

CHAPTER I INTRODUCTION

This technical report has been made as one of the requirements by World Health Organization (WHO) for Event Organizer who will manage the supervision and implementation of the project entitled "National Conference on Climate Change and Water Safety for Health" with the theme "Water Safety: a Sustainable Measure of Health Adaptation for Climate Change".

The main purpose of the national conference was to showcase emergency response, recovery and preparedness activities on water safety as part of climate change and health adaptation. Originally, the conference was scheduled to be a two (2) day conference on March 18-19, 2015 either in Tagaytay or Clark, Pampanga, however it became a three (3) day conference conducted last March 23-25, 2015 in Holiday Inn, Clark Pampanga which was also in line with the celebration of World Water Day last March 22, 2015.

The report highlighted the main features and outcomes of the national conference. Activities on the first day of the conference were intended for the Environmental and Sanitary Engineering students of different schools. The second day focused on the main event of the conference which was the recognition of water utilities with Water Safety Plans reviewed by the Department of Health (DOH) and signing of the Declaration by the participants on "Water Safety: A Sustainable Measure of Health Adaptation for Climate Change.

The national conference likewise focused on the presentations of three (3) sessions entitled: Session I- Climate Change Impact and Responses; Session II -

Development Partners' Initiatives on Climate Change and Health; and Session III - Linking Climate Change Adaptation and Health to Water Safety: Best Practices.

Other detailed discussions of activities of the national conference were reported in the second progress report after its completion and reference to this will be made accordingly. The present report recalls the main elements of the project documents such as project objective and output, approach to the project, implementation plan and methods and ends with a conclusion.

CHAPTER II PROJECT OUTLINE

2.1 Objective of the Project

The primary objective of the project is to conduct a three (3) day “NATIONAL CONFERENCE ON CLIMATE CHANGE AND WATER SAFETY FOR HEALTH” with the theme: “Water Safety: A Sustainable Measure of Health Adaptation for Climate Change” to showcase among the participants in collaboration with the Department of Health, World Health Organization, national, subnational and partner agencies the emergency response, recovery and preparedness activities on water safety as part of climate change and health adaptation.

And in order to achieve this objective the WHO need to hire an event organizer that will assist them and the DOH in the administrative, logistical, and documentation requirements in the conduct of Climate Change and Water Safety for Health Conference.

2.2 Expected Output of the Project

Participants are expected to have a declaration on way forward for climate change and water safety in preparation to the emergency response, recovery and preparedness activities on water safety as part of climate change and health adaptation in their respective area of assignments.

2.3 Activities to Achieve the Objective and Output

- Identification of venue
- Regular meeting with the Organizing Committee
- Development and production of programmes
- Development and production of leaflets
- Preparation of conference kits, souvenirs and materials
- Coordination of the physical arrangement
- Documentation preparation

CHAPTER III PROJECT IMPLEMENTATION AND OUTCOME

The World Health Organization in collaboration with the Department of Health deemed it necessary to provide information, dissemination and have consultation with other national, subnational and other partner agencies on the impacts of climate change on water safety, diseases and health. Hence this project was completed and achieved its objectives and delivered all its outputs.

All of the activities stated in the work plan which was included in the Inception Report, attached herewith as Annex 1 were implemented as planned. Although the project was originally a two (2) day event, it became a three (3) day national conference, with the first day intended for the Quiz Bee of the Environmental and Sanitary Engineering students of different schools. The second day focused the main event of the conference which was the recognition of the water utilities with water safety plans reviewed by the Department of Health and the achievement of its expected output which was the signed declaration on way forward for climate change and water safety, attached herewith as Annex 2, in preparation to the emergency response, recovery and preparedness activities on water safety as part of climate change and health adaptation in their respective area of assignments. Aside from the activities stated above, the conference highlighted the presentations of the three (3) sessions which was the main components of this report.

