Chapter 3

Results of the Evaluation

3-1 Relevance of Purpose

The purpose of this chapter is to confirm the relevance of the purpose of the Red River Delta Transportation Development Program by reviewing its consistency with the prior policies, principles and plans of the Government of Japan.

3-1-1 Consistency with Japanese Prior Policies

(1) Consistency with Japan's ODA Charters

The Program purpose of the Red River Delta Transportation Development Program (hereinafter the Program) is the establishment of a new transport system with the best mixture of different modes of transport in the Red River Delta area for the promotion of economic development in northern Vietnam, the alleviation of north-south regional disparity, and the support for the transition to a market economy and internationalization.

The functional component of the Program was the actual construction of a social and economic infrastructure, human resource development, intellectual support, environmental protection and so on. The Program also consists of a variety of Japanese ODA schemes such as Yen loan projects, grant aid projects, technical cooperation projects and development surveys. Combination of the different schemes was promoted. Furthermore, the Program successfully included international cooperation and coordination. The Program integrated the results of these activities into actual implementation.

The ODA Charter (1992) emphasized the importance of self-help efforts on the part of developing countries. The Charter also explained that Japan should implement its ODA to promote the sound economic development of recipient countries through the development of a wide range of human resources and the socio-economic infrastructure.

In the principles of ODA implementation, the Charter declares that substantial attention should be paid to the promotion of democratization and to the introduction of a market-oriented economy in developing countries.

The priorities of Japan's ODA were specified in the reference to regions and issues. Asia, particularly ASEAN countries, was selected as the priority region. As far as issues are concerned, the Charter specifically mentioned that priority should be placed on assisting infrastructure improvement as a prerequisite to socio-economic development.

In addition, responding to the various needs of developing countries, the Charter explained that Japan intends to link and coordinate the different ODA schemes of Yen

loans, grant aids, development surveys and technical cooperation. Furthermore, the Charter called for appropriate communication and cooperation with other bilateral donors, multilateral development aid organizations and NGOs.

The Program complies with The ODA Charter 1992 on the following major points:

1) The program is for infrastructure improvement which the Charter referred to as the prerequisite for socio-economic development;

2) The program constructed infrastructure which stimulates both domestic and international economic activities and it led to an increase in foreign direct investment. In this way, the program promoted the transition to and expansion of a market-oriented economy;

3) The program mobilized Japan's different ODA schemes fully in both the planning and the implementation process, and in so doing, this combination contributed to a maximization of general aid effects and also to cost saving;

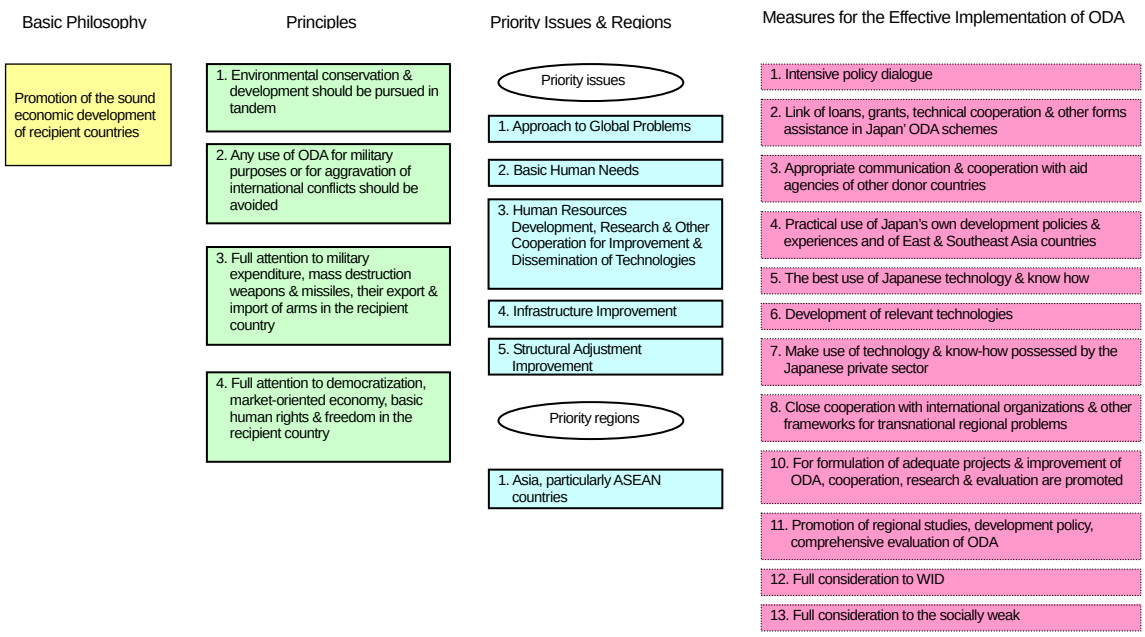
4) The program emphasized human resource development at various stages of the planning and implementation process so that a substantial scale of technology transfer was achieved;

5) The program maintained a very positive position regarding international cooperation and collaboration. Greater rationality and efficiency prevailed in the course of socio-economic development;

6) The program respected and encouraged the initiative of the Vietnamese authorities concerned and this manner reflected the core position of Japan's ODA policy of support for self-help endeavors.

The consistency with the basic purposes between Japan's ODA Charter of 1992 and the Red River Delta Transportation Development Program (1994-2004) are summarized in Figure 3-1.

Figure 3-1: Consistency with Japan's ODA Charter (1992)



The Ministry of Foreign Affairs revised the ODA Charter in 2003. In the new ODA Charter (2003), the Objectives of Japan's ODA were established. Dual purposes were established, first the pursuit of world peace and development and then the attainment of Japan's own security and prosperity.

In the basic policies, the new Charter again emphasized support for the self-help efforts of developing countries by extending cooperation for human resource development and economic and social infrastructure development. Japan also declared that it puts a priority on assisting countries that make active efforts for economic and social structural reform.

The new basic policies also emphasized partnership and collaboration with the international community. Currently, the international community shares more common development goals and strategies. Various stakeholders are increasingly coordinating their aid activities. Japan decided to pursue further collaboration with international development aid organizations, other donors, NGO's and other entities.

In conjunction with the perspective of "human security" in the basic policies, poverty reduction has become the major priority issue in the new Charter. Japan put a high priority on such sectors as education, health care / welfare, water and sanitation and agriculture. Japan also supported human and social development.

Asia, particularly ASEAN countries, was reconfirmed as the priority area. In addition to Asia, Africa received special attention and Japan committed itself to assist in those efforts of self-help to overcome poverty and other serious development issues which were affected by external and internal conflicts.

Comparing the Program purpose and its content with the objectives, basic policies and priorities of Japan's ODA Charter of 2003 as described above, it is evident that there is a consistency in the following major points.

1) The Program is carried out in Vietnam which is a country in the priority region mentioned in the Charter (2003);

2) The Program aimed at poverty reduction and sustainable growth which were specified as priority issues in the Charter (2003);

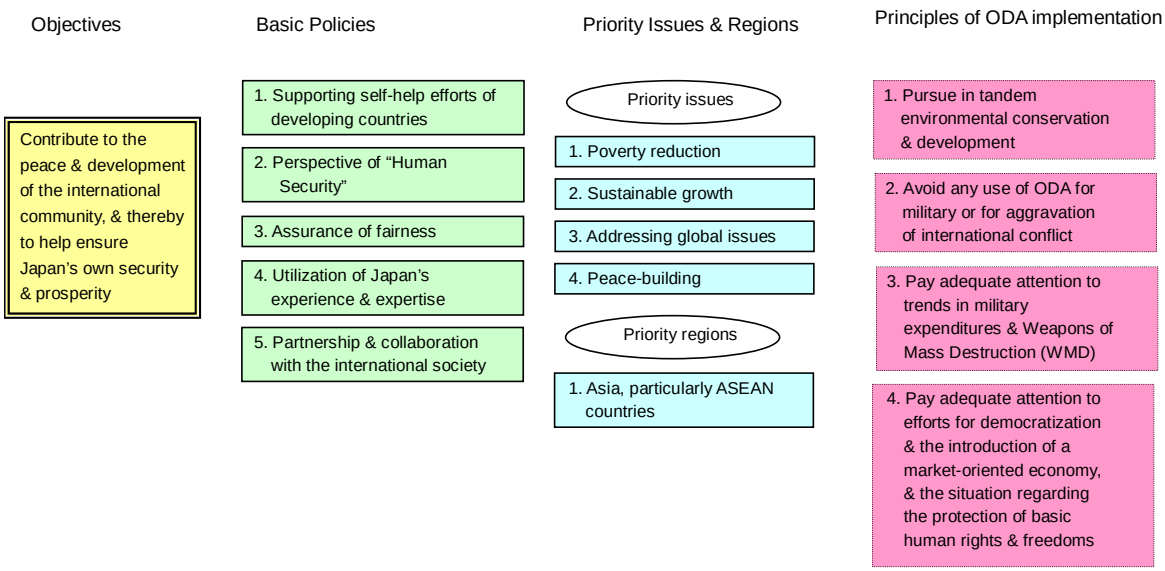
3) The Program utilized Japan's experience and expertise, especially those of the private sector, in the actual implementation process of Yen loan projects, as mentioned in the basic policies of the Charter (2003). In addition, the JICA development survey and technical cooperation projects in the Program also utilized Japan's experience and expertise;

4) The Program emphasized human resource development, which is a major component of "human security," also mentioned in the Charter (2003);

5) The Program maintained a very positive position regarding international cooperation and collaboration. Greater rationality and efficiency prevailed in the course of socio-economic development, as mentioned in the Charter (2003);

The consistency of the basic purposes of Japan's ODA Charter of 2003 with the purpose of the Red River Delta Transportation Development Program (1994-2004) is summarized in Figure 3-2.

Figure 3-2: Consistency with Japan's ODA Charter (2003 revision)



(2) Consistency with Japan's Medium-Term Policies for ODA

As for the basic approach, the Medium-Term Policy (1999) reconfirmed Japan's position to support self-help and initiative in developing countries. The Policy mentioned the importance of coordination and collaboration with bilateral and multilateral donors. The Policy also acknowledged that economic growth is a necessary measure for the improvement of "quality of life" for the people.

Amongst the priority issues of the Medium-Term Policy (1999), poverty reduction is regarded as a major issue, and poverty alleviation programs are strongly supported. The Policy stated that sustainable economic development constitutes an essential requirement in promoting social development and poverty alleviation programs. In addition, it emphasized that the development of social and economic infrastructures underpins economic growth and thus contributes to poverty alleviation.

The Medium-Term Policy (1999) also referred to support for overcoming the Asian economic crisis of 1997 and for the promotion of economic structural reform. Besides emergency measures, the Policy (1999) reinforced its continuous support for infrastructure development and technology transfer. Thus the Policy was formed in anticipation that the Asian and other countries affected by the crisis would return to a path of economic reconstruction.

In its priority issues and sectors by region, the Medium-Term Policy (1999) reiterated Japan's commitment to East Asia as the priority region. As for priority policies for East Asian countries, five policies were named. These were to provide support for economic structural adjustment, for the socially vulnerable, for human resource development and institution building and then for the adjustment of assistance in order to conform to the needs of each country and to provide support for regional development initiatives.

Comparing the Program and the Medium-Term Policy (1999), it is evident that there is consistency on the following major points.

1) The Program is carried out in Vietnam which is a country in the priority region mentioned in the Policy (1999);

2) The Program aimed at poverty reduction and sustainable growth which were included in the Policy (1999)

3) The Program utilized Japan's experience and expertise, especially those of the private sector, which were also included in the basic approaches of the Policy (1999);

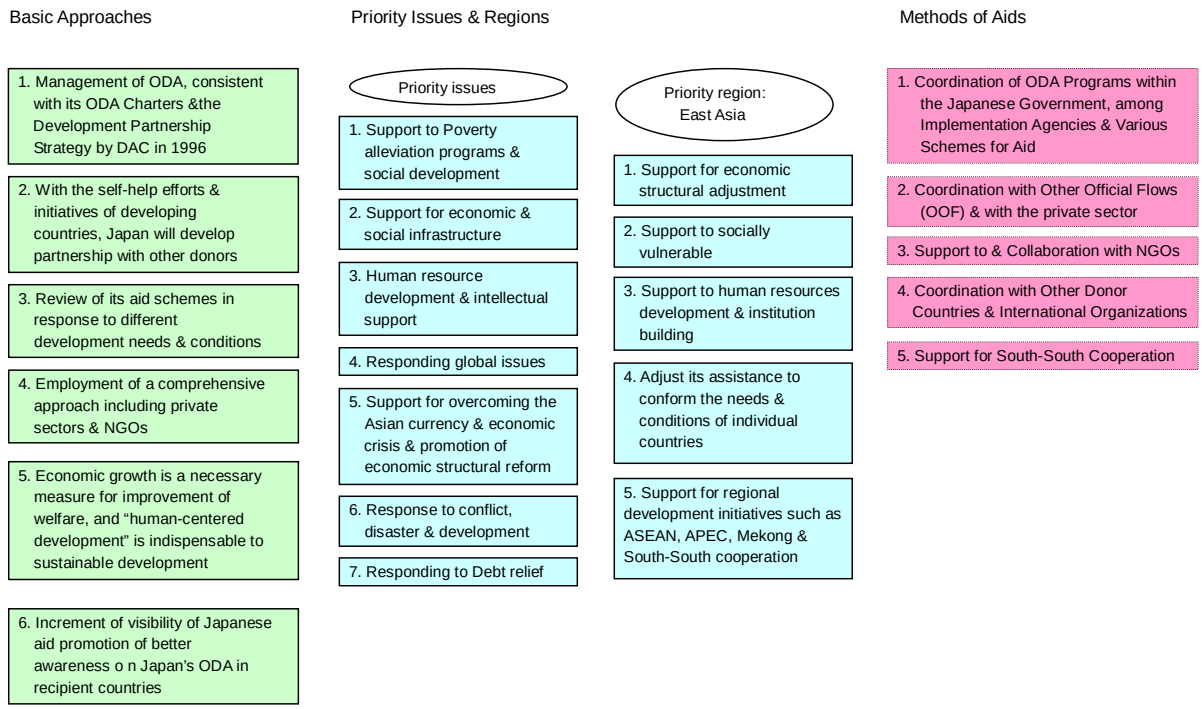
4) The Program emphasized human resource development, which is a major component of "human security," also mentioned in the Policy (1999);

5) The Program included projects of international cooperation and collaboration, which were specifically mentioned in the Policy (1999);

6) The Program is for infrastructure development, which was emphasized in the Policy (1999);

The consistency between the Medium-Term Policy (1999) and the Red River Delta Transportation Development Program (1994-2004) is summarized in Figure 3-3.

Figure 3-3: Consistency with Japan's Medium-Term Policy on ODA (1999)



The revised Medium-Term Policy (2005) also stressed poverty reduction through an increase in employment and sustainable economic growth. The increase of employment results from expansion of private business activities. For the activation of private businesses, the completion of the related economic infrastructure is a prerequisite. The Policy (2005) indicated another important role of the economic infrastructure, the contribution to sustainable growth by the promotion of a smooth and extensive transaction of goods and services through the wider region.

As for "Measures to Ensure the Efficient and Effective Implementation of Assistance," the Policy (2005) again acknowledged the importance of coordination and collaboration with other major donors and international development aid organizations.

The Medium-Term Policy (1999) and the revised Medium-Term Policy (2005) are very much the same in their basic approach, priority issues and sectors, also in priority issues and sectors by region for ODA, although the revised policy places a greater emphasis on poverty reduction from the perspective of "human security." However, both policies maintain the position of the Government of Japan that poverty reduction can be achieved through sustainable economic growth and both indicated the important role of economic infrastructure in the process.

Comparing the Red River Delta Transportation Development Program and the

Medium-Term Policy of 2005, there is a substantial level of consistency in both the purpose and the contents. As mentioned already, the Program reflects the Medium-Term Policy (2005) on the following major points:

1) The Program is for infrastructure development which the Mid-term Policy (2005) indicates as a precondition to the expansion of commercial activities and then sustainable growth, which in turn contribute to poverty reduction;

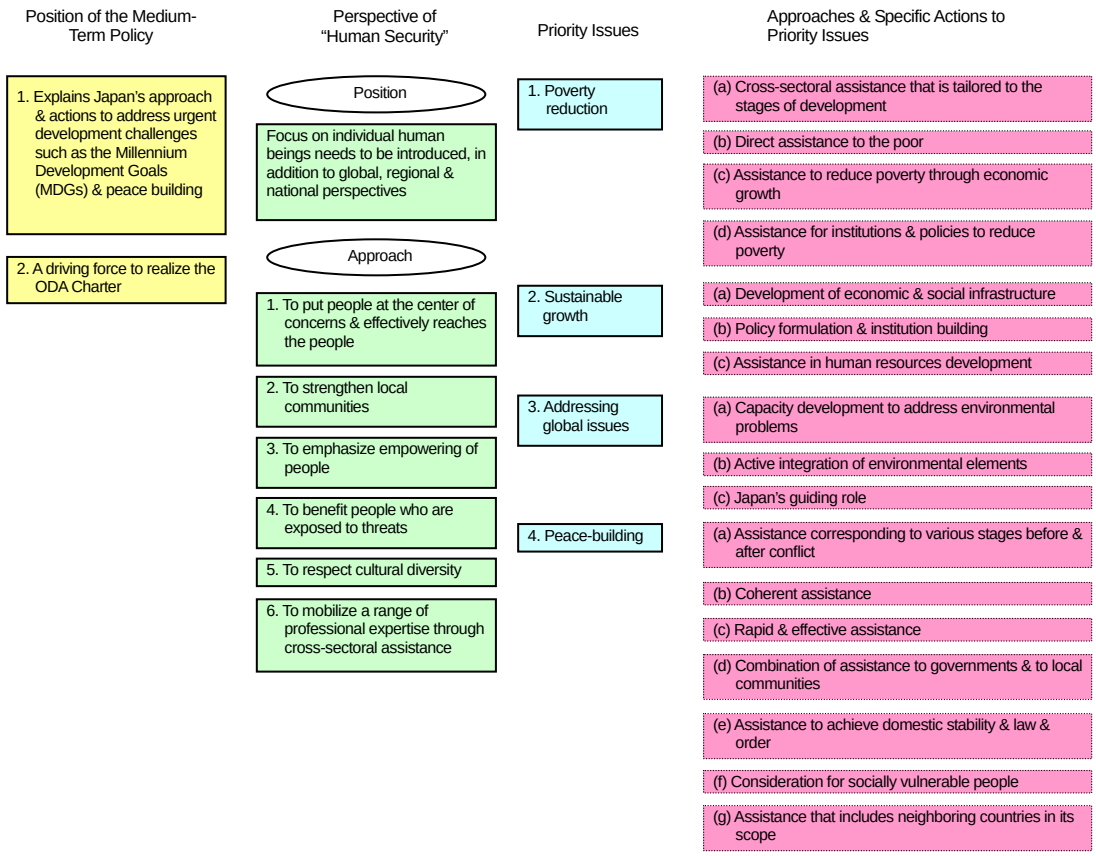
2) The Program adopted the idea of international collaboration and coordination and this is reflected in the implementation process. The importance of this was emphasized in both the two Mid-term Policies (1999 & 2005), as well as in the previously mentioned two ODA Charters (1992 & 2003);

3) The Program was carried out in Vietnam, an ASEAN country in Asia which both Medium-Term Policies (1999 & 2005) have confirmed as a priority region for Japan's ODA;

4) The Program carried out extensive human resource development by Japanese engineers and experts, which was also emphasized in both Policies (1999 & 2005);

The consistency between Japan's Medium Term Policy in 2005 and the Red River Delta Transportation Development Program (1994-2004) is summarized in Figure 3-4.

Figure 3-4: Consistency with Japan's Medium-Term Policy on ODA (2005 revision)



(3) Consistency with Japan's Country Aid Principles to Vietnam (1994-1999) and Japan's Country Assistance Programs for Vietnam (2000 and 2004)

The County Aid Principle by the Ministry of Foreign Affairs (MOFA) was originally designed to clarify the strategy, efficiency and transparency of Japan's ODA. It is a guide line for the implementation of ODA on the basis of each recipient country, reflecting the ideas of the ODA Charter formulated in 1992. Following the resumption of Japan's ODA in 1992, the County Aid Principle to Vietnam was formulated for the first time in 1994 continuing until 1999. In 2000 and 2004, the Japan's Country Assistance Programs for Vietnam were formulated to succeed the Principles.

The Country Aid Principles (1994-1999) have coherently selected five major priority sectors for the implementation of ODA as follows:

1) Human resource development and institution building, as a means to support the transition to a market economy;
2) Rehabilitation / construction of the economic infrastructure in the areas of electricity and transport, in order to establish a foundation for the induction of direct foreign investment and the establishment of an export-oriented economy;
3) Agricultural development, for improvement in productivity and the diversification of products;
4) Improvement of social services in education, public health and medicine; and
5) Environmental protection during and after the implementation of ODA projects

In 2000, MOFA formulated the Japan's Country Assistance Program for Vietnam and set as the goal of the plan the promotion of well balanced development between sustainable growth and poverty reduction. This Plan also confirmed the above mentioned 5 priority areas for the implementation of Japan's ODA. In the Plan, infrastructure rehabilitation and development in the transport sector were considered urgent issues in order to catch up with the increasing demand for the smooth transaction of goods and services.

In 2004, responding to dynamic changes in Vietnam's society and economy while at the same time paying due respect to international trends in aid coordination / collaboration, MOFA initiated a revision of the Japan's Country Assistance Program. The new Program in 2004 identified major development issues for Vietnam's society and economy. These major development issues are as follow:

1) Limited economic competitiveness in the world market partly due to high public utility, telecommunication and transport costs;
2) Social problems of ordinary people such as a regional income gap and limited social services; and

3) An insufficient legal and administrative system in areas of efficiency, comprehensiveness and transparency.

In order to tackle and overcome these development issues, the Program in 2004 newly and specifically defined the priority areas of ODA as the further promotion of economic growth, the improvement of "quality of life" and support for the reform of the legal and administrative system. For the promotion of economic growth, the Program in 2004 again firmly stressed development of the economic infrastructure as part of the so called improvement of the foreign direct investment related environment. In the transport sector, the Program in 2004 selected the economically active Northern area and Hanoi as the priority area for development as well as North-South linkage. Promotion of the development of small & medium size enterprises and human resource development were other measures recommended by the Program in 2004 for economic growth.

The program purpose of the Red River Delta Transportation Development Program is the establishment of a new transport system in the Red River Delta area for the promotion of economic development in northern Vietnam, the alleviation of north-south regional disparity, and support for the transition to a market economy and internationalization.

Therefore the purpose and the contents (projects) of the Program are directly consistent with the purposes and priority areas of the County Aid Principles (1994-1999) and the Japan's Country Assistance Programs of 2000 and 2004. In addition, the Program satisfies the Country Aid Principles and the Japan's Country Assistance Programs in the following:

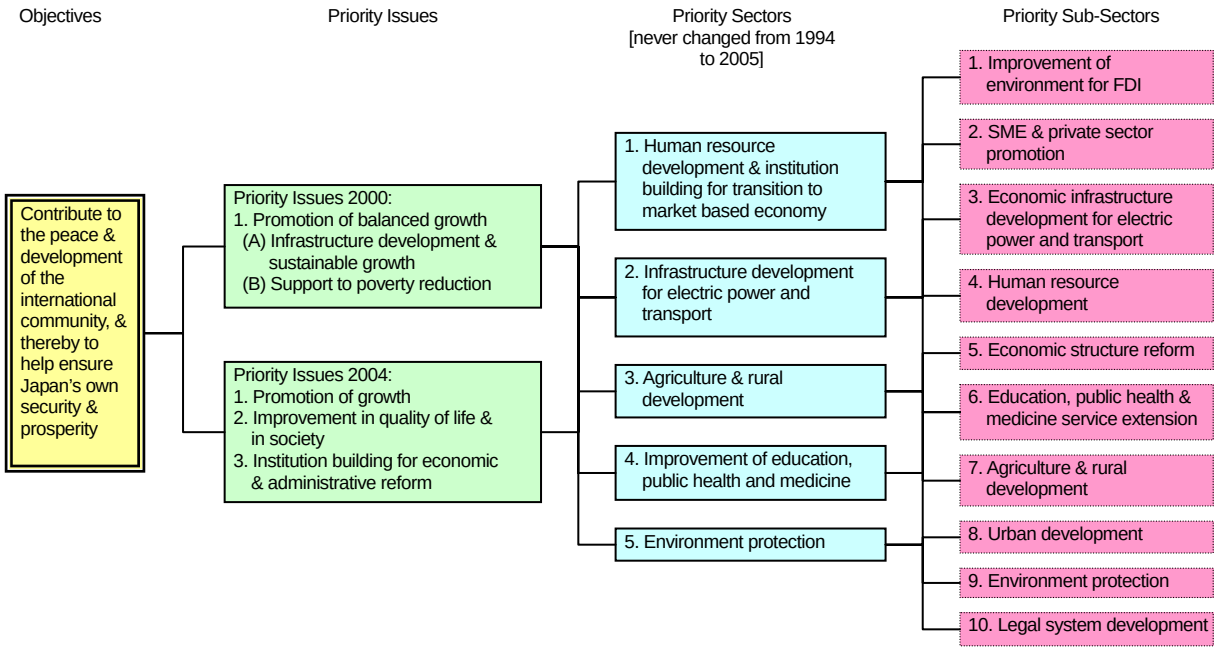
1) The Program affirmatively accepted international cooperation and collaboration in the implementation process which contributed to cost and time saving; and

2) The Program was designed to bring about a number of positive social impacts such as the creation of new jobs, easy access to medical service and the increment of higher education opportunities resulting in the improvement of "quality of life."

As indicated in the above review of the Japan's Country Aid Principles (1994-1997) and the Japan's Country Assistance Programs (2000 & 2004) to Vietnam, the principles and plans are neither contradictory or discontinuous but rather complementary and consecutive in value. Currently, the purposes and the contents are integrated into the Japan's Country Assistance Program of 2004.

Figure 3-5 is a summary of the Principles and the Programs and presents the consistent relationship with the Red River Delta Transportation Development Program.

Figure 3-5: Consistency with Japan's Aid Principles to Vietnam (1994-1997) & Japan's Country Assistance Programs for Vietnam (2000 & 2004)



3-1-2 Consistency with the needs of Vietnam

(1) Consistency with the Ten-Year Socio-economic Development Strategies 1991-2000 and 2001-2010

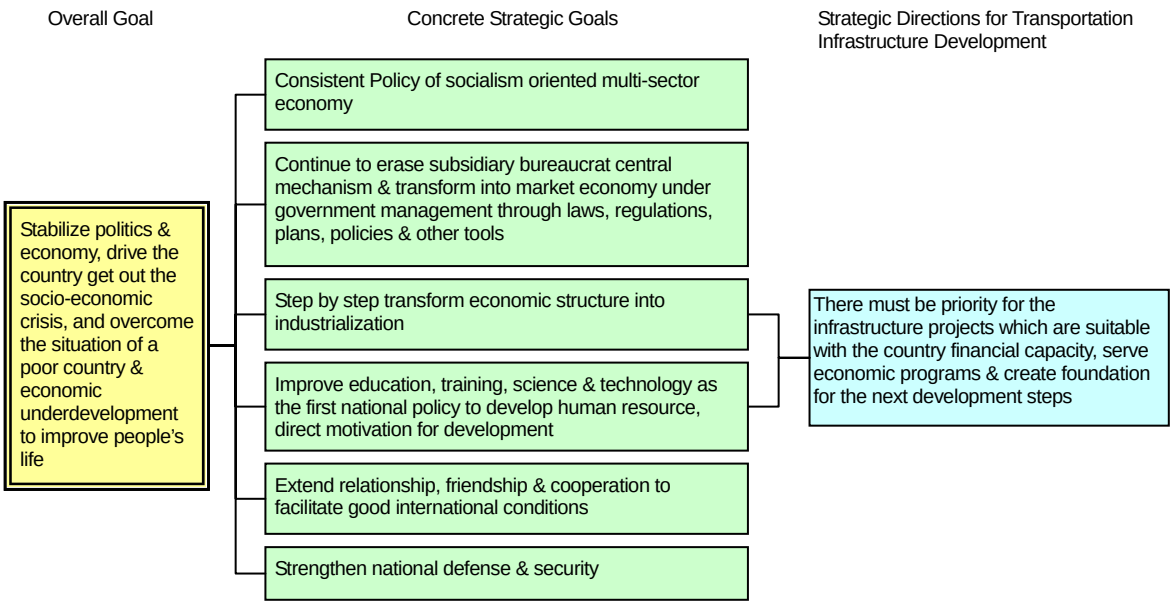
The VII National Party Congress in 1991 approved the Strategy of Socio-economic Stabilization and Development for the period 1991-2000. The following figure 3-6 is a summary of the Strategy 1991-2000. The positive relationship with the purpose of the Red River Delta Transportation Development Program (1994-2004) can be recognized.

This ten year strategy (1991-2000) was intended to promote industrialization and economic growth as a means to escape poor country status and economic underdevelopment. Large scale infrastructure development like the Program is an example of actual commitment as a prerequisite for industrialization and economic growth.

Since the one of the original ideas of the Program was to construct infrastructure which stimulates physical distribution and other socio-economic activities thus reducing poverty and increasing the general income and social welfare in rural areas, the Program is compatible with the overall goals of the ten year strategy (1991-2000). In fact, the roads, bridges and railways which were identified in the Program and later either constructed or improved through Japan's ODA certainly encouraged the overall economic activity in the region and thus steadily transformed the economic structure. In the construction process

of each infrastructure project, it is recognized that extensive OJT was carried out. The loan conditions of Japan's ODA have been very favorable with low interest, long repayment periods and a large amount in the fund. Therefore, the achievements of the Program and Japan's ODA scheme met the Vietnamese needs mentioned in the Ten Year Strategy (1991-2000).

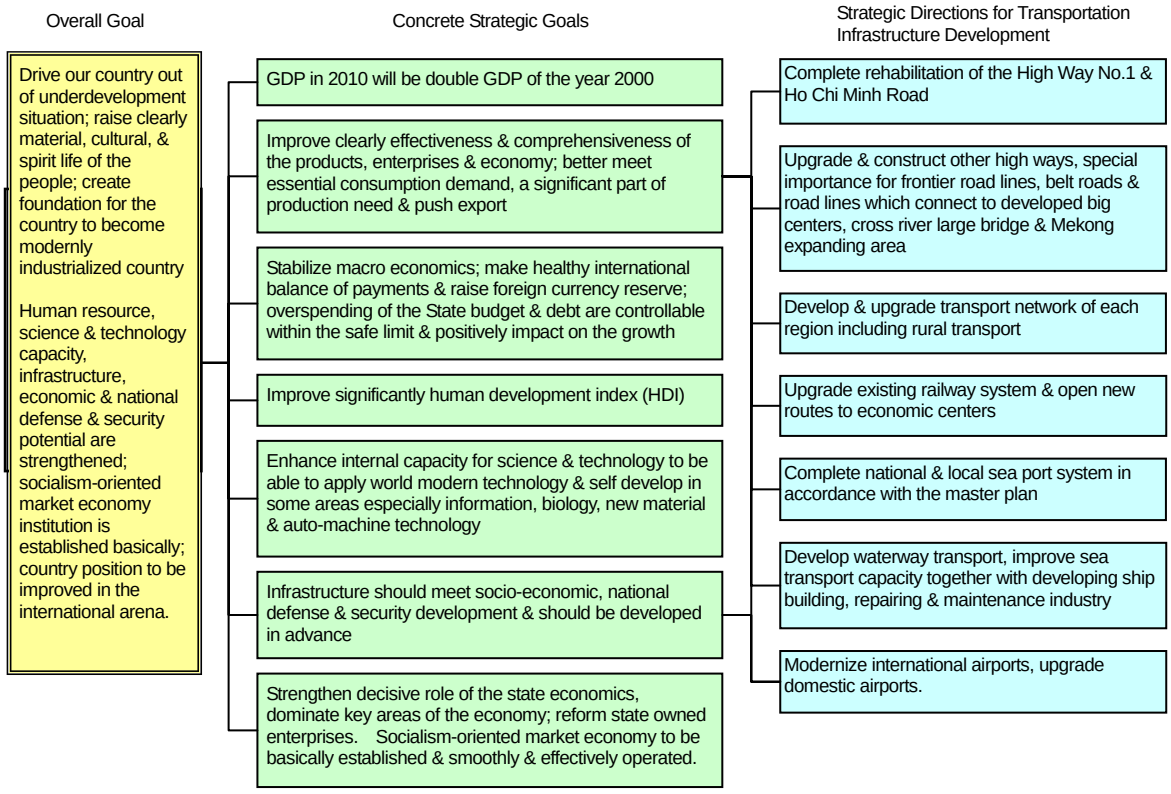
Figure 3-6: Objective Framework of the Ten Year Strategy (1991-2000)



The IX National Party Congress in 2001 approved the Strategy (2001-2010) to accelerate industrialization and modernization with a socialist orientation, creating a foundation for Vietnam to become a basically industrial county by 2020.

In fact as the Vietnamese economy has significantly achieved consecutive 7% annual economic growth in the 1990's, the needs and demand for infrastructure development have also become very clear and evident. Many projects identified in the Program have been constructed, are under construction or in the planning stage. The ten year strategy (2001-2010) emphasized the acceleration of infrastructure development in concrete terms. In this sense, the ideas and the identified priority projects in the Program are consistent with the contents of the "Strategic Directions for Transportation Infrastructure Development" of the Ten Year Strategy (2001-2010).

