PROFILE AND STATEMENT
OF GERRY BAGTASA, PhD

I am Gerry Bagtasa, deputy director for research and associate professor at the University of the Philippines – Institute of Environmental Science & Meteorology (UP-IESM), Diliman. I have a Bachelor of Science degree in Physics with specialization in Computer Application and Masters of Science in Physics from the De La Salle University, Manila and a Doctor of Philosophy in Science from Chiba University, Japan. I attached a copy of my *Curriculum Vitae* and *List of Published Papers* for more information of my background.

I was invited by Ms. Veronica Cabe, a petitioner in the human rights and climate change case to be a witness and resource person for the petitioners to explain climate change, its causes and effects, and specifically, the role of carbon and other greenhouse gases in warming the environment, in the first public hearing of the case on March 27-28 at the Commission on Human Rights in Quezon City, Philippines.

I agreed to be a witness and resource person for the petitioners. On March 7, 2018, at around 2 o'clock pm, in a presentation room of the UP-IESM I gave an *impromptu* lecture on the topic on the request of Ms. Cabe, Ms. Niq Esmeralda and Attorneys Zelda Soriano and Hasminah Paudac who also interjected questions during the lecture. The *impromptu* lecture, and the questions and answers during the lecture became the basis of this statement.

First of all, climate has been constantly changing over time. Carbon is an element essential to life on Earth. It can take on different forms such as carbon dioxide gas, and through its greenhouse effect, carbon dioxide makes our planet liveable to life as we know it. I will elaborate on the greenhouse effect with visual aid in the public hearing proper.

Climate change became a problem because the current period of warming is occurring more rapidly and this is because of the excess carbon dioxide gas that has accumulated in our atmosphere since the industrial revolution trapping more heat and increasing the earth's temperature in the process. While there are natural fluctuation or variability in global temperature observations, recent rapid increase in temperature is unprecedented in known temperature data. This warming effect is very likely human-induced and has serious implications on the planet's climate.

Most man-made emissions of carbon dioxide are through the burning of fossil fuels, as well as through cutting down of carbon-absorbing forests. Other greenhouse gases such as methane and nitrous oxide are also released through human activities, but their overall abundance is small compared with carbon dioxide. There is growing evidence of anthropogenic climate change and you can

find some of the evidence in the Powerpoint presentation attached herewith. The powerpoint will be presented in the public hearing.

Despite the universal consensus on the climate crisis, some are skeptical claiming that there had been no significant global warming despite ever increasing amounts of carbon dioxide being emitted and attributing the pause in warming to natural variations in the sun's energy output, decline in atmospheric water vapor and greater storage of heat by the oceans. However, there is no compelling evidence to support such skepticisms--at slide no. 10 of the Powerpoint presentation which will be discussed in the public hearing.

Even if we cut greenhouse gas emissions dramatically now, the effects will continue because it takes greenhouse gases decades to be removed from the atmosphere and parts of the climate system, particularly large bodies of water and ice, hundreds of years to respond to changes in temperature.

Nothing further.

Gerry Bagtasa, Ph.D
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