

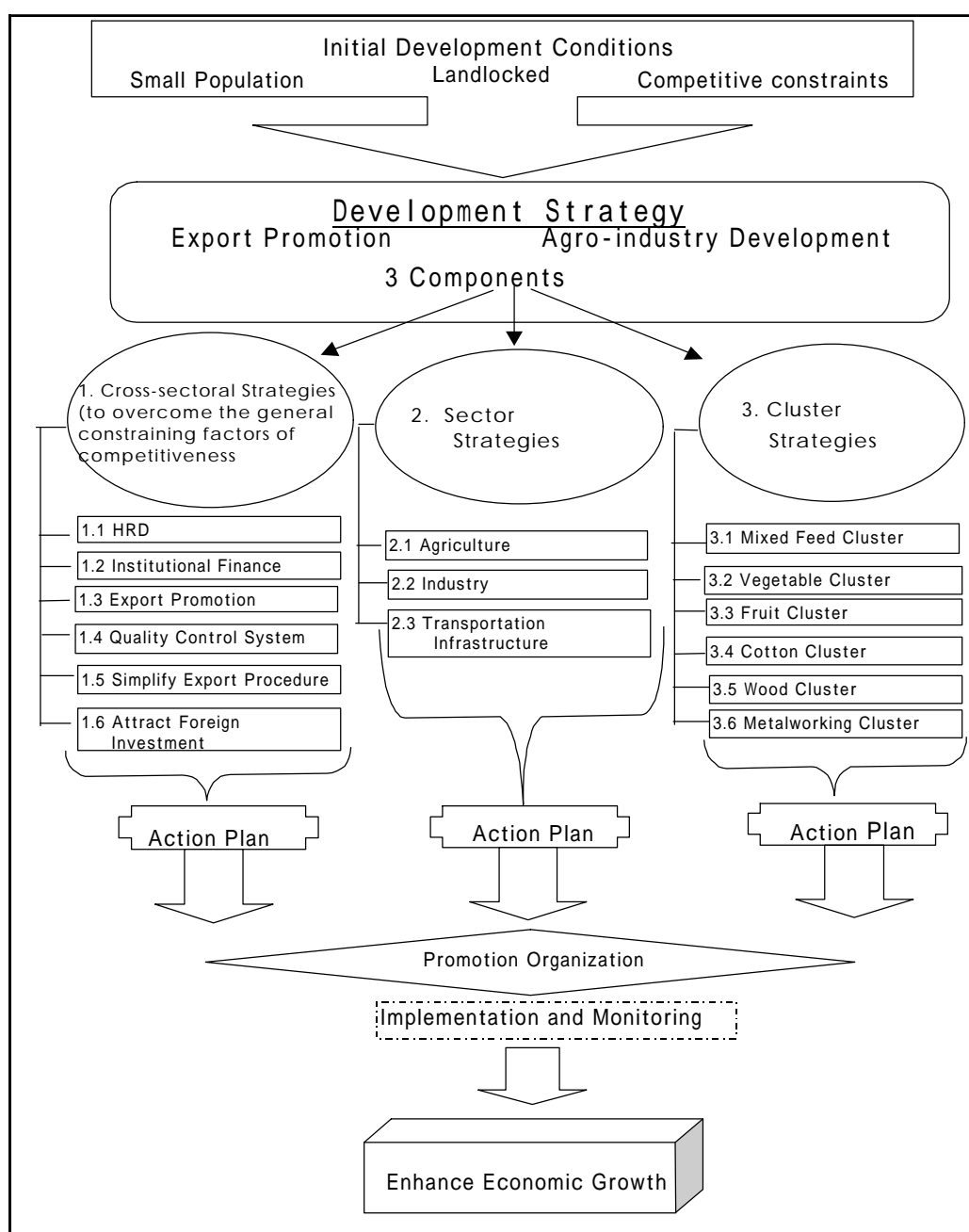
3. CONCEPT OF ECONOMIC DEVELOPMENT AND THE DEVELOPMENT STRATEGY

3.1 BASIC CONCEPT

3.1.1 Framework

This chapter introduces the basic concept of the economic development strategy designed to kick-start the stagnant economy.

Figure 1 Economic Development Strategy



(1) Overall objective

The fundamental goal is to create the conditions that will strengthen Paraguay's growth potential and allow it to cope with structural changes emanating from its participation in MERCOSUR. The strategy is based upon export promotion and strengthening the agro-industry, which is Paraguay's comparative advantage.

(2) Development scenarios

Roughly doubling per capita income is used as a benchmark of development progress. We will consider potential impact on fiscal budgets and the balance of payments of two growth scenarios. In one case we consider growth rates that are quite slow, as experienced in the second half of the 1990s. The other scenario assumes a more optimistic sustainable growth scenario.

(3) Strategy components and implementation

In order to achieve sustainable growth, it is necessary to inclusively consider a variety of economic policies: financial and other macroeconomic policies are often emphasized. However, this study, performed after Paraguay's entry into MERCOSUR, comes from the viewpoint of strengthening international competitiveness, and seeks to determine in what manner the existing industrial structure should be transformed. Thus, a "real sector" approach is taken. Emphasis is placed on promotion of real production sectors (agriculture, processing and transportation infrastructure) that will directly increase output. The strategy through which to achieve higher growth rates consists of three complimentary levels: cluster level, sector level, and cross-sector level (which is concerned with institutional capacity strengthening).

Leading and promising sectors will be analyzed. In addition, impediments to competition will be analyzed. Four time horizons are considered in the study, a short time horizon (until 2003) within which urgent strategies to overcome constraints to competitiveness should be started, a medium time horizon (until 2006), a long time horizon (until 2010), and a very long time horizon (beyond 2010). The action plan should be fully underway by 2006.

(4) Action plan

In order to implement the strategy, priority programs and projects, the required funds and the creation of a promoting organ will be outlined in the action plan. In addition, demarcation lines between public and private responsibilities will be delineated. The action plan is designed to be consistent with other international and bi-lateral assistance policies.

(5) Virtuous circle

Simultaneous implementation of the overall development strategy can lead to certain virtuous circle:

a) Due to consolidating linkages of input and output relations at the sector and cluster level, creation of new products and new investment demand can be expected. Multiple cluster development will create new demand for transport. As transport infrastructure improves, transport costs will fall. As costs fall, there is greater incentive/opportunity for cluster growth, which will again increase demand for transport infrastructure; b) active investment and productivity improvement at the sector and cluster level will enhance macroeconomic growth potential through the increase in investment efficiency. Greater macroeconomic growth has, in turn, a beneficial impact on microeconomic sectors, such as attracting further investment.

3.1.2 Development objectives

(1) Opportunities and threats to future growth

Paraguay's high economic growth in the 1970s was achieved through expansion of agricultural lands, and large-scale investments in hydroelectric power. However, with the end of construction on the Itaipú dam in 1981, the emergence of constraints on agricultural expansion beginning in the early 1980s, sluggish international primary commodity prices, and the decline of triangular trade opportunities as MERCOSUR has become more unified, sustaining economic growth has become more difficult. As a result, since the 1980s, per capita GDP growth has leveled off and Paraguay has been forced to live with low economic growth. In the latter half of the 1990s, in contrast to the other Latin American countries that have enjoyed somewhat of an economic revival, Paraguay has had a rather stagnant economy. Ending this economic stagnation is the challenge we face in this study.

Changes in the external environment, in particular, entry into MERCOSUR, presents both opportunity and dangers and is one of the large influences that will affect Paraguay's future growth. A brief analysis follows:

The impacts of joining MERCOSUR are varied and many. On the positive side are the increased trade opportunities that the union has created. However, these static gains from trade are limited, and perhaps even negative for Paraguay, due to two unique characteristics:

- Paraguay has traditionally been relatively open. The creation of a CET (common external tariff) is actually forcing Paraguay to raise its average tariff rate. Thus, there is considerable potential for trade diversion to occur.
- Paraguay has long benefited as a platform for re-exporting to neighboring countries. This advantage

is, however, diminishing, and will be completely gone by 2006, when the CET is to be in force without exception. This creates substantial problems for the local trading areas of Ciudad del Este and Encarnación.

The combination of these two characteristics means that customs duties will most likely decline drastically in the coming decade. Alternative sources of government revenue will be required to sustain fiscal balance and social welfare programs.

The primary gains from MERCOSUR entry are dynamic, centering on the increased investment that will be attracted. As Paraguay has cheaper labor costs than its neighbors, it is potentially attractive to foreign companies wanting to produce inside MERCOSUR.¹ In addition, membership in MERCOSUR should promote transparency and stability in governance. Another dynamic impact results from changes in the competitive environment. Export competing industries in a country that opens its borders to free trade are forced to produce at world standards if they are to survive. Unfortunately, the problem for Paraguay is that entry into MERCOSUR comes without a well-defined objective. Paraguayan industries are facing severe competition from neighboring country enterprises in the domestic market. Though it is debatable, it is likely that the dynamic benefits of joining MERCOSUR outweigh any static negative impacts. It is certain, however that even if the gains from joining MERCOSUR were negative, the alternative of not joining would be even worse.

There are certain strategies that Paraguay can pursue to maximize the benefits (minimize the negatives) of entry into MERCOSUR. The development strategy proposed in this study, in fact, will achieve this goal. Most importantly, the emphasis on export promotion of agro-industry, that is central to the strategy, is well suited to rural production. The formation of clusters that utilize domestic products will create new employment opportunities for the cities that are currently dependent on re-exporting for their livelihood, like Ciudad del Este. In addition, export growth will benefit trading cities, partially compensating for the expected decline in re-exporting.

(2) Structural reforms

To assist in the effort to improve the economic outlook, there are four structural reform areas that must be attended to:

¹ ILO, 1977 : Paraguay has one of the highest labor costs in Latin America for registered workers, but has the cheapest labor cost in comparison with neighboring countries for non- registered workers.

1) Industry policy

More than half of Paraguay's industrial value-added is concentrated in the food, beverage and tobacco industries. This area is about 6 times more productive than other industries. However, it is relatively vulnerable to export. To improve productivity of this area, strengthening both horizontal relationships and the vertical supply chain will lead to higher-value added production. These are the basic features of the cluster strategy proposed in this paper.

In order to support overall industry competitiveness, the transport infrastructure that is the foundation for distribution channels must be strengthened. This would be beneficial to all levels of agro-industry, the competitive core of the economy.

2) Trade and investment policy

In order to improve the trade deficit, trade can be expanded within MERCOSUR. To this end, policy should introduce international trade standards and rules (as to quality, quarantine system, etc.), unify the treatment of trade to one office, strengthen marketing networks and promotions, and rationalize the financial system (including export finance).

As for foreign investment (including Maquiladoras), it is extremely important to prepare an appropriate investment environment. In particular, the labor system/laws and investment promotion tax system need reform, and intellectual property rights and patent infringement laws must be enforced. Introduction of technology and management level education are also urgently needed.

3) Macroeconomic stabilization policy

The Paraguayan economy cannot meet domestic demand due to the extreme decline of supply capacity. To correct this situation, while avoiding a radical increase in domestic demand, it is necessary to increase investment in the agricultural and industrial sectors, to improve productivity and to promote exports with increased value-added.

4) Social policy

The slow structural reforms will reach lower income levels of society only after a considerable time lag. In the meantime, special consideration must be given to those citizens who have not been enjoying the benefits of reform. Primarily this involves the large population currently employed, informally in the re-exporting business and small agricultural producers.

(3) Medium-term objectives

The long-term development objective is to raise living standards to the average level of other Latin American countries. In the medium term, sustained growth in per capita income can be used as a rough indicator of whether Paraguay has been put on a sustainable development path. 2006 will be a medium-range target year as the CET is to be in force without exception. (A detailed analysis of economic growth is presented in the next section).

To achieve this, two growth engines have been chosen to lead the way, the agricultural processing industry and exports. Together these imply the export of agro-industrial goods. The fundamental thinking behind this approach is that as triangular trade has declined since joining MERCOSUR, competitive conditions have changed and Paraguay can no longer rely on the informal economy to such a great degree. Rather, Paraguay must develop and export higher value-added goods based on simultaneously making extensive use of its domestic resources.

There is one other constraint that Paraguay would be wise to take into account, the environment.

In addition to, two environmental considerations have great importance for future agro-industrial economic growth. The first is that continued development of the agro-industry, with complete disregard for environmental concerns, simply can not occur. For example, soil depletion/degradation results in a continually declining agricultural output. As a result, greater amounts of chemical fertilizers are applied, which results in rising production costs. Similarly, as forests are depleted, the foundation of the lumber and furniture industries is destroyed. The second point is that acting in an environmentally sensitive manner can be used as a sales-point to distinguish Paraguayan “green” products from others. For example, food grown organically without the use of pesticides can often be sold at a 20-30% premium when exported. That is, for agro-industry, attention to environmental concerns is not just a basis for development but can translate into a market advantage.

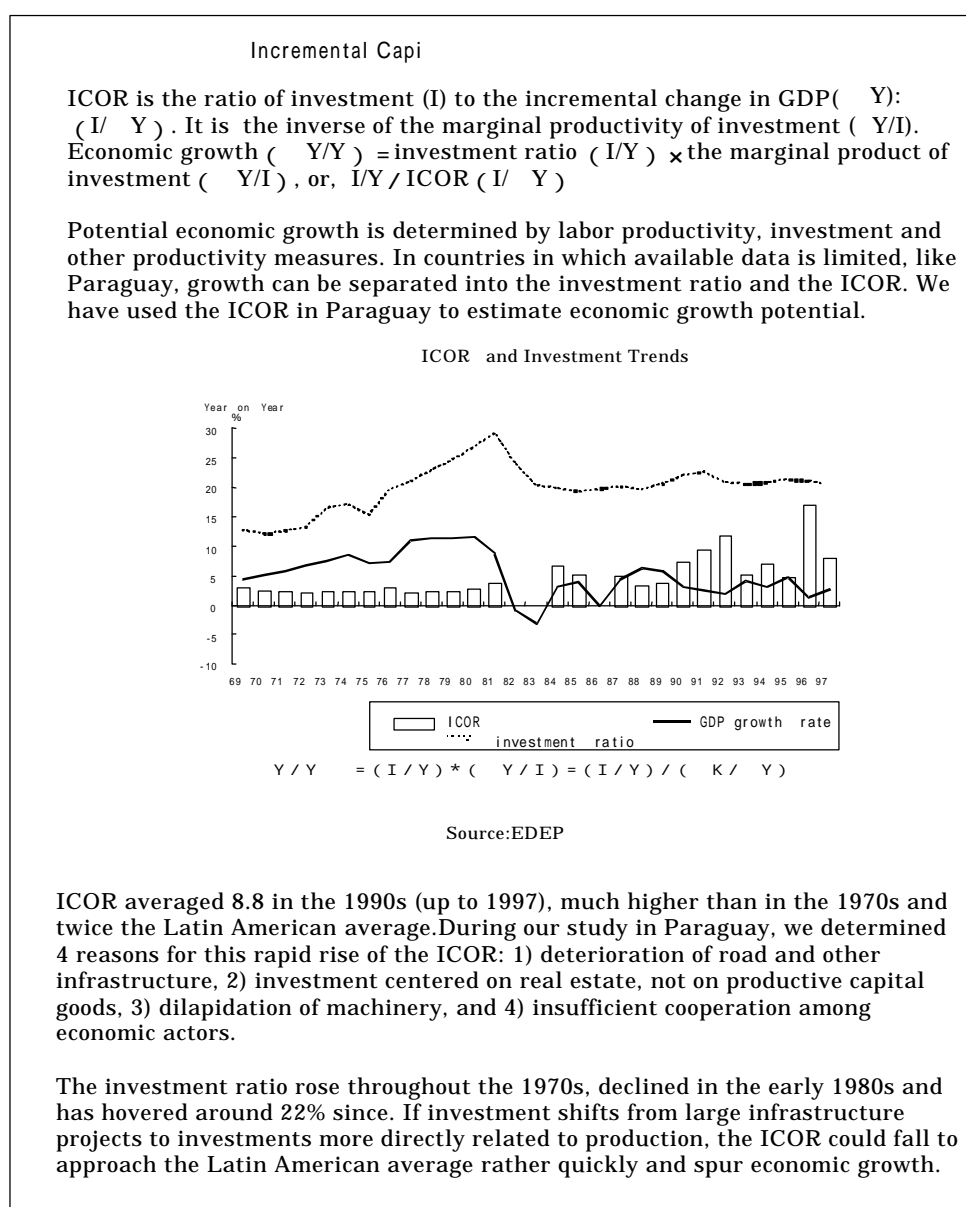
For these reasons, the following 3 points should be considered:

- Create an ecological agro-industry. That is, farms and factories can act together to take something resembling a “zero emission” approach. For example, a loop can be created between agriculture and raising animals. Waste from poultry and pig farming can be used as organic fertilizer to replenish fields. By-products from meat production can be used as fertilizer or feed.
- As environmental improvements proceed, agro-industry can increasingly be included. For example, in order to force the lumber industry to be active, reforestation schemes can be expanded.
- Actively stress the beneficial points of distinguishing exports as being environmentally responsible. For example, organically grown food and meat products free of anti-biotic.

3.1.3 Growth scenario

We consider two growth scenarios in relation to the development strategy. Scenario 1 assumes per capita income growth is maintained at its current level, while scenario 2 assumes high per capita income growth for a sustained period of time. These scenarios are neither forecasts nor targets. They are merely meant to be used as a reference guide.

Generally speaking, FDI precedes and complements local investment in countries at a development stage similar to Paraguay. FDI is an important factor in overall investment promotion in Paraguay. In our action plan, however, a grass-root cluster strategy is designed to attract local investment to strengthen economic independence. The cluster strategy will revitalize productivity, lower the Incremental Capital Output Ratio (ICOR), and raise economic growth potential.



Scenario 1: Growth according to trend

Table 1 Forecasted Growth Rates: Total Population / Working age population

Period	Annual total population growth (%)	Annual working age population growth (%)
2000 – 2010	2.4	3.1
2010 – 2020	2.1	2.4

To maintain current per capita income, economic growth must match population growth. Paraguay averaged 2.5% economic growth from 1990 to 1998, thus, with population forecast to grow at 2.4% annually over the next ten years (Table 1), Paraguay's average living standards will essentially be stagnant if growth remains at the same level. During the action plan period (2001 - 2006), the working-age population is, in fact, forecast to grow more rapidly than the population as a whole (3.1%). This relative increase in labor may cause greater unemployment pressure. To keep this problem under control, if possible, it is better to aim for an economic growth rate of 3.1% or greater (2000 – 2006).