Figure 3-7: Objective Framework of the Ten Year Strategy (2001-2010)



(2) Consistency with Five-Year Socio-economic Development Plans

Similar to the above mentioned Ten Year development strategies, The XII National Party Congress in 1991 approved the 5th Five-Year Socio-economic Development Plan for the period 1991-1995. The VIII National Party Congress in 1996 approved the 6th Five-Year Socio-economic Development Plan for the period 1996-2000. The IX National Party Congress in 2001 approved the 7th Five-Year Socio-economic Development Plan for the period 2001-2005 as well as the Ten-Year development strategy for the period 2001-2010.

The general purposes of these three five year plans are to depart from economic underdevelopment and lead the modernization and industrialization of the country within the designed period of years. In the "Concrete Strategic Goals," simultaneous social reform and economic development was emphasized. For the achievements of these goals, these three five year plans described the important role and functions of infrastructure development, especially in the transport sector. The "Strategic Directions for Transportation Infrastructure Development," are very specific for the rehabilitation of the present infrastructure and the development of a new and comprehensive infrastructure in the major sub-sectors of roads, railways, sea transports / ports and inland waterways.

Since the original concept of the Program is infrastructure development for economic growth and economic growth for poverty reduction, this is consistent with the basic

logical framework of the three five year plans. The immediate purposes and contents of the priority projects in the Program have been identical to those strategic directions in the three five year plans. Thus, an overall consistent relationship is observed.

Figure 3-8: Objective Framework of Fifth 5Year Plan (1991-1995)

Figure 3-9: Objective Framework of Sixth 5Year Plan (1996-2000)

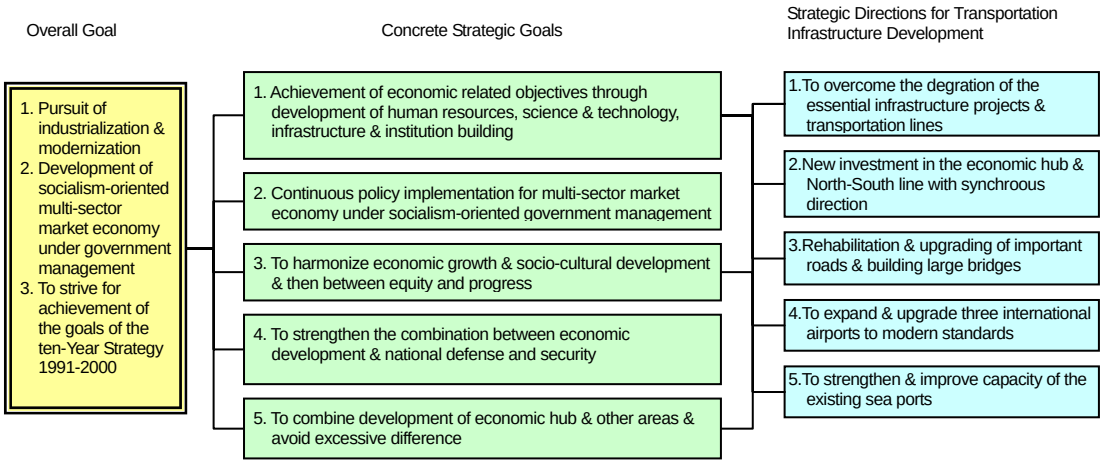
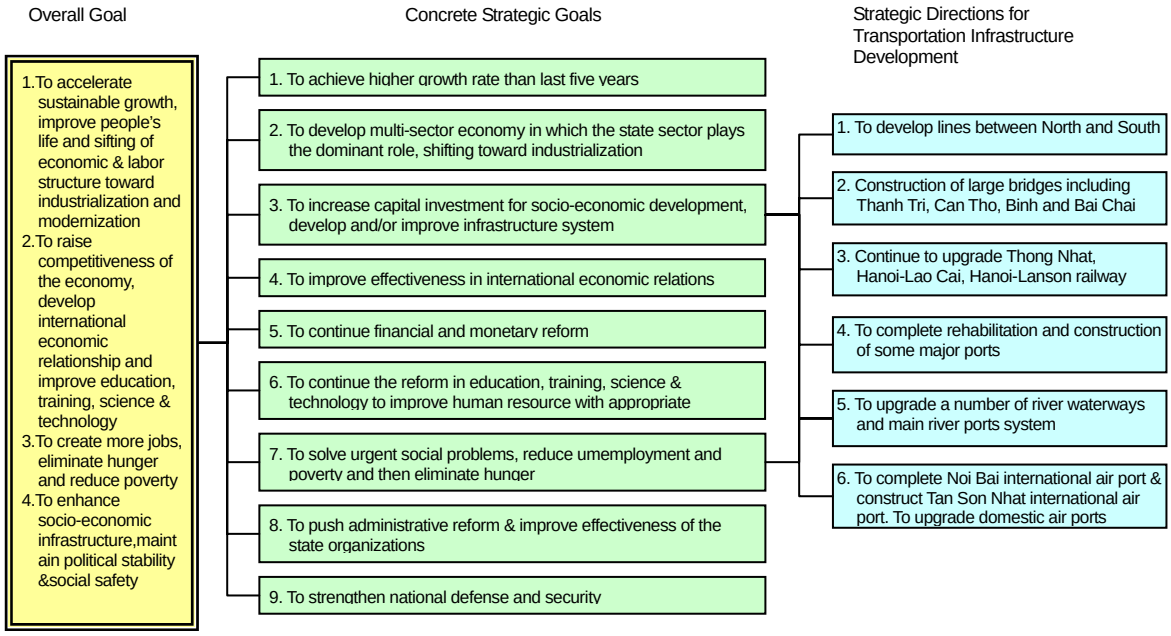


Figure 3-10: Objective Framework of Seventh 5Year Plan (2001-2005)



(3) Consistency with the Comprehensive Poverty Reduction and Growth Strategy 2003 (CPRGS)

In November 2003, the Comprehensive Poverty Reduction and Growth Strategy (CPRGS) was published as a PRSP of Vietnam. The government of Vietnam defined the CPRGS as an action program that translates the Government's Ten-Year Socio-economic Development Strategy, the Five-Year Socio-economic Development Plan as well as other sector related development plans into concrete measures with well-defined road maps for implementation.

The basic purpose of CPRGS is harmony between sustainable growth and the attainment of poverty reduction and social equity. There are two strategic objectives, namely A. economic objectives and B. social and poverty reduction objectives. Although these objectives may not be obvious in regard to the relationship with the program purposes of the Red River Delta Transportation Development Program (1994-2004), in Part IV of the CPRGS it is made clear that large scale infrastructure development plays an important role, through its spillover effects, helping to create more resources for implementing development goals, accelerating growth and eradicating poverty.

Therefore, there is significant consistency between the CPRGS and the purposes of the Red River Delta Transportation Development Program (1994-2004)

Figure 3-11: Objective Framework of The Comprehensive Poverty Reduction and Growth Strategy (CPRGS)

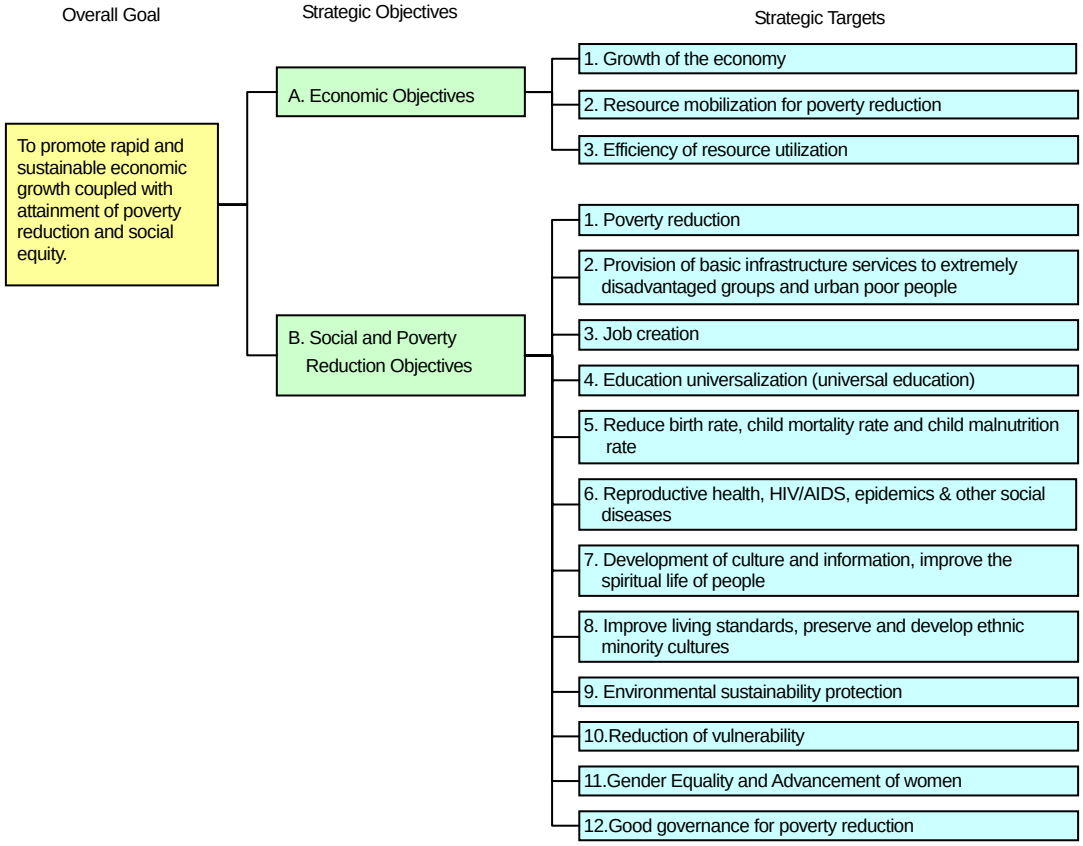
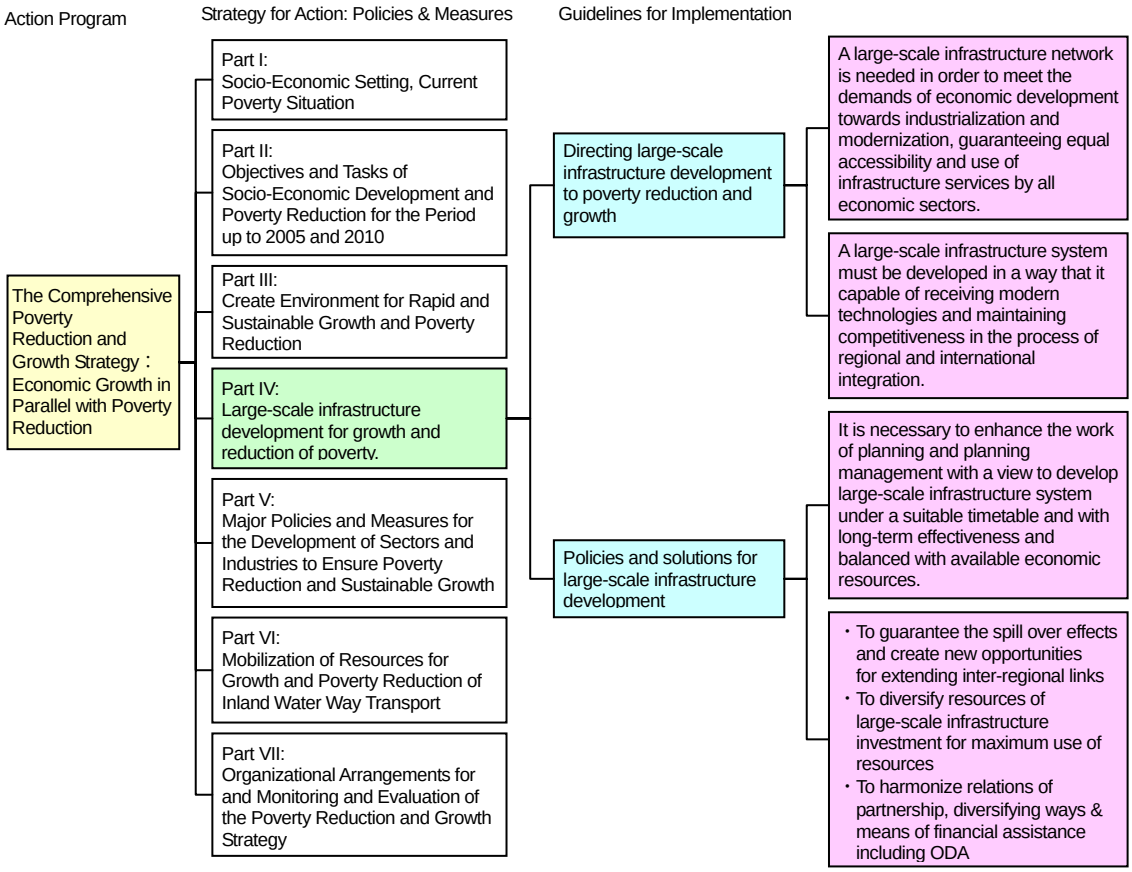


Figure 3-12: Role of large-scale infrastructure development in GPRGS



(4) Consistency with the Vietnam Transport Development Strategy

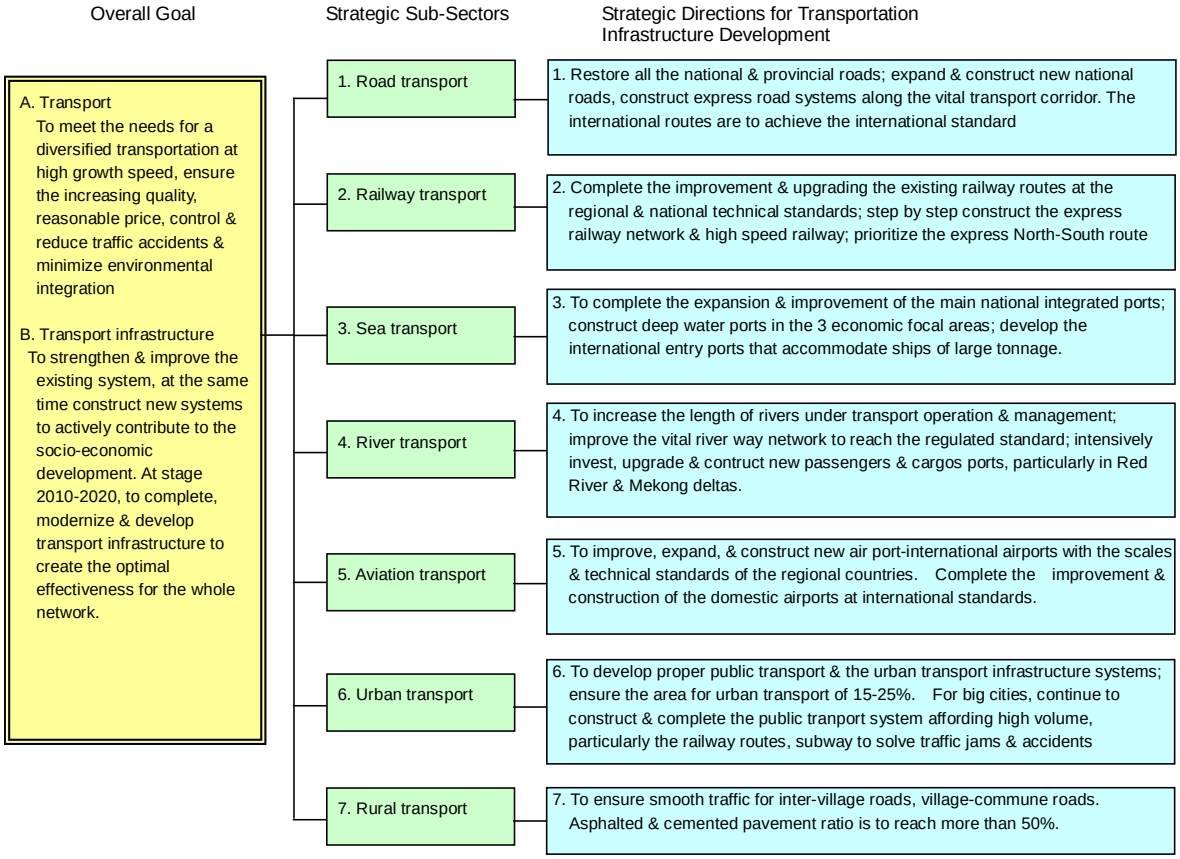
Based on a proposal made by the Ministry of Transport and suggestions by the Minster of Planning and Investment, the Vietnamese Prime Minister approved the Vietnam Transport Development Strategy by 2020 in December 2004. Since this Strategy is the most recent and comprehensive transport sector plan, prepared after a successful decade of intensive infrastructure development, it is appropriate to review the purposes of the Red River Delta Transportation Development Program (1993-1994) and compare them with the Vietnam Transport Development Strategy, in order to clarify both the long term continuity of the purposes and the direction taken by national infrastructure development in the transport sector.

The overall goal of the Transport Development Strategy is expressed as being to meet the rapidly growing and diversified transport needs at the same time as strengthening the quantity and quality of the transport infrastructure. In the strategic directions of the strategy, the development and expansion of the capacity of the transport infrastructure is emphasized, in order to satisfy the previously mentioned overall goal in each of the major transport sub-sectors of road, railway, sea, river, aviation, urban and rural transport.

The Program intended to develop a well balanced infrastructure in the general surface

transport sector, which covers road, railway, sea and river (inland waterway). Since the overall goal and the strategic directions of the strategy are equal to the purposes and contents of the priority projects identified in the Program, it is obvious that there is a continuity and consistency between this strategy and the Program.

Figure 3-13: Development Objectives in the Vietnam Transport Development Strategy by 2020



3-1-3 Advantages in Implementation of the program by Japanese Initiatives

(1) Advantage of Japan as a Country

The following is a summary of responses from Japanese and Vietnamese companies from the results of related questionnaires and interviews. After careful review and analysis, answers on the advantages of Japan as a country could basically be divided into eight categories. The general Vietnamese response on Japan was very good. It is clear that Japan as a country has provided a certain level of socio-economic and technical benefit to Vietnam through technology transfer to local consultants & construction companies and workers.

Figure 3-14: Summary of Responses from Japanese Consulting firms and Contractors

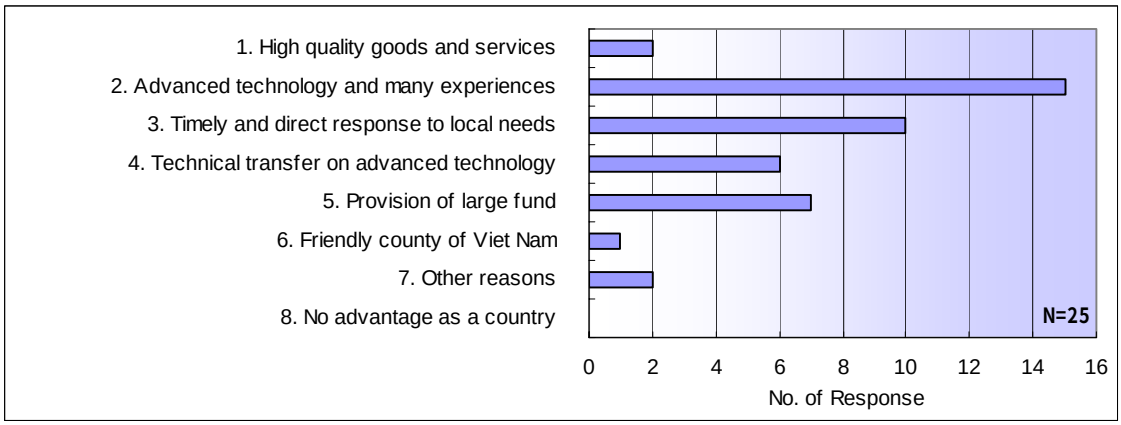
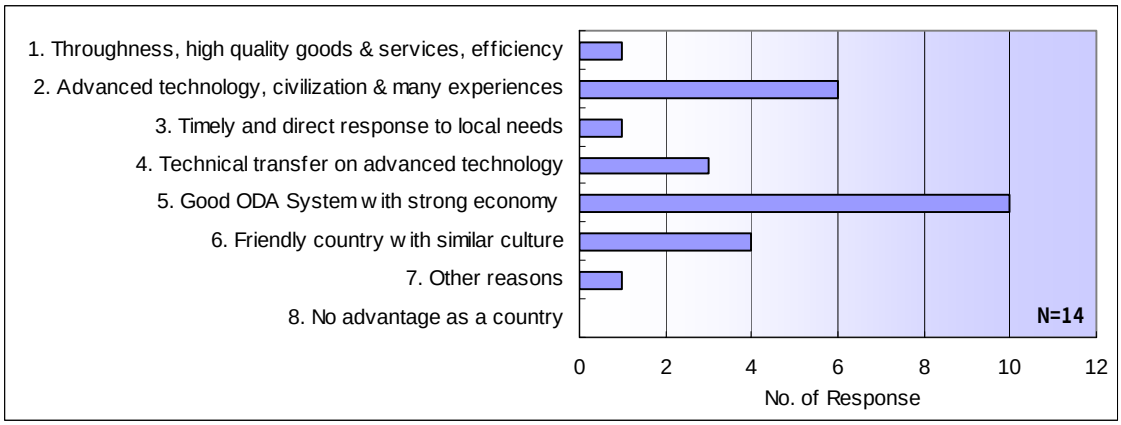


Figure 3-15: Summary of Responses from Vietnamese Counterparts and Sub-contractors



(2) Advantage of Japan with Japanese Companies in Charge

The following is a summary of responses from Japanese and Vietnamese companies from the results of related questionnaires and interviews. Answers on the advantage of Japan with Japanese companies in charge can be basically divided into four categories. Japanese companies in charge of the ODA program / projects are leading companies even in Japan so it is natural that they have advanced technology and skills together with abundant professional experience from all over the world. In addition, through interviews, those Japanese companies involved have showed strong confidence in their technical advancement and in the quality of their consulting services and in the actual construction.

Figure 3-16: Summary of Responses from Japanese Consulting firms and Contractors

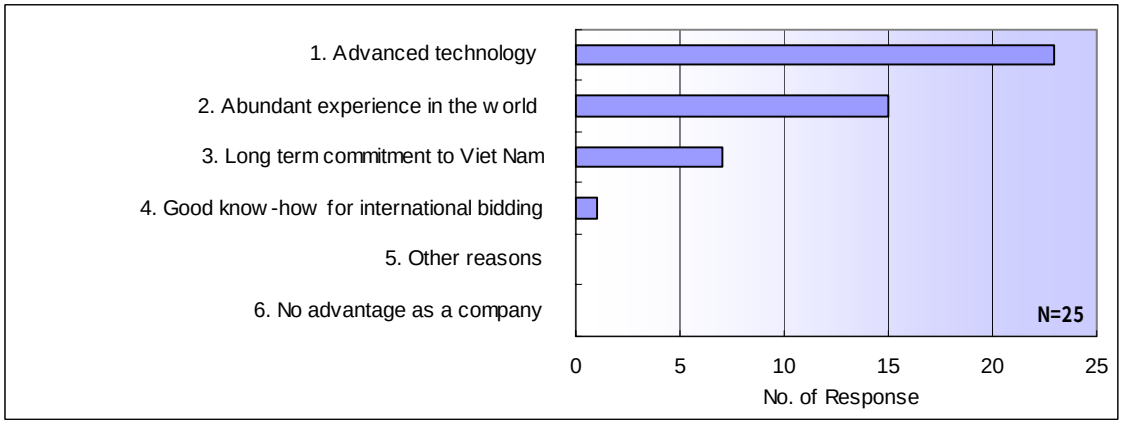
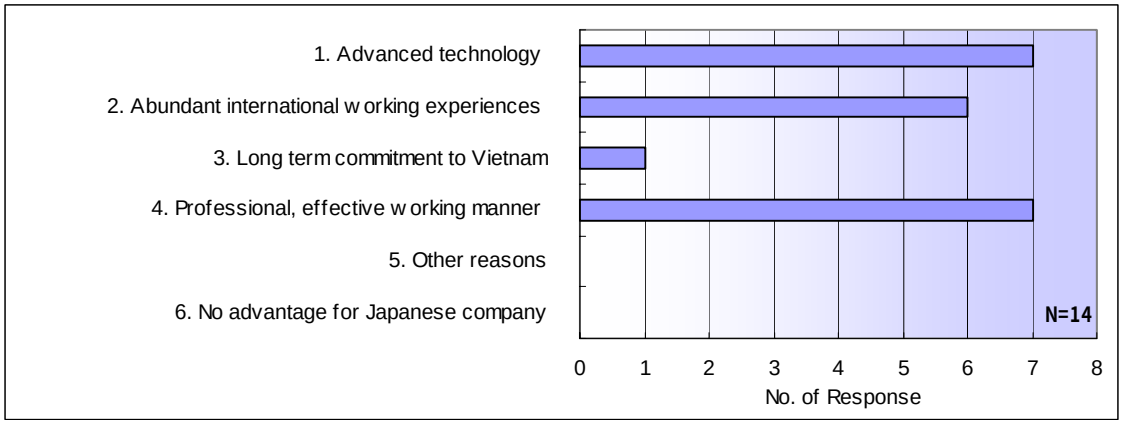


Figure 3-17: Summary of Responses from Vietnamese Counterparts and Sub-contractors



(3) Advantage of Japan Regarding the Capability of Japanese Professionals in Charge

The following is a summary of responses from Japanese and Vietnamese companies from the results of related questionnaires and interviews. Answers on the advantage of Japan from the point of view of the fact that Japanese engineers/professionals are in charge can basically be divided into six categories. A good Japanese engineer/professional was generally regarded as a hard working person with knowledge of advanced technology and with much international experience. Their personal commitment for technology transfer on site was highly appreciated by Vietnamese engineers and workers.

Figure 3-18: Summary of Responses from Japanese Consulting firms and Contractors

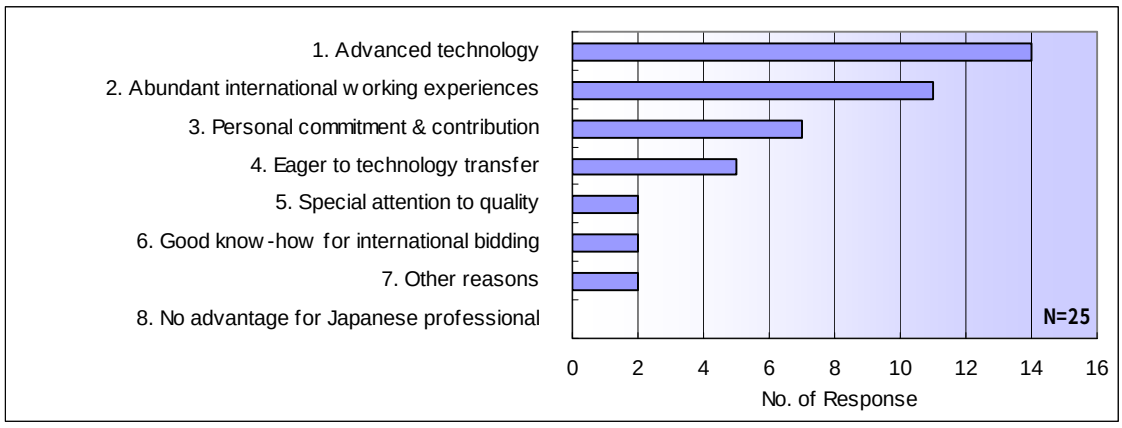
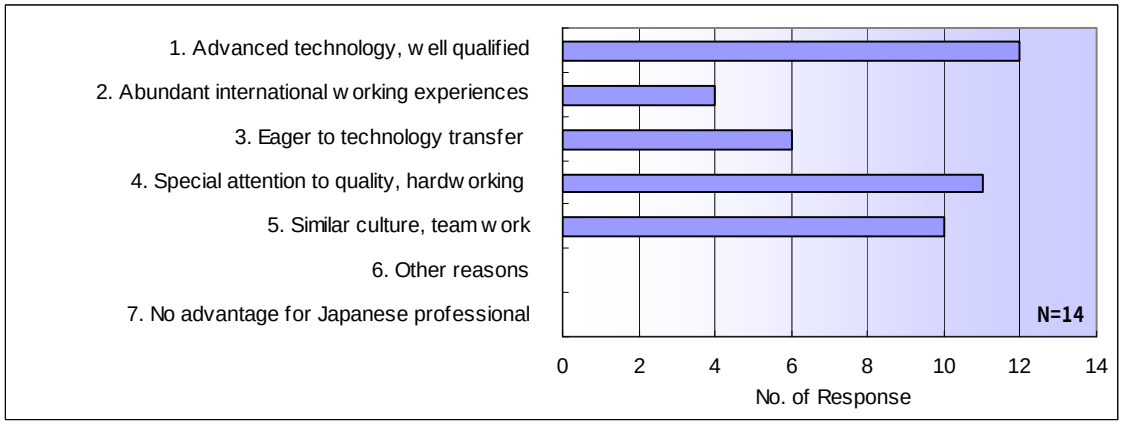


Figure 3-19: Summary of Responses from Vietnamese Counterparts and Sub-contractors



3-1-4 Comparison of Aid Policy and Programs between Major Donors and Japan

The major multilateral and bilateral donors to Vietnam in the transport sector are identified as the World Bank, the Asian Development Bank, Japan, the United Kingdom, Germany and France. Below is the aid policy framework of these major donors (except Japan) which identifies the positive relationship between policy, priority issues and the transport sector projects.

(1) World Bank

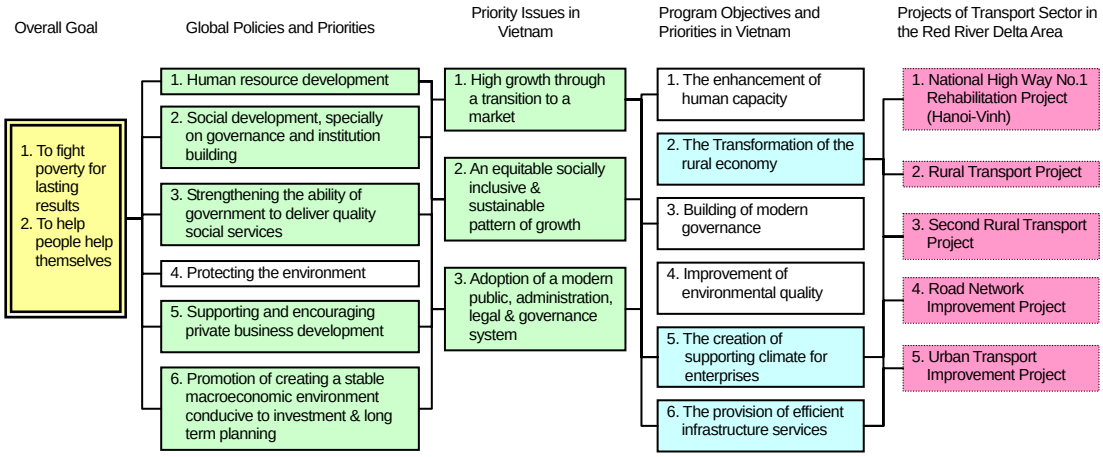
The World Bank priority issue in Vietnam is to support economic growth through transition to a market economy and the adoption of modern governance system. The provision of infrastructure services and the creation of a supporting climate for private enterprises are very important programs for the stimulation and expansion of economic growth, which in turn can be expected to contribute to poverty reduction. The World Bank concentrated on the construction of roads and the establishment of road networks from

urban centers to rural areas.

The Program and the World Bank operation in the Red River Delta area share the aim of poverty reduction through economic growth and the emphasis on infrastructure development, particularly in the road sub-sector. With good team work, JBIC constructed bridges on the road and World Bank constructed the road itself on the National Highway No.1.

Figure 3-20 presents the logical sequence of the World Bank operation in Vietnam and its relationship with the operations in the Red River delta area.