Presented below the detailed discussions of the different activities conducted in the three (3) day national conference:

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Day 1 of the conference started from 8:00 am to 9:00am with the registration of participants attached herewith as Annex 3: List of Attendees/Participants, invocation and singing of the National Anthem. It was followed by the welcome message from ARD. Louella Estembre, the Assistant Regional Director of Pampanga who replaced Dir. Leonita Gorgolon, Regional Director of Region III due to some personal emergencies. Then, Engr. Bonifacio Magtibay, the Technical Officer in Environmental Health of the World Health Organization and at the same time the President of the PSSE, presented the topic "Linkage of Climate Change, Water and Health". Engr. Magtibay discussed the key concepts and terminologies like weather, climate, climate variability, climate change and the difference between greenhouse effect against enhanced greenhouse effect. He emphasized on the linkages of climate change to water and health and on the strategies and policy options. We became aware that if there is no greenhouse effect, the average temperature on earth's surface would approximately 15 degrees centigrade and life on earth would then be unattainable. He enumerated the different effects of climate change that resulted to excessive rainfall, flood, water pollution, stagnant water as well as drought, heat wave, water scarcity, air pollution which led to the following diseases: diarrhea, cholera, malaria, dengue, leptospirosis, drowning, malnutrition; in addition to dehydration, scabies, heat stress, mental health and respiratory diseases. He ended up with a conclusion that climate change is happening and seriously affecting water supply systems and health, and that human activities are causing extra amount of greenhouse gases. He highlighted that the adaptation and mitigation are strategies that should be supported by policies to address the impact of climate change to water and health.

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A film showing on Climate Change and Water Safety was presented after his discussion then it was immediately followed by the presentations of Dr. Antonio F. Mateo, Dean College of Engineering of Adamson University of the topic " Creative Engineering Technologies as Intervention for Climate Change, Water Shortages and Disasters". Dr. Mateo discussed the several effects of climate change like severe weather and heat waves, more and intense tropical storm, flush floods and flooding, reduced agricultural yields that resulted to food shortages, sea level rises, and erosion in coastal areas. He mentioned that the solution for this is the creative/practical option which is rainwater harvesting. The legal basis for this installation is RA 6716 (1989) "An act providing for the construction of water wells, rainwater collections, development of spring, and rehabilitation of existing water wells in all barangays in the Philippines". The Rainwater Harvesting System Technology was developed to convert rainwater and contaminated water to potable water that passed all the 16 PNSDW parameter under the Physical and Chemical Tests. The development of ceramic clay, filters, bucket and candle with anti-pathogen is the heart of the system when clear, potable drinking water is required. The 3Es and 3Is are the proactive measures on water shortage and disasters are 1.) Engineering/Infrastructure 2.) Enforcement/Implementation and 3.) Education/Information. For the conclusion, Dr. Mateo mentioned that climate change and water crisis are real and may reach its worst dimension in the very near future. In addition to Asia's Typhoon Mat, disasters are inevitable and bound to happen with creative interventions and anticipations coupled with the good intentions to help, we will be able to come up with options that can solve or cushions the effect of these impending disaster. Practical, doable/appropriate climate change adaptation technologies are existing and available as discussed

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and whatever pro-active measure we implement, will be our legacy for the succeeding generations. He parted with these lines "People who grow up without a sense of how yesterday have affected today are unlikely to have a strong sense of how today affects tomorrow". After the completion of Dr. Mateo's presentations the panel discussion was conducted and moderated by Mr. Nelson R. Mendoza.

After lunch, the Quiz Bee started led by the quiz bee master, Engr. Magtibay. First part of the quiz bee was the elimination round having 15 questions with 10, 20 and 30 points for each 5 questions. In case there's only one school who got the correct answer, the scores will be doubled, and they should answer it within 10 seconds only. The TIP, Q.C. was eliminated in the first round. During the championship round again having the same mechanics and the school that will garnered the highest scores will be declared as the grand winner. Luckily the National University was declared as the Champion of the Quiz Bee. It was again a very successful and fulfilling day of the event.

For Day 2, the main event of the conference, although all students were invited to participate again, only the professors from different schools attended. It was started with the registration from 8:00am to 9:00 am followed by invocation and National Anthem then the welcome address and the introduction of the participants was delivered by Dir. Irma L. Asuncion, Director IV of the Disease Control and Prevention Bureau (DCPB) of the Department of Health. The inspirational messages were delivered by Engr. Bonifacio Magtibay from the World Health Organization in behalf of Dr. Julie Lyn Hall, WHO Representative and by Hon. Mary Ann Lucille L. Sering, Secretary from the Climate Change

