

August 25, 2016

China that once thrived on water, faces water problems today

By KODAMA Katsuya

The cradle of civilization is four ancient civilizations of Mesopotamia, Egypt, the Indus valley, and China. All of them rose and developed by great rivers. The Mesopotamian civilization is associated with Tigris and Euphrates rivers, the Egyptian civilization with Nile River, the Indus civilization with Indus River, and the Chinese civilization with the Yellow and the Yangtze rivers. Water is indispensable for human activities. Our civilizations have developed with water.

Among these regions of four great civilizations, China faces a critical problem of water today. According to CNN Hong Kong, ground subsidence was prevailing in Beijing, and in the worst district, the land had sunk 11 centimeters in a year by June 27, when this news was reported. This result was announced by an international research group based in China. The research group told that the subsidence is due to depletion of groundwater. In Beijing, two-thirds of water supplies for industrial and household uses come from groundwater. Even nationwide, underground water accounts for one-third of total water supplies. Therefore, subterranean water is an important source of water supply in China.

The total amount of water resources in China is so huge as to reach 2325.85 billion cubic meters, which is the 4th largest in the world. However, Chinese population is so large that the per capita amount of water resources is only 1730.4 cubic meters. This is extremely small in the world. Moreover, water resources are distributed unevenly by the region. Generally speaking, water is scarce in northern parts of China, including the Northeast, the North, and the Northwest regions. Beijing is in the North region. On the other hand, water is abundant in the South Central, the South, and the Southwest regions. The problem is that water is growing scarcer, while its consumption is rising. Particularly, people in Northwest China suffer from chronic shortage of water.

Industrialization requires a huge amount of water consumption. People use it for washing, cooling, and so forth. Only some industries like the service sector do not use

much water. China has become a mass water consumption society through economic development. Also, Chinese household is changing dramatically. Flush toilets have become widespread. In rural areas, people still go to what is called “Ni Hao” styled communal restroom which is still furnished with outdated pit toilet, where they chat and squat on the same toilet bowl in the same compartment. However, flush toilets are already widespread in urban areas. This is the Chinese toilet revolution. It is inevitable that water consumption surges. In addition, people are expected to keep themselves clean these days. As a result, people take a shower and a bath more frequently, and wash their clothes more often. In the past, people did not wash their clothes habitually even in Japan and Europe. However, they do laundry everyday now. Chinese people are following this trend. Water is indispensable to maintain the cultural standard of life.

It is not the quantity of water that matters critically in China. The quality of water is deteriorating rapidly. According to “The Monthly Report of Ground Water” which was released by the Ministry of Water Resources of China this January, they conducted water quality observation researches of 2,103 wells in the Songliao plain of the Northeast region and the Jiangnan plain in an inland area last year, and it turned out that 80% of ground water is too severely contaminated to drink. Ground water pollution is serious, particularly in the regions of water scarcity.

Quite often, we see the color of Chinese rivers change dramatically in the photo, due to terrible water pollution. Nevertheless, it takes relatively in a short period to clean the river, if proper measures are taken. Chinese rivers flow slower than Japanese ones, thus it may take longer to clean them, but water is flowing anyway. However, once underground water is contaminated in a vast area, it is very difficult to depollute it. In case of China, water pollution is associated with soil pollution. People discharge factory effluent underground, and fill industrial waste into the soil. Water pollution in China is extremely serious, because it stems from both coli bacteria and heavy metal.

First, it is important not to contaminate ground water furthermore. It is necessary to found a social framework, in order to clean dirty effluent and recycle it. Also, it is essential to depollute contaminated ground water, and reserve it as “available” water resources. In addition, water saving technology is indispensable.

Japanese people have been sensitive to water. Safe and clean water is deeply embedded into our culture as an essential element of it. There is no wonder why Japan

leads the world in water defecation technology. Also, she is a leader in water saving technology. In this area, Japan and China can cooperate each other. Water resources will be the most critical issue of economic development in the future. Japan has the most important technology in the water area. It would be wonderful, if both of countries could co-prosper with water.

(This is an English translation of the article written by Dr. KODAMA Katsuya, President of Socially Responsible Investment, which originally appeared on the e-forum “Hyakka-Somei” of CEAC on July 13, 2016.)