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Greening the Philippine Economy Symposium

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On behalf of BMZ Federal Ministry for Economic Cooperation and Development

dti DEPARTMENT OF TRADE & INDUSTRY PHILIPPINES

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November 2013

DOCUMENTATION OF THE SYMPOSIUM ON GREENING THE PHILIPPINES ECONOMY

09 October 2011

CONTENTS

SYMPOSIUM CONCEPT

INTRODUCTION

Internationally, there is today a considerable dynamism towards transitioning to a Green Economy. In high level international meetings held during the last two years, governments have supported a green economic shift. Of significant importance is the decision of the United Nations (UN) General Assembly to convene in 2012 Rio+20 a UN Conference on Sustainable Development in Rio de Janeiro, where Green Economy will be spotlighted as a theme in the context of sustainable development and poverty eradication.

Green Economy is a system of economic activities related to the production, distribution and consumption of goods and services that brings about "improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities" (UNEP[1] 2009). Simply put, Green Economy is "low carbon, resource efficient and socially inclusive."

The Philippines has the interest and stake to green its economy. For one, experts have cited the country as among those most vulnerable to the harsh impacts of Climate Change. As such, the government has put in place a comprehensive Environmental Policy (which includes the Renewable Energy Act of 2008) that creates a framework and environment for the pursuit of Climate Change mitigation and adaptation measures.

And secondly, the Philippines, by opting for the Green Growth strategy, will be able to make both public and private investments aimed at providing mechanisms for the reconfiguration of businesses, infrastructure and institutions towards adoption of sustainable consumption and production processes. When this happens, as shown from the experiences in other countries, the share of green sectors in GDP will increase, more and decent green jobs will be created, energy and material production intensities will go down, waste and pollution will decrease and greenhouse gas emissions will significantly drop.

While there is definitely room for learning from experiences and good practices of other countries, the Philippines has to chart its own unique journey and roadmap towards its own brand of Green Economy. It is in this context that this Symposium is being conducted – to serve as a platform for Philippine key stakeholders to gain a broader and shared understanding of the Green Economy as well as to discuss and to generate informed ideas for action.

[1] United Nations Environment Program

OBJECTIVE

Contributing to the ongoing discussion on how the Philippines can best pave the way for a greener economy and, as a result, optimize its benefits from this new strategy for sustainable development, we

- ✓ create wider awareness of the Philippine government's perspectives, direction and initiatives on Green Economy
- ✓ deepen understanding of the emerging concept, practices and impact of Green Economy drawn from global experiences
- ✓ expound on Social Entrepreneurship and demonstrate its potential for creating green jobs and promoting inclusive growth
- ✓ highlight the opportunities for Renewable Energies in the Philippines, some current initiatives and way forward imperatives
- ✓ disseminate information on existing Green Finance windows that can fuel green initiatives and projects of government and business enterprise sectors
- ✓ showcase the Public Private Partnership as a strategic approach towards mobilizing an industry sector for Green Economy
- ✓ get inspired for action by the huge success of a Green Business that achieved its global competitiveness through creativity and innovation.

OUTLINE

The keynote address describes the substance and form of the Philippine Government's Green Economy agenda. The presentations leading to the Panel Discussion bring to the forum global experiences that shape the current conceptual base of Green Economy, some good practices applied and early results achieved thus far. The Panel Discussion has two parts: 1) Thematic Introductory Statements where each of the panel discussion members orients the audience on their assigned topic and situates it in the Philippines' Green Economy debate and 2) Panel Discussion Proper, where the panel discussion members engage in a moderated conversation exploring the issues, challenges, opportunities and outlook of the Philippines' bid for Green Economy. The Open Forum allows the audience to actively participate in the conversation by asking questions to the panel members or offering their own comments and opinions.

TARGET GROUP

Some 150 attendees composed of government, private and civil society policy and decision makers, business leaders and entrepreneurs, development partners, regulatory and support institutions and media outfits and practitioners are invited as Symposium participants.

PROGRAM

0830 H Media Conference

0930 H Registration and Networking

1000 H The Green Economy Symposium

- National Anthems and Invocation

- Opening Statements
  Dr Volker Steigerwald, PSP Program Manager
  Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
  Mr Reiner Allgeier, President
  German Philippine Chamber of Commerce and Industry GPCCI

- Welcome Addresses
  Honorable Undersecretary Engr Merly Cruz Department of Trade and Industry DTI
  His Excellency Dr Joachim Heidorn
  Ambassador of the Federal Republic of Germany to the Philippines

- Keynote Address
  Green Economy: Turning the Climate Change Threat into an Opportunity and Achieve Inclusive Growth in the Philippines
  Honorable Secretary Mary Ann Lucille Sering
  Vice Chairperson and Commissioner, Climate Change Commission CCC

- Presentations
  Green Growth and Green Economy in an International Perspective and the Experiences of the Federal Republic of Germany: Lessons for the Philippines
  Mr Kim Nguyen Van
  Head, Sector Project Sustainable Economic Development, GIZ

  Green Economy in the Republic of Korea
  Dr Jung Tae Yong
  Deputy Executive Director, Global Green Growth Institute GGGI

  Open Forum

1200 H Lunch

1300 H Panel Discussion

- Thematic Introductory Statements
  - **Renewable Energies**
    Dr Günter Matschuck
    Vice President, GPCCI
    President, Maschinen & Technik, Inc MATEC

  - **Development Partnership with the Private Sector (DPP) in Energy Efficiency**
    Mr Tristan Loveres

Chief Operating Officer, TÜV Rheinland PH Inc

- **Green Business**
  Mr Pedro Delantar
  President, Natures Legacy

- **Green Finance**
  Mr Paul Lazaro
  Vice President, Development Bank of the Philippines DBP

- **Social Entrepreneurship**
  Mr Markus Dietrich
  Executive Director, Asian Social Enterprise Incubator ASEI

- Panel Discussion Proper

Forum Discussion

Closing Remarks
Dr Lorenzo Templonuevo, Senior Adviser, GIZ Philippines

Moderator **Ms Ma Victoria Antonio**
Senior Adviser, GIZ

OPENING STATEMENTS

GIZ – DR VOLKER STEIGERWALD

Program Manager, Private Sector Promotion Program
Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH

It is a pleasure to see you all here this morning for our GIZ Symposium on Green Economy. A special warm welcome goes to our new Ambassador of the Federal Republic of Germany to the Philippines, Dr Joachim Heidorn. He assumed his post just a few days ago. All the more we are honored that he graces this occasion.

This is the third time that such a symposium is staged by GIZ (former GTZ) in the framework of the annual Mabuhay Germany celebration. Mr Reiner Allgeier, the President of the German Philippine Chamber of Commerce and Industry will tell you more about Mabuhay Germany.

As for the Symposium, after two years dealing with Energy and Renewable Energy issues, we widen the screen this year towards Green Economy and Inclusive Growth.

How can such a major transformation of our conventional “BROWN” economic models towards a low carbon, GREEN growth path be initiated and promoted? What does it mean for the Philippines, a country that is ranked third on the list of countries most vulnerable to climate change risks? What are the global challenges and experiences? What lessons could the Philippines learn from other countries? From Germany? From Korea?

Such a major transformation of our way of producing, consuming, way of life need to include all sectors of the economy and the society. In the panel discussion we will look at energy, energy efficiency, green finance, green business and social entrepreneurship. There is more involved that we cannot touch upon today: education, housing, transport, green jobs.

So we see this symposium as a part of an important debate in the Philippines that is gaining momentum, especially as the Philippines is preparing for the country’s position during the upcoming Rio plus 20 Conference in June 2012.

For GIZ this symposium reinforces our commitment towards sustainable development worldwide and towards our continued cooperation with the Philippine nation and its people.

Herewith I open this symposium. Thank you very much – vielen Dank – maraming salamat po.

GPCCI – MR REINER ALLGEIER

President, German - Philippine
Chamber of Commerce and Industry GPCCI

The German Philippine Chamber of Commerce and Industry (GPCCI) is very happy that GIZ is organizing this symposium - GREENING THE PHILIPPINE ECONOMY - and I would like to thank Dr Steigerwald and his team for all their hard work which went into the preparation of the event.

GIZ is a very strong supporter of "Mabuhay Germany" since its beginning in 2008 and has always been a major contributor to the events, like also this year.

What does this year's motto "WINNING MOMENTS" have in common with the topic of the symposium? We are creating lots of winning moments if we succeed to be more environmental oriented - it is then a winning moment for our Mother Earth and for us at the same time as we secure the future of our planet as well as our future.

Looking at everything that is happening around us - climate change / increase in number and intensity of natural disasters - we need to realize that the time to do something is now - we can no longer afford only to talk but we have to act, as time is running out.

We should therefore work together and make Mother Earth a "WINNER" in the true sense of a win / win situation.

WELCOME ADDRESSES

HONORABLE UNDERSECRETARY ENGR MERLY CRUZ

Ms Rhodora Leaño, Director
Bureau of Micro, Small and Medium Enterprise Development
BMSMED, Department of Trade and Industry DTI

On behalf of Undersecretary Merly Cruz of the Regional Operations and Development Group of the Department of Trade and Industry, it is an honor for me to welcome all of you to the Symposium on Greening the Philippine Economy – Getting Ready for the Future Today.

We are most fortunate that this activity organized by the German Government through GIZ will further our efforts to learn and discuss how the Philippines can best pave the way for a greener economy as a strategy for sustainable development.

Studies show that while the Philippines contributes only a small portion to greenhouse gas emissions, it has been identified as one of the countries in the world most vulnerable to climate change. Our current experience bears this out. Badly affected is our agriculture industry due to flooding and drought resulting in distorted crop cycles and altered land use as the weather becomes less predictable. Changing sea temperatures have also affected the marine environment impacting upon the fisheries and aquaculture industries which remain important sources of income for many Filipinos. And because climate change is widely seen as an undeniable threat to sustainable development there is therefore a compelling need of putting in place strategies, policy reforms and regulatory changes to mitigate or adapt to it, at the very least, to transform this threat possibly into an opportunity for growth and development.

Our program today will allow us to be appraised not only of government initiatives in this regard but that of the private sector and development partners' efforts in promoting green growth, good practices that have been applied and early results achieved in this area.

What have we done to mitigate and adapt?

It is worth mentioning that the 2011 – 2016 Philippine Development Plan (PDP) identifies the urgent task to devise and adopt measures that will improve the state of the environment and natural resources, enhance the resilience of natural systems and improve the ability of communities to cope with environmental hazards. Priorities include the conservation, protection and rehabilitation of the country's natural resources, urban renewal, measures to reduce waste and pollution and heightened capacities for disaster preparedness and response.

Allow me to mention that in the Department of Trade and Industry, the Board of Investments has identified green projects as one of the sectors targeted for growth that has been awarded incentives

such as income tax holidays, tax credits and special nonfiscal incentives to help stimulate investment. Under the Investments Priorities Plan (IPP), green projects cover the production of goods such as capital equipment, lighting and construction materials, the utilization of which would lead to either the efficient use of energy, natural resources, raw materials, or minimize / prevent pollution. It also covers systems / processes that would involve the application of cleaner and more efficient technologies on carbon and / or greenhouse gas emission reduction.

The government's effort to build a green economy is likewise exemplified in the crafting of the 2010 – 2016 Micro, Small and Medium Enterprise Development Plan. One of the global themes by which the Plan will be implemented is climate change and green growth. The Plan was conceptualized and developed with the support of GIZ Private Sector Promotion SMEDSEP. Today there are sixteen MSME Provincial Development Plans which are the outputs of all provinces in the Visayas that have incorporated the green growth concept in their strategies for local development. These provinces are covered under the PSP SMEDSEP.

There are also advocacy, orientation, capacity building programs and pockets of green projects being implemented like the Bayong, Bamboo and Water Hyacinth ventures which DTI through the Regional Operations and Development Group is spearheading.

What we hope to achieve

Today, we in the Department of Trade and Industry recognize that developing a green economy requires utilizing the idea of green development to transform the entire process of production, distribution and consumption. Clearly there is need for more dynamism, consistency and uniformity in the implementation of environmental laws and programs not only for communities but for industry as well. We hope to engender the concerted action of all citizens whether they are government officials, members of the private sector or consumers to accomplish this.

With this symposium, we now have the opportunity to consider further synergy to respond to an urgent global challenge. May we all learn from the presentations of our speakers, work together and complement our efforts at greening the Philippine economy to get us ready for the future today.

Thank you GIZ for you unwavering support in continually exposing us to new perspectives and opening avenues for continuous learning and innovation.

On behalf of the Department of Trade and Industry, I would like to welcome all of you who are here with us this morning. I wish all of us a fruitful and productive day. Thank you.

HIS EXCELLENCY DR JOACHIM HEIDORN

Ambassador of the Federal Republic of Germany
to the Philippines

Welcome to Mabuhay Germany and this symposium.

Your massive and distinguished attendance clearly indicates: The subject of this symposium is well chosen.

Greening the economy - this is not an issue for the Philippine economy alone. It is an issue for all economies worldwide. Climate change, the rapid growth of many emerging economies and of the global population, limited supply of traditional energy resources and raw materials: All these issues are closely interlinked. They call for new economic concepts. Economies must go green to be successful in the long run.

Germany has been a frontrunner in green technologies and concepts for many years. Today: Green technology another economic success story. We have an ambitious green agenda.

For example: By 2020 at least 30 percent of our national power generation shall come from renewables. By 2030: around 50 percent. Earlier this year we decided to eliminate nuclear power from our energy mix. But we will maintain our ambitions with regard to climate protection and renewable energies. This turning point in our energy policy, in Germany we are talking of the “Energiewende,” marks a major challenge for our society at large.

But I’m sure: Our industries will provide us with the necessary technologies and solutions. Our companies have realized: Greening the economy offers exceptional opportunities. In 2009, in the midst of the global crisis, investments in renewable energies peaked at 20.4 billion EUR. The renewable energy sector alone provided more than 300,000 jobs by 2009 – with a yearly growth rate of 8 percent! But green economy is much more than energy. All industry sectors can contribute. Many German companies have taken up this challenge. German green tech succeeds on export markets worldwide. The Philippines have realized the potential of greening the economy. Your ambitious legislation in the area of renewable energies demonstrates this very clearly. We stand ready to assist you to fulfil your ambitions.

This is true for GIZ: They put much effort in this symposium and many other projects related to greening the economy. It is equally true for German companies: They are not just suppliers. They are partners to develop solutions, tailored for the specific needs of their clients, ready to share know-how and technology. This year’s motto of Mabuhay Germany is “Winning moments.” Greening our economy provided Germany with many winning moments already.

Let this symposium stimulate you to achieve winning moments of your own!

KEYNOTE ADDRESS

GREEN ECONOMY: TURNING THE CLIMATE CHANGE THREAT INTO AN OPPORTUNITY AND ACHIEVE INCLUSIVE GROWTH IN THE PHILIPPINES

BY HONORABLE SECRETARY
MARY ANN LUCILLE SERING

Vice Chairperson and Commissioner
Climate Change Commission CCC

Executive Director, Climate Change Office CCO

The response of the Philippines to the challenges posed by Climate Change is enacting Republic Act (RA) 9729. It is an act mainstreaming Climate change into government policy formulations, establishing the framework strategy and program on Climate Change, creating for this purpose the Climate Change Commission (CCC) and for other purposes. The Chairperson of the CCC is the President of the Philippines, supported by three commissioners with a fixed six year term. One of the commissioners is the Vice Chairperson who concurrently serves as the Executive Director of the Climate Change Office.

National Climate Change Action Plan (NCCAP) of the Climate Change Commission

There are twin global objectives against CC. The first objective is CC mitigation or greenhouse gas reduction. It is concerned with renewable energy such as wind, solar, biomass, hydro and geothermal, with carbon sequestration through forests and oceans as well as energy efficiency and conservation. The second objective is CC adaptation. It aims at improving resiliency when there is increase in temperatures (global warming), when the sea level rises as well as when severe extreme weather events frequently occur.

A total of 1128 tropical cyclones enter the Philippines within the period starting in 1945 to 2006. 56 percent of these tropical cyclones reached typhoon intensity. Each year the Philippines is hit by an average of 20 typhoons. Most of the deadliest and exceptionally damaging typhoons that hit the country occurred in the last two decades: over 2 bn USD in direct damages and causing deaths of more than 25 000 Filipinos, excluding 4.3 bn USD damages brought about by Ketsana (local name Ondoy in 2009) and Parma (local name Pepeng in 2009). The Philippines is ranked among the top 10 countries whose economic activity is most at risk from an intensification of storm surges. The Philippines also count three cities among the top 25 cities whose population is at risk of being affected by storm surges. Manila ranks as number one, Taguig is 23rd and Kalookan is 25th. Out of a larger sample of the 327 largest (with population above 100 000 inhabitants) coastal cities worldwide most at risk of storm surges, the Philippines contains, by far, the largest number of cities at risk with 48 cities. Indonesia ranks second with 28 cities. The population in these at risk Philippine cities account for 18.3 percent of the global in cities population at risk.

NCCAP, status and further process

The National Climate Change Action Plan (NCCAP) is the Philippine response to Climate Change (CC). Climate Change may increase the vulnerability of the supply, transport and distribution chains as extreme weather events such as typhoons may temporarily close ports or transport routes and damage infrastructure critical to trade as well as making coastal infrastructure and distribution facilities vulnerable to flood damage. Disruption to the supply, transport and distribution chains would raise the costs of undertaking trade.

Thus business as usual cannot continue.

The Philippine CC policy initiatives began with RA 9729 also known as the Climate Change Act of 2009, followed by the elaboration of the Philippine Strategy on Climate Change Adaptation in 2010. Also in 2010 the National Framework Strategy on Climate Change was crafted. In 2011 the cabinet cluster on Climate Change Adaptation and Mitigation was constituted, chaired by the DENR Secretary and having the chair of the HUDCC, the Secretary of the Departments of DOST, DILG, DPWH, DSWD, DA, DAR, DOE, DND as well as the chair of the MMDA as members. The Climate Change Commission acts as Secretariat to the cabinet cluster.

The National Climate Change Action Plan was elaborated in 2011. It outlined the agenda for adaptation and mitigation from 2011 to 2028. It is aimed to address urgent and immediate needs and concerns of the country relating to the dangerous consequences of climate change to vulnerable sectors such as agriculture, water resources, ecosystems, humans and infrastructure services while responding to the President's Social Contract of "Keeping the Promise."

The NCCAP was crafted after holding multisector consultations with a technical workshop held from 26 to 28 January 2011 at Clark, Pampanga; thematic consultative meetings; consultative meetings with the donor community on 09 March 2011 at Edsa Shangri-la and technical validation with CC experts on 25 April 2011 at Discovery Suites.

To build the adaptive capacities of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change and optimize mitigation opportunities towards gender responsive and rights based sustainable development is the avowed ultimate goal of the NCCAP.

The strategic actions regarding climate smart industries and services for 2011 to 2028 are the NCCAP intermediate outcome relevant to DTI where climate resilient, ecoefficient and environment friendly industries and services, sustainable towns and cities are promoted, developed and sustained. This is further broken down to immediate outcomes, outputs and activities.

To facilitate the NCCAP implementation at the local level, the concept of ecotowns is introduced. The planning unit is composed of municipalities or a group of municipalities located within and in the boundaries of critical key biodiversity areas (forest, coastal / marine and fishery, or watersheds), highly vulnerable to climate change risks due to its geography, geographic location and poverty situation.

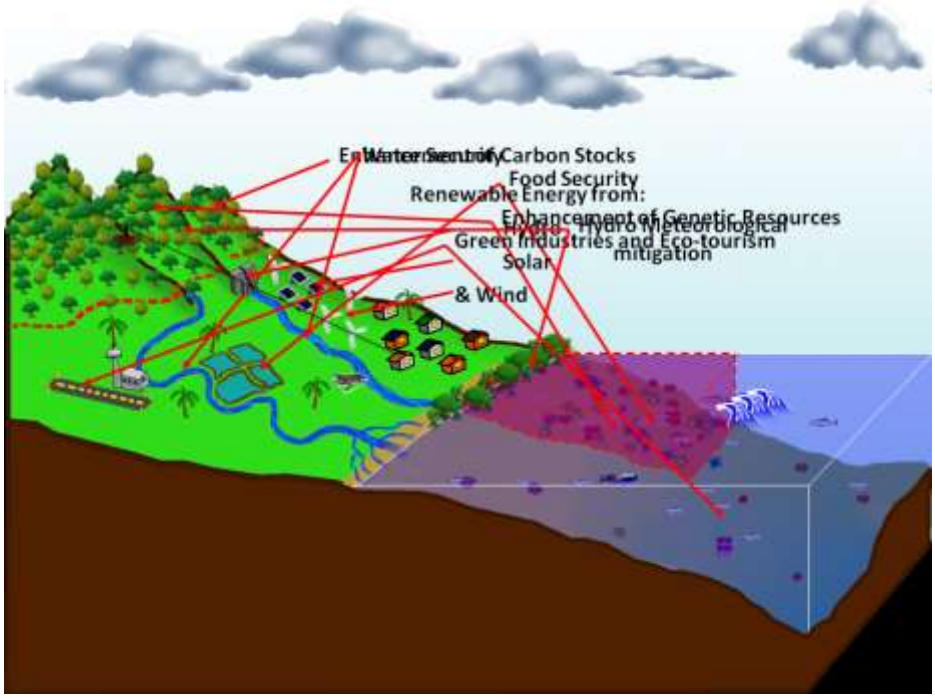


Figure 1 Ecotown

The ecotown framework is ecosystem based, enabling CC resilient communities and local economy.

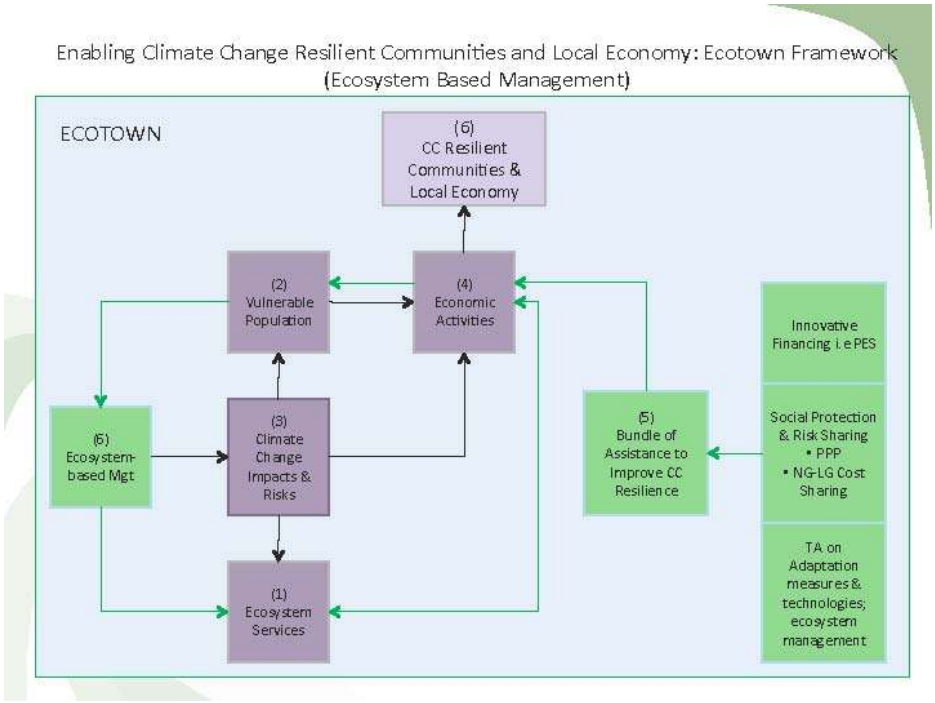


Figure 2 Ecotown Framework

Based on the 2009 NCSB data the ten poorest provinces are Zamboanga del Norte, Agusan del Sur, Surigao del Norte, Easter Samar, Maguindanao, Samboanga Sibugay, Romblon, Masbate, Davao oriental and Northern Samar.

The Philippines is actually rich in natural resources. The total economic value (TEV) appears in environmental economics as an aggregation of the main function based values provided by a given

ecosystem. Those include use and non use vales. Direct use value is obtained through a removable product in nature such as timber, fish, water, minerals. Indirect use value is obtained through nonremovable product in nature such as sunset, waterfalls, watershed, carbon sequestration. Option value is placed on the future ability to use the environment. This reflects the willingness to preserve an option for potential future use like timber and minerals. Nonuse value is placed on a resource that will never be used. This is otherwise known as existence value or bequest value.