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Commission. The keynote speaker was introduced by no other than the Undersecretary of the Department of Health, Dr. Vicente Belisario. The keynote speech was delivered by Hon. Janette P. Loreto Garin, the Secretary of the Department of Health. The gist of the inspirational messages/speeches of Dr. Julie Lyn Hall delivered by Engr. Bonifacio Magtibay of the WHO, Sec. Mary Ann Lucille L. Sering of the Climate Change Commission (CCC) and Sec. Janette P. Loreto Garin of the DOH were attached herewith as Annex 4. After the latter's speech, Dr. Garin together with Sec. Sering of the CCC and Engr. Magtibay of the WHO, awarded the Certificates and Plaques of Recognition to 11 water utilities with Water Safety Plans reviewed by the DOH. The 11 water utilities that were recognized during the event were the following: Maynilad Water Services Inc.; Manila Water Company Inc.; Dasmariñas City Water District, Davao City Water District; Metro Cebu Water District; San Pablo City Water District; Camarines Norte Water District; Batangas City Water District; and Baliwag Water District. The water utilities were also given equipment as a token by the WHO. Another important part of the conference was the signing of declaration by the participants led by Sec. Garin, Sec. Sering and Engr. Magtibay. Ms. Valeen Montenegro with her partner Mr. Noel Escondo acted as the master of ceremony.

After Lunch, Session 1: "Climate Change Impact and Responses" was moderated by Ms. Agnes Balota, the senior advisor of GIZ. Mr. Alexander von Hildebrand, Technical Officer of the Western Pacific Region Office (WPRO) of the WHO, discussed the topic: "Climate Change, Water and Health". Climate Change is the defining issues of the 21st century, the drive for sustainable development must go and in hand with the drive to address climate change, as quoted by Mr. Hildebrand from the opening message of Dr. Margaret Chan, Director General of

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the WHO in her remarks at the conference on Health and Climate Change in Geneva, Switzerland last August 27, 2014. Mr. Hildebrand discussed the impacts of environmental changes wherein a lot of factors contributed to the increasing human pressure that led to increasing impact on health such as stratospheric ozone depletion, forest clearance and land cover changes, land degradation and desertification, freshwater depletion and contamination, loss and damage of wetlands, loss of biodiversity, damage to coastal reef and ecosystem and impacts from urbanization. He also discussed the impact from climate change, the anthropogenic climate change drivers, impacts and responses as well as the frequent and intense natural disasters. He also mentioned the significant health impacts concentrated on the most vulnerable. He emphasized that there's a need for the integration of health and WASH into National Adaptation Plan for climate change and reminded the participants about the limited international support for health adaptation to climate change. He concluded his presentations by stating the next steps such as support rendering WSPs climate resilient and use of WSP to be part of climate change adaptation strategies; integrate climate change, health and WASH in international monitoring, incorporating them in the Sustainable Development Goals; and support initiative such as the subject conference to evidence that health must be at the center of climate change action.

Then it was followed by the discussion on the topic " Climate Change: the Public Health Response" by Usec. Vicente J. Belisario. He mentioned that 97 out of 100 climate experts agreed that humans are causing global warming. Further he mentioned the 10 countries worst hit by climate change were: Bangladesh, Myanmar, Honduras, Vietnam, Nicaragua, Haiti, India, Dominican Republic,

Philippines and China. The Philippine typhoons were getting stronger and he stressed what happened to health sector in time of climate change related disasters. Example of which were the facilities greatly impaired and during those times humanitarian aid system overwhelmed. He discussed the potential effects of climate change on health like injuries and fatalities die to severe weather events, respiratory and cardiovascular disease, mental health consequences, population dislocation and civil conflict. He further discussed the public health approach as well as the DOH commitment and response to climate change adaptation. He emphasized the national framework strategy on climate change and the national framework for action. He ended his presentations by quoting the lines from Al Gore "We should not wait, we cannot wait... we must not wait".

Dr. Candido A. Cabrido, Jr., the Team Leader, ADB-JFPR TA 8493 PHI Climate Resilience and Green Growth in Critical Watersheds and former President of the Society of Conservation of Phil. Wetlands, discussed the topic on "Indicators for Vulnerability Assessment of Climate Sensitive Diseases". Dr. Cabrido, Jr. discussed the Vulnerability Assessment Framework and the objective of the vulnerability assessment: climate sensitive diseases. He mentioned that Vulnerability is equal to Sensitivity plus Exposure plus Adaptive Capacity. He also discussed the vulnerability index calculation in 3 stages. Further he enumerated the different impacts on health as well as the sensitivity indicators its corresponding exposure indicators and adaptive capacity indicators. He enumerated the indicators, the scale classifications and its sensitivity ratings. Lastly, he showed sample of vulnerability to certain disease by municipality in table format.

