



## **DOCUMENTATION REPORT**

**Workshop Title:** Round Table Discussion on “Opening the Human Health Security Lens to Climate Change and Energy”

**Venue:** British Embassy, Upper McKinley Road  
McKinley Hill, Taguig City

**Date:** July 07, 2015

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### **I. BACKGROUND:**

Energy production and use account for two-thirds of the world’s greenhouse gas (GHG) emissions. Energy will be at the core of discussion in the global effort to combat climate change in the 21st Conference of the Parties under the United Nations Framework Convention on Climate Change (COP21) Paris in December. With the international collective goal to keep the rise in global average temperatures below 2 degrees Celsius, relative to pre-industrial levels, over 190 countries will gather to shape a global agreement that will curb GHG emissions responsible for climate change.

In the Philippines, the biggest GHG emissions contributor is the energy sector. By 2030 in business as usual scenario, power-related emissions is projected to increase by 400% between 2007 and 2030, from 26 to 140 million metric tons of carbon dioxide equivalent (MMT) CO<sub>2</sub>eq.

Climate Change, energy and health are interrelated. Increase in temperature, patterns of precipitation, extreme weather events and sea level rise are directly and indirectly affecting human health.

The Department of Health (DOH) is keen to develop a deeper understanding and active role in the climate change and energy discourse with the aim to contribute its efforts in tackling climate change.

In this regard, DOH held a round table discussion entitled ‘Opening the Human Health Security Lens to Climate Change and Energy’, hosted by the British Embassy, on 7 July 2015.

The output from this activity will be a valuable working document of DOH that will be utilized to update this year the National Environmental Health Action Plan (NEHAP),

which will be presented by the Philippine Government in the Regional Ministerial Forum on Environment and Health to be hosted by the Philippines in 2016.

## **II. OBJECTIVES**

**General Objective:** To acquire a deeper understanding of the Philippine energy policy framework and its impact to human health

**Specific Objectives:**

- To acquire a deeper understanding of the Philippine energy policy framework
- To determine relationships and synergies to address the impact of energy and climate change on human health
- To identify next actions for DOH in tackling climate change and energy security issues.

## **III. CONTENT**

1. Presentation of Philippine energy fuel mix policy present and future scenarios
2. Sharing of good and innovative Energy Practices/Success stories
3. Assessing the impacts of energy projects from proposal to implementation
4. Human Health Security lens to Climate Change and Energy
5. Presentation of the energy, climate change and health synergy

## **IV. METHODOLOGY**

- Technical Inputs
- Participatory discussion
- Processing/ Synthesis

## **V. EXPECTED OUTPUTS**

The output from this activity will be the **development of a DOH working document (including ‘next steps’ agreed in the RTD) that incorporates climate change and energy impacts on the health sector** to help shape the National Environmental Health Action Plan.

## VI. PROGRAM

Time	Activity
9:00am-9:30am	Registration
10:00am-10:10am	<b>Welcome Remarks</b> <b>Mr. Steph Lysaght</b> , 1 <sup>st</sup> Secretary, British Embassy
10:10am-10:25am	<b>Message</b> <b>Janette Loreto Garin</b> , <b>Secretary, Department of Health</b> (Message delivered by <b>Dr. Franklin C. Diza</b> , Manager of Environmental Related Diseases Division, Disease Prevention and Control Bureau, DOH)
10:25am-10:40am	“The Philippine energy fuel mix policy present and future scenarios”  <b>Mr. Daniel Ariaso Sr.</b> , <b>Assistant Secretary, Department of Energy</b> (Presented by <b>Director Jesus T. Tamang</b> , Energy Policy and Planning Bureau)
10:40am -10:50am	Q and A
10:50am -11:05am	“Assessing the impacts of energy projects from proposal to implementation”  <b>Atty. Jonas R. Leones</b> , Undersecretary & concurrent Environment Management Bureau Director, Department of Environment and Natural Resources (Presented by <b>Ms. Ma. Gerarda Asuncion D. Merilo</b> , Sr. Environmental Management Specialist, Climate Change Office and CDM Secretariat, EMB-DENR)
11:05am-11:20am	“Grassroots perspectives and experience on energy projects in the Philippines”  <b>Dr. Ramon Lorenzo Luis Guinto</b> , Campaigner, Health Care Without Harm - Asia
11:20am-12:00am	Open forum
12:00pm-1:15pm	Networking lunch
1:15pm-1:20pm	“Conceptual framework on “Human Health Security lens to Climate Change and Energy”  <b>Engr. Bonifacio B. Magtibay</b> , Technical Officer for Environmental Health, World Health Organization - Philippines
1:30pm -1:45pm	“The role of the energy, environment and health sectors to support the Philippines’ Intended Nationally Determined Contribution (INDC)”  <b>Secretary Lucille Sering</b> , Vice-Chair, Climate Change Commission (Presented by <b>Assistant Secretary Joyceline A. Goco</b> , Climate Change Office, Climate Change Commission)
1:45pm-1:55pm	Q & A
1:55pm -2:10 pm	“Response to Human Health Security Lens to Climate Change and Energy”  <b>Assistant Secretary Paulyn Jean Rossel-Ubial</b> Office for Technical Services, Department of Health
2:10pm - 2:30pm	Recommendations (short term/long term)
2:30pm-2:40pm	Coffee break
2:40pm -2:45pm	<b>Synthesis</b> <b>Ms. Agnes Balota</b> ,