The priorities for the next five years are to

1 review and harmonize policies (on trade, investment, environment, tourism, agriculture, etc) to provide a stable and unified policy environment for the development and expansion of climate smart industries and services
2 conduct vulnerability and risk assessments of vital local infrastructures and develop short and medium term plan to rehabilitate and retrofit those found to be vulnerable or to build new ones when retrofitting will be found relatively more expensive
3 do Green Jobs Mapping (Baseline / Database)
4 develop monitoring and reporting system for GHG emissions from various activities and sectors within the ecotowns that will feed into the local and national databases on GHG
5 build public - private and civil society organization partnerships in the following areas
    - developing social protection and risk transfer mechanisms
    - assisting small and medium enterprises become climate smart and resilient
    - creating jobs in the rural areas
    - developing an accreditation system for green building assessors
    - implementing a system of payments of environmental services
6 implement capacity development program on climate smart best practices.

For 2011 to 2012 the CCC has prioritized the scoping of Vulnerability Assessment tools including support for research and development, selection of experts to the National Panel of Experts, integration of Climate change Adaptation (CCA) and Disaster Risk Management (DRM), selection of demonstration sites in selected areas (convergence among NGAs and LGUs) as well as information and education campaign.

The DOLE report dated 30 March 2011 shows low levels of employment. Agriculture is the second highest employer but is vulnerable to economic shocks, natural disasters and extreme weather disturbance. There is an inability to translate remittances to productive investments. Poor foreign investments (the weakest in ASEAN 6) are attributed to inadequate infrastructure. Industries that rely on natural resources for inputs are threatened. The poor rely heavily on natural resources.

Green Growth: Way Forward?

There is a shift from the current model of Grow First, Clean Up Later to a more responsible long term sustainable development. It is a policy focus that emphasizes environmentally sustainable economic progress to low carbon, socially inclusive growth. The Asia and the Pacific has been in the forefront of the 21st century economic growth (export driven). Growth is threatened by diminishing natural resources, environmental degradation and climate change. Hence it requires an unconventional approach to support export driven economic activities.

There a lack of access to employment opportunities. Despite economic growth (annual average of 4.94 percent) unemployment barely improved from 7.5 percent in 2005 to 7.3 in 2010. There is high unemployment among the youth. From 2004 to 2009 an average of 39.2 graduates are unemployed. They lost the opportunity for productive work. There is also a job skills mismatch. Education should be market driven.

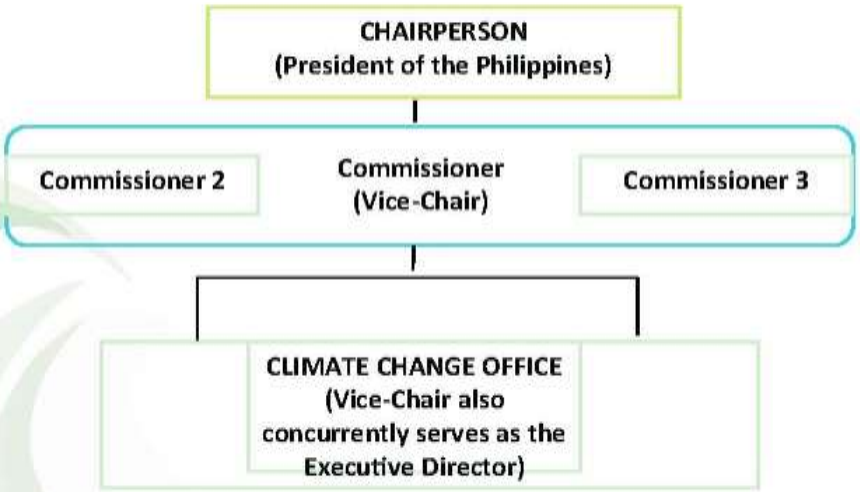
According to the report released by the Natural Marketing Institute consumers spent almost 300 bn USD annually on products and services in the Lifestyles of Health and Sustainability (LOHAS) market in 2008. The figure encompasses personal health including natural, organic food, personal care, supplements, etc at 117 bn USD; green building including certified homes, energy star appliances etc at 100 bn USD; alternative transportation including hybrids, diesel vehicles, electric vehicles, car sharing etc at 20 bn USD; ecotourism including travel spent on excursions in nature at USD 42 bn; natural lifestyles including home furnishings, apparel etc at USD 10 bn and alternative energy including renewable power at USD 1 bn. Economic activities should be geared towards the LOHAS market.

The manifestation of the impacts of CC such as saltwater intrusion on fresh water, increase in incidence of dengue, thinning of root crops due to extreme weather events and the rise of the sea level can be addressed with the following measure. More livelihood opportunities should be created in the rural communities to prevent or reduce urban migration. The following measures can also be implemented such as promoting sustainable use of natural resources, improving delivery of basic services, promoting skills that matches local job requirements and reducing risks from natural calamities and impacts of CC.

Issues and Challenges

There is a lack of a sense of urgency and a lack of awareness from policy makers. It is also perceived that there is a leakage of resources and funds. Priorities are misplaced. Policies are considered barriers to finance. Environmental laws are not implemented as they are so-called victimless crimes. There is also a lack of studies on impacts of CC to be able to mainstream Vulnerability Assessment of programs and activities.

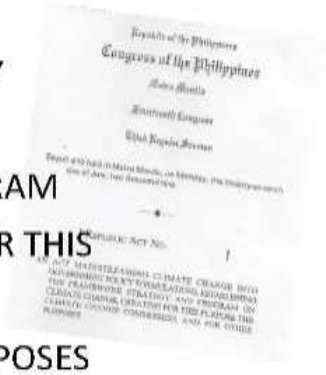
CLIMATE CHANGE COMMISSION*

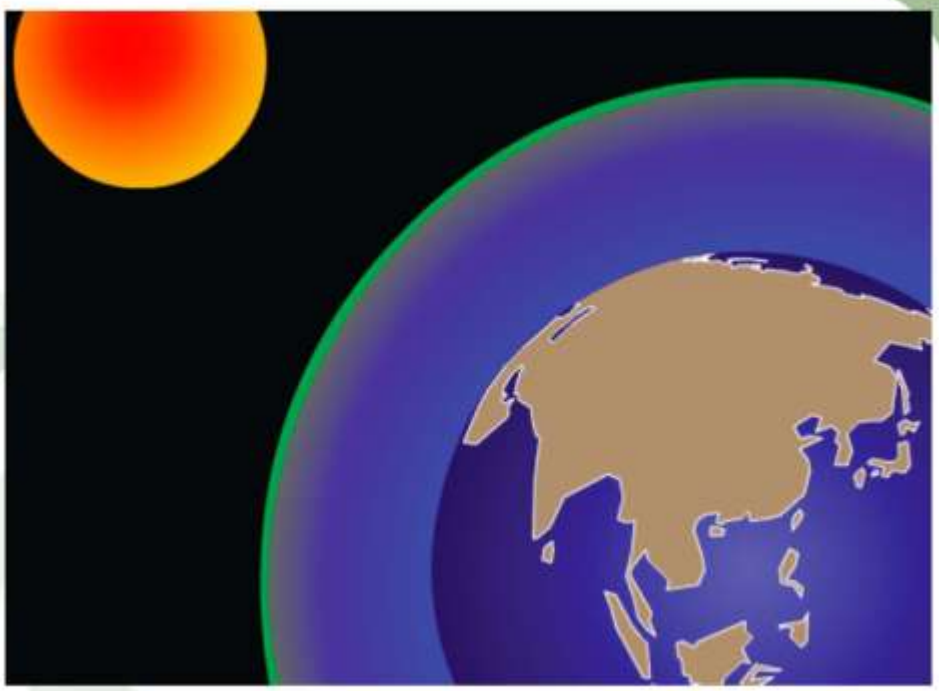


* Commissioners have a fixed 6-year term

Republic Act No. 9729

AN ACT MAINSTREAMING CLIMATE CHANGE INTO GOVERNMENT POLICY FORMULATIONS, ESTABLISHING THE FRAMEWORK STRATEGY AND PROGRAM ON CLIMATE CHANGE, CREATING FOR THIS PURPOSE THE CLIMATE CHANGE COMMISSION, AND FOR OTHER PURPOSES



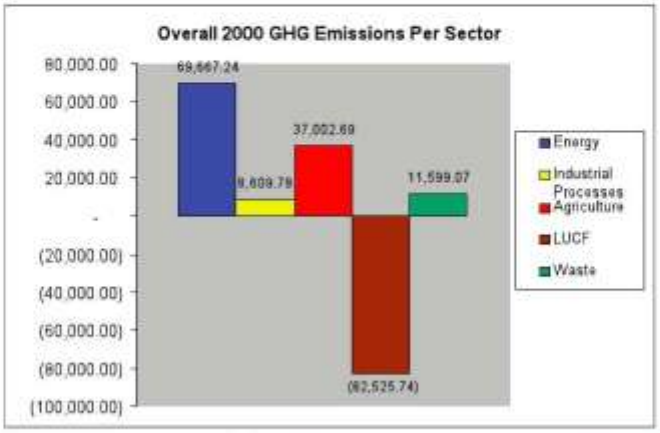


NATIONAL CLIMATE CHANGE ACTION PLAN

Climate Change Commission

NET: 21,767.41 Gg CO2-E

Figure 1: Overall 2000 GHG Emissions Per Sector (in Gg CO_2 e)



Twin Global Objectives against Climate change

- Climate Change Mitigation or Greenhouse Gas Reduction
  - Renewable energy (*i.e. wind, solar, bio-mass, hydro and geothermal)*
  - Carbon sequestration thru forests and oceans
  - Energy efficiency and conservation
- Climate Change Adaptation
  - Improve resiliency
    - increase in temperature (global warming)
    - Sea level rise
    - Extreme Weather events with increased frequency and severity

INC vs SNC
Greenhouse Gas Inventory
(without Land use and Forestry)

- Total (non-LUCF) increased 26%

Energy: 39%

Industry: 19%

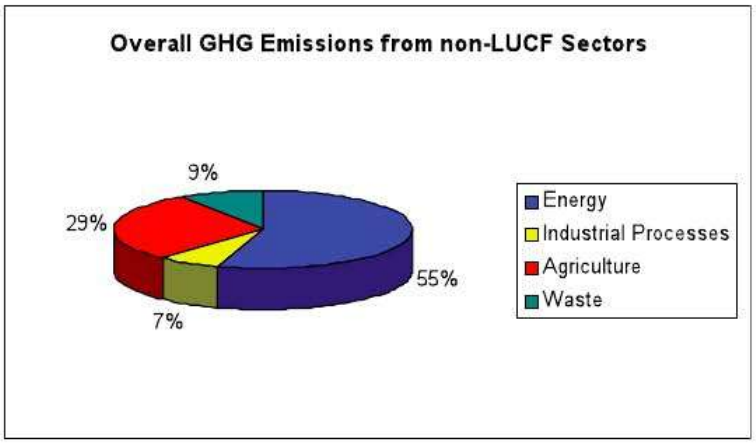
Agriculture: 12%

Waste: 64%

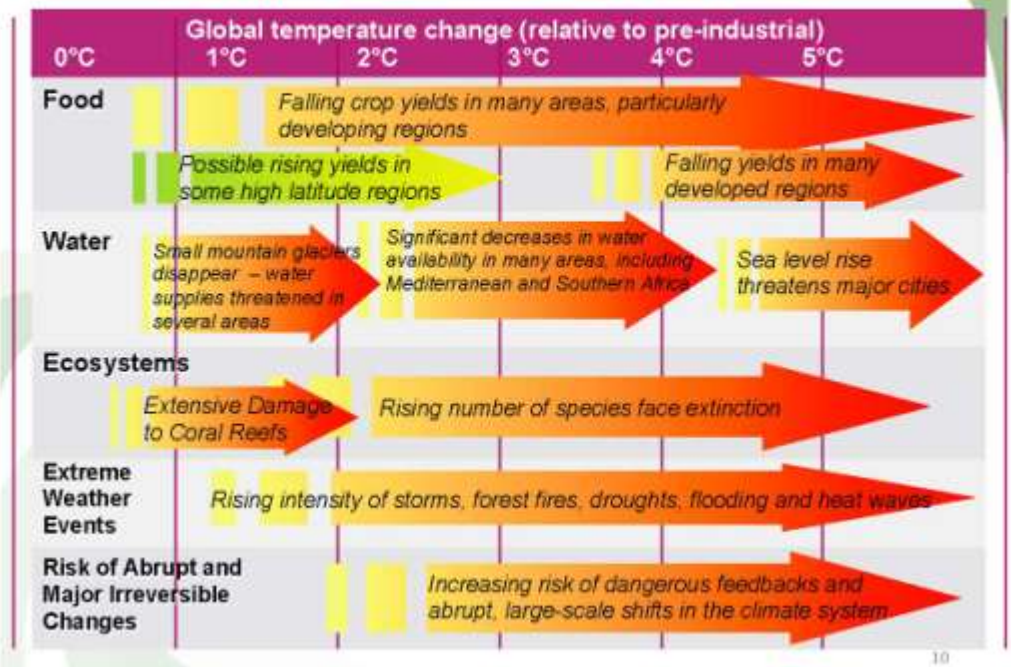
INC = Initial National Communication (1994) SNC = Second National Communication (2000)
National Communications are submitted to the UNFCCC as PH Compliance

Contribution from non-LUCF sectors

Figure 4: Overall 2000 GHG Emissions from Non-LUCF Sectors

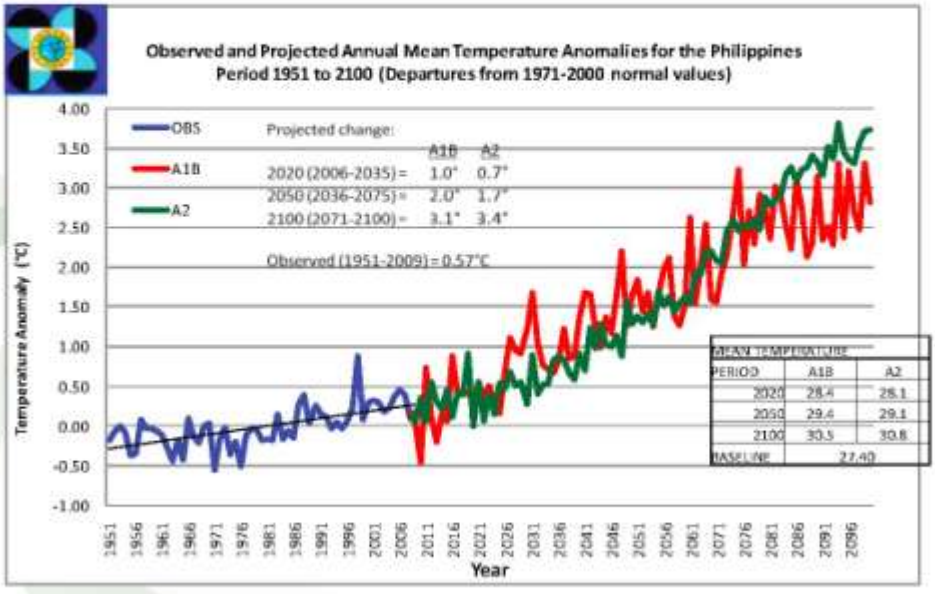


Projected Impacts of Climate Change



Source: Inter-Governmental Panel On Climate Change

Change in Mean Temperature

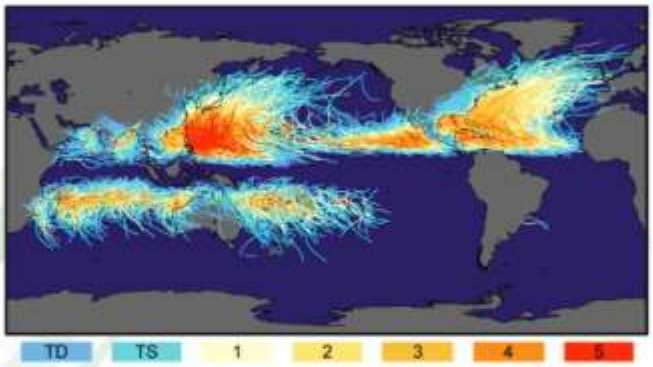


Future impacts of CC on developing countries

- **Philippines ranks among the top 10 countries whose economic activity is most at risk from an intensification of storm surges**

- (Dasgupta et al, 2009). The Philippines also count three cities among the top 25 cities whose population is at risk of being affected by storm surges **(Manila ranks as number one, Taguig is 23rd, and Kalookan is 25th**). Out of a larger sample of the 327 largest (i.e., with population above 100,000 inhabitants) coastal cities world-wide most at risk of storm surges, the Philippines contains, by far, the largest number of cities at risk (48), with Indonesia ranking second with 28 cities. The population in these at-risk Philippine cities account for 18.3 percent of the global in-cities population at risk

Increasing Intensity of typhoons and precipitation (1945-2006)



A total of 1128 tropical cyclones entered the PAR and 56 % of this tropical cyclone reached typhoon intensity. Each year, the Philippines is hit by an average of 20 typhoons.

Most of the deadliest and exceptionally damaging typhoons that hit the Philippines occurred in the last two decades: **Over US$2 Billion in direct damages** and causing the **deaths of over 25,000 Filipinos** (excluding damages from Ketsana and Parma)

Source: PAGASA

No Risk-Transfer Mechanism for PH even after Ondoy and Pepeng

- **Insurance**
  - High premium cost
  - Dependent on an event happening (2 triggers: Calamity + Declaration of State of Calamity)

- **Catastrophe Bonds**
  - With return on investments (higher interest rates)
  - Dependent on an event NOT happening

- **Cat DDO – Deferred Drawdown Option for Catastrophe**
  - A contingent loan that provides immediate liquidity following a natural disaster
  - Funds become available for disbursement after the declaration of a state of emergency due to a natural disaster (.25% of GDP or $500 M, whichever is lower)
  - Country must have a disaster risk management program in place (including integration with CCA), which the Bank will monitor on a periodic basis
  - Available to PH after approval of WB in July 2011

Ketsana and Parma (2009)

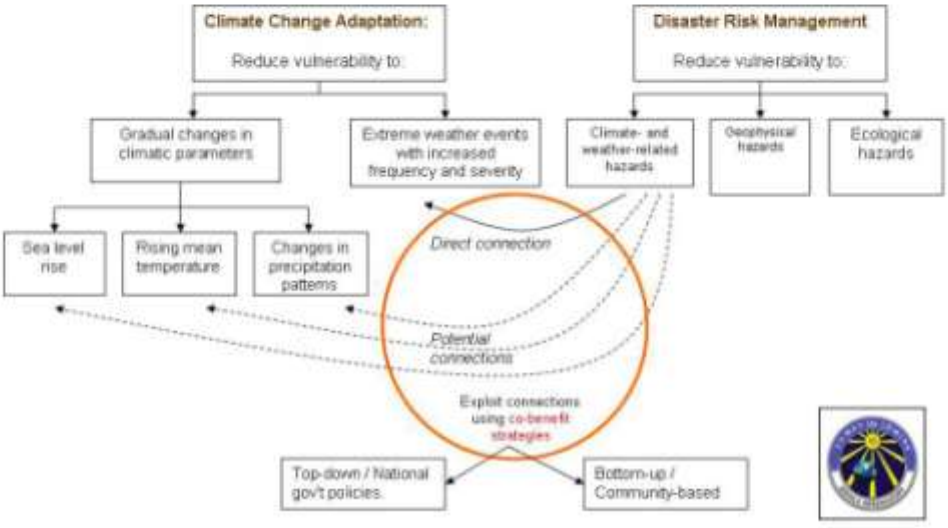
- **US$4.3 Billion or PhP 207 B (2.7% of GDP) in damages to crops, property and infrastructure (WB)**

- US$2.34 Billion to enterprise Sector
- US$849.3 million losses by farmers
- US$730.4 million losses by housing sector
- 9.3 million people affected
- 956 deaths from floods and landslides
- 249 deaths from diseases such as Leptospirosis (NDCC)
- 86 missing

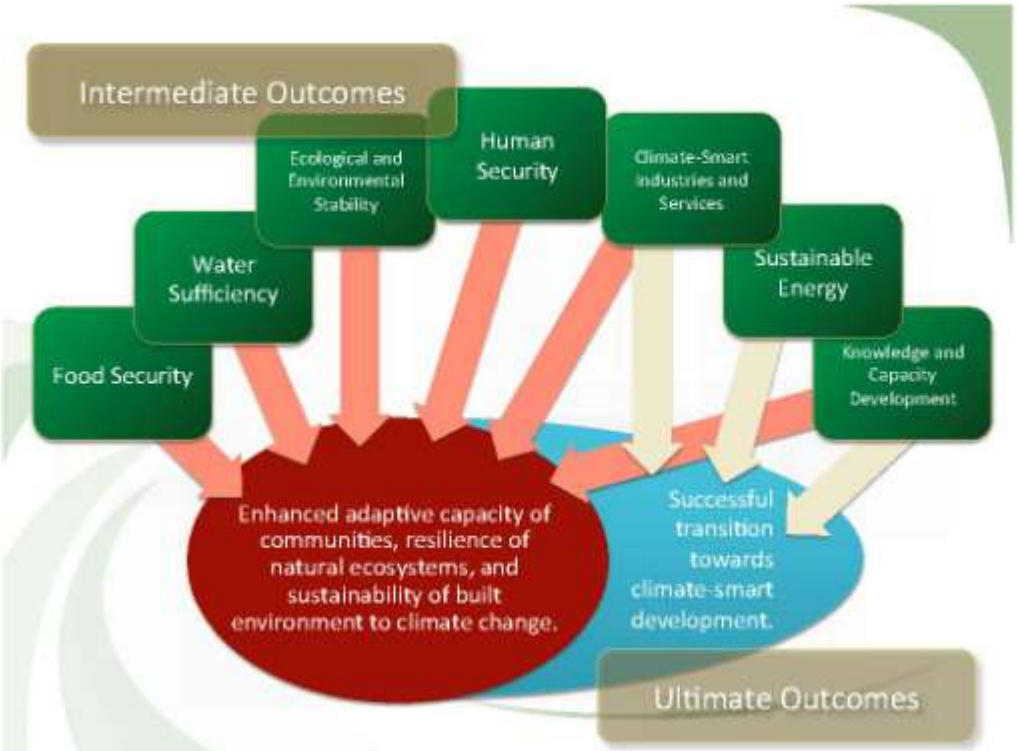
- **US$4,42 billion needed for RP's recovery over 3 years**

Adaptation Chain

Conceptual Linkages of Climate Change Adaptation and Disaster Risk Management (CCA-DRM)



(SOURCE: Castillo, Charlotte Kendra G, 2007)



CCA and DRR Indicators of Success:

- Reduction of climate-related losses through more widespread implementation of DRR measures linked with adaptation.
- More efficient use of financial, human and natural resources.
- Increased effectiveness and sustainability of both adaptation and DRR approaches.

CCC Priorities for 2011-2012

- Scoping of Vulnerability Assessment Tools
  - Including support for research and development
- Selection of experts to the National Panel of Experts
- Integration of CCA and DRR
- Demonstration Sites in selected areas
  - Convergence among NGAs and LGUs
- Information and Education Campaign

Human Security

- Integration of DRR and CCA
  - "One Against Risk" MOU with OCD and CCC
  - LIDAR in Metro Manila
  - Unified Mapping
- Climate proofing of health service delivery
- Climate proofing infrastructure
- Population Management
  - Determining carrying capacity vis-à-vis projected growth
- Conflict Management
  - Determining resource use conflict i.e. WATER

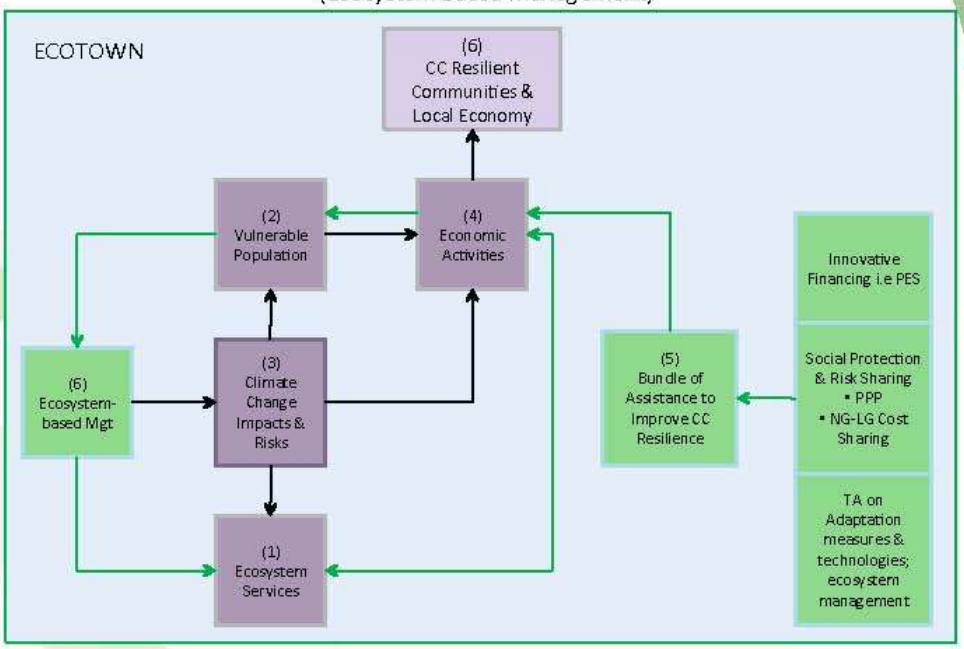
Labor and Employment
DOLE report (March 30, 2011)

- Low levels of employment
  - Agriculture sector is second highest employer but prone to economic shocks, natural disasters and extreme weather disturbance
  - Inability to translate remittances to productive investments
  - Poor foreign investments (weakest in ASEAN 6) due to inadequate infrastructure
  - Industries that rely on natural resources for inputs are threatened
  - Poor rely heavily on natural resources

Green Growth: Way Forward?