Scenario 2: Growth necessary to “double” per capita GDP²

In 1997, Paraguay's real per capita GDP was US\$1,489, while Latin America's average was more than twice that (US\$3,025). The economic growth rate necessary to achieve the current Latin American per capita income average is shown in Table 2. These growth rates, which utilize the population growth forecasts introduced above, are not forecasts or target growth rates.

Table 2 “Doubling” per Capita Income

Year	Required Annual Growth Rate
by 2010	10.4%
by 2015	7.6%
by 2020	6.2%

Sources: Population growth rates from Paraguay Planning Office. Calculated using Paraguay' per capita GDP of US\$1428 in 2000, and the Latin American average per capita GDP of US\$3025 for year 2000.

Realistically, for Paraguay to reach the current per capita income level of other Latin American countries in less than 15 years is unattainable. Table 3 shows the relationship between real GDP growth, the investment ratio, and the ICOR. Given the population forecasts above, a 6% growth rate and an ICOR of 4.0, requires an investment ratio of 24%, including the contribution of FDI. Although a growth rate of 6% results in a doubling of per capita income in 20 years, the action plan (2001-2006) should be considered a transition period for the economy to achieve a sustainable rate of 6% by 2006. Therefore, it would take somewhat longer to double per capita income.

² In fact, the calculation is made to achieve the per capita income levels that exist in Latin America today (2000), US\$3025, which is slightly more than a doubling of current per capita GDP.

In addition, with a growth rate of 4.3%, the median level between scenario 1 and 2, it would take roughly 46 years, including the action plan period, to double per capita income, which is well out of the time frame considered in the EDEP.

Table 3 Real GDP Growth, Investment Ratio and ICOR

Assumption	Real GDP Growth Rate (%)	Investment Ratio (%)	ICOR
	4.0	20	5.0
		25	6.2
	5.0	20	4.0
		25	5.0
	6.0	20	3.3
		22	3.7
		23	3.8
		24	4.0
		25	4.2
	7.0	20	2.9
		25	3.6
89 ~ 97 average	3.2	21	8.2
77 ~ 80 average	11.3	24	2.3

Source: EDEP

3.1.4 Components of the strategy

As explained, there are two growth engines considered in the development strategy. The first is based on economic growth through export promotion. As the domestic market is small, in order to increase competitiveness by taking advantage of scale economies, it is necessary to focus on foreign markets. Since joining MERCOSUR, the degree of triangular trade, including informal economic activities, has declined and it has become important to correspondingly develop markets outside of the region. The second growth engine is development starting from agro-industry, as agro-industry uses inputs from Paraguay's relatively competitive agricultural sector. Putting these together results in a strategy based upon increasing exports of processed agricultural goods. Furthermore, the strategy places emphasis on the period up to 2006, the time at which the MERCOSUR countries become unified behind a CET. In terms of a long-term strategy, the development of "leading industries" outside of agro-industry is necessary.

In order to guide the economy to an industrial structure based on the above, implementation of the development strategy has been divided into the following three components.

(1) Strategy to overcome the general constraining factors of competitiveness (Cross-sector strategies)

Compared to other countries, Paraguay has many conditions that restrict competitiveness. For example, in finance, in addition to high interest rates, the application process to get a loan is troublesome and time-consuming. In the area of human resource development, insufficient executive management and a lack of skilled workers are constraints on growth. As for exports, exporting procedures are complicated and cumbersome and many countries do not trust the quality of goods manufactured in Paraguay. Furthermore, the amount of information on potential foreign markets is woefully inadequate. The “Strategy to overcome the general constraining factors of competitiveness” is designed to deal with some of the more urgent problems of this nature and strengthen all sectors.

These improvements are expected to attract FDI, including investment into Maquiladora, which will enhance the investment ratio.

(2) Sector strategy

The second component is to promote development with a focus on certain productive sectors within Paraguay. These sectors, agriculture, industry and transport infrastructure, were chosen based on the current conditions of Paraguay’s economy and industries.

Agro-processing represents a major new frontier in view of abundant agricultural resources and possible export achievements. Development of transport infrastructure will support the new direction of industries in two ways: strengthening export corridors, and the production support network. However, Paraguay’s transportation infrastructure network is one of the least developed in South America.

While the above two components deal with the basic conditions needed to foster competitiveness, the “Cluster strategy” that follows is designed to provide specific details of how certain pilot model industries can improve competitiveness and increase exports.

(3) Cluster strategy

For any country, attempting to improve export competitiveness of all goods is a difficult task. Only a limited number of goods are subject to international competition and Paraguay should focus on enhancing the competitiveness of these goods. In order to do this, it is necessary to raise the productivity of economic clusters that are directly or indirectly related to these products.

However, the linkages between industries and firms in Paraguay are very weak. Taking processed

vegetables as an example, linkages between factories and farmers that grow the raw materials for processing are weak. Many processing factories can not operate efficiently, and some not at all, because they lack good supply connections. The domestic consumption of vegetables is extremely small, thus, given their perishable nature, even slight overproduction can result in a crash in prices. After an experience such as this, farmers may rationally decide not to grow the given product for the next harvest, which can leave processing factories unable to get the raw materials it had been counting on. As a result, there is no stable relationship between supply and demand. Paraguay's potential for processed agricultural goods will be greatly enhanced with greater cooperation between these two producers. That is, with a medium to long term vision toward agriculture and the processing industry, stronger linkages will bring mutual benefits. As processed goods are exported, productivity, and competitiveness, will rise.

From cases like this, we propose a micro-level strategy designed to strengthen the competitiveness of several high potential clusters. Thus the cluster is placed as the starting point of economic development. The proposals aim to foster the creation of 6 model clusters. From this experience, it is anticipated that new clusters will be added over time. For example, as the distribution system is improved, the movement of goods will rise and delivery costs can be expected to fall. Thus, enterprises that have not been export competitive because of the high costs of trucking and transportation may then be able to export more successfully.

In order to magnify this demonstration effect, the two development pillars introduced earlier need to be supported. Thus, the three strategy components are truly inter-connected pieces to one overall strategy, and form the backbone to realizing faster economic growth in Paraguay

The One Village, One Product Movement, introduced in the following box, can be thought of as a potential model of incubating clusters. The Ministry of Industry and Commerce in Paraguay is now introducing the model to Paraguay with the cooperation of the Japanese Government.

The One Village, One Product Movement

Japan's Oita Prefecture (population 1.23 million), located on the island of Kyushu far away from Tokyo, once experienced difficult economic times that induced many of its younger citizens to move away. However, economic progress has been actively promoted since the inception of the "One Village, One Product" movement in 1979. This unique concept was put forth to encourage local areas to create and market products special to their respective localities.

"One Village, One Product" is based on the idea of self-reliance, which relies upon the energy, creativity and desire of local citizens, using local resources, to enhance their economic well being. In order to achieve global recognition, the quality of the products with local characteristics must meet both domestic and international market standards. Through the constant efforts of many of local communities, in addition to the already world-famous "shiitake" mushrooms, many new products from Oita have been put on the market, which has invigorated the economy.

Instead of giving subsidies to local areas, which in other parts of the country often results in a decline in the spirit of self-reliance, the prefectural government encourages each community by providing technical assistance for the improvement of the quality of their products and assistance in marketing and publicity. This assistance is centered around the Oita Prefecture One Village, One Product Promotion Association. In order to expand sales, the Oita One Village, One Product Corporation was established to assist in targeting new distribution markets.

Since the ultimate goal of this movement is to foster human resources, the prefecture provides an educational institution called the "Land of Abundance Training School," an institution that trains young leaders to build a more affluent society.

Today, the prefecture per capita income is US\$5,000 (as of 1996), and Oita Prefecture was ranked 11th (out of 48) in the Economic Planning Agency's People's Life Indicators, an index based on 8 categories such as "living", "spending", and "working" in 1999.

3.1.5 Action plan

The programs that form the development strategy have been rated according to importance and priority, leading to an overall prioritization. Implementation of all required projects is to be started by 2006, which forms the basis of the action plan. The action plan is explained in detail in Volume 6.

Funding assistance will naturally be required to implement the action plan, including personnel and technical assistance. After the March – May 2000 field study, the action plan has been revised such that it complements assistance that Paraguay is receiving from other countries and organizations.

Because of the importance of the implementation process, we propose the creation of a promoting organization. Economic growth greatly depends on private sector vitality but the role of the public sector is still large.

The role of the government in forming a market economy is decreasing but, as the private sector in Paraguay is not yet sufficiently competitive, the government actually still has a large role to play in facilitating private sector competitiveness. The role suggested for the government for carrying out proposed development strategies is detailed in Volume 6.

For more effective policy measures to be taken, the voice of the private sector must be reflected when implementing the strategy to remove structural impediments to competitiveness and sector specific strategies. Although the cluster strategies center on the private sector, there is no existing private sector strategic alliance. In order to form clusters that reach beyond a given industry, it is necessary for the government to work together with the private sector in order to support and mediate between private sector entities.

In order to begin the action plan quickly, the promotion organ should be created immediately. The government should begin planning for this by creating a working budget and applying to international organizations for funding assistance.

Of ultimate importance is sustained effort to implement the development strategy. Monitoring implementation and follow-up assessments are equally important. Transparent policies will contribute to the systematic implementation of the development strategy, and in the process, trust in the public sector can be regained.

3.2 DEVELOPMENT CONCEPT AND STRATEGY BY SECTOR

3.2.1 General constraining factors of competitiveness

(1) Human resource development

1) Overall situation of education in Paraguay

In 1998, new educational system started in Paraguay as a result of Educational Reform. While in the old system, only 1st (6 years old) to 6th (12 year old) grades were compulsory, the new system obliged all students to attend school from 1st to 9th (15 years old) grades. In addition, in the old system, students could select their major from 7th grade, but the new system offers uniform courses for all students until 9th grade, thereby giving students more time to choose their specialties. In 1997, there were estimated 905,813 elementary school students nationwide in Paraguay, a 25% increase since 1991. On the other hand, junior high school students (7 – 9th grades) increased by 97%, and high school students by 88% during the same period (58,941 students in 1991 to 111,066 in 1997). The overall level of educational achievement has improved significantly over the past two decades. According to the 1982 and 1992 census, the share of those with no education dropped from 10.4% to 8.68%, and improvement in the share of the population at all other educational levels is observed.

However, there remains more to be done. Nearly universal primary education, but poor quality and one of the lowest rates of secondary education in Latin American characterize Paraguay's formal education. The rate of entry into elementary school is 92%, however, the number of retainees and dropouts are high, and the majority of students do not finish elementary school. Paraguay's secondary education enrollment is among the lowest in Latin America. Approximately 30.4% of the population of 12 to 19 years old continue on to secondary education, well below the Latin America's average of 57.6%. The number of students per 100,000 population receiving higher education in 1995 reached only 947 in Paraguay, as compared to 3,323 in Argentina, and 2,110 in Uruguay. Total annual classroom hours for elementary school in Paraguay is 293 hours, one of the lowest in the world. Many schools are not equipped with necessary infrastructure and equipment. This tendency is more severe in rural areas. Neither follow-up nor evaluation is done for most courses and programs. The curriculum does not fulfill the country's needs and is not up-dated. Most instruction efforts of schools are lost, since students do not work on the areas where they were trained. Quality of teaching staff varies among schools and training institutions. A number of instructors do not have teacher certification and are not upgrading their skills through training courses. The overall level of educational spending in Paraguay has consistently been one of the lowest among the MERCOSUR countries. Only recently has this trend begun to change. The 1992 Constitution stated that educational budget must not fall below 20% of the national budget. After falling to only 2.0% of GDP, and 9% of the national budget in the 1980s, public

spending on education has rebounded to 2.9% of GDP and 20% of the national budget by 1994. However, the expenditure is the lowest of all the MERCOSUR countries and more efforts are needed.

2) High school education

After finishing 9 years of compulsory education, students either choose to work or continue for a “bachillerato”, the high school degree. The General Direction of Middle and Technical Education, under the Ministry of Education and Culture (MEC), is in charge of the professional formation within the formal education in Paraguay. The Direction authorizes 315 high schools and other schools nationwide, of which 166 are in the public sector and 149 are private. Zero tuition is charged for public schools, as the constitution states that all public educational institutions must be free. Those who pursue a bachillerato degree may select from social, technical, and commercial courses. In addition, a 1999 agreement between MEC and MAG enabled students to select agricultural course in general high school and obtain a “bachillerato in agriculture”.

3) Professional training

Professional training in Paraguay is divided into the following categories:

- Professional training authorized by MEC: Technical and commercial high schools, CEV
- Professional training authorized by MAG: agricultural high school
- Professional training authorized by MJT: SNPP
- Professional training by other ministries: For small scale courses with duration usually less than 1 year, specific to the occupation related to each ministry
- Professional training by private institution and NGOs.

a) Professional Training authorized by MEC

In 1998, there were 208 institutions nationwide (105 official and 103 private), which offered bachillerato degrees in industry and commerce. Among them, as much as 195 were located in urban areas and 13 in rural. The number of students registered in 1998 at technical and commercial high schools was 22,512 nationwide. Regional disparities between the Metropolitan Area (Asunción and Central) and other regions are not so severe. The latter accounts for as much as 40% of students and institutions nationwide. (For reference, the latter contains 66% of the population.) However, in general, institutions in the Metropolitan Area have better equipment and infrastructure, both qualitatively and quantitatively, although these figures are not statistically available.

Most technical high schools require an internship of a few months. Students are sent to enterprises and receive OJT. In most cases, companies do not have the obligation to pay a salary to the students. On many occasions, after graduation, students are hired by the enterprise where they interned.

b) Professional training under MAG

Agrarian Education Bureau in the Ministry of Agriculture and Livestock (MAG) has also engaged in technical education and specialist training. It has established and supervised agricultural schools and agricultural training centers as secondary education facilities in rural areas, and it also monitors private training facilities. Nationwide, there are 10 public agricultural schools, 18 private schools, and 2 public agricultural mechanical schools. No private agricultural mechanical schools exist in Paraguay. Usually, courses last for three years including one year of internship on a farm. As the constitution states, no tuition is charged for all public agricultural schools. In addition, the majority of public agricultural schools oblige students to live in dormitories and meals are compulsory. The majority of public schools suffer from budget constraints. In the present system, the profit accrued from public schools is repaid to the national treasury. Once repaid, these funds are seldom reallocated to schools. Hence these institutions have no incentive to operate with a profit. In agricultural mechanical schools, machinery and equipment brought by farmers are repaired free of charge. This is also because there are no incentive for schools to collect fees from customers.

c) Professional training under MJT

i) SNPP

The SNPP is an institution under the Ministry of Justice and Work (MJT) began its activities in 1972. By the end of 1997, it had provided vocational training to 285,863 people. The objective of SNPP is to develop and to improve the skill of workers in all levels of the occupational pyramid. SNPP's activities are directed to workers over the age of 18, and apprentice workers from 15 to 18 (dual training). The programs offered at SNPP are: computer, electronics, electricity, enterprise management, special program (courses for those youths and adults of the exceptional situation such as former criminal), accelerated professional formation (FPA), teaching methodology (for future instructors), apprenticeship, dual training, personal training, radio communication, and refrigeration and control. Today, SNPP has 7 centers nationwide (Chaco, East, North, Central, Western, South Region, and SNP-PJ), and three sub-centers (North, East, South), providing wide access to services throughout the country, although the majority of its activities are concentrated in the western part of the country. SNPP has also tied up with Industrial Union of Paraguay (UIP) and other institutions (collaborating centers). In 1998, a total of 3,517 courses were offered nationwide. The number of total participants was 64,824, with 379,690 total hours. There are courses for primary, secondary, and tertiary industry. The primary sector accounted for

4% of courses, the secondary 19%, and the tertiary 77%. Within the tertiary sector, more than a third of the participants (22,003 out of 64,719) and courses offered (1,408 out of 3,507) were related to computers. As can be observed, a large number of courses are offered for each sector. However, some other courses seem less useful or not suitable for vocational training institutions.

ii) Private and other training institutions

Private training institutions are concentrated in urban areas, particularly in Asunción. The main fields of training focus on electricity, electronics, and business management. The quality of the courses available varies widely. As quality problems also exist in the area of staff and facilities, some kind of public intervention will likely become necessary in the future. The Paraguayan Industrial Union has 3,000 firms, and offers 30-40 courses related to marketing, management, among others. It cooperates with SNPP, but has little experience. It also receives cooperation from overseas organizations with regard to new areas. Other organizations such as NGOs, associations, federations, and unions also offer training courses in a variety of areas, but on a smaller scale.

4) Bottlenecks and countermeasures in human resource development

It is highly important to strengthen the development of human resource to promote economic development in Paraguay. However, there are a number of bottlenecks that have hindered this process.

The underlying obstacle hampering human resource development in Paraguay is the lack of financial sources. This has contributed to the following bottlenecks: a) In many schools (agricultural and technical) and vocational training institutions, few courses are updated periodically and not enough assessment of local community needs is conducted; b) Many agricultural and technical schools in Paraguay open the door only for those who have finished primary or secondary school - people who have lower educational background, say primary school dropouts, are left out and have less access to be trained in these institutions; c) In most cases, facilities, equipment, and teaching materials for schools and training institutions are insufficient and/or outdated; and d) The quality of teaching staff varies among schools and training institutions.

There is a need to create new employment opportunities at a relatively rapid pace in conjunction with the rising growth in the labor force. An environment must be quickly created so that high-quality human resources can be fostered and entrepreneurs can start and expand new business. There should be greater coordination between supply and demand in the labor market, allowing worker's improved skills and motivation to bear fruit in the workplace. Simply investing in human resources does not mean that the goal has been reached.

5) Proposal to overcome the bottlenecks in human resource development

In order to overcome the above factors, the following are proposed:

- a) Charge tuition to the students and / or for dormitory should be examined. In this way, schools and training institutions can secure financial sources and at the same time, only those students who have a real ambition to pursue their study and careers will attend the institution. There is need to examine the possibility of abolishing the dormitory system at agricultural high school.
- b) Construction of a system in which public schools can generate income through the sales of products and services and spend as its discretion is necessary. This would allow schools to update their facilities, equipment, and teaching materials periodically.

