
Dr. Yugo Ono, Professor at the Hokkaido University, has contributed an article to the WORLD RIVERS REVIEW(Volume 11, Number 5 / December 1996). Dr. Ono has appreciated to show the article to concerned people on river related issue. Thank you for Dr. One.

Citizens Work to Protect Chitose River

Dr. Yugo Ono, Hokkaido University.

A proposed flood control project would irreparably harm Japan's second longest river, a precious lake, valuable wetlands and offshore fisheries. The project was designed to protect against a flood that is 50 percent larger than any the area has ever experienced. And there are viable alternatives to the costly scheme. For these reasons and more, citizens' groups are taking a stand against the Chitose Diversion Channel.

The Chitose River is a tributary of the Ishikari, the biggest river in Hokkaido, and the second longest river in Japan. The Ishikari had historically high floods in 1976 and '81. Damages exceeded 22 billion yen, and most of the alluvial lowland-primarily used for farming -was inundated. In response, a government agency proposed an expensive "engineering fix" that would harm wetlands, fisheries and river-related habitat.

The drainage area of Chitose river is low-lying, especially between Chitose city and Ebetsu, situated at the confluence with the Ishikari. During floods, the Chitose cannot flow easily to join the main stream of the Ishikari, because the water level of the Ishikari becomes as high as that of the Chitose. Furthermore, because most of the Chitose's alluvial lowland is topographically lower than the water level of the Chitose during the flood, the area suffers inundation, caused by the rain water which cannot drain to the river.

Just after the 1981 flood, the Hokkaido Development Agency planned the Chitose Diversion Channel Project. This project proposes digging a new channel 38-kilometer-long and 200- to 400 meters wide between the middle reach of the Chitose south to the Pacific coast; and construction of three gates to control the river's flow. During flood conditions, gates will force the Chitose's

waters to flow down into the diversion channel to the Pacific Ocean, thus reversing the river's natural direction. The channel project-the biggest river development scheme now proposed in Japan-would cost 480 billion yen(US\$48 billion) and take an estimated 20 years to complete.

The channel was first proposed to the River Management Advisory Council of the Ministry of Construction in 1982 by the Hokkaido Development Agency. The council decided very rapidly to support the project, despite the fact that there had been no representation in the deliberations by local governments, citizens, NGOs, or specialists in ecology, economy or other social sciences. A strong movement against the project arose soon after it was unexpectedly presented to the public.

The movement against the diversion channel involves not only local people, but also many environmental NGOs. The movement grew and became stronger, helping to postpone the project for more than 13 years. Despite growing opposition to the project, it continues to receive a budget of more than two billion yen every year. The money is for obtaining land for the diversion channel, but public outcry has prevented the agency from actually purchasing any land. As a result, the Hokkaido Developing Agency has used this enormous budget only for research and propaganda supporting the project. Beautifully printed colour explanation booklets were distributed to the inhabitants of the drainage area of the Chitose, to help convince them that this project is the only way to avoid future floods.

Less Destructive Alternatives

Japanese NGOs have proposed many alternatives to this destructive project, including widening the channel of the Ishikari, constructing a stream separating embankments between the Ishikari and the Chitose at the junction, and enlarging flood retaining ponds in the Chitose floodplain. Although they do not provide the same level of flood control as the Chitose Diversion Channel, these alternatives have many positive aspects. Unlike the diversion channel, they have minimal environmental impacts, and especially to Lake Utonai, the fourth site in Japan to be designated under the Ramsar Convention as a wetlands of international importance.

Lake Utonai is located very near the planned route of the Chitose Diversion Channel, and would suffer damaging hydrological changes if the channel were built. Since the Chitose Diversion Channel will cut deeply into the ground

surface, all ground-water that nourishes Lake Utonai would seep to the diversion channel instead. This groundwater comes to the surface in a small valley dissecting the volcanic plateau, through many beautiful springs. The spring waters join together and soon become the Bibi River which flows into Lake Utonai. The construction of the Chitose Diversion Channel would completely cut off the groundwater flow which nourishes many springs of the Bibi and Lake Utonai.

On the occasion of the fifth Ramsar Convention at Kushiro, held in Hokkaido in 1993, the government of Japan promised that it would take steps to protect Lake Utonai. However, even three years later, the Hokkaido Development Agency has not presented information about any of the problems that would be caused by the diversion channel. The agency proposed only unrealistic means to conserve the groundwater. Their plan involves constructing a 12-kilometer-long underground wall to block the ground water flowing from the hills to the Diversion Channel, and a pumping system that would need to work eternally, 24 hours a day, to pump groundwater up and over the channel to replenish the Bibi River.