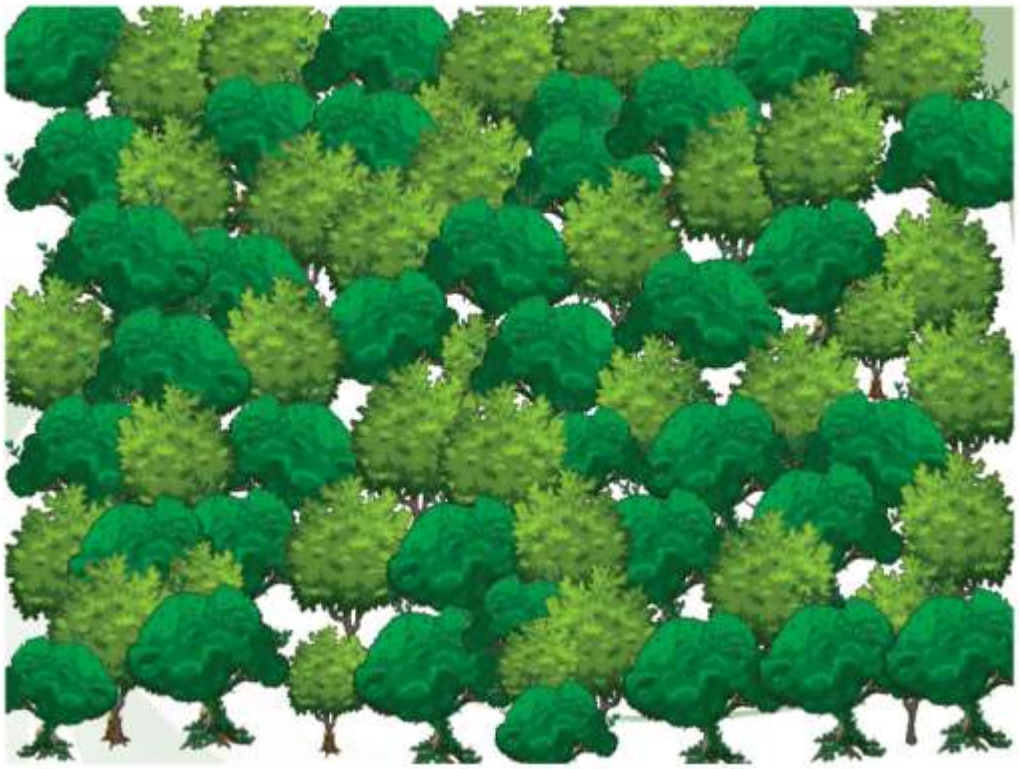
- Shift from the current model of "Grow First, Clean Up Later" to a more responsible long term sustainable development
- It is a policy focus that emphasizes environmentally sustainable economic progress to low-carbon, socially inclusive growth
- The Asia and the Pacific has been in the forefront of of the 21st century economic growth (export driven)
- Growth is threatened by diminishing natural resources, environmental degradation and climate change hence requires an unconventional approach to support export-driven economic activities

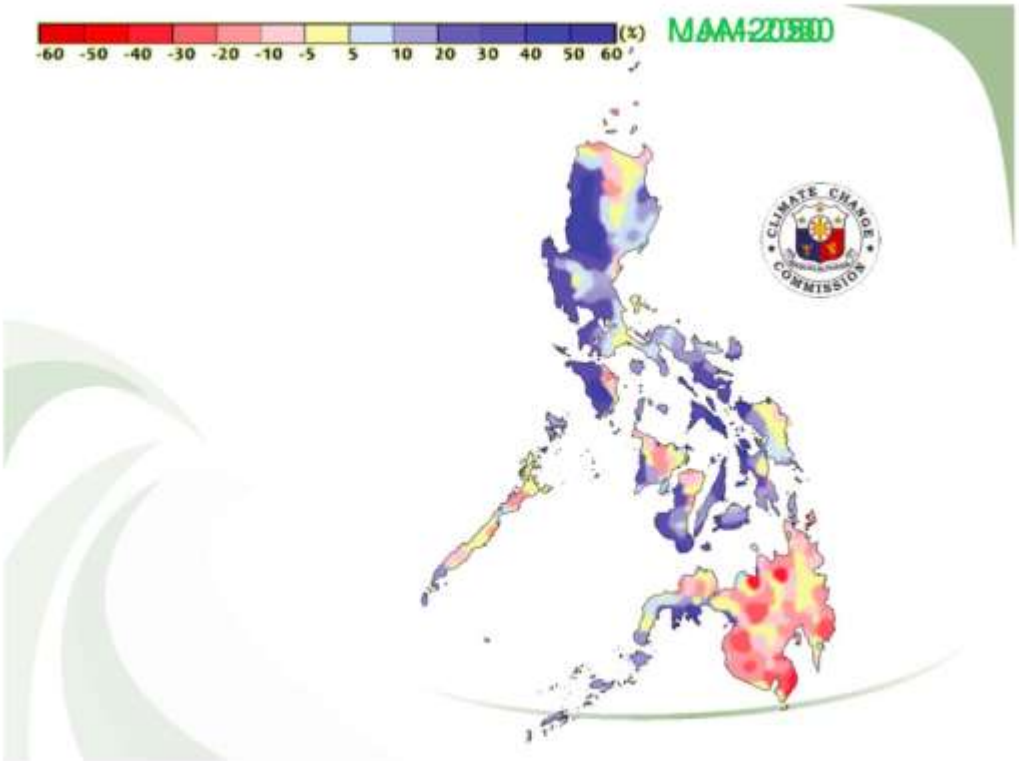
Enabling Climate Change Resilient Communities and Local Economy: Ecotown Framework
(Ecosystem Based Management)

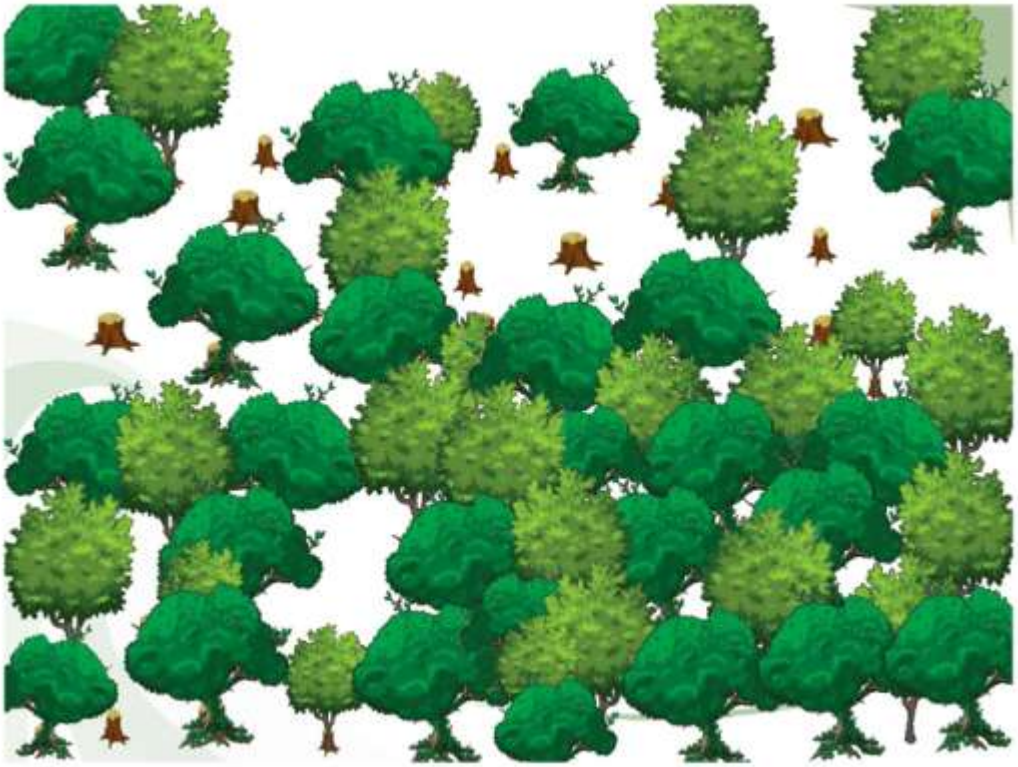


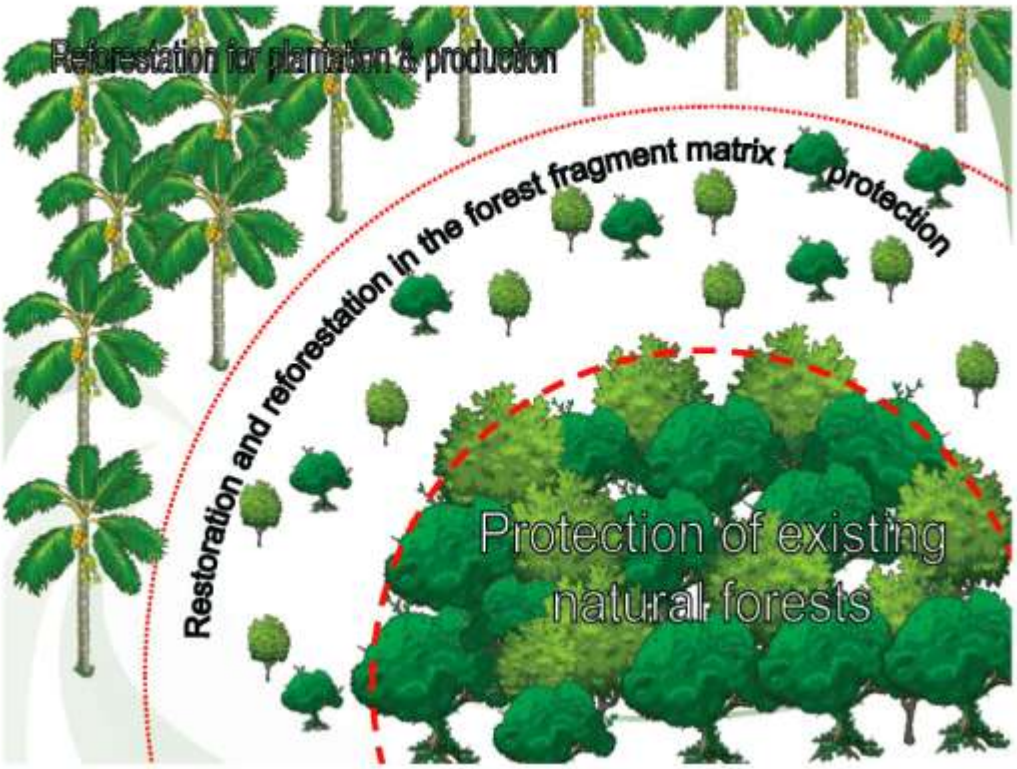
Cont...

- Lack of access to employment of opportunities
  - Despite economic growth *(annual ave of 4.94%)* unemployment barely improved from 7.5% in 2005 to 7.3% in 2010
  - High youth unemployment- half of ages between 15 to 24
  - 2007 to 2009, ave of 39.3 of educated are unemployed – loss of opportunities for productive work
  - Job skills mismatch – ensure market driven education

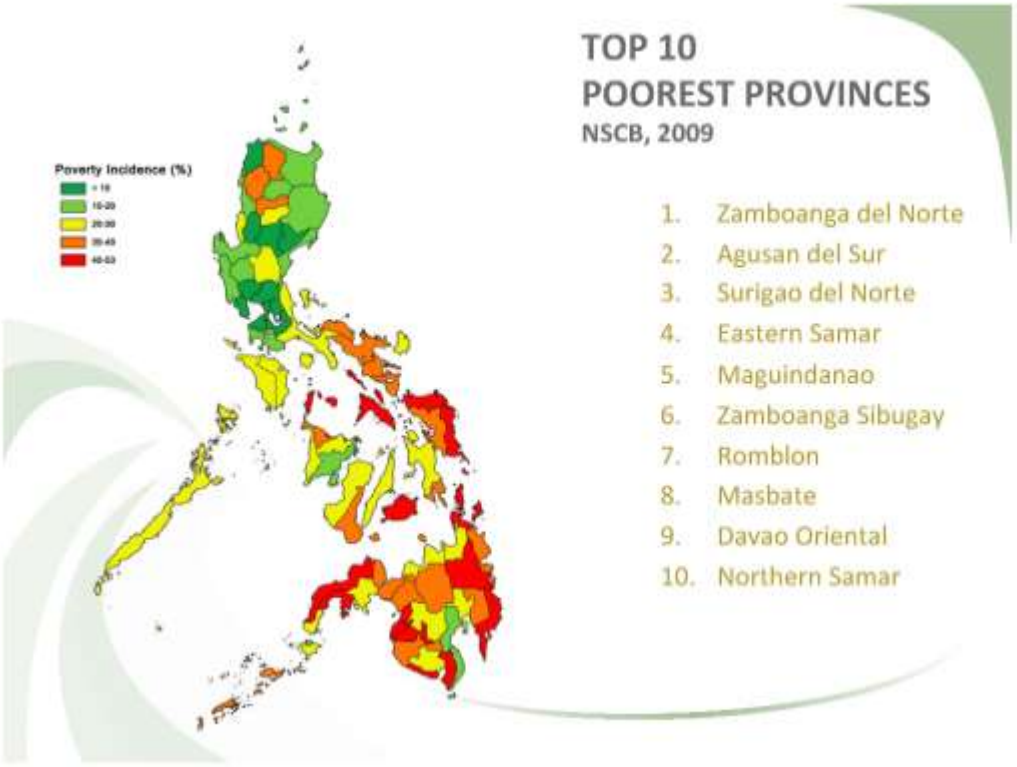


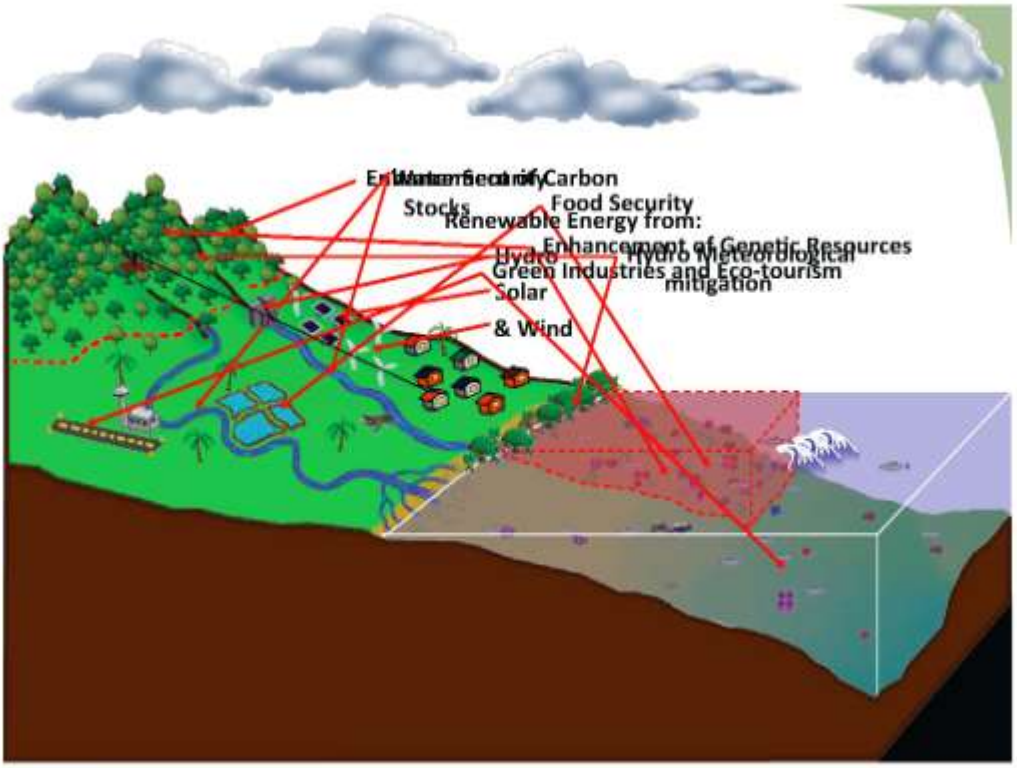

-60 -50 -40 -30 -20 -10 -5 5 10 20 30 40 50 60 (%)
CLIMATE CHANGE COMMISSION




Reforestation for plantation & production
Restoration and reforestation in the forest fragment matrix for protection
Protection of existing natural forests


Reforestation for plantation & production
Restoration and reforestation in the forest fragment matrix for protection
Protection of existing natural forests


Poverty Incidence (%)
TOP 10
POOREST PROVINCES
NSCB, 2009
1. Zamboanga del Norte
2. Agusan del Sur
3. Surigao del Norte
4. Eastern Samar
5. Maguindanao
6. Zamboanga Sibugay
7. Romblon
8. Masbate
9. Davao Oriental
10. Northern Samar


Carbon
Stocks
Food Security
Renewable Energy from:
Enhancement of Genetic Resources
Hydro
Hydro Meteorological
Green Industries and Eco-tourism
mitigation
Solar
& Wind

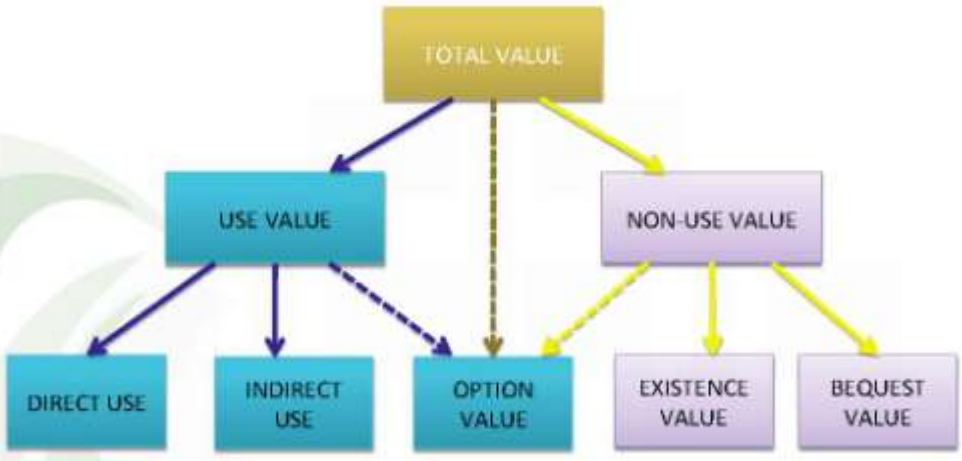
MOA signing with Gov. Matugas of Province of Surigao del Norte

PHL,"Rich" in natural resources; its true value

Total Economic Value (**TEV**) appears in environmental economics as an aggregation of the main function based values provided by a given ecosystem. Those include use and non-use values.

- **Direct USE VALUE:** Obtained through a removable product in nature (i.e. Timber, Fish, Water, minerals).
- **Indirect USE VALUE:** Obtained through a non-removable product in nature (i.e. Sunset, Waterfall, Watershed, Carbon Sequestration).
- **Option Value:** Placed on the future ability to use the environment. This reflects the willingness to preserve an option for potential future use (timber, minerals).
- **Non-Use Value:** Placed on a resource that will never be used, otherwise known as Existence Value or Bequest Value.

Total Economic Value of Natural Resources



Addressing Population, Health and Environment

- Prevent or reduce urban migration by creating more livelihood opportunities in rural
- Promote sustainable use of natural resources
- Improve delivery of basic services
- Promote skills that matches local job requirements
- Reduce risks from natural calamities and impacts of climate change

Manifestation of Impacts of CC

- Salt Water intrusion on fresh water
- Increase in incidence of dengue
- Thinning of root crops due to extreme weather
- Sea level rise

Means of Implementation

Financing	GAA, Climate Financing and ODA, Private Sector
Valuation	Natural Resource Accounting; Total Economic Valuation
Multi-stakeholder Partnerships	Mechanism of ensuring inclusiveness and buy-in; Encourage Public-Private Partnership
Policy and Planning Mainstreaming	Capacity Assessment and Development

Urban Fact or Myth

- Urban needs drive unsustainable utilization of natural resources
- Urbanization threatens food security and water sufficiency
- Technology is solution to urban decay
- Urban Heat Island contributed to the warming. UHI = localized warming arising from removal of natural surfaces such as vegetation and moist soil. "Concrete Jungle"
- Cost of Adaptation is HIGH

Issues and Challenges

- Lack of sense of urgency and lack of awareness from policy makers
- Leakage of resources and funds
- Misplaced priorities; policies as barriers to finance
- Lack of implementation of environmental laws "victimless crimes"
- Lack of studies on impacts of climate change
  - Mainstreaming of Vulnerability Assessment of programs and activities

The LOHAS Market

- Consumers spent almost $300 billion annually on products and services in the Lifestyles of Health and Sustainability (LOHAS) market in 2008, according to a new report released by the Natural Marketing Institute (NMI). The figure encompasses:
  - Personal Health: $117 billion (includes natural/organic food, personal care, supplements, etc.)
  - Green Building: $100 billion (includes certified homes, Energy Star appliances, etc.)
  - Alternative Transportation: $20 billion (includes hybrids, diesel vehicles, electric vehicles, car sharing, etc.)
  - Eco-tourism: $42 billion (includes travel spent on excursions in nature
  - Natural Lifestyles: $10 billion (includes home furnishings, apparel, etc.
  - Alternative Energy $1 billion (renewable power)

GREEN GROWTH AND GREEN ECONOMY IN AN INTERNATIONAL PERSPECTIVE AND THE EXPERIENCES OF THE FEDERAL REPUBLIC OF GERMANY: LESSONS FOR THE PHILIPPINES

BY MR KIM NGUYEN VAN

Head
Sector Project Sustainable Economic Development
GIZ Eschborn, Germany

The concepts of green economy and green growth have sparked debates in various international fora, as they are being touted as sustainable solutions in the face of escalating problems of climate change, environmental degradation, economic downturn, unemployment, poverty, etc.

Green Economy is defined as “an economy that improves human well-being and social equity while simultaneously reducing environmental risks and ecological scarcities.” (UNEP)

Green Growth means “fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.” (OECD)

These concepts will be the focal points in the UN Rio + 20 next year, as world leaders return to Rio 20 years after the first Earth Summit in 1992, with the goals of securing renewed political commitment to sustainable development; assessing the progress and implementation gaps in meeting already agreed commitments; and addressing new and emerging challenges.

Germany leads the way among European nations amidst growing calls for a transition to a global green economy. Jeremy Rifkin, founder and president of the Foundation of Economic Trends, wrote: “Germany has the role of a flagship in Europe, Germany is the motor of the third industrial revolution.”

What has Germany achieved to merit this distinction?

It has implemented an Environmental Fiscal Reform (EFR), changing the tax structure by taxing “bads” not “goods.” There’s more fiscal burden on things dentrimental to the environment or those that create external costs (such as burning fossil fuels, use of pesticide). On the other hand, subsidies were increased for the production of green and innovative products, and the execution of practices not harmful to the environment such as sustainable forestry methods or labour, not to mention a cut in income taxes to be funded by EFR measures.

Germany trailblazed a shift to renewable energies, embarking on what they termed as Energiewende ("Energy Revolution"), beginning in 1991. The energy revolution saw the Renewable Energy Act coming into force in 2000, pushing and gunning for renewable electricity, reduction of greenhouse gas emissions by 40 percent in 2020, complete phaseout of nuclear energy by 2022, and generally, accelerating the transition to a clean energy system through: energy efficiency with strong focus on the building sector (from building design to construction and operation); carbon free energy for all sectors with highly efficient and flexible gas power plants backing up in the interim period and innovation program for electric mobility; and strategic focus on long term goals by development of infrastructure and the adjustments needed to achieve a renewable energy dominated electricity system.

