7.1.5 Key Agenda Addressed to Success of the Project

Among many agendas, the three agendas are to be tackled; land acquisition, mobilization of financial resources, management infrastructure and legal framework for the development.

(1) Land Acquisition

Local governments taking charge of the regions in which a project has been pursued will exert the duties of compensation and resettlement.

They set up a special committee comprising related governmental bodies. Then, they will also decide what compensation and resettlement components will be appropriate and whether the levels thereof are adequate or not, referring to some official records about the tenure of land use right, land boundaries and the like. In the case of Vietnam, those official records such as cadastral map and land registration need to be much improved.

The Ha Tay Province should guide authorities at lower administrative levels to propose compensation and resettlement plans (including a construction plan of a new area for resettlement) to Ha Tay People's Committee for approval.

In this regard, FCC at provincial level is to be established and conducted by the Ha Tay People's Committee, which shall be chaired by the President or the Vice-President of the Ha Tay People's Committee.

But if a project is targeted over a broader area, it has far-rippling influence over the nation, and it is thought to be a national project. The Central government should be in charge of the project and bear a proper share of financial burden.

Procedures for the project covering a broader area have yet to be streamlined, therefore there seems to be much room for improvement.

(2) Mobilizing Financial Resources

The project needs financial resources on a large scale. The financial resources should be mobilized from diversified origin and should be put on a sustainable and stable financial flow.

(3) Management Infrastructure

Management infrastructure is required to be well structured. Coordination is to be one of the most critical elements of management infrastructure with a view to successful development of the project. Effective and efficient coordination is required in various phases such as planning, programming, budgeting, implementation, operation and maintenance, disposal, promotion.

(4) Legal Framework for the Developments of the Project

The legal framework for development should cover the land use right, commercial transaction of land use right and land use planning, specific area development strategy, and so on.

7.1.6 Expected Investment Fields

Expecting higher return on investment in the project, private entities will make investment. The expectation is derived from the evaluation on attractiveness produced by newly developed urban environment. Without reasonable attractiveness, no private activity will not be encouraged.

To create the favorable environment, social capital investment has to be made, first of all, under leadership of governmental agencies and public-related organizations. Induced by the government-led action, private business entities will be encouraged to participate in the project, mobilizing their own resources.

Social capital investment consists of land acquisition, provision of external and internal infrastructures related to the Urban Center, Vietnam National University and its related institutes, housing complexes, Phu Cat Industrial Park to be a base of traditional artisanship and skill, industries related to construction and housing materials, and project-related service industries.

Internal infrastructure comprises the area-wide and block-wide infrastructure.

Furthermore, it is worthwhile noting that there are two sorts of infrastructures; the non-profitable and the profitable. The classification depends on the several factors later mentioned in 2) "investment cost sharing." The former shall be provided basically by governmental organizations and the lather basically by private business entities.

(1) Land Acquisition

Land acquisition is a critical element in the project development. For a long time, people have earned their livelihoods through economic activities in such fields as agriculture, manufacturing and services. This project will lead to drastic changes in their traditional life style.

In the light of this condition, if a compulsory purchase scheme is implemented, some compensation and its related measures have to be taken to facilitate the transition. The country has the legal scheme to this end. Land acquisition of compulsory type should cover the cost for compensation, resident resettlement and ground treatment.

If not properly dealt with, the opportunity cost would become enormous due to delaying and front-heavy cash flow, which could in some cases bring about devastating effects with a halt of projects. Given that this project would be so heavily dependent upon loans for financing itself, an overwhelming amount of interest payment should be made if the implementation of the desired land acquisition is not secured. In order to carry out this project effectively, the land acquisition involved in this project is to go well and to be free of problems or troubles often caused by bureaucratic handling of the matter without due care for legal rights and insufficiency of compensation measures.

Appropriate measures should be taken to give some incentives to those who have waived their land use right and move to different places to resettle. Such measures should be designed to support their livelihoods so they can adjust themselves will be to the new environment, or they can buy the land and/or housing when some part of the project is completed.

Other than acquisition of compulsory type, publicly motivated measure will be available, although Vietnam does not have it at present. There are two available measures. The one is geared to encourage the exchange of land lots among related parties or among farmers, to the public and national interests. Different from the compulsory acquisition that might produce desired result in a shorter time, exchange of land lots takes longer time in a more gradual way, due to the time required for consensus building among related parties.

There are two alternative ways to acquire land; one way is that the government or executing agencies will acquire land, and the other is to acquire land through organizing

cooperatives under public initiatives. The two ways of land acquisition have to be implemented based upon legislation.

It is desired that this scheme will be introduced in the near future in the country. Of course a new legal framework should be established accordingly.

The other is a trust system, which the country does not have yet. It is also desired to be introduced under a legal framework.

Other matters related to the land acquisition are also noted as follows:

1) Prevention of Speculative Transaction of Land Use Right

It is really natural that people who live not only in this project area but also out of the project area will have concerns about the possibility of enhancing the value of the land after the development of the project. In this connection, speculative expectations will widely spread over the country as well as in the area and its neighborhoods. As a result, compensation cost will increase at an inflationary rate, which becomes a great impediment to successful implementation of the project. Some strict preventive measures have to be undertaken. It is even better if legalized framework is provided.

2) Land Acquisition in Priority Setting Order

At the initial stage of the project, land use is to be specified in terms of area and location. Planned land use in more detailed categories is as follows.

The land in the highest priority is the one where government organization-led social capital investment is made. Based upon the planned land use, the part of the land is appropriated for the capital formation.

First of all, the authority has to acquire the land lot by way of compulsory acquisition. The action of the authority is very essential to the success of the project. It is to show its strong intention to complete the project on the side of the government by overcoming any difficulties. In another way, it is regarded as a pumping function to lure investors to participate in this project and to gain more supportive attitude on the side of the people.

In case of compulsory acquisition, there are two alternative ways; purchase by cash payment and provision of substitute area for resettlement. Which way is opted for is

dependent on several factors. If there is a problem in arranging cash resources in massive amount, issuance of deferred-payment bond will mitigate the cash demand burden.

With regards to other infrastructure and facilities, exchange of land lots system should be applied in a fully-fledged manner. Through the process the project area as a whole will be transformed into better living environment and productive area with more added value.

(2) Infrastructure and Related Facilities

1) Various Infrastructure and Related Facilities

Infrastructure is categorized based upon two elements; return on investment and equity.

(a) Infrastructure commonly available in the project area, other infrastructure and non-profit bearing facilities with internal infrastructure

Earth work, transport (road, mass transit), water supply, sewage, water drainage, solid waste treatment, power supply, gas system, telecommunication, industrial waste treatment, park, green, air port, reservoir, retention pond, river side, reservoirs

(b) Infrastructure outside of the project area-external infrastructure

Transport (road, mass transit), water supply, sewage, water drainage, power supply, telecommunication

(c) New Urban Center

(d) Hoa Lac High-Tech Park

R&D, HHTP Center Area, High-Tec Industrial Park, Urban/Business Area, High Grade Residence, New Town,

(e) Vietnam National University

Accommodations, Colleges and Faculties, Research Institutes, Headquarter, University Center

(f) Housing complexes

(g) New Industrial Zone directed to artisanship and skills mobilization

2) Investment Cost Sharing

(a) A couple of theoretical matters

Which part governmental organization or private business entities should shoulder the responsibility of provision of infrastructure specified by physical characteristics, functions, and so on.

Citing for example, road, railway, port, telecommunication, drainage, flood control, reclamation, water supply, power supply, shelter, school, hospital, sewage, waste management and the like, are different with each other in physical characteristics.

However, careful consideration has to be given to categorization of infrastructure. For example, as to the road, there are many kinds of roads; national roads, regional roads, arterial roads, secondary roads and collector roads. Road of each kind is designed to play an appropriate function responding to various socio-economic needs of individuals, households and business entities.

Concerning investment cost, it should be shared with regard to an individual sort of roads.

To the end, serious consideration is to be given to two sides of the matter; supply side and demand side.

As at the early stage of economic development, capacities such as skills, experiences, technology, manpower, materials, equipment, information and finance are centered in the governmental organization, business entities are weak. In general, as economy develops, a country has more private business entities who can respond to the needs with increasing productivity and efficiency. It is generally accepted that at the later stage such business entities will hold more enhanced productivity than the governmental organization.

It is recognized that private business entities will be increasingly becoming a substantial power in the country.

Turning to demand side, following points should be taken into account. The first is whether a beneficiary and benefit's amount is identified or not. The second is how much a beneficiary has the capacity to share the cost. As for the former, if a

beneficiary and benefit's amount is identified, goods or services are categorized as private goods or services, otherwise, categorized as public goods or services. The case in which beneficiary is not identified is called the "exclusiveness" of goods and services, and the case in which benefit's amount is not specified is called the "incompatibility." For simplicity, other cases in between should not be discussed for the present.

It is generally accepted that more and more number of goods or services is recognized as the private benefits as technical and social identification methods are developed.

Public goods or services are partly resulted from the market failure, and to be provided by the governmental organization.

With regard to the latter, it does make a strong sense only if a beneficiary and benefit's amount is identified. A capacity to pay does not tend to be a decisive factor for specifying a proper supply entity; government or private business enterprises. This is due to the fact that there is a room for subsidy from the government in case of a low capacity to pay on the side of beneficiaries. Therefore, it is worthwhile noting that a matter of supply entity is totally different from that of financing.

How each infrastructure is provided in terms of a supply entity and financing measures is not fixed in an absolute term, rather it is dependent on changing socio-economic factors such as income, business set-ups, technological development, and completeness of institution.

Presently, Vietnam has the condition under which infrastructure provision is almost dependent on the governmental organization due to low income, low level of business-setups in terms of quality and quantity, low level of technology and incomplete institution buildings. However there are exceptional cases in which private business entities have done business. According to the MPI policy, the country accepted foreign capital investments for provision of infrastructure in the form of BOT, BOO and the like. Their business know-how covering various fields including financial one, is expected to contribute to a great deal to the realization of the project.

During the project period over twenty years, domestic organizations will play more enlarged roles in dealing with infrastructure provision, as the country realize the advantage of encouraging private business entitites.

It is undeniably understood that even in the provision of infrastructure of same kind, at the early stage, the government assumes main roles and at the later stage private business entities will do the same.

Therefore, investment cost sharing between both parties will be under constant review for the purpose of realizing the most efficient provision of infrastructure.

(b) Categorization

How each infrastructure is fixed in terms of financing measures and implementation entities is dependent on one feature of each infrastructure.

7.1.7 Development Strategy

It is undeniable that preferential treatment should be provided to the development of the project with the above-mentioned feature and that each component has to be developed in harmony with others so that the project has to work as a whole.

The project covers four main components; Vietnam National University, Hoa Lac High-Tech Industrial Park, Phu Cat Industrial Zone and residential complexes on a large scale. Until now, the country has accepted prioritized economic development policy such as setting up industrial zones, export processing zones and high-tech zones. Within the framework of this development strategy, a multitude of incentives is provided such as taxes at a preferential rate, profit tax reduction and exemption.

In the last years, IZs have contributed greatly to the economic development in terms of employment, production, budget revenues and so on.

As to the project, the country can afford to mobilize the preferential policy with regards to Hoa Lac High-Tech Industrial Park and Phu Cat Industrial Zone. Phu Cat Industrial Zone has already been appointed as an industrial zone. And Hoa Lac High-Tech Industrial Park is likely to be appointed as a high-tech zone. Incentive package is well prepared for these

components. Incentives centered on taxes, public assistance, organizational institution and the like have been legalized to support them.

However, Vietnam National University and housing complexes cannot enjoy any preferential treatment under the present institutional framework. The expected policy might be limited to preferential treatment in national budgeting, although the country has a low availability of financial resources at present.

Even some problems are revealed in the IZs system in the case of projects having large scale or multiple components. The past experiences have revealed some problems such as extremely complicated decision making structure

As already mentioned before, the project has features of a large scale, multi components, and big difference in return on investment among components. In spite of these features particular to the project, it should develop itself as one economic unit with effective interdependency among components. It becomes very critical that some have preferential treatment and others do not have, which becomes even worse if the latter is in lower profitability.

In the light of this condition, there are four available alternatives to cope with this condition.

Firstly, Phu Cat as an IZ, HHTP as high-tech park and no preferential treatment to other two components.

Secondly, Phu Cat as an IZ, HHTP as high-tech park and some forms of preferential treatment to other two components. Available means of preferential treatment might be within the national budget. Any special institutional framework remained to be established.

These two alternatives have problems in coordination structures and organization. Phu Cat as an IZ, HHTP as high-tech park have already established institutional system under the present legal framework. The problem is how to coordinate already established coordination system and newly established coordination system of other two components.

Also in these cases the organizational structure will be too much complicated to ensure good working. It is doubtful that the entire system works well.

Thirdly, the project as a whole should be provided with preferential treatment under the new legislation. In this case, the treatment of Phu Cat as an IZ, HHTP as high-tech park becomes an issue. These components have already appointed or going to be appointed as IZ and high-

tech. It is critically difficult to reverse already-established decision. Even if past decisions are deleted successfully, there still remains to be problems, i.e. coordination system, most essential to the success of the project. It should be newly structured.