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The topic on “Climate Change and Adaptation Tools for Health” was discussed by Dr. Fely E. Lorenzo, the founding chair of M.A. Health Policy Studies, UP Manila. Dr. Lorenzo stated the foundation project and goals and the focal disease and validation sites. She discussed the vulnerability assessment and adaptive framework including the vulnerability assessment tools. She also discussed the best practices and the innovative climate change adaptations which should be the priority policy direction and program. Lastly she recommended the proposed monitoring and evaluation framework. After all the presentations for session 1, a panel discussion conducted.

At exactly 4:00 in the afternoon, Session 2: “Development Partners’ Initiatives on Climate Change and Health” was moderated by no other than the CE, EnSE Chair of National University, Engr. Casiano E. Gonzales, Jr. The topic on UNDP’s Initiative on Climate Change and Health was discussed by Ms. Amelia O. Supetran, the team leader on Energy Environment of the UNDP. Ms. Supetran discussed the managing environmental risks by having risk assessment, risk evaluation and risk management. Risk according to her is equal to frequency multiplied to consequences whereas the frequency is the hazard and the exposure and vulnerability are the consequences. She mentioned some examples of risk avoidance like relocation, proper land zoning, while the risk mitigation include contingency planning, early warning systems and re-engineering. And in addressing residual risk samples include the risk transfer and sharing mechanism. She pointed-out the theory to practice cycle. She enumerated the UNDP response such as its readiness, the integrating DRR-CCA in Local Development Plan Program, the twin Phoenix/RAPID, rebuilding, the MDGF on CCA and the DDR-CCA standardization, etc. She also discussed the hazard

characterization, frequency analysis and risk criteria/acceptability. Lastly, she emphasized the emerging approach, the imperatives and its entail.

Ms. Agnes Balota discussed the topic "GIZ in the Philippines and Pacific: Climate Change Portfolio Overview, March 2015". At first Ms. Balota introduced what the GIZ, a private –sector entity is all about. Then she discussed their climate change programs and projects, approaches and results. She enumerated the entity's support to climate change and health like the technical assistance in the formulation of the DOH National Climate Change Adaptation in Health Strategic Plan (2014-2016). Further, she also discussed the future collaboration like establishment of framework for analyzing climate sensitive diseases with causal attribution to climate change, organization of the human security-health sub-working group and regular reporting and monitoring of the human security – health component under the NCCAP.

The last resource person for second day was Ms. Ma. Mercedes V. Ferrer, the Executive Director of Health Care Without Harm-Asia (HCWH) who discussed the topic on "First, Do No Harm, HCWH-Asia's Initiatives on Climate Change and Health. Ms. Ferrer showed the slide on Time: Health and Family with the statement "Rebranding Climate Change as a Public Health Issue" She discussed that health is central to climate action and the four-point agenda for health and climate , the adaptation and mitigation, beyond and within. She also discussed the future vision toward regenerative health care as well as the envisioning sustainable regenerative, equitable health systems. She introduced the Global Green and Healthy Hospitals project of HCWH and the 4 Energy which is to implement the energy efficiency and clean, renewable energy generation. She

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mentioned some of the hospitals that have good practices like St. Paul de Chartres Health Care Ministry, Philippines and Bir Hospital Kathmandu, Nepal. She emphasized the public health benefits of strategies to reduce greenhouse gas emissions: low carbon electricity generation. Lastly she recommended the CHEAP solution which is Climate, Health and Equity in All Policies. Then it was immediately followed by panel discussion.