Along with the above, establishment of a national scholarship and loan system for students from low-income households, and also for those who have shown good academic performance, should be examined.

- c) Conducting survey to enterprises in the related field and to the graduates of the school in order to identify the skill or technology is needed so as to reflect the demand of the society periodically in the curriculum.
- d) To introduce more practice in the technical training by inviting more instructors from private companies to the institutions and / or sending more interns to enterprises should be examined. Standards and procedures of periodic evaluations for programs should be developed and applied at the same time. Cancellation of less-useful courses from the perspective of industrial needs is important as well.
- e) The needs of those who have lower educational background should also be examined and more appropriate courses for them should be offered at vocational training institutions. NGOs have accumulated know-how for the training of the less educated, and working together with them on project design and execution is useful. In the agricultural sector, on the other hand, only CECTEC, at Bella Vista (Itapúa), is officially in charge of training for small agricultural producers who have not completed lower level education. Expansion of this role to a nation-wide level is important.
- f) There is necessity to create new employment opportunities at a relatively rapid pace to keep up with the growth in the labor force, and setting up new businesses is crucial to achieve this aim. However in reality, the number of courses offered for entrepreneurs is insufficient nationwide at schools and training institutions. In addition to increasing programs for the less educated, it is important to

strengthen the training programs for youth and adults who aim to become entrepreneurs, and thereby create new employment. Simultaneously, construction of a system offering low interest loans and information dissemination to entrepreneurs should be examined.

- g) To construct a system in which only those who took teacher preparation course and obtained teachers certificate are eligible to become school instructors, at all levels, is crucial. For both public and private vocational schools, guidelines for instructor qualification upon employment should be strengthened, thereby narrowing the gap of instructor quality among institutions. It is also necessary that all teachers upgrade their training skills and knowledge periodically.

6) Project proposal

In order to realize some of the above-mentioned measures, the following projects are proposed.

It is worthy to mention that Paraguayan labor law, such as the unrealistically high minimum wage and the difficulty in dismissing employees, discourages employers to train their workers. The law maintains the tradition of Latin America by heavily protecting the rights of workers, thereby causing employers to prefer informally hiring cheap unskilled workers. Change in the labor regulations is a pre-condition if these projects are to be effective in the long run.

- a) Project for technical high school

Name of the Project: Educational improvement of the technical high school in Paraguay

Executing agency: Ministry of Education

Background of the project: Public technical high schools in Paraguay charge zero tuition to the students and moreover in the present system, the profit accrued from public schools is repaid to the national treasury. Once repaid, these funds are seldom reallocated to schools and, hence, these institutions have no incentive to operate with profit. Lack of financial resources at technical high schools is directly or indirectly causing a number of problems, such as i) Insufficient materials and infrastructure at schools; ii) Low quality of teachers; iii) Outdated curriculum which seldom matches the demand of the labor market; and iv) Entrance of students who are less motivated.

Objective: To improve the quality of education of the technical high schools and secure their financial resources.

Duration: 3 years

Project outline: In the project, a pilot school is selected and the following actions are taken: i) development of curriculum and materials which match the needs of the labor market, ii) training and upgrading the skills of instructors, iii) examine the possibility of charging tuition to the students and also review how much should be charged along with other methods of school self-finance; iv) Execute i) to iii) above in selected schools and elaborate the guidelines in order to improve the quality of technical education (prepare draft materials and curriculum adaptable to technical high school, revision of material and curriculum, method of upgrading instructors' qualities). Moreover, the strategy and action plans are prepared in order to apply to other high schools nationwide.

b) Project for agricultural high school

Name of the Project: Educational improvement of the agricultural high school in Paraguay

Executing agency: MAG

Background of the project: Public agricultural high schools in Paraguay charge zero tuition to the students and most of these schools require students to live in the dormitory for free. Moreover in the present system, the profit accrued from public schools is repaid to the national treasury. Once repaid, these funds are seldom reallocated to schools and, hence, these institutions have no incentive to operate with profit. Lack of financial resources at technical high school is directly or indirectly causing a number of problems, such as i) Insufficient materials and infrastructure at schools; b) Low quality of teachers; c) Outdated curriculum which seldom matches the demand of the labor market needs; and d) Entrance of students who are less motivated or looks for free meal.

Objective: To improve the quality of education of the agricultural high schools and secure their financial resources

Duration: 3 years

Project outline: In the project, a pilot school is selected and the following activities are conducted: i) development of curriculum and materials which match the needs of the labor market, ii) training and upgrading the skills of instructors, iii) examine the possibility of charging tuition to the students and also review how much should be charged along with other methods of school self-finance; iv) Execute i) to iii) above in selected schools and elaborate the guidelines in order to improve the quality of agricultural high school education (prepare draft materials and curriculums adaptable to agricultural high schools, revision of material and curriculum, method of upgrading instructors' qualities). Moreover, the strategy and action plans are prepared in order to apply to other agricultural high schools nationwide.

c) Project for improvement of the quality of vocational training

Name of the Project: Improvement of the quality of training at SNPP

Executing agency: SNPP (Asunción and 6 other branches nationwide)

Background of the project: SNPP is the vocational training institution under MJT. By the end of 1997, it had provided vocational training to 253,863 workers. SNPP suffers from problems, such as insufficient materials and infrastructure at schools and low quality of teachers. Moreover, some courses are less useful or are not suitable for vocational training institutions.

Objective: To improve the quality of training (curriculum, materials, and quality of instructors) at SNPP

Duration: 1 year

Project outline: i) Consultants evaluate and analyze the present situation of SNPP regarding curriculums, materials, and instructors' skills, ii) Elaborate the guidelines in order to improve the quality of training at SNPP (prepare draft materials and a curriculum adaptable to each branch of SNPP, revision of material and curriculum, method of upgrading instructors' qualities) when elaborating the curriculum. Courses for those who have a lower educational background or for entrepreneurs will be also examined during the project period.

Name of the Project: Development of the system for securing financial resource at SNPP

Executing agency: MJT/ SNPP

Background of the project: SNPP has been funded by the institute for social provision (IPS) and 1% of workers' payroll by private companies. Law 1265 states that SNPP charge zero training costs to students. The lack of financial resources at SNPP is causing problems, such as insufficient materials and infrastructure at school, low quality teachers, and entrance of those who are less motivated.

Objective: Develop a system and guidelines that allow SNPP to introduce a self-financing scheme.

Duration: 1 year

Project outline: i) A financial expert elaborates and develops the guidelines and method on how, and how much, beneficiaries at SNPP should be charged for tuition. Also, study alternative sources of income for SNPP; and ii) Conduct technical transfer to the counterpart at MJT regarding methods of

self-financing.

(2) Institutional finance

1) Basic concept

The main argument in this section is to improve institutional finance for productive sectors that are of urgent necessity in implementing the action plan. Other relevant issues related to industrial finance, such as promotion of the capital market, self finance by producers, and export finance have also been covered such that a well-balanced overall solution is proposed.

The problems in institutional finance fall into three related categories: limited availability of funds, the high cost of funding and bureaucratic loan procedures. The situation has been aggravated by the existence of an intolerably high level of non-performing loans. Non-performing loans may be reduced by better loan control to accelerate repayment and by improved capacity to evaluate credit risks. There is also a complaint concerning the limited availability of long-term finance, especially from the industry sectors that require capital investment. As a means of solving the bottleneck, better utilization of the capital market as a source of long-term and stable financing is recommended. Creation of export finance is also needed.

Table 4 Number of Financial Institutions

	December 1988	January 1995	June 1999
Banks	26	34	23
Finance companies	28	63	35
Insurance companies	34	50	43
Total	88	147	101

Source: Supervisory Bureau of Banks, Supervisory Bureau of Insurance, BCP

As a result of institutional defects, financial liberalization measures implemented in the early 1990s led to a sustained financial crisis beginning in 1995. Insufficient regulatory control allowed the entry of financial institutions with a weak capital base and also enabled institutions to avoid proper risk analysis and accumulate increasingly risky loan portfolios. In addition, the legal system was inadequate to protect depositors from the potential risk associated with financial liberalization. As non-performing loans mounted, increasing pressure on financial institutions eventually led to collapse. Since 1995, 11 banks and 28 finance companies have gone bankrupt, as shown above.

Table 5 Distribution of Bank Credit by Sector: December 1999

Sector	Public Banks	Private Banks	Total Credit
Agriculture	36.03%	6.06%	10.38%
Livestock	4.18%	4.35%	4.33%
Industry	22.32%	9.62%	11.45%
Construction	0.00%	1.60%	1.37%
Export	7.64%	2.81%	3.51%
Consumer	4.02%	16.23%	14.47%
Commercial	25.61%	37.47%	35.77%
Other	0.19%	21.85%	18.74%
Total	100.00%	100.00%	100.00%

Source: Financial Indicators, BCP, August 1999

The high cost of funding results not only from the reduced availability of funds, as described above, but also from inefficiency in the system, which prevents it from reflecting the cheap funding on lending conditions. This inefficiency may be reduced by simplification of loan procedures and the introduction of safety measures, such as completion of the nation wide land registry and a system of agricultural insurance. For marginal producers, both in the agriculture and industry, that have limited access to institutional finance, self-financing, through cooperatives or credit unions, is recommended.

With the collapse of private sector banking, a system of public institutional finance was supposed to fill the credit gap. This system has, in turn, been affected by the financial crisis. Private banks tend to fund the needs of commerce and consumers, while public banks provide funding for agriculture, livestock and industry. In 1999, agriculture consumed 36.0% of public bank credit. The avoidance of riskier productive areas by private financial institutions has become more pronounced during the financial crisis. As a result, public institutions have assumed an increasing share of “high-risk” loans. Between the years 1990-1998, the aggregate outstanding loans of three banks, BNF (Banco Nacional de Fomento), CAH (Caja Agrícola de Habitación) and FG (Fondo Ganadero) became fivefold from Gs 213 billion to Gs 1,069 billion. Bad loans have reached an unsupportable level of 49.1% BNF (bad loans at private banks remained as low as 9.3%). As a result, many public financial institutions can no longer function normally.

Private banks are reluctant to provide long-term finance as their deposit base is short-term in nature. The banks do not have a system of term deposits as depositors wish to avoid long-term commitments due to the unpredictable economic environment. Public financial institutions are effectively the sole provider of long-term funding for fixed investment. However, due to budget constraints and the high predominance of non-performing loans, funds for long-term finance have become increasingly scarce. In addition, loan application procedures are cumbersome and time consuming. Interviews with Paraguayan business circles often point this out as a main obstacle for future growth.

In a mature economy, the capital market should share responsibility for long-term finance of productive sectors. However it appears that the necessary conditions have not yet been met. The ratio of

the market capitalization to GDP shows the degree of development of the equity market. While such ratio for Brazil and Argentina shows 20.7% and 13.2% respectively for 1998, the same for Paraguay and Uruguay are 3.6% and 1.0%. The latter two MERCOSUR members lag far behind.

Currently, 65 companies have been listed on the BVPASA, but the reason for almost all listings is to take advantage of the 10% tax rate that applies to listed companies, as opposed to the normal corporate tax rate of 30%. Until recently, there was a turnover requirement in the exchange and listed companies usually satisfied the requirement by transacting the shares among limited circle. This led to virtual absence of functioning secondary market. The most basic condition for a capital market is the existence of active investors and borrowers. In Paraguay, there are few institutional investors to activate the capital market, with most investments directed at either real estate or overseas investment, leaving little for domestic portfolio investment. Pension funds and life insurance companies are very good candidates for long-term portfolio investment due to their long-term and stable funding base. There are only two life insurance companies at present and the pension system especially IPS (Instituto de Previsión Social) is in deep trouble due to its commitments to bankrupted banks.

Privatized state companies will be good investments and will contribute to creating new investors through enhanced investor interest from abroad. In April 2000, a bill to privatize ANTELCO, ANDE and CORPOSANA, 3 state run companies, was passed. Although the method of privatization is not yet well defined, this can be a very effective way to vitalize the capital market. In its April 1996 report, the World Bank mentions that Paraguay's public utilities in the water, power, and telecommunications sector have fallen short of what is required to support the economy's development and recommends reforms, including privatization – even if time consuming and troublesome.³

In term of the actual funding needs, the degree of satisfaction is still very low in agriculture, industrial and export sectors. Since 1995, the situation has been aggravated by increased reluctance of private banks to provide funding to productive sectors. The Paraguayan export sector has been heavily handicapped by the absence of effective export finance and other related support measures by the government. Unlike other MERCOSUR countries, there is no availability of export credit in Paraguay, due to weak export competitiveness, non-tariff barriers in neighboring countries, volatile corporate profile of exporters and lack of experienced staff capable of handling complex export financing. All these are disincentives to provide export finance for Paraguayan banks. Among public banks' loan portfolio, the portion of export was merely 4.2% as of December 1998.

As mentioned, in addition to limited availability and burdensome application procedures, the high cost of borrowing money is a burden for Paraguayan farmers and entrepreneurs. High interest rates can be

³ Paraguay: The Role of the State, April 26, 1996, World Bank,

attributed to many factors: government desire to maintain the international value of the currency, a high loan loss ratio, the high required reserve ratio (greater than 10%), and a high risk premium (stemming from the lack of transparency of corporate information).

In the case of public financial institutions, the relatively low cost of funds derived from the government should be reflected in the final lending conditions. There is more or less 7- 8% interest rate gap between private banks and BNF, for instance. As of December 1998, private banks were charging 32.65% on average, while BNF was charging 24.25%. The BNF rate is composed of a cost of funds of roughly 16% and an operating expense of roughly 8%. The interest rates of other public financial institutions are similar, varying between 20% and 24%. FDC (Fondo Desarrollo Campesino) charges 20% up to 12 months and 24% for longer terms.

Weak credit evaluation capacity shares some of the responsibility for the substantial accumulation of non-performing loans. What is frustrating for credit analysts is that, on many occasions, loans are actually granted regardless of credit advice if the borrower presents collateral. On the contrary, a loan is likely to be refused if the borrower fails to provide collateral, even if the project is promising. There are also often political interventions in loan disbursements. Such political elements should be eliminated from the loan business. Subsidies for weak borrowers should not be imposed on the system, and ought to be dealt with through special funds.

Limited reliability of the information presented by clients is also problematic. It is a wide spread practice to keep double or even triple accounting books depending on the motivation of their use reserving the correct one for business control. There seems to be no fear of penalty for cheating the bank with false statements, and credit analysts are often unable to determine the truth.

Completion of the land ledger is also needed. A land ledger provides a basis for all legal transactions concerning land ownership and planning. Tax collection will also become more organized and financing will become easier both for the banks and borrowers as land becomes available for collateral. The problem is the huge costs involved in completion. Although urban areas have been largely attended to, substantial rural areas have been left uncovered by the ledger. By Law No.30 of April 1992, the Paraguayan government was approved for a loan agreement with the World Bank for the Project to Rationalize Land Use. The contract was to end in June 2000 and the Paraguayan government is negotiating for its renewal in Washington. Another 6-8 years will be required if all goes well.

Under any circumstances, the majority of small producers will not have access to financing. In an interview with a carpenters association, they complained of a lack of means to finance their business - their land assets are limited and used machines are not accepted as collateral. Inevitably, they rely on indirect financiers who take advantage of their weak situation. For such powerless producers, it would

be meaningful to encourage cooperatives as a means to mutually self-finance. According to INCOOP (National Institute of Cooperativism), 570 cooperatives have been registered with them, and 70 of them are specialized in deposit and credit operation.

2) Strategies

a) Simplification of loan procedures

Through simplification of the loan procedures, farmers and industrial entrepreneurs will benefit greatly as some of them have limited access to the loan facilities because of their complexity. Timely implementation of requested loans will enhance productive activities and, in turn, will improve efficiency of the banking operation itself through a higher turnover of financial resources. Practical loan manuals will be prepared for the convenience of loan officers, and recipients of such loans, accompanied by corresponding training of the officers. A review of the relevant laws and regulations to eliminate redundancies is needed. Investment in equipment, especially information technology will be required.

b) Introduction of agriculture insurance

Practically, the Insurance Supervisory Bureau of the Central Bank has already conducted a technical study on agricultural insurance, and it would be safe for the agriculture sector to have some measures to ensure continuation of a survival level of agricultural production in case of unexpected damages. In light of financial and staff constraints, both the type of products and the region to be covered by the system should be limited. Any damage caused by market fluctuation will be out of consideration. Before designing the implementing plan, research on the actual damages is required to identify possible burdens for the system. Relevant laws and regulations need to be studied as well.

c) Completion of nationwide land registration

Completion of nation wide land registration provides an extremely important database for development programs in the country and activates financial transactions using land as collateral. The current funding commitment of the World Bank, in support of the program, was to be end in June 2000. Along with the on-going attempt to renovate the contract, the government is in need of securing a new source of financing. At the same time, measures to encourage registration ought to be taken, such as reduction of the registration fee, simplification of the registration process and assistance by the bank staff to facilitate the registration. The bank may do the registration at proxy, including the registration fee in the lending condition to the client.

d) Strengthening of the evaluation capability of credit risks

This strategy consists of job training of the staff in charge of evaluation and unification of evaluation criteria. Through enhanced evaluation capability of the staff, there will be less likelihood of the loans becoming non-performing, contributing to improvement of the efficient use of funds and to stability. As a condition, implementation of lending should be consistent with the recommendation of the evaluation staff, and any intervention with political motives should not intervene. Unification or standardization of evaluation criteria is an essential condition for equitable evaluation of credit risks. Otherwise, there will be no reliable base to compare the results of the evaluation, creating room for the banks to make ad hoc decisions. A review of the existing evaluation criteria will be done to prepare unified and consistent criteria.

e) Introduction of an export financing system

The introduction of an export financing system is a long-awaited program, and consists of education and training of the staff in charge of export financing and introduction of a system of export insurance and rediscount of export bill. Very few bank staff have adequate experience. An education and training project for candidate staff should be prepared and implemented. The government will give incentive and support to the project.

