

Concern over Rivers in Japan Society against the Nagara Dam Construction

by Reiko Amano

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As a schoolgirl, I went to an elementary school at the north end of the city of Kyoto. As there were no swimming pools, we swam in a river nearby. Its water was so cold that our lips became pale in ten minutes and we could see a beautiful trout-like fish swim in the clear water. In the spring when I was nine then years old, I saw a man again as an angler. Rivers were my colleges where I studied a lot of things.

From then, for sixteen years, until the spring in 1988 when I was thirty-four, I walked along rivers throughout Japan a hundred days a year. And I found that Japan was a "River Country" and that few rivers were left in this river country. And I realized that they would build an estuary dam on the Nagara River, one of the "last rivers". July in the same year, as soon as the construction of the Nagara River Estuary Dam began, I organized an anti-dam movement with Takeshi Kaiko, a novelist. This was a movement not only opposing a single dam project and protecting a single beautiful river but also questioning why we no longer had such proud rivers in this river country. In 1995, the seventh year since the movement began, however, the dam was completed and operated. In the next year, 1996, we visited the United States.

In the U.S., the Bureau of Reclamation had declared that the dam building era was over. They initiated not only cancelling of plans but also discontinuation of dam construction and dam removal. After a visitation to some dams, I met an airplane crash, which fortunately I survived. I believe that the gods of rivers saved me. In autumns of 1996 and 1997, we had international conferences on the Nagara River, where we maintained that "changing the river management policy" and "review on the development in the 20th century manners" were

the trend among all the developed countries except Japan. March 1997, the Ministry of Construction drastically amended the River Act first time in a century. In addition to that 338 dam projects were reviewed and eighteen of them were cancelled or suspended. A monster finally went down. This reportage was serialized in "Sekai" — one of the most prestigious monthly magazine in Japan — from April 1997 to March 1998. Around 1988, I also reported rivers on through the whole country spending nearly two years. Since this was a report first time in almost a decade, I was a little pessimistic about whether rivers would be still alive or not. I have mixed feelings about that we have had only three rivers which maintain their lives as rivers — the Shimanto, the Naka, the Nishibetsu. I am wondering whether we should be glad or sad about it. On the Yoshino and at Kito village on the Naka, there are people who fight to defend the last of the last rivers desperately. On the Chitose and Honmyo, NGO coalitions are fighting against false flood control logic which Ministries of Construction and Agriculture argue. They are exposing the government's "logic of construction for itself" by showing their movements driving it to the corner.

And look at those poor rivers, the Oi and Kurobe! They are no longer rivers. But they represent the status quo of most of the rivers in Japan. In the 1960s, when Japan enjoyed a high economic growth rate, rivers were polluted and river fisheries went out of business. The Ministry of Construction aimed at those fishermen and made up a system, in which if they agreed to a dam in their river basin, they would get a large amount of money as a compensation. This system has been a measure for the ruling Liberal Democratic Party to collect political donations and

And this has made rivers throughout Japan half dead just like the Oi and the Kurobe with citizens who should have saved rivers kept utterly ignored. But, now, people have awoke. The Nagara river woke them up. Finding that they had right to save rivers even if they did not live on them, a lot of groups and individuals who work hard to take back rivers in their and their children's hands have begun to emerge. So I am confident that the rivers will revive.

In Germany, they cause experimental floods and have residents in the floodplains that was flooded move at the expense of the government. They went back from the flood control with dams to the damage prevention without resisting floods. In Britain, rivers were privatized and in France their management was decentralized. In the US, the Corps of Engineers which had built dams for flood control realized the limits of flood control measures by modern river engineering and asked residents in floodplains not to place expensive property on the first floor, to have flood insurance and to move out of them if possible.

Every country reflects what it has done with the modern river engineering. Without resisting the gods of rivers, they are trying to regain the nature and sustainability of the ecosystem. There are also economic reasons. In every nation, both people and the business interests criticize the need for large-scale projects for causing economic stagnation. Above all, they no longer have enough money to do them. On the other hand, however, even in such a severe financial circumstance, they are wisely spending a lot of money to recover the nature. In the Netherlands, for example, they have begun to return reclaimed land to wetland at great expense. How can we regain the nature in Japan, a developed country in name only?

