Plan for Honam High-Speed Railway

The Honam High-Speed Railway (HSR) construction is a major national transportation infrastructure project, which will be linked to the other major transportation axis of the country, or the Gyeongbu HSR. Also, it is a key national project that will support the balanced development of the country and innovative system construction in the Honam region, which will be achieved through the construction of Enterprise Cities and relocation of public agencies, as well as maximize the growth potential of the region. The construction is regarded as necessary and important as it is already included in the comprehensive national territorial plan and national transportation infrastructure network planning.

However, due to the failure in reaching an agreement among regions, the station where the Gyungbu HSR diverges to the Honam region has remained undecided in excess of 10 years, a major obstacle to the establishment of the master plan for the Honam HSR. Accordingly, there has been an urgent need for the selection of the diverging station, which will have to be decided through a reasonable settlement of the regional conflicts; and for the master plan to provide the basic directions to the efficient Honam HSR construction project. The plan will be formulated after calculating the demand for the railway, and conducting the economic and financial feasibility study of the construction by reflecting the changes in the circumstances in the country such as the Multifunctional Administrative City construction.

Previous plan

There have been several attempts to establish the master plan for the Honam HSR, as yet so far. The most recent attempt of the year 2003 had planned a route that begins at Suseo in Seoul, runs along with the Gyeonbu HSR near Hwaseong-si, or Hyangnam, diverges at several stations in the middle at Cheonan, Osong and Daejeon, and passes along Iksan and Gwangju to terminate at Mokpo. The results of the analysis on the demand and economic feasibility of the planned route show that, it is not desirable to construct the HSR for the whole section between Seoul and Mokpo in terms of economic feasibility and funding, since the demand is low due to the comparatively small population in the regions along the route.

Accordingly, the best suggested plan for the construction was to plan the route that would share part of the Gyeongbu HSR while utilizing the existing Honam Railway, and implement the construction by section and by stage. To be specific, during the first stage of the construction, the sections between Suseo, or Seoul, and Hyangnam (44km), and between the diverging station and Iksan (132km maximum) would be newly built by 2015. The second stage would be for the construction of the section between Hyangnam and the diverging station by 2020, with a maximum length of 101.4km. The plan suggested the construction of the section between Iksan and Mokpo be promoted depending on the demand for the railway after the completion of the first stage. The maximum cost for both the first and second stage of the construction, which would vary depending on where was selected as the diverging station, was estimated at 10 trillion, 378.6 billion won, and this was considered to be economically efficient.

Revision of the master plan & construction strategies

The 2003 plan for the Honam HSR construction reviewed was examined again for its demand size and the corresponding business potential after reflecting the changes in social and economic circumstances of the country since that time. The basic reason for the re-examination was the construction plan of the Multifunctional Administrative City in the Chungcheong region along the line, which was expected to cause an increase in the demand. In addition, it was necessary to review the estimation on the demand for the Honam HSR, reflecting the fact that since the partial opening of the Gyeongbu HSR in 2002, the demonstrated demand stood at half of the estimated demand.

Based on the 2003 plan, the route along Suseo, or Seoul, diverging station and Mokpo has been put up for review. After the demand and business potential

of the route were re-examined, it has turned out that, first, if Daejeon is selected as the diverging station, while the total length for the construction is minimized, and the demand is comparatively high with the construction cost remaining little, the economic and financial feasibility is expected to be low (B/C=0.58, R/C=0.66). Secondly, even if the section between Suseo and Hyangnam is built, the section between Gwangmyeong and the diverging station, which the Gyeongbu and Honam HSR will share, requires a total of 171 train runs as of 2045. This is less than the maximum number of the train runs, or 192 times, and there will be 21 extra runs on the railway.

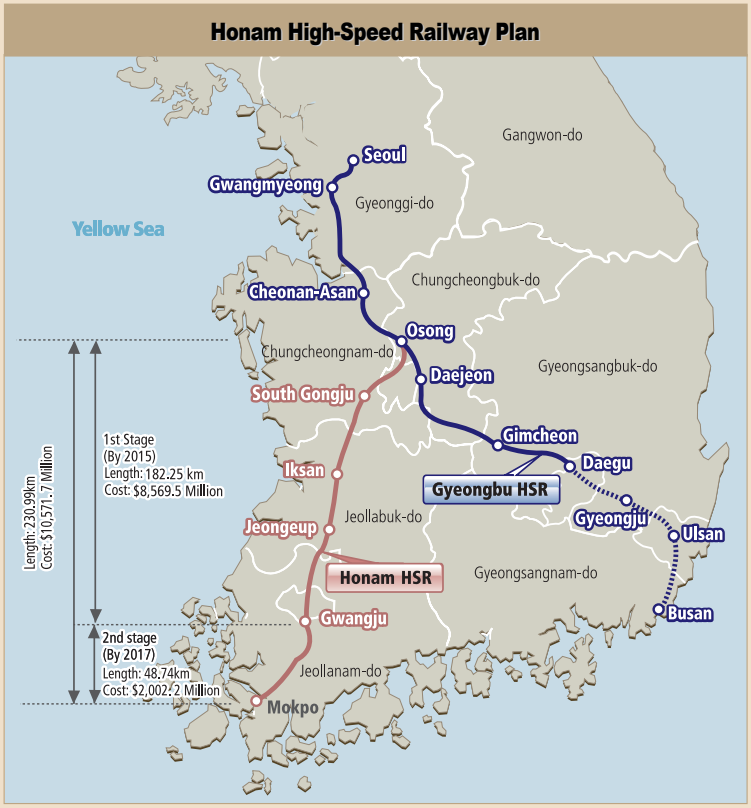
Therefore, based on the analysis, the base of the revision of the plan, and the directions to the master plan establishment were drawn up, the goals of which are to keep the total project cost minimum and to have the effect of the operation felt at an early stage. Finally, it has been decided that the section between the diverging station and Mokpo would be constructed for the Honam HSR project, except for the already reviewed section between Suseo and Hyangnam in the Capital region.