Introduction of a system of export insurance and rediscount of export bills is a project to activate export oriented productive activities in Paraguay by reducing export risks and accelerating recovery of the proceeds. Beneficiaries of this system will be Paraguayan companies, including company type cooperatives manufacturing fabricated or processed goods. Primary commodities will be excluded. Hopefully, multinational institutions or government-to-government loans will provide most of the funding. The fund will be passed through a two step governmental financial institution to operational private banks in Paraguay, and the banks will make an initial 80% payment, for instance, of the FOB value to the exporter at the completion of the export bill insurance contract by the exporter. The remaining 20% is to be paid at the time of shipping. Thus, the exporters will be able to step up their production for the next contract to come.

f) Promotion of the capital market

The next major program is promotion of the capital market, which consists of the following five projects: review of security market laws, regulation and the tax system; creation of shareholders through privatization; privatization of the pension system; establishment of a rating agency and education of Paraguayan entrepreneurs regarding the capital market.

Apparently, the Paraguayan capital market is still behind neighboring countries and activation of the market through review of the present laws and regulations is necessary. As a matter of form, capital market laws and regulations seem to be in place, but of more importance is whether there is a reality behind the laws. If the reality has failed to catch up with the condition stipulated in the laws and regulations, such laws and regulations ought to be modified accordingly. A careful analysis of the capital market and a review of the present legal framework will be done jointly by CNV (Comisión Nacional de Valores), the Ministry of Finance and the Central Bank.

Creation of shareholders through anticipated privatization of state entities would be a very effective measure to stimulate and activate the stock market. Privatization in France was mostly successful as it was designed to create individual shareholders through tax incentive and others. In order to mitigate strong resistance of the employees of the public entities, preferential treatment of the present employees is recommended in allocation of the privatized shares. What is important for the stock market is formation of a group of solid investors in the market. Under certain limits, foreign investment in shares should be invited. A review of relevant laws and regulations will be a necessary condition. As the bill for privatization of three public entities, ANTELCO, ANDE and CORPOSANA, has been approved by Congress, the above points should be considered immediately.

Although not an immediate possibility, privatization of the pension system is a topic to be argued seriously. As mentioned, the pension system can be a very powerful provider of long-term investment in the capital market, while life insurance companies still remain weak. However, IPS is in deep trouble due to its non-performing assets incurred by investment in bankrupt banks and hotels. Before going ahead with privatization, such troubled assets have to be disposed of. A feasibility study on privatization will be conducted.

A rating institution has to be established soon according to Law 1056. It is imperative for the Paraguayan capital market to have a respectable rating institution that provides objective and professional credit information of the issuers of securities, especially bonds. Technical tie-ups with top level international rating agencies will save lot of initial efforts in starting up the institution. According to their advice, a reasonable database to assist the rating institution will be prepared. A system to announce and publicize the rating information should be established.

The lack of management understanding of capital market functions and potentialities on the side of the entrepreneurs in Paraguay is lamented by the BVPASA. In response, a project to educate domestic corporations about the capital market is recommended. Low level of activities of BVPASA, as well as low motivation and interest of entrepreneurs to go public with their companies may be the reason. To make a breakthrough with the situation, educational campaigns on the functions and potentiality of the capital market will be launched after completion of a wide survey by questionnaire.

g) Strengthening of self-financing efforts

The final programs are to strengthen self-financing efforts, as most marginal producers will not be attended to by the existing finance system. This program consists of two projects, a project to assist organization of cooperatives or credit unions and one to place such newly created cooperatives under the supervision of the Supervisory Bureau of Banks of the Central Bank, instead of present control by MAG. By joint promotion of INCOOP and MAG, small producers will be encouraged to organize cooperatives or credit unions for the purpose of mutual assistance among the members. Correspondingly, the staff in charge at INCOOP and MAG will be increased. The project to place the cooperatives under supervision of the Supervisory Bureau of Banks is recommended to prevent failures of such cooperatives and to protect cooperative members. By unifying the cooperatives into groups, the supervisory burden of the authority will be reduced.

The final project is utilization of the commodity exchange as a means of self-financing. By presenting a certificate of contract on the commodity exchange to the financial institution, the seller of the products will receive an anticipated payment by the bank. This is a sort of self-financing for the producer, and the producer will be able to continue productive activities without interruption. Better utilization of the commodity exchange function is recommended. The exchange is in the process of increasing the type of products to be traded, and a solid operating system should be prepared in line with the campaign for agricultural producers by BVPASA.

(3) Export promotion

1) Promotion for export

a) Basic concept

Compared with other member countries of MERCOSUR, the degree of internationalization of Paraguay remains low and an inward looking mentality persists in many ways. It has been declared in the Government Program that the country will become an “Export Country”, but this basic stance has not been reflected in its trade promotion policy. It would require huge concerted efforts of both the public and private sectors to convert Paraguay into an export-oriented country.

i) Burdensome export procedures

In order to encourage would-be exporters, export procedures should be simple and practical. However, actual procedures are overly complicated and, therefore, act as a deterrent for first time exporters. A first

time exporter must be registered with the Registration Department of Customs. If the export item is an agricultural or animal husbandry product, another export registration is required with the MAG. Similar registration with the Forestry Office of the MIC and is necessary for wood products and manufactured products, respectively. A large number of documents are required for these registrations, and many of them are similar in content. The authorities claim that the number of documents required has been reduced drastically over the years, but further reduction should be possible.

Exporters usually starts on a small scale to test export feasibility. If the first attempt is a success, they will then increase the committed amount. On the other hand, lack of success may result in the exporter being discouraged to try again. Whatever the situation, it is important to provide potential exporters with relatively easy opportunities to try their products in the export markets.

ii) Exoneration and Recovery of Value Added Tax (VAT) on exports

Article 84 of Law 125/91, or the Tax Reform Law, exonerates all export products from VAT. This Law also allows for the recovery of VAT paid in the acquisition of inputs or services, directly or indirectly related to the production of export goods, in the form of a Tax Credit Certificate. Though not necessarily an incentive in the strict sense of the word, this instrument is probably the most significant measure for the exporter, as it prevents the double taxation of Paraguayan products-in the countries of origin and destination. This improves their competitiveness. Procedures for the recovery of VAT are set in Resolution No.1,105/95. Reportedly, these procedures are quite bureaucratic, time consuming, and unpredictable as to processing. Procedures seem to be particularly onerous for small and medium sized exporters.

The application form for VAT reimbursement needs to be accompanied with a series of supporting documents, and the authorities may request the company's books and records as well if they think it necessary. They may even perform a special audit of the company's records for the period of the fiscal credit being sought. All these cumbersome procedures will limit the intended value of the incentive.

iii) Access to export financing

There are no specific export-financing programs sponsored by the government in Paraguay. Export financing mechanisms are available only from private banks, at market rates, pre and post embarkation in the form of collateral loans, often secured by personal assets. The access to financing is very limited or prohibitively expensive, particularly for small-and medium sized exporters without enough collateral or credibility to obtain credit lines.

iv) Need for reinforcement of the public sector export and investment promotion institution in Paraguay

PROPARAGUAY, the public sector export and investment promotion institution, was created in October 1991 based on the successful export-promoting organ of Chile, ProChile. However, government support weak and the resulting export value handled by PROPARAGUAY is limited. Since January 1999, it has been controlled solely by the Ministry of Foreign Affairs. The budget fell to US\$697,000 (1999) and the staff has fallen from 58 to 28.

In order to assess the effectiveness of PROPARAGUAY, we can compare it with its similar institutions in neighboring countries. Since the 1970s, ProChile has conducted foreign market research, and provided assistance in developing products specifically for those markets. The number of exporting companies rose from 200 in 1975 to 5,539 in 1996 and the number of export products increased from 200 to 3,890 over the same time span. These goods are now sent to 177 countries. ProChile has been instrumental in this growth. ProChile has an annual budget of US\$11 million and 330 staff. The support it has received from the government is considered a key to its success.

In Brazil, the Trade Promotion Department (DPR) of the Ministry of External Relations is responsible for export and investment promotion. There is no independent trade promoting organ like PROPARAGUAY. The DPR and its three divisions in the Ministry of External Relations are committed to increasing Brazilian exports and publicizing investment opportunities. DPR has a sophisticated trade information network called Brazil Trade Net. The 111 Trade Promotion Sections located in Brazilian embassies and consulates in 95 countries are linked to DPR through Brazil Trade Net. The system is actively used.

In Argentina, Fundación Export•Ar, jointly created by the Ministry of Foreign Affairs, Ministry of Economy, Public Works and Services and the private sector is responsible for export promotion activities. Export•AR functions in integrated coordination with the embassies, consulates and Argentina Promotion Centers abroad which are located in Frankfurt, San Paulo, Barcelona, Los Angeles, New York and Milan. Export•Ar has 42 domestic offices and 13 delegated offices throughout the country with at least one office in each province.

In Paraguay the basic problem is a lack of solid and determined policy to promote exports on the side of the government. The diverse activities of PROPARAGUAY cannot be pursued by only 28 individuals without sufficient and integrated efforts with diplomatic representatives abroad. PROPARAGUAY must become a major driving force to promote exports, but it can only perform its proper functions with government commitment to support export promotion through financing, tax incentives and other measures.

- v) Need for concerted efforts to identify differentiated export products and corresponding export markets

Paraguay has been threatened by increasing imports even in traditional agricultural products. Vegetables and fruits are being imported from Brazil and Argentina in large quantities. In order to regain export competitiveness, both the public and private sectors must make efforts to identify differentiated and competitive products to be marketed abroad.

Product differentiation is a marketing strategy designed to increase market share by emphasizing/creating distinctive product characteristics that appeal to consumers and set the product apart from others. Differentiation could mean exporting a slightly higher value-added product than has been done in the past, perhaps through processing at home. Alternatively, it could exploit the environmental/health movement by marketing organically grown food. One of the key roles of PROPARAGUAY should be to obtain consumer behavior patterns information in target countries.

In view of the increasing preference for healthy and chemical free foods in international markets, more organic and non-pesticide vegetables and fruits should be developed. As an example, a sugar producer is successfully exporting organic sugar to the US market. Having cleared inspection of the US Organic Traders Association, the company now sells its product with a label stating this certification and has been sold at higher prices than ordinary sugar.

Another example is the fast growing tree “Paraíso Gigante,” which grows to a diameter of 45cm. and a height of 10 to 15 meters in 10 to 12 years. Eucalyptus grows to full size in 7 to 10 years, but can only be used for wood chips. Paraíso Gigante grows straight and has a rather large diameter, making it suitable for furniture and floorings. Already, some furniture makers are using the tree.

- vi) Need for establishing a nationwide network among export business circles

In order to develop and market Paraguayan export products in the midst of competition with neighboring nations, overseas marketing information and data should be collected and updated constantly through overseas embassies and consulates. More important would be to publicize Paraguay’s new and differentiated products to overseas markets. Under the present situation, communications between export associations/organizations/cooperatives and the public sector in Paraguay is less developed compared with other countries. ProChile is now preparing a domestic web site in addition to its international web site to smoothly convey overseas marketing information and data to their export traders, export-oriented producers and their associations and organizations.

Although PROPARAGUAY was styled after ProChile, there is a significant difference in the

magnitude and dynamism of their trade promotion activities. Aside from the difference in the budget and staff numbers, ProChile is much more integrated in the context of government policy to promote exports and communicate with the private sector. At PROPARAGUAY, coordination is weak. In general, industrial associations themselves are weak and less motivated to export in Paraguay. In order to catch up with neighboring countries, a more determined commitment by the Paraguayan government is necessary .

vii) National Plan for Exports (NPE)

In order to attain integrated export promotion at both the national and international level, it is advised that discussion be initiated on a NPE, which consists of the actions recommended in this study. The plan will include studies on potential export markets and clarify aid to agricultural and industrial sectors. Coordination at the foreign level will be handled by PROPARAGUAY and at the domestic level by STP, MIC, and MAG. An agreed upon system of cooperation with regional offices will be necessary. The plan is intended to result in a consensus on actions, under a sector program scheme created by public and private economic agents, assuming compromises and responsibilities according to their specific functions.

b) Strategies

i) Simplification of exporter registration

The purpose of exporter registration is to confirm the existence of export companies and to prevent tax delinquency. The latter function may be expected to promote tax collection, since companies that default in tax cannot be registered as exporters. However, promotion of tax collection must be executed as a part of tax collectorship, and should not be the responsibility of export registration. Based on these ideas, the following proposals are made for simplification of exporter registration.

- The customhouse should be the sole window for exporter registration.
- There should be two required documents: the application and articles of association with attestation of a notary public (RUC).
- The number of registration windows should be expanded from the customhouse in the capital to customhouses throughout the nation. If a local customhouse cannot screen documents, papers should be sent to the registration department in the capital for screening.
- Registration should be required only once. Renewal of registration should not be necessary.
- Assuming that the registration procedure will also function to promote tax collection, unpaid taxes should be collected when the VAT is refunded.

ii) Simplification for small exporters

In order to promote exports, it is necessary to simplify procedures for facilitating exports of existing export companies, as well as give incentives to companies with no exporting experience. For the latter, we will propose simple export procedures for new companies dealing with a small amount of exports. The proposals are summarized as follows.

- Exporter registration will not be required for exports of less than US\$5,000 per invoice.
- Exporters must present certificates to certify that they are not delinquent in order to get their VAT refund.

iii) Simplification of the VAT refund procedure

It is necessary to simplify the VAT refund procedure, however, it is also required to apply a check to prevent unfair refunds. In this regard, preferential treatment including simplification and shortening of refund procedures should be established for good companies that have received a VAT refund without legal and other problems in the process.

iv) Computation of export procedures

Proposals i) to iii) can be realized by mobilizing a large number of people, but it would be much simpler using IT (information technology). For instance, in Brazil, computerization of export procedures was realized in 1994 and 1995. By inter-linking the customhouse, the central bank, the agriculture and ranching department, the trade bureau and customs brokers, extensive labor-saving and shortening of procedures were realized. At first, computerization of export procedures was established and then it was applied to import and payment procedures. In Paraguay, computerization of import procedures is already introduced; it will be expanded to export procedures in 2000. If they review the systems as we have proposed in parallel with the promotion of computerization, it will enhance effectiveness of export promotion.

v) Identification of differentiated export products and corresponding export markets

In view of intensifying competition in traditional export products with neighboring countries, the best strategy for Paraguay is to identify differentiated products through concerted efforts both by the private and public sectors. A committee to select “exportable products” needs to be organized with representatives from exporting industries and related government officials. A nation wide survey of potential products should be carried out on a regular basis and evaluation of market potential should be conducted by PROPARAGUAY. The following products were identified by the study for further evaluation by PROPARAGUAY: organic sugar, organic fruits and vegetables, natural drinks using herbs,

stevia, and Paraíso gigante.

Once selection of the potential product has been made, PROPARAGUAY should take initiative to undertake an aggressive marketing campaign in the targeted overseas markets, assisted by Paraguayan embassies or consulates abroad.

vi) Creation of a trade information network through the internet.

It is recommended to create a nationwide communication network taking advantage of the web sites of exporters, associations of producers, cooperatives and other parties concerned. Inter-linking web sites, with PROPARAGUAY's homepage as the center of the linkage, is a good strategy. PROPARAGUAY will feed information to local points on overseas market situations, market preferences, newly developed products gathered through its own efforts or provided by embassies and consulates abroad. The local recipients of the information will pass the information to their member companies or associates. In turn, they will provide information on their own products, business opportunities etc. Such information will be exchanged and also passed to PROPARAGUAY for its attention. Obviously, this is the cheapest method to establish a nationwide trade information network.

vii) Enhancement of export mind of Paraguayan companies

In general, Paraguayan companies lack the will to export, presumably due to burdensome export procedures, absence of integrated government policy for export promotion and a long accustomed dependence on re-exports. If Paraguay is to exploit fully its export opportunities in the context of a fast changing regional economy, fundamental changes to this passive attitude will have to be brought about. In the first place, corporate needs for export will be surveyed, including obstacles or problems to export. The advisory and consulting function of PROPARAGUAY should be strengthened to cope with increasing demands for export.

A nationwide campaign to introduce export opportunities and successful cases of exports should be carried out in all major cities in Paraguay, starting in Asunción. The suggested trade information system is a convenient tool to support the campaign. What is important here is how to follow up the enhanced motivation of the Paraguayan companies to maintain their renewed attitude.

viii) Marketing Paraguayan trademarks and brands

With respect to select high quality export products, efforts will be made to establish their trademarks or brand names in the targeted markets through various measures, such as assistance to demonstrate the products at trade fairs, sales campaigns and publicity. In overseas moves, dedicated support of the

embassies, consulates and other overseas government representation will be required.

ix) Creation of export service centers for small and medium sized companies

It is necessary to assist small and medium size companies, which have products of high potential, to be commercialized in international markets in their attempt to export. For this particular purpose, creation of export service centers is recommended. These will provide the following support services:

- discovery and identification of differentiated products and their marketing support,
- services related to quality control and quality enhancement,
- technical export support.

In all of these, the initiative of the private sector will be appreciated.

x) Support for creation of export departments

By providing technical assistance for creation of export departments in selected medium sized companies with export potential and motivation, PROPARAGUAY will help materialize their willingness to export. Such a service can be extended to cooperatives and associations. Collaboration with the public sector, such as ministries and municipalities, can be expected. Specifically, courses for management, seminars, workshops, direct assistance and other related actions are conceivable for the promotion. PROPARAGUAY is too short of staff to do this alone, so experts will be contracted to assist in major cities in Paraguay.

xi) Assistance in trade fairs and special fairs

By encouraging Paraguayan companies to participate in trade fairs in or outside the country, PROPARAGUAY will help increase their opportunities to negotiate exports. It is important, though, that initiative be taken by the private sector, with effective collaboration of all organizations involved, like ministries, municipalities, industrial associations and cooperatives.

2) Support for export

a) Establishment of a national quality system

In order to assure the quality of products to the consumers, and especially to the export markets, a reliable inspection and certification system must be established. The absence of a national quality system can be a barrier to exports if the destination country requires a quality certificate for the import goods. Under the circumstances, exporters must obtain the certificates of the destination country, as

Paraguayan certificates are not accepted. This indicates that a quality system is a prerequisite to enhancing the export of agricultural and industrial products of Paraguay. It is an urgent task to establish a national accreditation and certification system, which conforms to the MERCOSUR standards and is recognized by the member countries.⁴ Taking into consideration the technical capacity gap between Paraguay and the other MERCOSUR countries, however, a quick and realistic approach should be taken to introduce a credible certification system from an internationally recognized third party or from the neighboring countries. Technological support, such as technical guidance and joint activities, could be sought with cooperation from the neighboring countries to establish a system that conforms.