The Ministry of Construction is now establishing a committee with the National Land Agency to review the result of its review on dams in the last year. In addition, it established boards "to follow up dams" at every dam throughout country in order to shut the Environment Agency out of the survey of rivers. Under this situation, if the Environment Agency also carries out research on the rivers and dams, it will be double expenditure of taxpayers' money. And many sitting executive members of academic societies are involved in those boards. We learned in the U.S. that NGOs, researchers and politicians had fought cooperatively against the pork barrel system to take rivers back by having laws amended one by one. As soon as we tried to realize it in Japan, however, those academic members were won over to the Ministry's side. Japan is refusing to realize the current of the world. Its completely cunning bureaucracy is planning, in the name of "administrative reform", to establish the "Ministry of Land and Transport", gigantic development agency with 550 thousand officials and 10 trillion yen (approx. U.S.\$ 69 billion) annual budget.

April 6, 1998. "The 21st Century Environment Committee" was established on the initiative of leading researchers and journalists. I had the honor of being one of the initiators. I hope that various people will take serious action on all fronts, questioning "what the 21st century should be made". This question will be the weapon for recovering the nature we have ruined in the 20th century, at least for a few years until the beginning of the 21st century. I wish this would be an aid to understand the realities of rivers in Japan.

The writer is a Japanese environment activist

The Science of Wazoo

by A M M Aabad

How many persons feel like washing the elbows five times a day? So the good habits are incorporated in the daily practice to make it second nature. The wiping of the neck tones the nervous system and is relaxing.

YOU are travelling, and you feel like having a wash at the halting place. How do you test the water quickly? You take some water in the cup of your palm, look for any colour (normal water has no colour or is colourless, and the colour of the water in your hand should not change); smell it (good water has no smell); and then gargle with this water (do not drink it), to note if it has any taste (good water is neutral or tasteless).

This is exactly what we all do when performing the wazoo or ablutio with water before offering our namaz (prayers), which is normally done five times daily. This simple scientific way of testing the water is hidden in the wazoo procedure since the first Muslims practised it almost 1400 years ago. There are scientific benefits of wazoo with which the masses are not familiar, as the publicity was confined more to the spiritual benefits of namaz.

Let us have a closer look at the wazoo process, to marvel at the ways the last religion of mankind was perfected. The above three actions in wazoo are sunnat. Then comes the first fard or compulsory act, namely washing the face. The gargling must be deep in the throat, for the water to reach the thyroid glands on two sides, which stand as sentinels, and kill or control various germs before food and drink enter the stomach. The accumulated dead germ particles are removed by gargling (need not stay there as garbage). Remember that for sore throat, gargling with warm salt water is recommended. So the mouth and the throat are cleaned five times a day, without reminders.

During the cleaning of the inside of the nose by the water at ambient or surrounding temperature (summer, winter), there are other beneficial effects. The mechanism inside the nose has delicate or rather the best air conditioning and air-cleaning system in the world, which man-made machines have not yet been able to perfect. The air we breathe into the lungs is always at the same constant temperature, pre-heated or pre-cooled by the nose passing to the lungs, whether the outside temperature is 45 degrees C or near the freezing point.

Also, when the nose measures the temperature of the water, signals are sent to the brain and body centres to adjust to the outside air and water temperature by regulating the blood circulation to the skin surfaces, making the person feel more comfortable, and helps prevent catching cold (perform wazoo before bathing, especially in the winter). The hairs inside the nose are wet and vibrating, and filter the air and trap the dust particles during breathing. So the nose is a busy factory working non-stop 24 hours a day (like the heart and other body organs) and therefore has to be kept clean — at least five times a day. Notice how many persons around you feel inclined to do so! This is a medical precaution, but quietly hidden in the wazoo process (do not burden

the ordinary mind with too many technical and scientific details and explanations). The splashing of water on the eyes is soothing and provides nervous stimulation, imparting a feeling of freshness. The rubbing of the face and eyes promotes blood circulation (it is a quick massage). Note that the ears are also cleaned several times a day, as dust particles gather on the inner sides of the ears (watch how the mothers scrub the babies during bathing). These are simple rules of good everyday hygiene, which can be separated from the religious practice.