Day 3 started by invocation followed by recapitulation by Engr. Ma. Sonabel S. Anarna, Supervising Health Program Officer (SHPO) of the DOH. Then Engr. Joselito Riego De Dios, CHPO of the Environmental Related Diseases Division (ERDD) of the DOH presented the "National Policy on Water Safety Plan (WSP) for all Drinking-Water Service Providers". First, he defined what is water safety plan, then he presented the flowchart of the 11 modules in 5 stages of WSP. He discussed the rationale why they came-up with the DOH Administrative Order (DAO) No. 2014-0027 dated Sept. 4, 2014, and its key provisions. He further discussed the general guidelines, the different agencies roles, the repealing clauses and the effectivity of the AO. At exactly 9:00am Session 3: "Linking Climate Change Adaptation and Health to Water Safety: Best Practices" started with Ms. Alexander von Hildebrand, Technical Officer of WPRO as moderator. In this session, the first resource person is Dr. Carlos Primo David, Project Leader, Project NOAH, DOST, who presented the topic on "Are we running out of water? Climate Change Vulnerability of Water Resources". Dr. David discussed the effect when the temperature and climate variability increases and when water level at Angat drops. He cited the article when La Mesa nears spill level: Ipo, Binga dams release water. He discussed where's our useable water stored, the integrated water resources management, the project

NOAH rain gauge stations (DOST), the efficient use of water, and what are the real impact of climate change.

After the presentations of Dr. David, the representatives from Private Utility, Water District and LGU Managed Water System presented their best practices. For Private Water Utility, Engr. Francisco A. Arellano, the Head of Corporate Quality, Safety and Health Division of Maynilad Water Services who presented their best practices. Engr. Arellano presented how they deliver potable water, the evolution of their water safety plan, the challenges encountered and the benefits of WSP. He discussed the design interventions, the new technology acquisitions, the establishment of multi-stakeholder watershed management program their tree planting activity and their information campaign. He further discussed the service improvements made due to WSP and benefits especially during disasters. He concluded that Maynilad Water Safety Plan was the 1st of its kind in the Philippines, the revisions and the effectiveness of the WSP and their customer satisfaction. Ms. Rebecca L. Husayan, the Manager of Production Division of Metropolitan Cebu Water District presented in behalf of the water districts. She mentioned the different activities, benefits and initiatives that they involved with due to implementation of their water safety plan. Engr. Gervacio Germano, the General Manager of Ormoc Waterworks Systems Administration presented "Best Practices-Water Safety Plan (Ahag Water System)" in behalf of LGU Managed Water System. Engr. Gervacio presented the key information about the water utility , the overview of WSP Development, the time frame and resources the issues, constraints, solutions, and actions taken. He also integrated climate change to water safety plan and cited major benefits from the implementation of WSP. For the conclusion he mentioned that the development

of the WSP testified to the commitment of the LGU of Ormoc to continue its delivery of safe and potable water to its constituents. Then a panel discussion followed.

Dr. Franklin Diza, the Division Chief of the ERDD of the DOH delivered the closing message. Dr. Diza presented the Summary of Participants' Recommended Plan of Actions, Measurable and Doable Plans for 2015-2021, attached herewith as Annex 5 and it was immediately followed by group photo. The documentations of the whole event are attached herewith as Annex 6. The concluded National Conference on Climate Change and Water Safety for Health with the theme "Water Safety: a Sustainable Measure of Health Adaptation for Climate Change" was a very informative, meaningful and successful event of the Department of Health in collaboration with the World Health Organization.

The implementation of this project expected to improve the knowledge of the targeted participants in the preparedness, response and recovery activities during emergency situations for water safety in adaptation to climate change. The idea gained by the participants in attending the three (3) day Conference with case study presentations, panel discussion and film showing, they were able to apply their acquired knowledge in their respective areas thru the partnership with the WHO and DOH and the cooperation of the LGUs.

CHAPTER IV CONCLUSION

After the conference, the targeted participants learned the different activities to be taken during preparedness, response and recovery in handling the water system so that its quality will not be deteriorated even after the extraordinary typhoon. Also, they were able to apply the learned principles and concepts during the different presentations conducted and also from the Information Education and Communication (IEC) or Promotion materials (leaflets) distributed during the conference. They gained a lot of information on how to react properly when water was contaminated in case of disasters. It is expected that with the showcased emergency response, recovery and preparedness activities on water safety for health during the conference an improvement of the water quality system in case of emergencies was committed by all of the participants. Based on the successful results of the entire conference as discussed in detailed in this report and in the second progress report which was attached herewith as Annex 7, the objective of the event was achieved.