policy Framework Relevant to the Wood Industry

Law	Titles
PD 705	(Revised Forestry Code of the Philippines)
Executive Order (EO) No. 23	Declares a moratorium on the cutting and harvesting of timber in the natural and residual forests of the entire country and creates the anti-illegal logging task force.
EO 318	Promoting Sustainable Forest Management in the Philippines, 2008
EO No. 263	Adopting Community-Based Forest Management as a National Strategy for Sustainable Forest Management in the Philippines
RA 8371	Indigenous Peoples Rights Act of 1997
RA No. 7586	National Integrated Protected Areas System, NIPAS Act
RA 9147	The Wildlife Resources Conservation and Protection Act of 2001

3.3.4.5 Level of Support of Social Players and Tripartism

There is scarcity of information about the health of existing firms and the state of industrial relations in the industry. Most of the big unionized firms in the wood-based industry such as those in the pulp and paper (like PICOP in Agusan and those managed by the Del Rosario family), plywood (like the Puyat & Sons and the Zamboanga-based Santa Clara), rattan (like Mindanao Rattans in Cebu and Davao) and furniture (like Maitland Smith in Cebu) have closed down. However, in the FGD, the PWPA claims that there are still some unionized firms, and yet, the Association is hard put citing specifics. If there are unions, they are obviously on the decline and are hardly heard of.

Further, the industry is hardly seen in the industrial relations radar of the country. Barely unionized, there are no reports of any tripartite discussion or social dialogue on the work conditions in the industry.

3.3.4.6 *Green Jobs and Decent Work*

The wood industry, wobbly as it is, is reinforced by new products, mainly those based on abaca and coconut. Jobs, like those in the rattan industry, are also on the decline. If at all, jobs are mainly found in small wood workshops or firms. There is not enough information or literature about the working conditions and the labor market in the struggling industry and the different sub-sectors under it.

An old unpublished study in 1995, by Jude Esguerra (now National Anti-Poverty Commission Undersecretary), shows that in the early 1990s there was already under-utilization of capacity in the large firms, which meant displacement of workers. His study also points to the "exhaustion of skilled manpower", triggered primarily by the outward migration of these workers. In the FGD, the migration of the skilled rattan designers and workers from Cebu to Jakarta contributed heavily to the demise of the Philippine rattan industry. After harvesting and exhausting Philippine rattan raw materials, the local producers turned to Indonesia as an alternative source of these materials; however, the Indonesians restricted the export of rattan materials and instead poached the skilled Filipino rattan workers in order to develop the Indonesian rattan industry. In the FGD, the PWPA reported that the rattan industry in Indonesia was now comatose because of the exhaustion of the raw materials and that the skilled Filipino rattan workers are now in Vietnam, the new rattan power producer.

A more recent study by Niels Beerepoot (2005) shows that the skilled wood workers, who acquired their skills in wood working by doing and through inter-generational transfer of knowledge, have been leaving the industry, primarily because of "job insecurity". Small firms doing subcontracting work for the large firms have also been losing job orders and have had to relieve or dismiss "excess" workers.

Given this overall socio-economic backdrop, it is not difficult to imagine that decent work is in short supply in the industry. Even in the "emerging" coconut-based wood industry, the FGD participants intimated about the "informality" of the work processes, especially in the gathering of coconut husks (which are paid a pittance) and the production of labor-intensive geo-textiles (which are also paid a pittance).

Any program to program to promote green production of green wood and wood-based products based on decent work will not be easy. It requires serious policy strategizing and cooperation of all stakeholders, the private investors in particular. A Philippine roadmap for the revival and modernization of the wood-based industry would require strategic approaches to sourcing of raw materials, market niching, technology upgrading and business/skills development. The development of green decent work in the context of the foregoing is an added and difficult challenge.

3.4 Analysis and Conclusion

Among the three sectors, the socialized mass housing construction industry has the highest product demand (due to an ever growing informal settler population and poor sector of the country) and it stands to benefit the whole society via sustainable communities design. It is expected to generate employment for a large chunk of the labor force as it has many potential forward and backward linkages in the various industries. Government support and influence are strongest. Strengthening green products and standards in the socialized mass housing construction industry can be replicated throughout the construction sector. Regulatory frameworks are in place and has existed since 1992,

and there is a strong presence of business and social partners advocating green building. Tripartism is minimal but shows much potential for active support to green initiatives. Figure 16 shows the positive features of this sector along the 7 evaluation criteria.

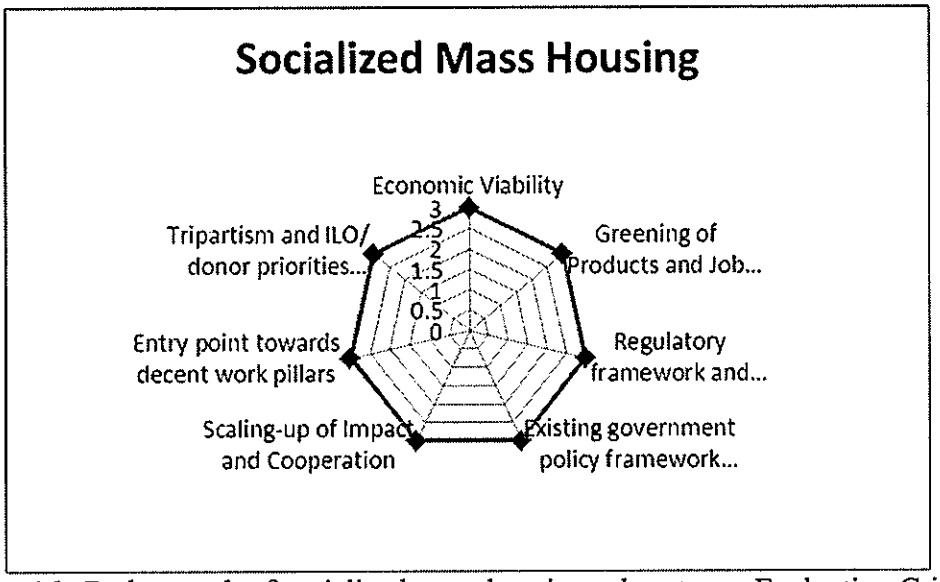


Figure 16. Radar graph of socialized mass housing subsector vs Evaluation Criteria

The Organic farming subsector is the second sector in priority for the Demonstration project because it has the highest potential for green products (Figure 17). All of the products of organic farming are green and there is increasing demand for these products locally and all the more so, internationally. And yet, organic farming constitutes a distinct minority in the agricultural sector, covering an estimated 1-2 per cent of the total agricultural land (about 10 million hectares) of the country.

Furthermore, the organic farms are also dispersed. With the passage in 2010 of the Organic Agriculture Act (RA 10068) and with a new Secretary of Agriculture who is openly in favour of organic farming, proponents of organic agriculture are optimistic that it will grow dramatically. However,there are several barriers and constraints that the sector is facing. Most organic farming are small-scale, and thus, have to address the cost benefit and economies of scale issues. Regulatory frameworks and policies have just been installed and will take some time until full implementation is achieved. The organic farming sector shows much promise in uplifting the plight of the poorest of the poor farmers of the country. Tripartism is in its infantile stage.

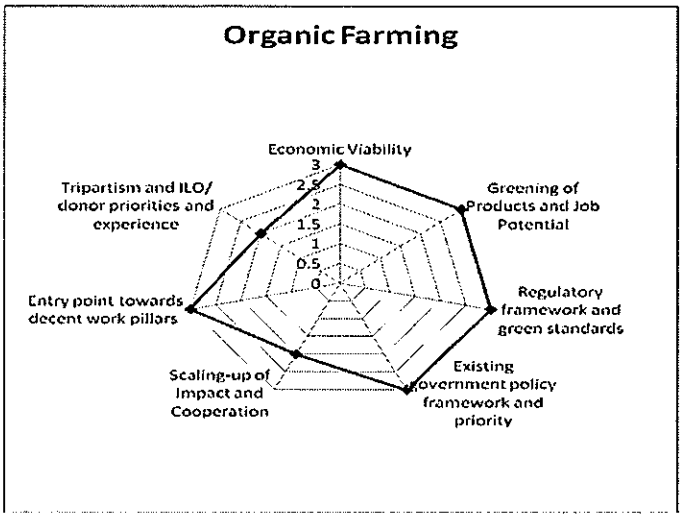


Figure 17 Radar Graph of Organic Farming Sector vs Evaluation Criteria

The last priority among the three sectors is the wood sector (Figure 18) because of the multiple problems, barriers and constraints beset in the industry, and its input industry: the forestry sub-sector. Regulatory frameworks are absent and there exists no tripartite cooperation in the sector. Some green advocacies exist but are not too strong. Nonetheless, the wood sector presents a good opportunity for the demonstration project as greening the sector and creating green jobs can be a stimulus to prime up the declining sector.

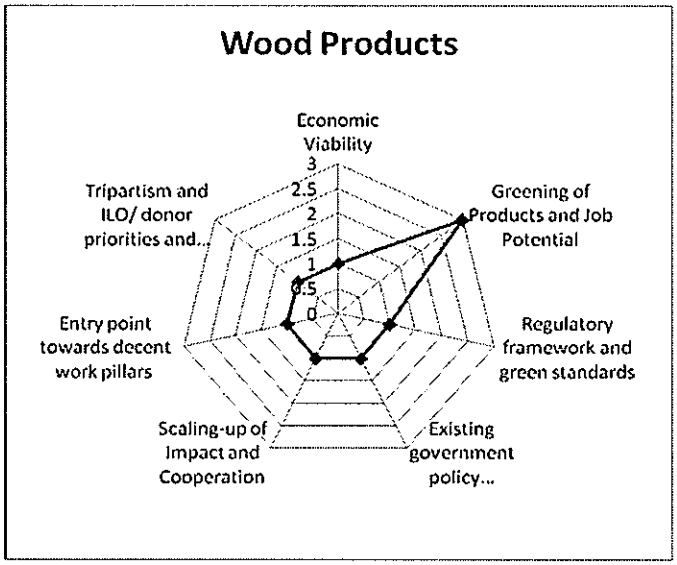


Figure 18. Radar Graph of Wood Sector vs Evaluation Criteria

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Glossary of Terms

Abandoned land	Abandoned land is land that was once cultivated, but is no longer used for agriculture. It may comprise degraded land with low productivity or land with high productivity. Set-aside land does not belong to this category. See also: degraded land, 'marginal' land
BERDE	BERDE (Building Ecologically Responsive Design through Excellence) is the National Green Building Rating System developed by the PGBC.
Crop Yield	Refers to the volume of the harvest from a certain group of crops.
Finishing Works	Works using special machines with precise and delicate processes.
Green Buildings	Buildings designed to be eco-friendly, energy efficient, and have low greenhouse gas emissions.
Green Skills	Jobs or skills in the area of research and development of low-carbon technologies, and also in traditional jobs
Hardwood	Wood from broad-leaved trees and ideal for building and construction purposes
Indigenous Materials	Materials that are naturally and locally found in a specific place or area. They do not require costly processing, which consume energy and other resources, and can be used even in their raw, untreated forms.
Informal Settler Families	Group of people who live on lands which they do not own
Land Holdings	Land owned by a certain organization
Logging	The activity or business of felling trees and cutting and preparing the timber.
Lumber	Timber sawn into rough planks or otherwise partly prepared
Organic Crops	Crops that are planted in an organic method and setting.
Organic Farming	Farming methodology that employs methods that are regenerative because they restore nutrients and carbon to the soil, resulting in higher nutrient density in crops and increased yields.

Philippine Development Plan (PDP)	A development plan set by the Philippine Government for 2011-2016 for various growth areas in the Philippines.
Plywood	A type of strong thin wooden board consisting of two or more layers glued and pressed together with the direction of the grain alternating
Recycled Wood	Wood taken for re-use.
Rough Works	Works using heavy machineries
Sheathing and Framing	Protective casing or coverings
Socialized Mass Housing	Low Cost Housings intended for poor households and informal settlers
Softwood	Wood from conifers (pince, fir, or spruce).
Timber	Wood prepared for use in building and carpentry
Veneer	A thin decorative covering of fine wood applied to a coarser wood or other material.
Volatile Organic Compounds	Volatile organic compounds (VOCs) are organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the earth's atmosphere.

ANNEXES

Annex 1 Preliminary Sector Overview

Rapid Sector Scoping for Green Jobs in Asia Project Philippines

PRELIMINARY SECTOR OVERVIEW

FINAL REPORT

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External Collaborator

15 June 2011

Rapid Sector Scoping for Green Jobs in Asia Project Philippines

1. Introduction

Sustainable economic growth is only possible with the protection and sustainable management of the environment and the use of natural resources. With the emerging issues of global climate change, nations now need to transform the manner of their economic development in such a way that strong development happens not at the expense of environmental degradation and resource depletion. Economies must become green economies inhabited by green industries employing green jobs.

The International Labour Organization's (ILO) initiative of Green Jobs in Asia project is its contribution in the "transformation of economies, enterprises, workplaces and labour markets into a sustainable, low-carbon economy." ILO proposes that "**green jobs** can be created in all sectors and types of enterprises, in urban and rural areas where the creation of direct jobs comes with the production of green goods and services and the creation of indirect jobs flows from the required inputs in the making, handling and selling of these goods." ILO aims to directly contribute to the national programs and initiatives relating to employment, climate change and environment and recovery from the economic crisis as set out in paragraph 21(3) of the Global Jobs Pact. Through enhanced capacity of ILO constituents in the Philippines, sound policy guidance, the undertaking of gender-responsive activities on green employment (decent and environmentally friendly) in a specific economic sector, the project aims to build the capacity of constituents to deepen their understanding and commitment to assist the Philippines in shifting to a low-carbon, environmentally friendly and climate resilient economy that helps accelerate the jobs recovery, reduce social gaps, support development goals and realize decent work (ILO, 2011).

The rapid sector scoping assessment is a short term research study implemented by ILO. The research aims to investigate shortlisted sectors and from there, identify a sector which has the one of the greatest potentials for the promotion of green jobs which shall serve as the focus sector for the Green Jobs demonstration project in the Philippines.

The Green Jobs Demonstration project in the Philippines aims to showcase a sector and demonstrate a pilot sectoral case in the promotion of green jobs through the promotion of green products, green standards, together with upgrading of technical and entrepreneurial skills, access to finance and strengthening of decent work.

Green Jobs are, according to the International Labour Organization and the United Nations Environment Program, "works in agricultural, manufacturing, research and development (R&D), administrative, and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution. (UNEP/ILO, 2008).

For ILO, green jobs entails decent work. Decent work, as defined in the Philippine Labor and Development Plan 2011-2016, is "a concept whose primary goal is to promote opportunities for all women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity. It has four strategic objectives in the area of employment (promotes the creation of sustainable enterprises and increased efficiencies in the economy), workers' rights (strengthen observance of the constitutionally protected rights of workers and ensure the ratification of core & governance conventions & respect for fundamental principles and rights at work), social protection (improve access to social protection mechanisms, improved wages, better working conditions and expanded employment opportunities for all) and social dialogue (strengthen tripartism and broaden representation of workers as a tool for attaining employment goals)." (DOLE, 2011).

