

Special feature: *Kokudo-gaku* (national land infrastructure planning) as code

National water management goes global

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"National land" and the globalization of water management

Water is essential to maintain life. At the same time, the appropriate control of water is foundational for a country and society. As the saying goes, "He who controls water controls the nation." Various issues related to water have existed throughout the world since ancient times. Since March 2003, when the Third World Water Forum was held in the Lake Biwa and Yodo River Basin Area, which includes Kyoto, the global water crisis has received frequent media coverage, and it is even said that the twenty-first century will be a century of water.

Steps are being taken in international politics as well. The United Nations Millennium Action Plan, which was adopted in September 2000, states the goal of reducing the percentage of the world's population which suffers from poverty and hunger, as well as the percentage of the population which lacks access to safe drinking water, to half of 1990 levels by 2015. At the G8 Summit which was held in Evian, France in June 2003, water was taken up as one of the most important international issues, and action goals for the resolution of water problems were established in areas such as promotion of good water management, use of financial resources, building infrastructure through decentralization of power to local governments, enhancing water monitoring, assessment, and research, and strengthening arrangements by international agencies.

Since ancient times, there have been international clashes regarding international rivers and internationally shared aquifers; and these are still major diplomatic issues in some regions today. Many of the water issues that are now receiving international attention were previously handled as domestic problems rooted in each region and addressed by local governments or at most, by individual national governments. Local issues are coming to be seen as global issues, a shift brought about by a changing awareness of what constitutes national land.



Photograph 1. Yoshino Daiju Dam

"National land" vs. territory

In the past, river basins were the main geographical divisions that made up countries or administrative units. This was partly due to the conditions of water circulation, including the need for cooperation due to conflicts related to the use of water upstream, downstream, and on the left and right banks. Of course, another reason was the fact that riverboats were the main means of transporting goods, and

watersheds were a significant barrier to exchange in an age when it was not possible to build large tunnels. As shown in Fig. 1, about half of Japan's present prefectural boundaries are the boundaries between Class 1 river basins. Only a little over 10% of prefectural boundaries correspond to Class 1 rivers themselves. Even when Class 2 rivers are included, the proportion only rises to about 20%. This suggests that river basins as geographical units provide natural geographical conditions that are very well suited to forming administrative units.

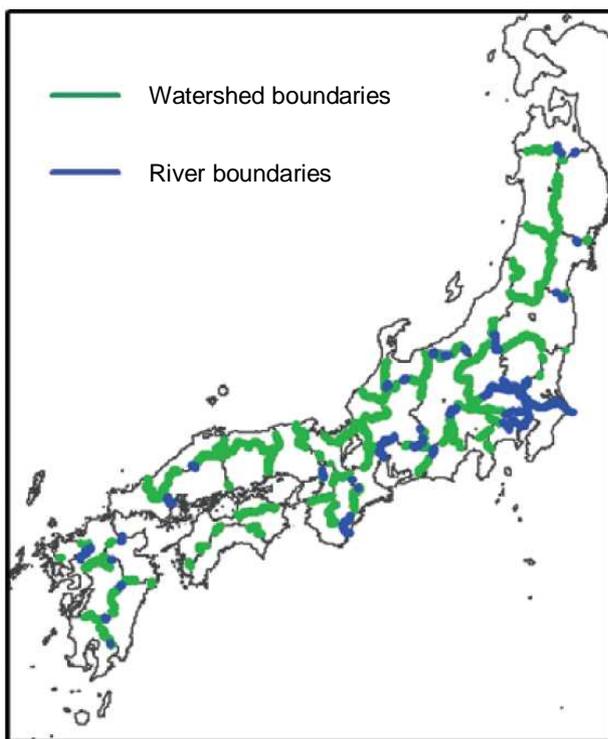


Fig. 1. Classification of current prefectural boundaries

The concept of "national land" indicates unification of these administrative units into a single nation, as well as a sense of ownership on the part of the people living on that land. From the point of view of a national government, it is the scope of its sovereignty or the scope of its authority to collect taxes; however, this is more a concept of territory. "National land" could be thought of as the region that is home to the people who support the nation's

prosperity. Seen in this way, the scope which should be called Japan's "national land" is not limited to the territory of Japan, but extends to the entire world. As globalization advances in the present era, the people who support Japan's prosperity are not only those people who reside within the territory of Japan.

In addition, a nation may be considered to have a responsibility to strive to allow everyone living on its "national land" to live a healthy, cultural life, not only its citizens in the narrow sense. Improving the lives of all of these people who support the prosperity of Japan does not indicate only assistance and welfare programs. Like measures to stimulate the domestic economy, the ultimate result of improvements in productivity, consumer confidence, and purchasing power will be greater national prosperity.

Technological development for "national land" water management

Developing countries located in semi-arid regions are the main places where water is in short supply, with concern that the supply may become increasingly inadequate in the future due to factors such as global warming and other aspects of climate change, population growth, and increasing concentration of population in cities. The price of water is very low, and since water is not well suited to transportation and storage, even a very tight market is not reflected in the price of water. Meanwhile, we have the technology today, including membrane treatment of reclaimed water and desalination of ocean water, to produce any amount of usable water as long as the water can be sold for a high price (limited only by the availability of energy). What countries and regions with water shortages need now are technologies that can supply water inexpensively and sustainably.

The technologies that can manage the water

of a river basin in an integrated manner, ensure water resources, and supply water appropriately are the culminating result of facility design methods, construction management methods, and so on; and water-related businesses in each country, or the national governments themselves, are competing for international supremacy in water resource management technologies. Some oppose the World Water Forum itself, believing that it is based on this kind of intention and that it represents a new kind of imperialism by advanced countries through water. However, there is definitely a significant contribution to community development when the working hours that had been spent on fetching water are turned to other productive activities or education, or when a stable supply of water improves agricultural productivity. If this is taken as an issue of "national land" rather than one of territory, unlike the case of imperialism in the past, then regardless of the intentions of the countries or companies involved, this is not a bad thing so long as the result is mutual prosperity through the resolution of water problems.

In the future, based on this kind of perspective, we have the duty to strive to resolve water problems and build the infrastructure of Japan's "national land" which extends beyond its own borders. In addition, when building new infrastructure in the future, we should build facilities and mechanisms that can be used continuously for long periods of time. During the 50 years since the Second World War, Japan has experienced major transformations with regard to housing, employment, and labor. In some cases, the steps taken to respond rapidly to these sudden changes have not necessarily been sustainable. Still, once infrastructure facilities have been built, they must be utilized for some period of time, with maintenance and repair. Rapid development is anticipated as Japan's "national land" expands farther into the world in the future; and as we build

infrastructure today, making use of our past experience, our efforts must be based on the goal of building the historical assets of the future which will be used for a hundred or a thousand years. Also, particularly with regard to water management, the results of conflicts over water between people and nature are everywhere engraved on the land, and it is impossible to build appropriate infrastructure without considering local conditions such as history, traditions, and culture. In competition and collaboration with Europe and North America, we must not be outdone even with regard to consideration for these aspects.