Lastly, based on the past decision related to Phu Cat, HHTP, new framework should be established. The present institutional scheme is to be slimmed. These alternative development strategies produce different organizational structures and budgeting mechanism.

Main criteria of well-structured coordination and organization are as follows; prompt decision making, reasonable personnel appointment, budgeting, appropriate balancing between responsibility and power, effective evaluation of activity performance.

7.1.8 Strategic Measures Responding to Main Agenda

The project is planned to extend over twenty-year period and will encounter new socio-economic conditions both proactive and counteractive to the implementation. In the process of implementation, new formula contributory to the project should be developed and applied to the project. Certainly, the country has made a remarkably successful advancement in digesting the essence of working mechanism of market economy and in infusing it into the traditional economic system. At present, the country has been in the process of forming a firmer economic foundation on a new paradigm. However, there is much to be developed. With new ingredients being injected into the traditional structure, the project will be implemented more effectively in a firmer way.

The followings are concrete measures to be developed and to be applied with regards to the development of this project. Of course, the results are applicable to other arena.

It is too hasty to reach conclusion that without them the project should not be started. In other words, they should not be the mandatory conditions for the project initiation and implementation.

(1) Acquisition of Land in Required-level Quality

1) Land Exchange System

At some stages deemed appropriate in the process of implementation of the project, the system of exchange of land is applied to generating better living and productive environment.

2) Land Use Right Trust System

The point of land trust is that those who own land or hold land use right entrust their property with someone who is entitled to manage and operate land and put the land to economically effective use. When trustees manage to turn a profit, the profit will be divided among those who have trusted their properties.

Land trust will be set up through either lease contract or sales contract. Land trust instrument is issued there through.

As long as land trust contract runs, trustees have the disposal of property rights that are returned at the termination of land trust contract. With the termination of the land trust contract, a trustee cannot manage or operate land any longer.

3) Preventive Measures against Speculative Commercial Transactions of Land Use Right

If speculative commercial transactions of land use right are not controlled, the result will be devastatingly negative; distorted allocation of economic resources, increasing difficulty in recovering land use right because of expanding cash demand, increasing inequity and disparity between the have and have-not.

4) Land Use Right Registration

The country has the registration system of immovable and movable assets stipulated by the New Land Law and related decrees. People's Committees has to be engaged in the duty in cooperation with the Department of Land Administration, both local and central.

There are three problems related to the registration of them. Firstly, because of insufficiency of capacity in terms of manpower, experiences and the like, system has not worked well. The registration rate of housings in Hanoi is estimated to be only 30 %. Secondly, even if the registration is made, only the direct party is permitted to look into the register book. The third party is rejected. The condition has derived from " the Ordnance on Safeguarding States Secret 1991." Thirdly, in addition to the above, the

present system of land use right and housing registration is not unified one, which causes a great inconvenience to related parties.

The registration is expected to contribute greatly to making transaction market of land use right more viable through disclosure of features of particular land use right. With this system being more reformed, the collateral which is essentially important to credit creation by private parties related is surely given birth.

To the end of substantial improvement in workings, fees collected in the administration of the registration system should be recycled into the system and invested in its capacity enhancement and motivation-up, incentive provision on the side of administration workers engaged. In this regard, special undertakings account is desired to be set up within the national budgetary system.

(2) Financial Resources Mobilization

Diversification of sources is indispensable in mobilizing financial resources, which will lead to availing them steadily. To this end, there are two ways.

The former is to shift the weight from foreign financial resources to domestic ones, thus mitigating probable effects generated by the business fluctuation of international economy. In this regard, development policy founded mostly foreign direct investment must be changed.

The latter is to broaden and deepen the financial resources recycling system, which is expected to have countervailing power on business cycles of the domestic economy. Earnest efforts to this direction have been made in the last few years. Recognition at all levels of people has been established so that workings of the financial resources recycling system are as important as that of production of merchandises and services, although in general the former tends to be not seriously concerned. For the purpose of stable and sound development of the economy, both are indispensable.

The financial resources recycling system comprises two part in generic terms. The first is the public finance, that is, tax and other public revenues. The second is related to financing and capitalization.

1) Budget revenues

In the country, budgetary information has not been made public. In the very near future, a new decree will be unveiled, permitting broad outlines of the State Budget to be published upon request of foreign donors who demand more transparency. At present, other sources have to be looked into. According IBRD, the revenue reached VND53370bn, accounting for 23.9 % of GDP in 1995. The share has been on the upward trend.

(a) Tax revenues

At present, the country has more complicated tax system than in the past. It has more than ten kinds of taxes, among which are business license tax, turnover tax, tax on special consumer goods, import export tax, profit tax, tax on land use, tax on land use right transfer tax, tax on house and land ownership, individual income tax, tax on natural resources, tax on foreign direct investment.

All these taxes were promulgated at the beginning of the 1990's. Until the end of the 1980's the tax system was a very simple system. In addition to the agricultural tax, two separate taxes were levied on non-agricultural activities; one on the state enterprises and the other on the private sector. The above changes have reflected structural changes of the economy in the 1990's.

However, the financial resources available through taxes under the present system are not so enough as to cope with the expanding demand of public expenditures comprising investments and current expenditures. It is of particular importance to note that in spite of continuing reforms tax revenues are too dependent on three resources; state-owned enterprises, external trade and joint ventures. Three resources constituted over 70 % in 1995 and 1996. Presently, further reforms are planned and going to be implemented.

One of the important reform measures to do besides the overlap of the turnover tax is the implementation of a value-added tax. The Law on VAT promulgated in May 1997 by the National Assembly will be implemented after January 1, 1999.

Besides VAT, two other tax laws have been compiled and promulgated; corporate tax and individual tax. Corporate income tax will replace profit tax. Like VAT, it will be levied only on companies and big private business entities. Individual income tax

will be levied on small private businesses. Taxes levied on inherited properties and fixed assets must be expanded further.

The country will go on a track to more consistent tax system based upon tax bases as income, asset and commercial transactions in the future. Equally important is strengthening tax collection system and enhancing trust in the tax system as a whole.

(b) Other public revenues

As for other revenues, the country has given a proper status to contribution as one of major revenue sources from civic entities and individuals both at home and overseas. Not only the Central government but local governments as well can afford to accept contributions from them. Especially, province has the right to encourage them to contribute funds under the condition of prior approval by the Prime Minister. Of course these financial resources thus mobilized should be invested in the social capital formation.

(c) Allocation of public revenues among governments at various levels

There is another argument about how to make local governments at all levels financially well founded. There are two main financial resources for local governments; independent resources and transfer from the central government according to the National Budget Law 1994. At present, major part of the revenue has come from the Central government. As in some cases it is better for local governments to undertake projects particular to the local areas by its own fund, the former is desired to be more strengthened. To generate better living environment and productive area, local governments are expected to have more means on their own financing. In this regard, a tax on "urban planning" is a prime candidate.

2) Financing and capitalization

It is estimated that domestic idled saving and annual remittance reach $2bn and $1bn respectively.

Until recently, partly due to poor condition of the banking system, the country cannot afford to mobilize these precious resources. The clearest sign of this is that liquid bank

deposits in 1995 were just 16 % of GDP, the same level as in 1991. Public confidence in the banking system remains low.

However, the country has begun to pursue a new track in financing and capitalization. Many of the pre-conditions have now been satisfied in the establishment of a public deposit system, new financial instruments symbolized by the issuance of treasury bonds and markets such as foreign exchange and security markets.

(d) Diversification of forms of credit institutions

First of all, it is noteworthy that the country has more diversifying kinds of credit organizations. The country has now several leasing companies. The Government issued Decision 64/CP in October 1995 on temporary regulations for the formation and operation of finance leasing company. Finance leasing supposedly provides an extra level of safety and convenience for all parties. Long-term loans have proven to be a risky investment as the potential for loss is high and legal environment is shaky. The leasing company owns assets such as production machinery, automobiles, computers and construction equipment being used during the lease period, and it can also recoup them if borrowers do not follow the agreement between the two parties, without having to rely on a mortgage or guarantee provided by the third party. Finance leasing is a standard practice in many countries, where it has played an important role in economic development. In the country, institution in relation to collateral is not well established, therefore, leasing is very effective in mobilizing financial resources.

Secondly, the State looks into insurance industry for investment funds. The purpose is to mobilize idle capital and saving through social insurance. Most recently, the country has witnessed the approval of the establishment of 100% foreign-owned insurance companies. Furthermore, experimental establishment of one or two 100% foreign-owned insurance companies will be approved. This is in line with the policy of diversification of insurance companies in order to attract investment capital from a multitude of economic sectors including the railway, aviation, maritime, oil and gas industries, and to establish investment companies and investment funds with the aim of utilizing idle capital from insurance companies.

Lastly, Post Office is to open savings accounts. Capital mobilization through post office network aims to bring unused money from people into use for the Government's investment programs. There are people with small accounts of money or living far from banking facilities that keep money at home. Post office services have advantages of the network of over 3,000 stations reaching even remote areas throughout the country. Depositors can withdraw money at any post stations nation-wide that operates 19 hours per day. Service, limited to individuals instead of businesses, will begin operations at year-end. Mobilized money will be transferred to the Central government for domestic investment.

(e) Restructuring credit institutions

The banking sector has long been characterized by weak management practices, a poor legal framework. Restructuring of state-owned commercial banks and joint stock banks is pursued. There are too many banks for the size of the economy. The country has now 85 banks. Six of these banks are State-owned, 51 were joint-stock commercial banks, 4 are joint ventures and 24 operated overseas. The country needs to undertake massive overhaul of its financial, which should include reducing the number of banks. The reform is aimed at ensuring a healthy and sustainable development of the credit society and its contribution to the task of economic transformation. In this regards, the Law on Credit Organization, more comprehensive law, replacing the Ordinance on Banks, Credit Co-operatives and Finance Companies May 1990, is to be effective in October 1998. The new law unequivocally sets down credit policies which the country adopts to develop credit function and monetary market to the future. The credit institutions constitute banks and no-bank credit institutions. Non-bank credit institutions comprise finance companies, finance leasing companies and other credit institutions.

The country's credit institution is expected to have intermediary functions and long-term credit function in the long-term.

(f) Special-purpose financial organizations

Before 1988, the banking system consisted of the State Bank of Vietnam (which was both the Central Bank and the main commercial bank), the Bank for Foreign Trade

(BFT) and the Construction and Investment Bank, which implemented the government's capital budget.

Under the reorganization of July 1988, the State Bank's central banking functions were strengthened and its commercial banking role was assigned to two newly created banks, the Vietnam Agricultural bank and the Vietnam Industrial and Commercial Bank, catering, as their names suggest, respectively to the agricultural and industrial-commercial sectors.

In March 1989, the State Bank assumed the BFT's foreign reserve management function. Since 1988, but particularly since 1992, Vietnam has moved to a diversified system in which state-owned, joint-stock, joint venture and foreign banks provide services to a broader customer base.

As of December 1995, in addition to four state-owned commercial banks, there 52 joint-stock banks, 23 foreign bank branches, four joint venture banks and 62 foreign banks with representative offices, in addition to 68 credit co-operatives and about 900 people's credit funds.

Other than the above, the country has now the following kinds of special-purposed credit institution, informal or formal alike; Informal Formal Circles, Rural Banking Institutions, Poverty Alleviation Programs, Mass Organizations, Multilateral & INGO.

The country has not yet any credit institution in housing provision. A new financing organization geared solely to development of habitation is desired to be established.

(g) Financial instruments

There are more financial instruments available to individuals. In the country, transaction based on cash payment is the most popular. In terms of the process of capital creation, if the economy is to take off, marked changes must be made starting with banking. Cash cannot be used for a large percentage of transaction, as it is at present. Conditions should be created for all businesses to replace as much cash as possible with "quasi money" such as trade, state and treasury bonds. It is important to create many kinds of credit instruments that can be converted and exchanged among individuals and companies.

In 1991, the government launched its first bond sale in Hai Phong; since then the market has grown sharply, although it is still marginal at present.

In recent years, the Treasury has had increasing success in issuing bonds. The major purchaser of bonds is Vietcombank. Instead of lending, banks have been buying one-year Treasury bills.

In 1996, the government raised just $759m from sales of retail bonds and from the Treasury bill market, up from $20m. However, there is a long way to go before the treasury comes close to meeting the target of raising $20bn from domestic sources to fund infrastructure projects by 2000.

(h) Bond sales distribution

The Treasury is now selling retail bonds to individuals. It has a nationwide network of branches selling bonds directly to the population for as little as VND100,000, or about nine dollars.

The sales effort is part of the government's bid to mobilize dormant domestic funds, which are now being touted as a possible source of finance for major projects such as the proposed new North-South highway and the new Dung Quat refinery. It is estimated that there are at least $2 billion of funds held by the population outside the banking system.

(i) Dollar denominated bond

The Ho Chi Minh City Investment and Urban Housing Fund is planning to issue a dollar-denominate municipal bond an a international market in order to raise over $8m to upgrade the city's highway and water supply system, which requires approval of the city's People's Committee.

