

## Stop Korea's Four Major Rivers Project

This is a call for attention to Korea's controversial Four Major Rivers Project which is not economically viable and causes irreversible damage to the ecosystems and biodiversity of the 4 major rivers and the adjacent riparian wetlands in South Korea.

First of all, it will be explained what is Four Major Rivers Project and what are the purposes and the plans of the Project. After that it will be discussed what can be environmental and economic & social impacts of the Project and why the Project in its current form should be stopped if the government wants to restore and develop the rivers in sustainable way.

### What is the Korea's Four Major Rivers Project?

The Korea's Four Major Rivers Project is one of the largest construction projects in South Korea which will spend 22.2 trillion Korean Won (approximately USD 19 billion) to restore the four largest rivers known as the Han, Nakdong, Yeongsan and Geum. The South Korean government calls it "River Restoration" or "River Saving", and claims that the purposes of the Project is to store water in case of drought and water shortage; to prevent flooding; to improve water quality; to restore the ecosystems; and to boost local economy in the name of Green New Deal. The Project has been launched on November in 2009. The master plan of the Project is by 2012 to build 16 new dams, to rebuild 2 estuarine barrages, to dredge almost 700km of riverbed, and to construct over 1,700km long bicycle lanes & other tourist-related facilities along the waterway. <sup>1</sup>

This is one of the biggest engineering projects implemented by President Lee Myung-bak, Lee. Mr. Lee is a former chief executive of the Hyundai construction company who is nicknamed the Bulldozer because he is well known for big engineering schemes. His main campaign pledge in the 2007 presidential election was constructing the "Korea Grand Canal (Pan Korean Great Waterway)" which was to link 4 largest rivers of the country for inland navigation but was scrapped in 2008 due to immense criticism. The Four Major River Project, which was announced just 6 month later after the controversial Grand Canal project was cancelled, is just a replacement for Lee's Grand Canal project because building dams and dredging is considered as a preparatory step toward canalization.

When countries aim to restore rivers and streams, the re-naturalization is today regarded as most desirable. The main goal of restoration is to bring the river back to its original or natural state by removing artificial

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<sup>1</sup> <http://www.sciencemag.org/cgi/content/short/327/5973/1568>

obstacles such as weirs, by changing canalized sections back into dynamic natural river bed, and by the provision of flood plains.<sup>2</sup> The EU countries are adopting a water management policy under the EU Water Framework Directive which promotes re-naturalization. Since 1912 the U.S.A has been removing 650 dams (removing 54 dams just in 2007) and Japan demolished 300 dams so far.

The South Korea's Four Rivers Project, which is one big construction project to build more dams and dredge the riverbeds, is therefore opposed to internationally accepted principles for the ecological river restoration and cannot be called a river 'restoration' project.

### **Environmental impact**

Over the last 50 years, most of small and big rivers in South Korea have been altered to build dams, barrages and reinforced banks, and floodplain wetland has been converted for agriculture and other uses. This project will be another devastating blow on already strained rivers' and wetlands' ecosystems and biodiversity.

The 4 major Rivers, the Han, Nakdong, Yeongsan and Geum, are supporting diverse forms of wild animals and plants including endangered species and their natural habitats. As an example, the 4 rivers' riparian wetland such as the Han River Estuary, Geum River Estuary, Nakdong River Estuary are all internationally important for migratory waterbird species.

The Busan-based bird conservation organization "Birds Korea" stated in a draft report on March 17th, 2010 that the Ministry of Environment's (MOE) data shows that if the Four Major Rivers Restoration Project is not massively reduced in scale or completely terminated, an estimated 50 species of birds including endangered species would be impacted, it will also reduce the conservation value of at least one Ramsar<sup>3</sup> site and negatively affect eight Birdlife-designated Important Bird Areas.<sup>4</sup>

As much as 68 wildlife species like freshwater fish, amphibians, reptiles protected by Korean domestic laws live in the project sites along the rivers. The Project disturbs the balance of their natural habitat; the number of the species will go down and some of them will just disappear.

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<sup>2</sup> [http://www.muehlen-deutschland.de/Allerlei-Ubersicht/Artikel-Wasser/Allerlei-Verschiedenes/Allerlei-Protestaktion/2\\_-\\_River\\_re-naturalization.PDF](http://www.muehlen-deutschland.de/Allerlei-Ubersicht/Artikel-Wasser/Allerlei-Verschiedenes/Allerlei-Protestaktion/2_-_River_re-naturalization.PDF)

<sup>3</sup> The Convention on Wetlands of International Importance, called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. [http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1%5E7715\\_4000\\_0\\_\\_](http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1%5E7715_4000_0__)

<sup>4</sup> <http://www.birdskorea.or.kr/Habitats/4-Rivers/BK-HA-Preliminary-Report-2010.shtml>

The Project in this current form is contradicting international standards and principles of Sustainable Development like UN Millennium Development Goals which pursues Ecologically Sustainable Development, and some international environmental conventions, of which Korea signed to be a member: the Ramsar Convention which provides the principles of restoring and managing wetlands and the Convention on Biological Diversity which promotes species diversity and ecosystems diversity,

### **Bicycle Lanes and Resort Areas**

The government argues that the Project promotes Green Transportation, as the construction of over 1,700km long bicycle lanes along the water front of the 4 rivers will help increase the use of bicycles, thus contributes to the reduction of carbon dioxide emission. In order to increase the use of bicycles effectively as a green alternative to driving cars, the government should promote the use of bicycles in urban areas instead of country-side areas along the 4 rivers. The construction of bicycle trails and resort areas will add more disturbance to the ecosystems without any big effects of the promotion of Green Transportation

### **Water Supply, Flood Control and Water Quality Improvement**

If the government really wants to supply water, to prevent flooding and to improve water quality, it should invest on managing small tributaries rather than mainstreams of the 4 rivers. Most of the flood damages in the country are happening along small rivers and tributaries, and droughts and water shortages in recent years happen in remote areas such as mountainous areas and islands. Therefore, there is no need of investing such a huge budget on the mainstreams of the 4 rivers.