Figure 3-20：World Bank: Aid Policy Framework to Vietnam and Projects of Transport Sector in the Red River Delta Area



Source: UNDP (2001)

(2) Asian Development Bank

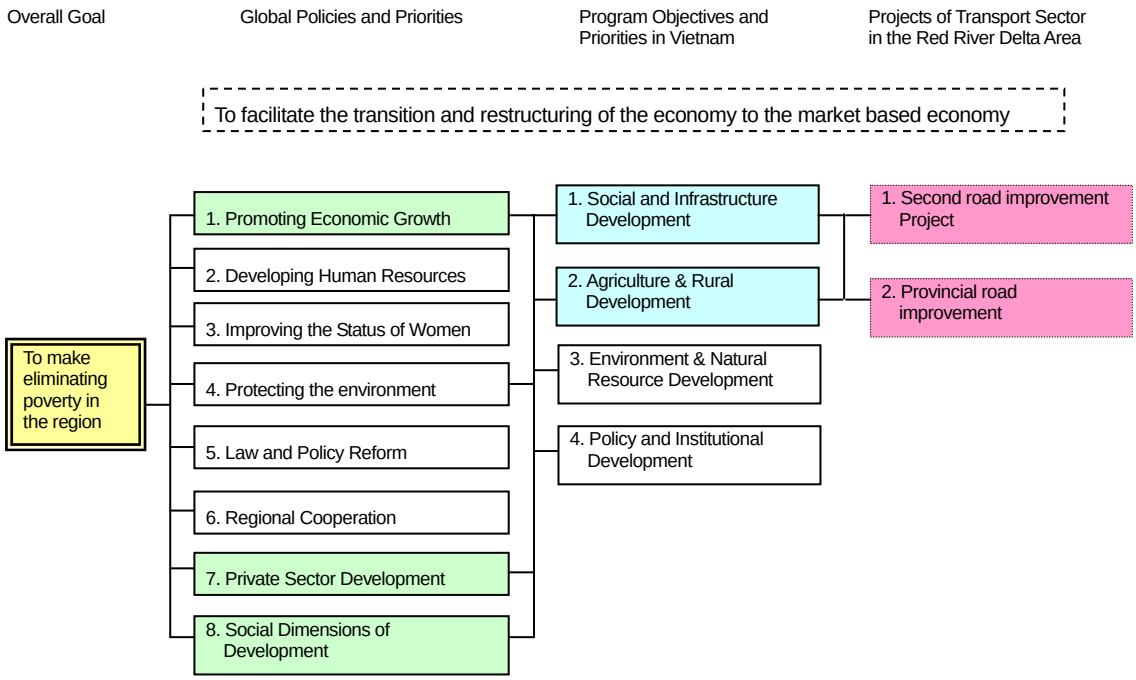
The Asian Development Bank (ADB) has emphasized the facilitation of the transition and the restructuring of the Vietnam economy according to market-based principles while promoting balanced & sustainable development. As for the promotion of economic growth, social and economic infrastructure development is a prerequisite, the ADB has also focused on the construction of roads and road networks. The ADB constructed the provincial road network, while the World Bank constructed the major national highways and rural roads. JBIC constructed major roads and road bridges across rivers.

Because the Program is for extensive infrastructure development, the purpose and contents are compatible with ADB activities. Although the scale of the ADB may be relatively limited with that of the World Bank and JBIC, its construction of a provincial road network is most effective for the establishment of a comprehensive road network in the Red River Delta area.

Figure 3-21 presents the logical sequence of the Asian Development Bank operation in

Vietnam and its relationship with the operations in the Red River delta area.

Figure 3-21: Asian Development Bank: Aid Policy Framework to Vietnam and Projects for the Transport Sector in the Red River Delta Area



Source: UNDP (2001)

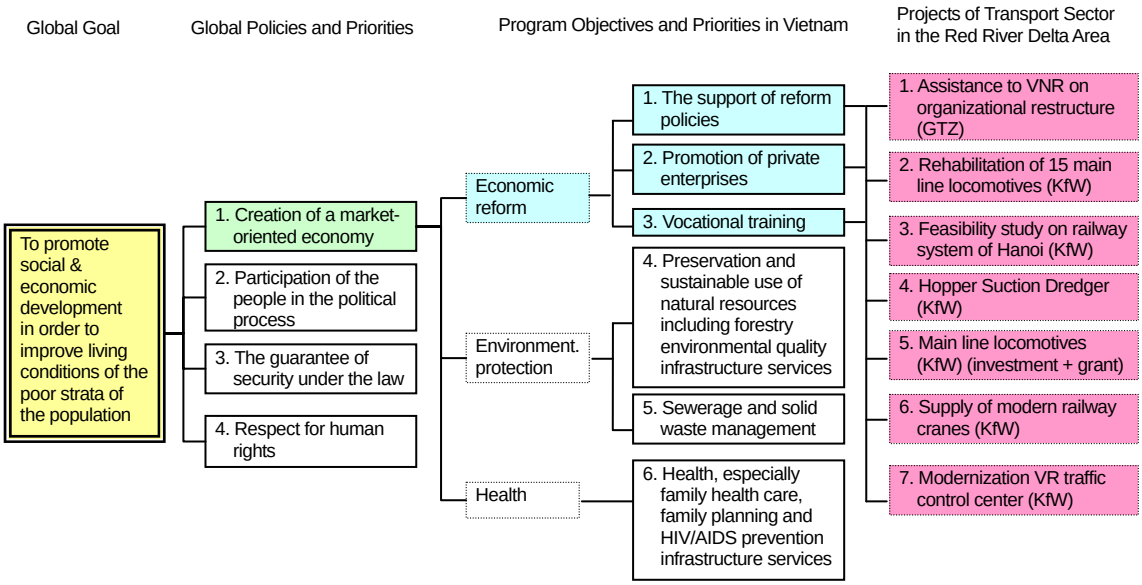
(3) Germany

German development aid to Vietnam has traditionally focused more on social development and poverty reduction and therefore the area of transport is not a top priority sector. However, Germany is also concerned with the transition to a market economy and has promoted related economic reforms. Germany recognized the role of infrastructure for economic development and wisely avoided duplication and/or redundancies with other donors in the subjects for its development aid. Thus, Germany selected and concentrated on the rehabilitation and reconstruction of the Vietnam railway sub-sector.

The Program is an extensive infrastructure development program, but there is no major project in the railway sub-sector. The German aid projects are very valuable through their coverage and fulfillment of the vacant sub-sector. The eventual expansion of the comprehensive transport network will be more effective in its contribution to economic growth and poverty reduction.

Figure 3-22 presents the theoretical sequence of the German development aid in Vietnam and its relationship with the operations in the Red River Delta area.

Figure 3-22: Germany Aid Policy Framework to Vietnam and Projects in the Transport Sector in the Red River Delta Area



Source: UNDP (2001)

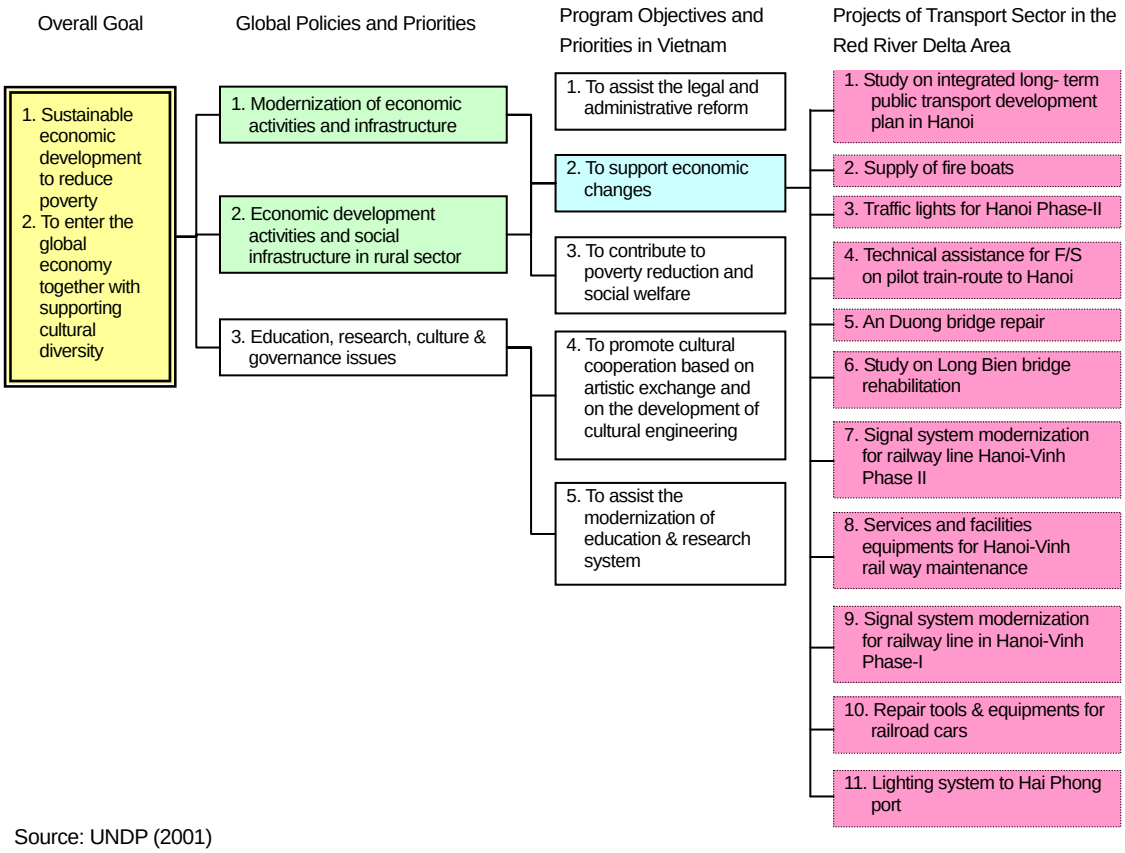
(4) France

French development aid to Vietnam has aimed at sustainable economic development to reduce poverty and to enable Vietnam to expand its relationship with the global economy while supporting cultural diversity. France has been traditionally more concerned with academic and cultural aid. The transport sector may not be their primary interest but France certainly recognized its functional role for the above mentioned sustainable economic development. For aid to the transport sector, France also concentrated its resources on the selected sub-sectors of railway, urban transport and sea port where there was no substantial duplication or overlapping among donors.

The Program is an extensive infrastructure development program, but there is no major project in the railway sub-sector. The number of urban transport and sea port projects is also limited. The French aid projects are very valuable through their coverage and fulfillment of the vacant sub-sector. The eventual expansion of a comprehensive transport network will be more effective in its contribution to economic growth and poverty reduction.

Figure 3-23 gives the general picture of development aid by France in Vietnam and its relationship with the operations in the Red River Delta area.

Figure 3-23: France: Aid Policy Framework to Vietnam and Projects in the Transport Sector in the Red River Delta Area



Source: UNDP (2001)

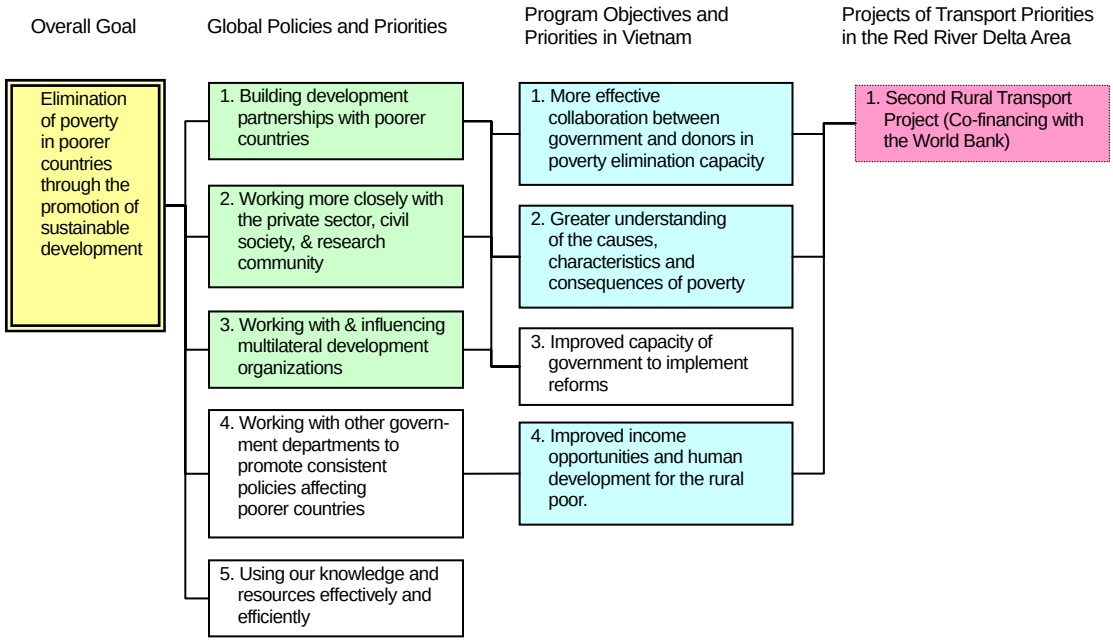
(5) United Kingdom

The basic development aid policy of the United Kingdom (DfID) to Vietnam has been to support the Government of Vietnam in implementing their strategy for economic growth and reducing poverty. To achieve these two goals simultaneously, DfID is concerned with targeting resources and programs to disadvantaged areas and groups. In this way, DfID selected the road sub-sector and focused on rural road development in cooperation with other major donors, the World Bank and Japan.

Because the Program is for extensive infrastructure development, the purpose and contents are compatible with DfID activities. Although the scale of DfID may be relatively limited compared with that of World Bank and JBIC, its co-financing approach and its construction of a rural road network is most effective for the enlargement of projects with minimum transaction costs and the establishment of a comprehensive road network in the Red River Delta area.

Figure 3-24 presents the logical consequence of development aid by the United Kingdom in Vietnam and its relationship with the operations in the Red River Delta area.

Figure 3-24: United Kingdom (DfID): Aid Policy Framework to Vietnam and Projects for the Transport Sector in the Red River Delta Area



Source: UNDP (2001)

In the overall review on aid policy and programs among these major donors and Japan, there is much consistency with the Program to be observed.

As their overall goal, all institutions emphasized the pursuit of poverty reduction through / with sustainable economic development;

In general, aid policies among major donors including Japan were substantially identical and the programs were complementary. Successful aid coordination and collaboration were also observed in this dimension.

This consistency was confirmed in practice through the expanded Objective Frameworks of the Red River Delta Area Transport Sector Program in Chapter I, which also included the non-Japanese transport projects of other major donors.

3-2 Effectiveness and Impact of Results

3-2-1 Achievement of Program Purposes

Analysis of the achievement of the Program purposes was conduced based on the following principal approach:

(i) The linkage between the sub-sector objectives and each component of Japanese ODA as well as major donor's ODA projects is examined according to the definition of the Program;

(ii) Based on (i), measurable indicators are selected. If any concrete measurable indicators or targets were already identified in JICA's Master Plan 1994, they are respected. If not, appropriate measurable indicators are set up by the study team; and

(iii) The contribution made by Japanese ODA as well as the other major donors' ODA is assessed according to the degree of the relationship / linkage between the output of each project and the outcome in each sub-sector

(1) Road Transport Sub-Sector

a) Relationship between Japanese ODA and the sub-sector objectives and selection of effect indicators

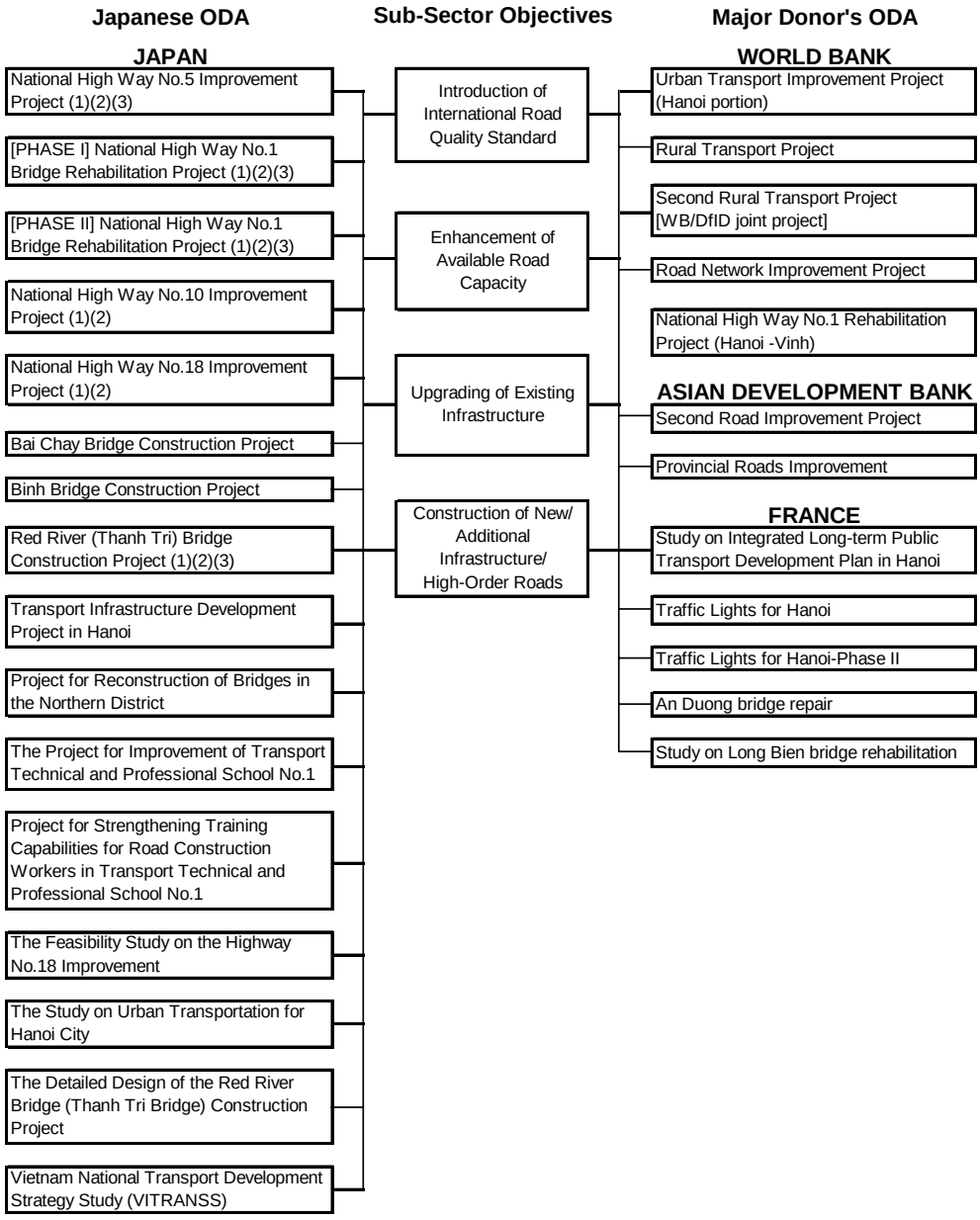
The linkage between the road transport sub-sector objectives and each component of the Japanese ODA as well as the ODA projects of others is summarized in Figure 3-25.

The road sub-sector has received the most benefit from Japanese ODA which has enabled the implementation of the rehabilitation and improvement of important road infrastructure including NH No.1, NH No.5, NH No.10, NH No.18, as well as major bridges in the area. Also provided was technical assistance for the improvement of Transport and Technical and Professional School No.1 and development studies including VITRANSS which is a comprehensive transport sector study[1] of Vietnam. These Japanese ODA projects have a positive linkage to the four sub-sector objectives listed in Figure 3-25.

Although no concrete target was set in JICA's Master Plan 1994 except the pavement ration, the evaluation team selected the measurable indicators to analyze the achievement of the road transport sub-sector objectives. They are (i) traffic volume including passenger and cargo volume, (ii) traveling time, (iii) pavement ratio, (iv) road density, and (v) road accessibility. These are important indicators representing the improvement of road transport capacity and quality.

[1] VITRANSS is a substantial comprehensive transport sector study covering every transport sub-sector nationwide following the Transport Sector Review (1991) by UNDP.

Figure 3-25: Objective Framework of the Road Transport Sub-Sector

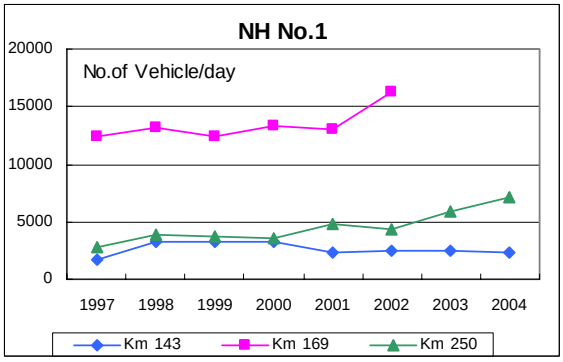


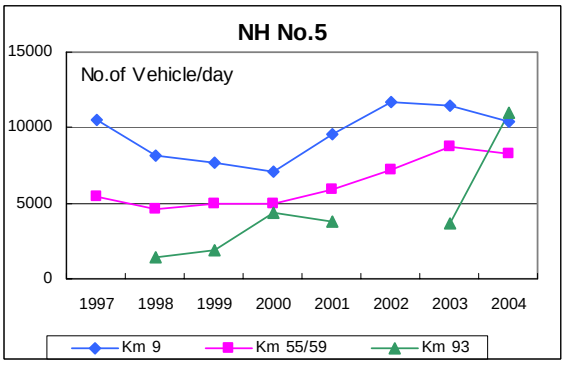
b) Volume of Traffic

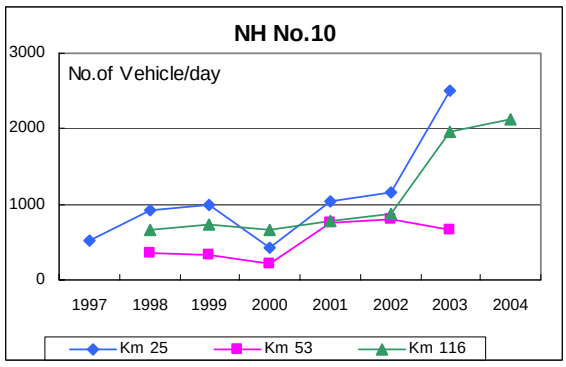
Figure 3-26 shows the annual average traffic volume, and Figure 3-27 is the annual average passenger and cargo volume on NH No.1, NH No.5, NH No. 10, and No. 18. The traffic volume data is picked up from selected stations for each national road in the Red River Delta area. The traffic data used is provided by Vietnam Road Administration (VRA).

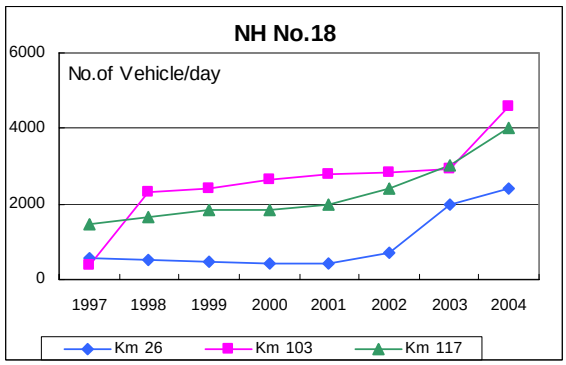
Figure 3-26: Annual Average Daily Traffic and PCU on NH 1, NH 5, NH10 and NH 18

Number of Vehicle per Day

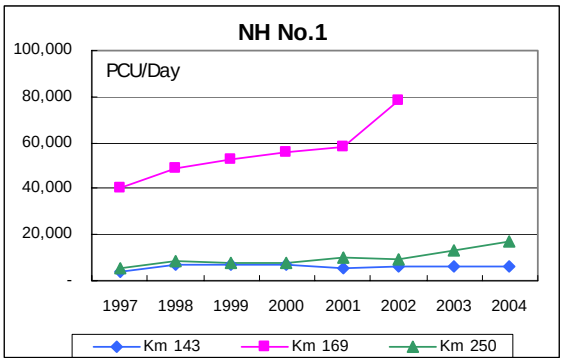


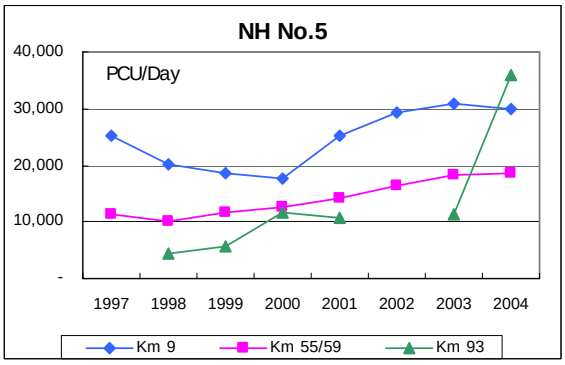


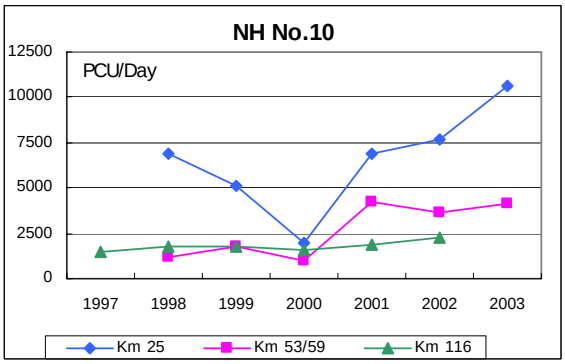


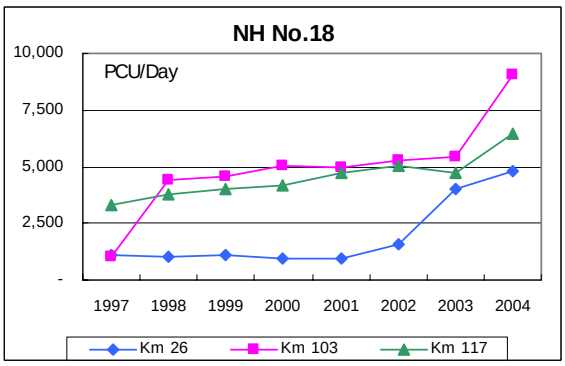


PCU per Day





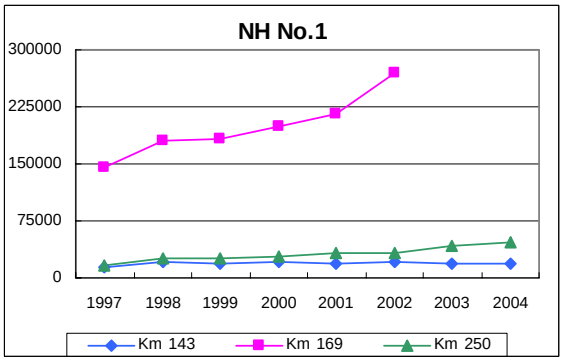


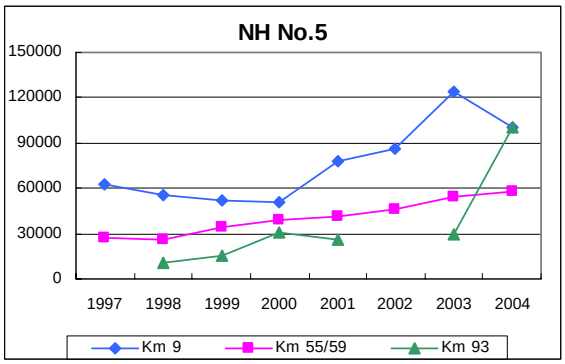


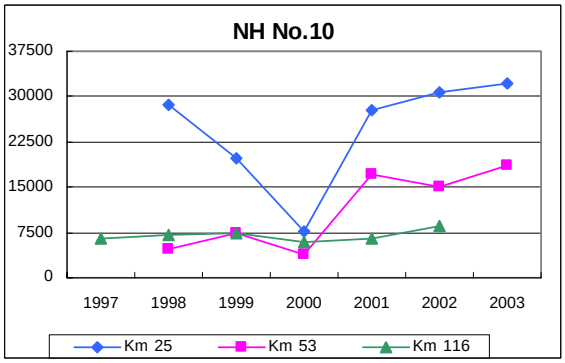
Source: Vietnam Road Administration (VRA)
Note: Some traffic data for particular stations and years are not available.

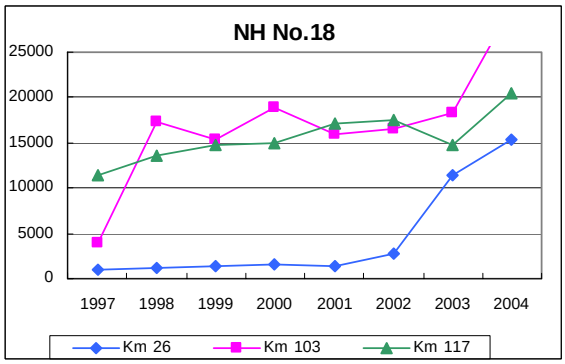
Figure 3-27: Annual Average Daily Passenger and Cargo on NH 1, NH 5, NH10 and NH 18

Passenger per Day

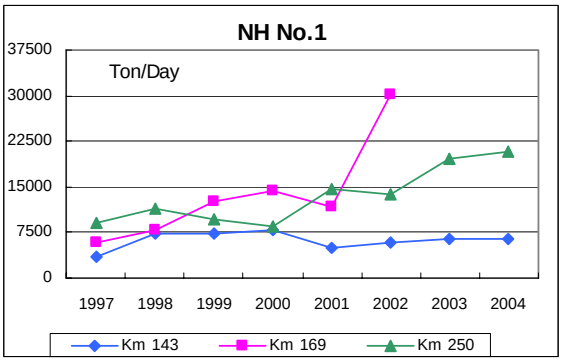


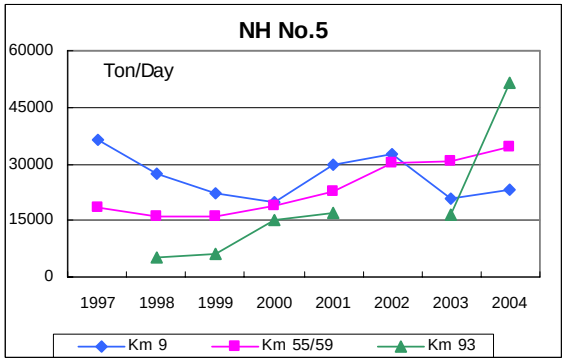


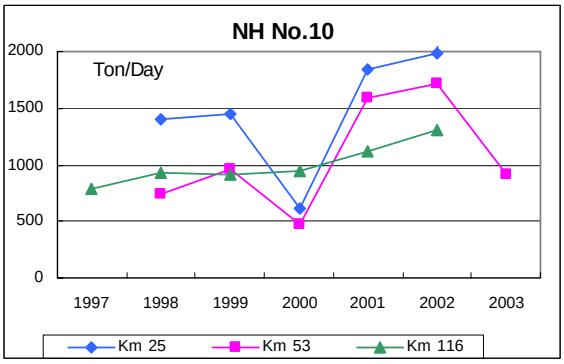


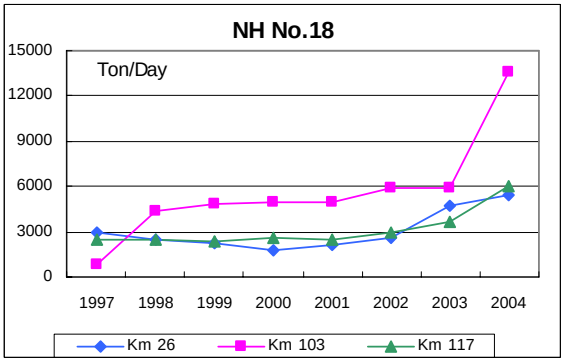


Ton per Day









Source: Vietnam Road Administration (VRA)
Note: Some data for particular stations and years are not available.

The traffic volume per day seen on the left side of Figure 3-26 provides the number of vehicles including normal cars, buses, and trucks but not including motorbikes and bicycles. The traffic volume in PCU (Passenger Car Unit) on the right side represents the volume of car traffic of normal cars, which is calculated by multiplying different variables to each type of vehicle and converting them into the unit of normal cars. The traffic volume in PCU also takes into consideration the number of motorbikes and bicycles, thus indicating the total volume of all kinds of road traffic in a single unit.[2]

Generally the volume of car traffic has increased constantly on each national road. At the same time, the volume of passenger as well as volume of cargo by road transport has shown a continuous increase (Figure 3-27). A temporary drop in traffic volume for NR No. 10 in 2000 can be seen. The reason is considered to be the problems of traffic data collection by VRA[3].

Table 3-1 has been prepared borrowing results of other surveys of traffic volume. As far as the traffic volume at selected stations on NH No.1, 5, 10, and 18 is concerned, it also proves that traffic volume has expanded dramatically during the last five years.

Table 3-1: Traffic Volume at Selected Stations through Field Surveys of Other Studies

Road No.	Location	Province	Daily Traffic Volume (No. of all vehicles per day)	
			1999	2004
1	North of Ning Binh town	Ninh Binh	4,091	8,002
5	East of Du Nghia	Hai Phong	4,041	8,922
10	South of Nghin bridge	Tai Binh	545	2,246
18	East of Sao Do (Chi Linh)	Hai Duong	2,650	4,320

Source: JICA
Note: Daily traffic volume includes car, bus, and truck; motorcycle and bicycle are excluded.

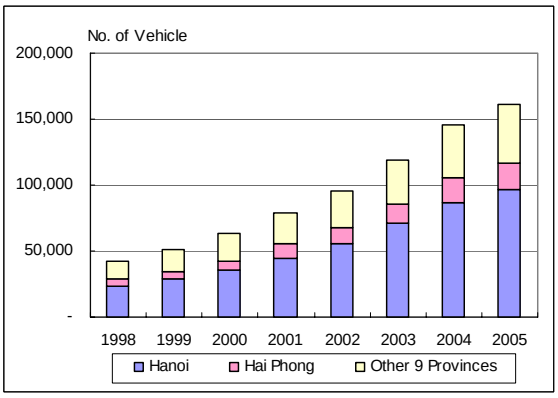
It is very clear that after 2001/2002 traffic volume expanded dramatically on each national road. This might be a result of the increasing number of vehicles in the Red River Delta coupled with the economic growth of the country (Figure 3-28, Figure 3-29), but it should be noted that most of the rehabilitation of each national road was completed or nearly completed after 2001. This implies that the timing of the rehabilitation and improvement of each national road through the Program, including several important bridges, has provided a good infrastructure keeping pace with the expansion of car traffic today.

