

## Local Development and Planning in the 21<sup>st</sup> Century

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## THE INTERNATIONAL HIGHWAY AND THE KOREA-JAPAN UNDERSEA TUNNEL PROJECT

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### Introduction

The plan for an International Highway is intended to realize the Reverend Sun-Myung Moon's proposal. It was presented at the International Conference on the Unity of the Sciences (ICUS) held in Seoul, Korea in 1981. The Korea-Japan Tunnel Project, a part of the International Highway Project, is a step toward the ultimate goal of an ideal world. For this purpose, the Korean International Highway Research Society has continuously made efforts in various areas: clarifying and elaborating the basic idea, establishing necessary organizations and management, and developing activities centering on this project to keep up with the hope of the people, which is the fulfillment of a dream for a united world.

In order to establish a new civilized world for 21<sup>st</sup> Century, we must establish a new sense of values stemming from a global vision for humanity. Every nation must stop looking out only for its own benefit. The blind pursuit of national interests leads to hostility and struggle among nations. It is well known that a nation cannot maintain true happiness and peace without happiness and peace in neighboring countries. The idea for the International Highway is to link the countries of the East and West in order to fulfill the ideal of humanity as one family.

### Basic Idea

The plan for an International Highway is to connect the nations of the East and West, and goes in line with the idea that humankind is one family. The International Highway is to link all countries with highways, starting by connecting Japan, Korea, and China. From there, the highway would pass through the Middle East and Europe as far as western Russia. Today, All humanity seeks to free itself from hunger, disease and war, and hopes for an ideal world overflowing with peace and happiness. We simply cannot look upon this cherished desire of humanity as though it were a dream, which can never be realized. We have a dream that we want to live in a unified world transcending nationalities. Such a dream reflects God's desire when he created Humankind. As we close out the 20<sup>th</sup> Century, which has been trying and painful, we greet the hopeful 21<sup>st</sup> Century. We need to establish a global sense of values in order to create a new civilized world for the 21<sup>st</sup> Century. We need to leave behind us the

pursuit of national interests. Without the peace and happiness of our neighboring countries, we cannot attain true peace and happiness.

At least 1km on both sides of the International Highway should be set-aside as an International neutral zone. This zone would be an area transcending national boundaries, and rest areas could be created here for people with high-speed automobiles and tour buses.

This plan is simply a part of more detailed plans to realize the ideal world in the future. For this purpose, the Japanese have finished the geological survey in the ocean and surrounding areas of Iki, Tsushima, and Karazu, and are preparing to begin a tunnel at any time. In Korea, we have finished the soil analysis in Koje Island for building a tunnel, and are discussing the technical and political issues for the project.

### **Organization and Management**

The Korea-Japan Tunnel Research Institute, an organ of the International Highway Project, was comprised of four committees at the time of its inauguration in 1983: Committee One was to handle issues of ideology, culture, law, economy; Committee Two was to handle topography, geology, hydraulics; Committee Three, alignment, design, construction; and Committee Four, environment, meteorology, hydrography. Recently, the Institute reorganized its committees into a General Meeting, a Board of Directors, a Policy Planning Committee, and a Technical Committee in order to strengthen international and social research. The Policy Planning Committee is in charge of the building of the Korea-Japan Tunnel, preparation for international meetings, research for organizations, and funding. The Technical Committee is collecting technical materials and exchanging information through its sub-divisions: Comprehensive, Construction Planning, and the Joint Projects of Government and People.

The topics for further discussion are the formulation of basic ideas for the second stage of the Tunnel, research on construction technology and clarification of the geological strata in the western part of Tsushima. In order to find solutions for these, we need to strengthen our basic technical research. It is important to understand the environmental changes in South and North Korea, Japan and China, and to promote mutual understanding and closeness through the exchange of information and culture among these countries.

### **Activities**

The activities for the project up to present in Korea and Japan are as follows.

#### ***Japan:***

1982

April: Establishment of the International Highway Construction Corporation

June: The first geological examination

October: The first boring (500m) in You

The first sonic survey of the ocean floor

1983

February: Establishment of the International Highway Construction Corporation  
 May: Establishment of the Technological Institute for the Korea-Japan Tunnel  
 July: Establishment of Kyushu branch of the Technological Institute for the Korea-Japan Tunnel  
 November: Purchase of a survey aircraft

1984

Onshore boring, geological survey, mapping  
 Sonic survey (by water gun and digital multi channels) in the western part of Tsushima  
 Magnetic prospecting of the ocean floor  
 Establishment of Fukuoka office

1985

Boring, survey, topographical mapping  
 International symposium on tunnel project  
 Installation of a seismometer

1986

Boring, survey, topographical mapping  
 March: Marine environmental survey in Tsushima  
 October: Groundbreaking ceremony for an incline investigation shaft

*Korea:*

The International Highway Research Society was inaugurated in Seoul in October 1986. While geological surveys, topographical mapping, and boring were exercised in 1987, a research plan was established for a geological survey of the ocean floor and environment of the western part of the Straits of Korea where the Tunnel would pass through. The first onshore boring at six locations (300~400m deep) in Koje Island, Korea was conducted in 1988, and the physical and chemical analyses of the core samples were carried out in 1989.

A research meeting on "the selection of the beginning of the tunnel" was held in 1988, and progress reports and symposia have been held every year since then. Many engineers could join the tunnel project owing to the establishment of the Technical Research Society for the Korea-Japan Tunnel in 1992.