Concerning the inspection and certification of the quality of products, there are three areas for primary and processed products: i) animal and plant quarantine, ii) inspection of food products, and iii) testing and certification of industrial products.⁵ It is necessary to meet the standards at all stages, from production of raw materials, to processing of the products, to storing conditions and, finally, to delivery to the export destination. By establishing a food certification organism that is officially recognized by the Argentine Ministry of Health and Welfare, for example, food destined for the Argentine market could be inspected domestically and a certificate could be issued before being exported. This can reduce most of the procedures that are required once the products reach Argentina without any recognized certificate. Other issues, which must be considered in export marketing, are the recent consumer demand for safe and healthy food, and the reflection of this on safety standards and import inspection systems for food products in many countries.

The technical level of inspection and certification institutions in Paraguay is not satisfactory at the moment. Therefore, the strengthening of these institutions is also needed in parallel to the establishment of a national quality system.

In order to establish a national quality system, there are three areas of urgency:

- establishment of an accreditation and certification system
- strengthening of testing and inspection institutions
- improvement of the quarantine system.

All require institutional development and assistance. Assuming a positive commitment to this matter within MERCOSUR, the government should allocate resources to the responsible institutions to strengthen their capacity.

⁴ The National Accreditation Organism (ONA) is in charge of this task.

⁵ The institutions that are responsible for each area are: a) the laboratories of the MAG, b) the National Institute of Food and Nutrition (INAN) of the Ministry of Public Health and Social Welfare, c) the National Institute of Technology and Standardization (INTN) of the MIC.

b) Strategies

i) Establishment of accreditation and certification system

The National Accreditation Organism (ONA) was created in 1998 to accredit testing, calibration and inspection laboratories, as well as certification entities of products and systems. It does not have any physical facilities for auditing, and is going to subcontract the auditing for accreditation and the metrology service outside the country, since there is actually no domestic metrology system adequate for the accreditation. They already have had communication with INMETRO (National Institute of Metrology, Standardization and Industrial Quality) of Brazil for cooperation, and they need resources for subcontracting to start the process of accreditation.⁶ Backed by the necessary budgetary measures, it is urgent to formulate a plan to realize conformity with the MERCOSUR standards and the mutual recognition of the accreditation and certification system. At the same time, it will be necessary to seek the assistance of INMETRO in terms of system introduction and human resource development.

The ONA has only two contracted staff at the moment, and prepared the documentation of accreditation in accordance with international guidelines. The capacity of the ONA must be increased through:

- A long-term advisor to develop the instruments of accreditation and to prepare the information system,
- Technical support of specialists to prepare the accreditation procedure,
- Training of the ONA staff and their attendance at regional and international seminars and conferences, and
- Equipment for the basic information system.

ii) Consolidation of INTN

The National Institute of Technology and Standardization (INTN) was founded in 1963 as a public institute for scientific research, technology development and technology transfer to the public and the productive sector. It added the function of National Metrology Laboratory at a later date, and was designated a National Certification Body in 1996. The activities of the institution are :

- Training of scientific and technological personnel
- Technological research and development of products, processes, alternative uses of raw materials, and environment conservation
- Elaboration, diffusion and application of technical standards, certifications, metrology and programs of quality control

⁶ INMETRO: Instituto Nacional de Metrologia, Normalização e Qualidade Industrial

- Diffusion and transfer of technology for the purpose of improving productivity, increasing efficiency, and applying adequate quality systems to obtain international competitiveness

In terms of metrology, JICA has started the “Project on Upgrading of Verification and Inspection Technology in the Area of Mass.” INTN is the first candidate of accreditation by the ONA, so it is necessary to upgrade its capacity as a certification body that conforms to the MERCOSUR standards.

It is recommended that the INTN itself acquires ISO 9000s, and even becomes a certifying organization for ISO 9000s. Meanwhile, the role as a calibration laboratory is as important as that of a testing laboratory in relation to the private sector. It will also be necessary for the INTN to be accredited as a calibration laboratory.

The establishment of product inspection bodies in local areas is also recommended in conjunction with the strengthening of local industries. The establishment of local laboratories is particularly important to consolidate those industrial sectors related to the cluster strategy that is discussed in section 3.3.

iii) Strengthening of INAN

The National Institute of Food and Nutrition (INAN) was created in 1997, and is responsible for the safety and sanitary control of food products. It should be accredited as a certification body of food products. If a food product is going to be exported, the certificate of the product is needed. Since the existing certification system is not recognized internationally, the certificate of the destination country is needed, which takes time and money, and can be a non-tariff barrier. If the government promotes the export of processed food products, such as milk, it is indispensable to strengthen the capacity of the INAN to function as a testing and inspection entity, while strengthening the competitiveness of the products through quality upgrading.

The INAN lacks staff and even basic equipment for analysis and verification. It urgently needs resources to strengthen its operations.

iv) Collaboration and cooperation with INMETRO

The standardization and certification system in Brazil is said to be equal to, if not better than, that of the USA or Japan. The INMETRO not only provides technical back up but also plays a central role in the Brazilian system, and is actively engaged in international cooperation. It has concluded a mutual recognition agreement with the LATU (Technological Laboratory of Uruguay) and is negotiating a similar agreement with the OAA (Argentine Accreditation Organization) in Argentina.

v) Establishment of quarantine organization and continuity of the staff

From 1998 to 1999, Paraguay was provided technical cooperation in connection with plant quarantine by Argentina. However, Argentina points out that directors were changed twice in 1999 alone. The staff was replaced along with directors. As a result, what Argentina taught did not stay in the government. Animal quarantine and plant quarantine must be conducted from the standpoint of experts. It is necessary to have consistent organization and staff so as to establish credibility of the quarantine system.

vi) Reinforce of personnel and facilities of the quarantine laboratory that support quarantine certificate

It is necessary to reinforce field control and laboratory function that support quarantine certificate in order to make quarantine certificate a paper to certify nonexistence of problems at the quarantine. However, the laboratory of plant quarantine does not function virtually. The situation is so serious that we cannot help but doubt their backbone as an agrarian and ranching country. Even though they are in financial difficulties, we hope that they will place priority on establishment of the quarantine system.

vii) Thorough nighttime quarantine

It is reported that some of fruits and vegetables arrived at nighttime from neighboring countries are quarantined by custom officers due to the absence of quarantine officers. If it is true, it is a serious problem that makes us cast doubt on Paraguayan administrative capacity. It is necessary to station quarantine officers at nighttime and to establish strict punishment for foul conduct in connection with quarantine. To reduce the burden of quarantine officers' paperwork on quarantine certificate, exporters should fill in items other than the signature of a quarantine officer.

(4) Investment Promotion

1) Basic concept

Generally Foreign Direct Investment (FDI) including Maquiladora investment in the industrial sector, improves productivity and employment by introducing capital and technology, and also stimulate investment from local companies and promoting exports.

In the case of Paraguay, foreign investment increased from US\$71.1 million (1.1% of GDP) in 1990 to 318.6 million (3.7% of GDP) in 1998.⁷ The ratio of foreign investment to GDP is greater than the mean

⁷ Fernando Massi, 1999, "Inversión Extranjera Directa en Paraguay: factores de atracción, Patrones de comercio e implicaciones de políticas", CADEP, Page1-2

value of that of the Latin America and Caribbean region. It is, however, about half the size of other medium and small countries such as Bolivia and Peru.

According to the Central Bank of Paraguay questionnaire and interviews, foreign investment was mainly in food, beverage and cigarettes in the early 1990s, and, since 1996, investment has rapidly increased in service industries, centering on insurance and financial businesses.⁸

Meanwhile, privatization of state-run enterprises is expected to improve infrastructure service and help increase FDI in general. After Law 126/91 was approved in 1991, however, enforcement was delayed due to strong opposition from political groups in the Congress. Only APAL (the alcohol monopoly), and ACEPAR (steel maker) were privatized. As for ANTELCO (telephone company), the government increased the capital base by 50% and foreign capital and the labor union accepted it without a improvement in services and others areas. In April 2000, the decree of privatization was sanctioned for ANTELCO, ANDE, and CORPOSANA.

Considering the above, we conclude that FDI promotion, led by Maquiladora investment, is an important strategy to complement local investment in the industrial sector.

2) Strategies

The primary determining factors of FDI are political and macroeconomic stability, and expectations for economic growth. Paraguay had a relatively stable economy compared with surrounding countries until the first half of the 1990s. However, the stringent policy enforced from the financial crisis in 1995 to early 1999 has decreased the motivation to invest in the productive sector.⁹ In addition, transparency in the administration and judiciary are not sufficient.

As incentives for FDI, Paraguay's preferential tax treatment measures are not inferior to those of surrounding countries. Paraguay also has the following incentives: a) low electricity charges, b) possibility of low labor costs,¹⁰ c) favored customs duties for capital goods leasing and electronics

⁸ Fernando Massi, "Inversión Extranjera Directa en Paraguay: factores de atracción, Patrones de comercio e implicaciones de políticas", Page 1-2

⁹ The exchange rate stabilization policy, accompanied with the stringent financial policy, created reluctance to grant loans to even leading local companies, and high interest loans in guaraní. This resulted in preventing foreign currency from flowing out rather than improving the investment climate

¹⁰ Nils Janson/Claudio Sapelli, 1997, "Preparing: Principales Obstáculos para el Desarrollo del Sector Privado", World Bank, Page12 : in the formal market, the minimum wage is twice that of Brazil and higher than in Argentina. It is difficult to dismiss a regular employee and when they have to do, employers must pay an expensive severance allowances. In the informal market, the government pays the lowest social insurance, including bonuses, in the region. Without legal limitations, severance allowances can be decided and the country has the lowest wage in the region.

industries, d) international comprehensive insurance service, e) investment guarantee agreements with many countries, f) favored customs clearance costs for materials importation finance, g) 50% of intra-regional origin ratio for re-export until 2006, g) safeguard clauses meeting the rules of WTO, h) common external tariffs for foreign countries in 1995 were 6.3% for raw materials, 9.1% for semi-processed goods and 12.5% for processed goods.

The reasons for rather gradual increase of FDI despite the attractive incentives, is a big question. It may be the lack of basic infrastructure and the delay in the modernization of the labor and tax systems that create an unreasonable investment environment. Because of high level minimum wage (over to Greece and Austria), for examples, 70% of employees are without a labor contract.¹¹ Because of 0% personal income tax (in many cases including unregistered small business), only registered corporations are charged 30% corporate income tax. VAT is imposed on registered exportation, ensuring that unregistered smuggling will increase. These factors accelerate informal economic activities.

The inflexible employment system, unceasing strikes, and low education level hinder the establishment of labor intensive industries, which is the main object of FDI.¹²

Other factors that decrease foreign investors' interest are: a) legal consistency is not guaranteed in the business categories receiving incentives as the President has the authority to expand or reduce the categories, and b) eligibility, judging by the regions at the initial planning, will decrease motivation to improve in the future.

In addition, lack of transparency and a delay in the implementation of procedures concerning protection of intellectual property rights also stimulate the informal economy. The study team heard complaints about bureaucracy, such as slow VAT refund (Law 90/1990) and delays in application paperwork.¹³

¹¹ Nils Janson/Claudio Sapelli, 1997, Paraguay: Principales Obstáculos para Desarrollo del Sector Privado”, World Bank, Page 12, Footnote 20 Minimum wages in Paraguay are sometimes higher than those in surrounding countries, allowing for inflation, however, the figure is considered on average of high salaries rather than minimum, as 70% are ignored at labor contract. In addition, employers with 10 or more employees have to pay training fees equivalent of 60% of minimum wages as a company benefit.

¹² Nils Janson/Claudio Sapelli, 1997, Paraguay: Principales Obstáculos para Desarrollo del Sector Privado”, World Bank, , Page 13-15 As the procedures to dismiss permanent employees are burdensome and lengthy, employment of minimum permanent staff is a business practice here. As the officials tend to make decisions that favor employees, it is possible that renewal of labor contract will be enforced after spending time and money to dismiss them. Therefore, the employers dismiss the employees beyond legal restrictions by providing better allowance than legal standard. Moreover, employment more than 10 years is considered as violation of the law or double the amount of severance allowance needs to be paid for those employees. As a result, the Labor Law hinders advancement of the middle management and skilled workers.

¹³ Fernando Massi, 1999, “Inversión Extranjera Directa en Paraguay: factores”, Page 36

Under these circumstances, it is impossible for investors to develop a long-term plan and it is inevitable that they lose motivation to commit to a long-term investment plan. A revised labor and tax legal framework, and rapid and transparent legal treatment are necessary to encourage formalization of the economy and break through the problems. FDI promotion organizations can then develop privatization to lead FDI, and strategic plans to promote Maquiladora.

In general, the Maquiladora system is the easiest system to promote FDI by reducing investment risks that arise from foreign exchange and duties. The Maquiladora system in Paraguay was established based on Mexico's Maquiladora and the Temporary Import Program for Exportation (PITEX), but lacks strong motivation to implement.¹⁴ In case of Mexico, a) there is a large market like the USA, and b) there is a country like the USA, where the custom duty for finished goods is lower than that of parts making it easy to introduce the Maquiladora system.¹⁵ Free trade zones such as Manaus in Brazil and Fuego Island in Argentina has strong motivation to serve country security and protected domestic markets. Paraguay does not have special economic relations with the USA, like the textile sector in Mexico, Costa Rica, and Dominica.

When we try to promote Maquiladora investment, the manufacturing and distribution costs become the most important point. For this purpose, adding transparency in judicial and governmental action, the irrational minimum wage and tax system, and the disadvantages of production cost which would charge more to a registered company as like Maquiladora than a non-registered company, should be eliminated.

Considering location, Paraguay is a short distance to big cities in surrounding countries. The Maquiladora in Paraguay, which is closer to the economic centralized area than Manaus in Brazil and Fuego Island in Argentina, may thus hold an advantage in assembly of household electrical goods and auto-parts, if infrastructure is improved. As for the American and European markets, however, the Maquiladora in Paraguay is not competitive relative to other in-bond industries in other countries near these markets.

Therefore, the Latin American countries are considered to be the first target for Paraguay's Maquiladora products. But in the case of assembling household electrical goods and auto-parts, these industries consist of simple assembly and lacking uniqueness, so it is highly possible that investors will close or minimize their production scale due to changes in the exchange rate and supply and demand.

Paraguay's Maquiladora strategy should thus aim not only to promote household electrical goods and auto-parts, but also to promote another type of Maquiladora using natural resources in the region, and

¹⁴ The system of Paraguay includes rules of re-export like Argentina and Uruguay.

¹⁵ In this case, greater incentive is given for production of completed goods of higher value.

based on its own technology. If targeting the American and European markets, the Maquiladora in Paraguay should handle high value-added and distinct products.

Possible examples are: a) a Maquiladora to utilize the internationally competitive natural resources in the region (leather car seats, leather covered steering wheel), b) a Maquiladora to process the resources (reassembled transmission for repair),¹⁶ and c) a Maquiladora for large-item, small-scale production, dealing in high value-added custom-made products (equipment to limousine and recreation car).

Thus, focus of the action plan is on promotion of the Maquiladora. The plan consists of the formation of a promoting organ, with specialists, and the education program of sending the Paraguayan specialists at the Business Supporting Center of JETRO in Japan to practice the FDI promotion through OJT.

¹⁶ Considering the fact that used cars are common and electronics products are often reexported, there should be certain techniques to maintain and modify these products. A strategy to combine the techniques and the environmental issue is needed.

3.2.2 Agricultural sector

(1) Characteristics of the agricultural sector and the study approach

1) Characteristics of the agricultural sector

The agricultural sector of Paraguay produced a total agricultural production earnings of US\$1.54 billion in 1998 generated by approximately 310,000 farm households and agricultural holding other than farm household operating on 33.5 million ha of agricultural land (cultivated land, pasturage, and forest land). Total agricultural production earnings have comprised 27% of GDP and have generated foreign currency earnings surpassing US\$900 million annually since 1990 (85% of total export earnings). It is a key industry that supports the national economy. Moreover, more than 50% of the population lives in rural areas and is largely dependent on the agriculture and livestock industry for their employment, income, and lifestyle. In addition, the agricultural sector is a major source of raw materials for the domestic industrial sector that is composed largely of agro-industries.

As mentioned above, the agricultural sector is a key industry, but it is distinguished by the following four characteristics; a) the domestic market is limited due to a small population; b) it is in transition stage to a real market liberalization after joining MERCOSUR; c) nearly 80% of the sector is comprised of small-scale farms whose competitiveness in the market is weak; and d) agricultural development is highly dependent on technical assistance and financial cooperation from international donor institutions, and foreign immigrants residing in Paraguay.

The average annual growth rate for the last ten-year period (1989-1998) of the agricultural sector was 2.5%, which was lower than the population growth rate of 2.8% for this same period. If policies to develop the agricultural sector are not actively and strategically implemented based on these four characteristics, there is the danger that agricultural development will stagnate. If this were to occur, food costs and the wage level in urban area will rise and in turn, hinder the growth of the manufacturing and other industries. Further more, overall domestic economic growth will be negatively affected since farmer incomes and the domestic purchasing power will not increase, leading to deficient growth in the industrials sector.

2) Study approach

The following approach from a macro and micro level was adopted to implement the study in order to clarify the issues and conditions required for agricultural development based on the characteristics explained above.

- a) Verification of the issues and transitions in macro-agricultural development policies before and after Paraguay's affiliation with MERCOSUR.
- b) Evaluation of the targets of macro-agricultural development policies based on an analysis of the agricultural produce trade.
- c) Agricultural development issues were verified according to the following micro-agricultural aspects; i) agricultural development trends according to region, ii) development conditions of vegetables, cotton, soybeans and new livestock products, iii) conditions and issues faced by farmer organizations and agricultural cooperatives.
- d) Trends and issues in Official Development Assistance (ODA) that are relevant to promoting agricultural development.
- e) Issues in agricultural development policies stemming from multilateral agricultural negotiations (MERCOSUR, WTO).

(2) Agricultural development concept

The issues in agricultural development have been clarified based on the basic theme of “what will happen to agriculture if it continues the traditional pattern of development?”