[2] The converted factors from vehicles type to passenger car unit (PCU) are below:

vehicles type	bicycle	Motor-cycle	car	2 axle-truck / bus with < 25 seats	3 axles-truck / large bus	Trailer / bus with trailer
Converted factors	0.20	0.30	1.00	2.00	2.50	3.00

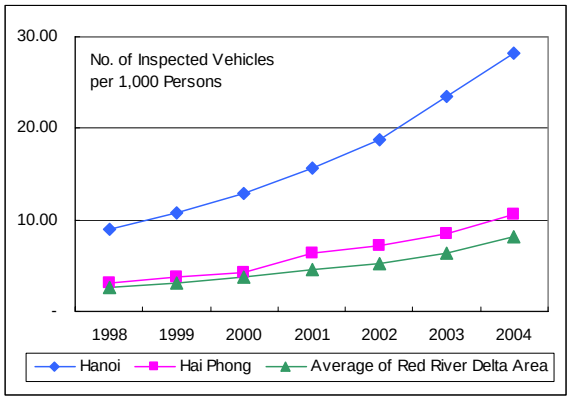
[3] The study team utilized the traffic data provided by VRA since there was no consistent traffic data covering the target period from 1994 to 2004 at the same measuring stations of each national road.

Figure 3-28: Number of Inspected Vehicles in Red River Delta Area



Source: Vietnam Register

Figure 3-29: Number of Inspected Vehicles per 1,000 Persons in Red River Delta Area



Source: Vietnam Register

c) Traveling Time

Traveling time on the national roads has also improved. According to existing studies and interview results, the improvement of major national roads in the Red River Delta has led to the saving of traveling time (Table 3-2). For instance, Hanoi-Hai Phong and Hanoi-Quang Ninh are important corridors between Hanoi Capital and international sea ports which play an important role for the development of the economic triangle in the northern part of Vietnam. There has been much economic development along these corridors such as the development of industrial estates. Particularly the improvement of traveling time in these strategic zones must have had a very positive impact on the acceleration of economic and trade activities in the area (this issue will be discussed with other the economic impacts in this report).

Also Hanoi-Lang Song is one of the important trade corridors between China and Vietnam, its potential development getting bigger as economic activities have become more common between the two countries in recent times. The saving of traveling time on this route also helps to increase the importance of this route as an international trade route.

Table 3-2: Traveling Time on Major Routes

Route	km	National Road	1994	2004
Hanoi – Hai Phong	100	NR 5	5-6 hours	1.5 – 2 hours
Hanoi – Quang Ninh	160	NR 5 / NR 10 / NR 18	6-7 hours	3 - 3.5 hours
Hanoi – Lang Son	150	NR 1	4.5-5 hours	2.5-3 hours in night time 4 hours in day time

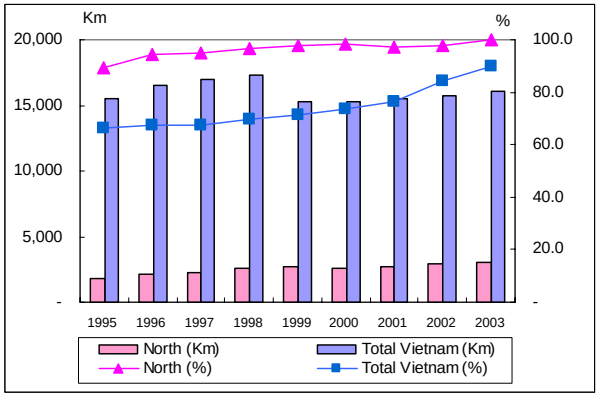
Source: Estimates by Study team and MOT.
Note: There is a speed limit regulation in day time on the Hanoi-Lang Song route.

d) Paved Road Ratio

Table 3-30 and Figure 3-31 show the paved road ratio of national roads and all other kinds of road in Vietnam. Whilst the paved road ratio of national roads in the northern part of Vietnam, including the Red River Delta, improved from 89.2% in 1995 to 99.8% in 2003, the paved road ratio of all national roads in total Vietnam increased from 66.5% in 1995 to 89.8% in 2003. At the same time, the paved road ratio of all other kinds of road including national roads, district roads, and commune roads in the northern part of Vietnam improved from 25.4% in 1995 to 54.0% in 2003. The paved road ratio of all kinds of road in total increased from 14.3% in 1995 to 30.7% in 2003.

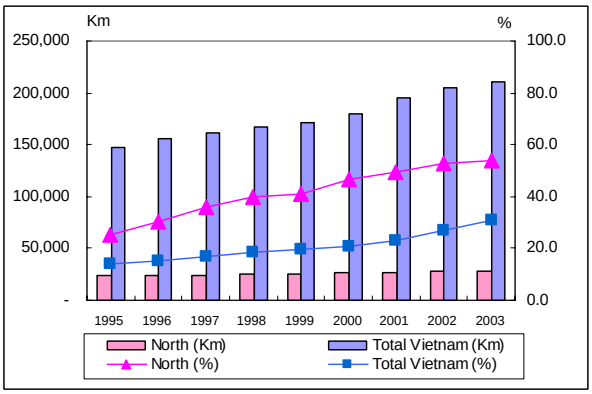
It is obvious that the paved road ratio in terms of national road as well as all other kinds of road is higher than national average. JICA's Master Plan 1994 set up a target to improve the paved road ratio (of all kind of roads) in the northern part of Vietnam from 24% in 1994 to 40-50% in 2010. In comparison with this original target, the actual paved road ratio of all kinds of road has already achieved its target in 2003. This is not only through the contribution of Japanese ODA projects but also through the contributions of other major donors for their district and rural road improvement projects.

Figure 3-30: Paved Road Ratio of National



Source: Vietnam Road Administration

Figure 3-31: Paved Road Ration of All Roads



Source: Vietnam Road Administration

e) Road Density

Table 3-3 shows the comparison of road density between the Red River Delta and the whole of Vietnam. It is obvious that the road density by land area in the Red River Delta is higher in all types of roads than that of Vietnam in total. In particular, the road density by land area of national roads in the Red River Delta is outstanding, at about three times higher than the average for the country. On the other hand, the road density by population in the Red River Delta is lower than that of the national average. These facts imply that the road network in the Red River Delta is far more developed than the national average in terms of coverage area. Also the road network in the Red River Delta covers not only high population density areas but also rural and peripheral regions with a low population.

Table 3-3: Road Density

	Total length	Road density	
	Km	Km/Km2	Km/1,000 persons
Red River Delta (2004)			
National Road	1,328	1.78	1.47
Provincial Road	2,667	0.09	0.07
Urban Road	1,246	0.18	0.15
District Road	3,909	0.08	0.07
Commune Road	17,147	0.26	0.22
Total	26,297	1.16	0.96
Total Vietnam (2003)			
National Road	16,119	0.64	2.57
Provincial Road	21,418	0.05	0.20
Urban Road	8,264	0.07	0.26
District Road	46,509	0.03	0.10
Commune Road	118,590	0.14	0.57
Total	210,899	0.36	1.45

Source: TDSI
Note: Due to the availability of data, data from 2003 was used for the Vietnam total.

f) Road Accessibility

Table 3-4 represents the road accessibility for roads, community infrastructure, and means of transport among the different regions in Vietnam. Regarding road accessibility, the Red River Delta provides the shortest distance from hamlet to the nearest road. The Red River Delta has achieved the most developed road network in Vietnam. Naturally infrastructure accessibility in the Red River Delta, represented by the average distance from hamlet to the nearest commune peoples' committee, post office, and daily market, is higher than the rest of the region. Transport means accessibility in the Red River Delta also maintains a relatively better position. Therefore, it can be concluded that people living in the Red River Delta enjoy a better position regarding accessibility for road transport and community services than in other regions in Vietnam. This may provide a lot of opportunity for improving standards of living through the improved access to social services (i.e. education and health care services), jobs, information, etc.

g) Contribution by Major Donors

The study team confirmed the substantial achievement of the Program in the road transport sub-sector in the Red River Delta. All the selected indicators such as volume of car traffic including passenger and cargo traffic, traveling time, the paved road ratio, road density and road accessibility prove a very positive outcome for the Program in the target area. Looking back the Objective Framework of the Road Transport Sub-Sector in Figure 3-25, it can be confirmed that the assistance of other donors has

also played a key role in the infrastructure development of road transport and its positive outcome. Since the road network consists of different layers of roads such as national roads, provincial roads, urban roads, district roads, and commune roads, in order to enjoy the full advantage of the road transport infrastructure, a balanced development in each layer is important. In this sense, the development and improvement of the connectivity of the road network in the Red River Delta is the key factor in the substantial achievement of the Program. Whilst Japanese assistance focused on the development of main national roads in the area, other major donors greatly assisted in the development of provincial and rural road infrastructure development. Therefore, it can be concluded that the contribution of major donors is high.

Table 3-4: Accessibility (2003)

	Unit	Region								
		North-east	North-west	Red River Delta	North of Central part	South of Central Part	High-Land (Tay Nguyen)	South-east	Cuu Long River Delta	Total Vietnam
Road Accessibility										
a) Average distance from hamlet (where there is no road) to the nearest road	Km	4.31	4.33	1.70	5.39	7.99	11.63	1.90	5.98	5.28
Infrastructure Accessibility										
a) Average distance from hamlet (where there is no road) to the nearest commune people's committee	Km	3.47	3.77	1.38	2.35	2.64	5.00	3.23	3.31	2.77
b) Average distance from hamlet (where there is no road) to the nearest post office	Km	8.50	13.90	2.49	5.87	4.90	12.00	3.80	4.25	5.68
c) Average distance from hamlet (where there is no road) to the nearest daily market	Km	10.49	11.44	2.34	4.34	5.60	11.60	4.50	3.50	5.86
Transport Means Accessibility										
a) Percentage of hamlets which have motor vehicles	%	24.85	17.65	30.37	24.85	43.46	28.57	44.69	73.93	40.30
b) Distance from hamlets which have no passenger transport means to the nearest bus station	Km	11.05	10.11	3.81	7.55	8.82	16.03	7.82	2.95	7.46

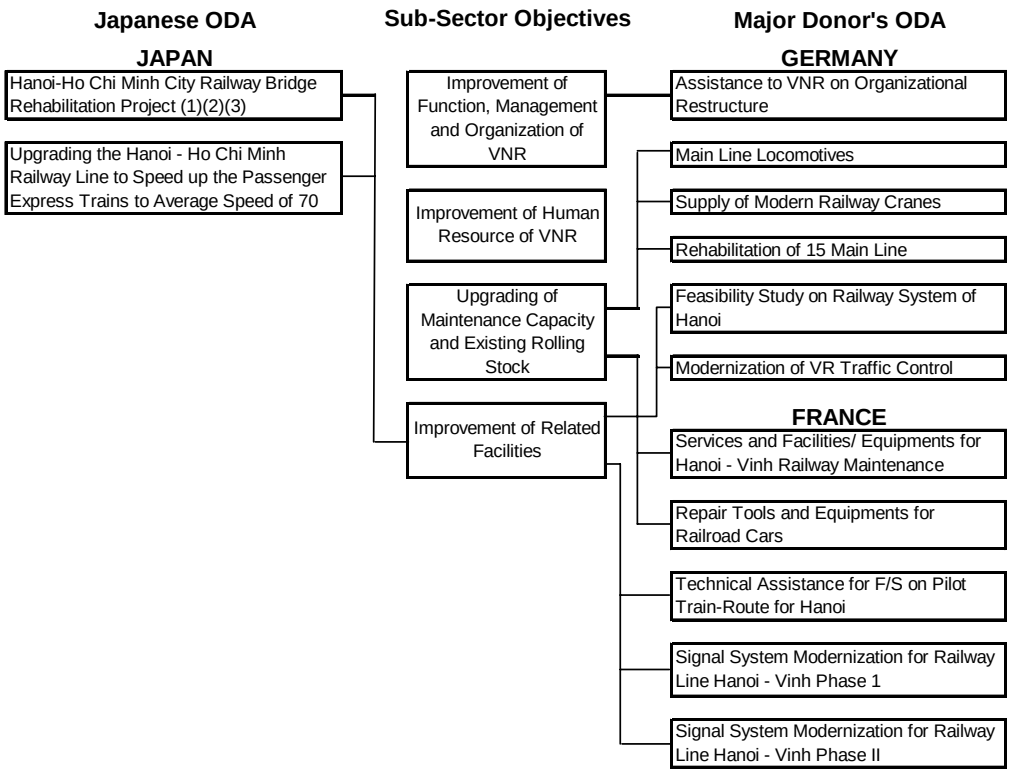
Source: TDSI

(2) Railway Transport Sub-Sector

a) Relationship between Japanese ODA and the sub-sector objectives and selection of effect indicators

The linkage between the sub-sector objectives and each component of the Japanese ODA as well the ODA projects of other major donors is summarized in Figure 3-32.

Figure 3-32: Objective Framework of Railway Transport Sub-Sector



Regarding the railway transport sub-sector, four sub-sector objectives are identified in the JICA's Master Plan (1994): (i) Improvement of the function, management and organization of Vietnam Railway, (ii) Improvement of the human resources of Vietnam Railway, (iii) Upgrading of maintenance capacity and existing rolling stock, and (iv) improvement of related facilities.

There is one development study and one Yen loan project under the Program. The main target area for upgraded railway bridges on the Hanoi-HCMC line is located in the central part of Vietnam, however, the Hanoi-HCMC line runs in the Red River Delta area and the outcome of this project seems to have been achieved in all sections of the line including the section in the Red River Delta. Therefore, the study team included the project of upgraded railway bridges at Hanoi- HCMC line in the scope of analysis.

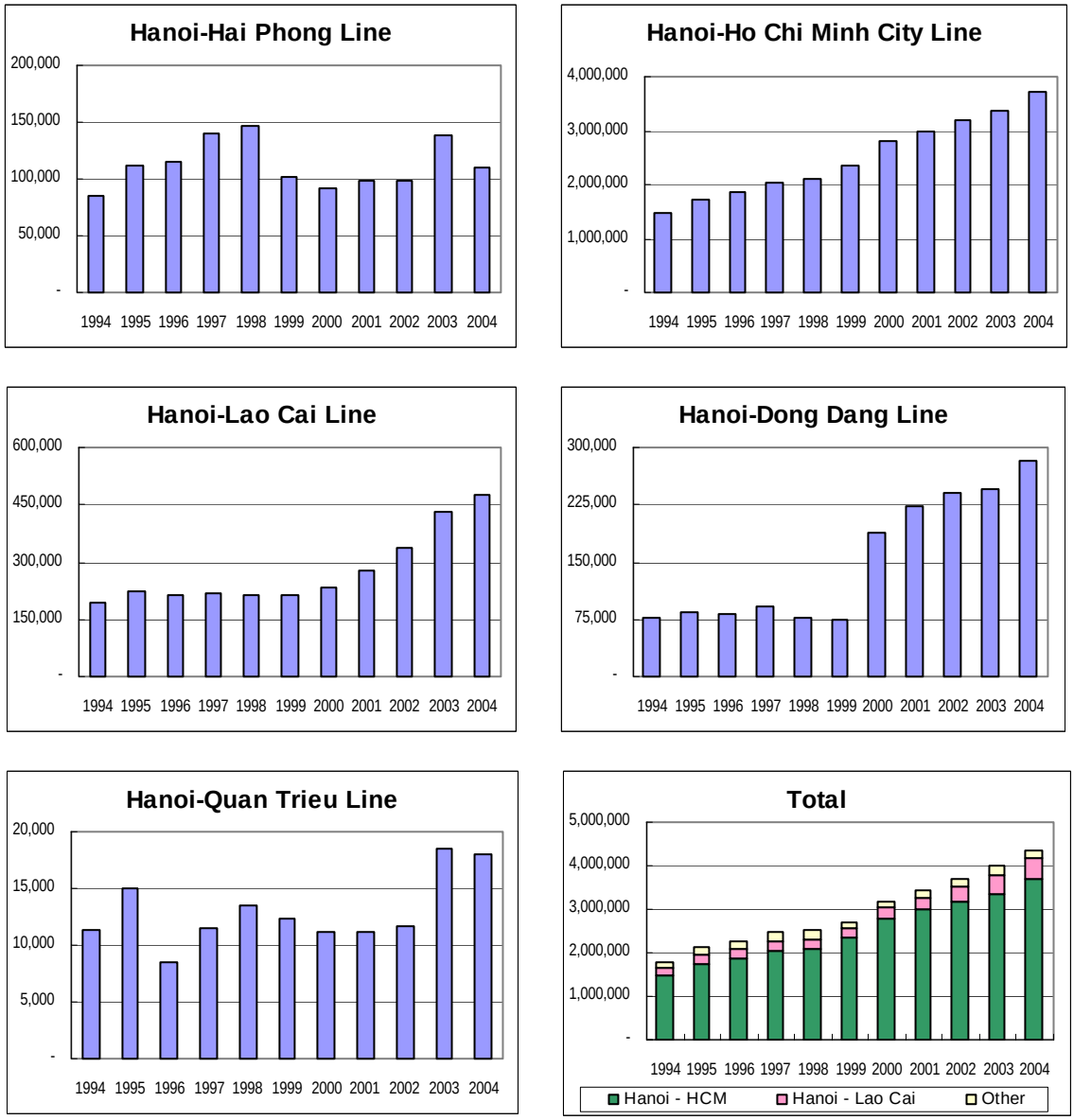
In relation to the direct linkage between Japanese ODA and the above four railway sub-sector objectives in the Program, this study mainly focused on the achievement in the "improvement of related facilities". Measurable indicators were (i) volume of cargo and passenger transport, (ii) number of train trips per day, and (iii) running hours. The target of analysis includes not only the Hanoi-HCMC line but also other four major lines, the Hanoi-Hai Phong line, the Hanoi-Dong Dnag line, the Hanoi-Quan Trien line, and the Haoni-Lao Cai line. No concrete indicator was set up for assessing the achievement of each sub-sector objective in JICA's Master Plan 1994.

b) Volume of Passenger and Cargo Transport

The volume of passenger transport (passenger-km) on the Hanoi-HCMC line shows a highest and most constant increase at 9.8 per cent of the annual average growth rate from 1994 to 2004 followed by the Hanoi-Lao Cai line with 9.3 per cent and the Hanoi-Dong Dang line with 5.2 per cent of the annual average growth rate. At the same time, passenger transport volume on the Hanoi-Hai Phoug line and the Hanoi-Quan Trieu line fluctuates during the same period. However, the summation of passenger transport volume for the five major railway routes demonstrates a constant upward tendency in volume, with an annual average growth rata of 9.4% (Figure 3-33).

Figure 3-33: Volume of Passenger Transportation on Major Railway Routes

(Unit: 1,000 Passenger-Km)

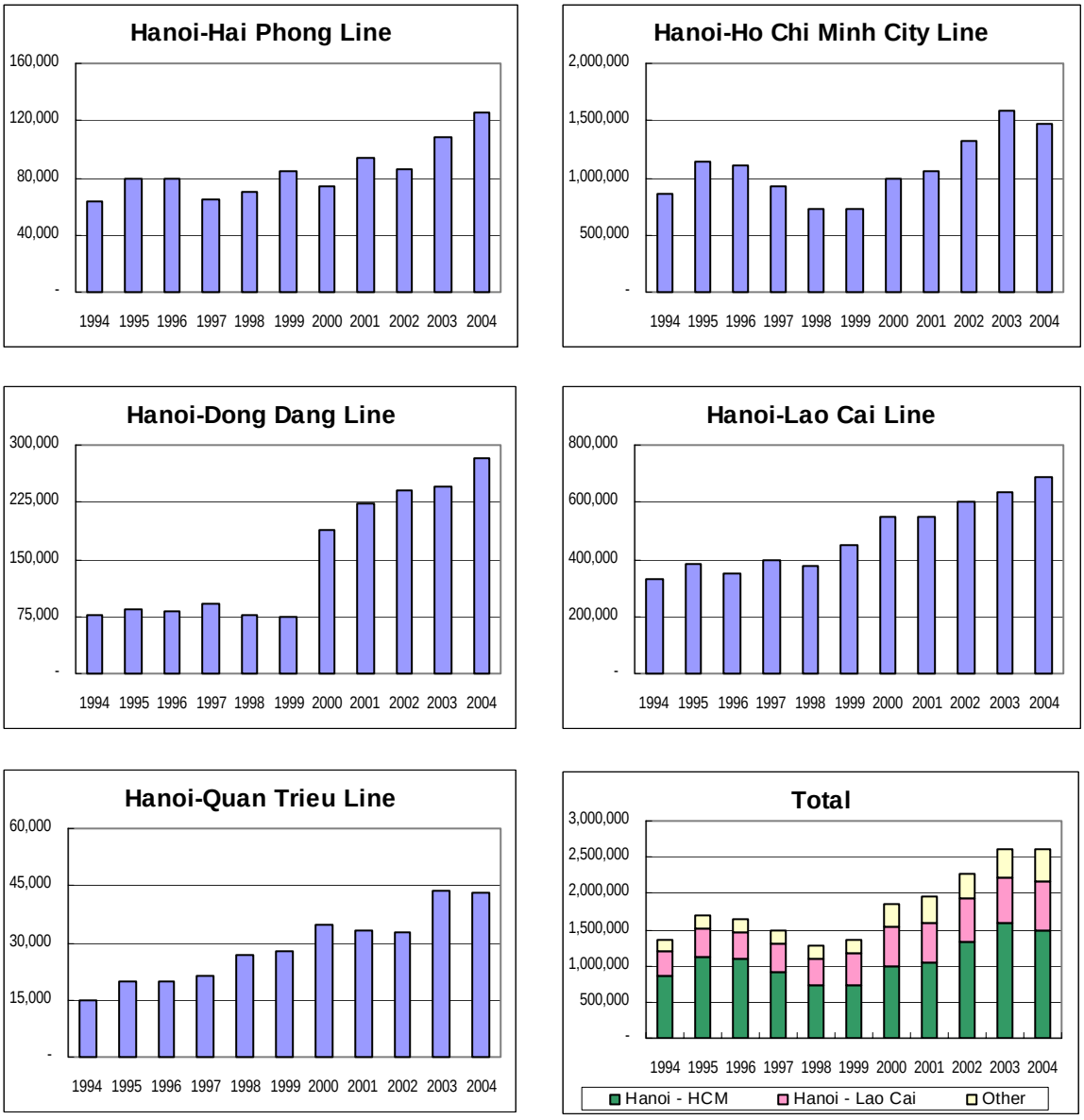


Source: Vietnam Railway Corporation

The volume of cargo transport (ton-km) on the Hanoi-HCMC line indicates the lowest increase among the major five routes at 5.6 per cent of the annual average growth rate from 1994 to 2004. The highest performance is seen on the Hanoi-Dong Dang line at 13.7%, followed by the Hanoi-Quan Trieu line at 11.3%, the Hanoi-Lao Cai line at 7.5% and the Hanoi Hai Phong line at 7.1%. The summation of cargo transport volume for the five major railway routes also shows a constant upward tendency in volume except four three years during 1996 and 1998, for which the annual growth rate is 6.9% (Figure 3-34).

Figure 3-34: Volume of Cargo Transportation on Major Railway Routes

(Unit: 1,000 Ton-Km)



Source: Vietnam Railway Corporation

Looking at the total size of passenger and cargo transport, the volume of passenger transport on the five major railway routes became 2.5 times greater and the cargo transport volume expanded 1.9 times during the period 1994 to 2004. Considering that the Hanoi-HCMC line dominates with nearly 85 per cent of the total passenger transport volume and about 60 per cent of the total cargo transport volume, the expansion of passenger and cargo transport on the Hanoi-HCMC line has made the biggest contribution to the schilling up of passenger and cargo transport services in the railway transport sector in Vietnam.

c) Train Operation

According to the available information, the number of train trips has increased. Altough on the three major routes, the Hanoi-Hai-Phong line, the Hanoi-Lao Cai line, and the Hanoi-Lang Song line, the number of passenger train trips has not much increased, the number of cargo train trips has grown about three times greater during the period from 1994 to 2004 (Table 3-5). The Hanoi-Lao Cai line in particular provides the most frequent cargo transport services followed by the Hanoi-Lang Song (i.e. the Hanoi-Dong Dang line). There are common characteristics shared by the two lines: (i) they provide direct links to Chinese border and the trade activities through these two border crossings have increased in recent years; and (ii) railway cargo transport is still competitive due to the existing constraints in cargo transport by road in these areas.

Table 3-5: Number of Train Trips per Day on Major Railway Lines

(Unit: Train trip/day)

Lines	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1. Hanoi-Thanh Hoa[1)]											
- Passenger Train	n.a.	n.a.	11.9	13.0	14.2	n.a.	n.a.	n.a.	15.7	n.a.	n.a.
- Cargo Train	n.a.	n.a.	9.1	8.7	8.5	n.a.	n.a.	n.a.	11.2	n.a.	n.a.
2. Hanoi-Hai Phong											
- Passenger Train	8.0	12.0	10.0	10.9	12.0	11.6	11.0	11.0	11.0	10.0	10.0
- Cargo Train	4.0	6.5	6.7	7.7	8.3	9.5	10.4	11.0	10.6	12.0	14.0
3. Hanoi-Lao Cai											
- Passenger Train	10.0	10.0	8.0	8.7	9.54	10.0	10.0	10.0	10.0	10.0	10.0
- Cargo Train	14.0	18.0	16.0	16.9	20.4	29.8	35.5	34.3	40.6	40.9	41.1
4. Hanoi-Lang Song[2)]											
- Passenger Train	4.0	4.2	4.4	4.8	5.2	5.3	5.6	6.0	6.7	6.8	7.0
- Cargo Train	8.3	9.9	20.9	23.3	21.0	17.9	26.5	24.7	22.0	23.0	24.5

Source: Vietnam Railway Corporation

Note: 1) Hanoi-Thanh Hoa section is a part of the Hanoi-HCMC line. The number of trains per trip for Hanoi-HCMC and Hanoi-Quan Trieu is not available.
2) Hanoi-Lang Song section is a part of the Hanoi-Dong Dang line.

d) Running Time

The reduction in running time for other major railway routes is not as clear as in the case of the Hanoi-HCMC line. However according to interviews with the Vietnam Railway Corporation, a reduction in running time for each railway route has been observed. For instance, the Hanoi-Hai Phong Line reduced its running time from 3 hours to 2 hours after 2001; the running time on the Hanoi-Dong Dang Line was reduced from 7 hours to 5.5 hours after 2001; and on the Hanoi-Lao Cai from 9 hours to 7 hours after 2003.

e) Contribution by Major Donors

Although there is no Japanese ODA directly linked to the objectives of "Function, Management and Organization of VNR" and to the "Manpower Training and Skill Improvement Program", the German government has supported the reform of the Vietnam railway sector from central planning to a competitive market structure. This initiative is still on-going but some achievements can be observed. They are (1) the separation of the Vietnam Railway Unit into two functions by the establishment of the Vietnam Railway Administration which is responsible for state management of all railway activities including legal issues and the sector development policy, together with the Vietnam Railway Corporation which is responsible for railway business activities; (2) the reform of the Vietnam Railway Corporation through the separation of four affiliated companies by type of business and functions. These are a) a freight railway transport company (cargo transport business), b) a Hanoi passenger railway company (passenger transport business), c) a Saigon passenger railway company (passenger transport business), and an infrastructure company (facility, infrastructure and operation and maintenance); and (3) the establishment of "Railway Law"[4] in order to liberalize the railway sector and to attract the participation of private sector operators and to develop the railway infrastructure.

Also German and France have actively supported the supply of locomotives, signal systems, O&M facilities and equipment, etc. This kind of improved railway infrastructure has provided backing for the confirmed achievements of the Program. It can be concluded that the contribution of major donors has been a substantial part of the realization of a positive outcome for the railway transport sub-sector.

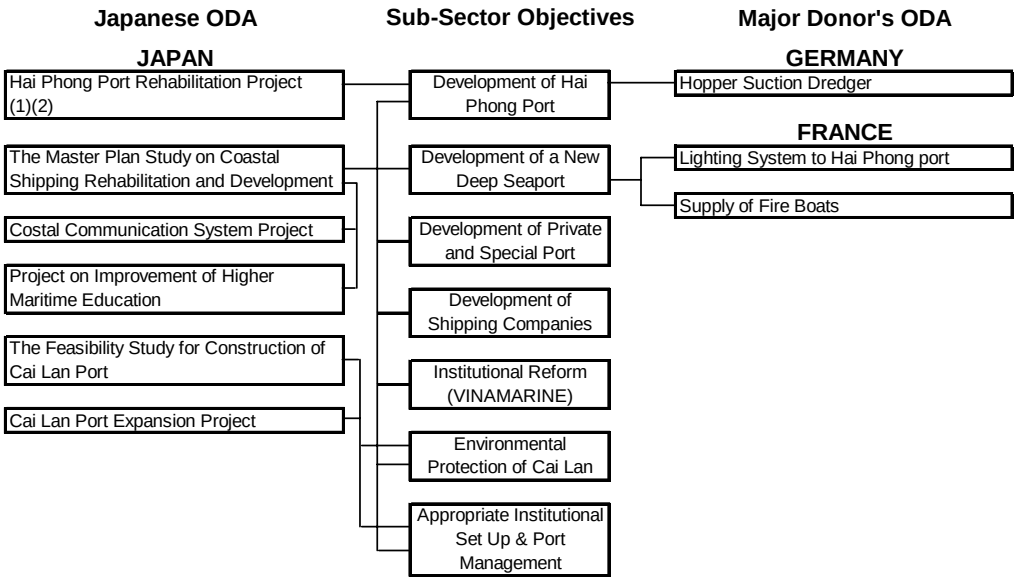
(3) Port and Sea Transport Sub-Sector

a) Relationship between Japanese ODA and the sub-sector objectives and selection of effect indicators

The linkage between the sub-sector objectives and each component of the Japanese ODA as well as the ODA projects of other major donor is summarized in Table 3-35.

[4] The Railway Law was established in May 2005 and it will be effective in January 2006.

Figure 3-35: Objective Framework of the Port and Sea Transport Sub-Sector



The port and sea transport sub-sector was the second priority transport sub-sector for Japanese ODA in the Red River Delta. The Japanese ODA projects implemented in this sub-sector were two port construction projects in Hai Phong and Cai Lan, the Costal Communication Expansion project, technical assistance to the Maritime University, and a development study for costal shipping rehabilitation and development.

Looking at the relationship between the Japanese ODA projects and the sub-sector objectives, (i) the Development of Hai Phong Port and (ii) the Environmental protection of Cail Lan port have direct linkage to the Japanese ODA projects. The Cai Lan Port Expansion project has some linkage to (iii) appropriate institutional set up and port management. Other linkages are not as strong since the master plan is for technical assistance and the real achievement in the related sub-sector objectives can be achieved only after the actual implementation of the project proposed by the study.

Regarding the measurable indicators, (i) the volume of cargo handling, and (ii) the containerized cargo ratio at Hai Phong port and Cai Lan port have been selected since the main function of the two ports is to serve export and import as well as domestic cargo and container handling. These selected indicators are essential to assess the improvement of port transport capacity, particularly cargo handling capacity.

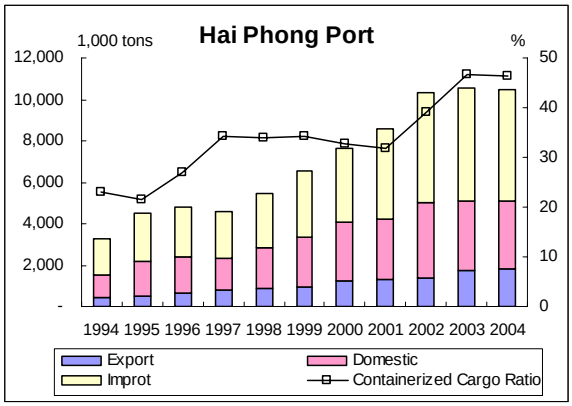
b) Volume of Cargo

Figure 3-36 shows the volume of cargo handling and the containerized cargo ratio at Hai Phong and Quang Ninh (Cal Lan)[5] ports from 1994 to 2004. Both Hai Pnong port and Quang Ninh (Cai Lan) ports expanded their cargo handling volume annually. Regarding the containerized cargo ratio, Hai Phong port improved dramatically from 23% in 1994 to 46%in 2004. Particularly after the completion of Hai Pong Port Project

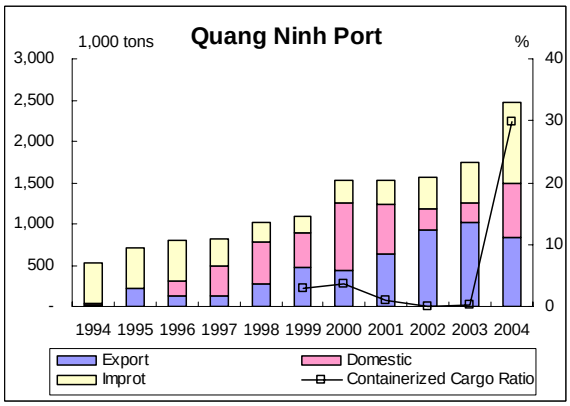
[5] Cai Lan Port is a part of Quang Ninh Port and a container berth has been constructed at Cail Lan Port.

Phase I in 2001, the improved container handling facility pushed up the ratio more than 10 points from 32% in 2001 to 46% in 2004, leading to an increase in the total cargo handling volume of Hai Phong port to about 1.5 million tons from 2001 and after 2002.