2. The Objectives of the Study

The objectives of the research are as follows:

2.1 To identify a shortlist of possible sectors for the rapid sector scoping study to be considered for the Demonstration project of Green Jobs in the Philippines;
2.2 Establish the profile of each sector according to the seven criteria proposed, looking at both the environment sustainability and decent work aspects.
2.3 Identify links of the sectors to significant experience in promoting sound and environmental practices through supply chains and green job drivers.
2.4 Identify key issues and challenges in green jobs creation/promotion among these sectors.
2.5 Summarize the standards and regulations that are applicable to Green Jobs and provide overview of those that are followed in the sectors.
2.6 Identify existing tripartite practices especially in incorporating decent work concerns and greening practices in the sector
2.7 To investigate in-depth the current practices and approaches on Green Jobs promotion and green skills in greening products and standards in the top three sectors as identified from 2.1.1; and
2.8 To select a focus sector for the demonstration project of greening jobs in the Philippines, which shows the highest potential for the creation of green jobs (either in the creation of new green jobs or the greening of existing brown jobs.

3. Methodology

3.1 3.1 Literature Review

Secondary literature review is accomplished to craft sector profiles and a comparative of sectors across the selection criteria :

1. Medium-term Philippine Development Plan (MTPDP) 2011-2016
2. Philippine Labor and Employment Agenda 2011-2016
3. National Framework Strategy for Climate Change
2. NSO Statistical Database & Philippine Statistical Yearbook 2010
3. ILO Greener Business Asia Philippines -3 Sector Study
4. Green Jobs: Towards Decent Work in a Sustainable, Low Carbon World
5. Decoupling and Sustainable Resource Management, UNEP.

6. Impact of Climate Change on Employment
7. National Urban Housing Development Framework
8. Philippine National Standards
9. PD1121 National Environmental Protection Council
10. PD1151 Philippine Environmental Policy
11. PD1152 Philippine Environmental Code
12. PD1586 Environmental Impact Assessment / ECC System
13. RA6969 Treatment of Healthcare Waste of 1990
14. PD856 Sanitation Code on Solid Waste
15. DAO 26 Appointment of Pollution Control Officer
16. RA8749 Clean Air Act of 1999
17. DAO 35 Revised Effluent Regulations
18. DAO 16 LLDA Environmental User's Fee (EUF)
19. UDHA 2000 Urban Development and Housing Act

The secondary literature shall also surface the various options of sectors to choose from.

3.2 The Analytical Framework

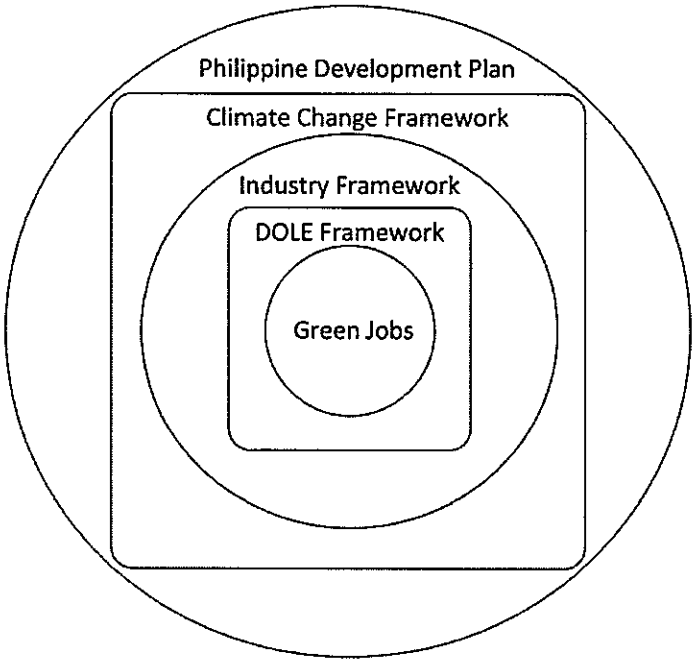


Figure 1 The Analytical Framework of the Rapid Sector Scoping for Green Jobs in the Philippines

In order to facilitate the screening of sectors in choosing a focus sector, it is imperative to first understand the analytical framework within which green job is contextualized.

ILO states that a green job addresses the environmental challenges, is decent and contributes to sustainable development in the long term.

It is a set of processes contained in a job description *which addresses the environmental challenges*, (meaning jobs that minimize the use of resources to avoid scarcity and depletion of resources and minimize the environmental impacts of activities, product and services throughout their life cycle); *is decent* (meaning a good job that fetches an adequate salary enabling the worker to live above the poverty index, offer safe working conditions, job security, reasonable career prospects, uphold workers' rights, promotes social dialogue and contributes to a respectable human development index) *and leads to sustainable development* at the long term through sustainable production and consumption.

In Figure 1, the green jobs is contextualized within the framework of the Department of Labor and Employment (DoLE), which is further aligned with the industry framework, which is also aligned with the National Framework Strategy for Climate Change as well as with the Philippine Development Plan 2011-2016.

The Green Jobs in the Philippines is defined in alignment with the Philippine Labor and Employment Agenda which espouses inclusive growth through decent and productive work. Inclusive growth refers to a "sustained growth that massively creates jobs, draws the vast majority into the economic & social mainstream and continuously reduces mass poverty." Furthermore, on request of the DoLE the Labour Agenda, in a consultative process with ILO and national stakeholders and experts 'greened' the Labour and Employment Agenda. As part of the Millenium Development Goals which aims to halve the poverty index by 2015, The DoLE has identified that the fundamental requisite to addressing the challenge of inclusive growth is employment growth. Employment growth with the promotion of green jobs will lead to poverty alleviation.

Furthermore, with regards to industry, the promotion of green jobs addresses and supports the structural changes envisaged in industry with regards to green growth. Green growth is defined by the United Nations Economic and Social Commission for the Asia Pacific (UNESCAP) as environmentally sustainable economic growth for the wellbeing of all.

The Green Jobs in the Philippines is contextualized within the National Framework Strategy on Climate Change which is committed towards ensuring and strengthening the adaptation of the country's natural ecosystems and communities to climate change. The Framework envisions a climate risk-resilient Philippines with healthy, safe, prosperous and self-reliant communities, and thriving and productive ecosystems. Its goal is to build the adaptive capacity of communities and increase the resilience of natural ecosystems to climate change, and optimize mitigation opportunities towards sustainable development.

Lastly, the creation of green jobs supports the Philippine Development Plan 2011-2016 which aims to reduce the poverty index from 33.1% in 1991 to 16.6 % in 2015, create an annual average of 1 million jobs and an annual average labor force growth of 2.75%. Current jobs creation is averaging at 5.6 million jobs annually and current labor force growth is at 3.17% from 2008-2010. The PDP plans to reduce unemployment rate from 7.2% to 6.8%; achieve investment to GDP ratio of 22% by 2016; and achieve the other MDGs by 2015 such as achieve 100% participation of school-age children in primary education, attain 1:1 ratio of girls to boys in primary education and 50% share of women in non-agricultural wage employment, reach 26.7 under-five mortality per 1,000 live births, 52 maternal mortality per 100,000 live births and have zero prevalence of malaria and tuberculosis.

3.3 Conceptual Framework of Green Jobs

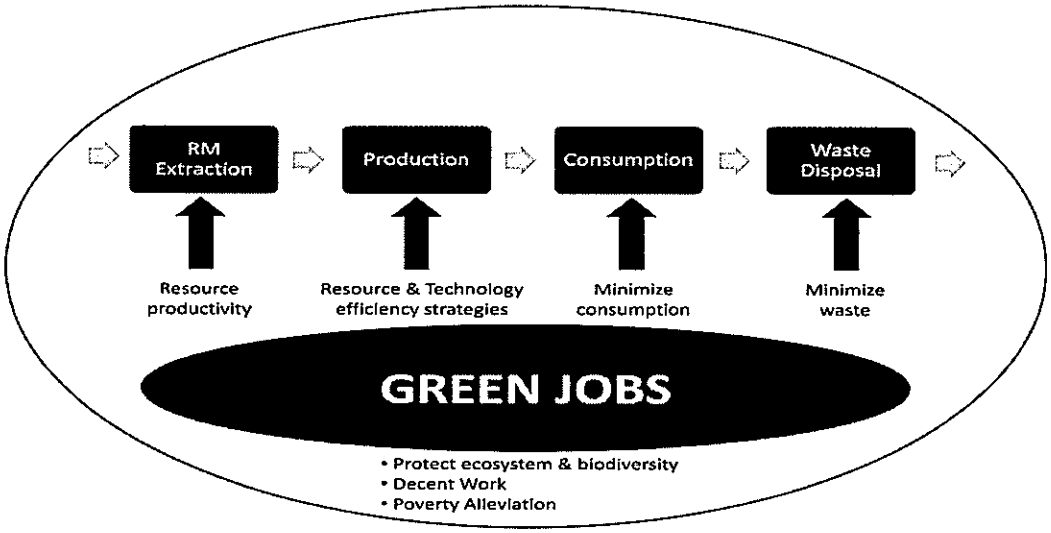


Figure 2 The Conceptual Framework of Green jobs

Green jobs can be generated across all the main activities and processes of man : from raw material extraction, production , consumption to waste disposal. Greening jobs entail applying resource efficiency during raw material and energy extraction, resource and technology efficiency strategies in the production and manufacturing of products and provision of services in order to achieve low carbon development, protecting ecosystems and biodiversity and reducing pollution and waste at all levels.

3.4 Evaluation Criteria

In choosing from among various alternatives, criteria belonging to musts and wants are crafted. Musts are non-compromisable objectives while wants are compromisable objectives. Alternatives sectors must meet non-compromisable objectives while for wants, the more the alternatives perform in the want criteria, the higher the probability the sector will be chosen.

For this study, the must criteria are:

1) sector classification used by all agencies to enable an objective assessment of the sector's performance and characteristics. This will mean that data will be available for the sector. The assessment shall entail perusing through various sources of literature and materials from various agencies,
2) The sector must be able to exhibit realizable results on the four areas (skills and decent work) within a year, and
3) The sector must have existing government initiatives or programs for high potential in scaling up.

The sectors that pass the must criteria shall be compared vis a vis the wants criteria. Criteria 2 and 3 are relaxed at the initial phase to compare all the alternative sectors across the wants criteria.

The wants criteria (to be utilized in identifying which among the shortlisted sectors will be used as focus sector the Demonstration project in the Philippines) are the following evaluation criteria specified by ILO.

3.4.1 Economic Viability

Economic viability refers to the degree of economic benefits to be gained in the sector including the volume of potential jobs created as well as greening of existing jobs This criterion shall be measured by the Gross Value Added (GVA) per sector, % contribution to the Gross Domestic Product, employment percentage relative to other sectors; capital formation, and volume of Job creation potential as well as degree of demonstration of greening of existing jobs. Other qualitative aspects to be perused are: direct and indirect jobs created and up skilling of jobs, less jobs reduction, but if there is, it is geared towards substitution, or horizontal movement, and corporate, technical and tailored training on green job

3.4.2 Greening of Products and Job Potential

The greening of products and job potential refers to the trend of how products and services are being transformed to green, the potential and prospects of developing new green products and the volume of potential of green jobs creation due to the advent of certain green products in the sector.

3.4.3 Regulatory framework and green standards

The regulatory environment and green standards refer to the presence of regulatory frameworks and the existence of green standards , both mandatory and voluntary. This criterion also assesses the scope of promotion of green standards in the sector.

3.4.4 Existing government policy framework and priority

This criterion points to the existence of government policy framework conducive to green jobs promotion in support to existing government development thrust and priority. This criterion will assess if green jobs promotion is supported by the over-all government priorities as reflected in the Philippine Development Plan (PDP), articulated in the specific government development and action plan and existing government policies. This also includes current and existing plans and programmes of the government including public private partnership initiatives and role of local government in generating economic development.

3.4.5 Scaling up of Impact and Cooperation

This criterion looks at the potential of increasing the level of impact, coverage and promotion of green jobs in the employment activities in the sector. Existing interest, and buy-in from the ILO constituents which are government, employers and trade unions/workers groups are already articulated, as manifested in existing greening programmes, including budget allocation and investment. Impact also considers where the sector industry is not too much spread out, as well as it support local government initiatives and local economic development.

3.4.6 Entry point towards decent work pillars

Entry point towards decent work pillars refers to the possibility of promotion of decent work where vulnerability issues can be addressed through the project. This indicator also considers strengthening existing decent work initiatives of the sector. The four pillars of decent work are employment, worker's rights, social protection and social dialogue.

The employment pillar promotes the creation of sustainable enterprises. It also explores opportunities for increased investments in human resource development and improved working conditions and seeks to achieve full and productive employment.
The worker's rights pillar aims to strengthen observance of the constitutionally protected rights of workers. It seeks to ensure the ratification of core & governance conventions & respect for fundamental principles and rights at work. The social protection pillar seeks to improve access to social protection mechanisms, improved wages, better working conditions and expanded employment opportunities for all. The social dialogue pillar seeks to strengthen tripartism and broaden representation of workers as a tool for attaining employment goals.

3.4.7 Tripartism and ILO/ donor priorities

Tripartism and ILO/donor priorities refer to the evidence of integrated and synergistic collaboration among government, employers and workers in the sector. This criterion shall qualitatively assess the existing social dialogue structure available as a platform to discuss green jobs related issues and look at the openness from tripartite players to actively and meaningfully engaged in consensus building processes. This will seek if government programs and activities are present to support the sector initiative, if employers' organization have strong counterpart with clear mandate to support the sector, and check if trade unions have mandate and where their agenda are being promoted and advanced in this sector.

3.5 Performance Indicators

3.5.1 Economic Viability

3.5.1.1 Percentage Share in Gross Domestic Product (GDP)

The sectoral Gross Value Added (GVA) cumulates to the whole Gross Domestic Product (Table 1). The % share of the sector to GDP indicates contribution of the sector in economic growth. The bigger the volume of GVA share of the sector in GDP, the more the impact in economic growth.

Table 1 Gross Domestic Product by Industrial Origin in 2009 (In million pesos)

		At current prices		At constant 1985 prices	
	Industry	GVA in Pesos	% to GDP	GVA in Pesos	% to GDP
1.	AGRICULTURE, FISHERY & FORESTRY	1,138,334	14.82	259,424	18.11
	a. Agriculture & Fishery	1,134,036	14.77	258,102	18.02
	b. Forestry	4,298	0.06	1,322	0.09
2.	INDUSTRY SECTOR	2,318,882	30.20	460,205	32.13
	a. Mining & Quarrying	119,160	1.55	29,354	2.05
	b. Manufacturing	1,566,738	20.40	314,399	21.95
	c. Construction	390,449	5.08	71,908	5.02
	d. Electricity, Gas & Water	242,535	3.16	44,544	3.11
3.	SERVICE SECTOR	4,221,702	54.98	712,486	49.75
	a. Transportation, Communication and Storage	514,266	6.70	126,530	8.84
	b. Trade	1,115,432	14.53	239,119	16.70
	c. Finance	443,521	39.21	88,305	6.17
	d. Ownership of Dwellings & Real Estate	426,150	5.55	66,746	4.66
	e. Private Services	1,147,890	13.03	129,860	9.07
	f. Government Services	574,442	7.48	61,926	4.32
	Gross Domestic Product	7,678,917	100%	1,432,115	100%

Source: Table 3.3 and 3.4, PSY 2010, NSO

3.5.1.2 Average Annual Percentage Growth in Gross Value Added (GVA)

The rate of growth in sectors indicates the level of monetary growth. This indicator has to be taken in constant 1985 prices to be consistent in comparison. The latest Philippine statistical yearbook 2010 shows data up to from 1995-2009. Annual rates of growth are computed and further averaged across the long term (15 years from 1995-2009), medium term (six years from

2004-2009) and short term (three years from 2007-2009) periods. This also indirectly indicates growth in employment and number of persons employed. Aggressively growing sectors rate higher than modestly growing sectors and stagnant sectors.