The issues will be reviewed according to the three themes of “what will happen to the competitiveness of exported agricultural products?” “What will happen to soybean and wheat production which are dependent on extended expansion of farmland?” and “what impact will multilateral agricultural negotiations have?”

This will be followed by the estimated number of farming households, farmer population, and production of major agricultural and livestock products by 2010, which will be used to clarify the development framework. The future scenario of the agricultural development concept will be formed based on these development issues and future perspectives.

1) The future based on the past development patterns: “What will occur to Paraguay agriculture if the past development patterns are continued?”

- a) What will happen to the competitiveness of exported agricultural products?
 - i) The growth of exported agricultural products will stagnate due to its reliance on export countries and minimal export products

The export growth rate of Paraguay's agricultural products since its participation into MERCOSUR has been low and unstable. One of the major reasons underlying the stagnant export of agricultural

products is the minimal amount of exported products and Paraguay's dependence on exports from other countries. The four commodities of soybeans, cotton, livestock, and lumber comprised on the average 90% of all exported agricultural products from 1995 to 1998, and an exclusive ratio of 80%, if manufactured goods are included. The recent decline in forestry resources has become a factor in restricting the export of lumber and forestry products; and a further decrease in the number of exported goods is anticipated.

The ratio of arable land use, calculated on the basis of cultivated area against arable land area, has recently dropped from 65% in 1981 to around 34% in 1995. The existing land resource utilization ratio is extremely low, with the ratio of cultivated area to agricultural land resource area at around 10 %. The natural grasslands in Paraguay are used for pastureland or under utilized, but it is possible to utilize them as arable land for grain and fruit, and so forth, under certain conditions. This shows that by raising the utilization ratio of existing natural grassland resources (approximately 20 million ha), increased grain production is quite possible.

According to an FAO report, land resources in Paraguay with undeveloped potential for crop production are estimated at approximately 22 million ha (World Agriculture: Toward 2010, An FAO Study, 1996). This estimation almost corresponds to the area of natural grassland mentioned above, demonstrating that the utilization of grassland is an important issue for future increase in agricultural production.

- ii) Diminished comparative advantage index due to lowered per capita productivity has contributed to a decline in competitive viability

According to the RCA Index estimated for 10 typical export commodities of Paraguay and the other MERCOSUR member countries. Only one of the 10 commodities for which Paraguay has a comparative advantage over the other three countries is a soybean, productivity of which is being increased through the introduction of new technology, such as direct sowing method.

In cotton, Paraguay's performance is close to the world average, but that advantage is showing signs of decreasing. In addition to cotton, another commodity exists for which the RCA Index shows a downward tendency. That commodity is Paraguay's traditional vegetable, the tomato. The decrease in RCA Index, however, may be attributed to the fact that in the period 1993-1995, productivity by hectare showed a tendency to stagnate, and that per capita productivity fell over the long-term. These export products are expected to continue declining. In addition, the failure to secure economization of scale (lack of development of middle-scale farms), problems vis-à-vis strategic marketing know-how and systems (lack of agricultural organizations) and problems vis-à-vis access to export markets (lack of hard and soft distribution channels) are possible factors for the decrease in comparative advantage

index.

iii) Potential agricultural development in the comparative advantage of soybeans

The other two primary processed soybean commodities (soybean oil and soybean ground) are increasing that comparative advantage index, which is encouraging trend for Paraguay's export competitiveness. Paraguay should cast off the label of "exporter of primary agricultural produce" which it has traditionally promoted, and aim to foster production centered on an agro-industry, enhance added value, and increase employment opportunities in the agricultural sector.

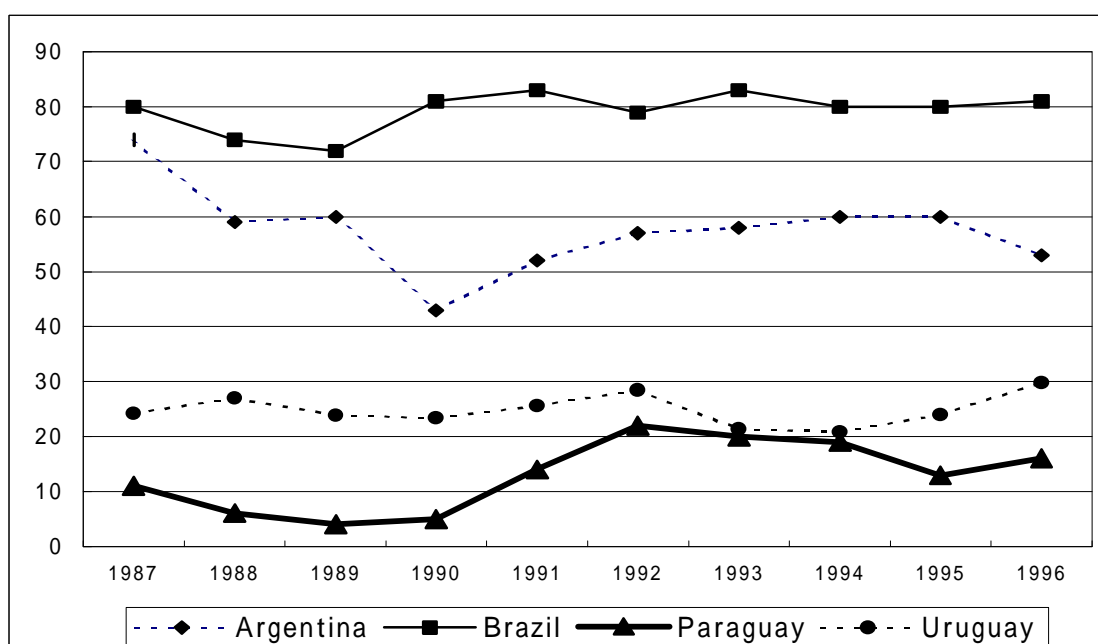
iv) Need for a strategy on product differentiation as seen in the expanding intra-industry trade

Figure 2 expresses the industrial trade index as the Gruebel-Lloyd Index (total of the 7 items, such as soybean, cotton, coffee, tobacco, yerba mate, meat, hides). In comparison to the late 1980s, Paraguay's industrial trade in the 1990s has increased. Changes in the Gruebel-Lloyd Index for Argentina and Paraguay show a similar pattern. Although restricted to these 7 items, it may be surmised that, while the scale of the two countries differs, their agricultural produce trade sectors share similar structural characteristics.

In the future, when Paraguay reforms the structure of its agricultural produce export sector to become more competitive, of all the MERCOSUR members Argentina will in all likelihood become its main competitor. Investigations which focus on industrialized countries normally cite the following as factors in the expansion of intra-industrial trade: rise in income, diversification of demand, economic scale, product discrimination owing to the influx of multi-national corporations and an oligopolistic market, and the reduction and abolition of trade barriers as a result of negotiations among multiple nations (GATT Uruguay Round). The diversification of demand owing to rises in income and urbanization in particular is a phenomenon that is apparent not only in industrialized countries, but also in developing countries.

The meaning of intra-industrial trade expansion that relates to the competitiveness of exports, as a result of the kind of overseas competition within a single industry seen in the "theory of comparative advantage," is not a matter of forcing the same domestic industry to choose between the two alternatives of whether to decline or survive, but of encouraging this same domestic industry to compete overseas through the segregation of niche by product discrimination. Therefore, in the similar industries of Paraguay and Argentina, which were discussed earlier, product differentiation is an important strategy.

Figure 2 Gruebel-Lloyd Index of Selected Commodities



Source: JICA-EDEP estimated based on The DATAINTAL Database from the IDB;
OCIT Data Compiled from Customs (Paraguay)

b) What will happen if the traditional development pattern based on extended expansion of farmland is continued?

i) The production of soybeans, wheat, and corn that have depended on the extended expansion of farmland has reached its limits

The forest resources of the central eastern region, where land productivity is high, have decreased by 160,000ha yearly. The rapid decline of these resources signifies that new agricultural development of the major granary area of the entire eastern region has reached its limits. The profitability of soybean has relied on the scale merit of extended expansion of farmland based on the cutting of forests; and this pattern of development has reached its limits.

The future profitability of soybeans is dependent on curtailing production costs. In order to achieve this, it is essential to disseminate and expand direct sowing and the practice of crop rotation, mainly of wheat, sunflower and corn. Furthermore, the use of soybean as mixed feed and other processed raw materials with high protein content are also important. In addition, the decreased cropping area of soybeans due to disintegrating profitability, affects wheat and corn production, the second crop food grains. Hence ensuring the profitability of soybeans is also an important issue in terms of securing a stable food supply.

ii) The quandary of absorbing a rising rural population

The productivity of cotton, the cash crop of small-scale farms, has been marked. Hence improving the productivity of this crop is important in order to sustain small-scale farming operations. Simultaneously, introducing new cash crops is also essential for these farming operations. Vegetables, which can be cultivated in a small area of land, usually generate high profitability and are anticipated to become a dominant substitute crop for cotton. However, the farms are highly cautious about growing vegetables due to the difficult cultivation techniques and the unstable prices stemming from fluctuating market prices. Therefore, the means by which a stable market is secured will be an important incentive in accelerating vegetable cultivation.

In future, a large population increase in the small-scale farming sector has been estimated, but reforms in the land ownership system have not progressed. Therefore, absorbing the overall population increase in this sector is difficult and utilizing the surplus labor to create new industries such as agricultural processing is recommended. The rising income of small-scale farms, which comprise more than 80% of the total number of farm households, is a vital source of purchasing power that will create effective demand; and it is equally important for the socioeconomic.

c) What impact will the WTO multilateral negotiations have on agriculture in Paraguay?

i) Need for rule-making vis-à-vis plant quarantine measures and quality issues

The WTO agreement on Agriculture consists of three main elements: market access, domestic support (domestic subsidies), and export subsidies. In comparison to these three main elements of WTO agricultural negotiations, the rules of MERCOSUR are still in the development stages, and there are still many areas for improvement. Nevertheless, since its key members are exporter countries of agricultural produce, these rules are oriented more toward liberalization than are the WTO rules. However, in the lead-up to the year 2000 WTO negotiations, MERCOSUR, including Paraguay, will have to confront one issue: rule-making vis-à-vis plant quarantine measures and quality issues.

The USA's stringent rules vis-à-vis processing levels, HACCP (Hazard Analysis and Critical Control Point), are already being introduced into many industrialized countries, as well as into developing countries such as those of Southeast Asia. There is no denying the possibility that a "new international order" will come into existence, in which the application of these strict rules of hygiene will replace the existing three elements of agricultural negotiations. Therefore, MERCOSUR's processing and distribution sectors will have to take account of the WTO's ISO series. Failure to do so will mean that MERCOSUR countries will lose the advantage of openness they currently enjoy in WTO agricultural negotiations. Unless Paraguay also endeavors to introduce this technology, its exports will fail to

become more competitive on the world market.

ii) Strengthening competitive viability through WTO exempt measures

The WTO agricultural agreement advocates curtailing and eliminating the system of subsidies and other measures mentioned above that distort free trade. However, the agreement does recognize the need to implement exempt measures to prevent reduced trial research and development activities, national food security, environmental conservation, structural reforms, and regional agricultural assistance. Exempt measures should be actively adopted in order to strengthen the competitive viability of agricultural products; and it is important to quickly create the foundations needed to achieve competitive viability based on improved productivity.

2) Future framework

A wide perspective of future agricultural development policies that will affect socioeconomic factors has been taken, based on the number of farm households, farmer population, agricultural production and balance of supply-demand of agricultural products. Existing government data has been utilized whenever possible and the study team provided its own estimated statistics when data was not available.

a) Estimated number of farm households and farmer population

The number of farm households increased about 23 % in the ten-year period from 1981 to 1991. Based on past trends, the number of farm households at present will increase by 180,000 by 2017. According to JICA “Small-scale farmer development project (1997)”, at least 90,000 new farms are anticipated to come into existence, raising the total of 400,000. Simultaneously, the farmer population will rise from 1,600,000 at present, to a maximum of 2,800,000 or a minimum of 2,200,000 farmers. The number of farm households and the farmer population is expected to increase markedly in departments with high land productivity, such as the east region in Alto Paraná department, a major grain producing area of soybeans, corn, and wheat. This is also expected in the central to northern regions of San Pedro and Caazapá departments where a large number of small-scale farms are dispersed.

b) Estimated agricultural production

The study team compiled estimations on the production of major exported agricultural and livestock products and food crops up to 2010 according to department; and the results are shown in Table 6. In 1990, the Ministry of Public Works and Communications (MOPC) and MAG compiled similar estimations up to the years 2000 and 2010. These estimations were very ambitious for 1990; and achieving these goals has been difficult, with the exception of soybeans. As a result, the study team

compiled their own estimations based on recent trends in regional agriculture. The estimated statistics on production have been summarized and are shown as follows.

- i) The production volume of soybeans is estimated to increase 1.3 times over current levels by 2010. Alto Paraná and Itapúa departments, the present soybean producing areas, have increased their production volume by only 1.0 to 1.2 times per annum. However, the northern departments of Canindeyú and San Pedro are anticipated to increase their production volume by 1.5 to 1.6 times.
- ii) Wheat is the winter crop and the production volume adequately meets the domestic consumption demand. As a result, wheat is not produced in some years depending on the conditions of the soybean harvest. Due to such an unstable system of cultivation, the production volume of wheat is anticipated to drop greatly.
- iii) The drop in the production volume of cotton is expected to continue and it is anticipated that improving the income of small-scale farms will be difficult. Vegetables, as exemplified by tomatoes, are anticipated to become the substitute crop for cotton by small-scale farms and the production volume is expected to increase. This is particularly true for San Pedro, Amambay, and Paraguari departments, where a growing number of small-scale farms are dispersed.

Table 6 Estimated Production Volume of Major Agriculture and livestock Products

		1997	2005	2010	/
Agriculture Products (1,000ton)	Soybeans	2,856	3,466	3,724	1.30
	Wheat	229	188	196	0.85
	Corn	873	941	1,001	1.14
	Sorghum	21	23	24	1.14
	Rice	100	157	170	1.70
	Cotton	222	182	183	0.82
	Cassava	237	264	275	1.16
	Sugarcane	3,127	2,918	2,948	0.94
Livestock Products (1,000heads)	Beef cattle	9,022	8,940	8,930	0.99
	Dairy cattle	690	710	723	1.05
	Pig	1,746	1,873	1,925	1.10
	Chicken	14,997	15,611	15,900	1.06

Source: JICA-EDEP

c) Estimated supply and demand of major food crops

The study team has estimated future supply and demand, based on recent trends, for major food crops such as wheat, corn, and root crops. The characteristics are summarized as follows.

- i) A surplus supply of corn is expected in all departments in future, excluding Chaco in the occidental region.
- ii) The supply capacity of wheat will fall in the major wheat producing areas of Alto Paraná and Itapúa

departments and the cities of Ciudad del Este and Encarnación due to increased population. In addition, the population increase in the capital, Asunción, will be marked and there will be a supply shortage.

- iii) The demand of wheat, corn, rice and vegetable are anticipated to increase from about 1.6 to 2.0 times in each of the departments of Central and Alto Paraná which have major cities.
- iv) Based on the estimated balance in supply and demand, Caazapá department, which is located between the southern region with fertile soil conditions and the central region with poor soil conditions, is the only department that will be able to achieve self-sufficiency in food.
- v) This suggests that supplementary production of food crops is vital between departments. There is the possibility that the disparity in food shortages between regions in future will become acute, unless a system of supplementary production and marketing is established in each department.
- vi) In addition, the number and dispersal of small, medium, and large-scale farms is relatively well balanced in this department. This is indicative of the importance of having a combination of various agricultural systems in the department.

3) Development concept: “So what to do?”

a) Development objectives

Based on the discussion above, the following development objectives are proposed in order to achieve sustainable agricultural development in Paraguay.

- i) Promote diverse agricultural commodities for export and eliminate Paraguay’s image as an exporter of primary agricultural products.
- ii) Strengthen the competitiveness in both the domestic and export markets by improving agricultural productivity and quality (additional value).

These combined development objectives, which are based on the characteristics of the agricultural sector, reflect the future status of Paraguay’s economy and agricultural sector and the role and demand they will be anticipated to fulfill when resolving development issues.

b) Basic development concept

In order to realize a substantial achievement of these development objectives, the following two concepts are proposed.

Basic concept 1

Promote the formation of a production system that incorporates regional agricultural characteristics, improve agricultural productivity, and strengthen competitive viability in both the domestic and export markets.

Basic concept 2

Promote agriculture and rural development that is based on agricultural processing, aim for diversified agricultural export products, and change the image of the country as an exporter of primary agricultural products.

The significance of the development concept given above is summarized below.

- i) As explained earlier, agricultural development objectives to achieve its goals through agricultural processing. In order to improve Paraguay's competitiveness in the MERCOSUR countries and in other regions, this objective is a dynamic means of securing an advantage in the market utilizing the agricultural processing industry and ending the traditional dependence on the export and production of primary products.
- ii) Apart from distribution and sales, the success or failure of the agricultural processing industry is dependent on the supply of raw materials. The small, medium, and large-scale farms produce and supply the materials for the processing industry. In such cases, regional agriculture that adequately reflects different regional land productivity and agricultural conditions will be targeted.
- iii) Incorporating small-scale farms with low productivity and competitiveness, which comprise the basic stratum of the rural community, will contribute to an improved and stable rural economy. When seen in this light, promoting the agricultural processing industry will serve as a positive force in mobilizing the rural community.
- iv) A multiplying effect, beginning with the production of primary ingredients to secondary and third products of each industry, is anticipated if a structure of agricultural development based on processing is created.
- v) In an overall review of the above, firstly, agricultural processing adds to the competitiveness of the agricultural sector, but secondly, it is also a strategy that can be altered and expanded to help reorganize regional agriculture and maintain a sound rural community. This raises the strategic value of this structure of agricultural development even further.

(3) Agricultural development strategy

1) Strategy to achieve agricultural development objectives

a) Relation between development concept and development strategy

Development strategies based on assistance for agricultural and livestock production, agricultural financial assistance, assistance to support exports, and strengthening producer organizations and agricultural cooperatives that are needed to fulfil the two basic development policies explained in the previous section (2), are proposed in this chapter. The following development strategies are aimed at achieving the two development concepts. However, the development strategies will not accomplish their objectives without the combined effort of other sectors.