The fruition of its efforts: Germany has almost tripled its share of renewables in its final energy consumption from 3.8 percent in 2000 to 11 percent in 2010. In the last five years, investments in Germany's clean energy sector grew by over 75 percent, creating a dynamic industry that supports 367 000 jobs. Investments worth 20.2 bn EUR were poured into renewable energies in 2009 alone.

Why is it crucial for countries like the Philippines to learn from the example of Germany? Philippines is one of the countries that suffers the most brunt from environmental degradation and climate change, compounded by its poverty situation. More pressing than ever is the need for the country to not only enforce mitigation measures, but adaptation strategies more so, in the light of increasing environmental impacts.

Transitioning to a Green Economy is an opportunity to unlock the Philippines' growth potentials, especially in certain sectors such as food processing, tourism, green building or transport, bamboo processing, wholesale and retail. With that, jobs and new markets can be created, investment and innovation can be boosted. The transition of the energy sector must be seen as a chance for strengthening regional development by adding value to the local economy.

There has to be a systematic approach, though. It needs strong and aligned efforts across various fields of policy and decision making since a successful transition to a Green Economy is not simply a technological process but a social one that affects the society as a whole.

It must therefore be supported by all stakeholders - government, private sector, local authorities, civil society - in a democratic process. The effort must be coordinated, across all levels, from macro (green industrial policy, EFR, green infrastructure, regulations), to meso (ecoindustrial parks, certification schemes, innovation systems) to micro - consumers (ecologically and socially responsible consumption and investments) and micro - companies (resource efficiency, sustainable value chains).

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Green Economy and Green Growth

from international debates to national agendas

GIZ Symposium

Greening the Philippine Economy: Getting Ready for the Future Today
A special featured event in the staging of the Mabuhay Germany 2011
7 October 2011

Kim Nguyen Van - GIZ

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Content

Part I: international trends and debates

Part II: a German perspective on Green Economy / Green Growth

Part III: lessons learned – a vision for the Philippines

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Part I: international debates

Why? What? How?

Point of departure:

global economic, ecological and social crisis?

Vicious circle of climate change, environmental degradation, economic downturn, unemployment, poverty, insecurity and inequality

We need to change the way we grow:
sustainable solutions balancing economic, ecological and social goals.

concepts **Green Economy / Green Growth** as solutions?

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Part I: international debates

Why? What? How?

For what reasons?

Transition to a green economy as a necessity? YES!

Transition to a green economy as an opportunity? YES!

Transition to a green economy as a tradeoff? ???

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Part I: international debates

Why? | What? | How?

What does it mean exactly?

Green Economy: *"An economy that improves human well-being and social equity while simultaneously reducing environmental risks and ecological scarcities." (UNEP)*

*"***Green growth** *means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies." (OECD)*

Discussion of these concepts and their implementation in various international fora.

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Part I: international debates

Why? | What? | How?

What does OECD say?

"Towards Green Growth" Flagship Report launched in May 2011

- Focus on new opportunities for sustainable growth in OECD countries
- Includes market and non market based instruments
- Promotion of innovation as a major issue
- Measuring green growth (not yet resolved) / political econ.
- Ambition to look at green growth in emerging and developing economies as well
- Special background report on development issues planned

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Part I: international debates

Why? What? How?

And the UN Rio+20 process?

Goals:

- Securing renewed political commitment to sustainable development
- Assessing the progress and implementation gaps in meeting already agreed commitments
- Addressing new and emerging challenges

Major themes:

"Green Economy in the context of sustainable development and poverty eradication"

"Institutional Framework for Sustainable Development"

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Part I: international debates

Why? What? How?

What could be the result of the UN Rio+20 conference?

Formulating new Sustainable Development Goals (SDGs)?

Conceptualizing of a UN Green Economy Roadmap?

Deducing national roadmaps with specific objectives and indicators?

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Contents

Part I: international trends and debates

Part II: a German perspective on Green Economy / Green Growth

Part III: lessons learned – a vision for the Philippines

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Part II: a German perspective

econ. order | env fiscal reform | "Energie -Wende"

Basic thoughts – how to balance economic, ecological and fiscal goals?

- **General principles of Germany's Social Market Economy**

Competition is the path to innovation and economic wealth	**Equal opportunities** to take part in this competition	A **fair share** in the gains for everybody	Ownership goes along with **social and ecological responsibility**

- ***Success factor*: decentralized decision making (subsidiarity) and participation of private sector and civil society**
- **Historical evolution from a social to a social ecological market economy (SEME)**
- **There are no blueprints, but the SEME could serve as an example how to integrate social and environmental aspects into a growth model**

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Part II: a German perspective

econ. order | env fiscal reform | "Energie -Wende"

"Germany has the role of a flagship in Europe, Germany is the motor of the third industrial revolution"

-Jeremy Rifkin

(writer, founder & president of the Foundation of Economic Trends)

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Part II: a German perspective

econ. order | env fiscal reform | "Energie -Wende"

Example I – implementing an environmental fiscal reform by taxing "bads" not "goods"

Revenues can be used for investment in **environmental projects, poverty alleviation**, etc

Increase fiscal burden on things harmful to the environment / create external costs (burning fossil fuels, use of pesticide)

[Increase subsidies on green, innovative products]

Decrease the fiscal burden on things NOT harmful to the environment, such as sustainable forestry practices or labour – like a cut in income taxes can be funded by EFR measures

[Decrease subsidies on environmentally harmful products]

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Part II: a German perspective

econ. order | env fiscal reform | "Energie -Wende"

Example I – implementing an environmental fiscal reform in Germany

1999-2003 (tbc in 2011):
- Labour taxes reduced
- transport / heating fuel taxes increased
- electricity tax introduced

→

- Tax subsidies for car transport reduced several times
- Hard coal subsidies reduced (phased otu in 2018)
- Ticket fees in air traffic, heavy goods vehicle toll fees, reduction in tax exemptions

Direct impacts of ETR only:

More

- Tax on environmental 'bads': energy taxes (+18.7 bn EUR)
- Employment (+250,000 jobs)
- Pensions (+1.2 percent)

- CO_2-emissions (2-3%)
- Tax on 'goods': Pension costs (-16 bn EUR or -1.7 percent)
- Costs for industry (-1 bn EUR)

Less

Source: Green Budget Germany calculations

Page 13

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Part II: a German perspective

econ. order | env fiscal reform | "Energie -Wende"

Example II – Germany's transition to renewable energies ("Energiewende")

1991

law encouraging renewable electricity and phase out nuclear energy

2000

Renewable Energy Act (reducing greenhouse gas emissions by 40 percent in 2020

2011

phasing out nuclear energy by 2022 and accelerating the transition to a clean energy system largely built on renewable energy and energy efficiency

Page 14

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Part II: a German perspective

econ. order | env fiscal reform | "Energie -Wende"

Example II – Germany's transition to renewable energies ("Energiewende")

Instruments:

energy efficiency:
strong focus on the building sector

carbon free energy in all sectors:
highly efficient and flexible gas power plants backing up in the interim period; innovation program for electric mobility

strategic focus on the long term goals:
develop the infrastructure and adjustments needed for a renewable energy dominated electricity system

Feasibility:

Germany has almost tripled its share of renewables in its final energy consumption from 3.8 percent in 2000 to 11 percent in 2010

In the last five years, investments in Germany's clean energy sector grew by over 75 percent, creating a dynamic industry that supports 367,000 jobs.

20.2 billion euros investments in renewable energies in 2009

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Contents

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Part III: Lessons learned – a vision for the Philippines

Green Economy as necessity:

- Very affected by environmental degradation and climate change
- Need for mitigation but especially for **adaptation** strategies

Green Economy as opportunity:

- Unlock growth potentials, esp in certain **sectors**, such as food processing, tourism, green building or transport, bamboo processing, wholesale / retail
- emphasizing existing and potential **comparative advantages** and building long term **competitiveness**, so that jobs and new markets can be created, investment and innovation can be boosted
- The transition of the energy sector must be seen as a chance for strengthening **regional development by adding value to the local economy**

Green Economy as a tradeoff:

- **Systematic approach**: Need of strong and aligned efforts across various fields of policy and decision making
- Need for **country specific implementation strategies**: There is no blueprint

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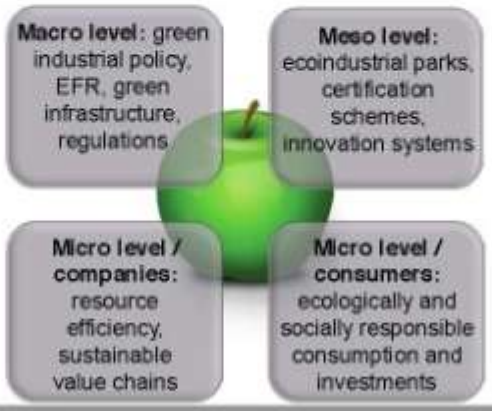
Part III: Lessons learned – a vision for the Philippines

Thesis:

A successful transition to a Green Economy is not simply a technological process but a social one that affects the society as a whole. It must therefore be supported by all stakeholders (government, private sector, local authorities, civil society) in a democratic process.



GREEN ECONOMY IN THE REPUBLIC OF KOREA BY DR JUNG TAE YONG

Deputy Executive Director
Global Green Growth Institute GGGI
Seoul, Republic of Korea

South Korea is at the forefront of regional efforts pushing for green growth - defined as environmentally sustainable economic growth for the wellbeing of all - by fasttracking its shift from being a high carbon economy to a green economy. It envisions itself as becoming the world's seventh green power by the year 2020, and the fifth by 2050.

In August of 2008, South Korean President Lee Myung-bak declared this vision. This was immediately followed by the setting up of the Presidential Commission on Green Growth that drafted a five year blueprint for green growth. In December 2009, the National Assembly passed the Low Carbon and Green Growth Act, which outlined a national framework for green growth.

What is GGGI?

South Korea believes that to achieve green growth, it would require global green cooperation. A major contribution to the international community is the launch of the Global Green Growth Institute (GGGI) in 2010. It serves as a global think and act tank in leading developing countries towards a low carbon society. It has positioned itself as a new breed of nonprofit, international organization - independent, interdisciplinary, multistakeholder and driven by emerging and developing countries.

Activities and Interventions

GGGI provides technical and financial support to developing and emerging countries in the design and implementation of their own green growth plans at the national or provincial level. It facilitates public - private cooperation to strengthen the enabling environment for resource efficient investment, innovation and diffusion of best practices in the private sector. It pursues research to advance the theory and practice of green growth, particularly drawing from the experience of the governments and industries that GGGI has worked with.

To date, its bilateral partners are Korea, Cambodia, Denmark, United Arab Emirates (UAE), Kazakhstan and Mexico while its multilateral partners are the Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD) and the World Bank (WB). It has also partnered with such international organizations as United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), World Economic Forum (WEF), International Energy Agency (IEA), Organisation for Economic Co-operation and Development (OECD) and United Nations Economic Commission on Africa (UNECA). It has linked with academic institutions, namely, the National Research Council for Economics, Humanities, Social Sciences of Korea, Masdar Institute of Science and Technology of UAE; and Tsinghua University of the People's Republic of China (PRC).

Its donor countries are Korea, Denmark, Germany, Japan, UAE, Australia, United Kingdom and its recipient countries are Brazil, Ethiopia, Indonesia, Cambodia, India, Kazakhstan, PRC, Rwanda, UAE and Vietnam.

Cooperation with GIZ

With Germany as one of GGGI's donor countries, a Memorandum of Understanding (MOU) was signed in May 2011 in Eschborn, Germany signifying its cooperation with GIZ. The areas of cooperation are support in green growth and sustainable development activities as well as cooperation and services on green growth and climate change. Potential future cooperation projects include green cities / urban development programmes, small medium enterprises and climate change adaptation programmes.

Cooperation with the Philippines

A draft of an MOU between the Philippines' Climate Change Commission CCC and GGGI is underway. Potential cooperation projects are set to be finalized and firmed up this year.

Lessons to learn from South Korea

To simply show how serious South Korea is in its green growth efforts, the government committed two percent of its Gross Domestic Product (GDP) to green growth between 2009 and 2013, which is twice the amount of investment suggested by the United Nations Environment Program (UNEP). It has also committed a voluntary Greenhouse Gas (GHG) reduction of 30 percent from the Business as Usual (BAU) by 2020, despite being a nonAnnex I Party to the United Nations Framework Convention on Climate Change (UNFCCC).

During the economic recession in 2008, South Korea has been most efficient in the actual spending of its green stimulus, with almost 20 percent of funds disbursed at the end of the first half of 2009 as compared to only three percent for most countries. It has also showed an active demonstration and advocacy of green growth at the international level.

The Philippines can take inspiration from how South Korea moved past political lethargy or apathy and move forward with government action and policies.

PRESENTATION SLIDES

I. Global Challenges and Paradigm Shift

Global Challenges – Need for New Paradigm

Addressing the global challenges requires a **comprehensive rethinking** of our ways of valuing and measuring socioeconomic progress.

A new paradigm needs to focus on the **inherent necessity and value** of environmental protection in enabling economic growth.

Practical and positive approaches and measures are necessary to achieve goals of economic growth and environmental protection

Rethinking of growth paradigm:

Quantity-oriented (labor, capital) → Quality-oriented (new ideas, state-of-the-art technologies)

Broadening the concept of "going green":

Responding to environmental degradation and climate change → Enhancing added value While promoting efficient use of resources (energy) in the economy

(Source: Prime Minister's Office, Korea, 2009)

Climate Change Mitigation and Adaptation

1. Combating Global Warming and Curbing GHG emissions
   - Global warming and climate anomalies are universal
   - Collective and sustained endeavor required

2. Widespread Environmental and Ecosystem Degradation
   - Sacrificing "environment" over "growth" has led to drastic damages
   - Unsustainable resource use resulting in deforestation, desertification and other damages to the ecosystem

3. Lack of Institutional and Technical Capacity for Climate Change Adaptation
   - Developing countries are particularly vulnerable as they lack both institutional and technical capacity
   - Building such capacity requires financial resources
   - Support towards developing country capacity-building required

Access to and Management of Global Commons

1. Energy Resources and Management
   - Securing access to clean and reliable energy for all
   - Decreasing reliance on fossil fuels
   - Finding and utilizing alternative, renewable energy sources
   - Increasing energy efficiency

2. Water Resources and Management
   - Ensuring access to clean water sources
   - Developing response capacity for droughts and floods
   - Management of existing water resources

3. Food Security and Land Management
   - Achieving food security through improving agricultural yield
   - Establishing efficient distribution channels
   - Reforming land management regulations and laws

Paradigm Shift – Addressing the Challenges

New Approach to Managing Global Commons

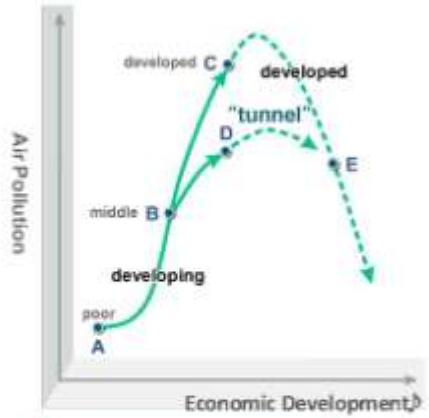
1. Internalizing External Costs to the Environment
   - Regulatory measures to discourage GHG emissions, inefficient use of resources, waste and pollution
   - Market mechanisms such as taxation, removal of subsidies, appropriate pricing for scarce resources

2. Market and Financial Incentives Structure
   - New incentives and payments for environmentally friendly practices and management
   - Public sector finance and investment towards green practices
   - Encouraging private sector engagement by creating new market opportunities and favorable investment environment

3. Building Institutional Mechanisms
   - Accountable policies and transparent practices
   - Empowering local governments and communities
   - Promoting public-private partnerships

II. Green Growth – A New Paradigm

What is Green Growth?



Munasinghe (1995,2008)

Old Path : A → B → C → E

Following the *"develop first, clean up later"* path of developed countries will widen the gap and not be able to catch up.

New Path : A → B → D → E

International cooperation through technology transfer and fund support for measures against climate change will enable developing countries to choose the new path and *"act wise"* from the beginning.

Conceptual Framework

What is Green Growth?

OECD's Definition

"Green growth means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. To do this, it must catalyze investment and innovation which will underpin sustained growth and give rise to new economic opportunities."

(Source: Towards Green Growth, OECD, 2011)

UNEP Definition

"A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services."

(Source: Green Economy Report, UNEP, 2011)

Low Carbon, Green Growth Act Definition

"The term "green growth" means growth achieved by saving and using energy and resources efficiently to reduce climate change and damage to the environment, securing new growth engines through research and development of green technology, creating new job opportunities, and achieving harmony between the economy and environment"

(Source: Framework Act for Low Carbon, Green Growth, Korea, 2010)

Global Trends

Green growth has become

the central topic of leading international organizations.

- 'OECD Declaration on Green Growth' signed by ministers from 34 countries (June 2009)
- Published *Towards Green Growth* (May 2011)

- 66th ESCAP Commission Session discussed green growth policy options for the triple crisis of food, fuel and finance (May 2010)
- Actively published green growth-related publications including Greening Growth in Asia and the Pacific, Greening of Economic Growth Series, etc

- Published *Green Economy Report*, underlining sustainable public policy and investment path on the road to Rio+20 (Feb 2011)

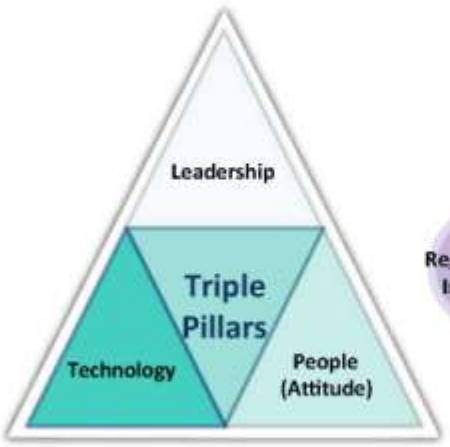
*"We are running out of time. Time to tackle climate change. Time to ensure sustainable, climate-resilient green growth....**Together, let us tear down the walls. The walls between the development agenda and the climate agenda. Between business, government, and civil society. Between global security and global sustainability.**"*

Ban Ki-moon, at World Economic Forum, Jan 2011

11

Enabling Green Growth: Roles of Government

Pillars of Green Growth & Roles of Government



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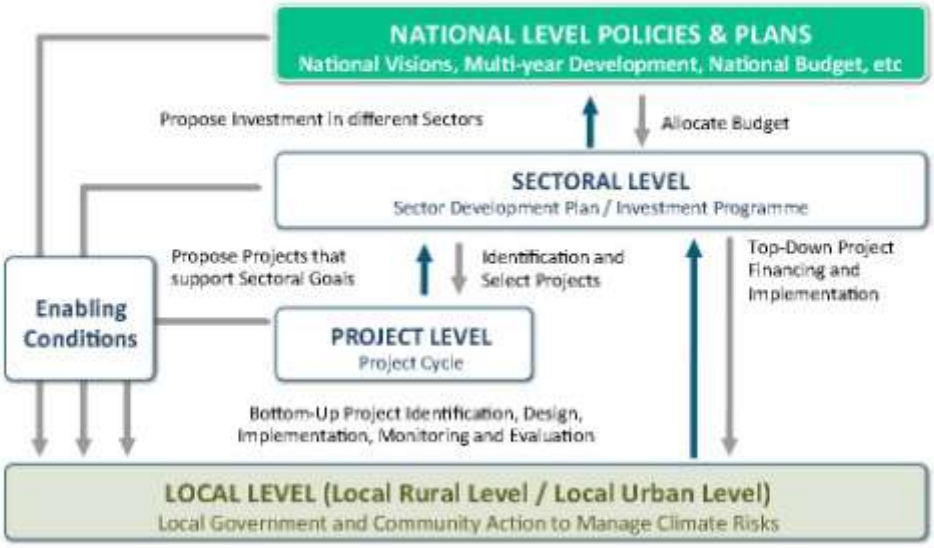
Enabling Green Growth: Roles of Government



13

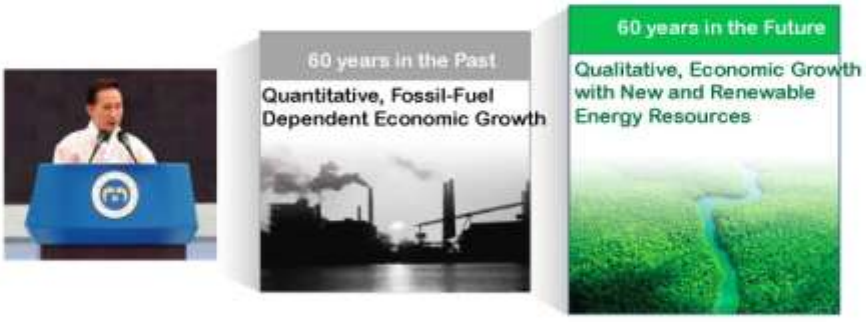
Enabling Green Growth: Roles of Government

14

III. Korea's Experience of Green Growth

Korea's Experience of Green Growth

- Declaration of New Vision (15 Aug. 2008): ***"Low Carbon, Green Growth" as a new paradigm of development***



Korea's Experience of Green Growth

Korea – National Strategy on Green Growth

VISON♪

To become the world 7th Green power by 2020, and the 5th by 2050♪

Three Objectives, Ten Policy Directions♪

Mitigation of climate change & energy independence♪	Creating new engines for economic growth♪	Improvement in quality of life and enhanced international standing
Improvement in Quality of life and enhanced international standing♪	4. Development of green technologies 5. The "greening" of existing industries and promotion of green industries 6. Advancement of industrial structure 7. Engineering a structural basis for the green economy♪	8. Greening the land, water and building the green transportation infrastructure 9. Bringing green revolution into our daily lives 10. Becoming a role-model for the international community as a green growth leader

17

Korea's Experience of Green Growth

Korea – National Strategy on Green Growth

Main Contents

- National Strategy for Low Carbon, Green Growth
- Establishment and Implementation of Action Plans by Central Administrative Agencies & Local Government
- Composition and Operation of Presidential Committee on Green Growth
- Basic Principles for Materialization of Green Economy and Green Industries
- Fostering and Support of a Green Economy and Green Industries
- Establishment and Support of Companies for Investment in Green Industries
- Basic Plan for Coping with Climate Change
- Basic Plans for Energy
- Reporting on Quantity of Emitted Greenhouse Gases and Quantity of Consumed Energy
- Establishment of Integrated Information Management System for Greenhouse Gases
- Cap and Trade System
- Management of Greenhouse Gases in the Traffic Sector
- Diffusion of Culture in Production and Consumption for Green Growth
- Education and Public Relations Activities for the Application of Green Life

18

Korea's Experience of Green Growth

Korea – Important Policy Instruments

Legislation
- National Strategy on Low Carbon, Green Growth
- 5-year Action Plan
- Establishment of Greenhouse Gas Reduction Target
- Framework Act on Low Carbon Green Growth
- Presidential Committee on Green Growth

Energy
- Establishment of Energy Master Plan
- Development of Renewable Energy
- Development of Smart Grid

Industry
- Greenhouse Gas Inventory
- Implementation of Target Management System
- Introduction of Emission Trading System
- Financial Support for Green Industry

Transportation
- Development of Green Cars
- Restriction of Auto Exhausts Emission
- Transportation System Management

Tourism
- Expansion of Green Tourism

Building
- Expansion of Green Building

Technology
- Financial Support for Green Technology

Korea's Experience of Green Growth

Korea – Institutional Structure for Implementation

Presidential Committee on Green Growth

Ministry of Environment	Ministry of Knowledge Economy	Ministry of Land, Transport and Maritime Affairs	Ministry for Food, Agriculture, Forestry and Fisheries
• Target Management System • ETS • Restriction of Auto Exhausts • Waste Recycling • Water Management	• Renewable Energy • Energy Efficiency • Smart Grid • Green Technology • Energy Master Plan • Green IT	• Green Car • Green Distribution System • Green Building	• Development of New Varieties • Technology for Energy Recovery from Waste
• Framework Act on Low Carbon, Green Growth • Framework Act on Environmental Policy • Clean Air Conservation Act • Wastes Control Act	• Framework Act on Energy Policy • Act on New and Renewable Energy • Industrial Development Act	• Automobile Management Act • Act on Development of Environment-friendly Automobiles • Action Transportation Tax	• Building Act • Urban Development Act • Act on Maintenance and Improvement of Urban Areas

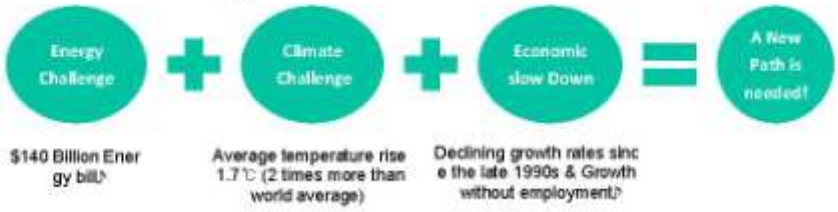
Why Green Growth?