3.5.1.3 Average Annual % Contribution to Growth (2004-2008) (at constant 1985 prices)

The rate of growth of contribution to economic growth per sector shows impact of sector to growth trends Table 2).

Table 2 Contribution to Growth (2004-2008) (at constant 1985 prices)

Industry	2004	2005	2006	2007	2008
Agriculture & Fishing	0.96	1.98	3.67	4.98	3.21
Forestry	0.21	0.02	0.15	-0.17	0.01
Mining & Quarrying	0.13	0.45	-0.31	1.18	0.1
Manufacturing	4.23	3.85	3.11	2.42	3.07
Construction	0.44	-0.75	1.11	2.56	1.08
Electricity, Gas and Water	0.41	0.24	0.61	0.65	0.71
Transportation, Communication & Storage	1.95	1.31	1.14	1.49	0.76
Trade	2.42	1.99	2.14	2.86	0.42
Finance	1.01	1.41	1.25	1.52	0.3
Ownership of Dwelling s & Real Estate	0.53	0.52	0.55	0.56	0.52
Other Services (Private & Government)	2.82	1.76	1.42	1.7	1.31

Source: Table 3.65, PSY 2009
Note: This data is not available in PSY 2010

3.5.1.4 Percentage of Number of Persons Employed to Total Number of Persons Employed

This indicator shows how inclusive the work in the sector is (Table 3).

Table 3 Employment Generated Per Year from 2007-2009

Industry	2007	2008	2009
Agriculture Hunting and Forestry	147,022	146,696	143,183
Fishing	32,550	27,654	27,118
Mining and Quarrying	17,935	20,732	26,322
Manufacturing	1,377,282	1,429,370	1,311,703
Electricity Gas and Water	89,024	89,425	92,578
Construction	107,994	116,254	146,550
Wholesale/Retail Trade; Repair Services	1,300,987	1,323,518	1,376,586
Hotels and Restaurants	450,155	452,068	506,726
Transport Storage and Communications	181,674	192,111	207,658
Financial Intermediation	278,441	395,346	337,158
Real Estate Renting and Business Activities	610,711	694,549	852,869
Education	275,156	329,681	318,150
Health and Social Work	140,531	145,235	157,651
Other Community Social and Personal Activities	178,331	181,951	186,858
Total	5,187,793	5,544,590	5,691,110

Source: Table 60, Labor Statistics, Jan 2011
Taken from National Statistics Office, Industry and Trade Statistics Department, List of Establishments

3.5.1.5 Percentage Share in Capital Gross Formation

The growth of the productive capacity of the economy of a state depends on its rate of capital accumulation and it is assessed by estimating the capital formation of the nation. The higher the rate of capital accumulation, the higher would be the growth of the productive capacity of the economy.

3.5.1.6 Percentage Growth Rate of Labor Productivity

As resource productivity is a key strategy off green jobs for environmental protection, labor productivity shows how labor is utilized efficiently in the sector to make the economy grow.

3.5.2 Greening of Products

The potential of greening products is evaluated through the number of incidences or examples of the potential green products and services in the sector. The higher the potential, the higher the possible impact of demonstration in the sector.

3.5.3 Regulatory Environment and Green Standards

3.5.3.1 The number of standards existing or the potential to green existing standards

The higher the number of green standards existing and the potential to green standards, the higher the rating.

3.5.3.2 The number of advocacies in industry

The higher the number of voluntary advocacies existing in the sector, the higher the rating. This shall be highly anecdotal and qualitative, taken from news materials and focus group discussions.

3.5.4 Existing Government Policy Framework and Priority

The higher the Government priority, the higher the rating. This shall be highly anecdotal and qualitative, taken from news materials, PDP and focus group discussions.

3.5.5 Scaling Up Interventions

3.5.5.1 The number of partner organizations committed to expanding and scaling up green jobs promotion

The higher the number of partner organizations existing and the more involved these are in the sector, the higher the rating. This shall be highly anecdotal and qualitative, taken from news materials and focus group discussions.

3.5.6 Decent Work Pillars

3.5.6.1 Percentage Share to Total Employment Generated

The number of jobs or employment generated by each sector is monitored every year. This indicator shows the trend of growth of employment generated per sector.

3.5.6.2 Workers' Rights

The higher the incidences that workers' rights are respected and observed, the higher the rating. This shall be highly anecdotal and qualitative, taken from news materials and focus group discussions.

3.5.6.3 Social Protection

The higher the incidences of social protection, the higher the rating. This shall be highly anecdotal and qualitative, taken from news materials and focus group discussions.

3.5.6.4 Social Dialogue

The higher the frequency of social dialogue, the higher the rating. This shall be highly anecdotal and qualitative, taken from news materials and focus group discussions.

3.5.7 Tripartism and ILO/Donor Priorities and Experience

3.5.7.1 Presence of tripartism

The presence or absence of tripartite representation in dialogues and activities (employers, employees and government representation existing). This shall be based on the indicators of decent work.

3.5.7.2 ILO priority

The higher the priority of ILO on the sector, the higher the rating. This shall be based on interviews with ILO executives.

Table 4 shows the weights given to the indicators.

Table 4 Indicators and Weights of Evaluation Criteria

1	Economic Viability		
	1 Gross Domestic Product (in Million Pesos, at constant 1985 prices)	2009	25%
	Gross Value Added (Million Pesos at constant 1985 prices)	2009	7%
	1.1 % Share in GDP	2009	5%
	1.2 Average Annual % Growth in GVA(at constant 1985 prices)	1995-2009 (15 years) Long Term	1%
		2004-2009 (6 yrs) Medium Term	
		2007-2009 (3 years) Short Term	
	1.3 Average Annual % Contribution to Growth (2004-2008) (at constant 1985 prices)		1%
	2 Employment Volume	2009	10%
	2.1 % Share to Total Employment Generated	2009	3
	2.2 % Growth of Employment Generated	2000-2009	3
	2.3 % Number of Persons Employed to Total Number of Persons Employed		4
	3 Gross Capital Formation	2009	8%
	3.1 % Share in Capital Gross Formation	2009	3
	3.2 % Growth rate of labor productivity	2004-2009	5

2	Greening of Products and Job Potential		20%
3	Regulatory framework and green standards		10%
4	Existing government policy framework and priority		10%
5	Scaling up interventions		15%
6	Decent work pillars		10%
	Employment Increases		4
	Workers' Rights		2
	Social Protection		2
	Social Dialogue		2
7	Tripartism and ILO/ donor priorities and experience		10%
	Presence of tripartism		6
	ILO priority		4

4. The Industry Sector Alternatives

4.1 The Macroperspective on the Sectors

There are 14 industries identified and categorized by the Department of Trade and Industry, classified further according to the number of employees as micro (employing 1-9 employees), small (having 10-99 employees), medium (with 100-199 employees) and large enterprises (200 or more employees). These are:

1. Agriculture, Hunting and Forestry
2. Fishing
3. Mining and Quarrying
4. Manufacturing
5. Electricity Gas and Water
6. Construction
7. Wholesale/Retail Trade; Repair Services
8. Hotels and Restaurants
9. Transport Storage and Communications
10. Financial Intermediation
11. Real Estate Renting and Business Activities
12. Education

13. Health and Social Work
14. Other Community Social and Personal Activities

It must be noted that tourism is not a sector on its own but is classified under hotels and restaurants and is reflected under the major industry category of services.

4.1.1 Number of Establishments

As of 2009 count, there are 780,505 business enterprises operating in the Philippines (Table 5).

4.1.2 Sectoral Distribution

Majority of the establishments in operation in 2009 are in the wholesale and retail trade industries with 385,925 business establishments; followed by manufacturing with 112,950; hotels and restaurants with 97,366; real estate, renting, and business activities with 48,375; and other community, social, and personal services with 44,375.

Table 5 Distribution of establishments by major industries from 2007-2009

Industry	2007	2008	2009
Agriculture, Hunting and Forestry	4,212	3,985	4,024
Fishing	1,553	1,306	1,199
Mining and Quarrying	324	340	423
Manufacturing	117,622	112,377	112,950
Electricity Gas and Water	1,387	1,388	1,417
Construction	2,499	2,202	2,539
Wholesale/Retail Trade; Repair Services	391,362	379,005	385,925
Hotels and Restaurants	98,032	93,405	97,366
Transport Storage and Communications	9,206	8,647	9,444
Financial Intermediation	23,288	25,766	26,578
Real Estate Renting and Business Activities	45,906	45,060	48,375
Education	12,094	13,562	14,205
Health and Social Work	31,488	31,113	31,685
Other Community Social and Personal Activities	44,896	43,253	44,375
Total	783,869	761,409	780,505

Source: National Statistics Office, Industry & Trade Statistics Department, Statistical Sampling and Operations Division, 2009 List of Establishments As quoted in Current Labor Statistics, October 2010

*4.1.3 **Employment Generation***

By industry sector, establishments in the wholesale and retail trade generated the most number of jobs (with 1,376,586) in 2009 followed by those in manufacturing, 1,311,703; hotels and restaurants, 506,726; real estate, renting, and business activities, 852,869; and education, 318,150 as exhibited in Table 6.

Table 6 Employment generation by major industries from 2007-2009

Industry	2007	2008	2009
Agriculture Hunting and Forestry	147,022	146,696	143,183
Fishing	32,550	27,654	27,118
Mining and Quarrying	17,935	20,732	26,322
Manufacturing	1,377,282	1,429,370	1,311,703
Electricity Gas and Water	89,024	89,425	92,578
Construction	107,994	116,254	146,550
Wholesale/Retail Trade; Repair Services	1,300,987	1,323,518	1,376,586
Hotels and Restaurants	450,155	452,068	506,726
Transport Storage and Communications	181,674	192,111	207,658
Financial Intermediation	278,441	395,346	337,158
Real Estate Renting and Business Activities	610,711	694,549	852,869
Education	275,156	329,681	318,150
Health and Social Work	140,531	145,235	157,651
Other Community Social and Personal Activities	178,331	181,951	186,858
Total	5,187,793	5,544,590	5,691,110

Source: National Statistics Office, Industry & Trade Statistics Department,
Statistical Sampling and Operations Division, 2009 List of Establishments
As quoted in Current Labor Statistics, October 2010

The National Statistics Office in its Philippine Statistical Yearbook publication merges these industries into the following categories:

1. Agriculture, Fishery & Forestry = Agriculture, Hunting and Forestry + Fishing
2. Mining and Quarrying
3. Manufacturing
4. Electricity, Gas and Water
5. Construction
6. Services: Wholesale/Retail Trade; Repair Services + Hotels & Restaurants + Transport Storage and Communications + Financial Intermediation + Real Estate Renting and Business Activities + Education + Health and Social Work + Other Community Social and Personal Activities

Table 7 Contribution to Growth in Major Industry

Industry	2004	2005	2006	2007	2008
Agriculture & Fishing	0.96	1.98	3.67	4.98	3.21
Forestry	0.21	0.02	0.15	-0.17	0.01
Mining & Quarrying	0.13	0.45	-0.31	1.18	0.1
Manufacturing	4.23	3.85	3.11	2.42	3.07
Construction	0.44	-0.75	1.11	2.56	1.08
Electricity, Gas and Water	0.41	0.24	0.61	0.65	0.71
Transportation, Communication & Storage	1.95	1.31	1.14	1.49	0.76
Trade	2.42	1.99	2.14	2.86	0.42
Finance	1.01	1.41	1.25	1.52	0.3
Ownership of Dwelling s & Real Estate	0.53	0.52	0.55	0.56	0.52
Other Services (Private & Government)	2.82	1.76	1.42	1.7	1.31

Source: Philippine Statistical Yearbook 2009, excerpt from Table 3.63
Note: Table 3.63 is not included in the PSY 2010

The top four major industries contributing to growth are agriculture, manufacturing, other services and construction, as evidenced by Table 7.

4.2 The Sector Profiles

4.2.1 Agriculture, Fishery and Forestry Sector

The Agriculture, Fishery and Forestry Industry has generated PhP 1.1 Billion (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 14.8 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 259 Million which comprises 18% of GDP.

This sector is sometimes separated into agriculture and fishing industry and forestry industry. Other times, it is referred to as agriculture, hunting and forestry industry and fishing industry. This research shall treat this sector wholly when difficult to separate but shall abide by the National statistical board's classification of agriculture and fishing industry and forestry industry.

The agriculture and fishing sector has shown a declining annual average growth of 2.99 % in the long term, slower growth by 2.93% in the medium term but much slower rate at 1.61% in the short term. The forestry sub-sector has the same behavior at 0.77% in the long term, 0.34% in the medium term and 0.01% in the short term.

It has employed more than a third of the entire Philippine population (34%) in 2010, generated 3% of total employment in 2009. Labor productivity in 2009 in the agriculture sector is at Php 18,695/employee, the fishing sector is at PhP 43,420/employee while at the forestry sector registered at PhP 8,474/employee.

4.2.2 Mining and Quarrying Sector

The Mining and Quarrying Industry has generated PhP 119 Million (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 1.58 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 29 Million which comprises 2.05% of GDP.

The mining and quarrying sector has shown a declining annual average growth of -2.98 % in the long term, slightly slower growth at an average annual rate of -3.59% in the medium term and much slower growth of -43.39% in the short term.

It has employed about 0.53% of the entire Philippine population in 2010, generated only 0.46% of total employment in 2009. Labor productivity in this sector in 2009 reached the third highest level among all the sectors at PhP 176,831/employee.

4.2.3 Manufacturing Sector

The Manufacturing Industry has generated PhP 1.5 Billion (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 20.4 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 314 Million which comprises 21.95% of GDP.

The manufacturing sector is the fastest growing sector: annual average growth of 30.65 % registered in the long term while medium term growth registered a higher level of 32.06% and the short term rate of growth is highest at 193.28%.

It has employed 8.25% of the entire Philippine population in 2010. It is the second highest job generator among all the sectors , generating 1,311,536 jobs or about 23% of total employment in 2009. Labor productivity in 2009 for this sector is the third highest among the major industry groups, registering at PhP 108,676/employee.

4.2.4 Electricity, Gas and Water Sector

The Electricity, Gas and Water Industry has generated PhP 2.42 Million (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 3.16 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 44.5 Million which comprises 3.1% of GDP.

The electricity, gas and water sector has shown modestly declining annual average growth of 3.94 % in the long term, grown at 3.69% in the medium term and grew at 2.21% in the short term.

It has employed only 0.39% of the entire Philippine population in 2010, generated 92,578 jobs or about 1.6% of total employment in 2009. The electricity sector garnered the highest labor productivity in 2009, reaching PhP 313,690/employee.

4.2.5 Construction Sector

The Construction Industry has generated PhP 390 Million (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 5 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 71 Million which comprises 5% of GDP.