	Senior Advisor, Deutsche Gesellschaft für Internationale Zusammenarbeit ( <i>GIZ</i> )
2:45pm-3:00pm	<b>Next Steps for the Department of Health and Closing</b>  <b>Dr. Irma L. Asuncion</b> Director IV Disease Prevention and Control Bureau

## VII. ROUND TABLE DISCUSSION PARTICIPANTS

Office	Name	Designation
<b>Government</b>		
Department of Foreign Affairs	1. Mr. Jesus R.S. Domingo	Assist. Secretary, UNIO
	2. Mr. Val Simone T. Roque	Director, Green Div.
	3. Ms. Elaine Mae V. Laruan-Hernandez	Principal Assistant
Department of Energy – Renewable Energy Management Bu.	4. Mr. Andersito Ulgado	Chief, Hydropower & Ocean Management Div
	5. Mr. Arnulfo Zabale	Supv. Science Research Specialist
	6. Mr. Michael John Velasco	Senior Science Research Specialist
	7. Ms. Ma Adeline Paguitan	Science Research Specialist II
Climate Change Comission	8. Ms. Peebles Sanchez	Project Director
	9. Mr. Lorenzo Commandante	Executive Assistant
Senate of the Philippines	10. Ms. Abeth Tongco-Cruda	Secretary, Committee on Cliamte Change
Senate Economic Planning Office	11. Mr. Merwin Zalarar	Executive Director
	12. Mr. Sherwynne Agub	Legislative Staff Officer IV
Office of Senator Loren Legarda	13. Atty. Rachel Sibugan-Herrera	Senior Legislative Officer
House of Representatives Committee on Climate Change	14. Atty. Paolo Villiongco	Consultant
World Health Organization/PHL	15. Engr. Arturo Fernando	National Project Officer on Water Safety Prog
Department of Health DOH	16. Dr. Cecile Magturo	Program Manager, Climate Change and Health Program
	17. Engr. Maria Sonabel Anarna	Supervising Health Program Officer
	18. Engr. Rolando Santiago	Supervising Health Program Officer
	19. Engr. Luis Cruz	Supervising Health Program Officer

<b>Business Sector</b>		
Shell - Philippines	20. Ms. Valerie Ku	LNG Business Development Manager
	21. Ms. Clairin Loh	Asia Gas Marketing Manager
	22. Dr. Rose Rivera	Country Health Advisor
<b>Civil Society</b>		
Health Care Without Harm - Asia	23. Ms. Ma. Merci Ferrer	Director
	24. Ms. Camille Dianne Mendoza	Communication Officer
	25. Ms. Mary Ann Lustressano	Health and Energy Assistant
Philippine Center for Population and Development Inc.	26. Mr. Jonathan David Flavie	Executive Director
<b>British Embassy</b>		
British Embassy Manila	27. Ms. Roslyn R. Ayarata	Climate Change and Energy Attache
<b>Resource Speakers</b>		
British Embassy	28. Mr. Steph Lysaght	1 <sup>st</sup> Secretary
Department of Health	29. Dr. Franklin Diza	Manager, Environmental Related Disease Division
Department of Energy	30. Mr. Jesus T. Tamang	Director, Energy Policy and Planning Bureau
Department of Environment and Natural Resources	31. Ms. Ma. Gerarda Asuncion D. Merilo	Senior Environmental Management Specialist, EMB
Health Care Without Harm	32. Dr. Ramon Lorenzo Luis Guinto	Campaigner, Healthy Energy Initiative
World Health Organization/PHL	33. Engr. Bonifacio B. Magtibay	Technical Officer on Environmental Health
Climate Change Commission	34. Ms. Joycelin A. Goco	Assistant Secretary, Climate Change Office
Department of Health	35. Dr. Pauly Jean Rossele-Ubial	Assistant Secretary, Office for Technical Service
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	36. Ms. Agnes Balota	Senior Advisor
<b>TOTAL</b>	<b>36</b>	

## VIII. THE PROCEEDINGS

1. British Embassy 1<sup>st</sup> Secretary welcomed the participants and resource persons. He underscored the importance of the Round Table Discussion (RTD) as a venue for the exchange of ideas on issues relating to climate change, energy and health and to find opportunities for partnership in working out the issues.