(Korea's case)

Increasing Energy Vulnerability

- **Top 10** energy consumer **with 140 Billion USD in energy bill♪**
- **Trade deficit: 97%** of the energy is imported♪
- **Dependence on fossil fuels: 83%** of the energy is from fossil fuels

Triple Crunch: energy crisis did not come alone♪



21

What makes Korea a model for green growth? (2) ♪

Committed **2% of its GDP** to green growth between 2009 and 2013, which is twice the amount of investment suggested by the UNEP

Voluntary GHG reduction of **30%** from BAU by 2020, despite being a non-Annex I Party to the UNFCCC

After the economic crisis in 2008, Korea has been most efficient in the actual spending of its green stimulus, with almost 20 per cent of funds disbursed at the end of the first half of 2009, compared to only 3 per cent for most countries.

Active demonstration and advocacy of green growth at international level

22

Korea's Experience of Green Growth

Global Green Cooperation

- Can Korea do it alone? UN, OECD, WEF…
- GGGI Initiative, Climate Finance Cooperation

Green ODA	• Increase from 14% in 2009 to 30% by 2020 • More effective and efficient operation of ODA
East Asia Climate Partnership	• 2008 – 17 key projects with 7 countries & 4 International organizations • 2009 – 18 new projects
Global Green Growth Institute (GGGI)	• To assist countries in formulating their own green growth plans • To serve as a global think and act tank in leading developing countries to a low carbon society
Climate Finance Cooperation	• How do we go about fast start financing? • Copenhagen Accord agreed on fast start fund of $30 billion between 2009-2012 / $100 billion by 2020 a year

23

IV. Global Green Growth Institute

24

History

GGGI is an independent, international non-profit organization dedicated to supporting the new model of economic development, '**Green Growth**'.

"I will ensure that GGGI will evolve into a permanent common asset of the international community by 2012"

- Lee Myung-bak, President of Republic of Korea, June 2010

Creation of GGGI announced by President Lee Myung-bak at UNFCCC COP-15

Copenhagen, Denmark
December, 2009

GGGI launched at East Asia Climate Forum

Seoul, Korea
June, 2010

"GGGI will significantly contribute to a variety of UN's activities regarding climate change"

- Ban Ki Moon, UN Secretary-General, June 2010

"GGGI is just the right institution at just the right time."

- Inger Anderson, Vice President of Sustainability for the World Bank, December, 2010

GGGI Side Event at UNFCCC COP-16

Cancun, Mexico
December, 2010

Who We Are

Vision

A world-class international organization dedicated to promoting and disseminating green growth worldwide, grounded upon partnerships between developing and developed countries & public and private sectors

Mission

1.Provide and facilitate technical and financial support to assist developing countries in their efforts to establish fact-based, analytically sound green growth strategies that are feasible and well-aligned to their national goals

2.Promote green growth through research in theory and practice.

3.Disseminate the results of our research and activity on green growth globally for capacity-building and knowledge sharing

Objectives

The concept of green growth suggests that ***"Growth and climatic and environmental sustainability are not merely compatible objectives, but can be made mutually reinforcing for the future of humankind."***

Green Growth provides a set of strategies that aims for continued economic growth and environmental sustainability at the same time.

27

GGGI Activities

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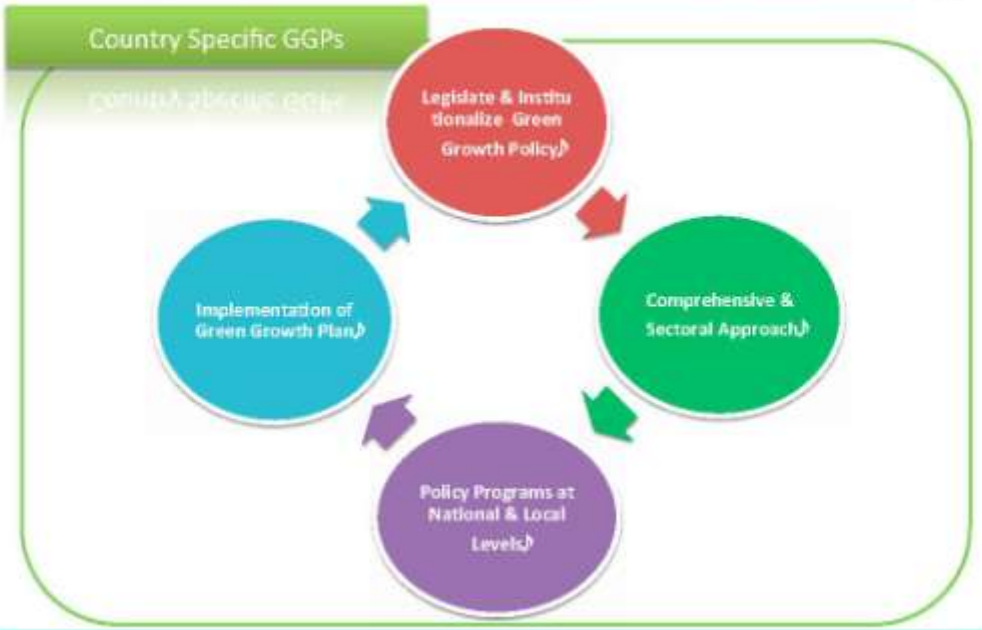
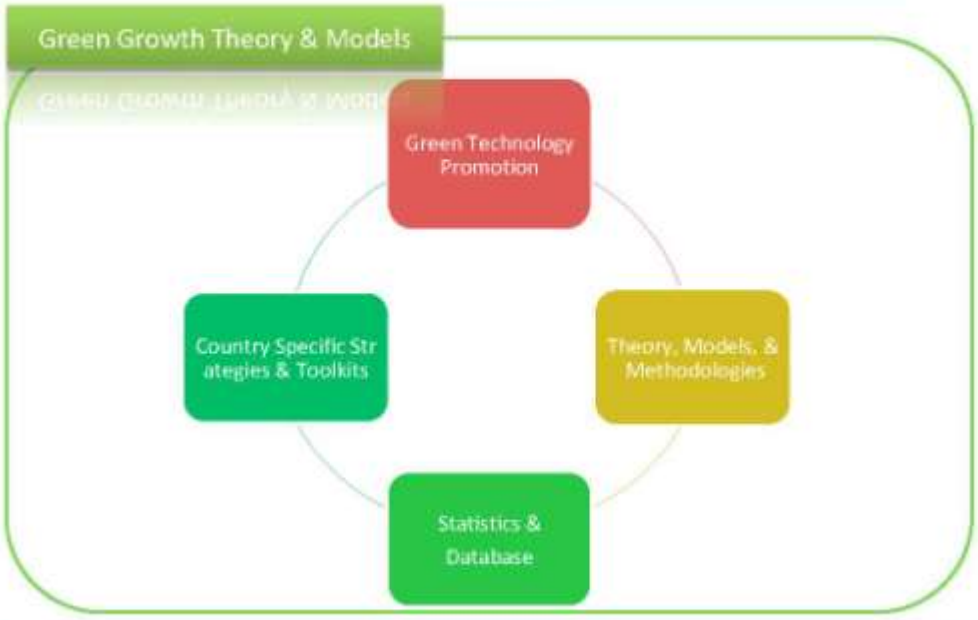
1. Country Projects: Green Growth Plans (GGPs)



2. Capacity Building

3. Research

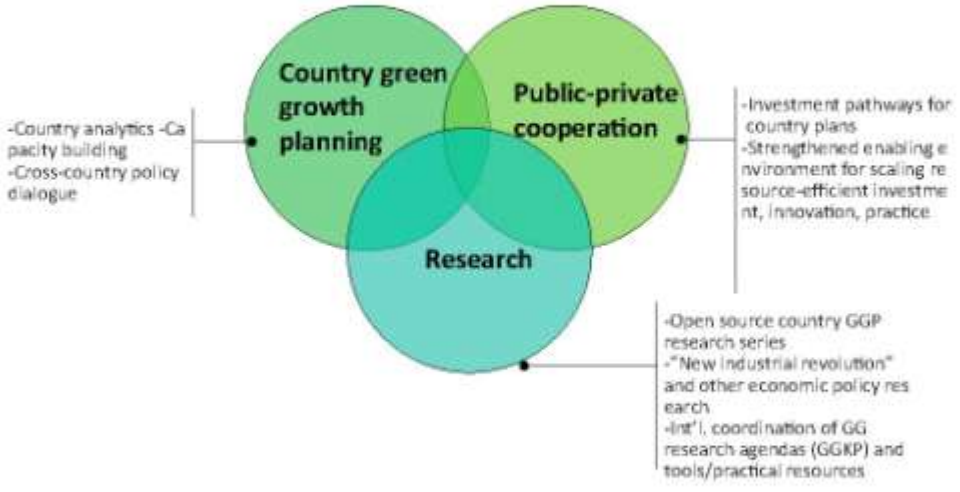


4. Knowledge Sharing♪

GGGI focuses on "Power of Example" by accumulating and disseminating world's best practice on Green Growth

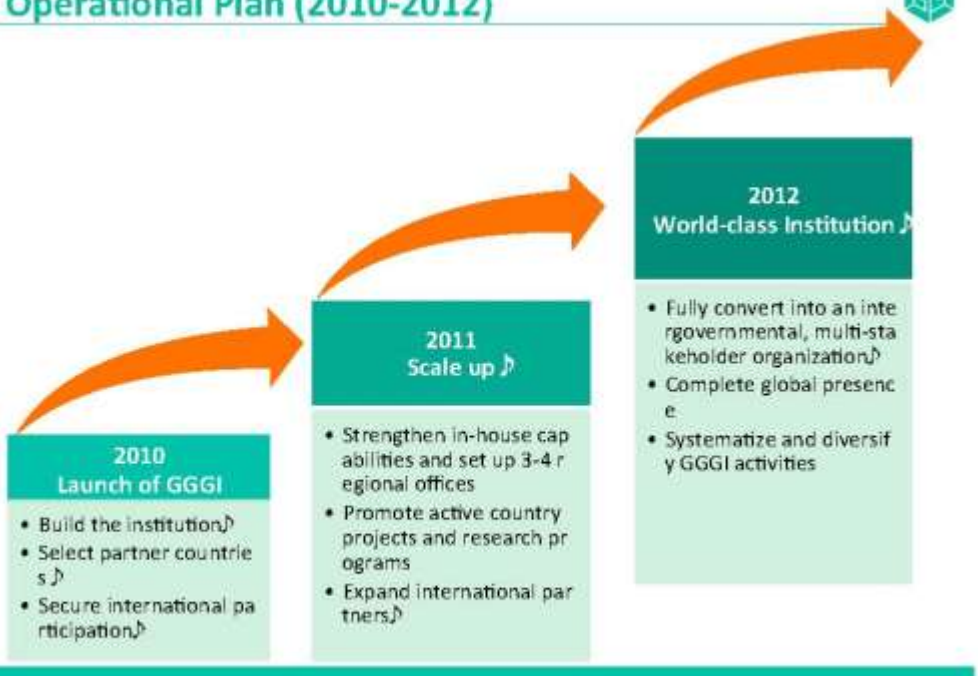
5. Public-Private Partnership

Interlinked Functions



GGGI Operation Plan

Operational Plan (2010-2012)



Partnership

MOUs

- ***Bilateral Partners:*** *Korea* (2010), *Cambodia*, *Denmark*, *UAE* (2011), Kazakhstan, Mexico
- ***International Organizations***: *UNESCAP* (2010), *WEF* (2011) I EA, OECD, UNECA
- ***Multilateral Partners:*** *ADB* (2010), EBRD, World Bank (2011)
- ***Academic Institutions:*** *National Research Council for Economics, Humanities and Social Sciences of Korea* (2010), Masdar Institute of Science and Technology, UAE; Tsinghua University, PRC (2011)

Partnership with Countries

- ***Donor Countries***: *Korea*, *Denmark* (2010), *Germany*, *Japan*, *UAE*, *Australia*, *UK* (2011)
- ***Recipient Countries***: Brazil, Ethiopia, Indonesia (2010), Cambodia, India, Kazakhstan, PRC, Rwanda, UAE, Vietnam (2011)

37

IV. Cooperation with GIZ

38

Memorandum of Understanding (MOU) signed on May 2011 in Eschborn, Germany

Areas of cooperation:

- support in green growth and sustainable development activities
- cooperation and services on green growth and climate change

Potential future cooperation projects:

- green cities/urban development programmes
- SMEs
- adaptation programmes

39

IV. Cooperation with the Phil. Gov't

40

- Draft Memorandum of Understanding (MOU) between Climate Change Commission and GG GI is underway
- Potential cooperation projects are yet to be finalized/firmed up before end of the year

41

Thank you!

42

RENEWABLE ENERGIES

Dr Günter Matschuck
Vice President, GPCCI
President, Maschinen & Technik, Inc MATEC

35 percent coal, 29 percent geothermal, 29 percent natural gas, 12 percent hydro, oil based 9 percent, wind 0 percent, solar 0 percent and biomass 0 percent comprise the total power generation of the Philippines at 65 795 GWh.

The relevant Philippine laws supporting a greener future are the 2006 Biofuels Act (Republic Act RA 9567) which provides fiscal incentives and mandates the use of biofuels blended gasoline and diesel fuels. The 2008 Renewable Energy Act (RA 9513) provides fiscal and nonfiscal incentives to private sector developers and manufacturers. According to the Department of Energy (DOE) the resources of Renewable Energy (RE) excluding geothermal have the following resource capacity: for biomass < 1 GW; run of river – hydro 10 GW; solar (photovoltaic PV) 5 kW/h/m2/day unlimited, only limited by space factor; wind 76 GW and the ocean at 170 GW.

The fiscal incentives cover duty free importation, tax credit on domestic capital energy and services, income tax holiday, corporate tax rate, net operating loss carry over, accelerated depreciation and 0 percent VAT. The two most discussed nonfiscal support schemes are for >100 kW the feed-in tariff (FIT) and for < 100 kW net metering. FIT refers to a renewable energy policy that offers guaranteed payments on a fixed rate per kWh for energizing RE sources, except any generation for own use or to rate itself as established pursuant to these rules. This is based on the principle of equal burden sharing for a brighter greener future.

The Energy Regulatory Commission (ERC) issued a ruling on the FIT which states that the electricity consumers who are supplied through the distribution or transmission network shall share in the costs of the FITs, in part through a uniform charge (in PHP/kWh) to be referred to as FIT All - applied to all billed kWh. Table 1 shows the 16 May 2011 FIT Recommendation from the Natural Resources and Environment Board (NREB) to ERC for decision.

				Rate Impact
Resources	Capacity (MW)	FIT ** PHP / kWh	FIT degradation rates	FIT All*** PHP / kWh
Biomass	250	7	0.5 % after 2nd year	0.041
Run of river hydro (1 – 10 MW)	250	6.15	0.5 % after 2nd year	0.012
Solar (PV) > 500 kW ground	100 50*	17.95	6 % after 1st year	0.0228
Wind	220 200*	10.37	0.5 % after 1st year	0.03
Ocean energy (thermal)	10	17.65	none	0.005
TOTAL	830			0.1118

* revisions by DOE

** to be paid to RE generator for 20 years; compromise suggestion – no differentiated FIT for roof mounted

*** for example for 44 percent Meralco customers (~ 100 kWh / month) the impact of FIT All would increase power bills by 12 PHP / month – only if installation targets are all in operation for three years.

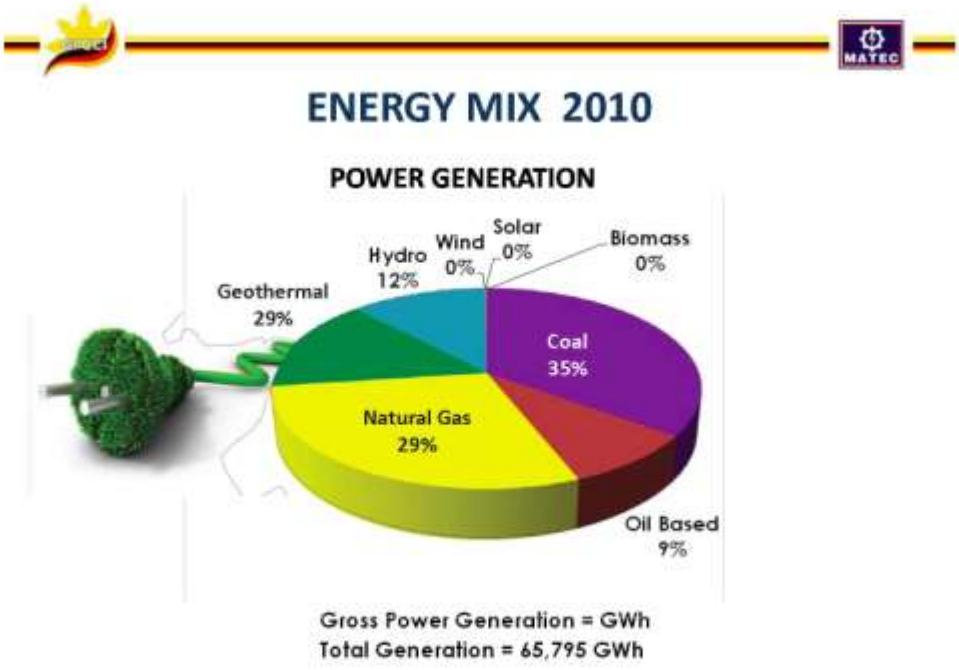
Any licensed RE producer is entitled to avail of FIT. Not all RE producers will qualify, owing to the capacity targets and interconnection. The challenges are the priority connection grid, priority dispatch, required reserve issues for intermitting energy as well as other reasons concerning connection details. The criteria for allotment are not yet known. It is speculated that it will be awarded on a first come, first served basis.

The second support scheme for RE generation for distributed generation which is predominantly applicable to building integrated photovoltaics (BIPV) is net metering. This covers RE generation which is <100 kW in residential and office premises. Surplus generation is supplied or exported to distributor utilities DU (3 meters: import, export and RE generation). Pricing is under discussion on surplus compensation payment from DU. DUs recover RE generation support through tradable RE certificates. Net metering rules are in their final stage of preparation. Meralco has already finalized technical draft manual for interconnection. Universal interconnection and permitting procedures for all DUs is requested by PSPA. For net metering surplus generation capacity DU limits are expected. The minimum is set by NREB. RE generation under net metering is not subject to capacity limits of DOE.

Off grid refers to the delegated NPC, small power utilities group (SPUG) area. There are 41 electric cooperatives (DU, coops) in 78 islands – 33 300 barangays with 192 municipalities. The installed generation (diesel) in 38 location is ~150MW. The RE developers register with DOE. They undergo competitive selection process (bidding) undertaken by the Energy Commission (EC). New power producer (NPP) signs the power supply agreement (PSA). RE developers shall be entitled to a cash generation incentive per kWh rate generated which is equivalent to 50 percent of the universal charge (UC) for power needed to service missionary areas where they operate the same - to be chargeable against the universal charge for missionary electrification (UC – ME). Universal charges billed to consumers are missionary, environmental fund, NPC stranded debt, NPC stranded debt contract cost, equal in taxes and royalties and DU's stranded contract costs.

The target is to eliminate electricity poverty. When good legislation and good execution converge, only then will a positive result to green the Philippines will be achieved!

PRESENTATION SLIDES



PHILIPPINE LAWS to Support a Greener Future

- The Biofuels Act of 2006 - (Republic Act No. 9367)-Provides fiscal incentives and mandates the use of biofuel-blended gasoline and diesel fuels.
- The Renewable Energy Act of 2008 - (Republic Act No. 9513)-Provides fiscal and non-fiscal incentives to private sector developers and manufacturers .

RE Resources*	Resource Capacity
Biomass	< 1GW
Run of River - Hydro	10 GW
Solar (PV)	5KW/hr/m²/day unlimited, only limited by space factor
Wind	76 GW
Ocean	170 GW

* DOE figures excluding geothermal

Fiscal Incentives:

1. Duty-free importation
2. Tax credit on domestic capital energy and services
3. Income tax holiday
4. Corporate tax rate
5. Net Operating Loss Carry Over
6. Accelerated Depreciation
7. 0% VAT

Mabuhay Germany 2011

The Two Most Discussed Non-Fiscal Support Schemes

>100 kW: Feed-in Tariff **<100 kW: Net Metering**

EQUAL BURDEN SHARING FOR A BRIGHTER GREENER FUTURE

A. Support scheme **On-Grid** commercial RE Generation over 100kW

Feed-in Tariff

ERC FIT RULES: Electricity consumer who are supplied through the distribution or transmission network shall share in the costs of the FIT's in part through a uniform charge(in PhP/kWh) to be referred to as FIT All applied to all billed kWh.

FIT: Refers to a renewable energy policy that offers guaranteed payments on a fixed rate per kWh for energizing RE sources, except any generation for own use, or to rate itself as established pursuant to these Rules.

Mabuhay Germany 2011

FIT Recommendation on May 16, 2011 from NREB To ERC for Decision

RESOURCES	CAPACITY (MW)	FIT ** PhP/kWh	FIT Degration Rates	Rate Impact FIT-ALL *** PhP/kWh
BIOMASS	250	7	0.5% after 2nd year	0.041
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SOLAR (PV)>500KW ground	100 50*	17.95	6 % after 1st year	0.0228
WIND	220 200*	10.37	0.5 % after 1st year	0.03
OCEAN ENERGY (THERMAL)	10	17.65	None	0.005
TOTAL	830			0.1118 **

* Revisions by DOE

**To be paid to RE generator for 20 years; compromise suggestion : no differentiated FIT for roof mounted

***e.g. For 44% of Meralco Consumers (~ 100kWh/month) the impact of FIT-All would increase power bills by 12PhP/months : only if installation targets are all in operation, is in 3 years.

Mabuhay Germany 2011

Feed-in Tariff

WHO IS ENTITLED?

Any Licensed RE Producer

WHO WILL BE GRANTED?

Not all RE producer will be allotted

WHY?

CAPACITY TARGETS
INTERCONNECTION REASONS

Challenges: Priority connection grid
Priority dispatch
Required reserve issues for intermitting energy
Other reason for connection denials

Criteria for allotments not yet known; first come first served?

Mabuhay Germany 2011

B. Support scheme for RE Generation for Distributed Generation

(dominantly applicable for BIPV, also known as consumer's Solar Rooftops)

NET METERING

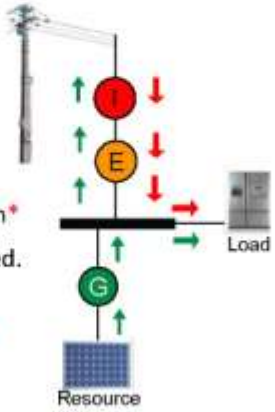
- RE generation < 100kW in residential & office premises
- Surplus generation is supplied (exported) to DU (3 meters : Import-, Export-, and RE Generation)
- Surplus compensation payment from DU.* DU's recover RE generation support through tradable RE certificates.
- Net metering rules prepared (final stage)
- Meralco finalized technical draft manual for interconnection*

For net metering surplus generation capacity DU limits expected. Minimum set by NREB

* Universal interconnection and permitting procedures for all DU's requested by PSPA

Note: RE generation under net metering is not subject to capacity limits of DOE

*Pricing under discussion



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OFF-GRID

DELEGATED NPC/SMALL POWER UTILITIES GROUP (SPUG) AREA

Island Grids

- 41 Electric Cooperatives (DU/Coops) in 78 Island, 3, 3300 Barangays with 192 Municipalities
- Installed Generation (Diesel) in 38 locations ~150MW

RE Implementation

- RE Developer registers with DOE
- Undergoes competitive selection process (Bidding) undertaken by EC
- New Power Producer (NPP)→Power Supply Agreement (PSA)

Payment: RE developer shall be entitled to a cash generation incentive/kWh rate generated, equivalent to 50% of the UC for power needed to service missionary areas where it operates the same, to be chargeable against the Universal Charge for Missionary Electrification (UC-ME).

Universal charges billed to consumers: Missionary, Environmental fund, NPC stranded debt, NPC stranded debt contract cost, Equal in taxes and Royalties, DU's stranded contract costs.

TARGET: ELIMINATE ELECTRICITY POVERTY

Mabuhay Germany 2011

Only when good legislation and good execution converge, a positive result will be reached to green the Philippines

Thank You!