(j) Market establishment

The country has been in the process of establishing a direct financing and capitalization framework, namely, securities exchange markets. The market connects business entities such as manufactures trying to expand factory and its equipment with investors who saved but idled their financial resources, looking for promising projects with high returns at low risk.

The Decree 48 on securities and the securities exchange markets July 1998 will pave the way for establishment of the security exchange centers in the country.

As state-owned enterprises will be encouraged to equitized part of their holdings, the new bourse will help facilitate government's capitalization efforts.

At the initiation stage, it will start on small scale, so to speak, shares are small in number and volume under limited commodities. Capitalization of state enterprises is proceeding slowly, while most local and foreign-invested joint venture companies remain small and do not issue shares. Related parties have a bit of concern over the lack of potential securities to be traded. Bonds and bills will become main forms of trade as opposed to shares. The reason is that their degree of risk is lower than company stocks.

However, as the exchange market becomes more and more accepted within the whole financial resources recycling system, the market will contribute to generating more capital for business entities which are in dire needs of funds and commodities traded on the exchange market will be diversified; not only shares of equitized state-owned enterprises but also bonds, bills of different years in maturity issued by the Central government, provincial authorities, commercial banks and state corporations, and investment certificates. Of course, number and volume will be in such a magnitude.

(k) Collateral

Environment under which collateral is assumed to play an expected role in commercial transaction in the market economy is under a gradual change.

The country has four types of collateral to secure loans available to the formal and non-formal financial systems. These are; real estate mortgages (houses, buildings, ships, and fixtures on land), mortgages of land use right, chattel mortgages (pledges) on personal property, cash collateral and third party guarantees. In practice, mortgages on real estate and cash collateral are predominant in securing interest. Pledges on personal property are not favored within the formal banking system. Third party guarantees, while used in the financial system at large, in practice are only accepted if secured by either a mortgage or a pledge on assets.

The collateral plays a critically important role in securing interests among parties engaged in business activities by way of reducing uncertainty attached to commercial transaction and contributes to more activating it. As a result, the country will have more advanced market economy. However, at present, the country has a couple of problems regarding the collateral. Firstly, the transparent and prompt system of enforcement and realization of the collateral is not provided.

Secondly, more basic problem is that the registration system is not well established, especially its operation is not in good working because of under-capacity and scanty regard for importance of registration. The purpose of the registration is to make ownership clarified to the public as well as parties directly related, which will prepare the field in which any party is willing to make transaction of goods and services with anything concerned clarified and proper value evaluation. Most recently, to implement the legislation on mortgage and pledge of property, thus creating favorable conditions for State-owned enterprises to borrow capital for production and business and to ensure the security of loaned capital of the credit institutions, the guidance on the procedures related to the above was issued. As it is a sort of piecemeal improvement, more complete and overall improvement in operation of the registration system is keenly required.

Thirdly, with regard to land use right under the New Land Law 1993, constraints on the transfer of land use right make liquidation of mortgages very difficult, which has been a big impediment to the development of more viable transaction of land use right. For banks eager to expand business in the country, current laws governing land use right pose serious problem. More cohesive legal framework is required to be established.

(1) Whole sale market

In order to maintain the present high economic growth rate in coming years, the country must create and develop a financial, monetary and credit infrastructure to attract investment.

While retail market for individuals is now well developed, the government still has a long way to go in its efforts to promote a wholesale market for government bonds. The country has concentrated heavily on developing the retail market and not the

wholesale market. Treasury bill auctions only began in 1995, with the irregular auctions of 12 month-bills; in 1996 only 2 % of the total debt stock of US$759 million came from treasury bill auctions.

The market for treasury bills has been restricted by a lack of a secondary market most bidders are Vietnamese banks and insurance companies who hold the bonds until maturity. The Treasury's practice of issuing minimum bidding prices has also discouraged the market. And foreign bank's access to funds in dong also restricted by regulations restricting the amount of dong deposits they can hold. In addition, there are also problems with a lack of information. Because the authorities do not pre-announce a calendar of upcoming bill auctions, so the institutions are unable to make plans around the schedule. There is also a need for more consultation with the bidders.

The development of a market-oriented economy with a high growth rate requires the creation and accumulation of capital. Doing so means promoting a network of intermediary financial-monetary mechanisms outside the limited sphere of commercial banks. At present, there are no intermediary financial bodies in the country.

Developed nations have dozens of intermediary financial bodies and hundreds of branches operating under conditions favorable to the investment capital. These bodies boast a huge amount of capital and extremely large number of promissory notes that can be exchanged daily. In other words, intermediary bodies play the role of an efficient purchaser of promissory note, and a vendor of the same, for all sectors of business community in a market economy.

The most urgent need in the immediate future is for establishing and expanding intermediary financial institutions outside the sphere of activity of commercial banks, including such mechanism as regional capital markets. At that point, amount of credit available in many fields, for example financial grants for infrastructure construction, will no doubt increase by billions. It is worth pointing out that the guarantees for official and private financial asset accumulation should be freely and openly assigned through the mechanism of capital markets at various localities and in different trades.

The establishment of secondary markets is also a pressing demand. However, only with serious attention to controlling risks in these markets will be possible to conduct efficient assistance services related to capital creation. Such a situation will place capital creation within a context of strict adjustment provisions.

(m) Syndicated foreign currency loan

Among syndicate foreign currency loans such as Citibank for $30m for the state coal producer Vinacoal, ANZ Bank for $15m for expansion by Vietnam Airlines, ABN-AMRO for $30m for Vietnam National Post to fund a contribution to a major underwater cable project and Bank of America for $30m for the Maritime Commercial Bank (a comparatively small commercial joint-stock bank), the most unusual deal was probably Bank of America's one. The funds have been raised on behalf of the Ministry of Transport, which wants to use the money to finance the construction of three projects; the improvement of Highway 51 between Ho Chi Minh City and Vung Tau, the improvement of Highway 41 between Ban Me Thuat and Binh Duong, and a trunk road linking ring-road Lang in Hanoi with a proposed new town at Hoa Lac. Tolls from the new roads will be used to repay the loan to Maritime Commercial Bank, with the State Bank guaranteeing the loan. This is the first kind of loan for infrastructure. Previously such projects would be covered by the state budget.

A few outstanding technical matters still needs to be resolved before the loan is approved because of overlapping and contradictory regulations related to escrow account and guarantee. However, the emergence of syndicated foreign currency loans from foreign banks could also hold some lessons for the banking system. There have been so far only two cases of which were, in effect, syndicated loans by state commercial banks. One went to finance the Hanoi Hotel and the other went to the March Eighth Textile Plant near Hanoi, both involving Vietcombank.

The State Bank is currently drafting new regulations that would allow private commercial banks to engage in syndication. But the underdeveloped nature of the banking system means that domestic loan syndication will be some way off. There are two key ingredients for a successful syndication; transparency of the system and trust. Both are in short supply at the moment.

(n) Market establishment and international financing

Official as well as private credit institutions should be expanded outside of the form of commercial banks and into a range of capital market for each economic sector, so that one day they can be part of the national stock markets. Planning for this step should include heavy industry, light industry, chemical and plastic industries, small and medium industry and various localities and major financial centers such as HCM City, Hanoi and Da Nang. The process of capital creation through the building of credit infrastructure consists of many phases. Banks (banking sector) will introduce new modes of capital mobilization such as issuing Government bonds and business bonds.

State bonds have been issued many times on the domestic markets, earning thousands of billions of dong. Although these bond revenue transfer into some tens of millions of dollars, this is still too small an amount to finance the country's industrialization and modernization. In terms of building a credit infrastructure, the urgent need at present is to issue bonds in the world capital market. Persons of Vietnamese origin (*Viet Kieu*) should be encouraged to invest on them. However, in order to break into the world capital market, the nation's present financial-monetary infrastructure must first of all be turned into a truly liberal and highly professional mechanism. This requires the presence of a free capital market in a monetarized economy equipped with all the necessary credit instruments. The introduction of a widely money economy to the world financial community needs to be made through a specialized international body.

The participation in world capital organizations hinges on the international market's estimation of the country's creditworthiness. A relatively good rating empowers a country to issue bonds, especially medium- and long-term bonds, in order to obtain loans on the international capital market.

For this undertaking, it is possible to make use of one of the many professional stock companies; with its support the country can enter the international financial market and borrow billion dollars. Borrowing foreign capital should not be worrisome if those loans really help increase the nation's productive forces and promote efficiency. Access to such capital sources is urgently needed to help the country gradually enter into competition with the region and the world, with a view to obtaining an

increasingly large share in exports of goods, services and credit. It is not surprising to find that their process of industrialization followed the path described above. Specially, that path is the creation of capital through building and developing their banking and financial infrastructure. At the same time, the nation's banking, finance and credit institutions must maintain their credibility in the eyes of investors and organizations around the world.

3) Immediate measures to mobilize domestic financial resources

In the short-term, the government should look into the following financial resources as revenues through selling villas held by the State, capitalization of state-owned enterprises, disposal of land on which Vietnam National University is presently located.

(a) Sales of villas

The Government issued Decree 61/CP referring to purchasing and trading houses under State management. The move is part of the Government plan to privatize public housing in urban areas. The process will create favorable condition for people to use the villa effectively. And profits from the sale will be used to finance new residential quarters and infrastructure projects.

(b) Capitalization

The Central government has promulgated the Decree44/CP, which replaces Decree 28/CP, on the standards and regulations governing the process of transferring SOEs into share holding enterprises.

The new decree stipulated that from now on, SOEs could sell shares to foreign organizations and individual. This break-through legal regulation will pave the way for the foreign capital to pour into the capital-thirsty economy as the country should be able to attract not only direct foreign investment but foreign portfolio investments as well.

The decree widens the list SOEs which can be either equitized or may change their form of ownership, and there now remains a limited list of SOEs which are not subject to capitalization, including those involved in certain commodities still requiring a Monopoly such as the production of explosive materials, the printing of

bank notes and the national and the international telecommunication networks. According to the new decree, the Government will still hold controlling shares in enterprises involved in the production of 13 important sectors, which include services for public interest, the exploitation of rare and precious minerals, technical services for oil exploitation, the production of fertilizers and medicines, energy production, aviation maintenance, post and telecommunications, railway, air and ship transport, printing and publications as well as the large-scale production of liquor, beer, cigarettes, oil and gas among several others.

The new decree also broadens the forms of capitalization, as from now any SOE not belonging to the group of the above-mentioned 13 commodities or services may be wholly sold to share holders. General situation in most of the existing SOEs is dire and obviously worth warning. Of the existing 5800 SOEs, only 1301 or 37% could be classified as efficient although the minimum standard to be considered efficient only include being able to maintain State capital, pay debts and taxes and a certain amount of profit. Of the same existing 5800 SOEs, 1634 others or 46.4% are classified as still inefficient and all facing a total sum of debt amounting to roughly $81 million, while the remaining 588 SOEs or 16.6% are classified as inefficient and are facing a total sum of debt equaling $126 million. Since coming into existence, these 588 SOEs have burned off a total of about 75% of the capital provided them by the State coffers under the form of registered capital. The reasons for the weakness and inefficiency of SOEs vary and included obsolete technologies and the lack of both registered and working capital, but topping the list is the management system.

In order to step up the reform plan, on April 1998, the Central government issued a regulation stipulating that all existing SOEs must be divided into three groups, of which the first is those which must be kept 100% state-owned, the second is those which must be either equitized, privatized or consolidated and the third is those which must be either made bankrupt, leased or sold.

SOEs now owe total sum of $12 billion of bad debt, of which some $5.4 billion are debt which must be collected and another $6.6 billion are debt which must be repaid. The seriousness of the current debt problem and the fact that many SOEs have intentionally dragged out their debts are threatening both the SOE reform program and capitalization scheme. It is planned that of the existing 3380 SOEs currently

being locally managed, only 1768 will remain 100% state-owned while the rest will be equitized, sold, leased or made bankrupt.

4) Long-term Measures to Mobilize Financial Resources

In the long-term, strengthening the foundation of taxes, financing & capitalization, the country has to establish the special framework contributing to mobilization of domestic financial resources. As to taxes, asset tax and urban planning tax are the most expected financial resources mostly available to the provincial authorities. Facilitation of financing and capitalization should be directed to diversification of financial instruments (bond, bill, promissory note), strengthening of guarantee function, project financing, corporate financing, syndicate loaning.

(3) Management infrastructure

1) Characteristics of the project

As mentioned before, the project comprises infrastructure fixing, new location of Hoa Lac High-Tec Industrial Park, relocation of Vietnam National University and its related institutes, housing complexes on a large scale and Phu Cat Industrial Park directed to establishment of industries founded on traditional artisanship and skills nurtured for a very long time, and industries oriented to construction and housing materials, and project-related service industries. Each undertaking tends to be developed at its own pace without paying attention to the other undertakings. So coordination is of prime importance. In this regard, followings are worthwhile being noted.