Mr. Lysaght emphasized that climate change is the result of misunderstanding costs. He gave the example of popular use of energy inefficient cars, because the initial cost are much cheaper than the energy efficient ones, but people tend to forget that to continue doing so will result in extreme weather events, which in turn will hurt people and cause damage to infrastructures. According to him, this is the kind of long term cost that we need to consider. Climate change is a strong argument. He hoped that the different agencies, the health department, the energy department, the Climate Change Commission, together with the private sector and the NGOs would all come together for an ambitious coalition to discuss the issues.

Mr. Lysaght said the UK and the EU are there as friends and as allies to share ideas with. They are ready to work with partners to make the Philippines and anywhere else a healthier and more comfortable place to live in. The partners may not agree on every issue but that is part of being partners and it is very important to keep the lines of communications open.

2. Dr. Franklin Diza, Manager of Environmental Related Diseases Division delivered the DOH message, in behalf of Health Secretary Janette Loreto Garin. He stressed that energy has great impact on health. Such interrelationship of climate change and energy may be seen on the adverse effects on human health driven largely by greenhouse gas emissions. Climate change and the threat of energy scarcity now pose serious challenges to the health system, specifically health care and public health services.
3. Director Jesus T. Tamang of the Energy Policy and Planning Bureau of the Department of Energy (DOE) presented on “The Need for Fuel Mix Policy”. Director Tamang acknowledged that currently, the Philippines has no policy yet on Energy-Fuel Mix policy but a lot of discussions has been going on with other partners - the private sectors, industry players and other government agencies on the topic to make sure that the policy crafted will be integrated and incorporating all the concerns of the various sectors.

He stressed that the main task of the Department of Energy is to address the energy requirements of the growing economy but gave assurance that although energy security is the top agenda of the DOE, the impacts and consequences of the energy needs will be interrelated to other sectors such as health, transport and local government units. He highlighted that as of 2013, oil and coal remains the biggest sources of energy in the country accounting for 31% and 22%, respectively of the total supply. Renewable energy sources such as biomass, solar, wind, hydropower, etc., account for 41% of the energy needs.

In terms of power generation for electricity, coal accounts for 35%, natural gas provides 12%, oil 5% while the renewable sources of energy supplies 48% of the needs. He stated that the country needs to deal with the ever increasing demand for electric power. Dir Tamang explained that the supply for renewable energy is in fact increasing, however, the increase cannot cope with the ever-growing demand. In

terms of sectoral power demand increase between 1990 and 2013, residential and commercial power demand are higher than the industry demand.

Director Tamang presented two future scenarios in terms of fuel-electric power ratio. In a do-nothing, that is, business as usual, current scenario, a possible 70 to 75% dependency on coal by 2050, a case that DOE does not want to happen. On the other hand, a study on a possible adjustment in the fuel-mix policy scenario, that is, a balanced participation of different major fuel sources: natural gas, coal, renewable energy and a provision for the entry of new technology (nuclear, wind, etc.), dependency on coal can be kept at 30%.

Energy programs being pushed by the DOE are:

- a. Development of indigenous energy resources (heavy focus on renewable energy)
- b. Expand use of natural gas (proposed Batangas-Manila-Bataan pipeline)
- c. Push sustainable fuels for transport (separate the emission coming from transport sector from that of the total energy to say exactly how emission can be reduced, and the introduction of compressed natural gas or the use of auto LPG)
- d. Make energy efficiency a way of life (setting minimum energy performance for all energy consuming devices and equipment; this is the next step for the yellow label currently used indicating energy consumption)
- e. Expand capacity and coverage of power supply (current national electricity coverage is 80% of households)
- f. Climate-proof energy infrastructure and facilities (propose an age cap of power plants in the Philippines)

Discussion of issues:

Issues	Response
Why is the nuclear power plant not used for the past 30 years?	Dir. Tamang: There were many high level decisions made to mothball the Bataan nuclear power plant. There were issues on corruption at the time and also the issue on accidents in similar power plants (e.g., the three-mile island and Chernobyl). Right now there is a continuing review on what best to be done with the plant. Evaluation is being done whether the Bataan Nuclear Plant can still be used or do we need to build a new plant.
Mr. Merwin Salazar (Senate Planning Office): 1) What is DOE program to make energy consumption per capita at par with Asian neighbors in terms of energy efficiency? 2) Why is the share of the renewable energy as a ratio of the total energy supply declined in recent years and	Dir. Tamang: 1) DOE has electricity access program with focus on renewable energy, particularly solar and wind, 2) The production of renewable energy, although continuously increased, in absolute terms, over the years, is not able to meet the higher energy demand, therefore other energy sources like coal and natural gas were tapped by the industry making the total share of renewable energy at a lower level. We have a continuous program to fully identify where the renewable energy resources are in the country.

what is its impact on energy efficiency of the country?	
On the fuel mix reduction policy, it is projected that only 30% coal dependency by 2050 but now, more coal power plants are being built every year. Is the policy being discussed with DOH, which has affirmed the WHO study indicating a strong link between coal plants and respiratory diseases?	Dir. Tamang: Yes, the carbon emission is high for coal-fired power plants but this is also true for the biomass fuel used in households, the question now is will the DOH worry more on industrial pollution of coal power plants or on indoor household pollution from biomass fuel which can have a bigger effect on the population?
There is a global movement to veer away from coal-fired power plants, what is the rationale of the DOE and the government on building more coal power plants where local investment is strong?	Dir. Tamang: Compared with the countries that have declared closing of their coal power plants, the Philippines is still building up on its required energy capacity. In other countries, there is immediate replacement of energy production from coal power plant by other sources, but in the case of the Philippines, if we shut down all coal power plants right now, the whole country will be out of electricity (total blackout). We don't have a policy that we should be put up only coal-fired power plants, EPIRA is saying that the government will not put up any more power plants but leave it to the private sector to do so. It is up to the private sector to choose what technology and what type of fuel to use. So whatever proposal coming from the private sector to produce electricity will be processed especially if no other competing proposal is submitted. We may not be able to move away from coal plants but there can be room for us to mandate a higher performance requirement from them. EMB for example, during the ECC requirement evaluation, can be putting these companies' generators to task, for example have the level of performance in the market right now increased to 40% conversion efficiency rather than the current 35% prevailing in the market.

4. Ms. Ma. Gerarda Asuncion D. Merilo, Senior Environmental Management Specialist of the Climate Change Office, Environmental Management Bureau of the Department of Environment and Natural Resources talked on the functions of the Climate Change Office in the evaluation and monitoring of energy projects, the processing of Environmental Impact Assessment and issuing of Environmental Clearance Certificate.

Discussion of issues:



Issue:	Response:
Comment on geothermal power plants: Health of the community around the coal plants should be monitored with specified frequency per year to ensure that the health of the members of the community are not severely affected by the operation of the power plants.	
Engr. Ma. Sonabel Anarna (DOH): Unlike before, the DOH would sit in the environmental review committee of the DENR in the evaluation of development projects, as resource persons, particularly regarding environmentally critical projects, such as power plants, but now the DOH has no more participation on the review of energy projects. The proponent then was required to secure environmental health impact assessment certificate from the DOH as one of the conditions for the approval of the project, but now, the LGU can issue the same certificate.	
Mr. Merwin Salazar (Senate Planning Office): Is there a DENR policy to conduct baseline study on the health of communities around the power plants?	Ms. Merilo: It will be a good effort in collaborating with other government agencies to be able to conduct the baseline study on health of communities around the power plants as basis for evaluating adverse impacts of these plants on human health.

5. Dr. Ramon Lorenzo Luis Guinto, Campaigner, Healthy Energy Initiative of Health Care Without Harm – Asia presented on the grassroots perspectives and experience on the climate change – energy – health nexus in the Philippines. According to Dr. Guinto, the key message in the link between climate change and health is that the global population will be inequitably affected and the effects will be unevenly distributed. Regions that will be severely affected by the greenhouse gas emissions are Africa, East Asia and the Pacific.

He said unfortunately, the Philippines is very vulnerable to risks of disasters, ranking third in the world in terms of risk index in 2013, and sixth in the world in the climate change risk index in 2012. Climate change should be a priority of the health sectors.