The hands have to be washed up to the elbows to remove the dirt and the grime. How many persons feel like washing the elbows five times a day? So the good habits are incorporated in the daily practice to make it second nature. The wiping of the neck tones the nervous system and is relaxing.

The feet have also to be washed five times a day. We are familiar with the foul-smelling socks. The socks and the closed shoes lessen air circulation and ventilation and the dead sweat glands are smelly (body odour). The space between the fingers need to be cleaned carefully, to prevent athlete's foot disease, a contagious disease caused by fungus. Washing is required also to maintain temperature balance in the body system. Wazoo is the next best thing if suf-

ficient water is not available for bathing.

Those were the physical benefits of washing. There are also electrical effects as the body uses and creates many types electrical fields inside and outside; and the electric forces around a person are subject to electric fields and radiations which affect the body and the mind. Static charges is a common phenomenon (dry hair standing on end while brushing with a dry comb). Water, as a conductor, removes or neutralizes such effects; at least the bad effects are removed. Thus we see that water has numerous uses and properties, remembering that 90 per cent of our body is water, and the brain has 85 per cent water! Use water, whenever you can; and drink plenty of pure water — it is a blessing of God.

Not mentioned above is the benefit on the regular use of the use of miswak or twig of tree for cleaning the teeth. Unlike a manufactured tooth brush (the purpose is the same), the miswak is available, ready-made almost anywhere, and does not come at a cost to replace it. It cleans between the teeth, and massages the gums, which is an essential part of the brushing. The neem twig has prophylactic property. When nothing is available, finger massaging is essential for healthy gums.

The point worth noting is that the explanations provided above are scientific and modern, but the practice had been followed for more than a thousand years by millions of Muslims all over the world, regardless of geographical and environmental local parameters (independent of time, place and culture).

Vegetable Production: A Way Out of the Woods

by GH Kennedy

The overwhelming loss can be overcome by increased production of vegetables. Vegetable production can create employment opportunities for people in the rural areas and generate income for their families.

THE prolonged deluge, which had two-thirds of the country under water for nearly two months, has had a devastating impact on the country's economic growth, damaging crops, fisheries, livestock and infrastructure. The farmers, the most important exponents of the agro-based economy, have been devastated by the worst flood of the century.

According to a Food and Agricultural Organisation (FAO) estimate, 16,65,390 hectares of land were affected, causing damage to 20,85,404 tonnes of aman paddy. The Dhaka office of the organisation projected a shortfall of nearly 4.3 million tonnes of food grains, including a normal deficit of 2.3 million tonnes. The scenario appears bleak, indeed, but the damage is not irreparable.

The overwhelming loss can be overcome by increased production of vegetables. Vegetable production can create employment opportunities for people in the rural areas and generate income for their families. Besides, production of more vegetables will effectively deal with severe malnutrition in the rural and urban areas. All our farmers will have to do is direct their efforts towards cultivation of different seasonal vegetables like cauliflower, cabbage, broccoli, okpoli, carrot, gourd, onion, long bean, radish, tomato, eggplant, pea, potato etc.

For good yield, the first and foremost requirement is good seed. Seed is the basic component of any crop production system. It is also the vehicle through which genetic improvement is introduced and crop performance is maintained. Good seeds stand for good yield.

In our country, vegetable seeds are mostly traded and supplied by the private sector. Bangladesh Agricultural Development Council (BADC), the only public sector organisation which supply vegetable seeds of good quality, generates only one per cent of the total requirement. Bangladesh Agricultural Research Institute

(BARI), the largest research facility in the National Agricultural Research System, only produces breeders seed of important crops. Over the years, BARI has developed high-yielding varieties of seeds for increased production of vegetables in the country, such as Ratan and Manik (resistant to bacterial wilt), BARI Tomato-3 of tomato, Tasakisan and Pinky of radish, BARI Lalshak-1 of Amarnath (resistant to disease and insect), Uttara of eggplant (resistant to fruit borer), BARI Lau-1 of gourd, BARI Sheem-1, BARI Jhar Sheem-1 of French bean, BARI Motor Shuti-1 of pea, Hera, Multa, Diamond, Cardinal of potato. These varieties have shown good yield performance. Some vegetable seeds of BARI released varieties created a market of high demand both at home and abroad. I personally conducted a research programme and found that BARI-1 of okra (dherosh) seeds are being exported to neighbouring countries by private sector. This shows the export potential of the seeds. However, at present, our objective should be making the seeds available to the farmers in time.

