

## **Sustainability of Asia: Economic Development, Urbanization, Lowering Birth Rate/Aging and Climate Change**

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The number of mega-cities is increasing rapidly and therefore is a determinant factor to sustainability of the globe.

Industrialisation has saved the human beings from hunger and starvation by stable production and income, without disturbances by climate and weather. While stable production has developed economy in industrialised cities, which has strengthened competitiveness of the country, the subsequent income growth in these cities has attracted migration from rural agricultural areas.

Urbanization, which is a phenomenon of population migration from rural areas to cities, causes various problems including 1) scarcity of energy and water due to rapid economic growth, particularly in mega-countries such as China and India, 2) socio-economic loss and contribution to GHG emission due to hyper-congestion and sprawl, and 3) increasing discrepancy in income and Quality of Life between cities and rural areas due to further immigrating population.

In Asia, birth rate is lowering and aging is progressing not only in developed countries such as Japan and Korea but in most of countries, only excluding India and its surrounding countries. The population who should work as engine of the countries will diminish while those to be supported will increase. This makes the society vulnerable and therefore will become one of the most serious risks for Asian countries.

On the other hand, climate related disasters have been increasing and more violent. Now we observe a contrast that being strengthened natural disasters will attack the being weakened human society.

Consequently, we must face inconvenient fact that the risk of deterioration

of Quality of Life is becoming more and more realistic. We should tackle the above extreme difficulty by preparing appropriate strategies and the relevant well structured countermeasures by cooperation between natural science, engineering and social science. The author emphasizes the necessity of approaches, which we call “clinical environmental studies” to bridge the diagnosis of changing phenomena in nature and society, reaching the treatment and then to theorise the process, which we call “basic environmental studies”. Finally examination of the problems caused by urbanization process in Asia and its countermeasures are demonstrated.