Dr. Guinto underscores the findings of the Lancet Commission paper of 2015:

- a. 2009 conclusions on health impacts not changed and may have even been underestimated;
- b. Climate change will threaten 50 years of gains in global health and development;
- c. Responding to climate change could be the greatest global health opportunity of the 21<sup>st</sup> century;
- d. Policy responses to climate change with health co-benefits: transformations in diet, transport, insulation, fuel sources/coal;
- e. Achieving a decarbonized global economy and securing the public health benefits it offers is no longer primarily a technical or economic question –it is now a political one;
- f. Many mitigation and adaptation responses to climate change are “no regret” options:
  - Rapid phase out of coal-fired plants to protect cardiovascular and respiratory health ,
  - Encourage a transition to cities that support and promote healthy lifestyles
- g. The health community has a vital part to play in accelerating progress to tackle climate change, as it did with tobacco and public sanitation

He asserted that if we want to address the climate change-energy-health nexus, we need better governance and we need a government that talks amongst each other and with other sectors.

He presented the four-point agenda for health and climate change:

	<b>Adaptation</b>	<b>Mitigation</b>
<b>Within Health Sector</b>	Build resilient health systems	Reduce health sector’s ecological footprint
<b>Beyond Health Sector</b>	Monitor the health impacts of climate change	Advocate for mitigation measures for health co-benefits

Discussion of issues:

Issue	Response
On the use of coal and biomass, where is the health impact greater, in the households or in the community where the coal-fired power plants are located?	Dr. Guinto: Transitioning from biomass to more sustainable and healthier household energy sources will require a set of interventions. There are data from international sources on the health impacts of fossil-based fuels that hopefully DOH can validate in terms of mortality and morbidity due to coal fired power plants versus indoor pollution due to household combustion of firewood. There are tools developed internationally to project or to calculate those numbers.

Are there models to calculate the cost of the health impacts of fossil-based fuel per kw-hr? Is it	<p>Dr. Guinto: If we include the hidden costs of fossil based energy options, then we may found that these energy options may be more expensive in the long run. The short term gains in using these types of fuel are negated by the long term costs.</p> <p>Ms. Roslyn Arayata (British Embassy): From a U.K. commissioned study, the cost of coal power production is about 40 to 50 dollars per megawatt-hour, and considering the externalities cost on health it will have an additional cost of 40 dollars per megawatt-hour, which supports the assertion that coal is not necessarily the cheapest solution. She added that as Mr. Lysaght has said, the U.K. has a firm stand on coal and that, no U.K. government money will be invested on coal projects. U.K. has made a commitment of 80% reduction of emissions by 2050, which right now is almost 30%.</p>
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6. Engr. Bonifacio B. Magtibay, Technical Officer on Environmental Health of World Health Organization – Philippines presented on the conceptual framework on climate change, environment, energy and health. Engr. Magtibay analyzed the interaction modes in the linkages of the various sectors on one another. In particular, he focused on the effects on health by the three other sectors:

a. Health and Environment

Proportion of health problems attributed to environmental factors

- 24% of the global disease problem
- 23% of all deaths
- 85 of 102 (83%) major diseases, disease groupings and injuries

b. Health and Climate Change

Projected number (percentage) of additional deaths per year due to climate change

- Heat exposure in elderly people – 38,000 (16%)
- Diarrhoea – 48,000 (20%)
- Malaria – 60,000 (25%)
- Childhood undernutrition – 95,000 (39%)

c. Health and Energy

Human health endpoints from production or use of energy

- Pulmonary health
- Cardiovascular health
- Brain development
- Cancer
- Infectious diseases
- Mortality
- Malnutrition/overnutrition

Engr. Magtibay offered the following possible issues for discussion, which the DOH can consider in the development of the national environmental health action plan to be presented in the regional ministerial forum next year:

- Existing policies on energy, environment and climate change that protect human health
- Existing programs, projects and initiatives that prevent or control the impact of energy, environment, and climate change on health
- Knowledge gaps in addressing the impact of energy, environment, and climate change on human health

Discussion of issues:

Issue	Response
Why was respiratory and pulmonary disease not included in the projected additional deaths per year due to climate change?	Engr. Magtibay: In the original data, pulmonary disease was included but the number is not high, only the top four were presented here.
Ms. Merci Ferrer (Health Care Without Harm): What is the timeframe and what are the preparations by the DOH and WHO on the development of national environmental health action plan, considering the gathering in the regional forum is next year and what is the status of the inter agency committee on environmental health ?	Engr. Magtibay: The inter agency committee on environmental health was created by Executive Order 489 signed by President Corazon Aquino in 1991. During that time, the committee was meeting regularly every month tackling issues related to environmental health such as the familiar red-tide issue. The committee is chaired by the DOH with membership of around 12 government agencies subdivided to several task forces such as sanitation, water, air, occupational health and food safety. Now, there is a suggestion to include climate change and health impact assessment. The development of national environmental health action plan (NEHAP) started in 2004 and presented in regional forums every three years: 2007, 2010, 2013 and in 2016 to be hosted by the Philippines. It is a ministerial regional forum where ministers of environment and of health of ASEAN countries plus four other countries including China, Korea and Japan meet to discuss environmental and health issues in Asian context. The countries present their accomplishment for the last three years as well as their plans for the next three years. Engr. Magtibay is hopeful that the NEHAP of the Philippines will be finalized by the end of the year.
How to bring the participation of lawmakers and local government officials into the discussion of issues on climate change, energy and health?	Engr. Magtibay: One way to reach to the grassroots level is to promote awareness regarding climate change in the LGU through the league of governors or the league of mayors.