The government has already undertaken a big-scale rehabilitation programme and started distribution of Tk. 3270 crore as agricultural credit among the flood-affected farmers to rehabilitate the agricultural sector and to increase food production to offset the deficit due to crop failure during the flood. This programme would obviously increase the purchasing ability of the farmers. FAO has promised distribution of 25 tonnes of vegetable seeds of improved varieties.

The Director General of FAO, Dr Jacques Diouf has approved an emergency assistance project in this regard. The organisation also pledged technical advisory services for the production of vegetable under the post-flood rehabilitation programme. It is needless to say that FAO has done a lot for organised vegetable seed production in the private sector since the begin-

ning of FAO/BADC vegetable seed project in 1986.

BARI, too, has taken up a rehabilitation programme. BARISA (Bangladesh Agricultural Research Institute Scientist Association) in association with Vegetable Division has raised seedlings of vegetable for distribution among the flood-affected farmers. Furthermore, BARI, through NGOs and its own regional stations, is distributing improved varieties of quality vegetable seeds to the farmers. The Krishibid Institute Bangladesh has launched a programme of raising six million seedlings in its own premises to help the flood-affected farmers.

The vegetable seeds currently used by the farmers are largely of inferior quality which leads to dwindling production. According to vegetable expert Dr. M Mamunur Rashid, less than 12 per cent of the vegetable seeds used in Bangladesh are produced in an organised way and are of good quality. Fifty per cent of the total requirement are met by farmer-to-farmer exchange, seeds or farmer-retained seeds. These seeds are not produced generally in an organised way and are of poor quality.

According to Dr. Rashid, nearly 30 per cent of the vegetable seeds used in Bangladesh are "spot market seed". These seeds are also not of good quality and their varietal character is totally unknown. To increase production of vegetable these low-quality seeds must be replaced by seeds of improved variety. Replacement of low quality seeds by good quality seed at least by 10 per cent would lead to remarkable rise in production.

Dr. Rashid is also of the opinion that the vegetable plantation can be expanded to the lands which could not be used for aman crops due to flood and with the aman season gone, production of vegetables in these lands would certainly make up for the losses to a great extent.

Every block of vegetable field should always be monitored by the extension people to ensure good yield. The research

personnel should be immediately informed if there is any kind of disease, insect attack in the field, so that they can come up with appropriate measures. Thus research and extension personnel should work combinedly, especially during the current season to minimise the crop losses of the farmer.

Authorities concerned should make arrangements for special programmes on radio and television, to be aired daily throughout a week at least. These programmes, specially designed for the farmers, should feature experts talking on vegetable production techniques, seedling raising, proper management and cultural practices, importance of improved variety seed etc. The initiative would certainly create awareness among the farmers to use quality seeds and thus, have a positive impact on production.

Trade and distribution of vegetable seeds should be controlled by the private sector. Some precautionary measures should be taken for the well-being of the farmers. More often than not, the farmers are cheated by the traders. So, arrangements should be made so that the farmers are not misled into purchasing seeds without proper packing, brand name or labelling.

The government may form surveillance teams with the vegetable experts to monitor overall vegetable production and problems in the field throughout the country. The teams have to supervise the quality of the seeds sold in market. Steps should be taken to deter dishonest traders intending to make most of the crisis. Import of vegetable seeds is likely to increase this year. Variety, vigor and viability, and germination capacity of the imported seeds should be examined by a committee comprising vegetable experts about as well. These imported seeds must be free from disease and insects.

The writer is an Agronomist working at BARI, Joydebpur.

Atlantic Ocean Threatens to Swallow Victoria Island

An exclusive preserve of Nigeria's wealthy, Victoria Island is home to some of the most elite real estate in Lagos. But the residents' fortunes are not preventing the rapid erosion of the island, which may be well on the way to sinking below the sea.

Abiodun Raufu writes from Lagos

THE Atlantic Ocean is threatening to dislodge Nigeria's rich and affluent from their mansions on Victoria Island, the country's choicest real estate off the Lagos coast.