Some topics of the symposia have been:

1989: The Effect of the Korea-Japan Tunnel on the Neighboring Areas  
 (Koje island and its vicinity)

- 1992: The Present Situation of Korean Transportation and its Future
- 1993: The Importance of an Asian Highway in the Cultural Community
- 1994: The Korea-Japan Tunnel's Influence on Neighboring Regions
- 1994: A Plan for Cooperation in Transportation between South and North Korea
- 1994: The Korea-Japan Tunnel and a Survey of the Connecting Route to the Main Road Network on the Korean Peninsula
- 1995: The Role of the Korea-Japan Tunnel in the 21<sup>st</sup> Century

These studies have progressed in a close relationship with the long and mid-term plans of the Korean government. We have tried to promote public understanding of the Project through news coverage of the studies. We have even tried to overcome national sentiments and cultural differences between Korea and Japan. In addition, expert meetings of marine and fishery sciences have been held in Japan and China to confront possible environmental changes caused by the tunnel construction.

I feel that we must establish a world of interdependence, mutual prosperity and universally shared values centering on God, which can lead us to the unification of thought, technology, religion, and East and West.

The Korea-Japan Tunnel project was started in accordance with a dream of science and religion. The 21<sup>st</sup> century can be the century that realizes the ideal of science and religion. Challenges to poverty and national confrontation have been launched. The Reverend Moon is trying to solve the food shortage of Africa through his activities in South America, and is sacrificing his personal life for the unification of religions and humankind; the International Highway should call forth a response in our hearts. The dream in our minds will eventually come true. Let us try our best to realize this dream.

### **The Size and the Traffic System of the Tunnel**

The Korea-Japan Tunnel is planned to be a large-scale tunnel, extending about 250km. From Karamu, the beginning of the tunnel, to Iki is 27km; across Iki itself is 18km; across Tsushima is 2km; across the Straits of Korea is 68km; across Koje Island is 30km; from Koje Island to Pusan is 7km, totaling in all 229km in a straight line. After due consideration of the geological aspects and survey errors, and winding paths, however, the distance between Karazu and Pusan totals 250km.

It would cost double or triple if portions of the tunnel were to be replaced with bridges in consideration for industry, sightseeing, appearance, and economic aspects. Bridges, however, are better than a tunnel for scenic beauty, and can bring economic development as tourist attractions. Therefore, there is a possibility that both ends of the tunnel could be built in the form of a bridge.

The form of the tunnel would vary with the traffic system. It is most desirable that

automobiles run directly through the tunnel because the tunnel is a part of the International Highway, but the main problem is ventilation. The ventilation of the tunnel is almost impossible because the tunnel is long and is located under the ocean floor.

Other possibilities have been considered:

- i) An electric automobile has practical use in the tunnel, because such automobiles, given current technology, can run only 100 kilometer on one charge. If a small and lightweight battery with a high density of energy were to be invented in the future, electric automobiles could be used in the tunnel. This system is also not practical unless adopted for general use on other highways.
- ii) A centralized system of electric automobiles has two possibilities: a pulley bus system and induction system. It would be difficult to operate such cars manually inside a sealed tunnel. If an automatic system were adopted, we would have to take into consideration various problems such as illumination in the tunnel, the arrangement of traffic lights collision prevention, and the switchover of traffic flow from right (Korea) to left (Japan).
- iii) An electric railroad could be used if an appropriate track system were adopted. Electrical substations would have to be established every 20~30km to supply the necessary power. A plan would need to be developed for platforms and the intervals between cars because of the different gauges of railroad track used in Korea and Japan.
- iv) Automobile transportation by train
- v) Monorail system
- vi) Neither a belt system nor a pallet system can attain high enough speeds and both are inadequate as a means of transportation.
- vii) Linear motor car powered by magnetic induction could run at up to 500km/h; thus it would take 30 minutes to travel between Korea and Japan. However, this would be a closed system only used in the tunnel if it were not adopted anywhere else.

The investment in the tunnel could not be fully recovered only by fares alone, given the prospective transportation economy. Beyond any economic point of view, however, the Tunnel itself has great meaning for building a peaceful structure, the Northeast Asian economic community.

### Closing Remarks

The International Highway provides an excellent opportunity for the underdeveloped countries, especially for the former Communist block, to emerge from under-development. After World War Two, the Communist countries once contained one third of the world's population, but were isolated from capitalistic economies and fell behind in economic development. Fortunately, Russia has headed for mutual prosperity in coexistence by opening its borders and reforming its living standards. China is searching for economic development with the support of the United States and Japan, and is facing the necessity of a

well-developed transportation network. Adequate means of transportation is one of the requirements of national development. North Korea also cannot turn face away from such an atmosphere any longer. The summit meeting between the two Koreas, held in June 2000, is a natural process of this trend.

I believe that the time will come soon to build a highway running through North and South Korea. Such a highway would facilitate the industrialization and development of the vast natural resources in Manchuria, and China would give a warm welcome to this development. North Korea could not help but accept the peaceful reunification of Korea, if the International Highway were to pass through North and South Korea, and on into China. The International Highway would naturally solve the ideological conflict between North and South Korea. It is time to establish an Asian community. If Korea devoted herself to the prosperity of all of Asia, all Asian countries would trust Korea. I think this is the only way for Korea to bring out eternal prosperity by loving the entire world.

I believe firmly that the frequent traffic of people and freight along the International Highway would eventually bind the people of the world into one and lead to world peace. If the Asian countries united this way, then Asia could become an intermediary between the developed countries in the Northern Hemisphere and the underdeveloped countries in the Southern Hemisphere. The policy lines of the United States and Japan would automatically correspond to the idea of an International Highway. Under a new economic basis, the International Highway zone, where freedom would be secured, could grow worldwide.

If the plan for an International Highway, free from national intervention, were realized, the distinction in wealth between the Northern and Southern Hemispheres would be solved. We could establish a peaceful world (a world of Shimjeong culture) centered upon God's love by joining the unified economic sphere starting from Asia.