The construction sector is an aggressively growing sector. It has shown increasing growth throughout the stretch of 1995-2009. Annual average growth registered at 8.2 % in the long term, grew at 8.25% in the medium term and registered a very high rate of growth at 32.04% in the short term.

It has employed about 5.7% of the entire Philippine population in 2010, generated 146,520 employment or about 2.58% of total employment in 2009. It achieved labor productivity of PhP 38,026/employee in 2009.

4.2.6 Services Sector

The Services Industry has generated PhP 4.2 Billion (in current prices) gross value added (GVA) to the domestic economy in 2009 which represents about 55 % of the entire gross domestic product (GDP). In constant 1985 prices, this is equivalent to PhP 712 Million which comprises 50% of GDP.

The services sector is composed of five subsectors, namely transportation communication and storage, trade, finance, ownership of dwellings and real estate and other services. Strongly growing sectors are trade and finance. Transport registered negative growth in the short term.

Table 8 Growth trends

Annual Average Growth rates	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
% Share in GDP	8.84	16.7	6.17	4.66	13.39
1995-2009 (15 years) LONG TERM	1.46	20.12	5.39	3.09	0.53
2004-2009 (6 years) MEDIUM TERM	1.17	20.57	5.48	3.01	0.18
2007-2009 (3 years) SHORT TERM	(22.67)	94.69	18.91	2.79	5.28

The Other Services sector is comprised of government and private services. Furthermore, the private services are subdivided into Education, Medical and health, Business, Recreational, Personal, Hotel and Restaurant and Others.

Trade, which includes wholesale and retail, and repair services accounts for 16.7% of GDP. It is an aggressively growing sector and is the second highest ranking sector in terms of short term growth, second to the manufacturing industry, registering growth of 94.69% in the short term.

It has employed more than half of the entire Philippine population (51.2%) in 2010, generated 3.9 Million employment or about 69% of total employment generated in 2009.

The labor productivity in 2009 of the sub-sectors are: Trade, PhP 35,504/employee; Transportation, Storage and Communication, Php 47,230/employee; Finance, P 97,499/employee and Other Services, PhP 22,333/employee.

5. Analysis of Sectors

5.1 Analysis versus Non-compromisable Criteria

Evaluating the sectors versus the must criteria would mean that the sector should pass all the must criteria. If it fails any must criteria, it will be automatically disqualified from the list of alternatives.

Table 9 Evaluation of Sectors vs. Non-compromisable Criteria

MUST CRITERIA/INDUSTRY	Agriculture, Fishing & Forestry		Industry				Services				
	Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
1) Generally used classification by PSY & other agencies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Since all sectors classified herein meet the must criteria (Table 9), the next step is for the want evaluation.

5.2 Analysis versus Wants/Evaluation Criteria

The alternative sectors are compared in Table 10 across the seven evaluation criteria. The ILO together with the External Collaborator designed to use a weighting scheme for the criteria in order to differentiate the levels of importance across them.

A process of validation and agreement was conducted with the Project Advisory Council (PAC) last May 16, 2011 and the indicators and their corresponding weights were decided on.

The qualitative evaluation would be presented at the Project Advisory Committee, together with the qualitative data, and based on consensus, the shortlist of sectors would be done.

Table 10 Comparative of Alternative Sectors Across Evaluation Criteria

6.	7.	8.	Agriculture, Fishing & Forestry		Industry				Services				
CRITERIA/INDUSTRY		Weight	Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Economic Viability		25%											
1 Gross Domestic Product (in Million Pesos, at constant 1985 prices)	2009	7%											
Gross Value Added (Million Pesos at constant 1985 prices)	2009		258,102	1,322	29,354	314,399	71,908	44,544	126,530	239,119	88,305	66,746	191,786
1.1 % Share in GDP	2009	5%	18.02	0.09	2.05	21.95	5.02	3.11	8.84	16.70	6.17	4.66	13.39
1.2 Average Annual % Growth in GVA(at constant 1985 prices)	1995-2009 (15 years)	1%	2.99	0.77	(2.98)	30.65	8.20	3.94	1.46	20.12	5.39	3.09	0.53
	2004-2009 (6 years) MEDIUM TERM		2.93	0.34	(3.59)	32.06	8.25	3.69	1.17	20.57	5.48	3.01	0.18
	2007-2009 (3 years) SHORT TERM		1.61	0.01	(43.39)	193.28	32.04	2.21	(22.67)	94.69	18.91	2.79	5.28
1.3 Average Annual % Contribution to Growth (2004-2008) (at constant 1985 prices)		1%	2.96	0.04	0.31	3.34	0.89	0.52	1.33	1.97	1.10	0.54	1.80
2 Employment Volume	2009	10											
2.1 % Persons Employed to Total Persons Employed		10%	33.95		0.53	8.25	5.68	0.39	7.43	19.43	1.15	3.21	19.97
Gross Capital Formation	2009	8%											
% Share in Capital Gross Formation	2009	8%	0.54	-	2.98	53.02	2.98	-	45.13	-	-	-	18.9

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Greening of Products and Job Potential		20 %	H	L	L	H	M	H	L	L	L	M	L
Refers to the trend of how products and services are being transformed to green, the potential and prospects of developing new green products and the volume of potential of green jobs creation due to the advent of certain green products in the sector.													
Potential in Green Products (Incidence)			Organic food production ; Sustainable farming, agrobiodiversity (sustainable water use ; e.g include : Low energy beef; Dutch tomatoes produced at low energy; Perennial polyculture ; Permanent agriculture; Biointensive minifarming ;	Sustainable forestry, rattan forest ; nurseries, afforestation, bamboo plantation	Corporate Social Responsibility related green jobs (eg. sustainable Natural ressource exploitation, clean technologies & safety in mines)	Promotion of clean technologies and clean production; resource efficient production, recycling of water in and waste management; Improved appliances and equipment; more environment friendly production, including fittings and processes e	Green construction related products, services from design to material use, , Berde green products (United Architects of the Phils) building materials e.g compressed earth blocks, coco lumber, bamboo panels, roofing materials Passivehaus, Float concrete wall; Passive cooling; Steel pylons	Renewable Energy including: Wind Energy; Hydropower ; applied e.g. Passivhaus; Superwindows; Passively cooled & ventilated engineering school; Float concrete wall; ; Biomass (Bagasse, Rice hull, coconut husks, animal wastes),Municipal solid wastes, solar energy, & Geothermal energy.	Hypercar; hybrid car, promotion of mass transport (upgrade of infrastructure and services); Electronic publishing; Autocad; Residential water recycling; E-jeepney, E-tricycle	Fair trade, Carbon off-setting (carbon finance),	Green finance (environmental impact into risk assessment, subsidies, reduced loans etc)	Ownership and rela estate transactions of green realestate / buildings.	Solid and liquid waste recycling; Electronic waste recycling; Lean engineering; Use of Clean Technologies; sustainable hotels and restaurants through local organic food use, waste recycling, energy efficiency , Urban mining;

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Regulatory framework and green standards		10%	H	M	L	H	H	H	L	M	L	H	H
Refers to the presence of regulatory frameworks and the existence of green standards , both enforced and voluntary . This criterion also assesses the scope of promotion of green standards in the sector.													
Standards			Organic certification standards RA 10068, Organic Agriculture Act of 2010, Sustinable farming standards	Voluntary forestry codes and standards	CSR codes	Office of Safety & Health Standards/Energy efficiency production codes	UDHA, NUDHF; Accreditation of Construction Technologies;Labor Code Provisions on Regulations of Contracting & Safety Health Standards; DAO 13, 1998 Delegation of Authority & Accreditation of Private Practice of Practitioners	PNS 396 Household Appliances		Republic Act 7394, Consumer Act of the Philippines		UDHA, NUDHF;	

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Philippine National Standards developed			classification and grading of fresh vegetables as celery, pechay, mustard green, sweet potato and yam; and pesticides and other agrochemicals; cork; coniferous sawn timber; coniferous and broadleaved tree saw logs; wood; aquaculture feeds, live grading for slaughter carabao & cattle, purple yam (Ube halaya), smoked fish, pili nut products, coconut flour, coconut sap sugar,		iron ores	yarn spinning system; standard terminologies for fabric defect, textiles, fabrics & fabric test methods, lamp caps and holders; diagrams for process industry; technical product documentation; piston; oscillation type density meters; anodizing of aluminum & its alloys; fine ceramics; laboratory glassware/ plastics & disposables; piston-operated volumetric apparatus & instruments; guidelines on types of glass of normal bulk-production composition and their test methods; oscillation-	building construction machinery & equipment; concrete mixers; road construction and road maintenance machinery; boilers; pressure vessels	LED modules for general lighting; switches for household & similar fixed electrical installations ; residual current operated circuit-breakers; cable management; appliance couplers; cord set & interconnection cord sets;; florescent markers; energy saving device for electrical household appliances; lighting & related equipment; light metals & their alloys; fire hazard testing; solid insulated materials; safety requirements for electrical equipment for measurement; control & laboratory use; storage and handling of diesel; & aviation					information technology, ergonomics, risk management; medical laboratories, packaging, health informatics, and, laboratory equipment, greenhouse gases, application of statistical method, surface chemical analysis ; microbeam analysis ;

						type density meters; glass containers; standard practice for stitches and seams; standard terminology for cotton fibers, apparel, sewn products automation, & relating to flax and linen; apparel, home furnishing, and leather products; and pallets for materials handling; aromatic natural law materials; solid mineral fuels; elastomeric seismic-protection isolators; sealants; school furniture, textiles, fried corn snack, dried cassava chips and granules, adhesives, , and, lamps, leather, agricultural machineries, plastic pipes, plain bearings, bamboos,		gasoline					

						insulating glass unit, footwear, rubber & rubber products, & textiles; LED modules for general lighting; switches for household & similar fixed electrical installations; residual current operated circuit-breakers; cable management; appliance couplers; cord set & interconnection cord sets;; florescent markers; energy saving device for electrical household appliances ; lighting & related equipment ; light metals & their alloys; fire hazard testing; solid insulated materials;							

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Phil Environmental Laws					DENR DAO 35	*PD1746 Powers & Functions of the Construction Industry Association of the Philippines*							
			PD1121 National Environmental Protection Council PD1151 Philippine Environmental Policy PD1152 Philippine Environmental Code PD1586 Environmental Impact Assessment / ECC System RA6969 THW Act of 1990 – Treatment of Healthcare Waste PD856 Sanitation Code on Solid Waste DAO 26 Appointment of Pollution Control Officer RA8749 Clean Air Act of 1999 DAO 16 LLDA Environmental User's Fee (EUF)										

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Voluntary Advocacies in Industry			Organic Products; Biomass		Extractive Industries Transparency Initiative	•Business Agenda 21 •Environmental Pact brokered by academe (phase 1 signed, phase 2 in progress) •Recycling and Composting Projects among NGOs & LGUs •ISO14001 EMSTA by PRIME/ USAEP	Berde (Building for Ecologically Responsive Design and Excellence) Products, Philippine Green Building Certification Program, Leadership in Energy & Environmental Design; Green Star Standards for design, Corporate Social						

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Existing government policy framework and priority		10%	H	H	H	H	H	L	H	L	L	H	H
Points to the existence of government policy framework where green jobs are promoted in support to existing government development thrust and priority. This criterion will assess if green jobs are articulated in the over-all government priorities as reflected in the Philippine Development Plan (PDP), articulated in the specific government development and action plan and existing government policies. This also includes current and existing plans and programmes of the government including public private partnership initiatives and role of local government in generating economic development.													
			Cited as top10 priority in PDP	Cited as top10 priority in PDP	Cited as top10 priority in PDP	Cited as top10 priority in PDP	Cited as top10 priority in PDP		Cited as top10 priority in PDP			Cited as top10 priority in PDP	Cited as top10 priority in PDP

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Scaling up interventions		15%	L	L	L	H	H	L	L	H	M	M	L
This criterion looks at the potential of increasing the level of impact, coverage and promotion of green jobs in the employment activities in the sector. Existing interest, and buy-in from the ILO constituents which are government, employers and trade unions/workers groups are already articulated, as manifested in existing greening programmes, including budget allocation and investment. Impact also considers where the sector industry is not too much spread out, as well as it support local government initiatives and local economic development.													
Presence of initiatives in government, social partners and other sstakeholders			Agusan, Bondoc peninsula, Bukidnon	Biodiversed areas in 10 areas	No manifestation	Greener Business Asia, Lean/Clean Tech; CIDA; PMAP, PSQ,	Green Building Council, NHA, United Architects of the Phils; Trade Unions, Gawad Kalinga, Habitat, Natl Confederation of Cooperatives, Social Housing Finance Corp., CREBA, SHEBA, Home Guarantee Investment Corp; Pag-ibig	Solar panel group in CDO, Alternative Energy Network	Greener Business Asia, Clean devt tech of 4 industries- furnitures, toys & accessories	Wellness & health & beauty groups	BPI Loan profolio; GFI; DBP; PSBank	CREBA, SHEBA	Phil Council for Sustainable Development activities in 10 areas

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Decent work pillars		10%											
Refers to the possibility of being a sector for decent work where vulnerability issues can be addressed through the project. This indicator also considers strengthening existing decent work initiatives of the sector. The four pillars of decent work are employment, worker's rights, social protection and social dialogue.													
Employment (% Share in Total Employment)	2009	4%	2.99	2.99	0.46	23.05	1.63	2.58	24.19	8.90	3.65	5.92	14.99
Workers' Rights (Improvement in Quality of Employment)		2%	L	L	L	H	H	L	M	H	H	H	L
Social Protection (Expansions in access to employment opportunities)		2%	L	L	L	M	L	L	L	L	H	H	M
Social Dialogue (Advances in social dialogue processes toward mutual or collective gains)		2%	H	L	L	L	L	L	M	L	H	L	L

CRITERIA/INDUSTRY		Weight	Agriculture, Fishing & Forestry		Industry				Services				
			Agriculture & Fishing	Forestry	Mining & Quarrying	Manufacturing	Construction	Electricity, Gas and Water	Transportation, Communication & Storage	Trade	Finance	Ownership of Dwellings & Real Estate	Other Services (Private & Government)
Tripartism and ILO/ donor priorities and experience		10%											
Refer to the evidence of integrated and synergistic collaboration among government, employers and workers in the sector.													
1 Presence of tripartism		6%	H	H	L	M	M	L	L	L	L	L	L
1.1 Presence of Tripartite Councils			Sugar TC, Fishing TC, Banana TC			Furnitures TC, Garments TC	Construction National Tripartite Council						Business Process Outsourcing Tripartite Councils
							National Union of Building & Construction Workers						
1.2 Presence of Labor Unions representing the Employees			TUCP, Kilusang Magsasaka ng Pilipinas, FFW, May First Labor Movement	TUCP; FFW, May First Labor Movement	TUCP, May First Labor Movement, FFW	TUCP, May First Labor Movement, FFW	TUCP, FFW, May First Labor Movement	TUCP, FFW, May First Labor Movement	TUCP, FFW May First Labor Movement,	TUCP, FFW May First Labor Movement,	TUCP, FFW May First Labor Movement,	TUCP, FFW May First Labor Movement,	TUCP, FFW May First Labor Movement, . Association of Progressive Laborers
1.3 Presence of Employers Representation			H	H	L	M	M	L	L	L	L	L	L
2 ILO priority		4%	H	M	L	H	H	M	M	L	L	H	M

6.0 Ranking of Sectors

Each of the evaluation criteria was given a weight by the Program Coordinator and Project Manager of ILO. Each numerical entry in the matrix were normalized and transformed into indices, after which they were multiplied with the weights to get the total score. The highest scoring got the highest ranking.