Basic concept 1: Promote the formation of a production system that incorporates regional agricultural characteristics, improve agricultural productivity, and strengthen competitiveness in both the domestic and export markets.

Strategy (1-1) Promote a production region that aims to decrease production cost and improve productivity.

Strategy (1-2) Promote effective agricultural financing

Basic concept 2: Promote agriculture and rural development that is based on agricultural processing, aim for diversified agricultural export products, and change the image of the country as an exporter of primary agricultural products.

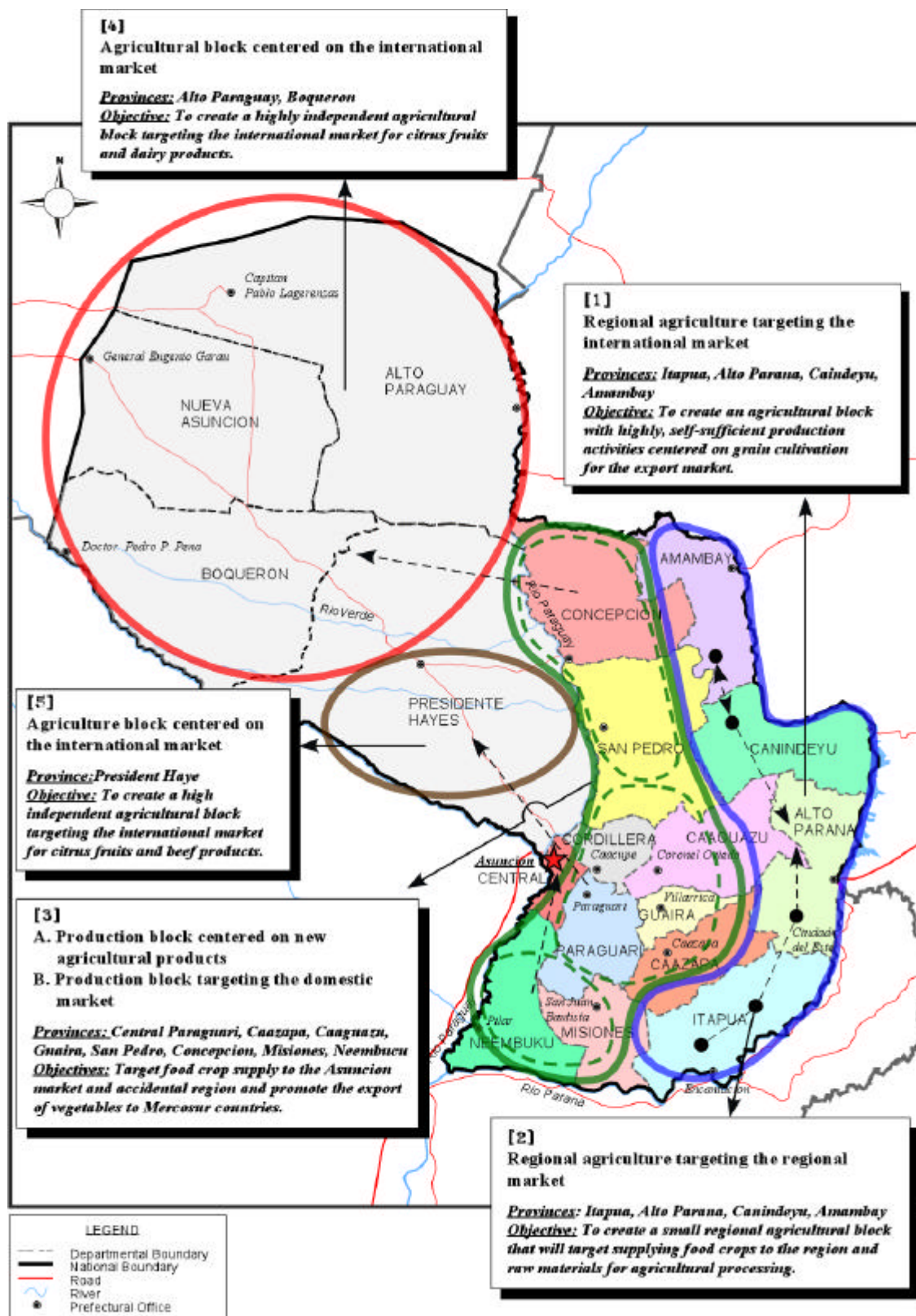
Strategy (2-1) Promote the export of agricultural and animal products by implementing a plant and animal inspection system.

Strategy (2-2) Diversify agricultural products and promote the agricultural processing industry by supporting producer organizations and agricultural cooperatives.

b) Focal concept of agricultural development strategies - agricultural production blocks according to region-

The focal concept underlying the agricultural development strategy is zoning the agricultural production in blocks according to region as shown in Figure 3. The agricultural production blocks according to region will be based on regional farming characteristics, recent crop production, and production trends. According to this concept, increased production of agricultural and livestock products with high productivity will be targeted. The region will be divided into 5 blocks with different production trends or different production goals.

Figure 3 Agricultural Production Blocks according to Region



2) Development strategy program/projects

The objectives of each development strategy program and the projects that comprise the program are discussed below. The development strategy program and projects have been considered in conjunction with the development structure of clusters explained later.

a) Assisting regional production program

The program objective is to promote regional production by incorporating regional characteristics such as different regional land productivity, agricultural conditions, scope of the farms (small, medium, large-scale), and the type of farm management that is practiced, to improve productivity, and strengthen the competitiveness of exports. In addition, in view of the deterioration anticipated in the balance of food supply and demand in each region in future, the program will help increase the production of food crops in the region. Improving the production system in the region will promote competition between production areas and the anticipated benefits are lowered costs and improved quality. Based on the objectives mentioned above, the following support projects are proposed.

- (1.1) Increase production of major grains
- (1.2) Assist cotton production
- (1.3) Increase production of new export products (horticulture)
- (1.4) Assist production of new livestock products
- (1.5) Assist production of useful trees and shrubs in the eastern region
- (1.6) Establish a regional market in order to create a produce-producing region
- (1.7) Integrate, systematize, and utilize the research findings of research institutions and MAG agricultural experiment

b) Assisting the export of agricultural and livestock products program

One of the factors impeding the export of Paraguayan agricultural and livestock products is the lack of an inspection system for such export products; and this has become a non-tariff barrier in the trade with MERCOSUR countries. In addition, the HACCP has been adopted by the WTO, resulting in stringent hygiene inspection controls. Therefore, despite improved productivity and strengthened competitiveness in the export market, increased export of Paraguayan products in the MERCOSUR and global market can not be expected if a hygiene inspection control system for exported agricultural and animal products is not implemented. Moreover, the lack of a hygiene inspection system for primary products will also impact the export of processed agricultural products. Therefore, an immediate countermeasure is needed. The following project is suggested based on the conditions described above.

- (2.1) Plant disease prevention project
- (2.2) Hygiene management project for livestock products
- (2.3) Analyze harmful substances in meat

c) Strengthening agricultural producers and cooperatives program

The cooperative is fulfilling a leading role in regional agriculture in the leading soybean and vegetable producing areas. They purchase farming equipment in one-sum payments and resell it to members at a reduced cost, thereby contributing to lower production costs. Presently, it has become difficult for small-scale farms, which comprise 80 % of the total number of farms in Paraguay, to achieve stable farm management operations due to the lack of capital. As a result, cooperatives and farmer organizations provide easily accessible capital for production and technical support and they have contributed to expanding the operations of the farms. In addition, cooperatives are a stable source of raw materials, an essential element in realizing the proposed cluster strategy. In view of the benefits that are derived from cooperatives and farmer organizations and in order for them to play a role in the development strategies mentioned above, the following projects are proposed.

- (3.1) Support agricultural cooperatives
- (3.2) Promote small-scale farm participation in agriculture processing

d) Agricultural financing program

The selection criteria of agricultural producers in Paraguay is not based on yield or high productivity levels, but natural disasters (unusual climate) and the compensation for production risks stemming from unstable market prices. This tendency is especially prevalent among small-scale farmers. The Paraguayan government normally does not provide assistance measures for farms suffering financial losses due to disease, pest, or drought. Producers hesitate to diversify their crops out of fear of a poor crop. This has been an impediment that has slowed the movement toward diversification. The production of soybeans, which is a competitively viable export product for Paraguay, is mainly carried out by cooperatives and their member farms. Financing the farm management capital for cooperatives is an important means of sustaining the development of competitiveness. The following agricultural financing plan based on the conditions described above is shown below. The objective is to achieve agricultural diversification. This program has been included in the development strategy outlined in section 3.2.1 on Institutional Finance.

- (4.1) Crop specific financial
- (4.2) Financial assistant for agricultural cooperative
- (4.3) Crop insurance

3) Priority of agricultural programs/projects

a) Evaluation criteria of priority programs/projects

There are 4 programs and 15 projects, which have been proposed as agricultural development strategy programs/projects. Of these programs and projects, which have been proposed, those, which meet the following criteria, will be designated as priority programs.

- i) Those programs and projects that are currently being implemented and which contribute greatly to MAG agricultural policies will be assisted to enable both to function effectively.
- ii) Programs and projects that greatly strengthen the competitiveness of export produce with relatively low investment and where the effects have been corroborated in past studies will be given priority.
- iii) Programs and projects that have been evaluated as important for coping with the changes in the external conditions of multilateral agricultural negotiations will be given priority.
- iv) Programs and projects which are in line with the cluster development structure that is the focus of the economic development objectives of this study and which will play a strategic role in future investments economic development will be given priority.

b) Proposed priority programs/projects

The programs and projects that meet the evaluation criteria listed above and which will be given priority in 2006 will be proposed in a short list.

Strengthening the competitiveness of exported agricultural products, despite short-term measures, it is extremely important that the proposed programs are well balanced and integrated and not implemented as separate, individual projects/programs. In order to achieve this, it is important to focus on the following categories: forming a production region, promoting agricultural and livestock products for export, and supporting farmer organizations and cooperatives. Table 4 shows the priority programs/projects proposed based on the integration of these categories. These ten priority programs are the basic package of the development strategies described earlier. The agricultural financing program is based on the development strategy explained in section 3.2.1 on institutional finance.

Table 7 Proposed Priority Programs/Projects

Program / Project	Phase 1	Phase 2	Phase 3	Phase 4	Implementation Agency
	2001-3	2004-6	2007-10	>2011	
1. Assisting regional production program					
1.1 Increase production of major grains					DGP-CRIA
1.2 Assist cotton production					DGP-DEAG
1.3 Increase production of new export products (horticulture)					DGP-DC-DEAG
1.3 Assist production of new livestock products					DGP-S.S.E.G
1.5 Assist production of useful trees and shrubs in the eastern region					DGP-S.E.R.E.N
1.6 Establish a regional market in order to create a produce-producing region					DGP-DC
1.7 Integrate, systematize, and utilize the research findings of MAG agricultural experiment					DGP-DIA-CRIA-IAN
2. Assisting the export agricultural and livestock products program					
2.1 Plant disease prevention					DGP-DDV
2.2 Hygiene management for livestock products					DGP-SENACSA
2.3 Analyze harmful substances in meat					DGP-S.S.E.G
3. Strengthening agricultural producers and cooperatives					
3.1 Support agricultural cooperatives					DGP-INCOOP
3.2 Promote small-scale farm participation in agricultural processing					DEAG-INCOOP
4. Agricultural financing program					
4.1 Crop specific finance					DGP-DDV
4.2 Financial assistance for agricultural cooperatives					DGP-SENACSA
4.3 Crop insurance					DGP-S.S.E.G



Priority project for action plan (2001-2006)

CRIA: Centro de Investigación Agrícola, DGP: Dirección General de Planificación,
 DC: Dirección de Comercio, DDV: Dirección de Defensa Vegetal, DEAG: Dirección de Extensión Agrícola
 DIA: Dirección de Investigación Agrícola, SENACSA: Servicio Nacional de Salud Animal,
 S.S.E.G: Sub Secretaria de Ganadería, SEREN: Secretaria de Recursos Natural
 INCOOP: Instituto Nacional de Cooperativismo

3.2.3 Industrial sector

(1) Present situation

The Paraguayan industrial sector represented 14.1% of GDP in 1998, according to the Central Bank of Paraguay. This percentage has declined gradually during the 1990s from 16% to 14%. Compared to other Latin American countries, Paraguayan industry contributes little to the national economy. Among the MERCOSUR countries, Brazil and Argentina achieve industrial proportions of around 25%. Uruguay, with a similar economic structure to Paraguay, has an industrial sector that accounts for 21-23% of GDP, including the mining sector.

Table 8 Industrial Growth and Contribution to GDP (%)

	1991	1992	1993	1994	1995	1996	1997	1998
Growth Rate	1.1	0.4	2.0	1.5	3.0	2.2	0.2	1.0
Contribution to GDP	15.9	15.6	15.3	15.1	14.8	14.3	13.9	14.1

Source: Economic Statistics, BCP

The Paraguayan industrial sector had negative real growth in 1996 and 1997, and recovered to a positive rate of 1% in 1998. The average growth rate of the sector for 1991-98 was 0.8%, lower than the 2.5% overall GDP growth rate. The industrial sector has played a secondary role in the economy, and its importance has decreased since the onset of MERCOSUR.

Historically speaking, Paraguay has not employed any specific industrial policy. Even when most Latin American countries promoted industrialization through import substitution, Paraguay maintained an open economic system. Exceptions were cement, steel and petroleum refinery industries, which were developed by the public sector. The reasons for not pursuing an active industrialization policy were that the domestic market was small, and that it was cheaper to import industrial goods from neighboring countries than to produce and supply them domestically.

However, during the late 1970s and 1980s, some industries, such as electronics and metalworking, developed to a certain degree when the Itaipú Dam and its power plants were constructed. The technology level of Paraguayan industry has not advanced significantly since then, and most related industries are still using rather outdated processes.

1) Major industry groups

As shown in Table 9, more than a half of industrial value added is concentrated in the food, beverage and tobacco industries, of which the food industry accounted for 38.4%. The beverage industry accounted for 11.8% of the industrial total in 1997. Other major contributors are: a) the textile industry

- including leather products (9%); and b) the wood industry (14%). This means that the processing of raw materials from agriculture and forestry created approximately three-quarters of industrial value-added.

Table 9 Industrial Production 1997

CIU	Value Added (US\$1,000)	Share (%)	Employment	Share (%)
31 Food, Beverage & Tobacco	737,093	50.9	30,527	16.8
32 Textile, Leather & Shoes	131,462	9.1	63,652	35.1
33 Wood & Furniture	202,595	14.0	21,630	11.9
34 Paper & Printing	97,890	6.8	7,382	4.1
35 Chemical & Petrochemical	76,126	5.3	7,100	3.9
36 Non-metallic Minerals	76,420	5.3	18,939	10.4
37 Basic Metal	2,734	0.2	3,467	1.9
38 Metal Products & Machinery	13,588	0.9	9,769	5.4
39 Other Manufacturing	2,953	0.2	19,103	10.5
Sub-total	1,340,861	92.6	181,570	100.0
Handicrafts (Difference)	107,272			
Total	1,448,132	100.0	181,570	100.0

Source: (Value Added) BCP

(Employment) Statistic and Census Bureau, BCP

As for employment, the Paraguayan industrial sector employed 10.0% of the economically active population, or 181,570 people in 1997 (see Table 9), declining from 11.1% in 1995, and 10.4% in 1996. The textile and leather sub-sectors absorbed more than one third of industrial employment. The second largest absorber was the food industry, followed by the wood processing industry and the non-metallic mineral industry (which produces cement, bricks and glass bottles).

The trend of production in the wood, leather and textile industries should be noted, from the viewpoint of industrial linkages. The production of wood processing increased most significantly in quantity, while the production of wooden furniture was stagnant and almost constant in dollar terms. The leather tanning industry also expanded its production in the early 1990s and in 1996, while the shoe making industry, a typical downstream industry of leather, did not show an increase of production in dollar terms. Another important sub-sector is the cotton industry. The textile industry peaked in 1991, after which it had not recovered to the 1991 level as of 1996. Between 1990 and 1997, the production of the garment industry fell dramatically. These three industrial groups experienced significant decreases in downstream fabrication, even though their upstream sub-sectors accomplished some increases in production.

2) Export of Industrial Products

The export of industrial products took off at the end of the 1980s. As a share of total exports, however, they decreased from 76.1% (1995) to 64.9% (1996), then to 49.9% (1997). Here, industrial products includes agriculture, livestock and forestry products that are processed before export, such as cotton

fiber, fresh and frozen meat, sawn timber, etc. The table shows declines in not only the share of industrial exports but also in the absolute value of their exports since 1995. Meanwhile, non-industrial exports increased drastically, mainly supported by soybean exports.

Table 10 Paraguay's Industrial Product Exports (US\$1,000)

	1992	1993	1994	1995	1996	1997
Non-industrial Exports	143,859 (21.9%)	237,823 (32.8%)	268,763 (32.9%)	219,936 (23.9%)	366,128 (35.1%)	572,977 (50.1%)
Industrial Exports	512,698 (78.1%)	487,395 (67.2%)	548,070 (67.1%)	699,395 (76.1%)	677,320 (64.9%)	589,802 (49.9%)
Total Exports	658,555 (100.0%)	725,218 (100.0)	816,833 (100.0%)	919,331 (100.0)	1,043,448 (100.0%)	1,142,779 (100.0%)

Source: "Estadísticas Económicas" No.427, BCP

Note: Here non-industrial exports include: cereals, oil seeds, coffee grain, silkworm, vegetables and live animals. Cotton fiber and sawn timber are included in Industrial exports.

3) Agricultural processing industries

In 1997, agricultural processing contributed 55.0 % of the added value generated by the industrial sector (excluding manual labor), or US\$737 million at current value, and provided 16.8 % of the jobs in the industrial sector, employing 30,527 workers. The added value contribution was 3.3 times higher than the employment contribution, indicating that agricultural processing is about 6 times more productive than other industries in Paraguay. Agricultural processing industries have in fact been the driving force in boosting overall added value in the industrial sector, as well as per capita added value.

Exports of agricultural produce, and associated processed products, accounted for 56.4% of total exports in 1994. This figure shot up to 73.7 % in 1997, reflecting the declining fortunes of cotton and wood products. However, processed agricultural products remained at around 20-23 % during this period.

