



Some Consequences from Increasing Human Population to the Environment and Weather & Climatic System



Paulus Agus Winarso*

Indonesia State College Meteorology Climatology & Geophysics, Indonesia

***Corresponding author:** Paulus Agus Winarso, Indonesia State College Meteorology Climatology & Geophysics, Indonesia

Submission: 📅 May 29, 2018; **Published:** 📅 June 27, 2018

Opinion

Global human population has been growth the population around 83 million people annually, or 1.1% per year. The global population has grown from 1 billion in 1800 to 7.616 billion in 2018 (based upon United Nations on World Population Prospect 2017). Based from World Population Prospect from the United Nations Population Division has informed that during the era nineteenth century up to beginning twentieth century, there was slow increasing population with the amount 1 million people. Then during twentieth century, there would become shorter approaching 1 million/ in the range 33 - 11 years, it means that in the last period in the end nineteen century especially starting 1980 the world population become 5 million people. The world population increased up to 6 million in the end twetieth century of 1999 and approacing more than 7 million people in the recent years of 2018. Increasing world population would not follow with additional areas, meaning to say, there should be efforts for introducing idea/technology how to attain and to survive for human life.

As no new areas to be added, the land-exploitation especially the land-clearing activities could encourage the environmental problems especially toward environmental degradation. Based from the experience over Indonesia Maritime Continent Area, the environmental problems arose when the land-clearing action using the cheapest way especially the burning activities. They might start during the dry season period in the era 1980 then they may enlarge coincide with the time and or increasing human population. Due the social matter of increasing the human population and needed space for the housing and other purposes such as comercialization of the wood. There were increasing number of the wood from big and large trees for futher purposes for living and economical value for the deveoing countries globally. Decreasing area of the forest have been real condition with enlarging impact of the land cover process with easily burning since 1980 up to present time. Indonesia would be a developing country to start with the wild fires over the forestry area last era 1980 when for the first time strong El Nino phenomenon arose for the first time in 1982/83 with enlarging the

fires over plantation and forestry areas land smoke from their fires to accross the boarder. The Enlarging Some or Haze from fires crossing the country would be so called the transboundary haze pollution. Where this transboundary haze over Indonesia and surrounding countries became to be famous every El Nino episode such as to occur at the period 1987/1988, longest in the record of the El Nino episode 1990 - 1994 then strong El Nino episode to be suspected to generate global economical crisis 1997/1998. Then entering in the millenium years 2001, every long dry condition (drought) over some places globally would follow with the fires, but after the year 2010 with reversal condition with La Nina episode, the fires could decelerate with wet environment condition. The La Nina episode could encourage wet condition over most Asian , Australian and European Continents and dry condition over African and American Continent.

Increasing population during the end twenty century up to beginning twenty one century would encourage with developing fires and smoke or haze pollution at certain areas/continent during dry environment. During wet condition would encourage surplus water from the stormy cloud development to cause three stormy condition e.g. rainstorm, thunderstorm and windstorm. These unfavorable environment would develop from natural and man-made from encreasing the population. Some efforts from the people of the world have been develop by most the United Nations Organization, but up to present time the impact from both condition of the environment seems to be under control in the global condition and situation. May be in the local scale point of view could affect some people with easily loss of life and material due to the drought, fires and smoke/haze for the dry environment and stormy condition in terms of flash flood, flooding, landslide. These disasters in both environmental condition could become more frequent, after land cover change continue further coincide with increasing human population especially in the developing countries with populated condition. Heat island condition would be reality in the current condition over several cities in the world.

Increasing human population would be parallel with increasing for food and living space with opening new space and intensive agriculture activities, they might encourage space with introducing new housing and new area for agriculture activities to support the human life. These activities would enforce to open new area such that the changing of the environment should occur with creating heating of the surface to increase the convective process in the atmosphere environment. Convective process in the atmosphere with humid air would support convective cloud development and convective cloud cell in term of single-, multi- and super-cell developed. With decreasing number of the number big trees with more than 1 meter of tree trunk replaced with new small trees, the sunshine could direct penetrate the earth surface. The direct sun shining could be heating up of the earth's surface and then they continue convective process. These atmospheric phenomena with increasing number of occurrence of local stormy condition from convective cloud would current situation and condition especially over maritime continent of Indonesia. It could be occurred in other

places of the world coincide with the changing of the environment as it continue to be sustained currently.

These situation and condition of the changing of the environment would continue as human population continuing to increase with respect with the time. As the weather and climate variability introduced last era 1980 when Global Phenomena of the El Nino/La Nina started to affect with supporting increasing human population and causing changing of the environment. These natural and man-made processing would encourage the local up to regional disasters both dry and wet environment condition. The dry environmental condition with fires and hazy air could easily develop over some cities such in Asian Cities and local storm could be during wet environmental condition with the local storm to cause flash flood, flooding, landslide. Some action to reduce the impact from the disasters would be required in the near future for better life and continuing sustainable development for us staying in the earth planet.



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