Figure 3-36: Volume of Cargo Handling at Hai Phong Port and Quang Ninh Port



Source: Hai Phong Port PMU



Source: Cai Lan Port PMU

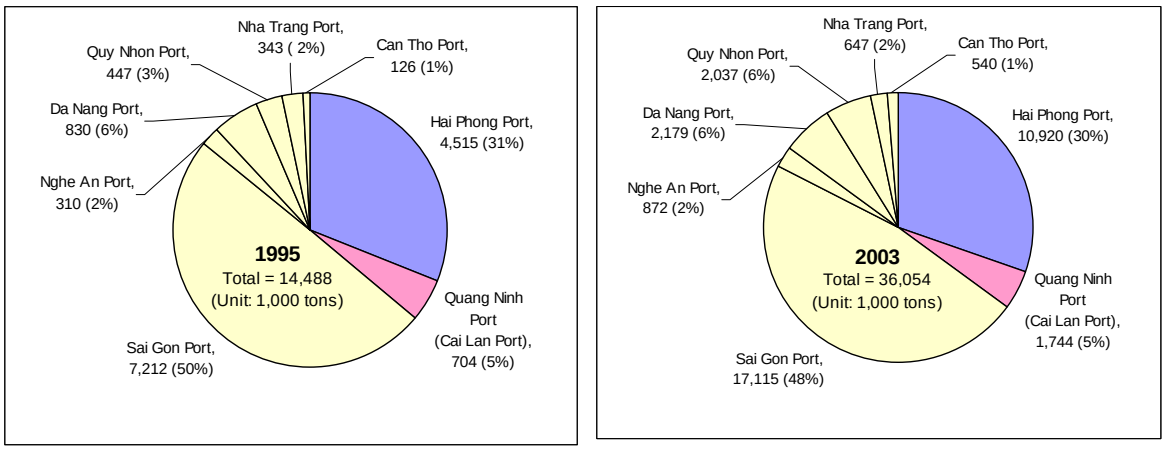
c) Containerized Ratio

The containerized ratio for Quang Ninh (Cai Lan) port, dramatically improved from 4% in 2000 to 30% in 2004 after the container terminal became available for use in 2004. According to the Quang Ninh Port Authority, due to technical problems the port suspended the use of container cargo handling in 2002 and 2003.

Figure 3-37 below shows the comparison of volume of export and import cargos at the main sea ports in Vietnam between 1995 and 2003. Despite a considerable improvement in cargo handling capacity at Hai Phong and Quang Ninh ports during the period, the share of export and import cargo volume at the two ports amongst eight major ports in Vietnam has not much changed as same as is the case of other major ports. During the period the total export and import cargo volume at major sea ports more than doubled from 14.5 million tons in 1995 to 36 million tons in 2003. This implies that major ports in Vietnam have continuously expanded their cargo handling volumes in conjunction with the growth in the economy and international trade, and that the two major ports in the Red River Delta have retained keeping their leading position after Sai Gon port in the south.

The study team also researched the waiting time of vessels at Hai Pong and Cai Lan ports, but no strong improvement in the saving of vessels' waiting time was observed.

Figure 3-37: Volume of Export and Import Cargos at the Main Sea Ports



Source: Statistical Yearbook, GSO.

d) Contribution by Major Donors

In the port and sea transport sub-sector, France provided the signal lighting system at Hai Phong Port and fire boats, and Germany supplied the hopper suction dredger. However, in comparison with the assistance of Japan to the port and sea transport sub-sector, their assistance was relatively small in terms of their scales and contents. As far as the direct relationship between the assistance of France and Germany and the improvement of cargo volume and containerized ratio at Hai Phong Port and Quang Ninh (Cai Lan) Port is concerned, their contribution is limited in the realization of a positive outcome for the port and sea transport sub-sector.

(4) Overall Achievement

The Program has achieved considerable improvement in the three target sub-sectors as discussed above. Particularly the development of road transport and port and sea transport has improved the connectivity of these two transport modes. These combinations of activities have stimulated the further expansion of activities in each sub-sector and have influenced economic activities in the target area. This issue will be also demonstrated in the part of this report which deals with the economic impact analysis. It is evident that the Program has contributed much to the establishment and development of a new transport system in the Red River Delta.

It is important to note that the timing of the Program was appropriate, in that the pave of development and the speed in each sub-sector has not created a bottleneck in economic growth between the last decades. On the contrary it can be said that the Program has most likely strongly supported the growing economic activities in the area.

3-2-2 Potential Risks to be noted

Whilst a considerable development in the transport sector has been advanced, there is a growing concern about operation and maintenance (O&M) issues, particularly the O&M of road and bridges. These issues include the following institutional and financial aspects:

(1) Public investment in the transport and communication sector increased more than 20 per cent annually from 1997 to 2002. This rapid expansion was mainly caused by the expansion of capital expenditure, not by current expenditure. As a result, the O&M expenditure in proportion to the total expenditure declined. In practice the current expenditure just met about 30% of the maintenance needs (Appendix 5). The accelerated expansion of investment in the transport and communication sector has led to an imbalance in investment and O&M. The financial source for O&M is weak.

(2) Usually transport investment plans are prepared by MOT and submitted to MPI, but the current budget plan of transport sector including the O&M budget plan is prepared by MOT and submitted to MOF. There is a weakness in not having a consistent O&M plan and a rational O&M budget allocation between the investment plan (for road construction) and the current budget plan (for road maintenance) as their planning processes belong to different ministries.

(3) According to Law on Land Road Traffic, MOT is responsible for the O&M of national roads, while the People's Committee is responsible for provincial, rural, urban and commune roads. The actual O&M implementing agency has been the Vietnam Road Administration (VRA)[6] since 1993. At the same time, it is common in Vietnam that a Project Management Unit (PMU) is established for road projects. The scope of the PMU covers the preparation of the project including the preparation of feasibility studies, and the implementation and supervision of road construction until completion. Therefore, there exists no road administration body responsible for the overall management of the project cycle for road projects covering the planning, construction, and O&M stages. This separate institutional arrangement for road projects may cause a weakness in acquiring an efficient and effective O&M system.

These potential risks are shared by the donor community as well as the Government of Vietnam. For instance, the O&M issue for the road sub-sector is one of the main subjects taken up by the Transport Partnership Working Group. Japan, represented by JBIC and JICA, has taken initiatives for effective countermeasures in cooperation with group members such as the World Bank, ADB, and MOT.[7]

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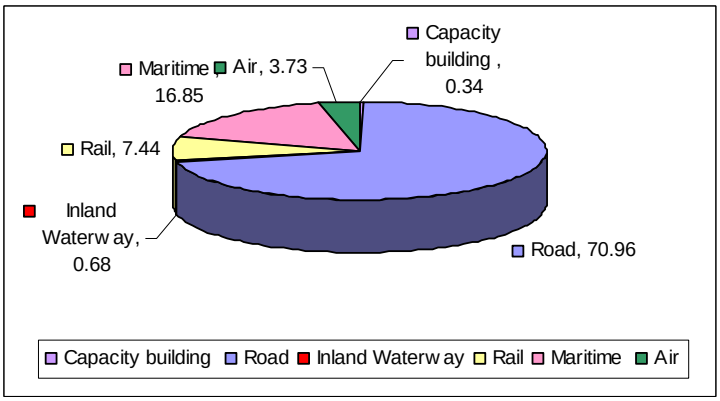
[6] VRA is responsible for the preparation of road and traffic plans, the O&M of the related infrastructure of national roads, the issue of drivers licenses, etc.

[7] The general assigned tasks by each donor are: (i) the development and introduction of the bridge management system (JBIC); (ii) the establishment of a data base of roads and bridges (ADB); and (iii) the introduction of a road management system (WB).

3-2-3 Financial Contribution to the Transport Investment Plan of Vietnam

Investment into the Transport Sector is one of the largest areas of interest for the Government of Vietnam and the donor community. Up to October 2005, there are 26 donors from different countries and organizations committed to ODA in Vietnam for the transport sector with an amount of 5.635 billion US dollars accounting for more than 23% of the total ODA in Vietnam for the same period. ODA investment in the road sub-sector has the largest proportion accounting for 71% of the total ODA committed for the transport sector in the whole country. The lowest rate is for Inland Waterways which is less than 1%, while railway, maritime and air transportation account for about 7.4%, 16.9% and 3.7% respectively. ODA invested for the transport sub-sectors during period from 1993 to October 2005[8] is shown in Figure 3-38.

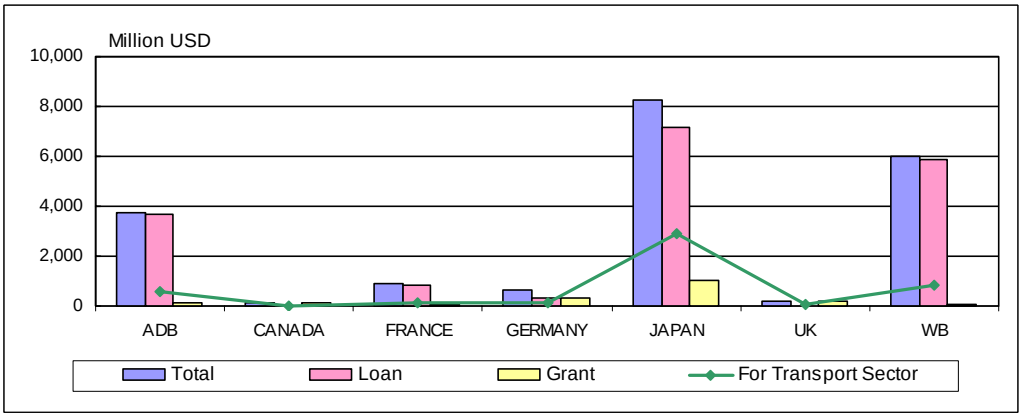
Figure 3-38: ODA Commitments for Transport Sub-Sector from 1993 to October 2005



Source: MPI data, calculation by the Study team.

The contribution of major donors in the transport sector in the country in general and in the Red River Delta area in particular in comparison with their total ODA committed for the period 1994-2004 is shown in Figure 3-39 and Figure 3-40.

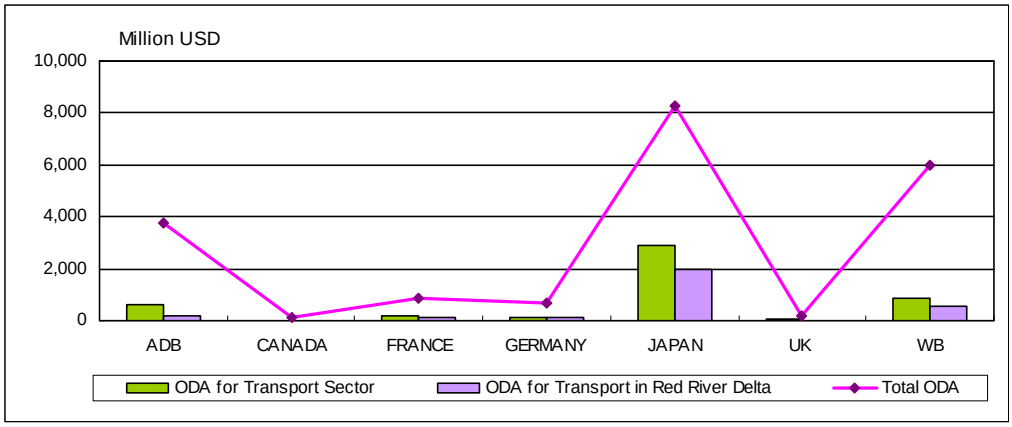
Figure 3-39: Total ODA Investment of Major Donors and the Proportion in Transport from 1993 to 2004



Source: MPI and donor data and calculation by the Study team.

[8] Since the target period of the Program is from 1994 to 2004, the target years of the analysis of the financial contribution of the Program in principle cover the same period. However, some of the analysis covers either a longer or shorter period due to data availability.

Figure 3-40: Total ODA Investment of Major Donors for the Transport Sector in the Red River Delta and in the Whole Country from 1994 to 2004



Source: MPI and donor data and calculation by the Study team.

Among major donors, Japan has become the biggest contributor for the transport sector of Vietnam with more than 2.9 billion US dollars, accounting for more than 52% of the total ODA commitment of all donors for the transport sector and about 35% of the total ODA from Japan for Vietnam. The next major donors are the World Bank and then ADB with an investment in the transportation sector of more than 847 million US dollars and about 599 million US dollars accounting for about 15% and 10% of the total ODA committed for the Vietnam transport sector respectively (Table 3-6).

Table 3-6: ODA Commitment for Vietnam during the Period of 1994-2004

(Unit: Million US dollars)

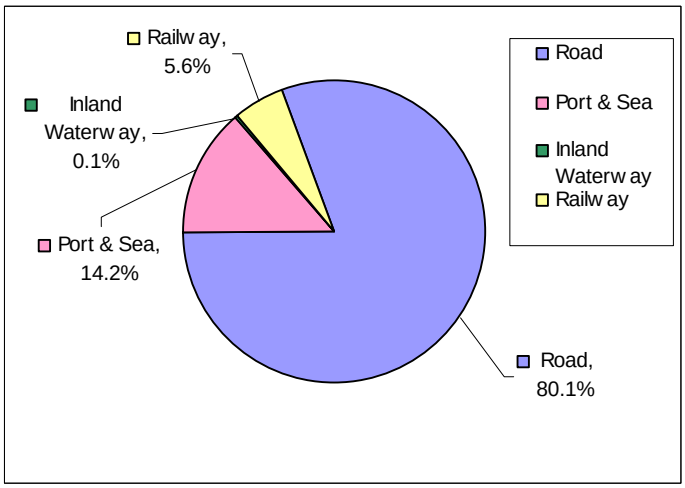
Donor	ODA commitment for Vietnam period 1994-2004			Of which	
	Total	Loan	Grant	For Transport Sector	Transport in RR Delta
ADB	3757.43	3650.77	106.66	604.11	190
CANADA	139.6	0	139.6	4.36	4.1
FRANCE	892.65	814.75	77.9	158.29	100.78
GERMANY	668.39	345.91	322.48	122.1	122.1
JAPAN	8240.89	7183.74	1057.15	2924.64	1952.72
UK	162.64	0	162.64	33.35	26.2
WB	5987.41	5895.42	91.99	847.50	585.36
Total	19849.01	17890.59	1958.42	4688.9	2981.26

Source: MPI and donor data and calculation by study team

A large proportion of Japanese ODA for the transportation sector was invested in the Red River Delta area with more than 1.95 billion US dollars. This was about 66.7% of Japan's total ODA for the whole transport sector in Vietnam and has been split by transport sub-sectors as indicated in Figure 3-41. About 80% was committed for road transport in the area.

Actual investment of the Government of Vietnam from domestic sources for transport activities under the management of MOT significantly increased (about 13 times) during the period from 1994 to 2005, accounting for approximately 66% of the total investment for MOT. The percentage of ODA investment for MOT projects is 34% which also significantly increased in line with domestic investment in the same period (Figure 3-42).

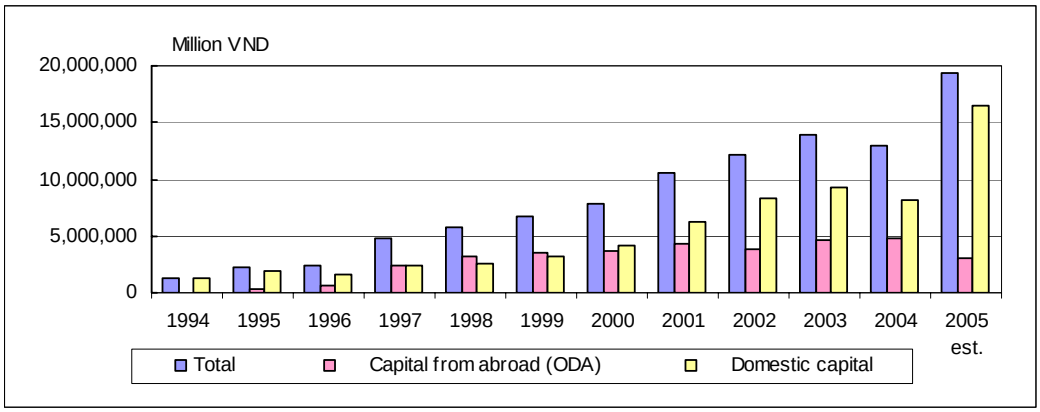
Figure 3-41: Japanese ODA Investment in the Red River Delta by Transport Sub-Sector



Source: MPI and donor data, and calculation by the Study team.

The proportion of domestic investment for the Red River Delta is not available for the period 1994 – 2004. However, based on the ODA investment proportion rate 63.58% for the Red River Delta area in comparison with the total ODA for the whole transport sector of Vietnam, together with Japanese ODA committed for the transport sector in the Red River Delta area in comparison with budget expenditure for the transport, post and communication sector as illustrated in Figure 3-43 and Table 3-7 below, it is estimated that the ODA contribution rate to the achievements of the Program in the Red River Delta area should be much higher than the average rate (34%). As a consequence of this domestic investment for this area should be much lower than the average rate (66%) for the whole country.

Figure 3-42: Investment using Domestic and ODA Sources for Transport Activities under MOT Management form 1994 to September 2005.

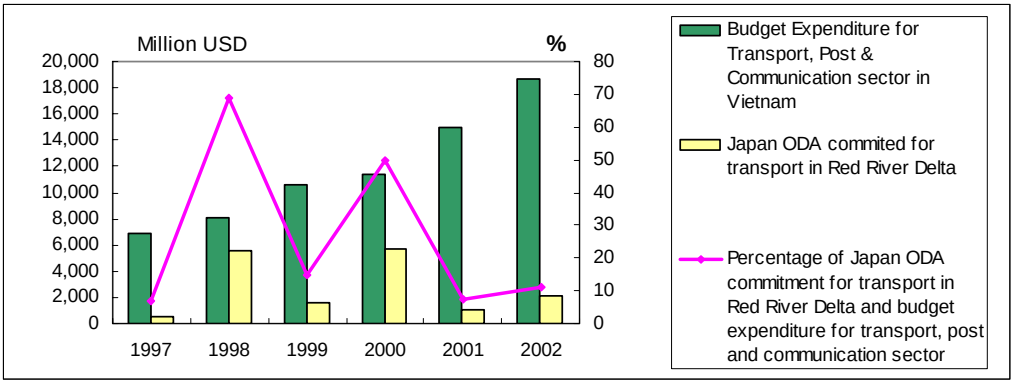


Source: MOT data, and calculation by the Study team.

As seen in Figure 3-43 and the data presented in the Table 3-7, the proportion of Japanese ODA commitment in the transport sector in the Red River Delta area is significant in comparison with the budget expenditure for the country as a whole for the transport, post and communication sector. This also shows the essential role of

ODA investment by the donor community in general and especially ODA from Japan in particular for the development of the transport infrastructure in Vietnam in general and in the Red River Delta area in particular.

Figure 3-43: Budget Expenditure for the Transport, Post and Communication Sectors and Japanese ODA Committed for the Transport Sector in the Red River Delta from 1997 to 2002



Source: MOF, MPI and donor data and calculation by the Study team.

Table 3-7: Budget Expenditure by Economic Sector of the Whole Country (1997-2002)

	1997	1998	1999	2000	2001	2002
Agriculture, Forestry, Irrigation	3,712	4,591	5,051	5,647	7,044	6,993
Fisheries	103	484	275	157	376	478
Transport, Post & Communication	6,890	8,065	10,615	11,375	14,991	18,720
- Japan ODA committed for transport in the Red River Delta	471	5,537	1,599	5,694	1,100	2,081
Industry	2,583	2,775	3,499	3,791	6,605	5,690
- Electricity	514	422	645	799	942	543
- Water	699	612	627	1,248	535	416
Education and Training	9,979	12,750	12,232	16,344	19,505	22,596
Health	4,329	5,207	5,912	6,550	8,475	8,616
Social Insurance	9,372	8,713	10,072	11,385	13,958	13,177
Culture & Sports	2,578	2,745	2,992	3,577	4,642	5,140
Science, Technology & Environment	890	1,067	1,113	1,423	2,579	2,949
Administration Expenditure	7,138	6,741	8,743	9,228	10,973	12,478
Interest payment	1,916	2,050	2,327	3,514	4,485	6,008
Other	21,260	18,231	20,986	30,160	25,770	32,645
Total in billion VND	70,749	73,419	84,817	103,151	119,403	135,490

Source: MOF (Vietnam Managing Public Expenditure for Poverty Reduction and Growth), April 28, 2005, MPI, donor and calculation by the study team

3-2-4 Impact on Economic Development

(1) Research Methodology for Impact Analysis

The study looked at three dimensions of economic impact which were identified in JICA's Master Plan (1994) and placed as overall goals of the Program objective in the objective framework of the Program (Figure 1-2). These were (i) the impact on the regional economic development of the Red River Delta; (ii) the impact on the mitigation of the regional economic gap between the North and South; and (iii) the impact on the promotion of the transition to a market economy system and internationalization. Since several studies have already been conducted on similar issues, 98 questionnaires had been received from companies and local authorities in all of the Red River Delta provinces, of which there were 52 in-depth interviews. A detailed description of the survey audience is provided in Appendix 6. A case study about the impact on the development of trade and economic activities between China and Vietnam was carried out in order to demonstrate the uniqueness of this study approach.

* A Note on the Scope of the Study

The scope of the study has been mutually agreed among members of Joint Evaluation Team. We mainly focus on Red River Delta region. However, it would be more ideal if we directly examined the Impact of the Program with a broader perspective, ie. Greater Mekong Sub-regional (GMS) Cooperation[9]. There were arguments that Japan's ODA to Vietnam was important for the development of Mekong regional cooperation by activating the transport network, expanding trade and investment between and/or of GMS countries.

Initiated by ADB, strongly supported by Japanese government and countries in the region, economic corridor have become a common concept in GMS, of which East – West Economic Corridor was Vietnam's initiative[10]. East-West Economic Corridor is from Da Nang (Vietnam) to Lao, Thailand.

In 2005, Guangxi of China joined GMS Cooperation. A new concept, which is two corridors and one belt between Southwestern China and northern Vietnam, has been introduced since November 2005. One corridor is the Kunning (China) to Lao Cai – Ha Noi-Hai Phong (Vietnam). Another corridor is the Nanning (Guangxi) to Lang Son – Ha Noi (Vietnam). These corridors are expected to effectively connect with Vientiane (Laos), Rangoon (Myanmar), Phnom Penh (Cambodia) and Bangkok (Thailand), especially Ha Noi-Vientiane-Bangkok. One belt is coastal zone between Beihai port of Guangxi and Hai Phong port of Vietnam.

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[9] Greater Mekong Sub-region (GMS) geographically consists of Vietnam, Lao, Cambodia, Thailand, Myanmar and Yunnan of China.

[10] ADB proposed five corridors (i) two North-South Economic Corridors which are from Kunning (China) to Ha Noi/Hai Phong (Vietnam) and from Kunning to Lao, Myanmar and Bangkok (Thailand); (ii) East-West Economic Corridor which is from Da Nang (Vietnam) to Lao, Thailand; and (iii) two Southern Economic Corridors which are from Vung Tau/Hochiminh city (Vietnam) to Phnom Penh (Cambodia), Bangkok (Thailand) and from Quy Nhon (Vietnam) to Phnom Penh (Cambodia).

The role of the Program on Mekong regional economic development can be indirectly measured through (i) the development of trade and investment between Red River Delta and China; (ii) the development of trade and investment between Red River Delta and ASEAN countries; and even (iii) the development of trade and investment between the Red River Delta and other regions in Vietnam. We will examine the development of trade between the Red River Delta with other regions and China. We also look at the investment between the Red River Delta and China.

(2) Analytical Framework

a) Regional Economic Development and the Role of Transport

The analytical framework used in this paper is shown in Figure 3-44. The Red River Delta Transport Development Program is designed to develop a better transport network in the region. It then encourages FDI and domestic investment by reducing transport time and cost, giving a better allocation of resources. The increase in investment leads to a concentration of production featuring a greater output, more specialization and differentiation. On the demand side, it helps expand the regional market, the inter-regional market and the export market. The increase in demand and supply creates higher income and purchasing power, creating more jobs. All of these processes lead to regional economic growth and the development of core centers. Core centers like Ha Noi and Hai Phong also encourage regional economic growth. GRP (Gross Regional Production) is a common indicator that can be used to analyze the economic growth of a region[11].

b) Mitigation of the Regional Economic Gap between North and South

The GRP structure, GRP difference and the poverty rate of the Red River Delta is compared with those of the South East region and the Mekong River Delta[12]. The gap

[11] Theoretically, to industrialize in a sustainable way, a country needs to increase its investment in transport to expand markets and encourage specialization. This idea is from Rostow. Rostow argues that to industrialize in a sustainable way, a country needs to have basic changes in three non-industrial sectors: (1) an increase of investment in transport to expand markets and encourage specialization; (2) an agricultural revolution; and (3) an expansion in import including capital (E.Wayne Nafziger 1998, p148). The theory of regional economic growth shows that the development of transport helps a region develop some trade and local specialization. The reduction in the transport rate concentrates production. It also facilitates differentiation (McKee et al 1970, p30-32).
Some theories on regional economic growth have been discussed in Vietnam recently (PGS.TS Ngô Doãn Vịnh 2005, p357-363). One theory suggests that regional economic growth is based on the region's resources. The growth rate of GDP per capita is derived from the allocation of resources. The speed of regional specialization is considered the engine for growth. Another theory argues that export (external demand) is an engine for regional growth. In addition, one theory stresses the importance of core centers as locomotives to lead and pull regional development. There is theory arguing that the development of leading industries in a core centers is the locomotive for the development of a region since it creates employment, income and purchasing power of that region.

[12] The South East region consists of Ninh Thuan, Binh Thuan, Binh Phuoc, Tay Ninh, Binh Duong, Dong Nai, Ba Ria – Vung Tau, Ho Chi Minh city. The Mekong River Delta consists of Long An, Tien Giang, Ben Tre, Tra Vinh, Vinh Long, Dong Thap, An Giang, Kien Giang, CanTho, Hau Giang, Soc Trang, Bac Lieu, Ca Mau.

differences in GRP in the most developed and least developed provinces are examined between regions[13].

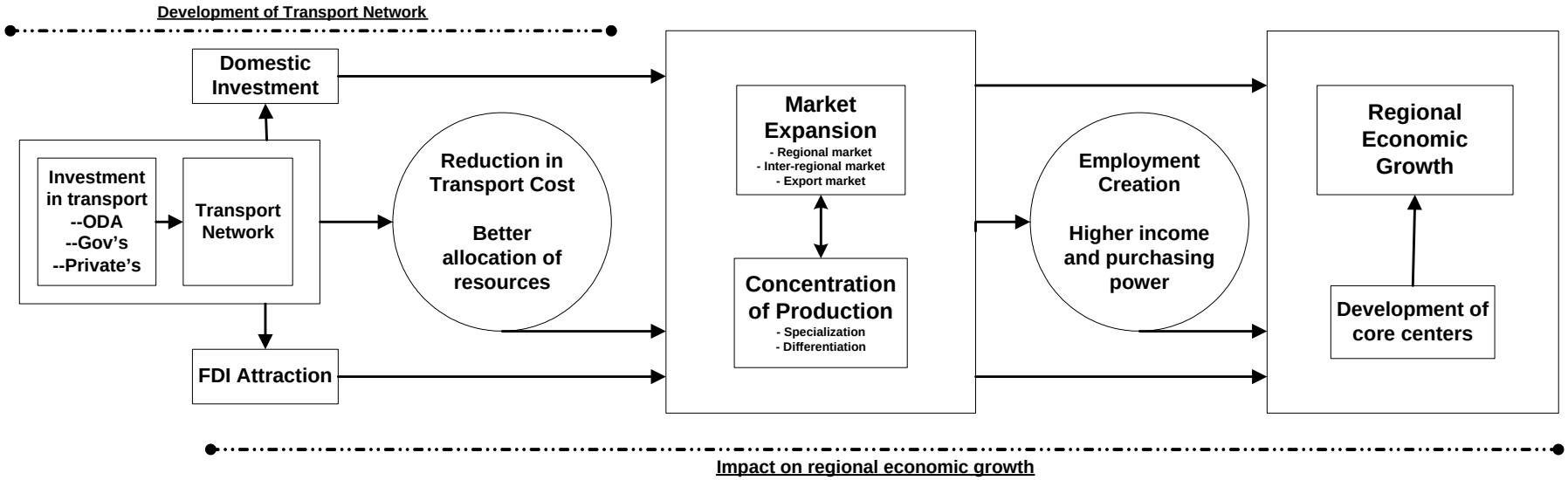
c) Transition to a Market Economy System and Internationalization

The following indicators are examined: (i) the structure of acting enterprises by types of enterprise; (ii) the number of acting enterprises by province; and (iii) Vietnam's trade openness which is its total export and import over GDP. The role of the Red River Delta Transport Development Program is recongnised by looking at its importance to investment decisions of private and FDI enterprises in the Red River Delta as well as its importance in the export market expansion of enterprises[14].

[13] The regional economic gap is seen as the difference in the economic development level of regions, especially the living standard of people in regions (PGS.TS. Ngô Doãn Vịnh 2005, p409).

[14] The transition of an economy toward a market economy is indicated directly by modalities of economic and administrative management. Indicators to view the transition to a market economy are the existence of private ownership in different ways; the existence of commercial banks; the existence of market price and integration into the world economy (GS.TS. Nguyễn Đình Hương 2005, p13, p26-28).

Figure 3-44. Hypothetical Role of the Transport Development Program on Regional Economic Growth



Source: prepared by Study team.

(3) Major Findings of Previous Studies

a) JBIC's Impact Study in 2003

"Impact Assessment of Transport Infrastructure Projects in Northern part of Vietnam" by JBIC (2003) touched on several issues concerned with the economic aspect and the socio-economic aspect. This impact study mostly examined Ha Noi, Hung Yen, Hai Duong, Hai Phong, which were closely related to HW 5 and Hai Phong Port Rehabilitation. The study was the most comprehensive with clear analytical framework and comprehensive figures and data. In terms of the economic aspect, managers from 81 FDI companies were interviewed. The study examined the process of the impact in two aspects: the economic aspect and the socio-economic aspect. In terms of the economic aspect, it was argued that the two projects brought in massive FDI to the region which then increased industrial production, created employment, increased fiscal contributions, etc. In terms of the socio-economic aspect, it was argued that rural economic activities had been stimulated by the diversification of agricultural production, better access to social infrastructure, etc. Other factors were specified as having contributed to the attraction of FDI attraction, changes in rural society and economic growth such as a good labor force, the expansion of vocational training programs, the development of industrial parks, administrative incentives to attract FDI, the development of public transport, good access to rural credit, etc. The study also compared the annual GRP (Gross Regional Product) of provinces in the Red River Delta in the period 1995 – 2000. Its main findings supported the hypothesis that the two JBIC projects had economic impacts on the GRP growth of the region

b) Other Studies

The study by GRIPS, which was completed in 2003, addressed the relationship between large-scale infrastructure and poverty reduction.

Research on "Mobilising investment for development: The Role of ODA, the 1993-2003 experience in Vietnam", which was submitted to OECD in December 2004, quoted examples related to Japan's ODA and Japan's ODA in the transport sector.

(4) Current Status of the Three Economic Dimensions

a) Regional Economic Development of the Red River Delta

The Red River Delta has achieved regional economic growth at a higher pace than the average economic growth of Vietnam (Table 3-8). Three emerging characteristics of the GRP of provinces in the region are as follows:

- Ha Noi, Hai Duong, Hai Phong and Hung Yen have achieved the fastest GRP growth rate.
- Vinh Phuc and Bac Ninh are the most dynamic provinces in the Red River Delta in terms of GRP growth rate.
- Thai Binh, Ha Nam and Nam Dinh are the provinces which have lowest GRP growth rate.

Table 3-8. GRP Growth Rate of Red River Delta Provinces at Constant 1994 Prices

(Unit: percentage)

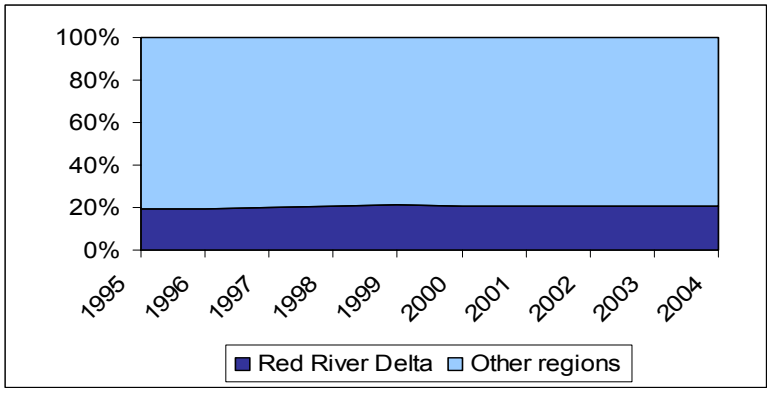
	1995	1996	1997	1998	1999	2000	2001	2002	2003
Ha Noi	-	113.0	112.6	112.0	106.8	106.9	110.9	111.6	111.3
Hai Phong	-	109.6	109.7	108.1	106.3	109.5	110.2	111	110.4
Ha Tay	-	107.7	107.9	107.2	106.7	112.6	107.9	109.8	109.1
Hai Duong	-	112.0	112.4	108.9	103.8	109.5	108.2	112.2	112.8
Hung Yen	-	110.0	113.6	110.2	114.5	111.1	110.9	112.1	112.6
Ha Nam	-	104.0	109.2	109.1	111.7	108.1	107.9	108.4	108.9
Nam Dinh	-	106.8	108.6	107.3	105.6	105.4	106.5	105.7	110
Thai Binh	-	105.7	104.1	103.9	105.6	106.6	104.8	107.5	105.7
Ninh Binh	-	106.4	114.6	107.3	106.1	107.4	107.2	108.5	111.8
Vinh Phuc	-	108.3	120.5	121.8	107.8	124.9	111.9	112.9	117.5
Bac Ninh	-	108.0	110.2	107.8	115.9	116.6	114.1	113.9	113.5
Vietnam	109.54	109.34	108.15	105.76	104.77	106.79	106.89	107.08	107.26

Source: GSO (2000) and GSO (2005b)

The contribution of the Red River Delta to Vietnam's GDP increases slightly from 19.5% in 1994–1995 to 20.7% in 2003-2004 (Figure 3-45). However, only Ha Noi and Hai Phong have GRP per capita higher than that of Vietnam (Table 3-9).