Mabuhay Germany 2011

DEVELOPMENT PARTNERSHIP WITH THE PRIVATE SECTOR (DPP) IN ENERGY EFFICIENCY

Mr Tristan Loveres
Chief Operating Officer
TÜV Rheinland PH Inc

TÜV Rheinland – what is this company?

TÜV Rheinland Group is a leading provider of technical services worldwide. Founded in 1872 and headquartered in Cologne, Germany, the group employs more than 16 000 committed and skilled staff members who use innovative ideas, solid technical knowledge and a worldwide network to ensure the safety and further development of various products, services, systems and employees – and thus support lasting economic success in 500 locations in 61 countries and in 39 business fields. It generates annual revenues of 1.3 bn EUR. The Groups mission and guiding principle is to achieve sustained development of safety and quality in order to meet the challenges arising from the interaction between people, technology and the environment.

TÜV Rheinland trains people in a wide range of professions and fields. To achieve this, TÜV Rheinland is equipped with a global network of recognized labs, testing facilities and training centers. Since 2006, TÜV Rheinland has been a member of the UN Global Compact for better sustainability and against corruption. The history of the TÜV Rheinland Group is the story of the growth from a regional testing organisation into an international provider of technical services - with several milestones in its development.

The industrial services range from pressure equipment and materials technology, elevator, conveyor, machine technology, electrical engineering and building technology to industrial engineering safety.

Philippine Energy Status

Global demand for all energy sources is forecast to grow by 57 percent over the next 25 years. By 2030 56 percent of the world's energy use will be in Asia. Electricity demand will grow by at least 40 percent by 2032. New power generation equals nearly 300 (1000 MW) power plants will be needed to meet electricity demand by 2030. Currently 50 percent of electricity generated relies on coal and fossil fuels. 85 percent of greenhouse gas emissions (GHG) result from energy consuming activities supported by fossil fuels. Oil is the dominant fuel in the Philippines, accounting for an estimated 48.2 percent of primary demand (PED) in 2010, followed by coal at 27.2 percent, gas at 15.4 percent and hydroelectric energy at 9.0 percent. The country's estimated 10.0 TWh (terawatthours) of hydro demand in 2010 is forecast to reach 12.0 TWh by 2015 with its share of the Asia Pacific hydro market falling from an estimated 1.02 percent to 0.93 percent over the same period. Between 2010 and 2020 an increase in the Philippines' electricity generation of 54.8 percent is forecasted. The country's power consumption is expected to increase from an estimated 52 TWh in 2010 to 65 TWh by the end of the forecast period.

The retail industry in the Philippines is well established. It continues to grow at a good pace. It contributes to about 15 percent of GNP and 20 percent of the employment. It also has broad reach and impact. SMEs constitute about 95 percent of retail industry which is scattered across the country. It is well represented by one national Philippine Retailers Association (PRA) and its 12 regional chapters. The retail industry apart from being one of the biggest employers in the country is also a huge consumer of power, energy, water, paper, plastic and other consumables. According to the PRA, power consumption alone (35 percent to 55 percent) accounts for a significant portion of the expenses of a retail outlet. This is aggravated by the fact that the Philippines is a power deficient state and imports over 99 percent of crude oil requirements and over 65 percent of its coal needs. The need for retail industry to become energy and resource efficient is high. The impact it will have on the environment and society is large.

Development Partnership with the Private Sector Project (DPP) with GIZ

ConservePhil is promoting energy efficiency among retailers in the Philippines. The objective of this ConservePhil PPP Project is to ensure that the retail sector has an enhanced access to services that are related to resource and energy management and to help retailers achieve energy efficiency in benchmarking international standards and best practices. Project funding and support is provided by GIZ. Funding and programme management and delivery is provided by TÜV Rheinland Philippines while the Asia Society for Social Improvement and Sustainable Transformation ASSIST is tasked with project delivery and advisory.

The methodology used are III, namely the first stage INFORM will help in creating awareness and interest among the retail sector and the public through forums, awareness trainings, e-learning kits, online portal and other promotional special campaigns about energy and resource efficiency benchmarking international standards and best practices; INVOLVE is the second stage which helps in building the local capability through the train-the-trainer workshops. The local trainers will be selected from a multistakeholder group (government agencies, industry associations, retail establishments etc) to create multiplier effect and to help in sustaining this project; and IMPLEMENT where interested companies will be asked to submit an application form and 30 companies will be selected by the project committee based on established criteria. These companies will receive technical assistance for implementing energy and resource efficiency management systems benchmarking international standards and best practices. CEO forums is one of the major activities where the sessions are organized for the top management or decision makers from various retail organizations to facilitate the initial understanding of the subject matter and to create a buy in for the

CONSERVEPHIL project. Awareness trainings are organized in two different cities in the country to enhance the knowledge on the energy efficiency subject as well as to create interest among retailers. The 300 e-learning toolkits (self-implementation) will be distributed to retailers to promote self-implementation of the program. The online portal will be used to educate customers on resource efficiency and will serve as a facility for information exchange between retailers and help in the sustainability of this program.

The selected retailer participants are Parkmall, Manels, Celine, CMG, So Fab, Timex, Watch Republic, Segnatempo, Automatic Centre, Blims Fine Furniture, Sogo Home and Office Center, Manila Plaza Mall, Ever Gotesco Ortigas Complex, Ever Gotesco Commonwealth Center, Isetann, Guess?, Mizuno, Abenson, Waltermart, Penshoppe, Oxygen, Memo, for me, Regatta, Red Logo and Budgetlane Supermarket.

What is energy?

Energy is a staple for everyone and an imperative for sustenance as it lights cities and homes, power machineries in factories, cook food, play music, operate televisions and sustain business. Energy is used for lighting, ventilation, heating or air conditioning, food cooling and refrigeration. There are a lot of potentials to save energy in retail outlets. With minimum effort and not much investment, people could reduce electric bills, live more comfortably without sacrificing comfort and eventually help reduce global warming.

TÜV Rheinland Philippines support the Building for Ecologically Responsive Design Excellence (BERDE) through capacity building and assessment and certification. By using less energy, electricity bills are proportionately reduced.

Energy Efficiency (EE)

Energy efficiency simply means efficient use of energy which is the goal of efforts to reduce the amount of energy required to provide products and services. For example, insulating a home allows a building to use less heating and cooling energy to achieve and maintain a comfortable temperature. Installing fluorescent lights or natural skylights reduces the amount of energy required to attain the same level of illumination compared to using traditional incandescent light bulbs. Compact fluorescent lights (CFL) use two thirds less energy and may last six to ten times longer than incandescent lights. Improvements in energy efficiency are most often achieved by adopting a more efficient technology or production process. There are various motivations to improve energy efficiency. Reducing energy use brings down energy costs and may result in a financial cost saving to consumers if the energy savings offset any additional costs of implementing an energy efficient technology. Reducing energy use is also seen as a key solution to the problem of reducing emissions.

Energy efficiency is widely viewed as an important element of energy and environment. Implementing efficiency measures in all sectors together CO2 reduction is possible through substitution of conventional gas or oil boilers by condensing gas boilers especially in single family houses, shifting from petrol to diesel vehicles in private transport, increased use of electric vehicles, gas combined cycle power plants and combines heat and power production (CHP) etc.

Energy Efficiency measures for refrigeration

Keep your refrigerator away from heat. Try to locate your refrigerator in a cool location. Keep it out of direct sunlight and away from appliances that generate heat like ovens and water heaters. Regularly check refrigerator door seals by closing the door with a paper. If you can easily pull the paper out then a replacement is in order. Do not overload. Refrigerators operate most efficiently when full but not overloaded. Do not put hot food in the refrigerator. Allow leftovers to cool before putting them in the refrigerator. Give your refrigerator some space. Allow at least one inch of space on each side of the refrigerator for good circulation. Poor circulation can increase energy consumption.

Energy Efficiency measures for lighting

Look for the PS Quality or Safety Certification seal or Import Commodity Clearance (ICC) seal issued by the Bureau of Product Standards when buying lighting products such as compact, linear, circular, incandescent lamps and fluorescent lamp ballasts. Replace incandescent light bulbs with a compact fluorescent light bulb (CFL). CFL consumes 60 percent less energy than a regular bulb. Use CFL fixtures with reflective backing to distribute lights evenly without increasing the number of CFLs installed. Clean lamps regularly (at least every six months) when exposed to an atmosphere with dirt, dust, grease and contaminants. Dirt lessens light output by as much as ten to 15 percent. Turn off lights when not in use.

Energy Efficiency measures for heating and cooling

Install a programmable thermostat. Adjust thermostat settings based on the weather conditions (different settings during warm and cold months). Clean air conditioning and refrigeration condenser or evaporator coils every three months. Check the refrigerant and fix leaks if necessary. Regularly clean or replace air filters on ventilation and heating or air conditioning equipment. Use ceiling fans or other circulating fans such as table and floor fans to improve comfort level and reduce air conditioning costs.

Energy Efficiency and competitiveness

In industry, energy is often used very inefficiently. However, the demand for energy in this sector will continue to increase substantially due to economic growth, and therefore, investing in energy efficiency measures in this sector turns out to be especially beneficial. These investments allow enterprises to gain a competitive advantage and help to create and sustain jobs.

Investing in energy efficiency measures is still a very unusual way to increase competitiveness, even if energy consumption and related costs are high and measures are extremely profitable. This is because in general, entrepreneurs do not have sufficient knowledge about existing options and are not willing to take risks in areas that are outside their basic activities, such as producing and selling their products. Additionally, there is often a lack of capital for investments in efficiency measures, especially when the economic perspectives are less promising. There are a number of simple no cost practices to adopt in using energy more effectively and reduce energy bill. Small changes in habits can mean a lot!

Remember that to set up a power plant it takes five years. To set up transmission lines it takes one year. To plan energy conservation it takes one month. To promote energy conservation it takes one hour. But to save energy it needs only one second!

Energy Management System EnMS (ISO 50001)

ISO 50001:2011 is an energy management system standard published by ISO on 09 June 2011. It specifies requirements for establishing, implementing, maintaining and improving an energy management system. Its purpose is to enable a retailer to achieve continual improvement in its energy use and consumption or energy performance through a systematic approach. It does not define specific energy consumption criteria but requires retailers to define its energy performance indices and targets and achieve them by implementing a proper action plan. It promotes energy management and reinforces good energy management bahaviors. It provides framework for promoting energy efficiency while facilitating energy management improvements. Thus retailers become more competitive and profitable.

Good energy management means good business. As retailers spend about three quarters of their sales in power consumption (lighting, air conditioning and food refrigeration) the challenge lies in improving energy efficiency. Energy consciousness is rare. High priority is placed on issues such as continuous sale. Energy management expertise is lacking. There is no knowledge of own energy consumption patterns, costs. There is a lack of capital. Investment priorities are elsewhere outside energy efficiency. Local energy infrastructure may not encourage energy saving. Manager and staff are not committed. There is a lack of awareness of energy engineers, technological possibilities and economics.

PRESENTATION SLIDES

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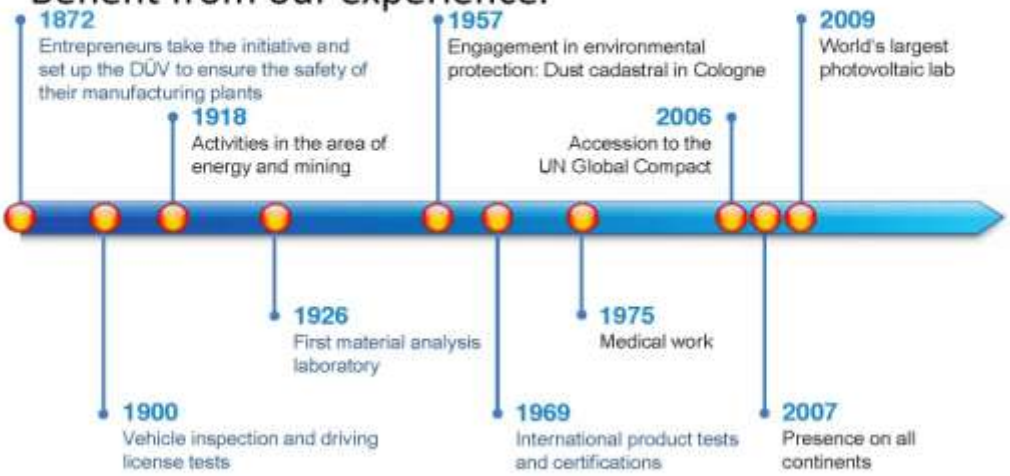

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ConservePhil
ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

Trends in energy usage

- Global demand for all energy sources is forecast to grow by 57% over the next 25 years
- By year 2030, 56% of the world's energy use will be in Asia
- Electricity demand will grow by at least 40% by 2032
- New power generation equals to nearly 300 (1,000 MW) power plants will be needed to meet electricity demand by 2030.
- Currently, 50% of electrical generation relies on coal and fossil fuel; while 85% of greenhouse gas emissions result from energy-consuming activities supported by fossil fuels.

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ConservePhil — The Philippine scenario

- Oil is the dominant fuel in the Philippines, accounting for an estimated 48.2% of primary energy demand (PED) in 2010, followed by coal at 27.2% gas at 15.4% and hydroelectric energy at 9.0%.
- The country's estimated 10.0TWh (terawatthours) of hydro demand in 2010 is forecast to reach 12.0TWh by 2015, with its share of the Asia Pacific hydro market falling from an estimated 1.02% to 0.93% over the period.
- Between 2010 and 2020, an increase in the Philippines' electricity generation of 54.8% is forecasted.
- The country's power consumption is expected to increase from an estimated 52TWh in 2010 to 65TWh by the end of the forecast period.

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ConservePhil — PROJECT BACKGROUND

- The **retail industry** in the Philippines is well established, continues to grow at good pace, **contributes to about 15 % of GNP and 20 % of the employment and also has broad reach and impact.**
- SMEs constitute about 95 % of retail industry and retail industry is scattered across the country, it is well represented by one national **Philippines Retailers Association (PRA)** and its 12 regional chapters.
- **The Retail industry** apart from being one of the biggest employers in the country, **is also a huge consumer of power, energy, water, paper, plastic and other consumables**. According to the Retail Association, **power consumption alone (35% to 55%) accounts for a significant portion of the expenses of a retail outlet** and this is aggravated by the fact that the Philippines is a power deficient state and imports over 99 % of crude oil requirements and over 65 % of its coal needs.
- **The need for the retail industry to become energy and resource efficient is high and the impact it will have on the environment and society is large**.

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ConservePhil — PROJECT OBJECTIVE

The objective of this CONSERVEPHIL PPP Project is to ensure that the retail sector has an enhanced access to services that are related to resource and energy management and to help retailers achieve energy efficiency in benchmarking international standards and best practices.

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ConservePhil — THE PROPONENTS

giz — A federal enterprise GIZ supports people and societies worldwide in creating sustainable [illegible] **PROJECT FUNDING/ SUPPORT**

TÜV — TÜV Rheinland [illegible] of providing long-term development of safety and quality in the interaction between man, technology and the environment. **FUNDING/ PROGRAMME MANAGEMENT/ DELIVERY**

ASSIST — ASSIST, Asia Society for Social Improvement and Sustainable Transformation is a foundation of the ECCI Group and implements many capacity building projects in South Asia, Southeast Asia, China and Africa. **PROJECT DELIVERY & ADVISORY**

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ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

Methodology

IMPLEMENT – Interested companies will be asked to submit an application form and 30 companies will be selected by the project committee based on established criteria. These companies will receive technical assistance for implementing energy and resource efficiency management systems benchmarking international standards & best practices.

INVOLVE – The second stage Involve will help in building the local capability through the train-the-trainer workshops. The local trainers will be selected from a multi stakeholder group (government agencies, industry associations, retail establishments etc) to create multiplier effect and to help in sustaining this project.

INFORM – The first stage Inform will help in creating awareness and interest among the retail sector and the public through forums, awareness trainings, elearning kits, online portal and other promotional special campaigns about energy and resource efficiency benchmarking international standards & best practices.

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ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

Major Activities

CEO Forums

These sessions will be organized for the top management / decision makers from various retail organizations to facilitate the initial understanding of the subject matter and to create a buy in for the CONSERVPHIL project.

Awareness Trainings

Multiple awareness trainings will be organized in 2 different cities in the country to enhance the knowledge on the energy efficiency subject as well to create interest among retailers.

E-learning Toolkit

300 e-learning kits (self-implementation) will be distributed to retailers to promote self implementation of program.

Online Portal

This portal will be used to educate customers on resource efficiency measures and will serve as a facility for information exchange between retailers and help in the sustainability of this program.

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Selected Retailer - Participants

- Parkmall
- Manels
- Celine
- CMG
- So Fab
- Timex
- Watch Republic
- Segnatempo
- Automatic Centre
- Blims Fine Furniture
- Sogo Home & Office Center
- Manila Plaza Mall
- Ever Gotesco Ortigas Complex
- Ever Gotesco Common Wealth Center
- Isetann
- Guess?
- Mizuno
- Abenson
- Waltermart
- Penshoppe
- Oxygen
- Memo
- For me
- Regatta
- Red Logo
- Budgetlane Supermarket

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What is energy?

- Energy is a staple for everyone and an imperative for sustenance as it lights cities and homes, power machineries in factories, cook food, play music, operate televisions and sustain business.
- Energy is use for lighting, ventilation, heating/air-conditioning, food cooling and refrigeration.
- There are a lot of potential to save energy in retail outlets and with little effort and not much investment, people could reduce electric bills, live more comfortably, and eventually reduce global warming.

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ConservePhil — Importance of Energy efficiency

Saving energy, saves money

The most obvious way to reduce your electricity bills is easy;

Don't waste energy !!!

Make energy efficient choices you can:

- Substantially reduce your consumption without sacrificing your convenience
- Put more money in your pocket
- Protect the environment and reduce global warming

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ConservePhil — Energy Saving Efforts

	LESS EFFORT	MORE EFFORT
SAVE A LOT	• Pursue large, strategic capital projects	• Create a multi-layer business plan for energy • Create reduction goals and accountabilities • Secure durable top-management direction and support • Aggressively improve habits and procedures
SAVE A LITTLE	• Delegate down • Quick, cheap projects • Business-as-usual for as many people as possible	• Focus on improvements to existing asstes • Boost awareness: stay on top of people's habits and procedures

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ConservePhil — Energy consumption for retailers

The following are the key requirements for retailers:

- Secure power supply
- Providing assortment of products
- Offering fresh foods daily
- Creating highly competitive and innovative shopping environment

The concern: In achieving the points listed above, retailers would require high energy demand.

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ConservePhil — Energy consumption for retailers

- Retailers spend about three quarters of their sales for power consumption.
- Electricity is mainly used for lighting, air conditioning and food refrigeration

THE CHALLENGE!!!

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ConservePhil — Why Manage Energy?

Good Energy Management = **Good Business**

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ConservePhil — Challenges for managing energy

- Little energy consciousness.
- Higher priority to "more important" issues (eg., continuous sale).
- Lack of energy management expertise
- Lack of knowledge of own energy consumption patterns/costs/ potential for saving
- Lack of capital.
- Other investment priorities.
- Local energy infrastructure may not encourage energy saving.
- Lack of commitment on the part of managers and staff.
- Lack of awareness of energy engineers, technological possibilities, and economics.

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ConservePhil Energy Management System

ISO 50001:2011 ENERGY MANAGEMENT SYSTEM (EnMS)

The standard specifies the requirements for an energy management system which will enable any organization to take a systematic approach for the continual improvement of energy efficiency and energy performance

EnMS is defined as:

A set of interrelated or interacting elements to establish an energy policy and energy objectives and processes, procedures to achieve those objectives.

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ConservePhil What will EnMS (ISO 50001) do?

- Assist retailers in making better use of their existing energy-consuming assets
- Promote energy management and reinforce good energy management behaviors
- Provide framework for promoting energy efficiency
- Facilitate energy management improvements
- Become more competitive and profitable

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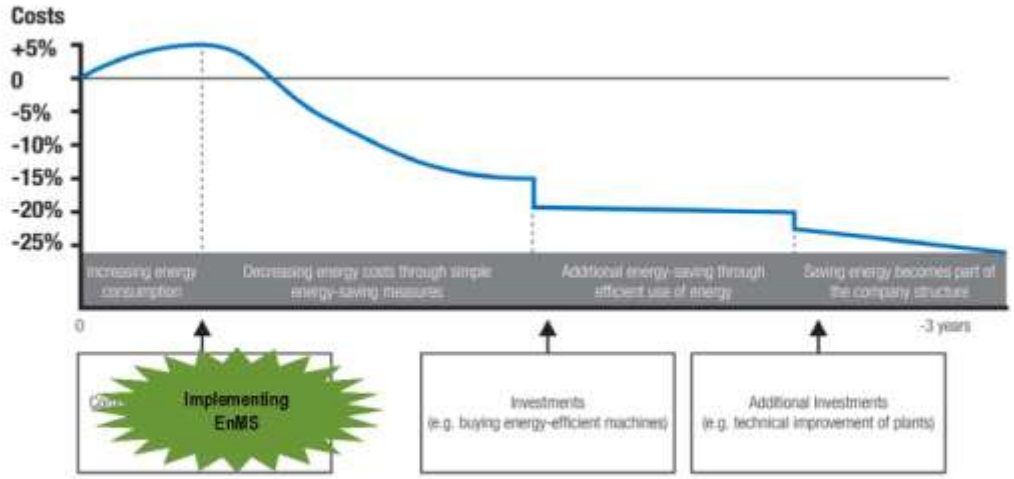
ConservePhil — What will EnMS do?



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ConservePhil — Energy Management

Cost nothing…Save a lot !!!

There are number of simple no cost practices you can adopt to use energy more effectively and reduce your energy bill

Small changes on your habits, can mean a lot !!!

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ConservePhil — Do you know that...?

- To set up a power plant, it takes ..... 5 years
- To set up transmission lines, it takes ..... 1 year
- To plan energy conservation, it takes ..... 1 month
- To promote energy conservation, it takes ..... 1 hour

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ConservePhil — Energy Management

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ConservePhil — Energy Efficiency measures for Lighting

1. Look for PS Quality and/or Safety Certification mark/Import Commodity Clearance (ICC) mark issued by the Bureau of Product Standards when buying lighting products (e.g. compact, linear, circular, incandescent lamps and fluorescent lamp ballasts).
2. Replace incandescent light bulb with a compact fluorescent light bulb (CFL) - CFL consumes 60% less energy than a regular bulb
3. Use CFL fixtures with reflective backing to distribute lights evenly without increasing the number of CFLs installed.
4. Clean lamps regularly (at least every 6 months) when exposed to an atmosphere with dirt, dust, grease and contaminants. Dirt lessens light output by as much as 10 to 15 percent.
5. Turn off lights when you are not using it.

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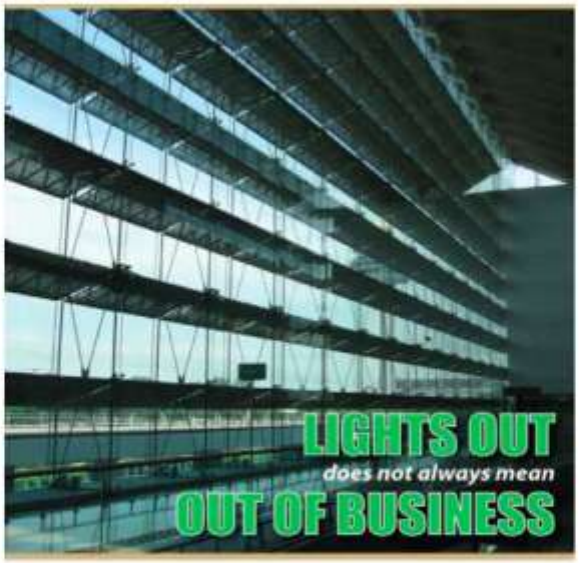

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Share the Light

Energy-saving bulbs can be more efficient with reflective surfaces.

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Energy Efficiency measures for Heating/AC

1. Install a programmable thermostat – Adjust thermostat settings based on the weather conditions (different settings during summer and cold seasons)
2. Clean air conditioning and refrigeration condenser/evaporator coils every three months.
3. Check the refrigerant charge and fix leaks if necessary.
4. Regularly clean or replace air filters on ventilation and heating/air conditioning equipment
5. Use ceiling fans or other circulating fans (such as table and floor fans) to improve comfort level and reduce air conditioning costs.

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Keep your cool

Insulation plays a key role in efficient energy management. Be sure that your walls and windows keep the cool in...