In order to select the diverging station, which had been the obstacle to the plan establishment, it was necessary to secure impartiality and objectivity during the assessment, and acceptance of the assessment results. Accordingly, prior to the assessment, the agreement among local governments was encouraged who were the direct stakeholders of the overall assessment process and assessment framework. They were also allowed to participate in the assessment process so that they could monitor whether the assessment was implemented in an impartial and objective manner.

In the meantime, a committee was constituted by experts recommended by each individual local government and academic associations, which would draw up the criteria for the assessment. After going through a number of discussions, detailed plans and procedures of the assessment criteria and the implementation were concluded upon. The committee selected a total of 5 basic assessment criteria and 19 detailed items for the assessment in the end, and, after having a public opinion poll taken by a professional surveyor, objectively determined the weight to each assessment item. In the end, an assessment panel composed of experts from every field implemented the assessment, choosing Osong in Chungcheongbuk-do as the diverging station.

Details of the Master Plan and expected effect of the project

The best suggested plan for the Honam HSR is to construct the section between Osong and Mokpo stepwise, excluding the section between Suseo and Hyangnam in the Capital region and keeping the construction period minimum. The first phase of the construction is for the section between Osong and Gwangju by 2015, with the second for the section between Gwangju and Mokpo by 2017. While the demand and business potential of the project are not high, it has been decided that the project is necessary



for the development of the Honam region and for the balanced development of the country. According to the assessment of the expected effects, the dissemination effects of the construction on the regional economy are as follows: the production inducement effect is 20.7 trillion won; wage increase effect, 4.2 trillion won; and an employment inducement effect of 172,000 persons. It is estimated that, once operated, the production inducement effect will be 40 billion won per annum depending on the intermediate input, and 29 billion per annum depending on the final demand.

Taking into account the study results, the Honam HSR should be initiated in a way in which the total project cost is kept at a minimum, and adopting investment-efficient methods. In conclusion, it must be proven that the efficiency of the Chulla Line between Iksan and Yeosoo will be improved by opening the Osong and Gwangju section of the Honam HSR as early as possible. Additionally, it will be necessary to demonstrate at an early stage that the travel hours can be reduced between the section of Seoul and Mokpo by one hour and four minutes, from two hours and fifty-eight minutes to one hour and fifty-four minutes including the stops.

Il-Ho Chung (ichung@krihs.re.kr)

Planned Management of Rural Land Use in Korea

Nowadays, our rural communities are losing vitalities faced with a number of challenges such as the decreases in population, an increasing elderly population, and a growing income disparity between urban and rural families. Moreover, as the local agricultural market is open to foreigners, farming households are expected to lose their competitive edge and inevitably abandon farming or reduce the scale. This will lead to an increase in idle farmland, which will be degraded as time goes by.

If this happens, the demand for converting the idle farmland for other uses is expected to increase, and there will be heightened pressure on cancelling the designation of the agriculture promotion area. When these problems are left unaddressed, the country will have to cope with the degradation of the farmland and an indiscreet development of the rural area at the same time, which is certain to cause a serious inefficiency in the national land use management.

Current status of the rural land use management

Currently, rural land use management is implemented under the Act on Planning and Utilization of National Territory (APUNT), Agricultural Land Law (ALL) and other related laws such as the Rural Maintenance Law (RML). The APUNT enforces a city/county plan establishment. Under the Act, the national territory is categorized into four zoning areas: urban area, management area, agricultural & forest area and natural environment preservation area, with each zoning area regulated for the land use.

The rural land is mostly designated as the agricultural & forest area and management area. The agricultural & forest area accounts for 50.7 percent and management area accounts for 26.5 percent of the national territory as of 2004. The ALL enforces the designation of the agriculture promotion area and restricts the land use and conversion in that area. The RML and other related laws stipulate that a range of rural maintenance plans (RMPs) should be established and projects executed in accordance with the plans.

Problems with rural land use management

However, it has been pointed out that the present system for rural land use management has several problems. Firstly, while spatial planning is after all a matter of land use, the RMPs do not accompany the land use plan. Moreover, the hierarchy between the two plans is not clear, and they are not closely related. Further, the RMPs are complicated and confusing since they have been introduced under several different laws. The planned districts and contents of the plan are overlapping or inconsistent, and the plans are not really about the corresponding development projects.

Secondly, agricultural land is not the only example of the land use found in the rural areas, but, in quite a