(a) Coordination

Firstly, as each undertaking has its particular feature, lack of coordination will spell dislocation of this entire project. The coordination among undertakings is of great importance. Taking into account the fact that each undertaking is implemented under sponsorship of the competent ministry, university and other organizations in terms of planning and budgeting, coordination at the first stage must be made at sponsors' levels. Even if coordination is made well at the first stage, it is almost difficult to avoid troublesome matters that hinder smooth working of the project at the implementation stage.

Secondly, As part of the project is completed at the implementation stage, new works as well as necessary construction into the future will come out. They include commercial transactions; sales of property, provision of services, finance, promotion and the like. Appropriate pace of construction of various facilities has to be matched with them. Otherwise, project cash flow balance will be moved into deficit, which in many cases leads to a critical halt of the project, project failure or waste of immense amount of precious financial resources. The country has already experienced this sort of condition in development of IZs, although foreign investments have shouldered this financial burden, not Vietnamese party. In order for newly value-added properties including innovated land, constructed infrastructures and buildings to continue to have their values maintained or enhanced into the future, maintenance & operation are also terribly indispensable. Thus, coordination among construction, commercial transaction and maintenance & operation should be one of the most critical elements to the end of the success of the project.

Finally, more difficult is that the project does demand not only coordination itself but enhancement of the project as well. This means that components will be changed into a totally new entity, like grapes being vintage into wine. The minimum requirement is that each component works in organic harmony with others. To the purpose of realizing this condition, serious considerations in coordination have been given to how neatly functional relations among physical components and relations between physical components and people and business entities' activities should be established, which will contribute to enhancing better living environment and to creating a productive area. It is to be seriously regarded that functional relations between physical components and people and business entities' activities in the project area and the counterparts outside the delimited area are as important as those in the project area. Suppose the situation in which if the one is out of the delimited area, suddenly, he or she is prohibited from enjoying better living environment and productive conditions. Some examples are recognized without difficulty as follows. The situation of this kind is totally unacceptable to any parties concerned.

The project requirement of this sort is the one that country has not yet experienced. Of course, not, IZ and EPZ development strategy has built them into itself. The high-tech strategy is planning to do on smaller scale and in less sophisticated way than the project, the result remained to be seen.

The management infrastructure to be established has to cope with these tasks in coordination to the success of the project. It is possible that to pursue them some rectification should be put on the traditional strategy (IZ, EPZ, and HTP).

(b) Management infrastructure and investors' attitude

It is also noted that management infrastructure will affect investors' attitude to the project. In this case investors are Vietnamese people who are taxed or fee-charged at home, overseas Vietnamese and foreign investors. The project will extend over a long period of time and guzzle away an enormous amount of money and money requirement for supporting the project may exceed governmental revenues. Vietnamese people have to get full-understandings about the project and are satisfied with giving approval to this project. Overseas Vietnamese and foreign investors need to be recruited in an effort to raise enough money for this project. In this context, their attitudes influence credit-worthiness to the country as well as the project.

What is vital to those who invest in this project is whether the project is viable enough to turn result on investment, which is contributory to the economic development of the area, regions and the country as a whole mentioned above. In this regard, whether management infrastructure is effective and efficient is critical in affecting investors' favor. Ineffective and inefficient infrastructure fails to attract many investors both an home and abroad. Thus the management infrastructure for the project is structured to be attractive enough to lure more investment.

2) Basic Approach to a Management Infrastructure

As mentioned above, the project is the one that the country has not experienced before. It could be said that it is a kind of trailblazer for this country. It is imperative that some old organizational structure should be superseded with the new one that will have been so created as to implement this project effectively and efficiently.

The management infrastructure will be set up on two bases; a unit within the Central government organization and another unit mostly oriented to implementation, by which the project will be directed to the successful completion.

Because each undertaking is implemented under sponsorship of the competent ministry, university and other organizations in terms of planning and budgeting, coordination among ministries concerned and other involving organizations such as the Vietnam National University and Ha Tay Province is of prime necessity. The unit within the Central Government organization is directed to this coordination. A strong power should be provided to this unit. In some cases at the implementation stage, the coordination covers troublesome matters that may result in total failure of the project unless coordinated at a high-powered level.

Another unit should be mostly engaged in implementation in terms of infrastructure construction, maintenance & operation, commercial transactions; sales of property, provision of services, finance, promotion and the like. The unit is required to get through the following coordination tasks. Firstly, in the process, appropriate pace of construction of various facilities has to be matched with sales of properties, provision of services, finance and so on. The coordination of this kind tends to be given a scant regard. Otherwise, project cash flow balance will be moved into deficit, which in many cases leads to a critical halt of the project, project failure or waste of immense amount of precious financial resources. Secondly, another important job is to implement the project, the condition being kept in which each component works in organic harmony with others. To the purpose of realizing this condition, serious considerations in coordination have been given to how neatly functional relations among physical components and relations between physical components and people and business entities' activities should be established.

In the light of this requirement, this unit, being well structured, is oriented towards two different directions. It will be established on a ministerial scale as a new independent governmental organization or an ad hoc one attached to the existing ministry. And both will be set up within a realm of the governmental structure. They will be in charge of coordination among various independent undertakings planned and implemented by ministries, universities and so forth. They will also have its own budget and staff.

This administration has long striven for making itself smaller and more effective (streamlining the administrative body, equitizing state-owned enterprises and the like.). This effort has to be held in high regard. The latter has more private overtone than the former. Thus, the latter direction seems to be in accordance with an effort that the administration has made to streamline itself.

In the latter case, some duties will be handled by the governmental organization and some duties will be carried out by a newly set-up organization outside the present governmental structure. This new organization could have a mixture of half-public and half-private character; it will combine governmental authority with market strategy as effectively as possible. The government will own some stocks of this organization and exert its control over the new organization only through its stocks.

(c) Traditional strategic scheme

The country has the basic dual-tier scheme consisting of provincial Board of Management and Infrastructure Development Company, which is stipulated by the Decree on the Regulation on Industrial Zones, Export Processing Zones and High-Tec Zones. The decree has also some stipulations about State Management and provincial People's Committee in terms of function, task and power. In case of a project on large scale, State Management is strengthened by setting up Steering Board recognized in projects such as Dung Quat Oil Refinery Project, Hoa Lac High-Tech Industrial Park and HCMC High-Tech Industrial Park, with the latter two being in formative stage.

The traditional scheme should not cope with this project. Some new problems such as overlapping in functions, tasks and powers, too much complicated decision making process, lack of coordination in budgeting, unbalanced relation between power and responsibility, and too much rigidity of the present personnel appointment system will come out under the traditional scheme, due to features particular to the project.

(d) Comparison of functions among related organizations

a) State Management

- elaborating strategies, planning, plans and policy
- issuing legal documents
- providing for and guiding the formation, building, development and management
- granting, adjusting, and withdrawing licenses
- deciding the organizational apparatus, personnel training and fostering

- supervising, inspecting and monitoring and dealing with newly arising issues

b) Provincial People's Committee

- perform the function of State management over IZs and provincial Boards of Management.
- take part in the elaboration of the overall planning, direct the drawing up of the plan to set up an IZ and working out the detailed zoning of IZs
- monitor and supervise the implementation of the planning
- assume the main responsibility for the site clearance plan and organizing implementation, resettle the inhabitants in the area to be cleared; allocate land inside and land outside the IZs for the building of the infrastructure works in service for the development of IZs.
- grant licenses for the establishment of Vietnamese enterprises
- propose to grant, adjust and withdraw licenses, propose to authorize the provincial Board of Management of the IZ to consider and approve the import and export plans of IZ enterprises.
- approve regulation on the management
- recommend the personnel eligible for the post of head of the provincial Board of Management of, decide the posts of deputy heads and members and assisting apparatus of the Board
- assume the main responsibility for organizing the evaluation of the technical designs of group A projects (foreign investment), group B and group C projects (domestic projects)
- supply documents, materials and information to the provincial Board of Management

c) Provincial Board of Management of the IZs

- work out the regulation on the management
- organize the elaboration of the detailed planning and manage the implementation, take part in the development of the related infrastructure works outside the IZ and dwelling quarters for employees

- urge and supervise the building of the related infrastructure works inside and outside an IZs, ensuring that they are built and put into operation in accordance with the approved planning and schedule.
- support the mobilization of investment
- receive applications for investment, organize the evaluation and grant licenses
- supervise and inspect the execution of investment licenses, contracts for processing of products, contracts for provision of services, business contracts, settle economic disputes
- coordinate with the agencies performing State management
- manage service activities.
- seek agreement with the IZs infrastructure development companies in setting the price rate for sub-lease the land and service charges
- grant, adjust and withdraw certificates, grant, adjust and withdraw licenses
- be invited to send its representative to the meetings of the Government agencies and provincial People's Committee to discuss the formation, building, development and management
- send reports on the situation of formation, building, development and management of IZs to the provincial People's Committee, the Vietnam Board of Management of IZs and the concerned Government agencies

d) Infrastructure Development Company

- mobilizing investment in the IZ on the basis of the detailed development planning
- sub-lease to the enterprises the land together with infrastructure works.
- lease or sell to IZ enterprises the workshops
- provide various services in conformity with the investment approving decision or investment license, the business registration certificate and companies charter.

- set the sub-lease rate for the land with the infrastructure works built thereon, the rate for lease or sale of workshops and service charges after consulting the provincial Board of Management on IZs.
- elaborate and submit the master plan on the development infrastructure works in the IZ and propose the related infrastructure works which need to be developed outside the IZ so that the State management agencies can have foundation to elaborate the development plan and assign responsibilities for implementation.
- build infrastructure.
- render maintenance to the IZ infrastructure works
- ensure the industrial hygiene and environmental and ecological protection.
- observe the regime of periodical and yearly reporting to the provincial Board of Management of the IZs.

e) State Steering Board for Dung Quat Oil Refinary Project

- supervises and urges investors to observe directives of the Political Bureau and Decision 514/Ttg July 10 1997 of the Prime Minister
- assume the primary responsibility and coordinate with the ministries, branches and localities in assisting the Prime Minister to promptly handle inter-branch matters in the course of execution of the project
- propose to the Prime Minister investment encouragement policies and major necessary measures to ensure the coordinated and efficient execution of the project as scheduled.

So the scheme directed to this project should be characterized by more streamlined, simplified, more rooted, more balanced sharing in power and responsibility, more incentive-led, more result-oriented evaluation, thus more effective and efficient management with more rationality and appropriateness should be realized.

In this regard it seems highly probable that the management system of State-owned enterprises will not be applied to the project implementation. The country has to have a totally new management infrastructure different from the one attached to State-owned enterprises. To the successful realization of the project, there are two basic

changes to be accepted into the traditional scheme. Firstly, function, power and task of a provincial Board of Management and Infrastructure Development Company should be reviewed and two bodies should be merged into it. Secondly, Steering Board should have more capacity such as budgeting and coordination in budgeting.

With regards to these points, one more point is worthwhile being recognized; the more well-structured, the more credit-worthy, thus providing more enhanced financial capability which the too much-complicated structure under the traditional development formula should not enjoy and attracting more investors or creditors with a immense bonanza, through buying spree of bonds and shares.

3) Government Organization (Steering Board under the traditional scheme)

The governmental organization has minimum administrative functions in implementing the project. They are as follows;

(a) Formulation of the basic plan

The governmental organization is to formulate the basic plan which covers various undertakings such as fixing new facilities, transferring Vietnam National University to the new site, constructing housing complexes, establishing Hoa Lac High-Tech Industrial Park and Phu Cat Industrial Park, utilizing land in an innovative way.

This land utilization plan will put forward a design for future utilization of the site. The site which is to be covered by the land utilization plan is classified into several groups, e.g., agriculture (paddy fields, cassava fields, others), forestry, fish pond/reservoir, industrial area, commercial area, residential area, public area and green area

Basic questions have to be addressed based upon the above-mentioned classification; those questions are about a total extent of land, ways or timing appropriate for land acquisition in order to implement this project.

For example, the State and Ha Tay Province will have to be the first to secure the site where basic infrastructure is to be constructed.

The implementation area will face a very difficult problem in capturing perfect timing for deciding on and announcing a new land utilization plan. That is because this

kind of action may lead to triggering off speculative expectation about the value of land use right. Thus, it cannot be too careful to judge the right moment for this kind of act. It is recommended that preventive measures are to be prepared for under the legal framework mentioned later.

(b) Outline for coordination of details in a construction plan.

A construction plan puts forth an outline of how to coordinate details of itself; for example, it specifies which of organizational entity should be responsible for the construction of various buildings and facilities, competent ministries, local governments, universities or the other organizations involved. The coordination among them will be required at any stage of implementation of the plan.

(c) Budgetary guideline

The budgetary guideline will be formulated before budget requests and the final settlements, which are related to this project, are made. That is because the budget is to be requested and settled only based upon this guideline.

(d) Incentives provision and licensing

The country is full of regulative rules because more weight is put on stability and integration of socio-economic society at the start of the new development path. Regulatory rules range over various fields. Among them, incentive provision and licensing are the most popular. They will generate difficult conditions many times.

With regards to investment, the current funding allocation mechanism has not work well to the purpose of smooth disbursement. The current system which requires the State capital to go through the State Treasury and the General Department of Investment and Development (GDID) before reaching investors has a great deal delayed the funding flows.