Although coastal erosion has been a perennial problem for the island, which only became habitable after its marshland was drained in the 30s and 40s, the problem has assumed a worrisome dimensions in recent times.

Since last June when the ocean overflowed its banks following a torrential rain, flooding the island for the umpteenth time in recent years, sending visitors scampering and holding residents captive in water-logged homes, an old debate about the safety of Victoria Island has been resurrected.

With the rainy season yet to come to an end, VI residents look on with trepidation any time the clouds darken and rain threatens to fall. Meteorologists say the island is likely to experience more flooding before the year ends.

Already some residents have tired of the recurring flood and have made plans to move out. Most believe that the advantages of staying in the elite island — which will house the residence of the State President once civilian elections are complete next year — outweigh the risks, but even they are worried about the future.

Others who have shown worry over coastal erosion are the estate developers: apparently for fear of residents fleeing with their deep, and much-prized, pockets.

The crux of the long-standing problem of Victoria Island during every rainy season is the rising sea level as a result of global warming.

A hundred years ago, the fine white sands of Victoria Island's Bar Beach, arguably Nigeria's most popular, stretched for about 1.2 kilometres. Today the beach has been eaten away to less than 500 metres wide.

Experts say the rapid erosion of the island and indeed most of Lagos coastline is attributable to two breakwaters known as the "east and west moles" which the colonial British

government constructed between 1908 and 1912. The moles were built to protect Lagos' harbour from the fierce action of the waves and to prevent sand from entering the deeply dredged harbour on the ocean surge.

Unfortunately, the harbour's gain was Victoria Island's loss. The moles altered the balance between the Lagos coast's rate of erosion and the rate at which ocean sediments are deposited, according to environmentalist Seun Ogunsaitan.

To check the rate of erosion, the authorities have come up with a beach nourishment strategy. Since 1963, 17 million cubic metres of sand have been dumped on Bar Beach. That's enough to bury a football pitch more than two kilometres deep in sand.

The measure has however proved ineffective, as the ocean continue to swallow beach-land at the rate of five metres a year. Today the ocean is barely more than 40 metres from the island which is currently believed to be less than half a metre below sea level.

Larry Awosika, an oceanographer at the Nigerian Institute of Oceanography and Marine Research (NIOMR) based on Victoria Island, argues that beach nourishment alone cannot curb the ocean surge.

Instead he suggests a multi-pronged approach, namely consisting of raising the beach to about two metres above the high-water level, extending the beach width by no less than 100 metres from the shoreline and constructing offshore breakwaters to dampen the waves' energy before they reach the shoreline.

Aside from periodic ocean surge, the low lying nature of Bar Beach, blocked drains and the low heads of the drainage channels also contribute to the flooding of Victoria Island," Awosika said.

Awosika also calls for the constructing new devices called "groins" which help trap eroded sediments. He says present groins do not extend long enough into the area where currents are actively transporting sediments away.

He also proposes clearing



storm drainage channels on the island regularly and increasing the capacity of old drainage channels.

A contract was signed by the late President, General Sani Abacha, to use stonework to reinforce the breakwaters. In theory, the work should start after the rainy season finishes in late November.

But government officials say no action beyond annual sand nourishment can be taken for now because the recommendations suggested by experts involve a huge financial outlay.

"The cost of constructing breakwaters is enormous and government does not have the funds for it now," says a top government engineer.

Professor Benjamin Akpatti, former director of NIOMR, cautions people who call for a permanent solution to the problem. He says available measures can only minimise the impact on Nigeria's coastline, as the ocean surge is a natural phenomenon that cannot be

prevented. "When you come to the coastline, the word 'permanent' has no meaning," Akpatti said. "The sea level is rising. Anything that is permanent today is not permanent tomorrow and the rising sea level is a global phenomenon. With time, this place (Victoria Island) where you and I are will be under the ocean."

It leaves many wondering whether Victoria Island will go under by the year 2006, as predicted six years ago by I. C. Ijomah, a Nigerian professor of sociology. Is the apocalypse around the corner for Victoria Island, the exclusive preserve of Nigeria's rich and mighty?

The writer is a member of the editorial board of 'The Punch Newspapers' and a well known environmental reporter in Nigeria. He was last year selected as the 1997 environmental reporter of the year in Nigeria.