Ha Noi has accounts for more than one third of the Red River Delta's GRP for the last 10 years. Hai Phong is the second biggest GRP province in the region followed by Ha Tay and Hai Duong. While the portion of Nam Dinh and Thai Binh's GRP has been reduced, that of Vinh Phuc and Bac Ninh has increased in the last 10 years, especially that of Vinh Phuc (Table 3-10).

Figure 3-45. Red River Delta Share of Vietnam's GDP



Source: The Study team calculation based on GSO (2001) and GSO (2005b)

Table 3-9. GRP per Capita in the Red River Delta at Constant 1994 Prices

(Unit: Thous. VND)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Ha Noi	4945	5447	5982	6533	6811	6999	7480	8091	8779
Hai Phong	3303	3582	3889	4160	4378	4577	4993	5490	5967
Ha Tay	1669	1775	1894	2012	2132	2376	2545	2772	2990
Hai Duong	2008	2235	2494	2699	2785	3028	3262	3631	4084
Hung Yen	1646	1794	2021	2207	2503	2756	3027	3362	3748
Ha Nam	1642	1688	1822	1965	2188	2357	2528	2722	2931
Nam Dinh	1771	1873	2014	2140	2239	2335	2471	2590	2845
Thai Binh	2092	2200	2278	2354	2472	2527	2633	2809	2966
Ninh Binh	1361	1431	1621	1717	1827	1952	2087	2257	2490
Vinh Phuc	1298	1387	1651	1991	2131	2743	3044	3401	3943
Bac Ninh	1565	1682	1830	1956	2263	2623	2964	3327	3754
Red River Delta	2370	2570	2810	3050	3230	3520	3800	4160	4590
Vietnam	2717	2923	3111	3240	3346	3525	3718	3929	4153

Source: The Study team's calculation based on GSO (2000), GSO (2004) and GSO (2005b)

Table 3-10. Structure of Red River Delta GRP by Province

(Unit: percentage)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Ha Noi	31.47	32.41	32.94	33.68	33.57	32.60	33.02	33.30	33.37
Hai Phong	13.90	13.89	13.76	13.57	13.47	13.19	13.27	13.31	13.23
Ha Tay	10.04	9.86	9.60	9.39	9.36	9.75	9.62	9.54	9.37
Hai Duong	8.46	8.64	8.76	8.71	8.44	8.56	8.47	8.59	8.72
Hung Yen	4.45	4.46	4.58	4.60	4.92	5.06	5.13	5.20	5.27
Ha Nam	3.29	3.11	3.07	3.06	3.18	3.19	3.14	3.08	3.02
Nam Dinh	8.44	8.22	8.05	7.89	7.77	7.56	7.35	7.02	6.96
Thai Binh	9.59	9.24	8.68	8.23	8.11	7.75	7.42	7.21	6.87
Ninh Binh	3.05	2.96	3.06	3.00	2.97	2.95	2.89	2.83	2.85
Vinh Phuc	3.56	3.51	3.82	4.25	4.28	5.16	5.27	5.38	5.70
Bac Ninh	3.75	3.69	3.68	3.62	3.92	4.23	4.41	4.54	4.64
Red River Delta	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: The Study team calculation based on GSO (2000) and GSO (2005b)

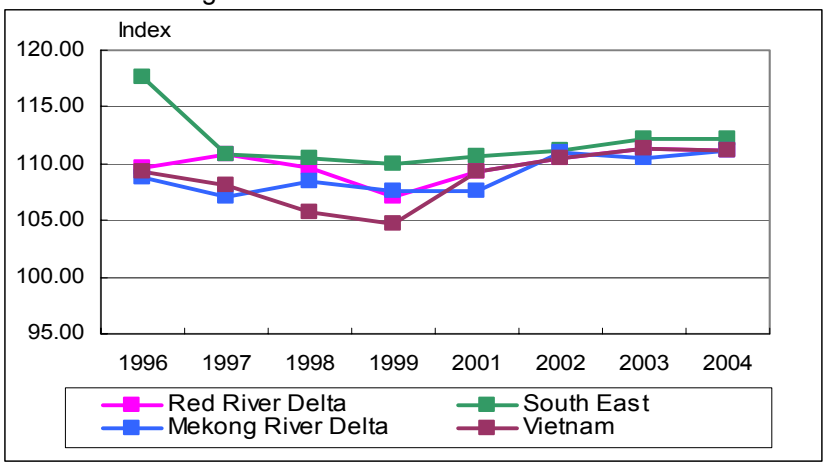
b) Mitigation of Regional Economic Gap between North and South

The GRP growth rate of the Red River Delta has been almost the same as that of the South East region from 1999 – 2004 (Figure 3-46).

However, the share of the Red River Delta GRP in Vietnam's GDP is growing at a slower pace than that of the South East region (Figure 3-47). The GRP of the Red River Delta in 1995 was at 62% of the South East's GRP but it was only 59.3% in 2004.

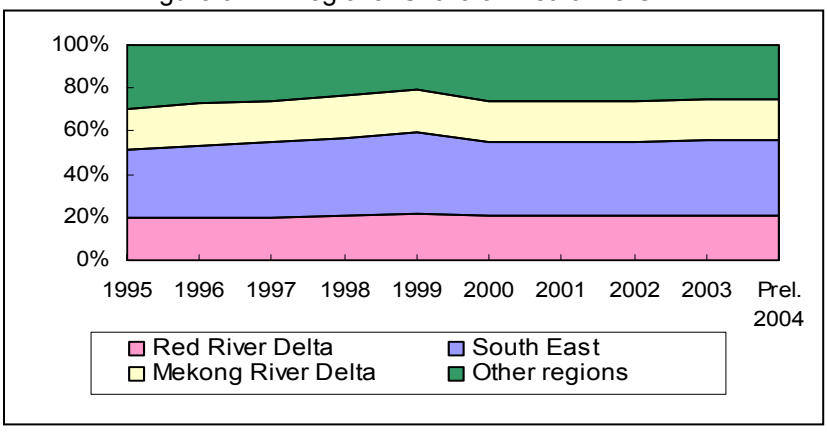
The gap difference between the GRP of the Red River Delta and that of the South East region has widened[15]. This is the same comparing Hai Phong and Ba Ria Vung Tau as well as comparing Ninh Binh and Tay Ninh. The former is the biggest GRP province in each region while the latter is the lowest GRP province in each region. Only Ha Noi has shortened the GRP difference gap with Hochiminh city (Table 3-11).

Figure 3-46. Index of GRP in Vietnam



Source: The Study team consolidation based on GSO (2000) and GSO (2005b)
Note: GRPs are at constant 1994 prices (previous year = 100)

Figure 3-47. Regional Share of Vietnam's GDP



Source: The Study team calculation based on GSO (2001) and GSO (2005b)

[15] CIEM & UNDP (2004) argued that the Red River Delta had good infrastructure, an abundant trained labor force and market access. However, provinces around Hochiminh city grew faster than provinces around Ha Noi and Hai Phong. Population growth was used as "a measure of success" since provincial GRP seemed to be high in all provinces and "migration rather than birth and death rates explain most population growth difference" (p1). Provinces in the North had a low population growth rate. Provinces around Hochiminh city had the highest population growth rate. The difference was explained by the migration of young labor. The nearby provinces around Hochiminh city had created more jobs and exported more commodities than provinces around Ha Noi and Hai Phong.

Table 3-11. GRP Difference between the Red River Delta and the South East Region

(Unit: Time)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Ho Chi Minh City vs Ha Noi	3.00	3.04	2.97	2.88	2.85	2.75	2.72	2.68	2.68
Ba Ria Vung Tau vs Hai Phong	2.74	2.79	2.81	3.02	3.40	2.88	2.94	2.96	2.94
Tay Ninh vs Ninh Binh	1.59	1.74	1.72	1.80	1.97	2.00	2.06	2.11	2.24
South East vs Red River Delta	1.61	1.73	1.73	1.74	1.79	1.63	1.65	1.66	1.66

Source: The Study team calculation based on GSO (2000) and GSO (2005b)

The Red River Delta had a marked reduction in poverty. A 40% reduction in poverty had been achieved in the Red River Delta from 1993 to 2002 while the number was 26.4% in the South East region for the same period (Table 3-12).

Table 3-12. Poverty Rate across Regions

(Unit: percentage)

	1993	1998	2002
Red River Delta	62.7	29.3	22.4
South East	37.0	12.2	10.6
Mekong River Delta	47.1	36.9	23.4
Vietnam	58.1	37.4	28.9

Source: Vietnam Development Report 2004: Poverty (2003)

c) Transition to a Market Economy System and Internationalization

In terms of the structure of acting enterprises, data was collected according to the type of enterprises in the period 2000 – 2003. The share of the private sector increased from 86.4% in 2000 to 93.4% in 2003 (Table 3-13).

Table 3-13. Structure of Acting Enterprises by Type of Enterprises

(Unit: Percentage)

	2000	2001	2002	2003
State owned enterprise	13.62	10.36	8.53	6.73
Non-state enterprise	82.78	85.75	87.80	89.60
Foreign investment enterprise	3.61	3.89	3.67	3.67
Total	100	100	100	100

Source: GSO (2005a)

The number of acting enterprises in the Red River Delta increased at a faster rate than that of whole country in the period 2000 - 2003. Ha Noi accounted for more than 67% of the increase (Table 3-14).

Table 3-14. Number of Acting Enterprises by Province

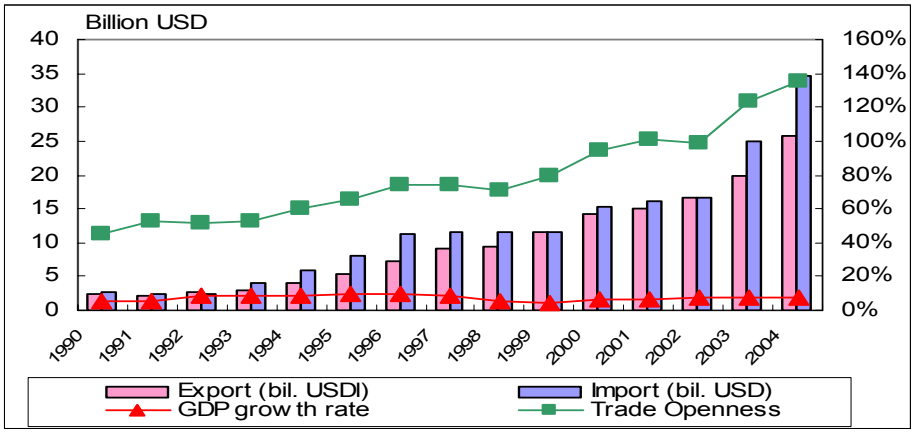
(Unit: Enterprise)

	2000 (I)	2001 (II)	2002 (III)	2003 (IV)	2003 – 2000 V = (IV – I)	Growth rate VI = (V) / (I)	Percentage of Red River Delta
Ha Noi	4691	6407	9460	11813	7122	1.52	67.36
Vinh Phuc	238	336	393	534	296	1.24	2.80
Bac Ninh	363	458	564	718	355	0.98	3.36
Ha Tay	644	739	890	1013	369	0.57	3.49
Hai Duong	507	617	681	778	271	0.53	2.56
Hai Phong	1089	1187	1586	1904	815	0.75	7.71
Hung Yen	224	283	328	401	177	0.79	1.67
Thai Binh	339	519	631	706	367	1.08	3.47
Ha Nam	134	212	318	358	224	1.67	2.12
Nam Dinh	404	555	714	777	373	0.92	3.53
Ninh Binh	251	365	433	455	204	0.81	1.93
Red River Delta	8884	11678	15998	19457	10573	1.19	100.00
Vietnam	42288	51680	62908	72012	29274	0.69	276.88

Source: GSO (2005a)

The trade openness indicator, which is the ratio of the total exports and imports to the GDP, shows that Vietnam is opening more to the international market. The indicator increased in the period 1990 – 2004 with the rate increasing substantially in the period 1998 – 2004 (Figure 3-48).

Figure 3-48. Trade Openness of Vietnam 1990-2004



Source: The Study team's calculation based GSO (2005a)

(5) Impact of the Program in Transport on Regional Economic Growth, the Mitigation of the Economic Gap and the Transition to a Market Economy System and Internationalization

There are several factors contributing to regional economic growth. It is not easy to say exactly how much the contribution of the Program accounts for. Based on the assumption that if the two Yen loan projects (i.e. Highway No.5 and Hai Phong Port) had not been implemented, FDI to the region would have been at 10% of the total registered amount, JBIC (2003) concluded that the impact on the economic growth of the Red River Delta of the two Yen loan projects, growth without the indirect effect of FDI promotion, was 0.8% in 2002[16].

Using the analytical framework explained in Figure 1, the following examines how the Red River Delta Transport Development Program had an impact on regional economic growth, the mitigation of the economic gap and the transition to a market economy. The process is emphasized more than the impact. The impact level including that of businesses and local governments measures how important the Program in particular, and regional transport network in general, is to business and economic development.

a) Development of the Transport Network in the Red River Delta and the Role of the Program

The investment in transport in Vietnam increased both in absolute and relative figures. It increased from 1.8–2% of GDP in period 1996–2000 to 2–3.5% of GDP in period 2001–2005. ODA accounts for 50–55% of the total investment in transport in the period 1996–2000 and about 30–50% in the period 2001–2005. Japan is the biggest ODA provider of Vietnam for transport (Doan, 2005).

The Red River Delta is a priority target area for Japan's ODA in the transport sector. The list of selected projects under the Program to provinces in the Red River Delta is as below (Table 3-15).

Table 3-15. Selected Projects under the Program of Provinces in the Red River Delta

Province	Name of Japan's ODA projects in the Program
Ha Noi, Hai Duong, Bac Ninh	Highway No.5 Improvement project (1) (2) (3), National Highway No.18 improvement project (1) (2)
Hai Phong	Highway No.5 Improvement project (1) (2) (3),, Binh Bridge Construction project, Hai Phong port Rehabilitation project (1) (2)
Hung Yen	Highway No.5 Improvement project (1) (2) (3)
Nam Dinh, Thai Binh, Ninh Binh	National Highway No.10 Improvement project (1) (2)
Ha Tay, Ha Nam, Vinh Phuc	No project under the scope of the Program

[16] We think that 90% of FDI reduction may be too high. In addition, even if JBIC had not granted the loan, the Vietnamese government would have found other funding one way or another. The problem is that the time for conducting projects would be probably longer.

b) Process of the Impact of Japan's ODA on GRP of the Red River Delta

- Role of the Program in the Attraction of FDI to the Red River Delta.

The improvement of the transport network in the Red River Delta has brought benefit to all investors. There is no doubt that it is easier for investors to run their businesses. In terms of FDI attraction, several factors need to be mentioned as motivators for foreign investors to come to a province in Vietnam. These include an improved infrastructure network, an improved transport network, positive assistance from local authorities, the abundance of natural resources, the availability of semi-skilled human resources, and cheap labor.

FDI to Red River Delta is shown in Table 3-16. Ha Noi, Hai Phong and Hai Duong, which are direct beneficiary provinces of projects on Highways No5, No.18 and Hai Phong port account for the largest share of FDI to the region. Vinh Phuc, Hung Yen, Ha Tay, Bac Ninh, neighbors of Ha Noi, are also emerging as favorable FDI destinations. The lowest FDI receiving group consists of Thai Binh, Ha Nam, Nam Dinh and Ninh Binh, which are not directly linked with most of Japan's ODA Programs.

Table 3-16. FDI to the Red River Delta 1988-2004

No	Province	No of projects	Total investment (Mill. USD)	Implemented investment (Mill. USD)
1	Ha Noi	687	9965.1	3942.4
2	Vinh Phuc	85	724.6	444.3
3	Bac Ninh	35	224.3	151.5
4	Ha Tay	51	641.8	291.8
5	Hai Duong	77	649.2	374.0
6	Hai Phong	204	2243.2	1251.7
7	Hung Yen	49	203.0	118.3
8	Thai Binh	17	39.8	5.1
9	Ha Nam	6	10.0	5.9
10	Nam Dinh	17	92.1	14.0
11	Ninh Binh	11	91.2	12.2
	Red River Delta	1239	14884.3	6611.2
	Vietnam	6164	59847.9	3006.5

Source: GSO (2005a)

The Program in transport plays an important role in attracting more FDI and domestic investment in the region.

Table 3-17. Role of RRD's Transport Network on Investment Decisions of Enterprises

(Unit: %)

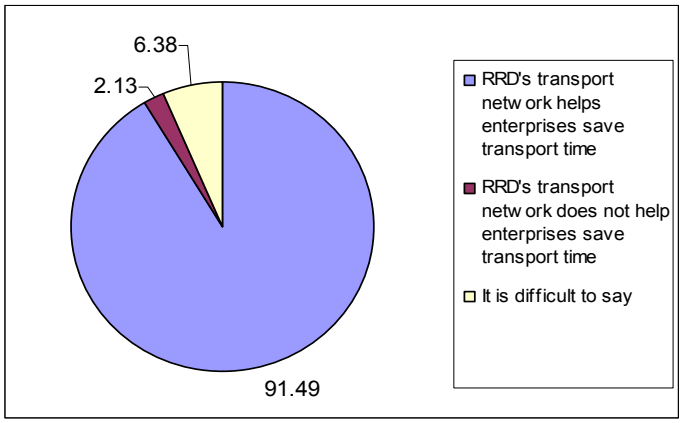
	Agree	Disagree	Difficult to say
Advantage to invest in province	75.4	24.6	
Invest to province because of transport network improvement	56.2	7.8	36.0

Source: Survey's result

- Role of the Program in the Reduction of Transport Cost and Time in the Red River Delta and the Predictability of Transport Time

The road transport cost is determined by oil price, the quality of roads, transport time, etc. For instance, even though Ha Tay is next to Ha Noi, it is difficult for transport containers to use the national roads in the daytime. Since the price of oil is increasing nowadays, it is not wise to analyse the changes in transport cost. Therefore, we examined both the cost and the time of transportation in the Red River Delta. The transportation cost is generally about 5% of a company's total cost in the region. There are, of course, exceptional cases like express delivery services or the tourism industry of which the transport cost is 30–35% of the total cost. The time of transportation in the region can increase. The explanation for this lies in the policy of speed control and the time that trucks can take to go in and out of cities. For example, the transport time from Lang Son to Ha Noi and vice versa for container trucks is 3 hours in the nighttime and 6 hours in the daytime. In the daytime, it is rare to see trucks on Highway No.1 (Ha Noi - Lang Son – Ha Noi) since transport companies are reluctant to use their trucks in the daytime due to speed control. It is quite easy to say how long it takes to deliver commodities from one place to another place in the region. For instance, a garment company in Hai Duong emphasized that a good transportation network in the Red River Delta had ensured the flow and time of the distribution of commodities and basic construction materials.

Figure 3-49. Role of the Red River Delta's Transport Network in the Reduction of Transport Time



Source: Survey's result.

Some answers suggested that the predictability of transport time in the region had helped companies in their operations.

- Role of the Program in the Better Allocation of Resources

The development of the transport network in the Red River Delta helped companies to gain access to natural resources and recruit labor more easily. However, the linkage of the transport network access to capital was low (Table 3-18).

Table 3-18. Role of the Red River Delta Transport Network on the Better Allocation of Resources for Enterprises

Unit: percentage

	True	False	Difficult to say
Easier to get access to natural resources	75.5	2.1	22.3
Easier to recruit labor	77.8	2.2	20
Easier to get access to capital	47.1	6.9	46.0

Source: Survey result (2005)

The improvement of Highway No.1 is most important in the better allocation of resources. This is followed by the improvement of Highway No.5 and the rehabilitation of Hai Phong port. The role of each project under the scope of the Program to enterprises differs from one to another according to the location of enterprises in the region. For example, the rehabilitation of Cai Lan port is more important to Thai Binh than to other provinces while the improvement of Highway No.10 and Highway No.18 is more important to Hai Phong, Vinh Phuc, and Ninh Binh than to other provinces.

- Role of the Program in Market Expansion

Most projects under the scope of the Program are considered important to the intra-regional trade, inter-regional trade and international trade of the region with the degree of importance ranging from important to very important and extremely important[17].

In terms of intra-regional trade, Highway No.5 is extremely important for the Red River Delta region with 100% of the valid answers ranging from "important" to "very important" and "extremely important". The degree of importance is increased for Cai Lan port, Highway No.18, Hai Phong port, Highway No.10 and Highway No.1 (Table 3-19). The degree of importance of each project under the Program to provinces in the Red River Delta is different from one to another due to the link with each project under the Program. For example, Highway No.5 is less important to Ha Tay and Ha Nam than to other provinces in the region. Highway No.10 is less important to Bac Ninh than to other provinces in the region. Highway No.18 is less important to Ha Nam and Ninh Binh than to other provinces.

[17] It will be more comprehensive to show concrete statistical data on growth of intra regional trade and inter regional trade of the Red River Delta. The team had discussions with the General Statistical Office (GSO) and the Ministry of Trade (MOT). However, the data is not available in any official statistics.

Table 3-19. Importance of the Program to Intra-Regional Trade of the Red River Delta

Project	Average importance score	Percentage of answers "important", "very important" and "extremely important"	Percentage of answers "very important" and "extremely important"
Highway No.5	4.25	100.0	85.0
Highway No.10	4.04	93.4	77.6
Hai Phong port	4.04	92.2	76.6
Highway No.1	4.02	94.0	76.2
Highway No.18	3.70	89.9	60.9
Cai Lan port	3.30	79.4	49.2

Source: Survey's result

In terms of inter-regional trade between the Red River Delta and other regions, Highway No.1 is the most important followed by Highway No.5, Highway No.10, and Highway No.18 (Table 3-20). Provinces like Ha Nam, Ninh Binh, Ha Tay benefit less from Highway No.5, Highway No,10, and Highway No.18.

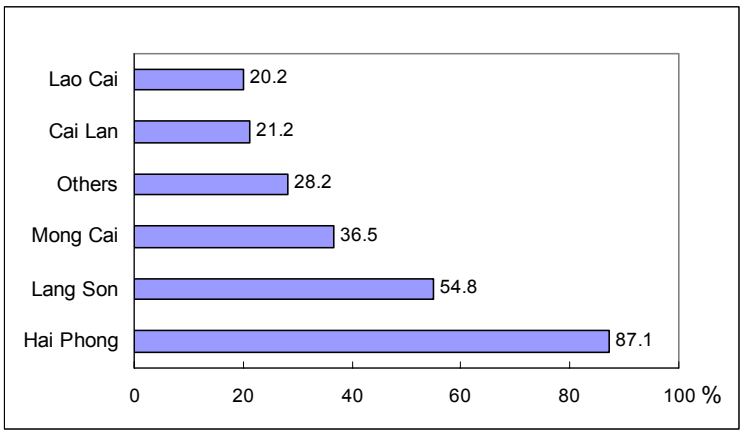
Table 3-20. Importance of the Program to Inter-Regional Trade of the Red River Delta

Project	Average importance score	Percentage of answers "important", "very important" and "extremely important"	Percentage of answers "very important" and "extremely important"
Highway No.1	4.36	97.5	85.2
Highway No.5	4.06	97.5	76.2
Highway No.10	4.00	91.9	73.0
Highway No.18	3.86	94.4	68.1
Cai Lan port	3.54	82.5	57.1
Hai Phong port	4.28	93.4	50.0

Source: Survey result.

In terms of international trade of the Red River Delta, the Program has contributed to the development of import – export activities by the enterprises' use of Hai Phong port, Highway No.5 and Lang Son border gate (Figure 3-50 [18]). This is especially so for companies in Ha Noi and Hai Phong which accounted for around 82% of region's export (Appendix 6).

Figure 3-50. The Use of Export-Import Gates of Enterprises in Red River Delta



Source: Survey's result.

- Role of the Program in the Concentration of Production, the Specialization and Differentiation of Production

Companies are reluctant to discuss their business strategy. This leads to difficulties in examining the process of specialization and differentiation. However, the importance of the transport network in the specialization and differentiation of enterprises in the region ranged from "important" to "extremely important" (Table 3-21).

Table 3-21. Importance of the Red River Delta's Transport Network to Specialization and Differentiation

	Average importance score	Percentage of answers "important", "very important" and "extremely important"	Percentage of answers "very important" and "extremely important"
Specialization	3.61	88.4	58.1
Differentiation	3.28	79.0	48.1

Source: Survey result.

The establishment of industrial parks and industrial clusters is considered an effective tool to attract FDI and domestic investment (Table 3-22), especially for Hai Phong port, Highway No.5, Highway No.10 and Highway No.1. All industrial parks and many of industrial clusters are constructed along the highways under the scope of the Program or along roads that are easily accessible from national highways. Appendix 6 shows the industrial parks in Red River Delta.

[18] The most frequent routes for export used by companies in Ha Noi and Hai Phong are Highway No.5, Hai Phong port, Highway No.1 (Ha Noi – Lang Son). Enterprises in Quang Ninh province use Hai Phong port less for export – import activities. Nam Dinh, Ninh Binh, Hai Duong, and Hai Phong use Lang Son less for export – import activities than other provinces in the region. Cai Lan port and Lao Cai border gate are less important for the export – import activities of the region. Mong Cai is mostly used by Quang Ninh and Thai Binh.

The success in attracting FDI to an industrial park is derived from not only the industrial park's accessibility to national highways but also to other factors like policy and attitude toward investors, etc (Appendix 6).

Table 3-22. Importance of the Program to Investment in Industrial Parks

Project	Average importance score	Percentage of answers "important", "very important" and "extremely important"	Percentage of answers "very important" and "extremely important"
The whole RRD transport network	3.94	94.1	72.9
Hai Phong port	3.97	91.2	79.4
Highway No.5	3.71	87.3	63.5
Highway No.10	3.64	84.1	61.9
Highway No.1	3.63	81.7	57.7
Highway No.18	3.22	68.5	40.7
Cai Lan port	3.02	61.5	36.5

Source: Survey's result.

- Role of the Program in the Development of Core Centers

Ha Noi and Hai Phong are clearly core growth centers in the Red River Delta. Ha Noi is the most important locomotive for the development of the Red River Delta. Officials and businesses in the Red River Delta specified that closeness to Ha Noi is an advantage for provinces in Red River Delta.

The GRIPS Development Forum (2003) concluded that the four industrial parks in the Red River Delta, consisting of 3 industrial parks in Ha Noi (Thang Long, Noi Bai, Sai Dong) and 1 industrial park in Hai Phong (Nomura Hai Phong) account for 85% of entire FDI to Northern provinces at mid-2003 (p7).

The Program is directly linked to these two cities. It creates more favorable conditions to attract FD and to develop export – import activities.

Table 3-23. Ha Noi and Hai Phong in the Red River Delta in 2004

Indicators	Degree of importance
GRP share of Red River Delta (%)	46.5%
GRP growth rate	second to Vinh Phuc and Bac Ninh
Share of FDI attraction in total FDI to Red River Delta (%)	82.0%
Direct export share of Red River Delta (%)	81.9%
Links to Japan's ODA Program in transport	Strongest
Importance of industrial parks in attracting FDI to industrial parks in the region	Most important
Percentage of acting enterprises in the region	75%

Source: GSO (2005b) and Survey result.

- Role of the Program in the Mitigation of the Economic Gap

The GRIPS Development Forum (2003) argued that there are three channels of pro-poor growth including direct channels, the market channel and the policy channel (p1-2). ODA in transport can play an important role in all of three channels.

The Poverty Task Force (2003), examining Ha Tay and Hai Duong, argued that the improvement of infrastructure including roads, irrigation, schools, market places and electricity lines has led to an improvement in production capacity and access to markets. It shows the rank of factors which contribute to poverty alleviation. However, in descending degree of importance is reform policy, crop diversification self-employment, job creation opportunities, available credit and improved knowledge and skills. The report also mentioned that "the standard of living has continuously improved" and "poverty has widely decreased" (p1).

JBIC (2003) shows that poverty reduction was remarkable in Red River Delta in the period between 1998 and 2000. It found that "four of five provinces[19] where poverty was dramatically reduced are located in the growing east-west corridor" (p62). It argued that (i) economic growth led to poverty reduction and (ii) Highway No.5 and Highway No.18 had played their role in the process of poverty reduction.

We agree that the Program has facilitated the economic growth in the Red River Delta and reduced poverty in the region. The Red River Delta has achieved remarkable results in poverty reduction through the contribution of Japan's ODA Program in transport. Even though there is little evidence to prove that the economic gap has been reduced between North and South, it is possible to say that the economic growth rate in the South is faster than in the North. The Program has contributed to the economic development of provinces in the North. The assistance plays a positive role in not widening the economic gap between North and South. Since there are several factors contributing to economic growth and the economic growth rate, it is reasonable to guess that there are negative factors widening the economic gap between North and South.

- Role of the Program in the Transition to a Market Economy

MPDF (2004) shows that the development of the private sector in Vietnam has been favored by various conditions. These are infrastructure, market demand, the availability of and access to resources and governance such as the establishment of the Enterprises Law, the implementation of licensing, land clearance, etc.

The Program is only one of the factors to facilitating the development of the private sector including registration and actual operating. It does not directly assist Vietnam in the transition to a market economy but it has positively contributed to economic growth and poverty reduction. Therefore, it is difficult to show a direct linkage between the Program and the transition to a market economy Vietnam. However, economic growth itself is an important factor in encouraging the development of the

[19] The five provinces are Ha Noi, Vinh Phuc, Bac Ninh, Ninh Binh and Hai Duong.

private sector, which is an important indicator of the transition to a market economy. A review of Japanese projects to directly help Vietnam in the transition to a market economy and internationalization is provided in Appendix 6.

(6) Case Study: The Impact of Japan's ODA Programs on the Development of Trade and Economic Activities between Vietnam and China

It is worth to emphasizing that Japan's ODA Programs have positively contributed to economic development including the trade and FDI activities of Vietnam. It is also necessary to point out that Japan's ODA Program in transport is not wholly directly linked to China. Currently, China is not the most important FDI source and trade partner of Vietnam. It ranks 14 over 71 in terms of FDI registered capital (MPI, 2005) and accounts for around 12% of the total trade of Vietnam (Author's calculation based on GSO, 2005a). Since the Red River Delta is close to China, Japan's ODA Program may have some impact on the FDI and trade activities between Vietnam and China. It can be argued that even if the transport network is not good, Chinese commodities still flood into Vietnam.

a) Chinese FDI to Vietnam and the Red River Delta

A Chinese FDI Garment Company in Red River Delta.

Chinese FDI has come to 44 provinces in Vietnam up to 31 August 2005. Industry accounts for 71.4% of projects and 59.6% of total investment (MPI, 2005). The five provinces Ho Chi Minh city, Ha Noi, Hai Phong, Quang Ninh and Dong Nai account for 44.3% of projects and 53.5% of the total investment. The location of choice for Chinese investors is the northern provinces. In terms of projects, the top ten provinces, to which Chinese FDI comes, are the northern provinces and Ho Chi Minh city (Appendix 6).

Chinese FDI has come to 10 out of 11 provinces in the Red River Delta. Chinese investment in the Red River Delta as well as in the Northern provinces is concentrated on industry. Even though 5 provinces in the Red River Delta are on the list of the biggest 10 destinations of Chinese FDI to Vietnam, Chinese FDI to the Red River Delta is relatively scattered and small compared to FDI to the region (Appendix 6).

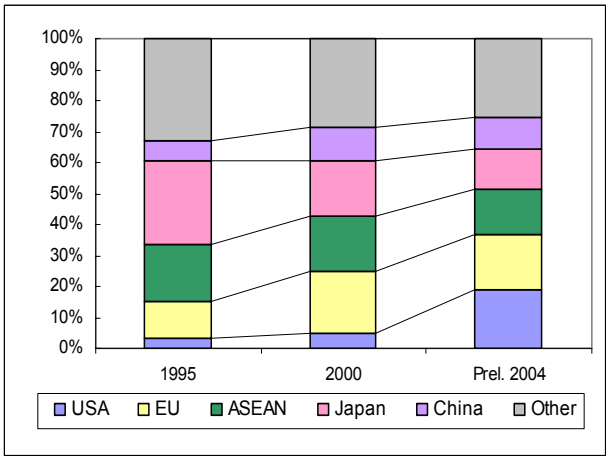
b) Vietnam-China Trade Relations

Over the last 10 years, Vietnam's export value has increased almost 500% with more diversification in the non-Asian market. The biggest export markets of Vietnam in 2004 were the USA and EU. In 1995, ASEAN, Japan and China accounted for 52% of Vietnam's export while the figure was less than 37% in 2004. ASEAN, Japan and China, in turn, accounted for 18.3%, 27% and 6.6%. These figures were at 14.3%, 13% and

10.3% in 2004. *China is the only country in East Asia of which shares in Vietnam's total export increases* (Figure 3-51). However, the absolute figure is still small (Appendix 6).