To ensure the timely progress of construction projects, the State Budget Department under the Ministry of Finance has given priority to allocate funding for key construction projects. But the money often stuck at the State Treasury. A large chunk of money sits idle at the State Treasury. It is stipulated that the State Treasury cannot release the funds if GDID fails to meet required demand. GDID blames

investors and local authority's inability to submit full required funding application documents. This condition shows how important the coordination should be to successful investment proceeding.

(e) Special legislation

Directives should be issued to put a group of special legislation into practice. And also, in order to develop this project, the government needs to draw up a new legislation dealing with rights related to land use right, land utilization plan, urban planning, transactions in real estate, establishment of a new organization, introduction of special undertaking account into the government budgetary system and so forth. Administrative operations in general would necessitate many of them, if it were not for this project.

It will be time-and-money consuming to prepare and implement which are listed above. It would be yet to see all of them implemented before the completion of this project. It may be necessary that the implementation of some of them are tailored to meet the completion of this project. They will be carried out more easily if they are backed up through special legislation.

The project should have to depend on financing by the Central government for a large portion of investment cost. Because the country has severe scarcities in financial resources mobilized, it is ultimate requirement that they are put into use in a most effective and efficient way, that is to say, to maintain the strict budgetary decline.

To this end, the structural framework under which financial resources allocated to the project are to be identified at any time, past or present, by any related parties such as taxpayers and investors, has to be established. Of certain it also enables the country to have measures to attract more financial resources towards the future, which contributes to strengthening the financial foundation of the project. The successful reform of this sort should make investors, especially foreign investors, trust the country's finance in a good shape, post the reduced risk rating of this country and recognize the enhanced attractiveness of the project. In this regard, some critical points need to be cleared.

a) Coordination

One of perplexing matters is how to deal with other projects in planning or in implementation. Some are related to the project and others are not. It becomes of terrible importance to sift the related from the unrelated from the standpoint of keeping the strict budgetary decline. If badly handled, overlapping will come out, thus result in a waste of precious financial resources. Because the ministries sponsor these projects, coordination at a higher level will be effective and indispensable.

b) Budget appropriation

There are alternative ways of appropriation of budget for investment. The one is to appropriate the entire budget to one competent ministry. The other is to appropriate the budget to ministers concerned.

c) Reserve budget

d) Management of budget

e) Budget appropriation, outlays, and undertakings

f) Incentives provision, licensing

(f) Structure

The Steering Board of the project is to be established, it will be headed by Prime Minister. Competent ministries, local governments, Vietnam National University and the other related organizations should participate in it.

4) A Newly Set-up Organization outside the Present Governmental Structure-Corridor 21 Development Corporation (C-21 Corp.)

C-21 Corp. covers function, power and task of a provincial Board of Management and Infrastructure Development Company stipulated by the decree pertaining to the traditional development formula. Traditional two bodies should be merged into C-21 Corp.

As the better structured should enhance a financial capacity, which makes investors or creditors more secured, it will attract more investments. The too much-complicated structure under the traditional development formula should not enjoy these favorable surroundings.

It will be mainly in charge of coordination among various independent undertakings planned and budget allocated, under the authorization of the Steering Board. It should also have its own budget and staff.

Main tasks should be centered on the implementation of the project and should be engaged in infrastructure construction, maintenance & operation, commercial transactions; sales of property, provision of services, finance, promotion and the like.

This new organization could have a mixture of half-public and half-private character; it will combine governmental authority with market strategy as effectively as possible. The government will own some stocks of this organization and exert its control over the new organization through its stocks.

The Central government, Ha Tay Province and Hanoi City should have stocks because the project will have a profound effect on national scale. Hanoi City will also enjoy a multitude of benefits derived from the project; less concentration of socio-economic activities, thus, contributing to generating a more viable and better living environment in Hanoi.

As mentioned before, the project cannot be handled within the traditional strategic formula. Accordingly, Ha Tay Province does not have to necessarily shoulder all burdens as stipulated by the decree 36/CP April 1997 on the regulation on industrial zones, export processing zones and high-tech zones. If the project proceeds based upon the traditional formula, Infrastructure Development Company will be set up, 100% contributed by Ha Tay Province in the form of land use right contribution. The past experiences have witnessed 100% contribution although 100% is not required by the decree.

As the newly set-up organization outside the present governmental structure, function, power and task of a provincial Board of Management and Infrastructure Development Company should be merged into it. It has the name of C-21 Corp. or the Corridor 21 Development Authority (C-21 DA) as the case may be.

(a) Functions

- Formulation of implementing the project
- Acquisition of land use right and management of land

- Construction of facilities
- Management and operations
- Sales of property and provision of services
- Financing (Funding)
- Promotion

(b) C-21 Corp. outside the present governmental structure; singular unit or plural units

The project comprises four components in a rough sketch; infrastructure fixing, new location of Hoa Lac High-Tec Industrial Park, relocation of Vietnam National University and its related institutes, housing complexes on a large scale and establishment of Phu Cat Industrial Zone where industries founded on traditional artisanship and skills nurtured for a very long time, and basic materials industries such as cement, steel, plastic processing, brick making, housing materials. In Phu Cat Industrial Zone, services provided to households and business entities will grow. In this regard short-term effects such as demand and employment generation will be realized more remarkably here.

There are two alternatives. The one is that only one authority will be engaged in all of the above, the other is; plural authorities should be established and each one should be in charge of each component.

The former is more suited to the project, taking into account particular features attached to the project, which has been already mentioned. In this case, serious matters remain to be cleared. One of them is that the Hoa Lac High-Tec Industrial Park project and the Phu Cat Industrial Zone project; have made more progress. They are just around the corner. Accordingly, organizational structure has been in the process of forming although it is still sketchy. If the process is not reversible, some variation will be put into display as follows;

(c) Establishment of more subsidiaries

As the project makes a gradual progress, the C-21 Corp. will set up more and more subsidiaries;

(d) Management principles and accounting and auditing system

Each entity has to make efforts towards maintaining sound financial condition and attaining a good performance record. Organizing management, drawing up and carrying out management policy which constitute corporate infrastructure should be prepared solely in conformity with the management principles.

The country should have performance evaluation on three bases; component project basis, business entity basis and project basis.

In preparation for them, the country needs to upgrade its accounting practice to international standards. In case of the project, consolidate accounting and auditing system is required to be implemented, under which inter-trade and internal subsidy are to be revealed to the public, through which the total picture will be revealed. Of course, the performance of non-profit bearing project components which C-21 Corp. should be engaged in, will also be evaluated under the system.

In this regard, the country has a big obstacle to the end of disclosure based on these standards; the Ordinance on Safeguarding State Secrets published in 1991. Although the new regulations on financial disclosure are under drafting, the issuance of financial disclosure regulations will violate the law if this ordinance is not amended. The regulations under draft include stipulations involving the financial disclosures of the State Budget at different levels, State-owned enterprises and funds operating with community capital.

Introducing international accounting and auditing principles, those who have already participated or plan to participate in the C-21 Corp. will be able to assess its financial standing and results of business operations based upon them, which will enable parties concerned to make risk evaluation with ease, thus will make the project more attractive.

But the country has also encountered obstacles. The country does not have standardized accounting and auditing systems, so reports made by many auditing companies were viewed with suspicion by the creditors or investors. They usually complain that they cannot access information about businesses' operations, and do not rely on examination results by various auditing companies because such companies are not independently operated.

(e) Relations between governmental organization and a newly set-up organization outside the present governmental structure

a) Equity participation

The government will invest money in the C-21 Corp. and it will have 100% of equity holding at the inception of this corporation. Then, this corporation will gradually come to finance itself. The government's share of subscription to the capital will probably phase down.

b) Business operations

Business operations related to this project are classified into three groups.

- Business operations which belong to the central or local governments
- Business operations which the central or local governments commissions the C-21 Corp. to conduct.
- Business operations which are under the charge of the C-21 Corp..

The C21 Corp. has to finance itself in order to operate its own business. It will raise funds through issuing bonds or stocks, credit taking and the like.

A basic framework for the business operation should be presented in the construction plan, which will dictate which of the above-mentioned three business operation categories those various facilities planned for this project should fall into. Steering Board headed by the Prime Minister will be responsible for working out those questions through coordination at every stage of implementing this project.

Foreign investors have a high stake in the question whether the C-21 Corp. has corporate infrastructure that is equal to secure the implementation of this project on a long-term basis. Positive evaluation of corporate infrastructure will serve the purpose of attracting an increasing number of foreign investments. But negative evaluation will go the other way and it would give the worst-case scenario in which the corporation would end up with default and the project itself would run aground.

c) Budget

It is not too much to say that budget resources should be expanded, that public finance is kept in good shape and that strict budgetary declines have to be held.

(4) Legal Framework for the Development of the Project

1) Land Use Right Registration

Legal framework of registration system has been established. The new land law 1993 and related decrees have provided legal foundation. However, the system does no perform well. The ratio of the registered is very low and benefits attributable to the system are not recognized; assurance of countervailing status to the party finishing registration and security of commercial transaction.

Assurance of countervailing status to the party finishing registration means that if the party has registers the land use right, nobody has right to hold the land use right. With regard to the security of transaction, it is indispensable for one party trying to sell merchandises to another party to know whether another party has enough means payable. This is common sense of market economy. If the former can check if the latter has land use right registered, which means that the latter has capacity to make payment through land use right as collateral, it can make trade with the former without any concern. Thus the registration system in good performance contributes to smoothening and expanding commercial transaction, that is, a key pillar of economic development. Of course this process will enable land use right to have more rational land use right value and mortgage value, contributing to the development of market economy.

For the system to be reformed, incentives should be built into the system. At present, fee is required to be charged. If revenues derived from charges are recycled into the system to the end of enhancing its performance through more staffing, more investment in physical conditions and the like, system will work more effectively. In this regard, a special account is recommended to be established within the framework of national budget system.

2) Transferability

In principle, individuals and households are entitled to free transfer and mortgage the land use right with complete registration required. However, much more caps are put on the right to transfer, mortgage the land use right by domestic organizations.

Domestic organizations which are assigned land by the State without having to pay the land use levy have to refrain reassigning, transferring or leasing the land use right. They are entitled to mortgage the land use right attached to the properties under their ownership at Vietnamese banks to borrow capital for production and business.

In case of domestic organizations which are assigned land by the State and subject to the land use levy shall have the right with regards to the followings; to transfer the land use right when selling dwelling houses attached to it to Vietnamese citizens, to transfer the land use right attached to the infrastructures already built thereon to Vietnamese citizens for use as dwelling houses, to lease the land use right attached to the infrastructure already build thereon and to mortgage the value of the land use right at the Vietnamese banks to borrow capital for the development of production and business. Domestic organizations with land leased by the State shall not to be allowed to reassign, transfer , sublease the land except for cases stipulated by the law and shall have the right to mortgage within the land lease term the value of the land use right attached to the properties under their ownership on that land at Vietnamese banks to borrow capital for production and business development.

Land use right should be made transferable upon agreement between direct parties. The role of the government should be only register, upon notification by the parties and to collect an appropriate transfer tax. The transferability should be extended to holders of mortgage on land use right.

3) Price of Land

A number of negative implications would have follow from setting price of land. The Central government has set the price brackets of land use right for land categories. On the basis of them the provincial People's Committees set the prices which reflect conditions particular to the province. They are treated as the basis for calculating taxes and fees, deciding rents, determining the value of property and compensating for losses incurred by the land retrieved.

Land rent applied to domestic organizations and various forms of foreign investment (JVs, 100 % foreign owned enterprises and parties to business corporation contracts) are decided by the Central government. In case of domestic organization, different industries has different rents applied (e.g. heavy industry or light industry). Of course, rents are

different between domestic organizations and foreign organizations. The predetermined schedule set in detail and based on non-economic conditions irrespective of market value would not generate an efficient allocation of available land among users.

In addition, prices set below market value would certainly result in excess demand for many types of land; this would in turn provide a large incentive for distortion in the process of allocation of land. Furthermore, by setting prices below market value the government would forgo a substantial amount of potential revenues. The market value of land could be established on outcomes of auctions of land use right by the government and reported transfer prices among private parties. For simplicity, the government could expand the use of book values for similar kinds of land, instead of specific assessment.

4) Land Use Right Transaction Control System

As the project develops, unforeseen problems such as speculative transaction of land use right are likely to take place. The speculative transaction will result in distorting allocation of economic resources, which is unfavorable not only to individuals and business entities but also to the market system as a whole. Any kind of speculation on land will bear an unpredictable result and inflict an unrecoverable damage not only on the private interests but also on the public benefit. Therefore, restriction on transaction of land use rights and control over the value of land use rights should come to legislation.

5) Land Use Plans and Planning System

The country has the legal framework that provides the stipulation of land use planning at various levels; national and local. Presently, the New Land Law 1993 and the Statute of the management of urban planning, issued together with the Decree 91/cp August 1994 alone constitute the legal foundation. More elaboration and development are required to be made.