Industry	Economic Viability	Green Products	Regulatory Frameworks	Policy Framework	Scaling up of Interven-tions	Decent Work	Tripartism	Total Score
Weights of Criteria	25%	20%	10%	10%	10%	15%	10%	
Agriculture & Fishing	0.15	0.20	0.10	0.06	0.045	0.03	0.067	0.65
Forestry	0.10	0.06	0.03	0.03	0.045	0.02	0.051	0.34
Mining & Quarrying	0.01	0.06	0.03	0.03	0.045	0.02	0.051	0.24
Manufacturing	0.12	0.20	0.10	0.1	0.15	0.09	0.149	0.91
Construction	0.03	0.12	0.10	0.06	0.15	0.05	0.149	0.66
Electricity, Gas and Water	0.01	0.20	0.10	0.03	0.045	0.02	0.081	0.49
Transportation, Communication & Storage	0.07	0.07	0.03	0.03	0.045	0.06	0.081	0.38
Trade	0.11	0.06	0.06	0.06	0.15	0.10	0.051	0.58
Finance	0.02	0.06	0.03	0.03	0.09	0.07	0.051	0.35
Ownership of Dwelling s & Real Estate	0.02	0.12	0.10	0.06	0.09	0.08	0.051	0.53
Other Services (Private & Government)	0.11	0.07	0.10	0.03	0.045	0.06	0.079	0.48

After the evaluation of the alternative sectors versus musts and wants, the sectors are thus ranked as follows:

1 Manufacturing
2 Construction
3 Agriculture & Fishing
4 Trade
5 Ownership of Dwelling s & Real Estate
6 Electricity, Gas and Water
7 Other Services (Private & Government)
8 Transportation, Communication & Storage
9 Finance
10 Forestry
11 Mining & Quarrying

Thus, the preliminary sector overview has surfaced the top three sectors to be Manufacturing, Construction and Agriculture and Fishing.

Annex 2 Minutes of First Special Project Advisory Council (PAC) Meeting
16 May 2011- 2:30-5:30 PM
ILO Conference Room, Makati City

Attendance:

1. USec Lourdes Trasmonte	Department of Labor and Employment(DOLE)
2. Ms. Cynthia Cruz	Institute of Labor Studies, DOLE
3. Mr. Roland Moya	Deputy Director, Employers' Confederation of the Philippines(ECOP)
4. Mr. Jose Cayobit	Federation of Free Workers(FFW)
5. Mr. Roland Cruz	Trade Union Congress of the Philippines(TUCP)
6. Dr. Anna Bella Manalang	Consultant
7. Mr. Benjamen Jr Santiago	Research Assistant
8. Ms. Maria Concepcion Sardana	Senior Programme Officer- ILO CO Manila
9. Ms. Georginia Pascual	Project Officer-Greener Business in Asia-ILO CO Manila
10. Ms. Carmen A. Baugbog	National Programme Coordinator- Green Jobs in Asia-ILO CO Manila

1. Discussion of the Agenda
USec Trasmonte chaired the meeting with Mr. Moya as Co-Chair. She presented the agenda which are: 1) Presentation of the Long Listed Sectors Profile; 2) Presentation of the Short Listed Sectors Vis-à-vis the selection criteria; 3) Question and Answer; 4) integration; 5) Next Steps.

She requested Dr. Manalang to make her presentation on the results of the short listing processes of the sectors.

a. Presentation of the Long Listed and the Short Listed Sectors
Dr. Manalang proceeded to discuss the following: a) objective of the study is to do a rapid scoping of Philippine industry based on selection criteria provided by ILO; framework for the study; selection criteria; the multi-criteria analysis.

She presented to the members the industry ratings with weights based on the musts and the selection criteria.

Ms. Sardana, sought clarification on the relevance of including % growth rate productivity vis-à-vis % of labor productivity as it seems repetitive. Dr. Manalang clarified that the growth rates covers the employment in totality, whereas the labor productivity % measures patterns of growth to total employment, thus both are important employment indicators.

Ms. Sardana also suggested that definition of criteria be incorporated in the matrix, not a separate page or sheet, to provide ease of reference. Dr. Manalang noted the suggestion.

USec Trasmonte also asked if it is already possible to count/quantify green jobs. Ms. Baugbog explained that in the Philippines, it is still not possible to count green jobs. She informed USec Trasmonte, that one of the activities of the Green Jobs in Asia is to conduct a Green Jobs Mapping Study, where part of the output is for the Philippine constituents to define green jobs, and establish at least indicative baseline of green jobs and where these jobs are.

During the discussion of the multi-criteria analysis, Dr. Manalang explained, that such multi-criteria weighting provides flexibility in cases of shifting of weights based on priorities. She also deliberated on the current initiatives in the greening of products in respective industries; green standards of industries, the existing government policies, the decent work pillars, and tripartite organizations per sector.

Director Cruz informed Dr. Manalang that DOLE have developed indicators for decent work which the office regularly update. Unanimously, the body recommended that the indicators on decent work in the selection criteria will adapt the DOLE indicators. Dr. Manalang noted the recommendation and clarified if these data are already categorized by industry and is updated.

Mr. Moya also recommended that tripartite bodies should also include employers/private sectors and workers groups, not only the government.

The members of the PAC proceeded to evaluate the industries based on the weighted scores per criteria. Preliminary short listed criteria are: manufacturing, construction, agriculture and fishing.

Mr. dela Cruz of TUCP asked if there are already current products or practices regarding green mining as it is seen in the data that mining has high contribution to GDP and employment.

USec Trasmonte , seconded by Ms. Cruz and affirmed by Ms. Sardana, that mining maybe have high score in GDP , employment share and capital formation, however, one has to look at its impact to decent work pillars including its effects to the environment. Ms. Baugbog shared to Mr. dela Cruz, that this is one area where the Green Jobs Mapping Study will look into, whether there are existing corporate social responsibility and greening practices in the mining sector including policy implications in resource management and climate change.

Mr. Moya, further recommended that when going to the in-depth study of the sector scoping, it should also consider the size of the industry vis-a- vis the limitation of the demonstration project such as it is only for one year, and limited resources. He cited an example, in the manufacturing, such industry is very broad, and most of these industries requires long term intervention and requires more resources, where results and impacts cannot be achieved within one year. He further stressed, that it is necessary that in the selection of the project demonstration sector, such captures these limitations. He appreciated the comprehensiveness and the science approach of the rapid scoping process; however, he said that such effort is not proportional to the resources and time frame of the project. The GJA should have immediately recommended a sector, which the PAC can support to.

Ms. Baugbog reminded the PAC on the history of the rapid sector scoping, that such was a response to the request of the PAC members to undergo the same process as that on the selection process of the sector of the Greener Business Asia project.

Ms. Cruz made her observation that the selection criteria of the sector both includes non-market criteria but also the social and sustainability criteria such as decent work, tripartism and up scaling and cooperation of existing partners. She made a hypothesis, that greening business and employment includes both economic and social factors to make it viable.

b. Next Steps

Ms. Sardana requested the Consultant to outline what are the next steps based on the recommendations from PAC.

USec Trasmonte solicited recommendations from the members on the next steps. In consensus, the following were agreed to be done in the incoming weeks:

- Revised preliminary scoping report due for verification by the PAC panel by 18 May 2011, once DOLE, ECOP, TUCP and FFW send additional data. Send revised scoping reports to all PAC members for validation.
- After the verification, the top three industries that would come out from the multi-criteria analysis will be assessed based on the greening of jobs criteria.
- Based on Mr. Moya's suggestion the PAC members suggested and agreed that sub sectors should be selected for scoping reports, as the selected sectors were too broad.
- Further secondary literature research.
- Focus group discussion with industry experts.
- Disaggregate manufacturing for FGD if selected.

Detailed List of Agreements/Revisions

Issue	Description
1. Verify relevance of labor productivity and % growth rate labor productivity	Some indicators are redundant for the panel
2. Verify relevance of % of growth employment, % Share to employment	Some indicators are redundant for the panel
3. Shifting of weights on said criteria	Shifting of weights in case of elimination of certain criteria
4. Transport key sector to reducing greenhouse gases from Medium to High	
5. Include definitions in matrix	Include definitions of criteria in comparative matrix
6. Study on how to quantify green jobs	More research on how to quantify green jobs
7. Currently there are efforts to retrofit buildings to be green (Phillips)	Example of green job potential in the construction sector
8. Get indicators for decent work care of PAC panel	
9. Include role of private sectors on tripartism	
10. Disaggregate manufacturing for FGD if selected	

Annex 3 PAC Nomination and Consensus of Sub-sector Focus

MATRIX FOR SUB SECTOR SELECTION

The succeeding matrices show the detailed comments, suggestions and remarks of all the PAC members regarding which should be the sub sector focus.

GROSS VALUE ADDED IN MANUFACTURING BY INDUSTRY GROUP

	Manufacturing Industry/Industry group		2009	% to GVA in Mfg	Possibility of Green Jobs	Improvement of Decent Work	Presence of Government Projects	Demo project doable in a year
	(In million pesos : at constant 1985 prices)							
	Food manufactures		142687	45.38	H	H	H	H
	Beverage industries		11887	3.78				
	Tobacco manufactures		2663	0.85				
	Textile manufactures		3921	1.25				
	Footwear & wearing apparel		10143	3.23				
	Wood & cork products		1501	0.48	HHH	HHH	HHH	HHH
	Furniture & fixtures		4588	1.46				
	Paper & paper products		2257	0.72				
	Publishing & printing		3020	0.96				
	Leather & leather products		105	0.03				
	Rubber products		1803	0.57				
	Chemical & chemical products		17951	5.71				
	Products of petroleum & coal		37361	11.88				
	Non-metallic mineral products		8142	2.59				
	Basic metal industries		8539	2.72				
	Metal industries		6663	2.12				
	Machinery except electrical		3136	1.00				
	Electrical machinery		34283	10.90				
	Transport equipment		3262	1.04				
	Miscellaneous manufactures		10486	3.34				
	Gross Value Added in Manufacturing		314398					

One response is the initial assessment of the consultant.

GROSS VALUE OF CONSTRUCTION AND GROSS VALUE ADDED IN CONSTRUCTION
(In million pesos: at constant 1985 prices)

	Industry/Industry group		2009	% GV of Construction	Possibility of Green Jobs	Improvement of Decent Work	Presence of Government Projects	Demo project doable in a year
1.	Public		58,001	46.02	HHHH	HHHH	HHHH	HHHH
2.	Private		68,034	53.98			HHHH	LMMM
	Gross Value		126,035					

One response is the initial assessment of the consultant.

GROSS VALUE OF AGRICULTURE AND GROSS VALUE ADDED IN AGRICULTURE
(In million pesos: at constant 1985 prices)

	Agriculture Industry/Industry group	2009	% to GVA in Mfg	Possibility of Green Jobs	Improvement of Decent Work	Presence of Government Projects	Demo project doable in a year
1.	Agriculture Industry	258100		HHHH	HHHH	HHHH	HHHH
	a. Agriculture	194898	75.13				
	Palay	43500	16.77				
	Corn	16762	6.46				
	Coconut including copra	8698	3.35				
	Sugarcane	5812	2.24				
	Banana	8214	3.17				
	Other crops	44456	17.14				
	Livestock	29128	11.23				
	Poultry	26727	10.30				
	Agricultural activities and services	11601	4.47				
	b. Fishery	63202	24.36				
2.	Forestry	1322	0.51				
	Gross Value Added in Agriculture,						
	Fishery and Forestry	259422					

Note: Agriculture is Organic only

One response is the initial assessment of the consultant.

APPROACH AND THE NOMINATION PROCESS INCLUDING SUBSECTOR PREFERENCE FOR THE DEMONSTRATION PROJECT OF THE GREEN JOBS IN ASIA PHILIPPINES

Name of PAC members	Preference (Either Approach 1 or Approach 2). If prefers option 2, please specify subsector for each industry(manufacturing, construction, agriculture)	Reasons or Justification for the Option
USec Trasmonte/ Executive Director Cynthia Cruz (talked to USec through phone)	Approach 2: Manufacturing: Subsector on wood and cork Construction: Subsector-Socialized Mass Housing Agriculture: Sub-sector-Organic Agriculture	These subsectors shows results within one year; introduction of eco-products are going on; materials are locally available, can contribute to the value added of the existing materials, bamboos and abacas are weather proofing ; generates much employment and tripartism is strong with identified players as takers, DOLE is supporting these in their plans Articulated openness for a PPP approach aside from a multi-stakeholdership structure Addition: For wood/construction- it has forward and backward linkages to the construction sector Even if it is not as big, but it is something which is not perishable, and something which can be experienced and seen There are already real group of persons who have manifested commitment to cooperate in the undertaking

Name of PAC members	Preference (Either Approach 1 or Approach 2). If prefers option 2, please specify subsector for each industry(manufacturing, construction, agriculture)	Reasons or Justification for the Option
USec Trasmonte/ Executive Director Cynthia Cruz (talked to USec through phone)		Inputs on raw materials support local suppliers For socialized housing/construction- it has a promising increase of potential jobs, green socialized housing can be experienced, very much real, construction of houses can be achieved within 6 months -1 year, it can be seen, it is nonperishable, it can be show cased, it has a tripartite body that expressed interest to engage in the demonstration project, and it has other forward and backward linkages such as energy efficiency, livelihood, local government participation, financing and etc. Organic/agriculture- there are already existing initiatives on the ground which some of these have support both from the employers and workers groups.

Name of PAC members	Preference	Reasons or Justification for the Option
Mr. Ferdie Diaz/ Mr. Roland Moya (talked to Roland Moya through phone)	Approach 2: Manufacturing- Two subsectors recommended: food manufacture and wood and work Construction: Sub-sector- Socialized Mass Housing Agriculture: Organic Farming	Capacity to show results within one year Has forward and backward links to the two other sectors, construction and agriculture Products has value added to it, as it has higher market value Starts with an internally driven process of regulation, which is voluntary and willingness of existing private partners within the sector to engage in the greening process Enhances skills and adds employment, not reduction Addition: There are existing business associations that are already in these three areas. Socialized Housing/Construction: The commitment of social partners can hasten the implementation process and the time frame of implementation especially on expected outputs. It can be felt, experienced, seen in the eye, generates additional skills and have high potential for jobs Food/Manufacturing- it has high GVA, Strong forward and backward linkages, export development, prospects for green technology, household level jobs and high export potential Organic / Agriculture- it has already an association, and there is a forward and backward linkage on this to the food manufacture.

Name of PAC members	Preference	Reasons or Justification for the Option
Mr. Allan Montano/ Mr. Asper/ Mr. Jose Cayobit(Talk to Mr. Cayobit through phone)	Approach 2 Manufacturing: Two sub-subsector on wood and cork and miscellaneous(beauty and wellness) Construction: Subsector on socialized mass housing Agriculture: Sub Sector on Organic Farming	The sub sector can show result within a year; The sub sector have high level of tripartism These are good entry to membership expansion This supports SMES and address local employment Supports on the priorities of the climate change action plan on wellness and beauty products which are locally produced Strong link to the forward and backward industry link including construction and agriculture Addition: Wood/manufacturing- even if it has lower GVA but its potential for jobs is very high and it can combine with furniture and paper as these subsectors also depends on wood. Inputs to product are locally available and not seasonal. There is already an existing demand on these products both locally and internationally, and it also encourages local skills and entry to strengthen decent work advocacy of workers group. Life span of production process can be done within a year, with a tangible result.