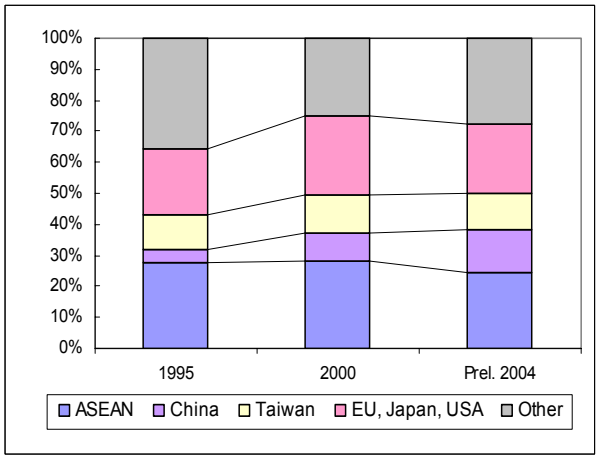
Vietnam's import value tripled during the period between 1995 and 2004. ASEAN, China, Taiwan, Japan and EU are the main import markets of Vietnam. China showed increases in both absolute and relative numbers (Figure 3-52). Vietnam's main commodities of export and import with China are shown in Appendix 6.

Figure 3-51. Vietnam's Export Market 1995 - 2004



Source: The Study team calculation based on GSO (2005a) and GSO (2005b)

Figure 3-52: Vietnam's Import Market 1995 - 2004



Source: The Study team calculation based on GSO (2005a) and GSO (2005b)

c) Red River Delta Trade Relations with China

The table below features the export – import activities of the Red River Delta with China.

Table 3-24. Features of Red River Delta Export-Import with China

Province	Export	Import
Ha Noi	7% of Ha Noi's export pepper, coffee, salted cattle skin, shelled ground nuts, aquatic products	yarns, fertilizers, motorcycles
Hai Phong	10% of city's export aquatic products, agricultural products, pepper, cashew nuts.	55% of total city's import auxiliary materials for garments, auxiliary materials for footwear
Hung Yen	rice, dry longan, litchi	motorbike accessories, iron and steel, fabric, fruit
Vinh Phuc	agricultural products (tea, snakes, fruit)	40% of province's import motorcycle's accessories, input materials for producing cattle's food.
Bac Ninh	12% of province's export anise flowers, cinnamon, logan fruit, bamboo products	16% of province's import machinery and equipment, steel, iron, motorcycles, car, plastic, seeds
Hai Duong	12% of province's export footwear, clothes, frozen pork, cucumbers, garlic, litchi	40% of province's import leather, fabric, chemicals, equipment for agricultural produce
Ha Tay	garments, bananas, bamboo products	acrylic fibres, medicaments, steel
Nam Dinh	30% of province's export aquatic products	30% of province's import iron and steel, medicaments, auxiliary materials for garments
Ninh Binh	coal, agricultural products	fabric, steel
Thai Binh	16% of province's export pork, aquatic products, rice, frozen shrimps, bamboo products	40% of province's import equipment, truck accessories, electronic home appliances, fertilizer, chemicals, steel
Ha Nam	agricultural products (litchi, pork, longan), peanuts	materials for garments, machinery and equipment

Source: Survey result (2005)

d) Impact of the Program on the Development of Trade and Economic Activities between Vietnam and China

Trade and FDI activities in the Red River Delta have been affected by the Program. Most of the projects under the scope of Program are considered important to the trade activities between the Red River Delta and China (Table 3-25). In descending order of importance projects under the Program are, in turn, Hai Phong port, Highway No.1, Highway No.5, Highway No.10, Highway 18, and Cai Lan port.

Table 3-25. Importance of Selected Projects in the Program to Export-Import Activities of the Red River Delta with China

Project	Average importance score	Percentage of answers "important", "very important" and "extremely important"	Percentage of answers "very important" and "extremely important"
Hai Phong port	3.78	83.6	63.6
Highway No.1	3.73	85.9	60.9
Highway No.5	3.47	80.7	52.6
Highway No.18	3.47	79.2	47.2
Highway No.10	3.50	84.8	47.8
Cai Lan port	3.10	69.2	38.5

Source: Survey result (2005)

Highway No.1 is less important to Hai Phong than to other provinces in facilitating trade relations with China.

Highway No.5 seems to be very important to Bac Ninh but less important to Nam Dinh, Ha Tay, Ha Nam and Hai Phong.

Highway No.10 is more important to Thai Binh, Nam Dinh and Ninh Binh.

Highway No.18 favors Bac Ninh, Nam Dinh and Hai Duong while it is less important to Hai Phong, Ha Noi, Ha Tay, Thai Binh, Ha Nam and Ninh Binh.

A truck delivering Chinese commodities to Vietnam at Lang Son province

e) Other Factors Contributing to the Development of Trade and Economic Activities between Vietnam and China

Interview to Chinese FDI Company in Lang Song Province

There are opinions that the impact was not large since there were other factors affecting trade and FDI relations between the Red River Delta and China. Together with the availability of natural resources, domestic demand increases and the improvement of the business policy environment, the improvement of the transport network in Vietnam is no doubt a critical factor in attracting FDI (not only from China). There are probably several factors affecting Chinese investment in Vietnam such as capital; geography; demography; and the Chinese

government's FDI policy orientation.

The first factor is geography. Vietnam is the neighbor of China, with the Red River Delta close to the Chinese border.

The second factor is related to history. Due to the collapse of Soviet Union in 1991, Vietnam shifted its export-import activities from the Soviet Union and Eastern Europe to other markets. This is an important decisive factor in the trade activities between Vietnam and China.

The third factor is related to policy orientation. For instance, the Chinese government's policy is to encourage Chinese outward FDI or the Chinese government promotes to develop natural resources including the import from abroad. As a result, Chinese FDI projects in exploiting mineral resources tend to gather near the Chinese borders.

Box 1. Transport network is just one factor among many affecting trade and FDI relations between China and Red River Delta

Garment A Co: Investors consider an acceptable infrastructure, good quality of labor and good leaders as attractive factors for FDI

Garment A is a Chinese FDI company in Hai Duong. It has factories in Tian Xin, Mongolia and Vietnam and sale agents in the USA and Hong Kong. In Vietnam, its choice of location is Hai Duong province. Its factory is not in any industrial park. The company said that province's leaders cared a great deal about business development. The company's management board is satisfied with the quality of Vietnamese labor which is hardworking. Garment A exports 100% to the USA and imports almost 100% of its materials from Hong Kong, China and South Korea. It uses Hai Phong port and the international airports of Ha Noi and Ho Chi Minh city for its export – import activities. The road between Ha Noi and Hai Phong is improved but still worse than Chinese roads.

Ha Tay province: a better transport network does not help increase Chinese FDI

FDI to the province is scattered and small. FDI companies rarely choose to invest in industrial clusters. Chinese FDI is relatively small in the province. About 70% of the province's exports are through Hai Phong port. In trade relations with China, the province mainly imports. China accounts for about 45% of the province's imports and 15% of the province's exports. Highway No1 is the most important road for the economic activities of the province. Chinese products are competitive since the price is low and the speed with which designs change is fast. According to an official at the Department of trade, Investment relations between Vietnam and China are not strongly affected by the transport network. Geography is more important than the transport network. Evidence suggests that even though the province has improved its transport network, FDI from China has not increased.

3-2-5 Impact on Capacity Building of Vietnamese Counterparts

It has been generally recognized that Japanese ODA has some impact on capacity building in the Vietnamese counterpart institutions and personnel. This evaluation survey intends to identify the contents and analyze the meaning of these impacts. This time, those Vietnamese professionals / engineers who participated in the Yen loan projects and the counterpart personnel in the JICA technical cooperation projects become the subjects of an extensive field survey. The methodology was analysis of data and information collected by questionnaires and interviews through / with Japanese contractors / suppliers, Vietnamese sub-contractors and then the counterpart personnel in the JICA technical cooperation projects.

Here, it is necessary to explain the general and fundamental reasons why human resource development is important for the grand management strategy of Japanese institutions especially private business companies. The basic characteristics of good Japanese institutions, especially world leader private business corporations, may be said to be as follows:

1) Concentration of management skill, know-how and other resources for integrated and long-term planning and manufacturing (construction) processes

2) Attainment of long term sustainability and low costs for goods and services through active application of most the advanced technology and know-how

3) Pursuit of "Quality Control" in the attempt to offer the best goods and services in the world and for the best management at manufacturing (construction) sites

These Japanese companies believe that the common acceptance of these basic principles and the mastery of advanced technology among all participants in projects / programs are prerequisite for what they call "genuine success" in construction, manufacturing and the provision of services. Human resource development on-the-job aims to understand these principles and to teach advanced technology on hand. This is regarded as an indispensable part of actual planning and implementation operations.

As described before in 3-1-3, the advantages recognized by the Vietnamese counterparts especially regarding Japanese professionals / engineers were as follows. These are most likely the personal reflection of the characteristics of the good Japanese corporations mentioned above.

1) Advanced technology, well qualified

2) Abundant international working experience

3) Professional, effective working manner

4) Special attention to quality

5) Eagerness for technology transfer

One major reason for the notable achievement in human resource development in Japanese ODA projects given by the Vietnamese counterpart institutions and personnel has been the willingness and ability of Japanese institutions and personnel. Nevertheless, the process could not have been successfully completed without an equivalent level of active participation on the Vietnamese side. On this matter, the response from Japanese institutions and professionals strongly indicated that there has been an eagerness and capacity among Vietnamese counterpart institutions and personnel to learn advanced technology, management skill s and know-how from Japanese side.

The following is a summary of responses from Japanese and Vietnamese companies from the results of related questionnaires and interviews. The answers about the impacts on capacity building for Vietnamese professionals could basically be divided into six categories.

From the viewpoints of the Japanese consulting firms, contractors and technical experts, improvement in technical skill and know-how among Vietnamese engineers / professionals have been very remarkable due to their joint efforts. This result was confirmed by the responses from the Vietnamese personnel concerned. The Japanese side also praised the improvement in long term and comprehensive planning and management skills and the know-how of the Vietnamese counterpart institutions.

It is clear now, mainly due to the joint efforts between the Japanese and Vietnamese institutions and personnel concerned, that Japanese ODA projects as a whole have created a certain level of not only technical but also business morale amongst Vietnamese engineers / professionals through education / training in technical cooperation projects and the on-the-job-training in Yen loan projects.

Figure 3-53: Summary of Responses from Japanese Consulting firms and Contractors

Figure 3-54: Summary of Responses from Vietnamese Counterparts and Sub-contractors

3-2-6 Social and Environmental Impacts

Although this study focuses on the analysis of economic impacts, , for a comprehensive approach and based on the desk review of related existing studies, social impacts including environment, gender, and traffic safety are also discussed with relation to the most critical issues.

(1) Impact on the Environment

a) Roads Development and Air Pollution

- Hazardous Emissions from Transport Vehicles

Together with the process of industrialization and urbanization, the number of motorized vehicles has increased dramatically, particularly in urban areas. Before 1980s, 80 – 90% of urban people used bicycles, at present, 80% of urban peoples use motorcycles. Emissions from transportation have become a major source of air pollution in urban areas. In the Red River Delta area, large cities such as Hanoi and Hai Phong are seriously affected by emissions from vehicles. The rapid growth of the automobile and motorcycle fleet has contributed substantially to air pollution, in the form of lead and fine particles.

The sharp increase in the vehicle fleets also generates traffic congestion and causes air pollution in the large towns. In Hanoi or Hai Phong, traffic congestion, which is common at several intersections, is the main source for serious air pollution. Very often, numerous old vehicles in narrow and poor roads at many intersections cause a disorder in the traffic flow. In such situations, vehicles frequently change speed or idle for long periods, emitting harmful pollutants such as CO, SO_2, NO_x, HC_s, lead and dust at rates that exceed the permitted level. It has been monitored that the concentrations of CO, SO_2, NO_2, SPM and Pb have increased recently at some intersections. Lead concentration in urban air at some of the large crossroads in cities is approximately equal to the maximum permitted

standard (0.005 mg / m^3)[20].

Vietnam phased out leaded gasoline in July 2001, with a correspondingly decreased lead content in the air. Yet, while shifting to unleaded gasoline, Vietnam faces the risk of benzene pollution, as benzene is the compound added to gasoline to replace the lost octane-boosting effects of lead. The benzene content in gasoline may greatly increase unless appropriate solutions are found to ensure the importation of low-benzene-content gasoline or the use of catalyst transformers is made mandatory.

Scientific research shows that vehicle emissions contribute to serious health and environmental effects. HCs, benzene, PAH, heavy metals (mostly Pb and Cd), and SO_2 are the emissions that mainly affect the environment and human health. These pollutants can cause several diseases, including respiratory system diseases (from dust, $PM_{10,}$ CO); nerve disorders; cancer (from benzene, PAH, Cd), and blood disease (from Pb). Their impacts on the environment are considerable, and include contributions to the greenhouse effect, acid rain (SO_2, NO_x), and dust pollution (TSP)[21].

b) Dust and Noise caused by Transportation

The vehicles and the industrial establishment scattered in residential areas also damage the environment in the form of dust and noise. The noise level at night in urban areas is approximate or less than 70 dBA, but during the day, it is higher than 70 dBA; in some cases it probably reaches 90 dBA. Noise level is worse in locations near highways, and reaches to 83-85 dBA on some major traffic routes in large cities such as Hanoi, and Hai phong.

In most urban areas, the air environment is heavily polluted by dust. Dust concentration in the air exceeds the standard limit by 1.3 to 3 times. Along the highways, the situation is the same or at times even worse. Due to the high speed and large number of vehicles, noise and dust are two of the most serious pollution problems on Highway 5. Households on both sides of the road complain about these. On a highway, noise is a problem all day and night. Not only noise, but many trucks also create vibrations for the houses along the way.

c) Marine Environment

Waterway transportation causes water pollution, particularly in harbors, estuaries and coastal areas. The rapid increase in navigation in coastal areas has had a corresponding increase in the quantity and categories of pollutants in the marine environment, thus degrading marine resources, particularly in the coastal areas of North and South Vietnam. A concentration of pollutants is increasingly being detected in the area. Many coral reefs have died and bleached in Bach Long Vi, Cat Ba and around other islands in Quang Ninh province. Oil content is close to the acceptable limit. There has also been a perceptible decline in the fishery yields in coastal areas[22].

[20] Vietnam Register (2002)

[21] Vietnam Register (2002)

[22] MoSTE (2001)

(2) Impact on Gender

The development of the road system in Red River Delta area has created numerous chances for women. The shortened traveling time has made people, including women, more able to access various kinds of services such as health, education, etc. The most convincing impact is the occupational change that helps women to generate more income. While lessening the available cultivated land area which yields a modest income, road system development enables provinces to attract more FDI and domestic investment through the establishment of industrial parks and industrial clusters and this in turn has made people shift to non-agricultural industries from which they are paid higher[23].

Women influenced by the upgrade of the road system are divided into two large groups. Young women, less than 25 years old, make up the first group. The young have thousands of recruitment opportunities at new established enterprises which are mainly in labor intensive industries such as textile and garment, footwear, food processing, etc. Many also migrate to urban areas for higher income jobs in the trade or service sectors. Elderly women, making up the second group, are the persons with the dual responsibilities of housework and income generating. They tend neither to migrate nor enter enterprises. They shift to higher cash crops, extend their husbandry and cultivation of vegetables. The developed road system either helps their products to access markets more easily or in many cases brings more purchasers to them.

In general, the development of the infrastructure has brought more opportunities with more income for women. Yet if women were more qualified, skillful, educated, and more oriented to the specific needs of enterprises, they would gain much more. Unfortunately, at present, there are few such workers available in the provinces. Therefore, entrepreneurs have usually to employ qualified staff from urban areas, making use of the shortened traveling time from the cities to the local provinces.

The economic changes supported by the development of the infrastructure systems have thus affected the status and roles of women, both economically and socially. Women earn more and have an extended social environment. The new occupations have brought new opportunities for women, turning their potentiality into capability, at the same time requiring women to improve their knowledge and skills. New occupations have brought them not only higher income but also the extended exercise of social rights.

(3) Impact on Traffic Safety

a) Overall Situation

According to WHO, traffic accidents were the ninth leading cause of disease burden globally in 1998, fifth in the high–income countries and tenth in the low and middle–income countries. For adult men aged 15 – 44, road traffic accidents are the single largest cause of ill–health and premature death worldwide, and the second largest in

[23] According to Vietnam Economy dated December 7, 2005, 60% of laborers working in industrial parks and industrial clusters are women.

developing countries[24].

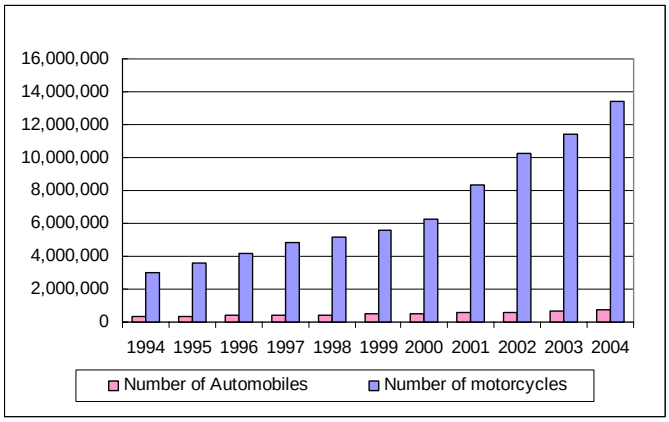
In such a context, traffic safety has become of high priority for the Government of Vietnam. Paradoxically, while there has always been strong commitment on the part of the Government and of the line ministries and agencies to traffic safety in Vietnam, it has markedly increased over the last decade, in reaction to a more than 95% contribution of road accidents'[25], at the cost of at least 2% of the national GDP[26].

b) Road Accidents, Causes, and Critical issues

- Registered Number of Road Vehicles in Vietnam

Motorization has increased in Vietnam during the last 10 years, along with economic and social development. The following figure shows the dramatically increasing trend of road vehicles in Vietnam through 2004. For better or worse, the motorcycle has rapidly replaced the bicycle as the daily mode of transportation and is now viewed as the customary mode of family transport. Few families own cars. However, the growth rate of automobiles over the last 5 years has been twice more than that of motocycles' and will maintain this pace for the coming years. Figure 3-55 shows the dramatically increasing trend of road motorized vehicles.

Figure 3-55 Number of Road Motorized Vehicles in Vietnam (1994–2004)

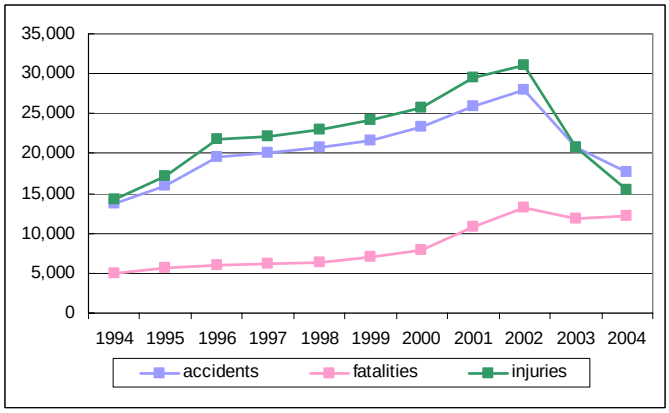


Source: NTSC

- Trend of Road Accidents

As shown in Figure 3-56, the number of accidents, fatalities, and injuries sharply increased from 1994 up to 2001. From 2002 to date, there has been a decreasing trend in the number of accidents and injuries. Unfortunately, this does not apply to the steadily increasing number of fatalities.

Figure 3-56 Trends of Accidents in Vietnam (1994-2004)



Source: NTSC

Traffic crashes occur more frequently in urban areas than in rural areas. However, rural crashes

[24] WHO (1999)
[25] MOT, JICA (2002)
[26] Bui L H, Chu H M (2001)

tend to be more severe. The Red River delta and the Mekong River Delta have the largest number of injury cases, of which Hanoi and Hochiminh City contribute the highest figure. Road network improvement and the increased traffic volume inevitably lead to higher numbers of traffic related injuries.

Regarding the traffic accident along NH No.5, the annual growth rate in the number of accidents and fatalities are higher than the national average during the period between 1999 and 2002 (Table 3-26).

Table 3-26: Comparison of Road Traffic Accidents along NH No. 5 and in Whole Country (1999-2002)

	1999	2000	2001	2002	Annual growth rate 1999 – 2002 (%)	Annual growth rate 2000 – 2002 (%)
NH No. 5						
a) Number of accidents	251	363	311	376	14.42	1.77
b) Number of injuries	137	160	90	108	-7.62	-17.84
c) Number of deaths	41	47	24	49	6.12	2.11
d) Deaths/ Accidents	0.16	0.13	0.08	0.13	-7.25	0.32
Whole Country						
a) Number of accidents	21,538	23,327	25,831	27,993	0.09	0.10
b) Number of injuries	24,179	25,693	29,449	30,999	0.23	0.29
c) Number of deaths	7,095	7,924	10,866	13,186	0.09	0.10
d) Deaths/ Accidents	0.29	0.31	0.37	0.43	0.13	0.17

Source: GSO (2000) and NTSC

One should bear in mind that the current reporting system greatly underestimates the occurrence and severity of crashes, as well as under-reporting the actual number of fatalities. Using mortality data collected at community level, there have been studies which show that, approximately, as confirmed by Viet Duc hospital, one third of road traffic injury victims brought to Viet Duc Hospital were so severely injured that they were taken home to die. Since they were alive when discharged from the hospital, they were not counted as fatalities. This phenomenon, "discharged alive to die at home", closely matches the amount of under–reporting of fatalities recorded by NTSC reports. This phenomenon happens in almost all hospitals in Vietnam, leading to a consequent serious underestimation of the magnitude of the road traffic injury epidemic in Vietnam[27].

- *Major Causes*

Major causes for all accidents are the road users themselves. Statistics show that 75-80% of road accidents were caused by road users who did not observe traffic rules and regulations, problems included speeding, dangerous overtaking, drunk driving, poor road observation, driver fatigue, and illegal motorcycle racing; only 1-2% of accidents were caused by structurally poor roads / bridges and unsafe vehicles.

[27] Road Traffic Injuries and Health Equity Conference (2002)

Table 3-27: Cause of Traffic Accident (Whole Country and NH No. 5)

Cause	Whole Country (2002)		NH No. 5 (1999 – 2001)	
	Number	Percentage	Number	Percentage
Speeding	5,299	33.8%	355	52.7%
Dangerous overtaking	3,699	23.6%	178	26.4%
Drunk driving	853	5.4%	5	0.7%
Encroaching lane	347	2.2%	8	1.2%
Lack of observation	1,965	12.5%	0	0.0%
Not keeping a safe distance	0	0.0%	99	14.7%
Falling asleep while driving	0	0.0%	22	3.3%
Pedestrians	395	2.5%	6	0.9%
Others	3,123	19.9%	0	0.0%
Total	15,681	100.0%	673	100.0%

Source: JBIC (2003)

As shown in Table 3-27, the dominant cause of accidents for road users of NH No. 5 is *speeding* (52.7%), followed by *dangerous overtaking* and *not keeping a safe distance*, the figures of which are considerably higher than the average rate for the country.

An indirect cause of accidents caused by road users the ineffectiveness of the ongoing education and propaganda on traffic safety. Campaigns on the enforcement of traffic laws and regulations are not enough to ensure a positive change in many young road users' aggressive driving behavior. The systems of driver training and licensing are also problematic. The quality of licensing education and the training necessary obtain licenses is often questionable as is the continuing existence of so many young licensed drivers with poor driving skills and low awareness of safety issues. Making the matter worse, although data are unavailable, is the quite large number of motorcycle riders without licenses, and the motorcycles with 50cc engines or less that do not require licenses.

Road infrastructure has not yet met the transport demand, especially for motorized vehicles. Road density per area and population is low, especially in urban areas. Transport flow on roads consists of a mixture of motorized and non-motorized vehicles, which operate at different speeds, leading to driver frustration and risk taking while overtaking. Certain roads are tortuous, with small radius bends and limited sight, also causing accidents[28]. Lack of fly-overs is also the cause of many accidents occurring with pedestrians.

- Critical Issues

Road traffic injuries are the leading killer of children and adolescents in Vietnam, affecting the most productive and economically active portion of the population with a social

[28] MOT, JICA (2002)

burden due to lost workdays, school days and residual disability.

A great deal needs to be done, especially with education and training, additional safety devices and other preventative approaches to the problem. Almost half of the population is in the 15 – 39 age range, in which people are resistant to the adoption of safe driving behaviors especially for motorcycles. Younger, male drivers who predominate exhibit typical aggressive driving everywhere, ignorant of other road users' safety. Behavioral change, as well as risk awareness/ risk reduction behavioral modification programs should be included in any national transportation safety policy, propaganda programs, and in driving schools' curricula.

c) Accidents in the Railway, Inland Waterway and Maritime Sub-Sectors and Critical Issues

- Railway Accidents

Of the total traffic accidents in the whole of the transport sector, railway accidents accounted for 1.5-1.6% in terms of crashes, 1.8-2.35% in terms of fatalities and 0.7-0.8% in terms of injuries. This data shows the relatively severity of railway accidents. The number of railway accidents is low but increasing[29]. The major causes for 50% of accidents are trains and rolling stock, many of which are out dated and in poor condition. Insufficient training for train operators, poor management, and the weak enforcement of related safety laws and regulations are important causes as well.

- Inland Waterway Accidents

Inland waterway accidents account for 1.5-2.0% of the total traffic accidents nationwide; however, human loss and property damage are severe. The average fatality is 0.65-0.8%person / accident. The Northern area, with only 35%share of the country's inland waterway transport vessel fleet, has 65% of the total accidents. The differences are partially due to the natural conditions of the North with fast current and complex channel conditions and the abundance of bridges.

A critical point regarding the figures of the inland waterway vessel fleet is not just the rapid increase in registered vessels, but also the high number of unregistered vessels that accounts of 20% of the total in operation. Many family-run inland waterway vessels remain uncontrolled and are not statistically assessed.

There is a clear link between uncontrolled vessels and the failure to keep track of vessel operators / drivers. More than 50% of captains / pilots of registered vessels do not have professional licenses as required under MOT regulations. Many of the captains and crew members therefore are untrained and poorly skilled.

Overloading, with about 50% of the total traffic responsible for safety violations, is one major cause of accidents. The situation is more severe with the existence of many outdated operating vessels under ineffective and irregular inspection and checks.

[29] MOT, JICA (2002)

- Maritime Accidents

The absolute figure of maritime accidents is relatively low with an average of 100 accidents per year. However, maritime accidents have increased by 10 – 15%in recent years. Again, the main causes lie in captains' mistakes (52%), and the poor condition of vessels (28.4%).

- Critical Issues to Resolve

Paralleled with infrastructure improvement, effort and investment should be made for education and training for the operators of the means of transport. Training should be provided not only in the contents of traffic laws and regulations but also in technical matters. Inspections and checks are very necessary to ensure the proper function of the means of transport, sufficiently equipped with safety devices.

d) Japan's ODA Approach towards Traffic Safety Issues

The increase of traffic accidents leads a social and economic loss. Japanese ODA related authorities in Vietnam have forecasted the possibility of the occurrence of drastic increase of traffic accidents on the highways since their construction stages. As the possibility became apparent reality, they have paid special attention on development of additional safety devices and preventive measures against the drastic increase of traffic accidents. Their recognition of danger on the highways and urgency for safety measures are commonly shared among other international donors. Thus, general road safety became priority issue for Japanese ODA that has promoted the infrastructure development in Vietnam.

With the consensus within the Government of Japan as the priority issue, JBIC and JICA have been performing leading roles for implementation of the preventive measures on road safety. After careful review of current situation of the highways, JBIC is adding safety devices to the constructed highways. It has also promoted the traffic safety campaign and education to the residents living along the highways. Furthermore, it is constructing land bridges (flyover) to avoid traffic congestion and accidents at the cross sections of major roads. JICA has already executed three experimental traffic safety promotion programs in Hanoi in 2003 and 2004 and thus proved to the Vietnamese authorities (Hanoi People's Committee, Ministry of Transport and others) that combination of those safety device, preventive measures and road safety education to the public are very effective for reduction of traffic accidents and enhancement of road safety. In 2006, both JICA and JBIC moved to next stage. JICA is preparing a large scale development study to develop comprehensive road safety plan in Vietnam. JBIC started preliminary survey which intends to formulate the Yen loan projects aiming at strengthening of road safety in Vietnam.

Also improvement of railways safety is supported through modernization of the existing railway facilities.

3-3 Appropriateness of the Planning and Implementation Process

3-3-1 Appropriateness of the Organizations involved in the Planning Process

In general, Japanese ODA has been planned, implemented and evaluated in response to official requests from the governments of recipient countries. This definition and practice has not changed in principle and has been exercised as a formal procedure. However, in order to identify development needs more accurately and quickly, preliminary surveys have been commonly used recently without there being a formal request and policy dialogue.

In case of the Program, these practical activities are extensively used over the years by the authorities concerned in both the governments of Japan and Vietnam. As the result, the exercise of timely preliminary surveys and frequent formal or informal policy dialogue have significantly contributed to a more accurate project formulation, efficient project management and then effective evaluation.

For the overall planning and implementation process of the Program, MOFA (and Embassy of Japan in Hanoi) represented the Government of Japan and became the counterpart agency of MPI in the development policy dialogue as a part of diplomatic activities and following the ODA procedure between the two governments.

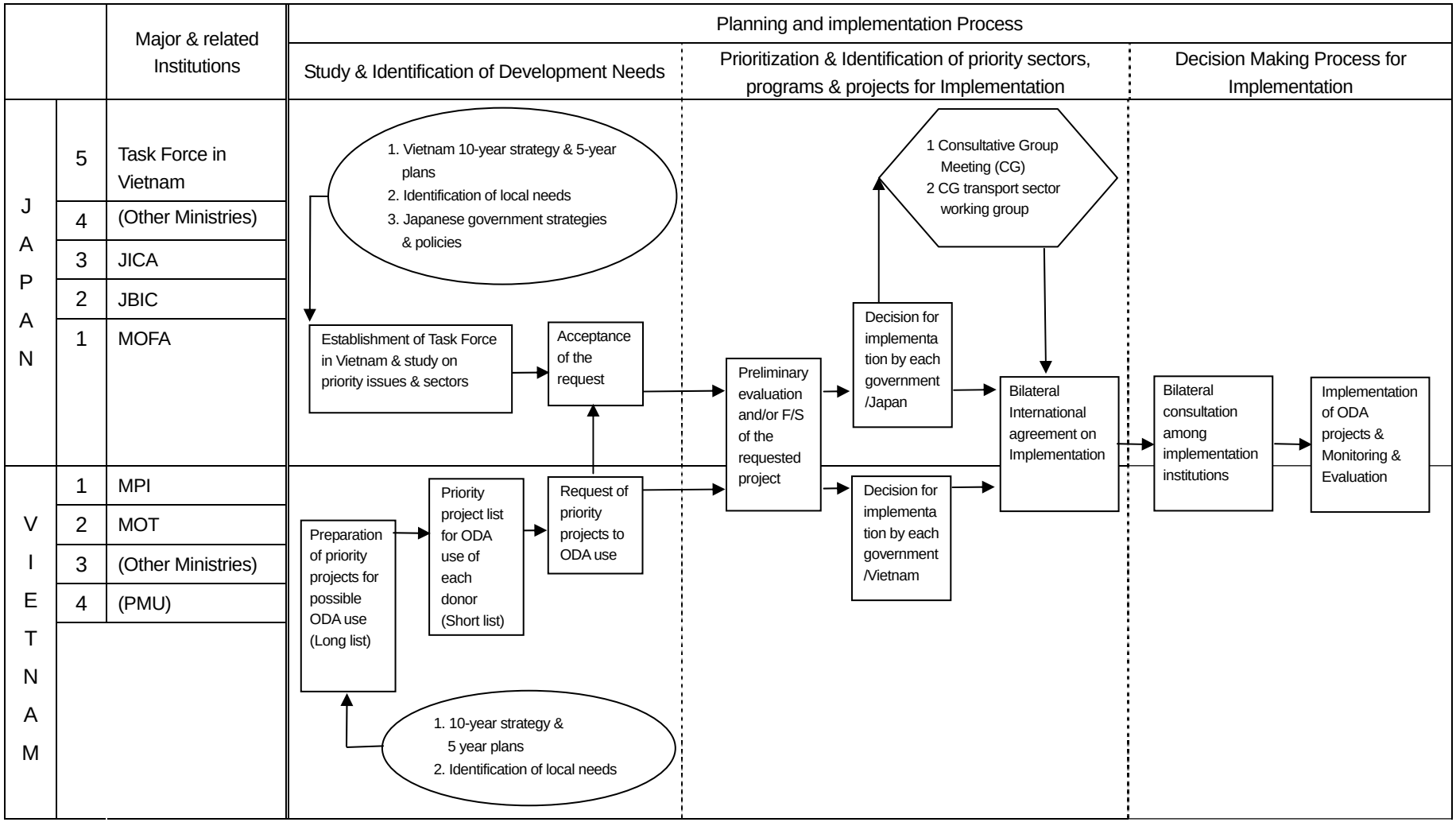
JBIC and JICA are the implementation institutions for each Japanese ODA scheme. JBIC is in charge of the Yen loan projects and led the implementation process. JICA is in charge of the development survey, technical cooperation projects and grant aid projects jointly with MOFA.