7.2 Land Management: Method Use in Japan

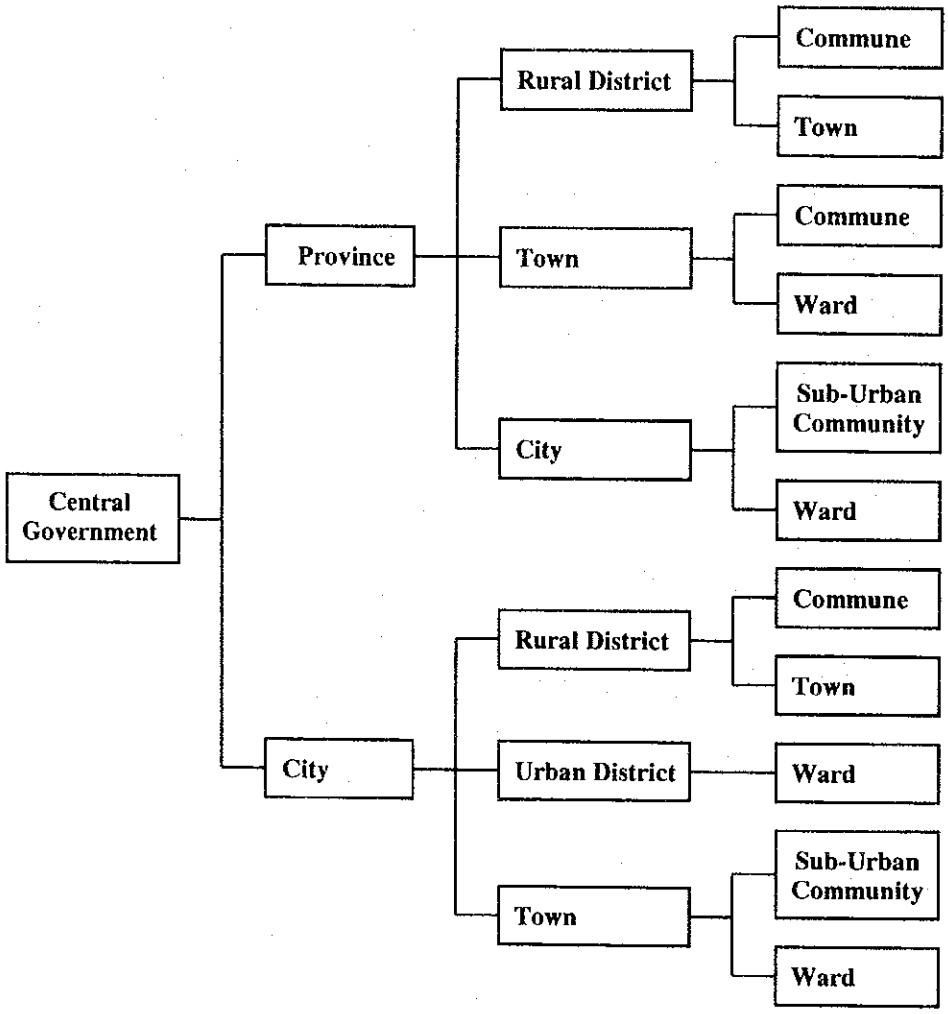


Figure A-7.2.1 Land Management Organization

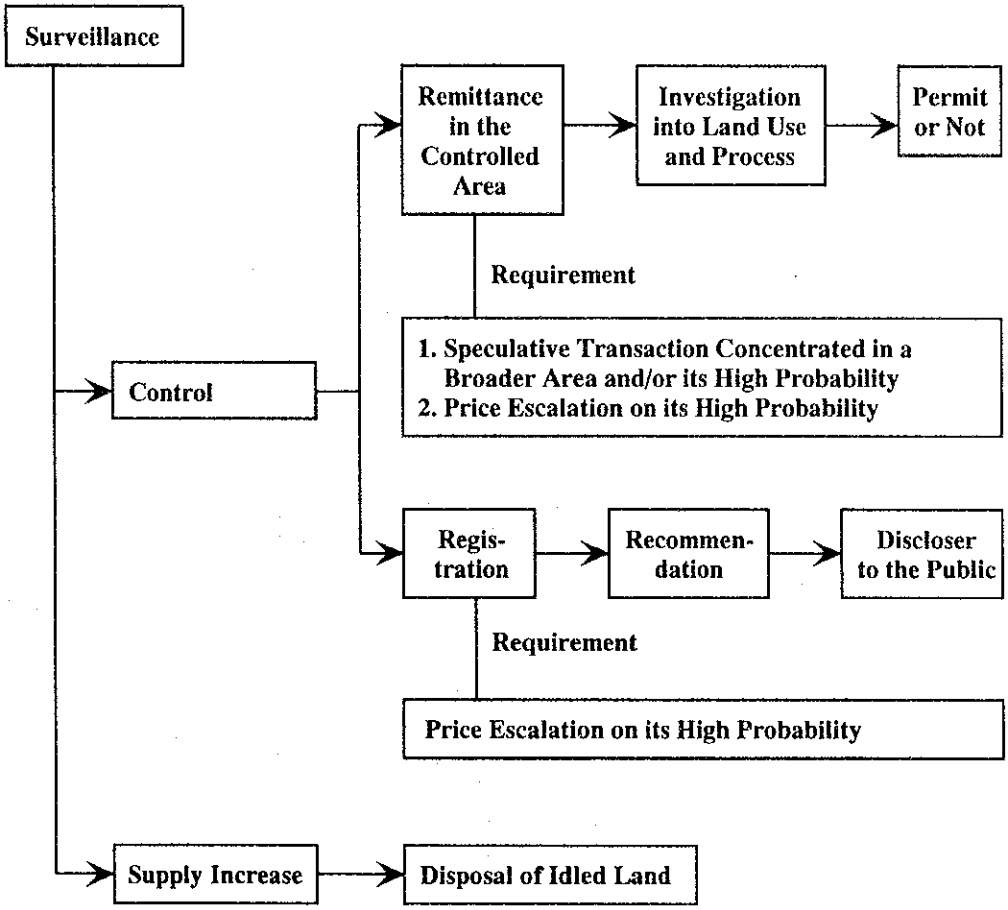
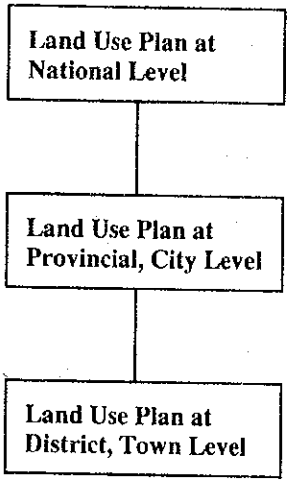


Figure A-7.2.2 Method of Purchase of Land



Land Use Category

1. New Land Law 1993 (1)

(1) Farm Land
(2) Forestry Land
(3) Land for Rural Residential Area
(4) Urban Land
(5) Specialized Land
(6) Unused Land

2. Land Law (2)

(1) Agricultural and Forestry Land
  1) Land for Annual Cultivation
  2) Land with Water Surface for Aquaculture
  3) Land for Perennial Trees and Forest
(2) Land in Rural Residential Area
(3) Land in Residential Areas on Urban Outskirts and Near Traffic Hubs and Main Roads, and Commercial Tourism and Industrial Centers

3. Land in Urban Area

Figure A-7.2.3 Land Use Planning System

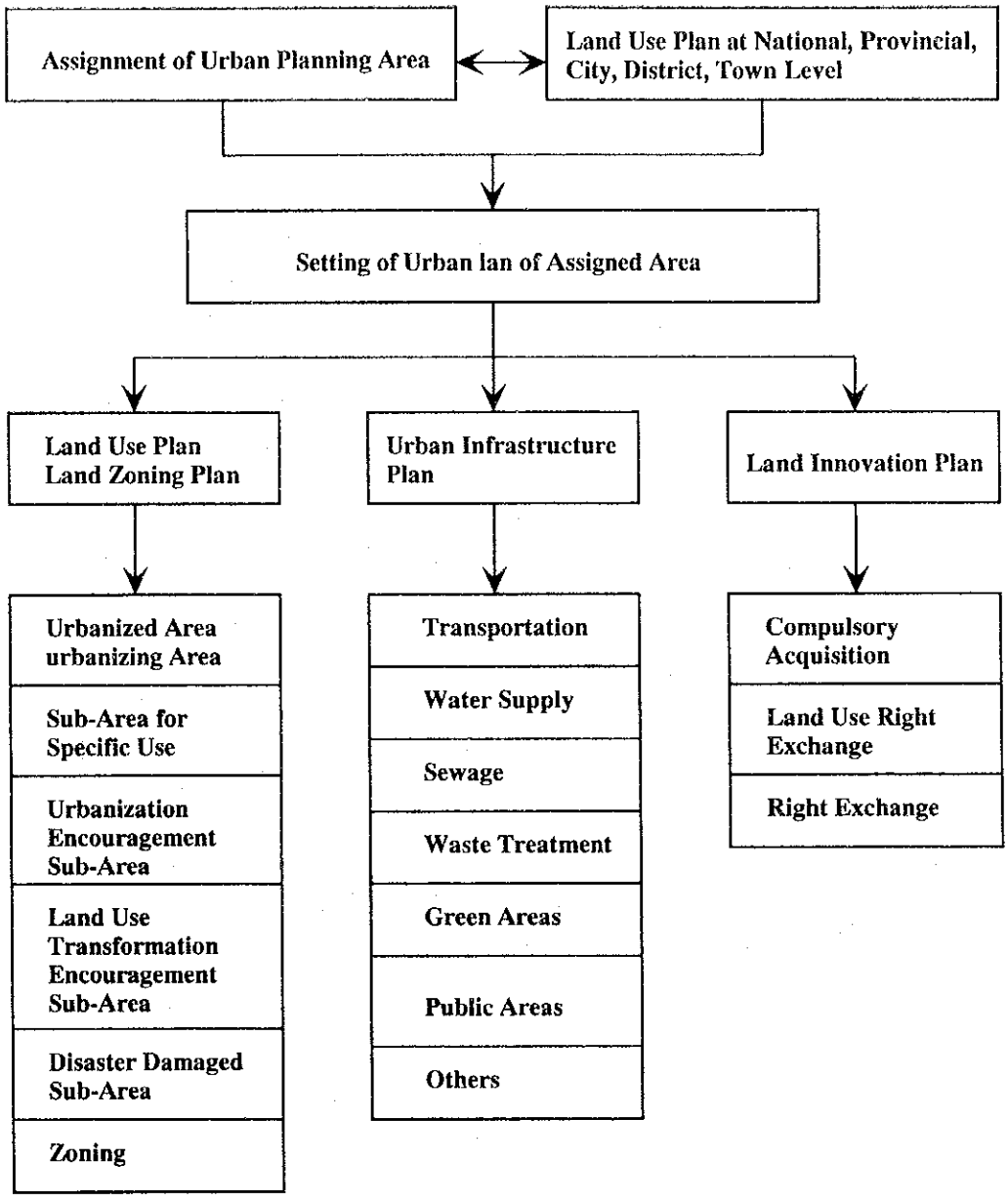
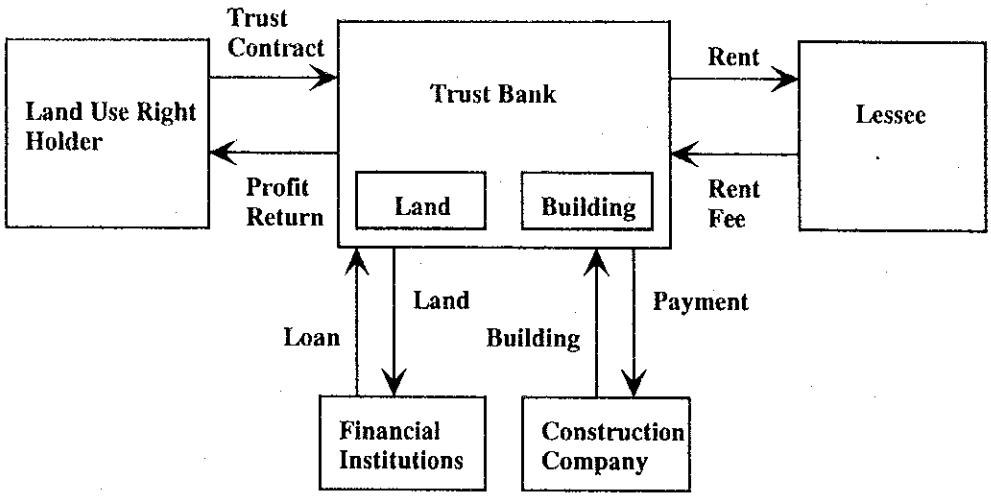