Name of PAC members	Preference (Either Approach 1 or Approach 2). If prefers option 2, please specify subsector for each industry(manufacturing, construction, agriculture)	Reasons or Justification for the Option
Mr. Allan Montano/ Mr. Asper/ Mr. Jose Cayobit(Talk to Mr. Cayobit through phone)		Socialized Housing-greening housing answers the perennial problem of lack of affordable housing to poor, addresses enhancing role of community and other multi stakeholders/tripartism in the delivery of the demonstration project especially there is an existing manifestation of commitment both from workers groups and civil society to collaborate for a demo project, and partnership with existing government initiatives making this one already doable within a year with sustainability already addressed. It is easy to see, and everybody involved experienced it. Organic Agriculture- we have affiliate members who are into organic agriculture as well, and this has already been started
Mr. Rafael Mapalo/ Mr. Rolando dela Cruz(talked to Roland through phone)	Approach 2 Manufacturing: Sub sector on wood and cork Construction: Subsector on socialized mass housing Agriculture: Subsector on organic farming	The sub sector can show result within a year; The sub sector have high level of tripartism These are good entry to membership expansion There are TUCP affiliates within the given sectors Supports to local employment generation Subsectors are included in the economic, infrastructures and social development priorities of the government

Annex 4 Focus Group Discussion (FGD) Summaries

Socialized Mass Housing FGD

Profile of Participants and Participating Organizations

Names, Positions and Government Agencies Represented by Respondents

The government agencies present were the National Housing Authority represented by its Corporate Planning Chief, Ms. Rebecca Albano, the Social Housing Finance Corporation represented by Ms. Teresita Castillo, and the Bureau of Working Conditions represented by their Senior Labor and Employment Officer, Ms. Michelle Jean Renido.

Tripartite and Non Government Organizations Represented

The Federation of Free Workers (FFW) represented by Mr. Joe Cayobit, the Association of Construction and Informal Workers (ACIW) represented by its president, Mr. Pelayo, its Secretary General Mr. Meynardo Palarca, and Mr. Elian Ray Soliman and the National Union of Building and Construction Workers represented by their secretary General, Larry Farmadico attended the FGD.

The non-government agencies present were the Philippine Green Building Council (PGBC) represented by Mr. Chester Dela Cruz, the Trade Union Congress of the Philippines (TUCP) and the People's Alternative Study Center for Research represented by Mr. Johnny Payod.

Discussions

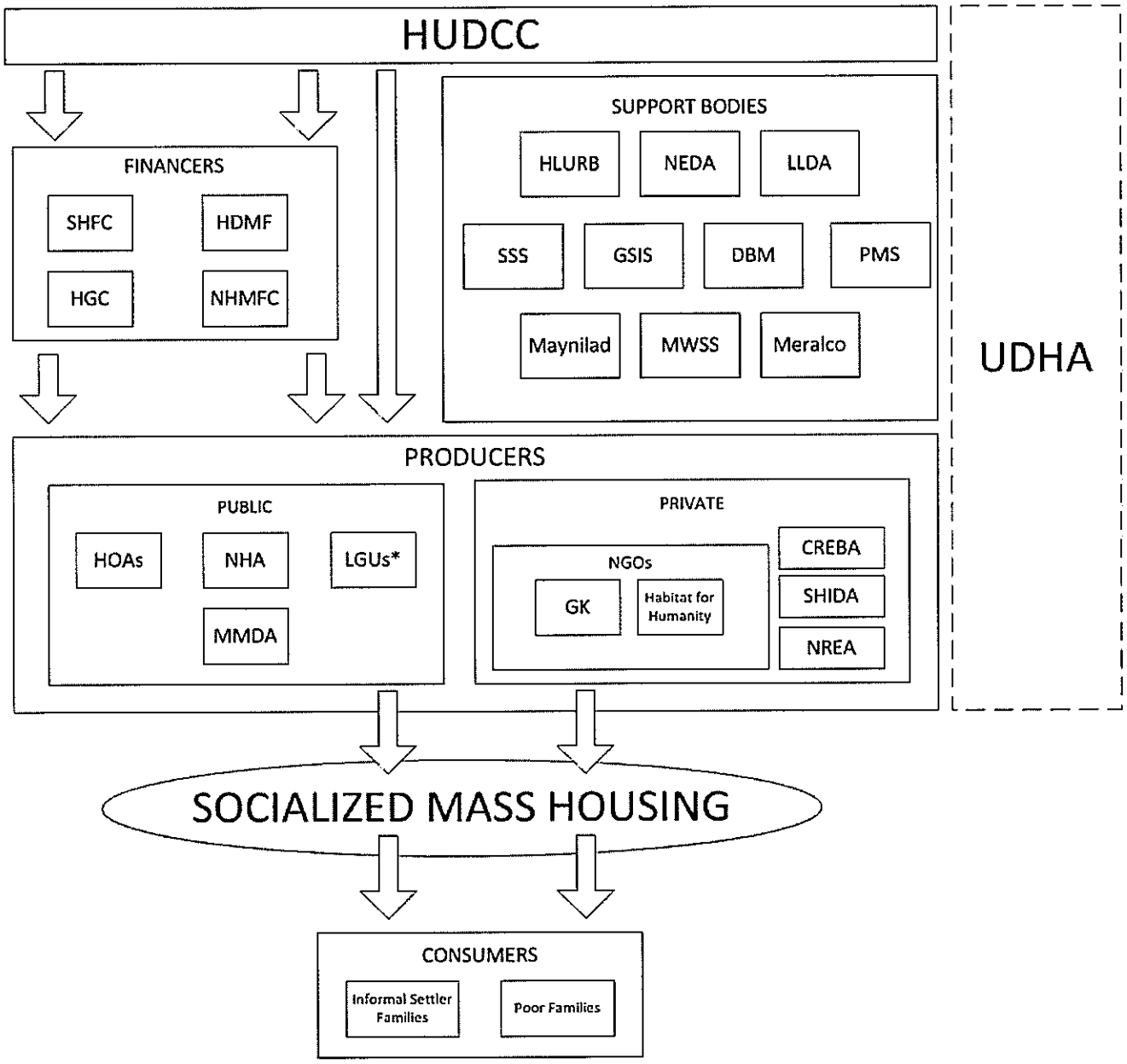
Socialized Mass Housing Sector Framework

The urban population according to the National Housing Authority (NHA) is estimated at 11.8 Million urban households. Twenty percent (20%) of these urban are informal settler families (formerly termed as squatters) or 2.4 Million households.

In line with this alarming increase in the population of informal settler families, in 1992, the Philippine Government then enacted the Republic Act No. 7279 or the Urban Development Housing Act of 1992 (UDHA) that aims to provide underprivileged and informal settling Filipino families leverage to own their own land tenure. The UDHA states that government-owned lands which have not been used for the purposes for which they have been reserved for the past ten (10) years from the affectivity of the UDHA including government-owned idle and alienable lands of the public domain – and are suitable for socialized housing – shall be subject to disposition in favor of UDHA beneficiaries or for socialized housing purposes.

The UDHA in effect became the trigger for the birth of the public mass housing or the socialized mass housing in the Philippines. Since its birth the socialized mass housing sector has substantially grown not only in terms of the number of public housings that it has contributed but also the number of stakeholders that contribute to the achieving of the sector's goals.

Improving from the initial framework by Dr. Manalang, Ms. Albano and Ms. Castillo validated the linkages among various players. A general framework for the Socialized Mass Housing sector as seen in the Figure below was created.



Consumers

Informal Settler Families and Poor Families

According to Ms. Albano, the main beneficiaries of the Socialized Mass Housing programs are the informal settler families and poor families in the Philippines. Most often, these families live on lands which they do not own or live in houses which they own but are immensely low in quality.

Enablers

HUDCC

Presently, the body which facilitates all the activities in the Socialized Housing Sector is the Housing and Urban Development Coordination Council (HUDCC) led by the Philippine Vice President, Jejomar Binay. As stated in its vision statement, as the highest policy making and coordination body on housing and urban development, the HUDCC shall facilitate access to a variety of housing options that are "decent, affordable and responsive to the diverse and changing needs of homeless and underprivileged Filipino families."

Producers

The socialized mass housing sector can be divided into two categories namely Public and Private. The public category involves the national agencies while private category includes the non-profit organizations or non-government organizations (NGOs) that produce the socialized mass housings.

National Housing Authority

The biggest source of socialized mass housings in the Philippines is the Philippine Housing Authority or the NHA. The NHA's main purpose is to construct public housings in publicly owned lands through private construction contractors. Beneficiaries are relocated to public housings constructed by the NHA. The NHA is also involved in the upgrading of slums by acquiring the privately owned land tenures inhabited by the informal settler families and converts the tract of land into decently built houses.

Local Government Units

Local government units specifically in Metro Manila and Region IV-A are also producers of socialized mass housings. Cities like Quezon City, Makati, Marikina, Pasig, and Antipolo are known to be very active in providing public housings for the informal settler families in their respective regions.

Among other producers of socialized housings in the Philippines are NGOs like Gawad Kalinga (GK) and Habitat for Humanity. These organizations partner with private companies and universities to fund their activities.

It should be noted that Gawad Kalinga's thrust is not only to provide low cost housing to informal settler families but also holistically develop the community through livelihood and educational programs.

Home Owners Organizations (HOAs)/Community Associations (CAs)

According to Ms. Castillo, HOAs are the organizations of informal settlers that are recognized by government institutions. Having been accredited as Community Mortgaged Program Originators, communities through various financial methods will construct their own homes. These make them both producers and consumers of socialized/public housing. There are 240,000 families from CMP Originator that adopts this production scheme.

Private Sectors

Another source of public housings are from the private real estate companies which are required by the government to use at least 20% of the land that they own for socialized mass housing purposes.

NGOs

Among other producers of socialized housings in the Philippines are NGOs like Gawad Kalinga (GK), Habitat for Humanity, Ayala Foundation, ABS-CBN Foundation and cooperative housing.

Most of the approaches of these NGOs is to meet the needs of the families holistically, which include, livelihood , education and basic social services programs. Some of these NGOs provide site development and manage the material recovery facilities of the socialized housing areas.

Support Bodies and Financers

The socialized housing sector is supported by several organizations from the government and the private sector. Although these organizations do not directly produce housing for the informal settler families, they provide various forms of assistance.

Housing and Land Use Regulatory Board (HLURB)

The Housing and Land Use Regulatory Board (HLURB) is a government body under the directive of the HUDCC that regulates housing and land use towards rational land development.

This agency enables the production of socialized mass housings by approving and studying the development plans set by the socialized mass housing producers.

Social Housing Finance Corporation (SHFC)

The Social Housing Finance Corporation (SHFC) is a government body under the HUDCC that provides loans to informal settlers represented by the Home Owners Associations (HOAs) or Community Associations (CAs) with low interests and payment periods spanning up to 25 to 30 years. The loans that the SHFC provides are used by the HOAs or the CAs to buy the huge tract of land from the owner of the land that they informally reside in. After the acquisition of land, the HOAs and CAs are then assisted by other government bodies like the NHA to formally construct the public housings.

Home Development Mutual Fund (HDMF)

The Home Development Mutual Fund (HDMF) or more famously known as Pag-ibig is a government cooperative body that provides housing loans to individuals. HDMF gains its funding through the monthly dues collected from the members of the cooperative. The loans are lent at low interest to the members of the cooperative.

Not all of the beneficiaries of the HMDF do not classify into the informal settler families or poor families as the membership for the Pag-ibig cooperative is actually open to all social classes.

National Home Mortgage Finance Corporation (NHFMC)

The National Home Mortgage Finance Corporation (NHMFC) meanwhile is another government body that operates as a viable secondary home mortgage market, utilizing long-term funds principally provided by related government agencies. They are also mandated to develop a system that will attract private institutional funds into long-term housing mortgages.

Home Guaranty Corporation (HGC)

The Home Guaranty Corporation (HGC) is a government body that provides risk coverage or guarantees and tax/fiscal incentives to banks and financial institutions/investors granting housing development loans/credits, and home financing.

Socialized Housing Standards

In the midst of providing socialized mass housing for informal settler families, standards have been developed to ensure that there would be uniformity and unity in the execution of the projects.

BP220

One of the important standards issued is the BP220 which intends to make the physical design structures of the socialized housings whether it would be produced by public or private bodies. Among the important dimensions in the BP220 is the size of land to be allocated per house, geographical location with regards to roads, floor area, water supply, electrical supply, drainage system, sewage disposal system, and other parameters. One of the considered greening of the standards is the provision of open spaces and parks for the various socialized housing villages and locations.

PD957

The PD957 meanwhile is the protective decree for the standards for the construction of subdivisions and condominiums. Among the issues tackled in here is the area planning, site preservation, land allocation, community facilities, etc.

Potential Green Products and Green Jobs in the Sector

Green Products

Mr. Chester dela Cruz from the Philippine Green Building Council discussed with the group some potential green products and jobs. For the socialized mass housing sector, it was identified by the panelist from the Philippine Green Building Council (PGBC) the potential products in the form of low cost houses made of 'green raw materials'. These green raw materials would be composed of recycled plastics to be used as fillers for hollow blocks. Recycled wood reprocessed from the scraps wood and lumber processing companies is also recommended to be used in building some parts of the houses.

In line with these, the use of contraptions like rain catchers can be used for the easy reusing of water for cleaning various parts of the houses and the community. A centralized grey water system is also suggested for the easy collection of grey water as it can be reused in watering plants and cleaning various places in the community.

Green Jobs

For this sector, construction workers like carpenters, plumbers, and painters can easily be converted into 'green workers'. Vital to the greening of the socialized houses would be the design, materials used, and the efficiency of labor.

Other kinds of green jobs in this sector would be energy efficiency managers, green architects who will create designs that would induce 'green' benefits. Another possible green job is to be a sustainability officer which would help in the overall planning of the socialized housing community and how the environmental resources can be maximized and be sustainable. Also, there is also an opportunity for solid waste disposal officers as proper solid waste management is vital for the greening of the jobs and providing the workers with 'decent' work.

Regulatory Frameworks and Green Standards

In terms of regulatory frameworks, as mentioned the BP220 and the PD957 would be most prevalent. In terms of 'greening' standards however, it was emphasized by the Mr. Palarca from ACIW that the government is not very eager in implementing green standards in the building houses as the government does not provide the appropriate incentives to the contractors who design 'green' houses. Given the additional costs by 'green houses', several contractors in effect are discouraged to build houses that aims to be 'green'.

At the present, it was mentioned by the PGBC panel that only voluntary green standards are present but not mandatory. In some cities like Quezon City however, ordinances for the 'greening' of buildings have already been casted. Also, it was mentioned that there are already bills that aims for 'greening of buildings' and 'green jobs' are already in works but have yet to be passed.

