

Celebrating World Water Day

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By Lee Chang-seok

March 22 is World Water Day. It was established and proclaimed by the United Nations and celebrated worldwide following the resolution of the Global Environmental Summit in Rio de Janeiro, Brazil, in 1992. The decision at the Rio conference was based on the reality that the biggest crisis facing humanity is still a water problem and that more than two-thirds of diseases threatening humanity are either caused or transmitted through water. As such, when World Water Day was designated, the focus was on solving drinking water problems and waterborne diseases in developing countries. However, rapidly progressing climate change has triggered extreme climate events and deepened the problem through meteorological, hydrological and ecological droughts. This has turned the water problem into a problem for all of us.



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As we all know, water is a key factor in ensuring life. Water makes up 70 percent of the body based on weight. It is used as a medium for all life phenomena. Organic matter was created by chemical reactions on primitive Earth, and the birth process of the first organism with self-replicating function from this organic matter took place in water. We humans were also born into this world through the process of developing into an organism in water called amniotic fluid in our mother's womb. Many wildlife species in nature also use the aquatic and riparian zones as their breeding environment. Water and the aquatic ecosystems containing it are the survival environments that guarantee life for all organisms, including us humans. Unlike living environments, which provide the necessary conditions for pursuing the convenience of life, survival environments provide the essential conditions for sustaining life. Water is a valuable survival environment. Even in a rapidly changing environment caused by climate change, water with a large heat capacity buffers temperature changes like the sweat of our bodies, creating opportunities for us to adapt to climate change.

But precious water is getting farther and farther away from us. We pave surfaces for our convenience, and water has flowed into surface bodies to limit groundwater filling. However, groundwater forms one of the pillars of our Earth's crust. It is our future water resource and the foundation of the global environment, and it also plays a role as a member. We now need to consider the impact of transforming part of a river into rice fields, narrowing its width and increasing the flow of water to cultivate our staple food, aquatic plant rice. This land-use conversion also restricts groundwater filling and the ecological diversity flowing water creates, suppressing the establishment of biodiversity that provides various ecosystem services. However, our interference with rivers goes beyond necessary changes like this. By reshaping rivers for human convenience, we convert their natural, puddle-like cross-sections into narrow, double-terraced designs, often paving over them. This prevents rivers from functioning as they do in nature.

In addition, the plants introduced there disrupt the system and order of the river as a natural landscape by ignoring the original plants and introducing ones that live in mountainous or distant regions. In this era of climate change, aquatic systems that we have transformed for the

convenience of life are fluctuating, threatening our lives and the living organisms around us. We now need to check our aquatic systems in preparation for extreme weather events caused by climate change. It is necessary to examine whether the water bowl modified to meet human needs can accommodate incoming floods or droughts. Furthermore, it should not merely be inspections. They must be followed by human intervention to address any identified issues. This is the necessary relationship we need to establish between water — our essential source for survival — its ecosystem and humans.

On the occasion of World Water Day, we must move away from using water as an unlimited resource and instead use it thoughtfully, recognizing its essential role in sustaining life. We should strive to preserve our aquatic systems close to what nature wants, so that we can protect them as a survival environment for biodiversity, including humans.

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