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ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

Energy Efficiency measures for Refrigeration

1. Keep your refrigerator away from heat. Try to locate your refrigerator in a cool location. Keep it out of direct sunlight and away from appliances that generate heat, like ovens and water heaters.
2. Check refrigerator door seals. Check the door seals on your refrigerator by closing the door with a paper. If you can easily pull the paper out then you would probably benefit by replacing the seal.
3. Don't overload. Refrigerators operate most efficiently when full but not overloaded.
4. Don't put hot food in the refrigerator. Allow leftovers to cool before putting them in the refrigerator.
5. Give your refrigerator some space. Allow at least one inch of space on each side of the refrigerator for good circulation. Poor circulation can increase energy consumption by 10%.

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BE ENERGY EFFICIENT

prepare • conserve • save

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ConservePhil
ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

Summary

SAVING ENERGY, SAVES MONEY

- The most obvious way to reduce your electricity bills is easy: USE LESS ENERGY !
- With a little effort and not much more money, most people could substantially reduce their bills without sacrificing comfort.
- Master the fundamentals of energy efficiency. Look at the energy conservation in a broader view and take action.

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ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

Save the Planet, Save Energy!

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IMPLEMENTING PARTNERS TÜVRheinland BUREAU VERITAS

IN ASSOCIATION WITH

ConservePhil
ENERGY EFFICIENCY FOR RETAILERS IN THE PHILIPPINES

PHILIPPINE GREEN BUILDING COUNCIL

BERDE
Building For Ecologically Responsive Design Excellence

TÜV Rheinland Philippines supports BERDE thru capacity building and assessment and certification

IN COOPERATION WITH giz Federal Ministry for Economic Cooperation and Development

IMPLEMENTING PARTNERS TÜVRheinland BUREAU VERITAS

IN ASSOCIATION WITH

GREEN BUSINESS

Mr Pedro Delantar
President
Natures Legacy

Naturescast by Nature's Legacy started out in 1986 as a rattan furniture and furnishings company in Cebu. It constantly innovated to differentiate itself from the competition, eventually becoming a manufacturer and distributor of sustainable and versatile products after discovering the wonders of green - biodegrable and environment friendly - materials.

The natural scrap materials recycled to create Naturescast's handcrafted line of products include dead barks, shrubs, fallen twigs, leaves and other agroforest waste. It was an offhand comment of his wife that started the use of these materials.

Its president Pedro Delantar said that the global market opportunities for green products are wide and diverse, encompassing home furnishings, hospitality and hotels, fashion accessories, packaging, visual merchandising, etc. Nowadays, green products are garnering attention like never before.

In Naturescast's case, its multiawarded products have been showcased in high-profile events like the Grammys, used as giveaways at the Oscars, patronized by international stars and utilized by global beauty brands for packaging.

Delantar, nevertheless, said that Filipino companies already producing or are looking into making it in this particular business need to have a better understanding of the market requirements so as to compete in the global marketplace.

For one, the products should meet testing certificate requirements, material traceability label, flammability test, as well as mold and mildew testing. They should employ green manufacturing practices and adopt a sustainable and clean production (input and output analysis) process. They should live up to standards when it comes to social compliance, Volatile Organic Compound (VOC) for indoor air quality and factory evaluation.

The outlook is bright for ecofriendly products and there is a need to come up with more options, but Delantar said that companies should develop core competencies so as to have a stronger basis and background to develop additional products.

Manufacturing companies need to also equip and brace themselves with upcoming tougher environmental regulations. He added that more green financing should be made available, and that green technology must be tapped.


Nature's Legacy®
Versatility meets Sustainability™

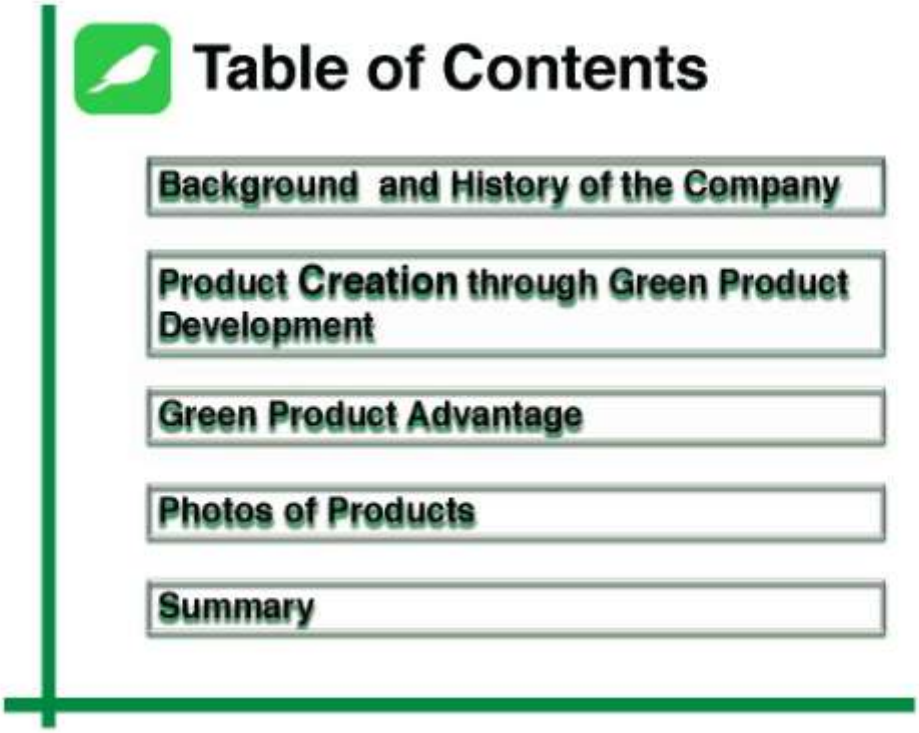


Table of Contents
Background and History of the Company
Product Creation through Green Product Development
Green Product Advantage
Photos of Products
Summary

Company Information

- Established: **1986**
- No. of employees: **120**
- Market served: **ASEAN Countries, Europe, US, Australia, New Zealand, China and UK**
- Product Categories: **Home Furnishings, Lawn & Garden, Fashion Accessories & Packaging, Hospitality & Hotels**

Company Background

- Based in the Municipality of Compostela in Cebu
- Started as Rattan Company in 1993
- Added Home & Garden Accessories in 1996
- Started to innovate new materials to develop core competence & differentiate the company from competition

What's in the Market?

Rattan furniture

Home décor (ases)

Home Accent

Basket

Our Solution…

We created our own material

Stonecast → basic

2nd generation stonecast → value added

3rd generation stonecast → texture & colors

Discovered green material → Patented Worldwide
Trademark Worldwide

NaTurescast®

Sustainable Renewable Recyclable

About: NaTurescast®

Naturescast Launching at Ambiente, Germany

Green Market Requirements

- Testing certificate requirements
- Material traceability label
- Flammability Test
- VOC (Volatile Organic Compound) for indoor air quality)
- Mold and Mildew testing
- Green manufacturing practices
- Sustainable & Clean production (Input and Output Analysis)
- Social Compliance
- Factory Evaluation

Future of Eco-Products…

- We need to equip ourselves for the coming environmental regulations
- There will be more and more demand on environment friendly products
- We have to create more ecofriendly products
- We need more green financing
- Use of green technology

Market Opportunities

NaTurescast® Products

Club collections shown at the
50th Grammy Awards Celebrity Lounge

Boti bowl as Oscar Award's giveaways

NATURESCAST® featured at the 50th Grammy Awards Celebrity Lounge

Musician Amy Lee of Evanescence at the 50th Annual GRAMMY Awards Grammy Gift Lounge

Andrea Bocelli at the 50th Annual GRAMMY Awards GRAMMY Gift Lounge

Musician Cyndi Lauper at the 50th Annual GRAMMY Awards GRAMMY Gift Lounge

NaTurescast® Buyer

Villeroy & Boch 1748

Troy tappered planter

Dynasty vases

Plate

A total of 12,000 pcs ordered

THE BODY SHOP®

Hemp Heroes

Hemp box

A total of 86,000 pcs ordered

Awards & Recognition

GOLDEN SHELL AWARD
FOR EXCELLENCE IN DESIGN & MANUFACTURING
December 2004

ENVIRONMENT-FRIENDLY ENTREPRENEUR OF THE YEAR
Cebu Chamber of Commerce and Industry
June 2007

EXCELLENCE IN ECOLOGY AND ECONOMY (E3)
October 2007

MUGNA CITATION: ECO-FRIENDLY PRODUCT
CEBUNEXT
2008,2009,2010 &2011

MOST CREATIVE EXHIBITOR AWARD
April 2005

CERTIFICATE OF MERIT FOR MATERIAL INNOVATION
Manila F.A.M.E. International
April 2004

Articles (Clippings)

ASEAN City of Culture

Nature's Legacy products were featured during the **ASEAN City of Culture Exhibits** in Northwing Atrium of SM City Cebu, last July 15-25, 2011.

The products were featured are:
Cube Chair
Boti bowl
Totem candle holders

Summary

- **Sustainable Products need to understand on what the market requires**
- **Green Product should follow the SCP concept in Manufacturing Industry**
- **Core Competence is important to establish expertise and consistency**
- **We have to be ready & up to date with new regulations for ecoproducts**

THANK YOU

For questions and verifications kindly call
[6332] 425 8399/ 425 8814 or fax [6332] 425 8815
www. natureslegacy.com
info@natureslegacy.com

GREEN FINANCE

Mr Paul Lazaro
Vice President
Development Bank of the Philippines DBP

It was the USD175m World Bank structural adjustment program that enabled the Development Bank of the Philippines (DBP) to commence plans to concretize its commitment to the environment and environmental management. The aim was to improve the efficiency and international competitiveness of Filipino industries with component for environmental concerns and sensitize the Private Finance Initiatives (PFI) against risks associated with environmental concerns.

DBP embarked on the following initiatives: capacity building (such as training of DBP officers and account officers on environmental evaluation of projects, including risk assessments); coordination and establishing cooperation points with environmental agencies; financial credit and technical assistance for environmental investments; partnerships with academe, government agencies, NGOs, etc and promotion of environmental stewardships.

The environment is cited as a development priority. The environmental investments that DBP is promoting are in Pollution Abatement and Control; Cleaner Production and Technology; Solid & Hazardous Waste Management; Natural Resources Conservation; Renewable Energy; Energy Efficient Transport / Building; Water Supply and Sanitation; Watershed Management and Carbon Investments.

Environmental credit facilities had been set up by DBP, which so far have funded environmental projects or environmental components of projects of private sector, industries, local government units and government corporations

- 1996 – Environmental Infrastructure Support Credit Program (EISCP) Phase I, funded by JBIC (JPY 5bn)
- 1998 – Industrial Pollution Control Loan Project (for Small and Medium Enterprises), funded by the Kreditanstalt fuer Wiederaufbau KfW (German Bank for Reconstruction)
- 2001 – EISCP Phase II (JBIC - JPY 20bn)
- 2005 – Credit Line for Solid Waste Management, funded by KfW – promoting solid waste management projects, mostly of Local Government Units (LGUs).
- 2009 – Environmental Development Project – JICA

No ROI was stated for the abovementioned projects.

The general loan and concessional terms for environmental investments are the following

- Eligible borrowers should be public and private enterprises (with at least 70 percent Filipino ownership).

- The maximum loan amount per project is 80 percent to 90 percent of total project cost in Philippine pesos to avoid Forex risk.
- The interest rate is fixed.
- The repayment term will be based on cash flow: maximum of 15 years with a maximum of a five year grace period.

Proposed projects are evaluated for their environmental features and sustainability, including social and health impacts to the host community. DBP is biased towards energy-efficient operations, countryside development and good governance among proponents. Projects are subject to quarterly environmental performance monitoring.

These experiences in environmental credit lending illustrate that various industrial, commercial, service sectors and the LGUs have started considering environment (beyond compliance) in their project planning and implementation.

DBP has also adopted an internal environmental management system that it became the first domestic bank to achieve the ISO 14001 international environmental certification in 2002. As an institution, it has also partnered with government agencies and LGUs, mostly in forestation, soil and water conservation efforts.


Greening the Philippine Economy:
Getting Ready for the Future Today
DBP
GREEN FINANCE
Presented in the GIZ Symposium
Mandarin Oriental Hotel, Makati City
7 October 2011
PAUL D. LAZARO
Vice President
Development Bank of the Philippines


OUTLINE
DBP
I. DBP Profile
A quick Profile
Priority Thrusts
II. Environmental Commitment Preparations
Challenges
Objectives
III. Strategies and Initiatives
Credit
Non-Credit
IV. Summary
2

Development Bank of the Philippines

The Bank for the Environment

DBP Profile

- A State-Owned Bank
  - Development mandate
  - DFI with a Universal Bank license
- Committed to triple bottom line = Social, Environment and Economic
- 6th Largest Bank: Resources Over P297 B (US$ 7 B)
- 1st Local Bank to be ISO 14001 Certified
- Recipient of national and international awards

3

Awards and citations

Association of Development Financing Institutions in Asia and the Pacific

- *2010 Most Outstanding Environmental Award – Rural Power Project*
- *2006 Environmental Development Project Award for DBP Forest*
- *2002 Environmental Development Award for DBP EMS*

The Asian Banking Awards

- *2001 Most Outstanding Environmental Program for the New and Renewable Energy Financing Program*
- *1999 Most Outstanding Environmental Program for the Environmental Management Program*

Office of the President / Dept. of Energy National Energy Efficiency and Conservation Program in Government Buildings

- *2005 -2008 "A" Grade for DBP Energy Conservation Program*

Department of Environment and Natural Resources

- *2011 Excellence Award for Eco-Friendly Government Office*

4

DBP Profile

Development Priorities

1. **INFRASTRUCTURE & LOGISTICS**
   Transport (land and water), Logistics (cold & bulk chains), Utilities

2. **ENVIRONMENT**
   Energy (RE & EE), Water, Waste Management
   Pollution Prevention

3. **SOCIAL DEVELOPMENT**
   Housing, Health, Education and Livelihood

4. **MICRO + SMEs**
   MSME, Guarantees, Eco-Tourism, Agribusiness

5

DBP's Preparation for Its ENVIRONMENTAL COMMITMENT

- **Started in 1992 under US$175 million World Bank structural adjustment program**
  - To improve efficiency and international competitiveness of Filipino industries; with component for environmental concerns
  - To sensitize PFIs against risks associated with environmental concerns

6

CHALLENGES

1. Compliance related to environmental regulatory requirements
2. Inclusion of environmental risks in loan evaluation
3. Loan processing time because of new credit guidelines
4. Identification of environmental projects

7

OBJECTIVES

To influence industries and Local Government Units to be more pro-active in environmental management and protection

Introduce a new mindset and new approaches to Environmental Management for both Bank and Account Officers and staff

8

STRATEGIES AND INITIATIVES

1. Capacity Building
   - Production of environmental manuals and guidebooks
     - Workshops and seminars/training of DBP officers and Account Officers on environmental evaluation of projects, including risk assessments.
     - Extension of training to Account Officers of other banks
     - Coordination and establishing cooperation points with environmental agencies
     - Establishment of Environmental performance monitoring
2. Financial credits and technical assistance for environmental investments

9

STRATEGIES AND INITIATIVES

3. Establish Partnerships
   - Government Agencies
   - Non-government organizations and Peoples' Organization
   - Academe
   - Industries and businesses
4. Promotion of good environmental stewardships

10

Environmental Credit Facilities

With all the preparations on environmental management, DBP ventured into funding of environmental projects or environmental components of projects of private sector, industries, local government units and government corporations.

- 1996 - Environmental Infrastructure Support Credit Program (EISCP) Phase I, funded by JBIC (JPY 5 billion)
- 1998 - Industrial Pollution Control Loan Project (for Small and Medium Enterprises), funded by KfW)
- 2001 - EISCP Phase II (JBIC-JPY 20B)
- 2005 - Credit Line for Solid Waste Management, funded by KfW – fund solid waste management projects, mostly of Local Government Units.
- 2009 - Environmental Development Project - JICA

11

ENVIRONMENTAL LOAN FACILITIES

- DBP actively promotes investments in:
  - Pollution Abatement and Control
  - Cleaner Production and Technology
  - Solid & Hazardous Waste Management
  - Natural Resources Conservation
  - Renewable Energy
  - Energy Efficient Transport / Building
  - Water Supply and Sanitation; Watershed Management
  - Carbon Investments

Fund Sources

12

GENERAL LOAN FEATURES

Concessional terms to promote environmental investments

- **Eligible borrowers**

  Public and Private Enterprises (with at least 70% Filipino Ownership)
- **Maximum Loan Amount Per Project**

  80 to 90% of total project cost in Pesos to avoid Forex risk
- **Interest Rate**

  Fixed rate
- **Repayment Term**
  - Based on cash flow: Maximum of 15 years with a maximum 5 years grace period

Proposed projects are evaluated for their environmental features and sustainability, including social and health impacts to the host community

- **Bias for energy-efficient operations, countryside development and good governance among proponents**
- **Projects are subject to quarterly environmental performance monitoring**

13

Internal Environmental Management System

We have adopted an Environmental Policy Statement in 1997…

First domestic bank to achieve the ISO 14001 international environmental certification in 2002…

to date, generated considerable savings from conserving water, electricity, fuel, paper . . .

14

EMS Conservation Measures

- Changed lighting facilities from fluorescent lamps to compact fluorescent lamps
- Converted all water faucets to have regulated release of water including waterless urinals
- Observes waste segregation and recycling
- Observes prudent use of electricity
- A fleet DBP vehicles use LPG instead of gasoline
- Institutes paperless internal office communication
- 2 Units of unused Old transformers containing Polychlorinated Biphenyl (PCBs) succesfully dismantled and shipped to France for treatment and destruction
- *Pilot measurement of GHG from the Bank's business travels (2008)*

15

DBP Forest

(not a loan, but a partnership project)

- To help in government's forestation and soil and water conservation efforts
- Collaboration and partnership in restoring forest cover
- Income-generating opportunities for project partners
- Planting of fruit trees and rehabilitation of coastal areas
- Forest Partners: POs with Community-Based Forest Management Agreements (CBFMA), LGUs & SUCs
- DBP provides support through the provision of planting stocks of tree species and financial support for establishment

16

Status (as of Sept. 2011)

Luzon	-	22
Visayas	-	6
Mindanao	-	6
		34

34 DBP Forest Projects

Total Area: 5,755 ha.

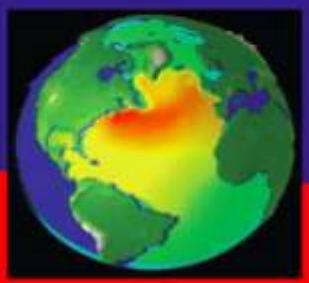
Planted Area: 3,759 ha.

17

DBP's CLIMATE CHANGE PROGRAM

We promote projects that abate emission of Greenhouse gases

We assist the projects' registration with the Clean Development Mechanism (CDM)



We are processing CDM registration of single and bundle projects.

We have organized other project groupings for the POA scheme of registration, i.e. methane capture from hog raisers, composting, generation of electricity from micro-hydro power plants etc..

18

SUMMARY

- DBP's experiences in environmental credit lending show that various industrial, commercial, service sectors and the LGUs have started considering environment (beyond compliance) in their project planning and implementation.
- DBP's deliberate efforts in promoting pollution control and abatement, a bias for good environmental management, energy and natural resources conservation among its clients are expected to contribute to the development and adoption of green growth strategies in the Philippines.

19

THANK YOU !

20

SOCIAL ENTREPRENEURSHIP

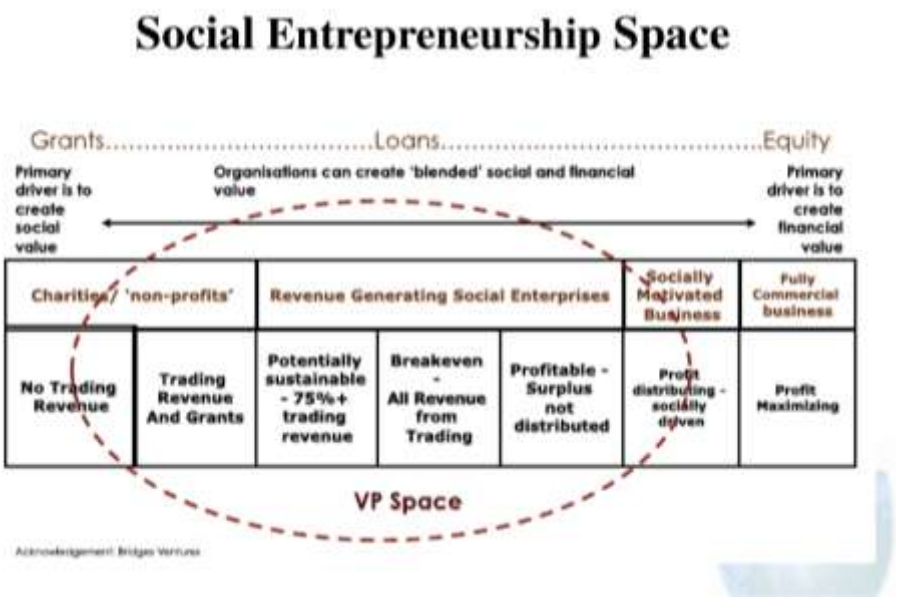
Mr Markus Dietrich, Executive Director
Asian Social Enterprise Incubator ASEI

According to Milton Friedman (1970), “There is one and only social responsibility of business – to use its resources and engage in activities designed to increase its profits...” This is decidedly NOT social entrepreneurship. For the Global Impact Investing Rating System GIIRS (2011) social enterprise models create social and / or environmental impact through company products or services, target customers, value chain, owners or operations

Revenue generating social enterprises are potentially sustainable and have more than 75 percent and above trading revenue. It could also breakeven, after deducting all expenses from trading. It can be profitable where the surplus is not distributed.

Hapinoy’s Mark Ruiz and Bam Aquino are two of the more famous Filipino social entrepreneurs. They received the 2011 Asian Social Entrepreneurship Award and the 2011 UN Project Inspire.

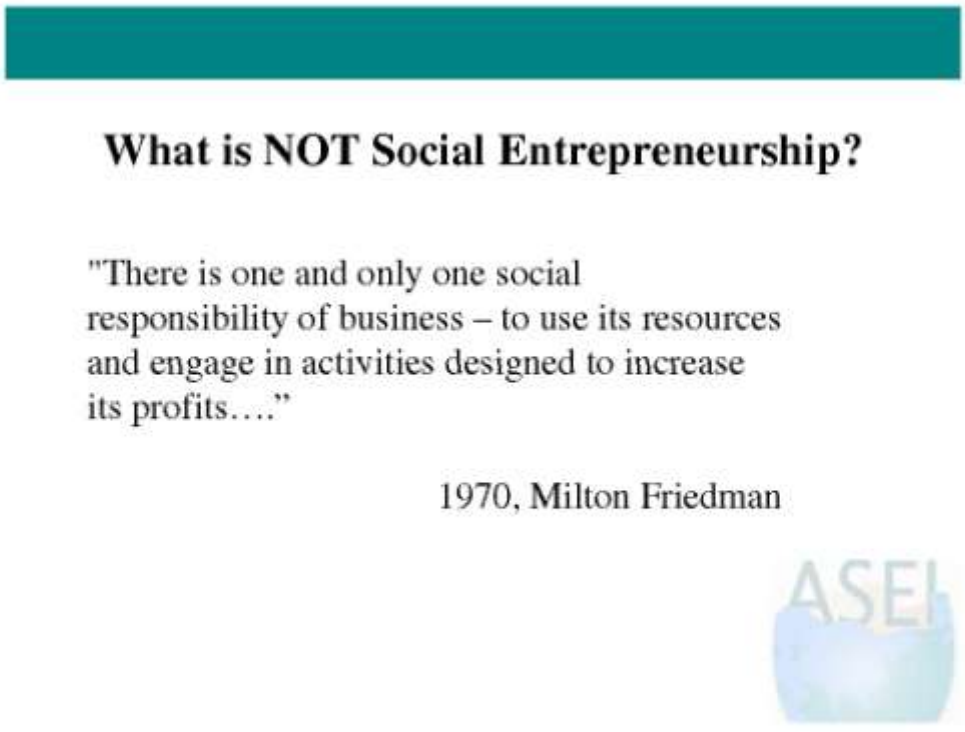
Another famous social entrepreneur for a green economy is Ms Anne Wizer of the Invisible Sisters, a creative design intervention into poverty reduction and environmental protection. The double or triple bottom line of social entrepreneurship is its social and environmental impact. For social impact it provides additional income for 85 poor urban women while building capacity and creativity. Its impact on the environment is felt as the used plastic shopping bags are cleaned up from the environment.