7. Assistant Secretary Joyceline A. Goco of the Climate Change Office of the Climate Change Commission delivered a presentation on the Role of Energy, Environment and Health to Support the Intended Nationally Determined Contributions (INDC).

Asec Goco stressed the benefits of doing the INDC:

- Getting on track toward the 2 degree goal
- Demonstration of a political commitment
- Realization of non-climate benefits associated with integrating climate change
- Strengthening institutional and technical capacity
- Policy integration
- Informing key stakeholders
- Communicate resource needs

Asec Goco enumerated the following basic policies of the Philippines as guide in the development of the INDC:

- Republic Act 10174, “Climate Change Act as Amended”
- National Framework Strategy on Climate Change
- National Climate Change Action Plan Outcomes
- Institutionalizing the Philippine Greenhouse Gas Inventory Management and Reporting System (PGHGIMRS)

#### Discussion of Issues:

Issue	Response
Is the INDC composed of government agencies? What is the role of the DOH in terms of paving the way for CCC to do the INDC, in terms of co-benefits of health?	Asec Goco: INDC is a government offer or contribution using official data from the government in formulating the mitigation options. The INDC will be shared and consulted as well with civil society and the private sector. Currently, we are in the process of consulting what will be the information to put in the adaptation measures. With regards to mitigation, they already have the numbers and the tools on how to formulate, but how to quantify our vulnerability for the adaptation measures? This is where the health sector can help. For example, DOH can provide data on the loss or damage of coal on the health sector.
Is there a convergence on the different, not entirely competing, initiatives of various government agencies?	Asec Goco: It is clear that government agencies anchor their sectoral plans on the Philippine Development Plan. In the PDF, it is very clear that it supports sustainable development.
What will be the consequence of a country not meeting or achieving the INDC?	Currently, it is not established what the legal form and nature of the INDC. There will be a Conference of Parties in Paris in December 2015, wherein it is expected to have an agreement on the legal nature or legal instrument to be adopted. It will be a big discussion between the developed and the developing countries whether the INDC is a commitment of Parties or not. In terms of the Kyoto Protocol, there were no sanctions on

	countries which were not able to comply.
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8. Assistant Secretary Pauly Jean Rosell-Ubial of the Office for Technical Services of the Department of Health gave a presentation of DOH Response to Human Health Security Lens to Climate Change and Energy. Asec Ubial opened her presentation with the following issues:

- Health benefits for energy versus impact on public health?
- Best alternative sources of energy?
- Existing health-driven energy policies?

Asec Ubial acknowledged the importance of energy for:

- Economic development as it drives global economy
- Health care, as it provides light, powers medical equipment, store vaccines, sterilize equipment, etc.

However, she also recognized the impacts of energy on the environment:

- Toxic chemicals (sulfur dioxide, nitrogen oxide, mercury, etc.) hazardous to human health are released into the environment during the combustion of coal
- Production of power from coal produces ground-level ozone which is the primary ingredient of smog

Asec Ubial quoted the 2015 World Health Assembly declaring the health impacts of air pollution as the world's largest single environmental health risk causing yearly:

- 4.3 million deaths from indoor pollution
- 3.7 million deaths from outdoor pollution

Asec Ubial offered the following strategies the DOH can adopt to address the impacts of climate change and energy to human health:

- Strengthening health policy on energy
  - Advocacy on raising awareness that climate change is a fundamental threat to human health
  - Partnerships with other agencies to ensure that health is properly represented in the climate change agenda
- Strengthening the surveillance of diseases and data management
- Strengthening the health system
  - Assess health vulnerabilities
  - Build capacity to reduce health vulnerability to climate change
- Science and evidence
  - Coordinate reviews of the scientific evidence on the links between climate change and health
  - Develop a national/global research agenda
- Strengthening the inter-agency and stakeholders collaboration through the Inter-Agency Committee on Environmental Health (IACEH)
  - Air pollution and climate change are members of the thematic sectors
- ASEAN Ministerial Meeting in 2015 through the National Environmental Health Action Plan (NEHAP)

Discussion of Issues:

Issue	Response
On policy gaps on human health impact assessment: Is this a DOH mandate or do we need to create another body to deal with this.	Asec Ubial: DOH is heeding the call of the World Health Assembly on monitoring the health impacts. DOH is working to have the health impact assessment in place. DOH develops, implements and regulates the policies for the entire health sector.
Comment: Considering the effects of air pollution to human health in the Philippines bordering on epidemic proportion, can we not utilize the health data (from international sources) to push for more rational energy policy.	
On the impact of energy on human health and the diseases caused by climate change, is there research identifying the direct link on the local level to help us assess the health impacts.	
Ms. Merci Ferrer (Health Care without Harm) The real purpose of this forum is tackling policy gaps. With all the data presented earlier and the need for concrete data on the local level, we really need to sit down, discuss and work hard to address the policy gaps, then look at the mitigation aspect, and then proceed to the heavy part on the adaptation aspect. Yes we need to have local data, but it should not be an excuse for us to do nothing. There are regional and global data available we can use.	Dr. Guinto: We need to strike a balance between the lack of local data and the need to act on policy gaps. Who has the responsibility to generate the local data? Yes, the civil society and the private sector can provide the data but they will need the leadership role of the DOH for analyzing, collecting and compiling all data into annual report. The health report would be a good contribution to the climate change, energy and health discourse.
Comment: Timelines should be set for the DOH, the DOE and the DENR to identify the policy gaps, write those policies and implement.	

9. In the synthesis of the Day's Round Table Discussion on Opening the Human Security Lens to Climate Change and Energy, Ms. Agnes Balota, Senior Adviser from GIZ, presented the four (4) key messages arising from the RTD:

**a. Policy direction – Think long-term**

- At present, short-term goals drive decision-making on energy mix with little consideration of long-term costs
  - DOE strives for a balanced participation of renewable energy, oil, coal and natural gas in the primary energy mix
  - Dependency on coal until the country builds up its required base capacity to address the energy requirements of a growing economy

**b. Close the knowledge gap**

- Need to examine the multiple health and environmental hazards associated with each stage in the life cycle of fossil fuels – extraction, transport, processing and combustion
- Be mindful of the on-going research and debate on health issues associated with renewable energy
- Need for locally generated evidence on climate change and health impacts
- Assess health vulnerabilities: children, the elderly, and those with weak or impaired immune system.

**c. Create synergies and foster collaboration**

- Build on existing policies, programs and initiatives to strengthen the nexus of climate change, energy and health
  - Health-driven energy policies
  - Health surveillance systems to support monitoring of health impacts, emerging and re-emerging diseases
- Re-establish functional work relationship among agencies (e.g., the EIA system) and strengthen the IACEH
- Work with the private sector – they have a choice on what technology to put up

**d. Aim for co-benefits**

- Work towards the realization of non-climate benefits (health co-benefits) from renewable energy as the world strive for an ambitious global deal on emissions reduction



## IX. PHOTOS



**Figure 1.** Mr. Steph Lysaght, 1<sup>st</sup> Secretary of the British Embassy welcomed the participants of the Round Table Discussion



**Figure 2.** Dr. Franklin Diza of the Environmental Related Diseases Division delivered the DOH message



**Figure 3.** Director Jesus T. Tamang of the Energy Policy and Planning Bureau of the Department of Energy (DOE) presented on The Need for Fuel Mix Policy