The channel will affect not only the Ramsar site, but also, the offshore environment. By directing flood waters containing silt and suspended material to the Pacific Ocean rather than to the river's floodplain, the channel could cause serious damage to aquaculture (scallops and other molluscs) and off-shore fishing in the region. Following strong protests by fishers' associations, the Governor of Hokkaido Prefecture declared that he would not approve the start of construction of the Chitose Diversion Channel, unless Hokkaido Development Agency presents effective measures to avoid such damage to fisheries.

But as with the problem of ground water flows, the Hokkaido Development Agency has not yet presented any effective proposal to solve this problem. The situation clearly demonstrates that it is impossible, with present technology, to avoid fisheries damage caused by flood-water flushing. But the Hokkaido Development Agency still insists on the construction of the Chitose Diversion Channel, and is trying to persuade the fisherman by giving them money.

Ingrained System

Why does the Hokkaido Development Agency insist on pursuing this project? The answer lies in part because the project has already been approved by the Ministry of Construction. In Japan, once a project has been approved and

authorised by the Ministry, it is very difficult to stop or change it. This damaging and illogical tradition has already been revealed in the case of the Nagara River Estuary Dam and many other dams in Japan.

The only argument for the Chitose Diversion Channel over other alternatives is based on the supported value of standard flood discharge of the Ishikari, which was determined secretly by the River Management Advisory Council in 1982. In that committee, the Hokkaido Development Agency proposed 18,000 cubic meters per second (m³/sec.) for the standard flood discharge amount. But this value is much higher than the peak discharge experienced even in the two historical floods of 1976 and 1981. The peak discharge in the 1976 flood was 7,700 m³/sec. after three days' continuous rain, and 12,000m³/sec. in 1981, after three days' rain.

After increased demands for information disclosure, the Hokkaido Development Agency recently revealed the process by which they determined this high value. A computer simulation produced seven different values, ranging from 12,000m³/sec. to 18,000m³/sec. They chose 18,000m³/sec., merely because it is the highest value. This demonstrated clearly that they never checked any environmental or social impacts resulting from the choice of this high value for the standard flood discharge. If the value was a mere 1,000m³/sec. less than the highest simulation value, the Chitose Diversion Channel becomes unnecessary, since it evacuates only a flood discharge of 1,000m³/sec. to the Pacific Ocean.

It is true that the drainage area of the lower reach of the Chitose needs flood management. But even if it can reduce flood damage from the Chitose better than other alternatives, the Chitose Diversion Channel is not a good plan. It causes too many serious environmental problems which cannot be resolved with present technology. but most importantly, it was determined in secret, completely hidden from the local people. This is unjustifiable for such a large public works project.

Fortunately, the construction of this project has been stopped for now by the opposition movement, which continues in its efforts to stop the channel from being built. The movement is working to change the system of how river public works projects are approved in Japan.

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Following article is an introduction on the DAMPW's activities in Japan.

Japanese Groups Call for New River Philosophy

The Diet Members' Association for a Mechanism of Public Works Review(DAMPWR)

In September, the Diet Members' Association for a Mechanism of Public Works Review(DAMPWR) and the Nagara River Inspection Committee sponsored a "dam summit" in Nagaragawa, Japan. The International conference on Creating a Vision of Rivers for the Twenty-first Century led to the adoption of a far-reaching declaration on protection rivers from destructive development, in both Japan and the World.

While acknowledging that "dams had as their nominal purpose the promotion of economic growth and more convenient human livelihoods," the declaration states that "a new river philosophy...is needed".-one that would respect the "cycles of materials-water, sediments, and living things-in rivers."

It calls for the conservation and restoration of inland and coastal wetlands, the preservation of river-connected cultures, and a flood management approach that would favour preventive reforestation and retention ponds rather than engineering structures. But perhaps the most radical proposal is this: "The central role in river management should be taken by residents living along rivers, with technicians and engineers serving as their advisors."

Specific recommendations for Japan include creating a sustainable management plan for wetlands, forests, rivers and seashores; increased emphasis on river restoration; and appropriate land-use planning to avoid concentrations of economic activities and populations that exceed the natural capacities of their watersheds. The group also called for the suspension of all proposed large-scale dam, barrage and other construction projects until they can be reviewed for adherence to the other principles outlined in the resolution. In closing, the declaration states that "the issues presented here in relation to Japan should apply as well with respect to river management activities undertaken overseas, such as through Japan's Official Development Assistance(foreign aid)."

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