

Human Health and Adaptation in a Sustainable World

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When we hear the word, “sustainability”, most often it is referring to the issue of global warming, and in turn the issue of reduction of the carbon emission. While it is clear that reduction in emission and preventing the global warming are prerequisite for human survival, it is not so clear what or what kind of survival should be sustained by reducing emissions.

Health of human populations is obviously one of the most important components that should be sustained in the future. Here, as is well known by the WHO’s definition, health should refer not only to physical status but also to other aspects of human life. In addition, it becomes gradually recognized that maintaining the ecosystem is also very important for human health. Therefore, sustaining the health of human population will be achieved through multi-dimensional effort. In this sense, human health could be an integrated indicator of “sustainability”.

Then, what kind of health for populations? We do not have quick answer to this question. The WHO’s definition, rather focusing on individual’s health, is too idealistic, looking for something too perfect. Concept of health could vary across populations/regions/cultures as well as across time (generations), presumably reflecting the status of each population/society placed in a particular space/time context. Given that drastic change of the current societies is expected to achieve a sustainable world, it is plausible that future view of human health will also change substantially.

An important but tough question in this connection is whose health should be considered. Since neither resources nor technology are infinite, we need to set priority to deal among various health issues. Although such prioritization has been made in many occasions in the past, both the spatial

and time scales need to be widened; the spatial scale may need to cover even ecosystems, while the time scale should span several generations at least.

Our past and current activities modified and even “destroyed” the environment/nature, which brought about undesirable consequences in human health. Although many issues regarding the health effects of global warming and/or sustainability might be dealt within the field of environmental health, a branch of preventive/social medicine, relative importance of prediction/projection appears much greater in such issues than “traditional” issues in this field. Consequently, much more uncertainty is inevitable.

For example, spread of infectious diseases is one of the major health issues related with global warming as pointed out by, e.g., the IPCC report. Little hint for possible emergence of an unknown (or existing but totally neglected minor) disease has been provided. While this is largely due to the nature of the problem (“anyway we cannot talk what we do not know at all”), it is also true that breakout of unknown infectious diseases have been serious threats to human health/societies.

Chemical pollution of the environment, mostly occurred as a result of economic activities, had another huge impact on human health during the last half century. The real magnitude of the potential health effects of numerous chemicals in the current environment has not been adequately evaluated; thus, we may worry too much or too less than we should. Current scheme for the evaluation of risks associated with the existence of such chemicals may not be appropriate enough, considering that we need to deal with either subtle but widespread or subtle but potentially long-term risks. In addition, to justify the judgments about the risks, they should be weighed against the benefits, which is not an easy task. In addition, hazards of the chemicals emerged in various ways that we did not expect, which we need pay attention to.

In retrospect, introduction of agriculture, construction of cities, and industrialization brought about drastic changes in human health and diseases. Currently, adaptation to the climate change is being discussed. Adaptation to sustainable society/world needs to be discussed since realization of the sustainable world requires fundamental changes in our life style and value systems; we, our social systems, and our thinking have been gradually adapted to current “unsustainable” world, and we yet to know potential health impact, in its broadest sense, of sustaining the earth.