**Figure 4.** Participatory discussion of issues after Dir. Tamang's presentation





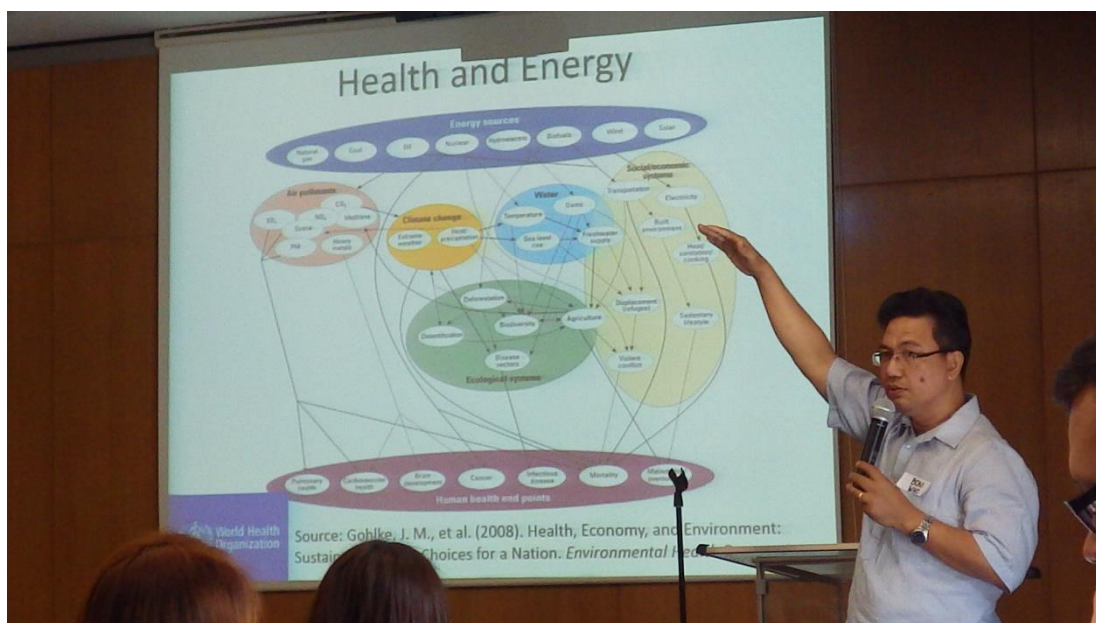
**Figure 5.** Ms. Ma. Gerarda Asuncion D. Merilo, Sr. Environmental Management Specialist of the Climate Change Office, EMB-DENR talked on the functions of her office



**Figure 6.** Participatory discussion of issues after Ms. Merilo's presentation



**Figure 7.** Dr. Ramon Lorenzo Luis Guinto of Health Care Without Harm – Asia presented on the Grassroots Perspectives and Experience on the Climate Change – Energy – Health Nexus in the Philippines

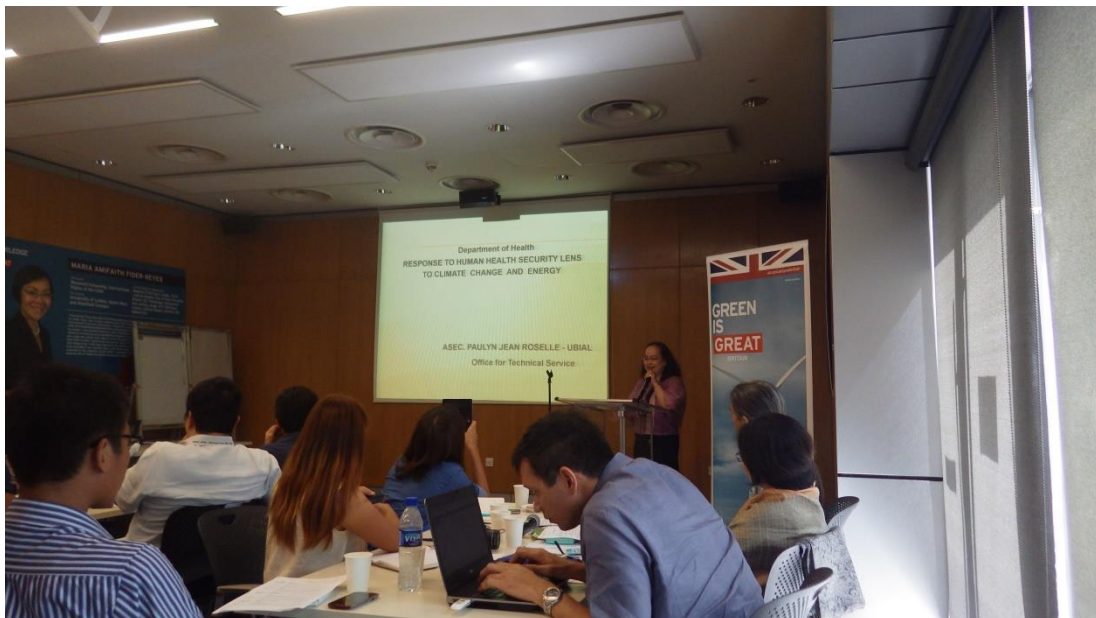


**Figure 8.** Engr. Bonifacio B. Magtibay of WHO/PHL presented the Conceptual Framework on Climate-Change, Energy and Health





**Figure 9.** Assistant Secretary Joyceline A. Goco delivered a presentation on Intended Nationally Determined Contributions (INDCs)



**Figure 10.** Assistant Secretary Paulyn Jean Rosell-Ubial gave the response of DOH to Human Health Security Lens to Climate Change and Energy.



**Figure 11.** Discussion of issues on Climate Change, Energy and Health nexus



**Figure 12.** Ms. Agnes Balota, Senior Adviser of GIZ provided the synthesis of the key messages of the Round Table Discussion