In line with this, it was suggested by the FGD panelists that in order for the successful greening of the socialized mass housing sector, it is very important for the government to become very involved and give the appropriate funding. The government should make it mandatory that all kinds of infrastructures including socialized housings should have green designs. Also, the government should give the appropriate funding to those who will be following the standards of 'green designs'.

Decent Work Pillars

It was revealed by Mr. Pelayo and Ms. Renido that almost 99% of the construction worker population are not experiencing 'decent work'. First of all, it was revealed that the construction workers are not properly educated in health and safety which contributes to the high fatality rate of construction workers at work.

Also, it was revealed that 99% of the construction workers are not certified as skilled by TESDA. This in effect, according to the panel from ACIW leads to the exploitation of the construction workers as they are substantially under-paid as they cannot show proof of the their skill.

All of these culminated to the realization that there is a lot of work to be done in improving the working conditions of the construction workers before the proper training for 'green jobs' set by the ILO would be initiated.

Tripartism

It was also revealed from the FGD panel from the ACIW that currently there are zero unions that represent the construction workers and fight for their rights. The main reason for this is that construction workers are always working on a contractual or casual basis which is why they do not have the enough privileges for company benefits or SSS membership.

Another big issue here is that the groups of people that try to form alliances to voice out the concerns of the construction workers and fight for their rights are not recognized by the government.

Suggestions by the FGD panel with regards to this would be the creation of independent organizations that would initiate their own skills and green training and possibly be independent construction or housing contractors.

Organic Farming FGD

Profile of Participants/Participating Organization

Names, Positions, and Agencies Represented by the Respondents

Most of the agencies represented by the respondents are primarily non-government organizations catering to the development of organic farming in the Philippines. These agencies were: PAKISAMA represented by Mr. Felix Zamar, their operations manager, Magsasaka at Siyentipiko para sa Pagunlad ng Agrikultura (MASIPAG) represented by their national coordinator Chito Medina, the Philippine Chamber of Agriculture and Food (PACAFI-MFI) represented by its President, Mr. Alejandro Escano, and the Benguet State University represented by its University President Mr. Rogelio Colting.

Meanwhile, the Organic Certification Center of the Philippines was also represented by Ms. Leilani Limpin.

Discussions

Economic Viability

In terms of economic viability, it was revealed by Mr. Zamar that actually, less than 1% of the whole agriculture sector in the Philippines is into organic farming. In recent years however, a huge demand for organic products have emerged because of health issues mainly caused by controversies in other countries. Mr. Escano in fact stated that there are some areas in the Philippines where organic farming have thrived. Among these areas mentioned were the islands of Negros Oriental and Negros Occidental which weres declared to be 100% organic in terms of their output.

Mr. Medina then went on to discuss the ongoing debate between organic and chemical farming as many farmers are hesitant to engage in organic farming because of the perceived low yield in organic farming. Mr. Medina presented a business case on the "Masipag" crops wherein organic farming actually gave the farmers that they have studied more profit when they converted to organic farming from chemical farming. Also in the case presented, it was seen that the farmers benefited through 20% reduction of costs by eliminating chemical fertilizers hence reaping 15-20% more profit despite the low yield.

Mr. Cotling then describes that in Benguet, almost 2% are into organic farming while 1% is into organic coffee.

Potential Green Jobs and Products

Among the biggest reasons stated by Mr. Escano why farmers should go to organic farming is for soil health and bio diversity. As Mr. Zamar states, chemical farming through time degrades the soil quality of farm lands as it bombards the soil with Nitrogen and other chemicals thus overusing the nutrients in the soil. In effect, continuous use of chemical fertilizers will leave the soil unable to recover its nutrients making it unproductive in the future.

Also, Mr. Medina used the effect of pesticides in the biodiversity within the farm soil. Aside from the fact that there are some cases where pesticides cause health problems, the use of pesticides leads to the death of some organisms in the farm land which contributes to the enrichment of the crops.

Organic farming meanwhile uses fertilizers from livestock of chicken and other farm animals. These though sometimes also pose potential problems to the soil . In fact, improving the soil also entails the improvement of the flora and fauna with the ideal carbon content in the soil of 5%.

Issues

Among the issues raised by the FGD panel was the fact that the government is not really supportive of the organic farming sector. The reason for this according to them was the presence of international companies that sell their chemical fertilizers to farmers.

According to Mr. Zamar, the shift to chemical farming started in the time of President Marcos wherein Masagana 99 was perpetuated to encourage the Filipinos to produce crops with high yield. This however was achieved through the use of chemical fertilizers which are supplied by foreign companies. Up to now, according to Mr. Pescano, the prevalence of 'high yield' brought by chemical fertilizers is overshadowing the green benefits of organic farming. One concrete example of this is the incentives promoted by the government to the farmers who will avail of 'Genetically Modified Crops' or hybrid crops supplied by a foreign source.

In line with this, another issue in the Philippines is that it is very hard to get an accreditation that a certain farm is organic due to politics with other farms. Mr. Escano explains that for a certain farm to convert to organic, the cooperation by the other farms nearby is needed to convert to organic as well.

Monocropic

Conversion from chemical to organic leads to temporary yield depression for about 2-3 years.

Interventions

Some of the interventions done to promote organic farming in the Philippines are to teach organic farming to Universities and schools. According to Mr. Zamar, the University of the

Philippines Los Banos is very active in promoting organic farming to students related to agricultural subjects. Also, the University of Rizal System in Baras also is vigilant in promoting organic farming. In the Visayas region, Bohol is also seen to be very participative in letting the news out about the benefits of organic farming to the farmers.

Wood and Cork Products FGD

Names of Respondents, Positions, and Agencies Represented

For the Wood and Cork Sector focus group discussion, the government and tripartite agencies that attended were the Philippine Wood Producers Association (PWPA) represented by Mr. Angeles, its director, the Philippine Coconut Authority (PCA) represented by Mr. Alcala, its vice president for operations, the Philippine Fiber Industry Development Authority (PFIDA) represented by its planning coordinators Ms. Fuentecilla, Ms. Soriano and Ms. Regalado, and the Philippine Forest Management Bureau represented by Ms. Vasquez.

Discussions

Basic Framework of the Wood and Cork Industry

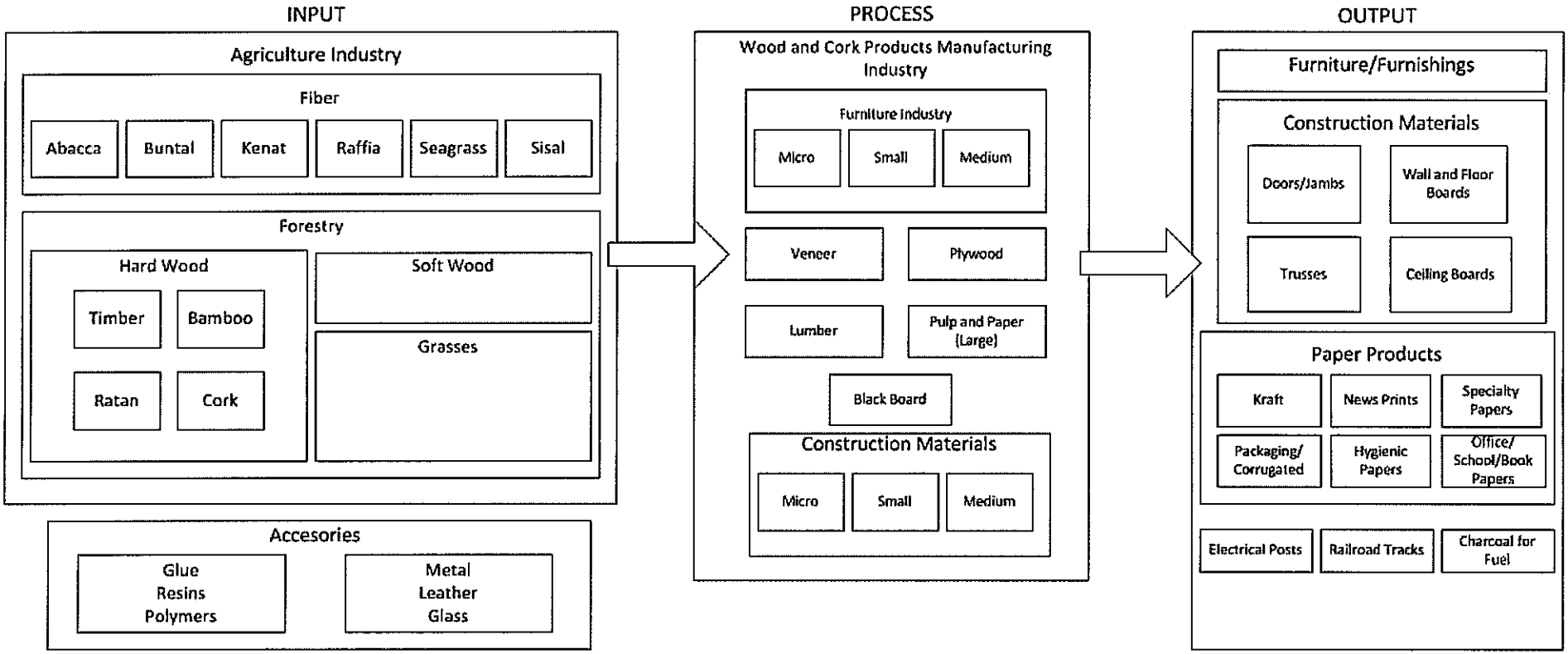
Wood and Cork Sector Supply Chain Framework

According to Mr. Angeles and Mr. Alcala, the wood and cork sector is highly dependent on the agriculture sector and the forestry sector as the main inputs for the sector mainly comes from logging of trees. Among these inputs from the forestry sector are the logging of hard wood, soft wood, and grasses. The hard wood group consists of timber, cork, bamboo, and ratan. Meanwhile the fiber group consists of Abacca, Buntal, Kenat, Raffia, Seagrass, and Sisal. Also, accessories such as glues, resigns, polymers, metal, leather, and glass were also considered as inputs to the wood and cork manufacturing process. The inputs then go into transformation in the wood and cork sector through various processes under the sub groups in the wood and cork manufacturing industry.

Ms. Fuentecilla and Ms. Regalado then described other parts of the wood and cork sector framework. The first subgroup in the wood and cork manufacturing industry is the furniture industry. The furniture industry according to the FGD panelists makes use of various hardwood like timber, and rattan while also consuming processed products such as veneer, and plywood. This subgroup then can be classified into micro, small, and medium according to the size of furniture that is made.

Other subgroups under the wood and cork manufacturing industry are the veneer, plywood, lumber, and pulp and paper which essentially becomes raw materials to the construction industry specifically housing, and interior designs of buildings.

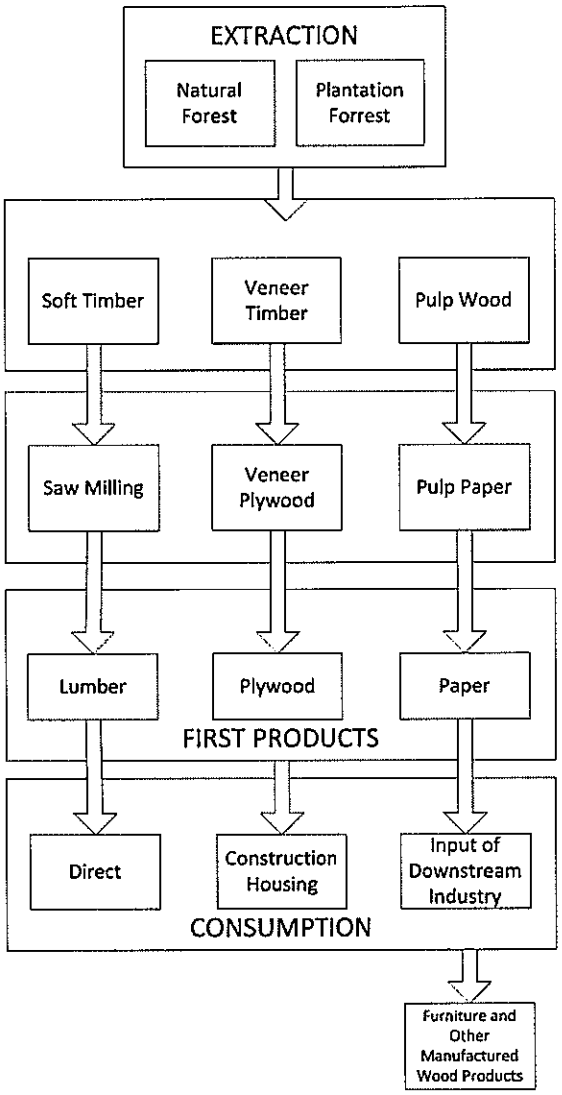
Other destinations by the processed inputs as pointed out by the FGD panelists are paper products such as news prints, school and office papers, packaging/corrugated materials etc. Lastly, the processed inputs may also serve as electrical posts, railroad posts, and charcoal fuels.


INPUT
Agriculture Industry
Fiber
Abacca
Buntal
Kenat
Raffia
Seagrass
Sisal
Forestry
Hard Wood
Timber
Bamboo
Ratan
Cork
Soft Wood
Grasses
Accesories
Glue
Resins
Polymers
Metal
Leather
Glass
PROCESS
Wood and Cork Products Manufacturing Industry
Furniture Industry
Micro
Small
Medium
Veneer
Plywood
Lumber
Pulp and Paper (Large)
Black Board
Construction Materials
Micro
Small
Medium
OUTPUT
Furniture/Furnishings
Construction Materials
Doors/Jambs
Wall and Floor Boards
Trusses
Ceiling Boards
Paper Products
Kraft
News Prints
Specialty Papers
Packaging/ Corrugated
Hygienic Papers
Office/ School/Book Papers
Electrical Posts
Railroad Tracks
Charcoal for Fuel

Wood and Cork Industry Process Framework

As drawn by Mr. Angeles, It is also important to describe the process at which the inputs are transformed into outputs useful to the wood and cork industry. In the extraction stage, two possible sources were identified by the FGD panelists. These sources of wood are naturally grown forests and plantation forests.

The logged wood then can be utilized or classified into soft timber, veneer timber, and pulp wood. For the soft timber, it has to go through saw milling and eventually is transformed into lumber products. Veneer plywood meanwhile is transformed into plywood and eventually goes into the construction sector. Lastly, the pulp paper is transformed into paper and used as inputs to various sectors and various industries.



Industry Potential Green Products and Green Jobs

For the potential green products and jobs, the Ms. Soriano from the Philippine Fiber Industry Development Authority pointed out that there is a high potential for fibers such as Abaca to replace almost 30% of fossil fuel based products used in the construction industry.

Among the fossil fuel based products mentioned are plastics used in interior designing that are made of resins and polymers. These products consequently can be able to replacement plastic manufacturers into fiber manufacturers thereby making green products, and green jobs.

Also, the Ms. Fuentecilla pointed out that the wood and cork industry is green within itself if only the extraction of its inputs, timber can be renewed constantly and diligently. Also, because of the raised awareness for environmental protection, the FGD panellists think that there will be no reason for the volume of jobs not to increase.