Figure A-7.2.4 Method of Master Plan

1) Lease - Type



2) Purchase - Type

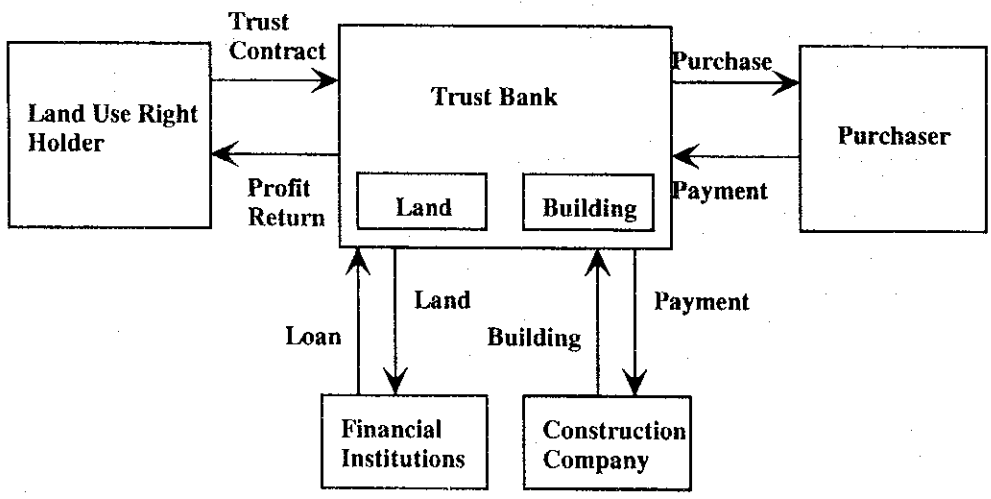
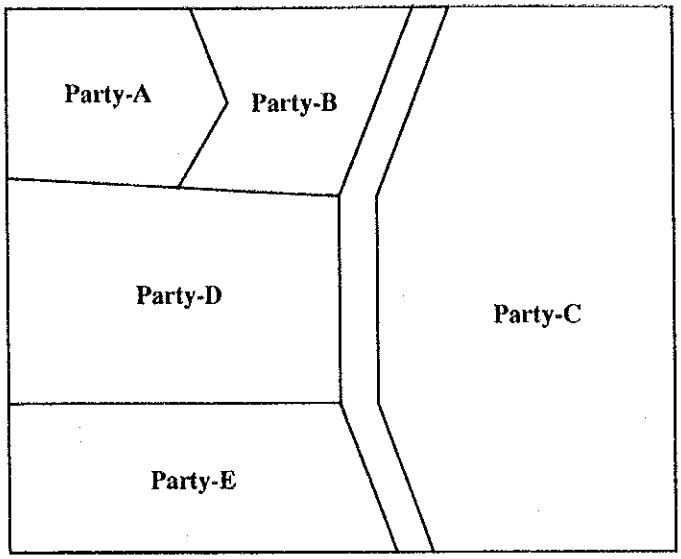


Figure A-7.2.5 Land Acquisition Method

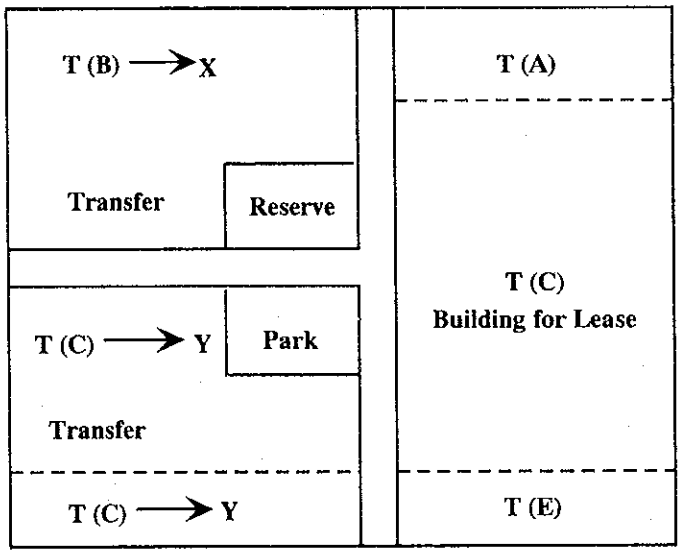
Before



Party-A to E:
Land Use right Holder

Party-T:
Trustee

After



Party-X to Y:
Transferee,
New Land Use Right Holder

Party-Z:
Tenant

Figure A-7.2.6 System of the Land Readjustment (1)

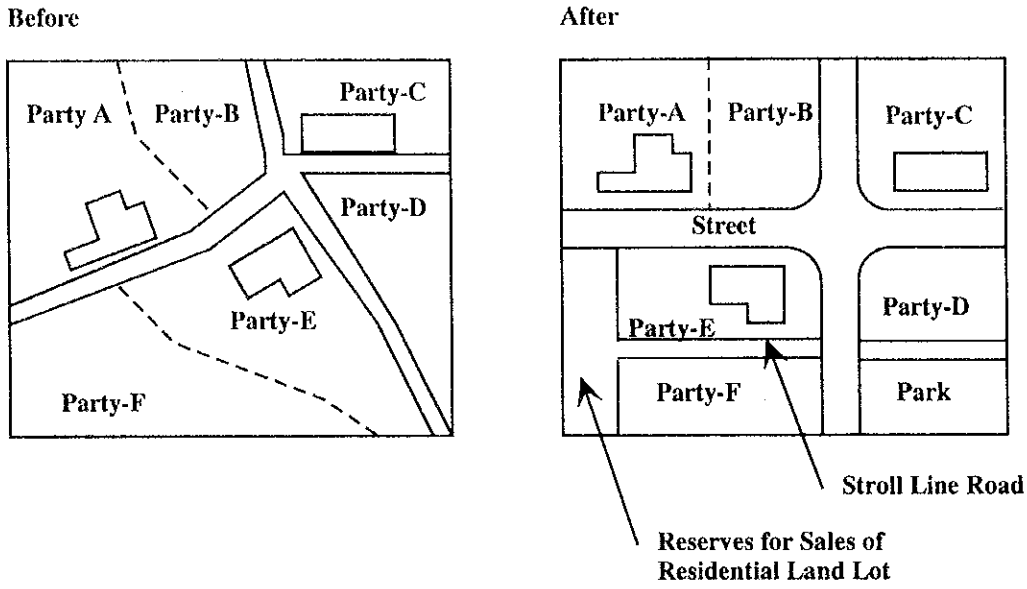
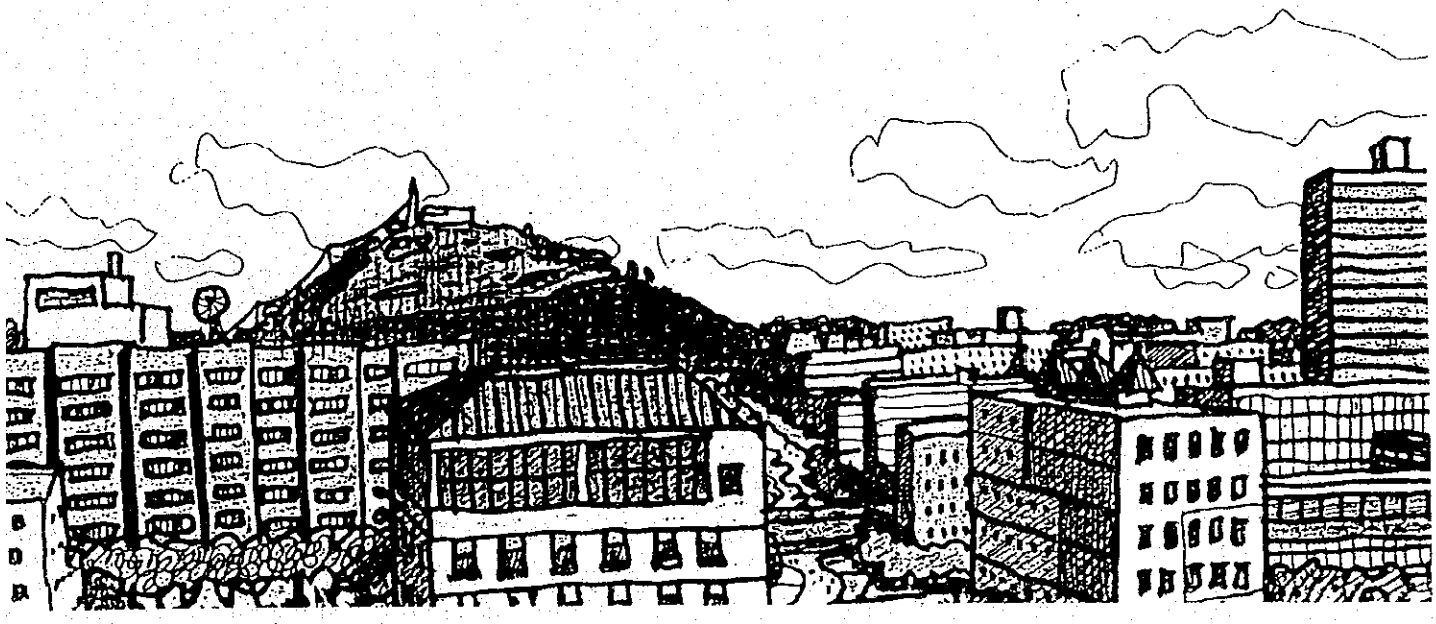


Figure A-7.2.7 System of the Land Readjustment (2)

APPENDIX 8

Preliminary Estimation of EIRR/FIRR for HHTP, Phu Cat, and Dong Xuan Areas



Appendix 8 Preliminary Estimation of EIRR/FIRR for HHTP, Phu Cat, and Dong Xuan Areas

As part of a preliminary evaluation of the Project, preliminary economic and financial analyses are made for the Areas of HHTP, Phu Cat and Dong Xuan.

The evaluation indicators to be calculated for these Areas mentioned above are as follows:

- HHTP Area: - EIRR and FIRR
- Phu Cat Area: - EIRR and FIRR
- Dong Xuan Area: - FIRR

8.1 HHTP Area

(1) Estimation of EIRR

For the economic analysis in this section, the assumptions were based on the following previous studies, and some reviews were made in this Study:

- The Master Plan and Feasibility Study on the Hoa Lac High-Tech Park Project, March 1998, JICA , (hereinafter referred to as "Previous HHTP JICA Study"), and
- The Hoa Lac High-Tech Park Project, presentation of the F/S, April 1998, Ministry of Science, Technology and Environment (MOSTE), (hereinafter referred to as "MOSTE Study").

1) Basic Assumptions of Analysis

The development of HHTP has comprehensive economic, and in this analysis, added value in the high-tech industrial park is treated as a quantitative benefit. The value-added related to Software Park is not included, and the value added in the agricultural production in the HHTP development area is treated as a benefit in the case "when the project is not implemented".

That is, the benefits are estimated through the comparison between the current value added of mainly agricultural production ("without project") and the value added of high-tech industrial production ("with project").

EIRR (Economic Internal Rate of Return) is calculated on a cash flow basis, consisting of the following:

Economic Costs:

- Construction cost of infrastructure for HHTP Area.
- Construction cost of factory building by private investors.
- Investment cost of machinery and equipment by private investors.

Economic Benefits:

- Value added in high-tech industrial production.
- Value-added in agricultural production (as a negative benefits).

2) Assumptions of Costs

In general, the economic cost is obtained by deducting the component of such transfer payment item as import duties and taxes from the financial costs.

Considering the characteristics of the Project as a national development, the taxes are assumed to be exempted, so the financial costs were used as the economic costs.

(a) Infrastructure costs

In the economic analysis, the infrastructure costs include not only the costs directly related to HHTP Area, but also the indirect costs such as "off site."

The following is the summary of the total economic infrastructure costs:

Table A-8.1.1 Economic Costs of Infrastructure: HHTP

Unit: US$ Million

Phase	Phase-1A	Phase-1B	Phase-2
Total costs (Incremental)	506	344	515

Note: JICA Study Team

The infrastructure costs for HHTP Area such as water supply, sewerage, electricity, and telecommunication were estimated by the proportional distribution on a basis of land area or population size from the total costs for the whole the Project areas.

(b) Construction cost of factory building

Based on the "Previous HHTP JICA Study," the construction cost of factory building is assumed to be US$ 1,000 per square meter. Assuming a coverage ratio of 40 % of the building site, the construction cost of factory building is estimated as follows:

Table A-8.1.2 Estimated Construction Cost of Factory Building: HHTP

	Phase-1A	Phase-1B	Phase-2
HHTP Industrial Development Area (ha)	45	26	39
Incremental Factory Costs (US$ Million)	180	102	157

Note: JICA Study Team

(c) Machinery and equipment costs

In the "Previous HHTP JICA Study," the machinery and equipment costs have been estimated based on the number of employees (US$ 100,000 per employee). In this Study, the data on the number of employees is not available. So that, on the land area proportional basis, the number of employees was assumed. The following are the estimated results:

Table A-8.1.3 Estimated Cost of Machinery and Equipment: HHTP

	Phase-1A	Phase-1B	Phase-2
HHTP Industrial Development Area (ha)	45	26	39
The Assumed Number of Employees	6,300	3,600	5,500
Incremental Machinery / Equipment Costs (US$ Million)	630	360	550

Note: JICA Study Team

(d) Implementation schedule of private investment

The implementation schedule of private investment is assumed as below:

Table A-8.1.4 Implementation Schedule of Private Investment: HHTP

Year	First	Second	Third	Fourth	Fifth
Implementation	5%	35%	30%	20%	10%

Note: JICA Study Team based on Previous HHTP JICA Study

(c) Reinvestment

Since the details of cost components are uncertain, the reinvestment is roughly assumed once every 20 years for the total infrastructure costs in each development Phase.