ToughStuff provides very inexpensive solar powered products to low income people in developing countries that save money, improve lives and protect the environment. It was founded by Andrew Tanswell who was the recipient of the 2009 Global Social Business Incubator for Social Entrepreneurs sponsored by the Skoll Foundation. Its solar panel is lightweight, flexible, waterproof and almost impossible to break. It is used for lighting, charging mobile phones and other small appliances. Customers who buy their products save an average of 90 USD per year. The products improve health, education and safety while protecting the environment at the same time. Providing energy to 165 000 people, providing income to 200 village entrepreneurs, increasing productivity by 184m hours with a savings of USD 24m comprise the social impact of ToughStuff. Its environmental impact is shown as it replaces 165 000 kerosene lamps and prevents the use of 6m batteries.

Sustainability / profitability, scalability / replicability, financing by the missing angel, legal status which is in between an NGO and INC as well as recognition as a driver for sustainable development are the challenges confronting social entrepreneurship.


ASEI
Social Entrepreneurship
Greening the Philippine Economy: Getting Ready for the Future Today
October 7, 2011

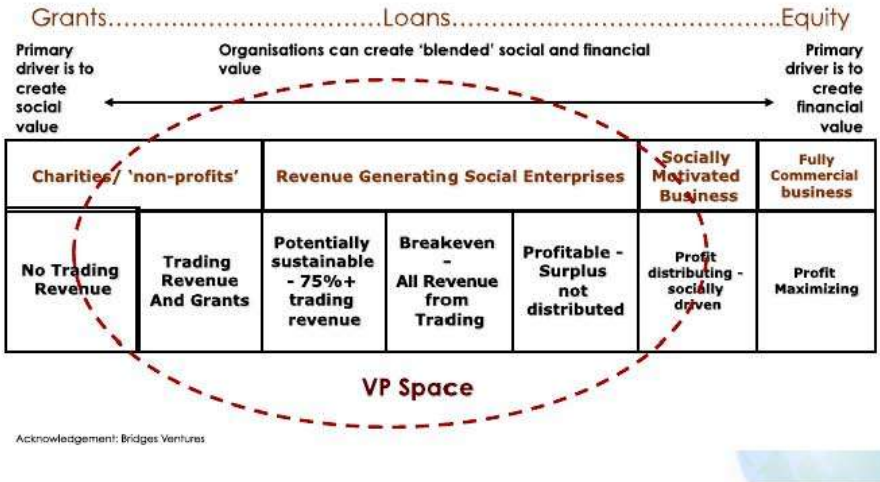

What is NOT Social Entrepreneurship?
"There is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits…."
1970, Milton Friedman
ASEI

What is Social Entrepreneurship?

Social enterprise models create **social** and/ or **environmental impact** through company products or services, target customers, value chain, ownership or operations.

2011, GIIRS

Social Entrepreneurship Space



Acknowledgement: Bridges Ventures

Famous Social Entrepreneurs

Hapinoy's Mark Ruiz and Bam Aquino

2011 Asian Social Entrepreneur Award
2011 UN Project Inspire

Social Entrepreneurs and A Green Economy

Ann Wizer – Invisible Sisters

Social Entrepreneurship and A Green Economy

Social and Environmental Impact
(Double/Triple Bottom Line)

Social Impact

- Provides additional income for 85 poor urban women
- Builds capacity and creativity

Environmental Impact

- Cleans up environment of used plastic shopping bags

Social Entrepreneurship and A Green Economy

ToughStuff
GOOD : WORKS

Social Entrepreneurship and A Green Economy

Social and Environmental Impact
(Double/Triple Bottom Line)

Social Impact
- Gives Energy to 165,000 people
- Provides Income for 200 village entrepreneurs
- Saves 24Mio USD
- Increases productivity by 184Mio hours

Environmental Impact
- Replaces 165,000 kerosene lamps
- Avoids 6Mio batteries

Challenges of Social Entrepreneurship

- Sustainability/Profitability
- Scaleability/Replicability
- Financing by the missing angel
- Legal Status in between NGO and INC
- Recognition as a driver for sustainable development

CLOSING REMARKS

DR LORENZO F TEMPLONUEVO

Senior Adviser
Private Sector Promotion Program SMEDSEP
GIZ Philippines

Quotable Quotes

On behalf of the Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) and in cooperation with the German – Philippine Chamber of Commerce and Industry, Lorenzo Templonuevo praised the audience for attending the Symposium which in a way is already a huge contribution towards greening the Philippines.

He recaptured the Symposium by a recap using quotes of the speakers. From Dr Volker Steigerwald, *"Greening the economy involves a major transformation which needs to include all sectors of the society ..... Today's Symposium reinforces GIZ's commitment to sustainable development worldwide and its continuing support to the Philippine nation."* From Mr Reiner Allgeier, *"Let Nature be winning. If it achieves its winning moment, all of us will have our winning moments as well ..... but we need to act now."* From Ms Rhodora Leano, *"The Board of Investments has included new projects in the green sector as investment priorities for growth ..... The 2011 to 2016 MSME development plan embeds climate change and green growth strategies."* From His Excellency Dr Joachim Heidorn, *"There are no more secrets in this world ..... Recent experience has caused to rethink and recalculate the risk and benefits of nuclear energy. The equation has changed."*

Honorable Secretary Mary Ann Lucille Sering said, *"Climate Change is something to be concerned about but not to fear. The Philippines should learn how to adapt. Filipinos are a resilient people. However, our infrastructures and sources of livelihood are not ..... Climate Change is also about opportunity. In exploiting the opportunity, we should be mindful to promote inclusive growth."* Mr Kim Nguyen Van opined, *"To ensure global growth, we need to change the way we grow! .... There are no blueprints, but the SEME model could serve as an example on how to integrate social and environmental aspects into a growth model ..... Green economy: a necessity, an opportunity and a tradeoff .... Cross sector options and instruments (macro): green industrial policy, green infrastructure, regulations ..... Cross sector options and instruments (meso): eco industrial parks, certification schemes, innovation systems ..... Cross sector options and instruments (micro – companies): resource efficiency, sustainable value chains .....Cross sector options and instruments (micro – consumers): ecologically and socially responsible consumption and investments."* Dr Jung Tae Yong encouraged the audience, *"We need to shift from a quantity oriented to a quality oriented growth paradigm .... Pillars of Green Growth: Leadership, Technology and People (Attitude) ..... Roles of*

Government: policy signals, market creation, education, internalize external cost and regulations and incentives ..... GGGI focuses on the power of examples ..... If we do something we can change the world."

"Over the years and over time, technologies get cheaper ..... Only when good legislation and good execution converge, a positive result will be reached to green the Philippines," said Dr Guenter Matschuck. Mr Tristan Loveres thought, *"If this hotel increases the temperature by two percent, it will save at least five percent of energy cost ..... Good energy management equals good business; it impacts on the profitability of the business."* Mr Paul Lazaro announced, *"DBP considers the triple bottomline – people, planet, planet – when we evaluate environmental protection and conservation projects ..... We can support both public and private enterprises, up to 80 to 90 percent of project cost, on fixed rate, for a repayment period of up to 15 years with five year grace period."* Mr Pedro Delantar shared, *"Being a latecomer, we need to compete through innovation: we created our own material which, without us realizing it, led us to produce green products ..... A green business should also entail, among others, green manufacturing practices, sustainable and clean production and social compliance ..... Start searching now: you can be the next green product creator ..... Less packaging, more beautiful world."* Mr Markus Dietrich stated, *"There is more business than just one bottomline ..... social entrepreneurship is not charity. It generates profits for sustainability. It works with a community with an end in view of replicating the experience in other communities ..... social entrepreneurship generates both social and environmental impacts thereby contributing to the greening of the Philippine economy."*

The Symposium is the kickoff activity of Mabuhay Germany 2011. All the participants of the Symposium are invited to further discover Germany in the Mabuhay Germany Exhibition from this afternoon till 09 October 2011, at the Bonifacio High Street where cultural and business relations between Germany and the Philippines are showcased.

PRESS CONFERENCE HIGHLIGHTS

GIZ Symposium puts focus on Greening the Philippine Economy

GIZ is all set to showcase a symposium on Greening the Philippine Economy: Getting Ready for the Future Today on 7 October at the Makati Mandarin Hotel. The symposium that starts at 1000h brings together a panel of high level, distinguished guest speakers from Germany, Korea, and the Philippines who shall contribute to the ongoing discussion on how the Philippines can best pave the way for a greener economy.

Invited to give the welcome addresses are the Undersecretary of the Department of Trade and Industry and the Ambassador of the Federal Republic of Germany.

Secretary Mary Ann Lucille Sering, Chairperson of the Climate Change Commission (CCC) will give the keynote address: Turning the Climate Change Threat Into an Opportunity and Achieve Inclusive Growth for the Philippines.

About the Symposium: The Strategy of Green Economy

The Philippines has the interest and stake to green its economy. For one, experts have cited the country as among those most vulnerable to the harsh impacts of Climate Change.

The Philippines, by opting for the Green Growth strategy, will be able to make both public and private investments aimed at providing mechanisms for the reconfiguration of businesses, infrastructure and institutions towards adoption of sustainable consumption and production processes. When this happens, as shown from the experiences in other countries, the share of green sectors in GDP will increase, more and decent green jobs will be created, energy and material production intensities will go down, waste and pollution will decrease and greenhouse gas emissions will significantly drop.

GIZ Country Director, Robert Kressirer says, *"This is a unique opportunity to learn more about Low Carbon Growth, Green Economy, Green Industries, Green Jobs that will become more and more important for the Philippines and the whole world in the framework of inclusive and sustainable development."*

Green Economy is a system of economic activities related to the production, distribution and consumption of goods and services that brings about "improved human well being and social equity, while significantly reducing environmental risks and ecological scarcities" (UNEP1, 2009). Simply put, Green Economy is "low carbon, resource efficient and socially inclusive."

Dr. Volker Steigerwald, Private Sector Promotion (SMEDSEP) Program

Program Manager of GIZ further reveals that with the symposium, *"We aim to create wider awareness, deepen the understanding of the emerging concept, practices and impacts drawn from global experiences. We aim to highlight the opportunities, disseminate information, showcase Development Partnership for the Private Sector as a strategic approach towards mobilizing an industry sector."*

Distinguished Speakers

Slated to give presentations at the symposium are: Dr. Jung Tee Yong, Deputy Executive Director of Global Green Growth Institute who will talk on Green Economy in the Republic of Korea; and Kim

Nguyen Van, Head of Sector Project Sustainable Development of GIZ who will present: An International Perspective and the Experience of the Federal Republic of Germany: Lessons for the Philippines.

Leading the panel discussions will be Dr. Gunter Matschuck, Vice President of German-Philippine Chamber of Commerce and Industry, Inc. (GPCCI) and President of Maschinen & Technik, Inc. (MATEC) who shall talk on Renewable Energies. Tristan Loveres, Chief Operating Officer for TUV Rheinland PH Inc. will discuss Development Partnership with the Private Sector (DPP) in Energy Efficiency. Pedro Delantar, President of Nature's Legacy will discuss Green Business and Paul Lazaro, Vice President of the Development Bank of the Philippines (DBP) will elaborate on Green Finance options. Mr Markus Dietrich will close the discussion with the topic on Social Entrepreneurship.

GIZ Symposium: A Winning Moment for Mabuhay Germany 2011

The GIZ symposium kicks off the 3-day Mabuhay Germany 2011 event- themed *"Winning Moments!"* For this year, Reiner Allgeier, President of the German-Philippine Chamber of Commerce and Industry, Inc. (GPCCI) says, *"We are focusing on remarkable victories that have established the Philippines and Germany relationship. These winning moments clearly define and build up the dynamic and mutual relationship between two great nations."*

PROFILES OF SYMPOSIUM SPEAKERS AND PANEL DISCUSSION MEMBERS

Dr VOLKER STEIGERWALD

Program Manager
Private Sector Promotion Program SMEDSEP
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Dr Volker Steigerwald obtained his Doctorate (PhD) in Agriculture from Justus Liebig University Giessen in 1989. He had his Masters Degree in Economics from the Johann Wolfgang University Frankfurt in 1979 and a postgraduate degree in Development Politics and Planning from the German Development Institute Berlin in 1980. He is married. His qualifications include Rural Development, Regional Economic Development, Promotion of MSMEnterprises, Development of Enterprise Associations and Business Chambers, Project Cycle Management, Capacity WORKS, Quality Assurance, Impact Monitoring, Assessment and Evaluation, among others. His specific country experiences include Germany (Western Europe), Indonesia, Malaysia, Nepal, People's Republic of China, the Philippines, Sri Lanka (Asia), Malawi (Africa), Ecuador, Colombia and Mexico (America). In all of his professional life Volker is researching, planning and promoting regional or territorial approaches to development: from Integrated Rural Development (IRD) via Regional Rural Development (RRD) to Local and Regional Economic Development (LRED). He is with GIZ for more than 25 years already.

Mr REINER ANDREAS ALLGEIER

President
German Philippine Chamber of Commerce and Industry (GPCCI)

Mr Reiner Andreas Allgeier, a German national, is presently the President of German Philippine Chamber of Commerce and Industry Inc (GPCCI). He is the Managing Director of Schenker PH Inc - a German multinational logistics company under the DB Group. With over 800 employees with eight facilities nationwide, Schenker PH Inc offers a full range of logistics supply chain solutions.

He has been with DB Schenker for 36 years, holding various management positions in different countries such as Kenya, Nigeria, Indonesia and Malaysia, being the last country he handled as Managing Director prior to his assignment to the Philippines.

Mr Reiner Allgeier is married to Maria Salvacion F Allgeier (Filipina) for 29 years. They have four children.

Ms RHODORA M LEAÑO

Director
Bureau of Micro, Small and Medium Enterprise Development
Department of Trade and Industry
(DTI BMSMED)

on behalf of the DTI Undersecretary
Engr Merly Cruz

Ms Rhodora Manalo Leaño is currently the Director of the Bureau of Micro Small and Medium Enterprise Development, Department of Trade and Industry.

She also heads the National Micro Small and Medium Enterprise Development Council Secretariat. Prior to her current post, she was the Director of the Bureau of Domestic Trade Promotion and Supervising Director of the Product Development and Design Center of the Philippines. Before joining DTI, she was connected with the Philippine Economic Zone Authority in various capacities. Her fields of specialization include Investment Promotion, Market Promotion, Policy Advocacy and Program Development.

HE Dr JOACHIM HEIDORN

Ambassador
Federal Republic of Germany

His Excellency Dr Joachim Heidorn was born in Hanover, Lower Saxony in North Germany in 1951. He is married and has three children. He earned his PhD in Political Sociology from the University of Marburg in 1982 and completed the Diplomatic Training Program at the German Federal Foreign Office in 1983.

Dr Heidorn served in the German Embassy in London from 1986 to 1988 and was the German Embassy Deputy Head of Mission in Tripoli from 1988 to 1991, in Colombo from 1992 to 1996 and in Riyadhfrom2001 to 2004. He was the German Ambassador to the Hashemite Kingdom of Jordan from 2007 to 2008. In between diplomatic postings in German Embassies abroad, Dr Heidorn had stints with the Federal Foreign Office's Middle East Division in 1985 as Deputy Head of the Division on Public Diplomacy from 1996 to 2000 and as Head of the same Division from 2004 to 2007.

Hon MARY ANN LUCILLE SERING

Vice Chairperson
Climate Change Commission (CCC)

Executive Director
Climate Change Office (CCO)

Attorney Mary Ann Lucille Sering served as DENR's Undersecretary from August 2007 to January 2010 and as National Coordinator for the Phase Out of Ozone Depleting Substances and related programs and projects from September 2009 to January 2010. She also held in concurrent capacity the posts of Undersecretary for Climate Change and Alternate Chairperson of the Clean Development Mechanism from July 2009 to January 2010 and Member of the Supreme Court Technical Working Group for Environmental Rules of Court chaired by then Chief Justice Reynato Puno).

She merited her Master in Entrepreneurship in Social Development from the Asian Institute of Management and her Bachelor of Laws from the San Sebastian College of Law.

She is a very much sought after speaker and resource person in national and international seminars on topics concerning Climate Change Adaptation and Mitigation.

Mr KIM NGUYEN VAN

Head
Sector Project Sustainable
Economic Development
GIZ

Mr Kim Nguyen Van is currently heading the Sector Project Sustainable Economic Development at GIZ Eschborn, specializing in economic policy advice. Before that he worked several years for the German Federal Ministry for Economic Cooperation and Development (BMZ) as deputy head of division for Economic Policy and Financial Sector and as a Policy Specialist in Sustainable Economic Development. He holds a Master's degree in International Economics from Georg August University Göttingen, Germany and from Universidad de Salamanca, Spain.

Dr JUNG TAE YONG

Deputy Executive Director
Global Green Growth Institute
(GGGI)

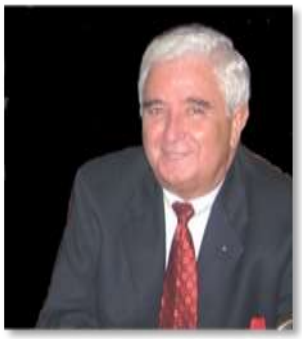
Dr Jung Tae Yong is currently the Deputy Executive Director of the Global Green Growth Institute (GGGI) located in the Republic of Korea.

Prior to his current position at GGGI, he was the Principal Climate Change Specialist of the East Asia Regional Department at the Asian Development Bank from 2007 to 2010 and the Senior Energy Economist of the Energy, Transport & Water Department at the World Bank from 2005 to 2007. He was also the former Project Leader in Climate Policy Project at the Institute for Global Environmental Strategies of Japan from 1999 to 2005 and Senior Fellow and Director of the Energy Modelling Division at Korea Energy Economics Institute from 1992 to 1998.

He also assumed the role of Senior Advisor of Energy & Climate Change Task Force in the Presidential Transition Committee, Republic of Korea as well as a Commissioner at the Presidential Committee on Green Growth, Republic of Korea from 2009 to 2010.

Educated at Seoul National University (BA) and at Rutgers, The State University of New Jersey (MA and PhD), he was a Visiting Researcher at the Joint Global Change Research Institute, University of Maryland as well as a Joint Research Fellow at the National Institute for Environmental Studies (NIES), and a Visiting Fellow at Kyoto University, Japan.

His many publications to date, both in Korean and English, include numerous books, reports and papers, including Environmental Economics 2000, The Economics of Climate Change in Southeast Asia: A Regional Review 2009 and Regional Economics of Climate Change in Asia and the Pacific 2009.



Dr GÜNTER MATSCHUCK

Vice President
GPCCI

President
Maschinen & Technik Inc (MATEC)

Dr Günter Matschuck has been an active promoter of the use of Renewable Energy sources, especially in rural electrification, MATEC's solar and wind installation as well as mini and pico hydroplants have substantially contributed to the quality of life in remote and isolated areas in the Philippines.

As an experienced Engineer, Dr Matschuck leads his MATEC team to offer turnkey concepts, a supply of state of the art equipment and components, engineered for the adoption of local application and a maximum integration of local manufacturing and construction contents to achieve environment friendly and economical tailormade technological solutions.

Married to Rizalina Soli with five children, Dr Matschuck was the 1990 Golden Leadership National awardee (Humanitarian Center of the Philippines), the 1989 Star of Austria awardee for his outstanding assistance to the Austrian Trade and Industry and the 1984 Golden Quill awardee given by the Philippine Media Practitioners.

Mr TRISTAN LOVERES

Chief Operating Officer
TÜV Rheinland PH Inc

Mr Tristan Loveres is a Registered Electrical Engineer and passed the Civil Service Commission's Career Service Professional Examination.

Prior to joining the TÜV Rheinland Philippines, he worked with the Department of Trade and Industry - Bureau of Product Standards (BPS), the National Standards Body of the Philippines, where he gained extensive experience on conformity assessment activities. He has represented the country in various international meetings.

Pursuing a career in the private sector, he joined, in 2006 TÜV Rheinland Philippines, as the Manager for the Product Safety and Quality (PSQ) Department.

In 2009, he was designated as TÜV Rheinland Philippines' Chief Operating Officer. Since then, he has consistently expanded the services of TÜV Rheinland Philippines where previously only Systems, Products and Academy Services, now offering in addition Industrial Services, Mobility and Lifecare. Under his leadership, TÜV Rheinland Philippines is currently implementing two Development Partnership with the Private Sector (DPP) Projects – one with ConservePhil in partnership with GIZ, Germany (Energy Efficiency for the Retail Sector) and with Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG), Germany called Enhanced QUality and Information security Program for Businesses and Professionals in the Outsourcing sector (EQUIP BPO), and one DPP project successfully completed, Resilient Organizations Built for Sustained Transformation of the Philippines (ROBUST Phil) also with DEG (Crisis and Disaster Management for Mission Critical Enterprises). Two more DPP projects are in the pipeline for implementation: one on Food Safety and the other one is on improving the Healthcare sector.

He is as well active in the implementation of Building for Ecologically Responsive Design Excellence BERDE, the green building rating scheme under the Philippine Green Building Council (PhilGBC) where TÜV Rheinland is the exclusive Assessment and Certification body for BERDE.

Mr PEDRO DELANTAR

President
Nature's Legacy

Mr Pedro Delantar is a self made man who has been exposed in various trainings and seminars on Green Innovations and Sustainability. He is one of the pioneers for greening the furniture industry in Cebu by using naturescast scrap like dead barks, leaves, fallen twigs, shrubs and other agroforest waste. He was the recipient of the 2008, 2010 and 2011 Mugna Awardee for Eco-Friendly product. He was named the 2007 Environment-Friendly Entrepreneur of the Year given by the Cebu Chamber of Commerce and Industry. His company Nature's Legacy was also awarded as Excellence in Ecology and Economy (E3). His inventions are patented in the Philippines, US and Europe. For the past years, the export industry faced the global crisis, but their resiliency proved to be the survival of the business. He is still able to continue in helping our country's economy through his advocacy on green innovations and development.

Mr PAUL D LAZARO

Vice President
Development Bank of the Philippines (DBP)

Mr Paul D Lazaro is a graduate of Bachelor of Science in Commerce from the University of Santo Tomas. He has a Certificate in Business Economics – Strategic Business Economics Program from the University of Asia and the Pacific and has completed units in Masters in Business Administration from the University of Santo Tomas. He has 33 years of experience in banking both from the private and public sectors, holding various positions. He is currently the Head of Program Development, Department of the Development Bank of the Philippines that is responsible for the management and implementation of various development programs under the major thrusts of the DBP particularly, Infrastructure and Logistics, Environment and Climate Change as well as Energy and Water Resources. Infrastructure and Logistics covers land and water transportation as well as bulk and cold chains. Environment and Climate Change covers toxic and hazardous waste management, air and water pollution control and prevention and CDM registration. Energy and Water Resources on the other hand, covers renewable energy both power and nonpower, energy efficiency, conventional energy generation, power transmission and distribution, alternative fuels, water supply and sanitation.

Mr Lazaro is also the Head of the Project Management Offices (PMO) of on-going projects funded by multilateral and bilateral development partners as follows

40 million USD Rural Power Project Additional Financing funded by World Bank

24 billion JPY Environmental Development Project funded by the Japan International Cooperation Agency

30 billion JPY Logistics Infrastructure Development Project funded by the Japan International Cooperation Agency

As the PMO Head, he oversees the project implementation and ensures compliance to the requirements of the respective development partner on technical, financial, environment, social safeguards and procurement.

Mr MARKUS DIETRICH

Executive Director
Asian Social Enterprise Incubator (ASEI)

Mr Markus Dietrich is driven by the passion for social entrepreneurship and Base of the Pyramid ventures based on the principles of inclusive growth as well as social and environmental impact. He places himself at the crossing of international development and business with over 17 years of entrepreneurial and managerial experience at the highest level. With his organization, the Asian Social Enterprise Incubator, Markus supports the leading Philippine social enterprises and develops promising projects into sustainable social enterprises. A German national, Markus lives in the Philippines, is married and has a three month old son.

Dr LORENZO F TEMPLONUEVO

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Dr Lorenzo F Templonuevo is a Senior Adviser at the GIZ Private Sector Promotion Program (SMEDSEP). He is responsible for the Program's Knowledge Management and Public Relations Unit. He serves as Focal Person for the global theme Migration. He finished his MA in Industrial Education from the Technological University of the Philippines Manila, his Master of Development Management from the Charles Darwin University (formerly Northern Territory University) in Darwin, Australia and his PhD in Technology Management from the Technological University of the Philippines Manila.

Ms Ma Victoria B Antonio

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Ms Ma Victoria Antonio is a Senior Adviser and the Component Manager for Local and Regional Competitiveness of the Private Sector Promotion Program, GIZ Philippines. She serves as Focal Person for the global theme Green Growth, Climate Change and Private Sector Development. She graduated with a BS Architecture degree from the University of the Philippines in 1994. She then obtained her MS degree in Urban Planning from the Columbia University In New York, USA in 1998. She was also a participant at the Mesopartner Local and Regional Economic Development Training in Germany and the International Labour Organization Summer Academy in Turin, Italy.

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