Potential/Prospective Green Products and Initiatives	**Jobs that can be generated**	**Volume of Jobs**	**Reason for Volume of Job**
1. Green Design • Eco Friendly Materials • Wood is a renewable resource (15-20 years)	Replacement for fossil fuel based products manufacturing: • Resins • Polymers • Paints/H2O based	Medium Potential	Awareness Heightened for clean environment processes
2. Composites • Can replace 30% of all the fossil materials. (Plastic for housings, polymers, etc.) • Dusts recycled to form recycled plywood	• Wood cutters/Carvers • Finishers/Carpenters • Consumers • Shippers • Designers	High Potential	Minimization of Carbon credits

Potential/Prospective Green Products and Initiatives	Jobs that can be generated	Volume of Jobs	Reason for Volume of Job
3. Wood Products • Comes with sustainable logging	• Purchasing Managers • Production Crew/Quality Crew • Manufacturers of Equipment • Researchers	High Potential	Awareness for need for renewable source of energy locally through media
			Strict LGU code for waste/toxic management

Regulatory Frameworks

It was revealed by Ms. Vasquez that the serious problems in the Wood and Cork industry stems from the unstable supply of wood from the forestry and agriculture sector.

One of the contributors to this unstable supply of wood from the forestry agriculture sector accordingly is attributed to the ever changing and conflicting laws and regulations passed on by the government after the changing of administration personnel.

Together with the ever changing regulations on logging, it was also pointed out by the FGD panelists that the implementation of these laws is poorly executed by the government. One perfect example would be the EO23 or the Logging Moratorium signed by President Noynoy Aquino. This Logging Moratorium aims to stop the vast depletion of the Philippines' forest reserves by protecting the natural and residual forests from illegal loggers.

According to the Mr. Angeles however, this order by the government was very impulsive as it does not have a clear cut implementation plan to carry out the order thus threatens to deprive the forestry and wood and cork sector with over P30 Billion of investments and $1 Billion of experts.

As the Mr. Angeles states, the illegal loggers which the government want to stop from depleting the Philippines' forest reserves are the same illegal loggers which the government has continuously failed to halt for the past decades. Instead, the government is only able to enforce is its regulations on those timbering companies which comply with the regulations thus making them feel weary of the government's decision making.

In effect, according to the FGD panel pushes the logging firms who operate legally to shoulder the burden caused by the illegal loggers thus giving them a big disadvantage.

Also, it was emphasized by the FGD panel that the ideal situation of the forestry sector being sustainable and renewable is not met because of the government's failure to monitor if the logging companies have been replacing the trees that they have cut by planting new trees. This in effect is for seen by the FGD panel to topple the intention of the logging moratorium as the forests fail to regenerate despite the stopping of the cutting of trees.

Other issues include the underutilization of trees specifically coconut trees as many of the coconut farmers resort to the cutting of coconut trees for faster income according to Mr. Alcala. This in effect denies the access to the other possible products of the coconut tree like coconut oil, 'buko', and other useful products.

Industry Scaling Up of Impact

In terms of scaling up of impact, the FGD panelists see a high potential for the sector to demonstrate a high level of impact in terms of promoting green products and green jobs since the wood and cork industry is essentially green.

Some of the state of interest in which this could be accomplished according to the panel is through the introduction of new products such that materials that degrade the environment can be eliminated.

Also, the promotion of a sustainable forestry management and overall supply chain in coordination with the government and tripartite organizations would induce great impact towards the greening of products and jobs.

Ms. Vasquez also mentioned the involvement of local government initiatives through job generation, taxation and other community services. Also, the FGD mentions that there are LGUs which promote proper forestry management.

The downside however, as other FGD panelists divulged is that there are some LGUs which somehow 'overtax' the logging companies thus limiting their income and worse, connives with illegal loggers.

Question	Wood	Coco Lumber
What is the potential in increasing level of impact, coverage and promotion of green jobs?	Moderately high	Very high
Describe the state of interest in scaling up in the sector?	Innovation and new products certification process – EO23	Innovation and new products certification process – EO23 For exporters, chain of custody, timber came from sustainable forestry management
Is there an involvement of external support?	Yes, through union and tripartite conference	N/A
What are the local government initiatives?	Job generation, taxation and community services	Job generation, taxation and community services PCA regulatory fees shared with LGUs

Entry Towards Decent Work

Mr. Alcala and Mr. Angeles discussed that there are concrete points of entry towards decent work in the sector. Among these entries can be wages and benefits of the workers in the wood sector.

Question	**Wood**	**Coco Lumber**
Can the sector be a demonstration sector for decent work?	Yes, entry possible	Yes
How can existing decent work initiatives of the sector be strengthened?	Salary and wages upgrading and other benefits sharing and contribution	Strict implementation of labor laws, PCA projects
How can existing decent work initiatives of the sector be strengthened?	Implementation/observance of existing labor laws	N/A

Presence of Tripartism

In terms of tripartism, Ms. Vasquez states that there are organizations other than ECOP and the PCA which try to coordinate with loggers, the government, and the employees .

Question	**Wood**	**Coco Lumber**
Is there evidence of integrated and synergistic collaboration among government, employers and workers in the sector?	Yes	Yes but not certain
Are government programs and activities present to support the sector initiatives? Please specify.	Observance of CSR and Labor	Yes, PCA intervention
Does employers' organization have strong counterpart representation? What is the evidence of this?	Through ECOP	
Do they exhibit clear mandate to support the sector? Explain.	Constitution	

Annex 5 PAC Validation Meeting

Special Project Advisory Committee Meeting for Green Jobs in Asia
24 June 2011-9:30-11:30 am
ILO CO Manila Auditorium

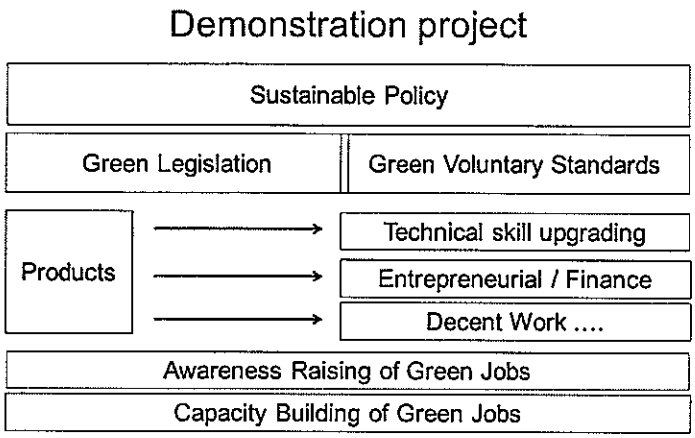
Attendance

1.	Mr. Roland Moya	Deputy Director- Employers' Confederation of the Philippines
2.	Mr. Jose Cayobit	Federation of Free Workers
3.	Ms. Myriam Fernando	Regional Coordinator- Green Jobs in Asia-ROAP ILO
4.	Dr. Anna Bella Manalang	ExCol- La Salle University
5.	Mr. Benjamin Santiago	Research Assistant- La Salle University
6.	Ms. Georginia Pascual	Project Officer- Greener Business in Asia Philippines- ILO CO Manila
7.	Ms. Carmen A. Baugbog	National Programme Coordinator- Green Jobs in Asia Philippines- ILO CO Manila
8.	Ms. Cynthia Awitan	Admin Assistant- Green Jobs in Asia Philippines- ILO CO Manila

Discussion of the Agenda

1. Mr. Roland Moya chaired the meeting. The DOLE and TUCP excused themselves for not attending the meeting. He presented the agenda which are: presentation of the results of the scoping study, validation and selection, next steps for the demo sector, and information on the foundation training and capacity building. The agenda was adopted. Ms. Fernando followed by reviewing the Green Jobs in Asia Project plan, and focused on the demonstration project (the policy and standards framework and the capacity building / skills upgrading component). She stressed on the demo project framework, to guide the

PAC in their selection of a sector.



2. Dr. Manalang proceeded to present the highlights of the sector scoping study. She refreshed everyone on the selection criteria of the scoping study. She then presented the findings which are:
    - Socialized Housing is very high in potential and existing greening of products, standards, initiatives and scaling up of intervention, high in economic viability especially in the potential for employment generation because of its forward and backward linkage, high in decent work and tripartism. There are many green housing products, the Urban Development and Housing Act (UDHA), with a sustainability focus, has been passed since 1992, existence of Building Ecologically Responsive Design through Excellence BERDE standards, there is a strong public private partnership, and it has an entry point for decent work and strengthening tripartism.
    - Organic Agriculture is high in economic viability, medium on the standards, initiatives and scaling up of intervention as the Organic Agriculture Act was passed on 2010 and requires more time for roll-out. The farms are highly dispersed throughout the country. Furthermore, Negros Island has been recently declared an organic agriculture island and will start implementing the organic agriculture program in the province in 2011 / 2012; it will be potential for scaling up. Decent work is high but tripartism is medium due to its limitation only to farmers' organization and distinction between workers and employers is not clear because small farmers are self-employed.
    - Wood and cork as a sector has high employment potentials, but is low in standards and regulations due to the existing log ban and other existing laws. Furthermore, the sector is shrinking. The industry is also highly dependent on imports. Positive to the sector is their ability to find alternative product for wood

and able to integrate this in the manufacturing process. The sector also has very few workers group and has no tripartite structure.

Dr. Manalang ended her presentation by recommending socialized housing sector as the most viable sector for a demo project because it is all high in the criteria.

Ms. Fernando facilitated the discussions of the study among PAC members. She solicited from them their choices.

- Mr. Joe Cayobit thanked Dr. Manalang and congratulated her for the impressive presentation. However, he suggested, that there was no need for Dr. Manalang to make her recommendation, since the result of the study proves that it is the socialized housing sector that qualifies highly. He was glad that their previous choice which was socialized housing is validated because of the study. He chose socialized sector for the following reasons. It is the sector where there is a clear relationship between workers and employers, and this is the sector where their union can pursue the goal of improving the plight of workers in the construction sector including socialized housing. Furthermore, the standards will be an opportunity for the workers group to improve their competencies to be competitive, as well as it addresses decent work issues.
- Mr. Roland Moya thanked Dr. Manalang for a very good presentation. He went back into the previous choices of the PAC members which according to him, even though based on anecdotal evidence, have been confirmed through the study. The results of the data show that socialized housing sector best fulfilled the criteria. He further added that the employers have no problem of addressing workers employer's relations in the sectors as the distinction between workers and employers can be easily identified. He also added that the sector is economically dynamic and it is an industry with an evident corporate social responsibility. His selection is also the socialized housing.

It was agreed that as DOLE is not present at the PAC meeting they would be provided with soft / hard copy of the presentation and through consultation, the sector selection endorsed.

The National Programme Coordinator of Green Jobs in Asia met with USec Trasmonte of DOLE on 5 July 2011 to discuss the result of the sector scoping study. During the meeting, the coordinator and the undersecretary went through the findings. After running through the findings, USec Trasmonte also endorsed the socialized housing sector as it has the highest rank in the study. She also stressed that she sits in the Board of Director of the National Housing Authority representing DOLE. She pinpointed that the livelihood component has an integral part of the demonstration project in the socialized housing. Ms. Baugbog assured USec Trasmonte, that livelihood component is one of the key areas of the demo project.

She also hopes that ILO can also look in the nearest future on how to integrate organic farming in the DOLE programmes related to communities in agrarian reform.

Ms. Fernando reviewed the demonstration project framework and solicited recommendations from the representative of employers and workers.

- Mr. Moya from ECOP suggested incorporating employment/jobs promotion among the settlers and ensuring this to be decent, including strict enforcement of standards, monitoring and evaluation. He also suggested that there will be support both micro finance and entrepreneurial competencies' to workers including possible request of using the Conditional Cash Transfer to be utilized in creation of enterprises/livelihood among settlers. Myriam Fernando assured ECOP that this element will be a central point within the demonstration project, and the NHA livelihood department has numerous initiatives underway in this regard.
- Mr. Cayobit would like to see the demo as an entry point towards formation of workers guild, technical skills upgrading for green workers for green jobs, including compliance of the OSH. Again this was agreed that these aspects are central to the demonstration project which will be implemented in close cooperation and consultations with involvement of constituents.

Ms. Pascual informed the body that Mr. Diaz send his regrets of not able to attend as his breakfast meeting did not finish early, but is confident that ECOP will be duly represented as Mr. Moya is present.

Ms. Fernando proceeded to discuss the next steps on the demonstration project which is to conduct a preparatory study. The study will involve in-depth assessment of the potential entry points and interventions to promote green jobs in socialized housing where the project constituents will be consulted especially in the formulation of the project implementation plan. Two national consultants will be engaged (on environment/ engineering / architectural aspect and for the social / livelihood / institutional development, decent work and tripartism).

3. Ms. Fernando further highlighted that together with GBA, a training needs analysis was conducted among constituents for the basis for the foundation training for green jobs and a further input to the capacity building activities for the workers and employers. The foundation training is tentatively set on July 19-20, 2011. It was agreed that Ms. Baugbog will liaise with ECOP and FFW, TUCP and APL to discuss their further capacity building needs and will consult with them in the development of the concept note.

4. National Conference

The Green Jobs Conference is tentatively set on 16-17 August 2011. ILS will convene a meeting with PAC as part of the preparatory activities to the conference.

Mr. Moya adjourned the meeting and thanked everyone who braved the rains and cold just to attend it.

Note:

An initial discussion with ECOP and FFW regarding capacity building was done after the adjournment of the meeting. Areas of ECOP's capacity building will be: 1) work with regional network, 2) selection of case studies based on framework developed,3) four case studies developed, 4) workshop to discuss the case studies and green jobs,5) Training for Trainers on Green Jobs. With FFW, the representative suggested that discussion shall be done together with TUCP.

The National Programme Coordinator of Green Jobs in Asia met with Mr. Rafie Mapalo of TUCP on 29 June 2011. Ms. Baugbog discussed the findings of the sector scoping study as well as the capacity building for the workers. Mr. Mapalo noted the high ranking of the socialized housing as a sector for demo project of the Green Jobs in Asia, and suggested that the decent work among the construction workers at the socialized housing should be seriously addressed due to incidences of decent work violations in the sector. He wanted to read the full report of the study. With regards to the capacity building for workers, he suggested that support to awareness raising on green jobs specific to workers in a massive scale, support to strengthening workers initiative,(at TUCP)as, they already have a checklist on green jobs, and a trainer's training for green jobs among workers group. He even proposed that a workers perspective of green jobs will be presented during the foundation training, and that a module should be developed which will be accessed by all workers groups. A meeting with FFW, TUCP and APL on 6 July 2011 was suggested to review the consolidated concept note, and to discuss implementation arrangements including work plan, budget and management.

The National Programme Coordinator of Green Jobs in Asia met with USec Trasmonte of DOLE on 5 July 2011 to discuss the result of the sector scoping study. During the meeting, the coordinator and the undersecretary went through the findings. After running through the findings, USec Trasmonte also endorsed the socialized housing sector as it has the highest rank in the study. She also stressed that she sits in the Board of Director of the National Housing Authority representing DOLE. She pinpointed that the livelihood component has to be an integral part of the demonstration project in the socialized housing. Ms. Baugbog assured USec Trasmonte, that livelihood component is one of the key areas of the demo project. She also hopes that ILO can also look in the nearest future on how to integrate organic farming in the DOLE programmes related to communities in agrarian reform. Ms. Baugbog also updated the USec on the final date of the Green Jobs Conference which is on 15-16 August, where a media launch will be on the 21st July 2011. Ms. Baugbog will send to USec the power point presentation including the final report of the sector scoping and the minutes of the PAC meeting.