Among 4 rivers, the Han River and the Nakdong River provide drinking water to about two third of the population of South Korea. The water quality of the rivers will deteriorate rather than improve as the free flow of river water is blocked by dams and degraded due to depletion of oxygen in the water. Dredging also cause water quality deterioration as it will remove river shallows and riparian wetlands which function as natural water filter

### **Environmental Impact Assessment (EIA)**

The EIA reports of this mega engineering project had been prepared just less than 6 months by Government-funded research institutes which did not make a thorough field survey, and even utilized old reports some of which are about 20 years old to compile the EIA report; therefore, the reports failed to show biological information of many important species living along the 4 rivers.

There has been also not enough communication and consultation throughout the process the policy-making. Only limited amounts of information of the Project were released to the public and there were few public hearings and meetings with local people. Also concerns of local people, independent experts and civil society

organizations were not reflected.

### **Economic and Social Impact**

The Four Rivers Project is being criticized because of its tremendous budget allocation. Despite of this huge investment, the economic return would be too little after the completion of the project.

The amount of the total budget for the 4 Major Rivers Project increased from 13.9 trillion Korean Won (about USD 11.6 billion) at the announcement of the interim plan on April 27th, 2009 up to 22.2 trillion Korean Won (USD 19 billion) at the announcement of the final plan on June 8th, 2009. Over one month the estimated costs of the 4-Rivers Projects have nearly doubled. It is claimed that with even 22.2 trillion Korean Won does not cover all costs associated with the Project and the actual budget will go up much higher. There is also a concern how the budget for the project has been taken from other government's budgets like the welfare budget for the disabled and the poor without prior consultations with directly affected groups.

The Four Major Rivers Project is one of the economic stimulus packages to create employment promoted by the Lee government. The government argues that the Green New Deal policy including the 4 River Restoration Project will be effective in providing jobs. However, it will not provide any decent jobs. Most of jobs will be simple and manual labors only during the project period. It also cannot be considered as a long-term employment project. In a long term the local dredge workers will lose their permanent jobs and the local farmers will lose their livelihoods because their farmlands will be altered into bicycle lanes and recreational facilities. According to one report of Hankyoreh daily Newspaper on March 18<sup>th</sup>, 2010, approximately 25,000 farmers will lose their jobs. The main beneficiaries will be the construction sector, especially the large construction companies. The reason is due to the economic downturn, construction sector is in dire need of government initiated projects, which will improve their profitability.

### **Conclusion**

Since the "Sustainable development" term was used by the UN Brundtland Commission<sup>5</sup>, the principles of sustainable development have been widely adopted, and the Korean government has also set up a commission<sup>6</sup> and is actively pursuing Sustainable development in its policies. Sustainable development is a development which tries to achieve a sustainable economy while promoting a just society and respecting environmental limits to improve our environment and ensure that the natural resources are unimpaired and remain so for future generation The Government argues that the Project is designed to restore rivers, to

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<sup>5</sup> The Brundtland Commission, formally the World Commission on Environment and Development (WCED), known by the name of its Chair Gro Harlem Brundtland, was convened by the United Nations in 1983.

<sup>6</sup> Korean National Commission on Sustainable Development <http://www.pcsd.go.kr/>

supply water, to prevent flooding and boost local economy in a sustainable way.

However, the Four Major Rivers Project in its current form — a mega construction project which involves dredging and building dams — goes against the internationally accepted river management policies and cannot be called a `restoration` project in a sustainable way, There was no transparent and inclusive environmental impact assessment and the policy-making process has been lacking proper communication and consultancy. The Project is costly but not providing too little economic benefits, and will have a huge negative impact of these internationally important river systems. Some of negative impacts will be immediate, and others will emerge in the long run and remain permanent as the rivers and riparian wetlands can no longer function in a natural way. Restoration works to reverse the rivers into a natural state will take a long time and will be also expensive.

The majority of the Korean people are against the Four Rivers Project. A poll conducted by an independent research institute on June 2009 showed that 67.4% of Korean people did not support the Project. Another poll conducted by the Kyunghyang daily newspaper and Korea Society Opinion Institute on March 24th, 2010 also showed that 66.8% of people were critical to the project. Korean environmental organizations, academics, religious leaders and politicians joined a protest against the Four Rivers Project. It has brought even conservatives and progressives together. Backed by civil society organizations, several simultaneous legal actions which request for an injunction against the Project are pending, and a law suit to cancel the Project is underway.

Amid strong opposition from all sides and implicated negative effects of the Project, President Lee is adamantly pushing this project just like his nickname, a bulldozer

Since November 2009 the construction works have been simultaneously undertaken at 4 rivers. Excavators and bulldozers are working relentlessly to strip off vegetation of the riverbanks and to dig & move earth on sites for building dams and dredging. The river water is turning yellow and the habitats of wildlife are being destroyed. As the construction works progress further, the damage on the ecosystems of the rivers and the riparian wetlands will be more severe and irreversible.

We urge the South Korean government to halt the Project immediately and review the current plans of the Project in a realistic approach which promotes conservation and sustainable use of water and living resources. We also call for support for our campaign from the international communities and concerned people around the world.

Korean Women's Organization in Germany (Koreanische Frauengruppe in Deutschland)

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