

2. TRANSPORT INFRASTRUCTURE DEVELOPMENT CONCEPT

Paraguay is one of the South American countries with less developed infrastructure. Since Paraguay is a landlocked country, development of transport infrastructure is essential, especially to strengthen its competitiveness of export in the world market. Two aspects are important to plan the development of transport infrastructure in Paraguay: one is a multi-national viewpoint of MERCOSUR and the other is a national viewpoint to encourage domestic production by developing farm-to-market roads as well as highway networks.

Thus, two kinds of transport infrastructure, export corridors and production-supportive network, should be planned with a proper balance, in order to dissolve constraints to competitive advantages of Paraguayan products. Infrastructure development for production and physical distribution should pursue three targets: capacity increase, security, and effectiveness.

2.1 INFRASTRUCTURE FOR ENHANCEMENT OF EXPORT CORRIDOR

(1) Reinforcement of transport capacity

Since the main export commodity is grain, especially soybeans, it is most important to improve accesses from production areas to river ports by road development, increase the storage capacity at ports as well as at production areas, and reinforce the shipping capacity of barge convoys.

If the export of soybeans increases in the future, the loading capacity at river ports will run short, and then an increase in the capacity of ports and shipping will be needed as well as development of access roads from production areas to the river ports. In addition, it is important to foster truck transporters by taking policies for encouraging them to increase their fleet size and also truck size to economize transport cost.

As for the export by truck transport, a dominant flow is to Brazil via Ciudad del Este. The capacity of this corridor is limited to a border bridge over the Parana River. The daily capacity is about 480 trucks at present. Construction of a second bridge is an important issue but needs huge investment. A study will be needed on more economical short-term measures, such as pipelines or conveyers to transport grains crossing the river.

Although train transport has recently reduced its role, it is still necessary to diversify transport modes and routes within the limit of economic feasibility. Thus, adequate improvements to transport infrastructure needs to be proposed to meet the future demands.

(2) Security for stable transport

Main transport issues of grain export in Paraguay are the difficulty of river transport in dry season, road transport in rainy season, and many bridges with a low load capacity, which cannot allow for the passage of large trucks. In Paraguay, rivers with a depth of less than three meters are not navigable by law. However, most sections of Paraguay River in Paraguay become less than 3 meters in depth. Therefore, an access should be reinforced to comparatively deep river ports, such as Ayolas and Pilar.

Most unpaved roads become impassable after heavy rainfall. Pavement projects of trunk roads should be promoted. The total length of the national roads under the jurisdiction of MOPC is 4,500 Km, of which 1,900 Km, or 40% of total, is unpaved. At least, the highways designated as trunk roads by the MERCOSUR Committee should be paved urgently as well as the bi-oceanic highways in Paraguay.

As a highway network expands, maintenance cost will increase. The road maintenance system should be enhanced, and a new funding system will be needed. New financial resources for public infrastructure should be studied based on the “beneficiaries pay” principle.

(3) Effective transport

To reduce transport cost, transport efficiency has to be raised. Proper combination of transport modes should be studied, and in some cases, development of a multi-modal terminal will be needed. Transshipment cost has to be reduced to the maximum extent. Transshipment occurs, for example, from trucks to vessels at a river port, from trucks to railway at Encarnación, from ships to railway at Corumbá, and from ships to trucks at Campinas.

Efficiency of long-distance transport will be significantly improved if a truck or a vessel can get cargoes for its return trip. In order to raise a load factor, development of an information network and service centers on cargo transport, either international or domestic, is worth studying for truck and river transport.

2.2 INFRASTRUCTURE FOR PRODUCTION SUPPORT

Development strategies for production-supportive infrastructure are almost same as those for export corridor but focused on production areas.

(1) Increase in transport capacity

In Alto Paraná and Itapúa, farmers with large- and medium-sized farmlands have their own silos and

transportation measures. However, farmers with small land less than 5 ha, 80% of farmers do not own their facilities, which narrows their choices of crops, in spite of their effort for purchasing and selling jointly through cooperatives. They need public supports for storage facilities and economical transport measures.

(2) Stable Transport

In remote areas with insufficient farm-to-market roads, products cannot be transported in proper timing, which discourages farmers from increasing production. According to MOPC's data, most of the 46,000 km of agricultural roads remain unpaved. Pavement of primary ones is urgent to encourage agricultural production, and new funding method is indispensable.

(3) Effective Transport

It is important to reduce transport cost by improving the load factor through promotion of joint distribution and shipping. The full usage of information on physical distribution is essential. Mitigation of traffic congestion is also important by constructing urban bypasses and implementing traffic management.

Imported crude oil and petro-products are shipped and unloaded at Villa Eliza and then distributed by road transport. Consequently, the fuel price is lowest in the Metropolitan region and becomes higher in remote areas away from Asuncion. If some portion of imported petro-product is transported via Parana River and unloaded somewhere in Alto Paraná, the local price will be lower. Construction of stock points is worth studying for the feasibility.

Figure 41 Policy System for Transport Infrastructure