The Ministry of Planning and Investment (MPI) represents the Government of Vietnam for general ODA related international affairs with different donors. In addition, MPI is in charge of the overall planning, management and evaluation of ODA projects / programs within the Government of Vietnam. Thus, MPI conducts the difficult task of coordination among the domestic ministries and other institutions concerned.

Therefore, it is confirmed, through a review of previous official records and the responses from interviews, that the leading authorities concerned in both governments, namely MOFA, JBIC and JICA on the Japanese side and MPI on the Vietnamese side, have jointly made appropriate decisions and led the due administrative process for the successful implementation of the Program with good international coordination and cooperation.

The following figure is a general description of the roles of both the Vietnamese and Japanese organizations concerned and their interrelationship in the joint planning process for successful implementation.

Figure 3-57: The general Joint ODA Project Planning and Implementation Process



3-3-2 Appropriateness of Needs Assessment in the Planning Process

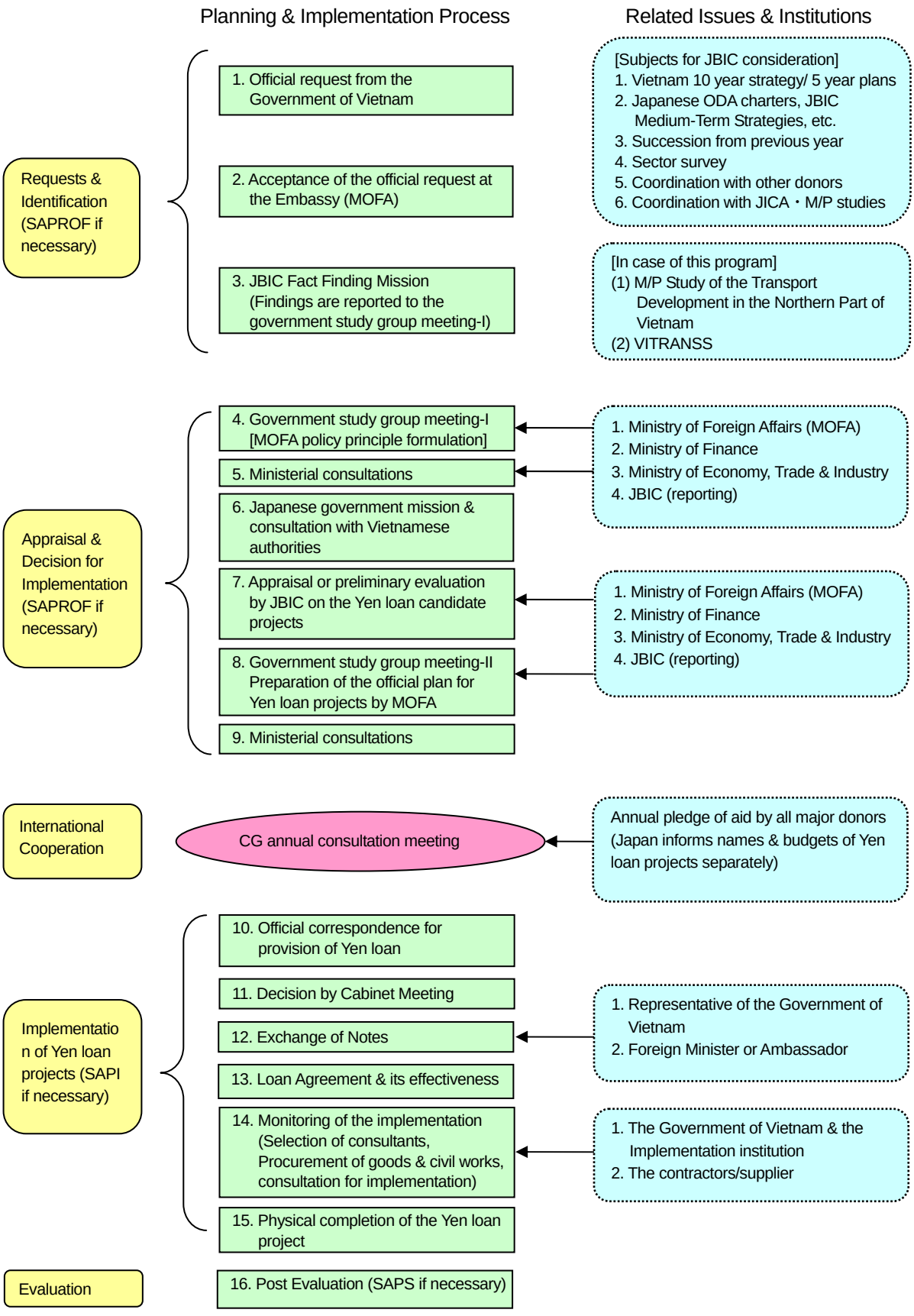
(1) Yen Loan Projects

JBIC is the implementation institution for the Yen loan projects. Since its commitment to Vietnam, JBIC has been concerned not only with the sphere of economic development but also with the general direction of national development of Vietnam.

First, JBIC checked the projects in a long list which was presented by the Vietnamese authorities, its concerns being the consistency with the basic development strategies and plans of both Japan and Vietnam. Second, JBIC together with ODA Task Force exchanged views on the target sector with Vietnamese authorities concerned and identified the priority issues and needs of the sector. Third, based upon the identified priority issues and needs the short list of candidate Yen loan projects was prepared and submitted by the Vietnamese government.

After careful review and analysis of the official records and extensive interviews with the JBIC staff on the Program and the Yen loan projects implemented, it is confirmed that JBIC followed the due administrative and field survey process for the identification of Vietnamese development aid needs and appropriately reflected them in the actual purpose and contents of each specific Yen loan project through the official planning and implementation process. The following process is the way in which JBIC analyzed the Vietnamese needs and reflected them into each Yen loan project.

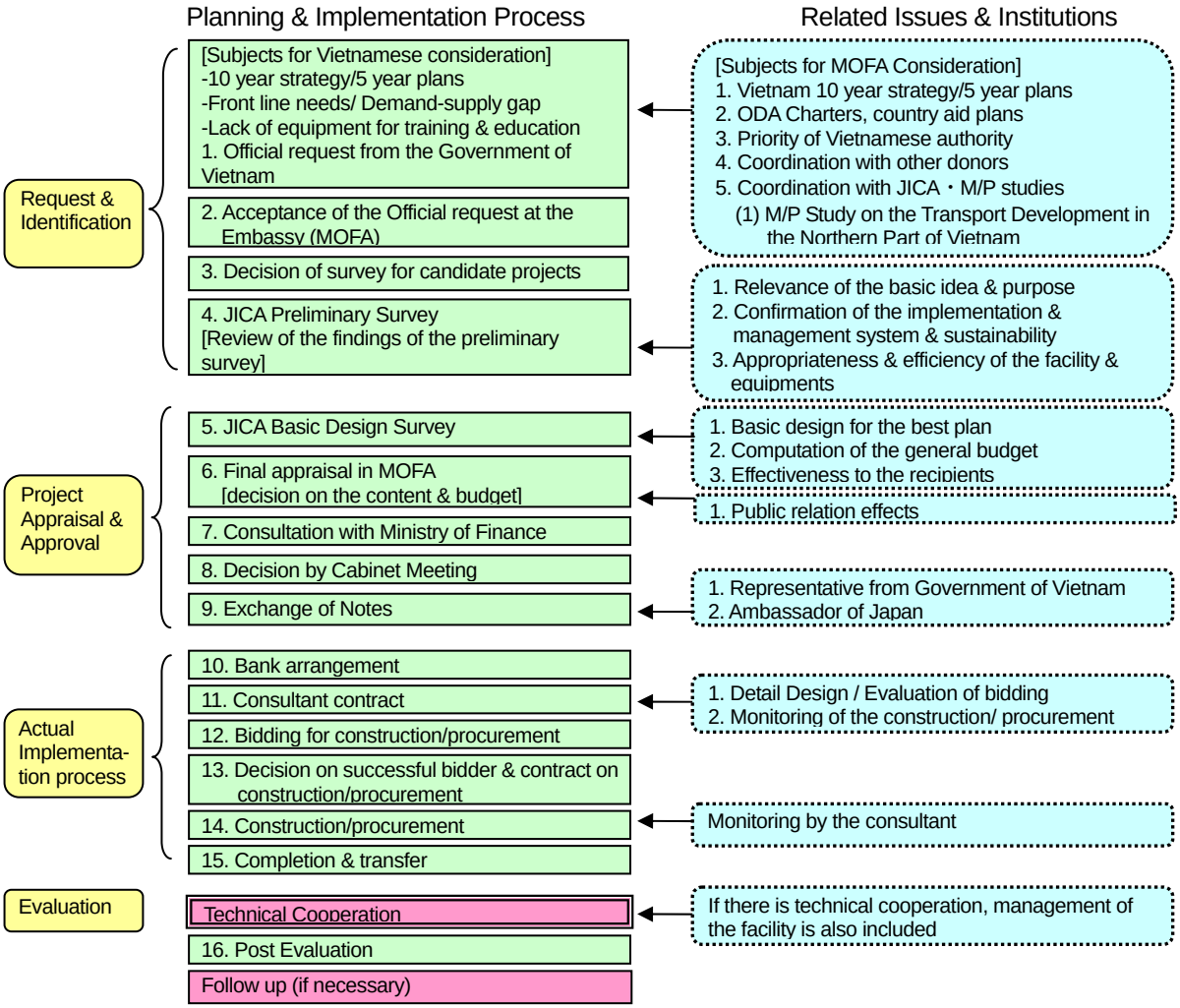
Figure 3-58: Yen Loan Projects



(2) Grant Aid Projects of the Ministry of Foreign Affairs (MOFA) and JICA

The Ministry of Foreign Affairs (MOFA) and JICA are responsible for Grant Aid projects. The initial step was the acceptance by MOFA of the official request from the Government of Vietnam. The needs assessment was very important in order that the purpose and the content of the requested project could be carefully examined by MOFA and JICA. The consistency with the basic development strategies and the plans of both Japan and Vietnam was also checked. The necessity and appropriateness of the requested facilities /equipments, capability of the execution organization and institutions was studied. Coordination with JICA master plan studies and/or other donors was also reviewed. If necessary, technical missions were dispatched to clarify the purpose, contents and other conditions even before the basic design stage of the project.

Figure 3-59: Grand Aid Projects:



After careful review and analysis of the official records and extensive interviews with MOFA and JICA staff on the Program and the grant aid projects implemented, it is

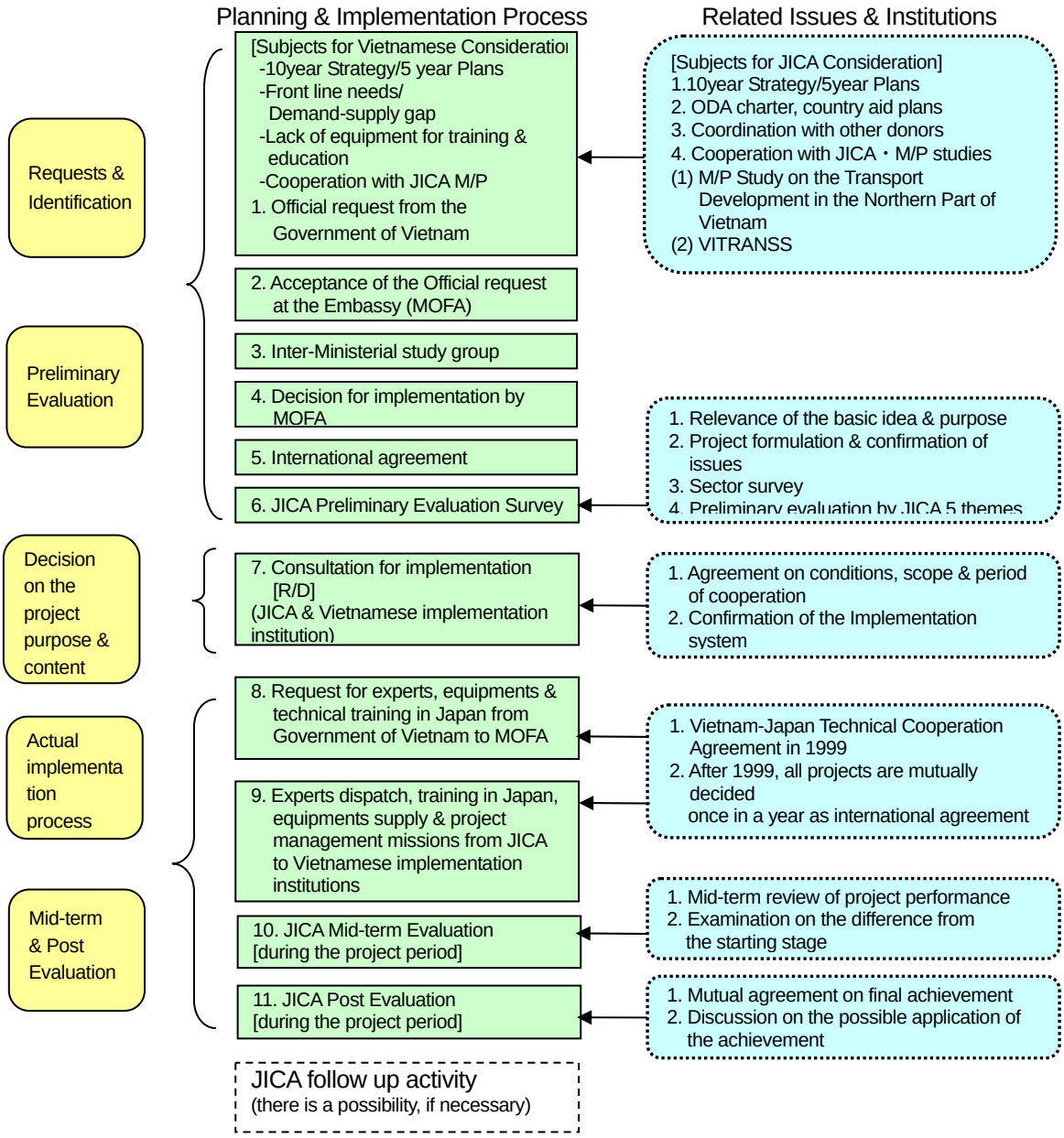
confirmed that MOFA and JICA followed the due administrative and field survey process for the identification of Vietnamese development aid needs and appropriately reflected them in the actual purpose and content of each specific grant aid project, following the official planning and implementation process. The above mentioned process is the way in which MOFA and JICA analyzed the Vietnamese needs and reflected them into the purpose and content of each grant aid project.

(3) Technical Cooperation Projects of JICA

JICA is the implementation institution for technical cooperation projects. The needs assessment of the technical cooperation project was mainly carried out during the preliminary evaluation stage, through site surveys and discussion in detail with the Vietnamese counterpart implementation institution. Technical cooperation projects were implemented jointly and very closely between the Japanese expert team and the Vietnamese counterpart staff. As the result, needs assessments was constantly held on different issues and the content was automatically modified or changed regularly, based on consensus. Besides, JICA executed mid-term evaluation and post evaluation during the project period and thus critically reviewed the purpose, content and implementation course of the project.

After careful review and analysis of the official records and extensive interviews with MOFA officials, JICA staff, Japanese experts and Vietnamese counterparts on the Program and the technical cooperation projects implemented, it is confirmed that MOFA and JICA followed the due administrative and field survey process for the identification of the Vietnamese development aid needs and appropriately reflected them in the actual purpose and contents of each specific technical cooperation project through the official planning and implementation process. The following process is the way in which JICA analyzed the Vietnamese needs and reflected them in the purpose and content of each technical cooperation project.

Figure 3-60: Technical Cooperation Projects



(4) Development Study of JICA

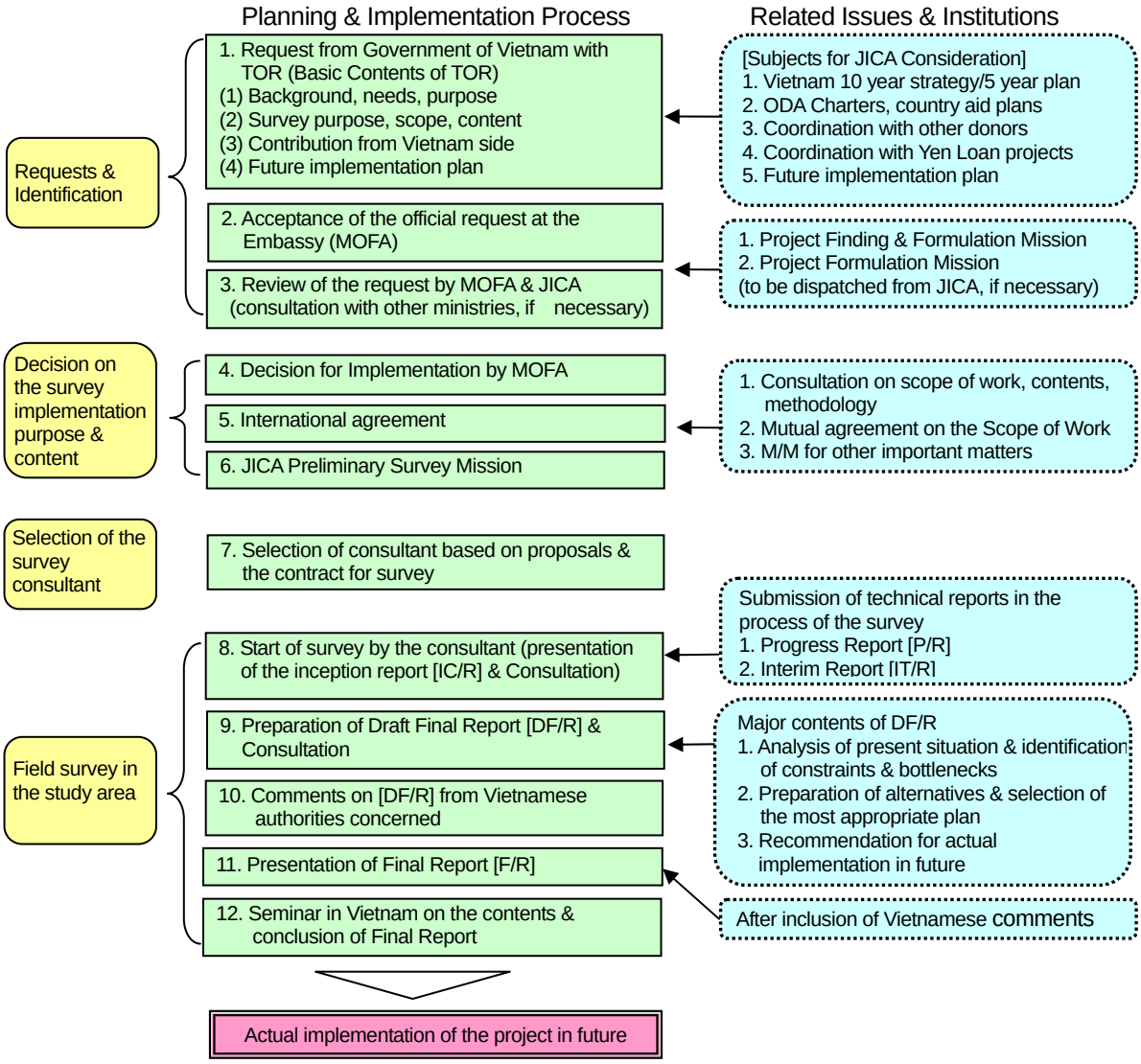
Development studies are also implemented by JICA. The needs assessment for development studies is carefully carried out by MOFA and JICA as an important aspect in deciding about implementation.

In addition to the examination of consistency with the basic development strategies and the plans of both Japan and Vietnam, the possible future connection with the Yen loan projects or other financial projects is an important factor in the consideration of implementation. JICA dispatch technical missions for the clarification of the purpose and

the content of the request of the development survey, if found necessary. The details of the development needs are identified as study subjects by the mutually agreement with the Vietnamese authorities. Furthermore, the actual development study is a process of the needs assessment itself. The contents of the development needs are summarized in the final report.

After careful review and analysis of the official records and extensive interviews with MOFA officials, JICA staff, Japanese consultants and Vietnamese counterparts on the Program and the development study implemented, it is confirmed that MOFA and JICA followed the due administrative and field survey process for the identification of the Vietnamese development aid needs and appropriately reflected them in the actual purpose and contents of each specific development study through the official planning and implementation process. The following process is the way in which JICA analyzed the Vietnamese needs and reflected them into the purpose and content of each development study reports.

Figure 3-61: Development Study Projects



(5) Ministry of Planning and Investment (MPI)

As it is mentioned above 3-3-1 (4), the Ministry of Planning and Investment (MPI) represents the Government of Vietnam regarding foreign donors in the general government procedures of ODA programs / projects in the Degree No. 17 / 2001 / ND-CP. The project planning and implementation process led by MPI is very systematic and transparent.

The needs assessment process of the Government of Vietnam was very deliberate and comprehensive. The fundamental criteria were consistency with the ten year strategies and five year plans and also with genuine local and national needs.

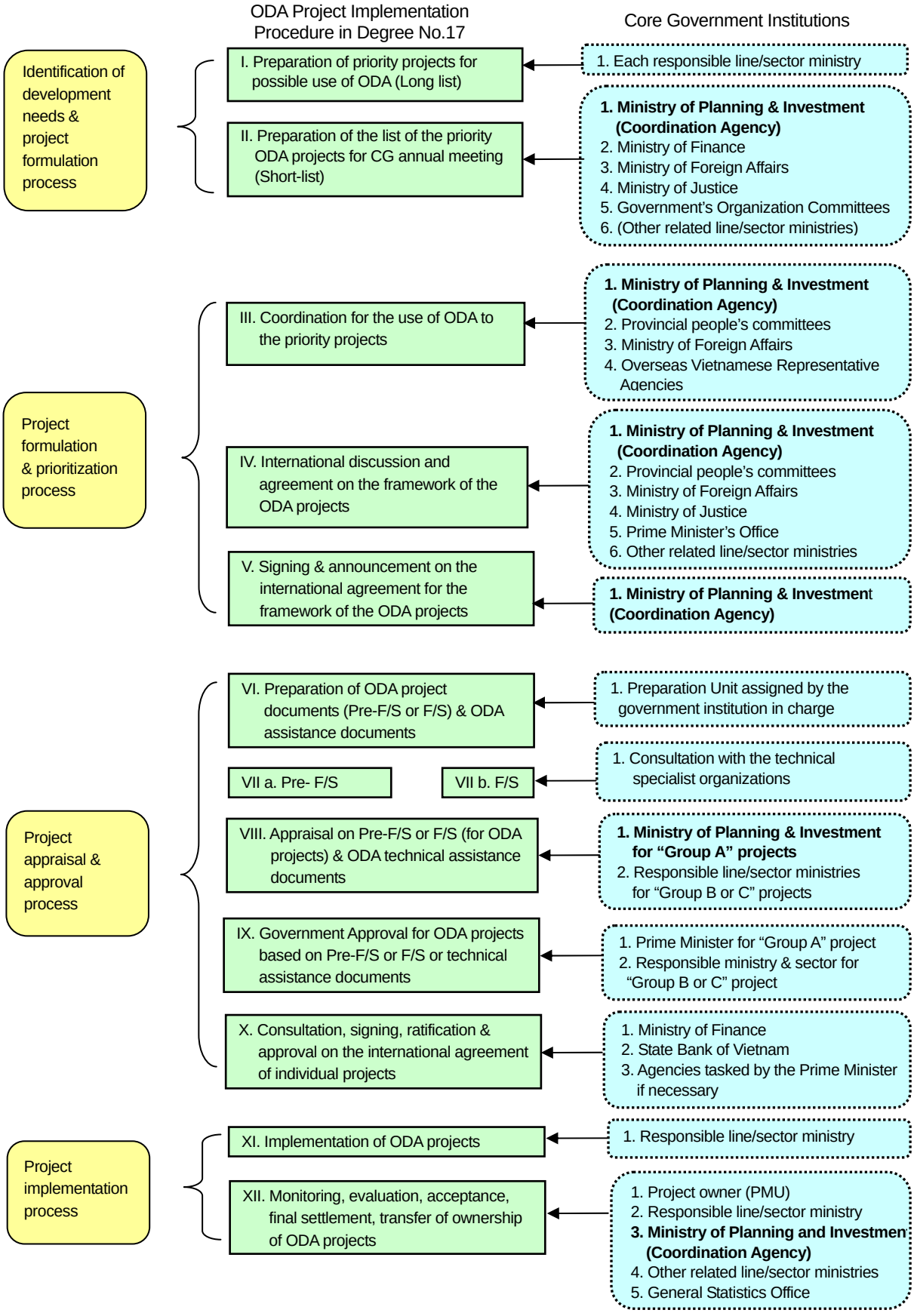
First, each responsible line / sector ministry prepared projects according to their own needs assessment. Their needs assessments were usually carried out according to the sector master plan and feasibility studies carried out by themselves. These formulated projects were then assembled and MPI carried out preliminary technical and administrative screening of these projects, putting the results on the "long list."

Then, MPI functioned as a coordination agency and consulted with the other important government ministries and committees, defined in the Degree No.17. MPI also successively discussed with foreign donors projects in the "long list" and examined the possibility of ODA application to each project. After this identification of development needs and the project formulation process, a "short-list" of priority projects was prepared by MPI and presented to donors for official consultation.

After careful review and analysis of the official records and extensive interviews with MPI officials, officials of Embassy of Japan, JBIC and JICA staff on the Program and the decision making and management initiative of MPI, it is confirmed that MPI followed the due administrative process in cooperation with other Vietnamese ministries and pertinent institutions for the identification of the Vietnamese development aid needs and the formulation of priority projects and the appropriate administrative management of each specific development project through the official planning and implementation process as mentioned before.

The following process is the way in which MPI analyzed the national socio-economic development needs and reflected them into the purpose and content of each development project to be presented to foreign donors for possible ODA use.

Figure 3-62: ODA Project Implementation Process in the Government of Vietnam



3-3-3 Coordination between Japanese ODA Schemes in the Program

In the review of Japanese ODA transport projects in the Red River Delta area, 14 cases of coordination between Japanese ODA Schemes in the Program were observed among 25 related projects.

The main combination was systematic links between the Yen loan projects and designated development surveys. The process of the master plan study and the successive feasibility study by the JICA development survey and then the Yen loan project has been well established. This process was very rational and systematic in identifying and evaluating the specific needs in each target area and was effective to formulating appropriate ODA projects, especially for large infrastructure projects.

In addition, there were several cases of other combinations. JICA technical cooperation projects have trained and thus provided qualified professionals in the field of road construction and sea transport. A MOFA/JICA grant aid project prepared facilities and equipment for education and training, carried out by a JICA technical cooperation project. A JICA master plan study identified the needs of human resource development in the area of sea transport and thus a JICA technical cooperation project was implemented for that purpose.

Table 3-28: Coordination between Japanese ODA schemes in the Program

【Yen Loan Projects related Coordination】

No.	Other ODA Projects which relate to Each or All the Yen Loan Projects as a Whole.	Name of the Yen Loan Project	Name of Development Survey in connection with the Yen loan Project
01	[Grant Aid Projects] The Project for Improvement of Transport Technical & Professional School No.1 [Technical Coop. Projects] Project for Strengthening Training Capabilities for Road Construction Workers in Transport Technical & Professional School No.1 [Development Study] 1. The Master Plan Study of the Transport Development in the Northern Part of Vietnam 2. Vietnam National Transport Development Strategy Study (VITRANSS)	National Highway No.5 Improvement Project Ⅰ･Ⅱ･Ⅲ	
02		[Phase-Ⅰ] National Highway No.1Bridge Rehabilitation Project Ⅰ･Ⅱ･Ⅲ	
03		[Phase-Ⅱ] National Highway No.1Bridge Rehabilitation Project Ⅰ･Ⅱ･Ⅲ	
04		National Highway No.10 Improvement Project Ⅰ･Ⅱ	
05		National Highway No.18 Improvement Project Ⅰ･Ⅱ	F/S on the Highway No.18 Improvement
06		Bai Chay Bridge Construction Project	
07		Red River (Thanh Tri) Bridge Construction Project Ⅰ･Ⅱ･Ⅲ	D/D of the Red River (Thanh Tri) Bridge Construction Project
08		Transport Infrastructure Development Project in Hanoi	The Study of Urban Transportation Master Plan for Hanoi City
09		Binh Bridge Construction Project	
10		Hai Phong Port Rehabilitation Project Ⅰ･Ⅱ	
11		Cai Lan Port Expansion Project	F/S on Cai Lan Port Construction Project
12	2. Vietnam National Transport Development Strategy Study (VITRANSS)	Coastal Communication System Project	The Master Plan Study of Coastal Shipping Rehabilitation & development Project

【Coordination with Non-Yen Loan Projects of Other ODA Schemes】

	Technical Cooperation Project	Grant Aid Project	Development Survey
13	Project for Strengthening Training Capabilities for Road Construction Workers in Transport Technical & Professional School No.1	Project for Improvement of Transport Technical & Professional School No.1	
14	Project on Improvement of Higher Maritime Education		The Master Plan Study of Coastal Shipping Rehabilitation & development Project

As mentioned above, the number of cases was significant and the forms of combination very rational and systematic in order that coordination among the different Japanese ODA schemes could actually result in good quality projects and related human resource development services. Therefore, coordination between Japanese ODA projects as a whole became a very efficient and effective means for the infrastructure development of the transport sector in the Red River Delta area.

3-3-4 Coordination between Major Donors' Aid Programs/Projects and the Program

There was an actual case of coordination among major donors in relation to the Program. This was the Improvement of National Highway No.1. Also, there were the cases of a partial coordination in National Highway No.5. between Japan and Taiwan and in National Highway No.18. between Japan and Korea.

For National Highway No.1. project, the World Bank, the Asian Development Bank and U.K. carried out a substantial improvement of road conditions and Japan took the responsibility to rehabilitate and/or reconstruct road bridges across rivers and the banks of the highway. Basic and practical reasons for this were the large scale of the project as a whole and the need to share the financial burden together with the awareness of the urgency for an early completion of the project in order to meet the ever growing volume of the physical distribution of the road.

In the review of the road projects actually implemented, it is becoming clear that this triangular coordination had taken place on a grand scale. Japan continued to rehabilitate and reconstruct major roads and large road bridges to overcome crucial bottlenecks and the constraints of land transport. The Asian Development Bank focused on the improvement of the provincial road network. The World Bank concentrated on the extension of the rural road network with the cooperation of DfID of the United Kingdom. As the result, it is observed that a comprehensive road network was established in the Red River Delta area which can serve to reduce poverty and stimulate economic growth simultaneously through the smooth distribution of goods and services between the metropolitan center and rural areas.

In the transport sector, according to review of the development aid performance, another

form of coordination among major donors can be recognized in the selection of priority sub-sectors. According to the review of the development aid by the major donors of the transport sector, another kind of coordination was done in the selection of priority sub-sectors. Japan has carried out substantial number of ODA to all transport sub-sector, but in the road sub-sector, Japan, World Bank, and the Asian Development Bank aided heavily this sub-sector. In the railway sub-sector, Germany and France are the major donors, but Japan also actively aided with significant volume. Japan was also cooperating for the strengthening of the capability of sea transport and ports through both Yen loans and technical cooperation.

Consequently, the development of the three major sub-sectors in the transport sector, namely road, railway and sea transport and port, have been supported by both bilateral and multilateral donors. This international concentration of aid by major donors to the three sub-sectors became very effective and efficient as a direct response to where fast growing needs for different modes of infrastructure development were arising rapidly.

International development partners group meetings based on different sectors and/or priority issues emerged during the preparation period of CPRGS. Among those groups, the transport partnership working group was established in July 2000, originally for international cooperation and coordination. The meetings are voluntary and membership is on a registration basis. The informal group meetings are usually held monthly. The chairmanship is currently shared by the Ministry of Transport and JBIC. The active members consist of MOT, PMU, and major donors who carry out large transport projects.

The original purpose of the meeting has not changed, but more institutions participated in the meeting and the role and function of the meeting has developed further. By 2004, it became more or less a forum for active discussion on sector issues and joint policy formulation. Some of the members which were donors and Vietnamese government institutions organized certain interest groups separately, then executing development aid projects of their concern (Figure 3-63).

Therefore, as a conclusion, this international cooperation and cooperation in the transport sector has been significantly successful so that it is satisfying the needs for both poverty reduction and economic growth comprehensively.

Table 3-29: Coordination between Major Donors' Aid Programs/Projects and the Program

【Yen Loan Projects related Coordination】

No.	Name of the Yen Loan Project	Name or Content of International Cooperation	Name of the related International Donor
01	National Highway No.5 Improvement Project I･II･III	Partial coverage of distance in road construction	Taiwan
02	[Phase-I] National Highway No.1 Bridge Rehabilitation Project I･II･III	Construction of the road portion 1. Highway Rehabilitation Project by WB/U.K. 2. Second Road Improvement Project by ADB	1. World Bank (WB) 2. Asian Development Bank (ADB) 3. U.K.
03	[Phase-II] National Highway No.1 Bridge Rehabilitation Project I･II･III		
04	National Highway No.18 Improvement Project I･II	Partial coverage of distance in road construction	Korea

Figure 3-63: Partnership in Cooperation