In summary, then, the structural characteristics of agricultural processing industries are as follows:

- Agricultural processing represents 55 % of the industrial sector in terms of both production output and added value. It is the leading industry by far, with both high growth and high per capita added value.
- Agricultural products are export-dependent, while processed agricultural products are essentially driven by domestic demand.
- Processed agricultural products are relatively vulnerable to import and export trends.
- Alcohol and tobacco together account for nearly two-thirds of all imports of processed agricultural products. Agricultural-related imports have been continuously in excess of exports if those two items are included, and, on the other hand, if they are excluded, exports exceed imports.

- Product categories are clearly divided between those which have grown during the 1990s and those where growth has remained constant or declined.
- Growth categories tend to be luxury items such as milk products, confectionery, beer, soft drinks and tobacco, while the others tend to be standard necessities.
- Growth in luxury items reflects rapidly changing consumer preferences in the 1990s. This phenomenon, considered quite unusual given that per capita GDP has not risen over the same period, can, perhaps, be partially attributed to the demonstration effect related to the increasing popularity of television and supermarkets.
- Export competitiveness of luxury items is weak, and domestic production has been shrinking due to pressure of imports, except for beer and dairy products.
- Demand has tended to rise in categories with high brand association — where individual products have short life cycles — as opposed to the basic commodities such as meat, flour and sugar. These categories are more suited to newer outlets such as supermarkets, and would therefore benefit from proper marketing such as market research, new product development, sales promotion and active development of new sales channels.
- The agricultural processing sector in Paraguay has a two-tiered structure: while commodity lines are relatively export-competitive, luxury lines, where proper marketing is required, are swamped by imports.

4) Textile industry

Table 11 Production Volume of Cotton Products
(Units: Fiber - 1000 tons, Cotton yarn - tons, Cotton fabrics – 1000 meters)

	1990	1991	1992	1993	1994	1995	1996	1997
Fiber	218	208	143	151	137	153	116	68
Cotton yarn	442	576	576	605	546	601	575	336
Cotton Fabrics	14,648	19,170	19,170	20,129	18,172	19,989	18,870	10,922

Source: BCP

Table 12 Production Value of Cotton Products (Unit: US\$1,000)

	1990	1991	1992	1993	1994	1995	1996	1997
Textile	264,716	322,078	215,158	228,987	222,352	277,258	219,217	137,390
Cotton Fiber	235,396	265,086	164,909	184,750	179,568	253,703	196,072	114,245
Cotton Yarn	658	1,12	915	1,019	991	1,180	1,109	652
Fabrics	18,659	28,815	26,058	29,013	28,200	39,565	31,134	18,021

Source: BCP

Paraguay's cotton production sector has sufficient production capacity and spinning factories to operate for 100-120 days per year, including the harvesting period. Although it operates at 100 % of its nominal capacity, the machines have suffered from their concentrated operation, age, and lack of maintenance. There are 48 ginneries in Paraguay and production capacity amounts to 302 tons per hour, some of which is currently inoperable.

The production of cotton has decreased over the past few years due to factors such as weather, continuous cropping, downsized cultivation scale for farmers, and management problems. Over the past five years, five spinning companies have faced bankruptcy and ceased operation. Although there exists an agricultural policy to subsidize raw cotton, it has not been sufficient to overcome the problems of small-scale spinning factories. Furthermore, government policy has apparently been inconsistent.

5) Leather industry

Paraguay has a very active meat production industry, and consequently there is a large production of cowhide. Most of the hides are delivered to tanneries as raw, salted or dried hide. The hide material is tanned using chromium sulfate to become either Wet Blue products or tanned leather, which is then sent to the next process — refining tanning (crust leather) — in which the hide is cleaned, dried, divided in half and then shaved, stretched, and cut into specified sizes. It is then dyed as required by the client, before shipping. Currently there are 112 leather companies, of which seven produce 76% of the leather used for domestic consumption. 72% of the industry consists of small businesses.

Table 13 Production Volume of Leather Products

(Unit: Salt Dried Leather and Soles: 1000 ton, Tanned Leather: 1000, Shoes: 1000)

	1990	1991	1992	1993	1994	1995	1996	1997
Salt Dried Leather	29	19	18	25	27	29	37	36
Soles	5	5	5	7	7	8	9	9
Tanned Leather	3,754	27,243	26,241	30,630	26,073	28,550	35,545	34,649
Shoes	4,287	4,569	4,620	4,100	2,811	2,952	3,247	3,247

Source: BCP

Table 14 Production Value of Leather Products (Unit: US\$1,000)

	1990	1991	1992	1993	1994	1995	1996	1997
Leather Products	30,861	85,916	74,841	99,419	102,019	121,099	141,559	176,276
Salt Dried Leather	4,842	4,571	3,945	5,811	6,716	7,986	9,770	9,398
Soles	15,961	28,834	24,889	36,660	42,366	50,381	56,237	55,013
Tanned Leather	4,872	50,836	44,591	54,818	50,475	59,808	73,807	70,380
Shoes	55,581	74,200	67,863	58,107	47,376	54,105	58,689	564,967

Source: BCP

6) Woodwork industry

In Paraguay, the following products are manufactured from timber: construction materials, such as primary-processed (unfinished) logs, plywood, veneer, and flooring; and furniture, such as tables, chairs, shelving, doors, frames, and kitchen cabinets.

Table 15 Production Volume of Wood Products(Unit: Sawn Wood - ton, Plywood, Veneer, Flooring- 1000m², Building Materials, Furniture 1000)

	1990	1991	1992	1993	1994	1995	1996	1997
Sawn Wood	970	766	764	814	979	1,043	1,001	1,059
Plywood	62,596	92,769	92,595	98,614	99,600	104,082	99,919	105,125
Veneer	2,534	2,773	2,767	2,947	2,976	3,065	2,942	3,089
Building Materials	762	2,282	2,277	2,425	2,499	2,596	2,466	2,539
Flooring	9,611	7,501	7,486	7,937	8,053	8,536	8,109	10,055
Furniture	401	522	521	379	359	366	348	348

Table 16 Production Value of Wood Products (Unit: US\$1,000)

	1990	1991	1992	1993	1994	1995	1996	1997
Sawn Wood	163,845	136,608	132,868	145,220	188,966	227,262	221,119	240,928
Plywood	70,342	110,122	106,699	117,064	127,890	150,920	146,841	159,239
Veneer	4,663	5,389	5,221	5,729	6,258	7,277	7,079	7,661
Building Materials	4,201	13,472	13,053	14,322	15,643	18,724	18,026	19,507
Flooring	3,693	3,045	2,950	3,237	3,536	4,233	4,075	5,208
Total	251,778	274,311	266,566	290,104	347,413	415,378	402,846	439,392
Furniture	20,509	20,652	20,202	15,413	18,064	20,094	19,722	22,703

The growth rate of the woodwork industry in 1995, 1996, and 1997 was 4%, 5%, and 6%, respectively.

The 7,000,000m³ of natural forest cover is decreasing, partially due to illegal logging. On the other hand, efforts have been made in afforestation, and the materials for the processing mentioned above quite often come from afforested wood. The afforestation program is promoted by the Forestry Agency and the Natural Resources and Environment Agency of the Ministry of Agriculture and Livestock (MAG), but the program is not progressing very well, partly due to insufficient funds.

Illegal logging is prevalent, and smuggling of lumber is an everyday occurrence. The authorities are quite concerned about this, but find it difficult to implement countermeasures. The illegal export of timber from Paraguay is a serious problem, and a resolution is urgently required.

The woodwork industry uses wood as its raw material. Material costs have increased gradually due to early felling, the reduction of forested areas, and the increased costs of transporting wood to remote areas. The afforestation of this country started quite late, and planting does not yet exceed 2,000 ha.

(2) Problems and obstacles for industrial development

Paraguayan society has been facing the severe reality of political instability for several years, which hampers greatly the new investment and businesses environment of the country. At the same time, the economic presence of Brazil is growing overwhelming with her aggressive expansion of exports. Together with the business environment, the major obstacles that the Paraguayan industrial sector now

faces are as follows:

1) Low and stagnant level of investment

In spite of the preferential law of investment and incentives for the import of raw materials and intermediate goods, the level of investment, foreign or domestic, has been low and stagnant. In addition, the information of such incentives is not enough for domestic small and medium enterprises. Foreign investment has been focused in the area of grain trading, commerce and services, and the realized investment in manufacturing industry has been limited. The basic condition needed to promote investment is political stability and consistent economic policy. Moreover, the reasons for not realizing licensed projects are reportedly tedious procedures, bureaucracy, and corruption.

2) High cost and difficult access to credit

The Industrial Development Fund (FDI) was founded in 1994, however, access to the credit line of soft and long-term loans is still very limited, especially for small and medium enterprises. Therefore, it is difficult to renew machinery and equipment, as well as implement new technology.

3) Lack of an internationally recognized certification system

A quality certificate is required to export merchandize. Agricultural produce, as well as livestock products, need quarantine certificates by the MAG, and food products need the certificates of the National Institute of Food and Nutrition (INAN). Other industrial products require the certificates of the National Institute of Technology and Standarization (INTN). However, these national institutions are not recognized internationally as certification bodies because of technical problems. This fact causes problems when Paraguayan products are to be exported.

4) Supply of raw materials

The most important problem in agro-industries, which basically process agricultural produce, is how to procure raw materials. Though the agro-industries are the largest exporters, they have not achieved substantial development yet. In the case of the textile industry, the drastic decrease of cotton production did serious damage to the industry. The rapid decrease of forest area is creating a bottleneck in the woodwork industry.

5) Labor force

The minimum wage of Paraguay is relatively high compared to that of Brazil and employment

conditions are more protective of labor. Thus, there is a tendency for even foreign companies to minimize regular employment and hire more part-time labor or procure services outside. In the case of small and medium enterprises, informal employment is common. Generally speaking, there are a lack of qualified human resources and low quality of labor because of insufficient vocational training and the poor condition of primary and secondary education.

6) Quality and introduction of technology

Production facilities are old and in need of renovation. The quality of Paraguayan products must improve and appropriate technology must be introduced if goods are to compete with imports not to mention be exported. Together with stagnant investment, the efforts of upgrading quality are quite limited in the business circle.

7) Lack of marketing

Most Paraguayan enterprises are oriented to the domestic market and do not pay much attention to the needs of the external market. Whether the market is domestic or foreign, a grasp of the trends and demands of customers is needed to develop and offer competitive products. Many enterprises lack a market oriented management strategy that focuses on market information, product development and commercialization.

(3) Export potential

Many Paraguayan products currently have export opportunities, as well as the danger of losing their market. Access to global markets has improved, but at the same time, imports from nearby countries are on the rise. There are several exportable products that have latent potential.

Among the livestock products, live animal exports have become increasingly competitive, and beef is the most competitive meat for export.

The major dairy exports are milk powder, butter and cheese at present. Milk and ice cream, as well as milk powder, are increasingly imported. The dairy processing industry in Paraguay currently faces both dangers and opportunities.

Orange juice and some vegetable products are other potential products for export.

From the viewpoint of domestic availability of raw materials, the textile, leather and woodworking industries are recommended for export, though the leather industry is facing severe environmental

problems.

Cotton is one of the major products promoted for small farmers by the government. However, the recent production and export of textile products has been less than a half of those of the peak year of 1996. This sub-sector has structural and financial problems, and re-conversion of the industry is needed in order to make use of its potential for export.

The export of sawn timber and processed wood has been growing in the 1990s. However, the natural forests are diminishing rapidly, in spite of the government's efforts for conservation and forestation. Export demands for Paraguayan wood and processed products are still high, and this sub-sector has good potential as an export industry.

(4) Development strategy

In order to absorb the high population growth and to increase the per capita income at the same time, it is essential to achieve sustained high growth. The development of industry, in addition to that of agriculture and services, will become even more important. This is corroborated by the fact that many developing countries have managed to achieve improved economic standards and increased employment through the advancement of industrialization.

There are two conceivable approaches to promote industrial development in Paraguay. The first is a strategy that exploits Paraguay's comparative advantage in endowed resources while the second is a development strategy that encourages foreign investment, primarily through assembly and processing of manufactured goods. Of these two approaches, we place more emphasis on the former strategy to strengthen the competitiveness of the country, considering the current condition of political stability and the economic environment.

1) Generation of value added starting from agro-industries

As Paraguay has attained high productivity for certain crops, such as soybean and cotton, agricultural processing represents a major new frontier in view of the plentiful agricultural resources and export achievements. As was pointed out in the GTZ report, Paraguay's comparative advantage in agricultural products can act as a ladder to increase the competitiveness of processed agricultural products, creating a synergy effect whereby agricultural production will be stabilized and the competitiveness in the market will be enhanced.¹⁷ Accordingly, the emphasis should first be placed on agro-industries when we discuss industrial development strategies. The development of agro-industries must be directed at

¹⁷ Klaus Esser, 1998, "Paraguay : Construyendo las Ventajas Competitivas"

exports from the beginning in order to compensate for the limited domestic market and to pursue scale economies.

In order to make the synergy effect work and to increase the added value of Paraguayan products, it is important to carefully examine the marketability of the potential products. Differentiation is the second step, connecting the consumers' preference in the market with the merits of the Paraguayan products. The third step is to organize the production system from the raw material to the final product along the production chain. This strategy is called the "cluster development strategy", and some cases are shown later in this study.

2) Investment promotion

The Paraguayan government offers credit lines and incentives for investment. However, the information is not always easily available, and the entrepreneurs sometimes don't even know of their existence, especially in remote areas. Propaganda and efforts to spread information should be done in order to promote the use of incentives for investment. It will make the procedures and the bureaucracy more rapid and transparent.

In the longer run, expanding long-term low interest rate loans to meet the demand for renovation and re-conversion of technology in industries is needed. However, time is needed to introduce a new credit line for industrial modernization since the institutional finance should be reformed and the upgrading of evaluation capacity of the commercial banks is indispensable.

The following projects are proposed to promote domestic investment:

- a) Promotion of investment incentives
- b) Two-step loan for renovation and re-conversion of technology

3) Improvement of quality and productivity

With globalization, especially, for Paraguay, entry into MERCOSUR, every product has to compete with imported goods-even in the domestic market since the tariff barriers are disappearing. For producers, the Paraguayan domestic market is not big enough to make use of scale economies for the efficiency of production, so they must also look to the external market. Attaining global standards of quality and productivity is needed to survive in this globalized economy. Several efforts to tackle this subject, have started, however, the advancement is not sufficient to support and strengthen the industries.

The government should support and strengthen activities and enterprises that make efforts to innovate,

to improve productivity and quality, and to export. In this context, it is important to confirm their intention and preparedness with the apparent efforts that are already done in the enterprises.

One of the most assured ways of raising the credibility of Paraguayan products in overseas market is to obtain ISO 9000s, which are global quality control standards. It is, therefore, strongly recommended that Paraguayan companies make active efforts to obtain ISO 9000s. In Uruguay, the Chamber of Industries has been providing technical assistance for the introduction of the ISO 9000s system since 1996. Thus the number of companies having obtained ISO 9000s has increased from 7 in 1997 to 30 in 1998 and 99 in 1999. A similar assistance program, which includes technical guidance and funding to cover the cost of obtaining ISO 9000s, should be formulated and implemented in Paraguay to increase the number of local companies that have ISO 9000s status.

According to the newly approved National Quality Policy, the Quality and Productivity Program of Paraguay (PPCP) will be formulated in the near future. In Brazil, the Quality and Productivity Program (PBQP) has been implemented to strengthen the competitiveness of industry. At present, JICA is assisting one of the institutes created for this purpose in Curitiba, Brazil, providing technical assistance to transfer quality and productivity techniques and formation in-house activities for productivity improvement. Also, in Paraguay, cooperation from the early stage of formulating the PPCP and designing future cooperation projects in this field is recommended.

The study team suggests the following projects to be implemented for the upgrading of quality and productivity of Paraguayan industry:

- a) Project for industrial standardization
- b) Center for quality and productivity
- c) Diffusion of quality control
- d) Technology information system

4) Strengthening of marketing activities

Market surveys and product development are very important to find and enter new markets. To support and promote such marketing activities by private sectors, it is recommended, as a first step, that the Ministry of Industry and Commerce or PROPARAGUAY conduct overseas market surveys of some products of selected clusters that may include both traditional and non-traditional products. They should be accessible in any department of the country through the regional offices of the Ministry of Industry and Commerce (MIC) or through the department offices.

Whether PROPARAGUAY will be transferred from the Ministry of Foreign Affairs to the MIC is now being discussed. Since the communication between PROPARAGUAY and the private sector is

important, the MIC should articulate their role more positively.

The following projects are recommended to support the marketing activities of individual companies:

- a) Market studies of principal products of selected clusters
- b) Orientation of entrepreneurs toward marketing

5) Industrial statistics and consultation desks

The above four areas of industrial strategy focus on the private sector's efforts to improve competitiveness. In addition to these, there are two other basic areas that support the overall effort. They are the preparation and publication of industrial statistics and the setting of consultation desks for enterprises.

In Paraguay, no positive industrial development policy has ever been taken. Most of existing industry was rather spontaneously generated. Consequently the relation between the government and the private sector is weak, and even basic information on current conditions such as production, shipment and stocks is not available. However, in the era of globalization, modernizing industry with the administrative and technological infrastructure of the nation is required. For this purpose, basic statistical data are indispensable to formulate appropriate policies and programs to strengthen competitiveness, as well as formulate macro-economic and financial policies. Data are also used to examine the effects of alternative measures and programs. Basic economic data are now managed by the Central Bank of Paraguay. Thus, the industrial statistics should be consistent to this system. It is strongly recommended that the MIC develops and establishes a system of industrial statistics that grasp the structure and current conditions of industrial production, as well as develop various indicators needed for policy making.

Industrial statistics improve policy-making and also for information service and procedures. Effective communication between government and the private sector is indispensable to promote industry. Currently, government incentives and regulations for industrial operation, for example, are not well known among entrepreneurs. Furthermore, there are not sufficient easy to understand explanatory materials for the small and medium-sized entrepreneurs who have not been educated enough to read official laws and decrees. Creation of an information and consultation desk for all administrative procedures and inquiries is recommended for each department to attend to private enterprises. These desks will reduce the complexities of bureaucracy and should be enjoyed with specially trained staff. In this respect, we propose the two following projects:

- a) Consultation desks in Department offices
- b) Consultation desks for cluster development