The replacement of the factory building and machinery / equipment is assumed once every 20 years and once 10 years, respectively.

3) Estimation of Economic Benefits

(a) Estimation of value-added in agricultural production

In the "Previous HHTP JICA Study," the value-added in agricultural production has been estimated by the productivity per hectare of the agricultural land use.

In this study, the data of land area for the agricultural land use is uncertain, so that the total development area is used for estimation. On the proportional basis of the land area for the total development area, the value added in agricultural production was estimated as summarized below:

Table A-8.1.5 Value-Added Agricultural Production: HHTP

	2005	2010	2020
HHTP Total Development Area (ha)	248	414	880
Agricultural value added (US$ Million)	0.4	0.8	2.9

Note: JICA Study Team

(b) Estimation of value added of high-tech industrial production

In the "Previous HHTP JICA Study," the productivity of the high-tech industry has been estimated in terms of "net product per number of employee." According to the "MOSTE Study," the unit value of net productivity per employee has been reviewed (approximately 50 %, compared to "Previous HHTP JICA Study"), resulted in the reviewed value-added of US$ 104 million as of Phase-1 / Stage-1. It is assumed that for this analysis, this reviewed value is applied as the base of an estimation of the value-added in the period of Phase-1A.

Since, in this Study, the kind of high-tech industry allocated in HHTP Area is uncertain, the value-added for this analysis was estimated on the land area proportional basis. The annual growth rate of 8.4 % during 2005 – 2010, 5.9 %

during 2010 – 2020 and 3.3 % after 2020 were assumed based on the "Previous HHTP JICA Study." The following are the estimated results of value-added of high-tech industrial production:

Table A-8.1.6 Estimated Value-Added of High-Tech Industrial Production

MOSTE Study	Stage-1		
Factory Lot Area (ha)	30.5		
Estimated Value-Added (US$ Million)	104		
This Study	**Phase-1A**	**Phase-1B**	**Phase-2**
Accumulated HHTP Industrial Development Area (ha)	45	71	110
Accumulated Value-Added of Industrial Production (US$ Million)	154 (Year 2005)	362 (Year 2010)	987 (Year 2020)

Note: JICA Study Team

The details of estimation are referred to Table A-8.3.5.

4) Estimated EIRR

Using the economic costs and benefits above-mentioned, the value of EIRR was estimated to be 18.2%. The table of cash flow is shown in Table A-8.3.6.

(2) Estimation of FIRR

Similarly, in the case of EIRR estimation, the assumptions for the financial analysis was based on the studies of "Previous HHTP JICA Study" and "MOSTE Study," and several reviews were made.

1) Basic Assumptions of Analysis

This financial analysis aims at evaluation in terms of investment for the components of high-tech industrial zone, software park zone, urban business zone, and high-grade housing (detached type and row house type) zone. And these components are analyzed as a whole in M/P stage. Other components such as R&D zone and middle- low-grade housing zone are assumed to be excluded as an evaluation objective, because these components are considered to be non-profitable and have public benefits.

2) Assumptions of costs

(a) Infrastructure costs

In the financial analysis, the infrastructure costs include such basic components as public works. The following is the summary of the total financial infrastructure costs:

Table A-8.1.7 Financial Costs of Infrastructure: HHTP

Unit: US$ Million

Phase	Phase-1A	Phase-1B	Phase-2
Incremental Total Costs	126	93	206

Note: JICA Study Team

The infrastructure costs for HHTP Area such as water supply, sewerage, electricity, and telecommunication were estimated by the proportional distribution on a basis of land area or population size from the total costs for the whole Development areas.

(b) Reinvestment

Since the details of cost components are uncertain, the reinvestment is roughly assumed once every 20 years for the total infrastructure costs in each Phase.

(c) Land rent cost

In this analysis, the unit land rent cost for the components composed of high-tech industrial zone, software park zone, urban business zone, and high-grade housing zone is assumed to be US$ 0.10 per square meter annually, which is equivalent to the value of "Case-2 in the Previous HHTP JICA Study."

(d) Land compensation and relocation costs

In the "Previous HHTP JICA Study," the costs of the land compensation and relocation costs for HHTP Area has been estimated. According to these estimation results, the average costs per hectare of the land compensation and relocation were obtained to be US$ 10,500 and US$ 5,900, respectively. For this analysis, the above mentioned values are assumed to be applied for the estimation of land compensation and relocation costs. The following are the estimated results of land rent cost, land compensation cost and relocation cost:

Table A-8.1.8 Estimated Costs of Land Rent, Land Compensation and Relocation

	Phase-1A	Phase-1B	Phase-2
Incremental Total Objective Area (ha)	75	50	107
Incremental Land Rent Cost (US$ 1,000)	75	51	107
Land Compensation (US$ 1,000)	788	531	1,127
Relocations (US$ 1,000)	443	299	633

Note: JICA Study Team

3) Estimation of Financial Revenues

(a) Land lease for high-tech industrial zone

The unit price of land lease for high-tech industrial zone is assumed to be US$ 45 per square meter for the period of lease of 50 years, which is equivalent to US$ 0.90 per square meter annually. The following are the results of revenue estimation:

Table A-8.1.9 Revenue Estimation: High-Tech Industrial Zone

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	45	26	39
Incremental Land Lease Revenue (US$ 1,000)	405	230	354

Note: JICA Study Team

(b) Land lease for software park

The unit price of land lease for software park is assumed to be US$ 40 per square meter for the period of lease of 50 years, which is equivalent to US$ 0.80 per square meter annually. The following are the results of revenue estimation:

Table A-8.1.10 Revenue Estimation: Software Park

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	15	10	15
Incremental Land Lease Revenue (US$ 1,000)	120	80	120

Note: JICA Study Team

(c) Land lease for urban business zone

The unit price of land lease for urban business zone is assumed to be US$ 10 per square meter monthly. The following are the results of revenue estimation:

Table A-8.1.11 Revenue Estimation: Business Zone

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	10	10	30
Incremental Land Lease Revenue (US$ 1,000)	12,000	12,000	36,000

Note: JICA Study Team

(d) Land lease for high-grade housing zone

The unit price of land lease for high-grade housing zone is assumed to be US$ 10 per square meter monthly. The following are the results of revenue estimation:

Table A-8.1.12 Revenue Estimation: Housing Zone

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	5	5	23
Incremental Land Lease Revenue (US$ 1,000)	6,000	6,000	27,600

Note: JICA Study Team

(e) Assumption of schedule of land lease

The schedule of land lease is assumed as follows:

Table A-8.1.13 Schedule of Land Lease: HHTP

Year	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
1)	5%	15%	10%	10%	10%	10%	10%	10%	10%	10%
2)	5%	35%	30%	20%	10%	-	-	-	-	-
3)	-	5%	35%	30%	20%	10%	-	-	-	-
4)	-	5%	35%	30%	20%	10%	-	-	-	-

Note: 1) Software park

2) High-tech industrial park zone

3) Urban business zone

4) High-grade housing zone

Assumed by Study Team based on Previous HHTP JICA Study.

4) Estimated FIRR

Using the financial costs and revenues above-mentioned, the value of FIRR (Financial Internal Rate of Return) was estimated to be 15.5 %. The table of cash flow is shown in Table A-8.3.7.

8.2 Phu Cat Area

(1) Estimation of EIRR

1) Basic Assumptions of Analysis

Due to the limitation of data availability on Phu Cat Area, the assumptions for this analysis compellingly followed those in the case of HHTP Area. Accordingly, the estimation process of economic benefits was based on that in the case of HHTP Area.

However, considering the general characteristics of the industrial zone in Phu Cat Area compared to the high-tech industrial park in HHTP Area, some modifications for such as unit cost / unit value were made.

The benefits are estimated through the comparison the current value added of mainly agricultural production ("without project"), and the value-added of industrial production ("with project").

EIRR is calculated on a cash flow basis, consisting of the following:

Economic Costs

- Construction cost of infrastructure for Phu Cat Area
- Construction cost of factory building by private investors
- Investment cost of machinery and equipment by private investors

Economic Benefits

- Value-added in industrial production
- Value-added in agricultural production (as a negative benefit)

2) Assumptions of Costs

Similarly to the HHTP project, the financial costs were applied as the economic costs.

(a) Infrastructure costs

In the economic analysis, the infrastructure costs include not only the costs directly related to Phu Cat Area, but also the indirect costs such as "off site." The following is the summary of the total economic costs of infrastructure:

Table A-8.2.1 Economic Costs of Infrastructure: Phu Cat

Unit: US$ Million

Phase	Phase-1A	Phase-1B	Phase-2
Incremental Total Costs	412	293	424

Note: JICA Study Team

The infrastructure costs for Phu Cat Area such as water supply, sewerage, electricity, and telecommunication were estimated by the proportional distribution on a basis of land area or population size from the total costs for the whole Development areas.

(b) Construction cost of factory building

According to the "Previous HHTP JICA Study," the construction cost of factory building is assumed to be US$ 1,000 per square meter. Although the kind of industries allocated in Phu Cat Area is uncertain, considering the characteristics of industries, compared to the HHTP Area, the unit construction cost is roughly assumed to be the half of that in the case of HHTP Area, which is equivalent to US$ 500 per square meter. Assuming a coverage ratio of 40 % of the building site, the construction cost of factory building is estimated as follows:

Table A-8.2.2 Estimated Construction Cost of Factory Building: Phu Cat

	Phase-1A	Phase-1B	Phase-2
Phu Cat Industrial Development Area (ha)	55	100	175
Incremental Factory Costs (US$ Million)	110	200	350

Note: JICA Study Team

(c) Machinery and equipment costs

In the "Previous HHTP JICA Study," the machinery and equipment costs have been estimated, based on the number of employees (US$ 100,000 per employee). In this Study, the data on the number of employees is not available. So that, on the land area proportional basis, the number of employees was assumed. Similarly to the case of unit construction cost of factory building, the unit machinery and equipment costs are also assumed to be the half of that in the case of HHTP Area. The following are the estimated results:

Table A-8.2.3 Estimated Costs of Machinery and Equipment: Phu Cat

	Phase-1A	Phase-1B	Phase-2
Phu Cat Industrial Development Area (ha)	55	100	175
Assumed Number of Employees	7,700	14,000	24,600
Incremental Machinery and Equipment Costs (US$ Million)	385	700	1,230

Note: JICA Study Team

(d) Implementation schedule of private investment

The implementation schedule of private investment is assumed as below:

Table A-8.2.4 Implementation Schedule of Private Investment: Phu Cat

Year	First	Second	Third	Fourth	Fifth
Implementation	5%	35%	30%	20%	10%

Note: JICA Study Team based on Previous HHTP JICA Study

(e) Reinvestment

Since the details of cost components are uncertain, the reinvestment is roughly assumed once every 20 years for the total infrastructure costs in each development Phase. The replacement of the factory building and machinery and equipment is assumed once every 20 years and once 10 years, respectively.

3) Estimation of Economic Benefits

(a) Estimation of value-added in agricultural production

In the "Previous HHTP JICA Study," the value-added in agricultural production has estimated by the productivity per hectare of the agricultural land use.

In this study, the data of land area for the agricultural land use is uncertain, so that the total development area is used for estimation. On the proportional basis of the land area for the total development area, the value-added in agricultural production was estimated as summarized below:

Table A-8.2.5 Value Added Agricultural Product: Phu Cat

	Phase-1A	Phase-1B	Phase-2
Phu Cat Total Development Area (ha)	86	254	500
Agricultural Value-Added (US$ Million)	0.1	0.5	1.6

Note: JICA Study Team

(b) Estimation of value-added of industrial production

In the "Previous HHTP JICA Study," the productivity of the high-tech industry has been estimated in terms of "net product per employee." According to the "MOSTE Study," the unit value of net productivity per employee has been reviewed (approximately, 50 % compared to "Previous HHTP JICA Study"), resulted in the reviewed value-added of US$ 104 million as of Phase-1 / Stage-1. It is assumed that for this analysis, this reviewed value is applied as the base of an estimation of the value-added in the period of Phase-1A.

Since, in this Study, the kind of industries allocated in Phu Cat Area is uncertain, the value-added for this analysis was estimated on the land area proportional basis. Considering the differential characteristics compared to HHTP Area, the factor of 50 % was assumed. In addition, for the annual growth rate, the decrease by 2 points in terms of percentage was assumed, which is equivalent to the rate of 6.4 % during 2005 to 2010, 3.9 % during 2010 to 2020 and 1.3 % after 2020. The following are the estimated results of value-added of high-tech industrial production:

Table A-8.2.6 Estimated Value-Added of High-Tech Industrial Production: Phu Cat

MOSTE Study	**Stage-1**		
Factory Lot Area (ha)	30.5		
Estimated Value Added (US$ Million)	104		
This Study	**Phase-1A**	**Phase-1B**	**Phase-2**
Accumulated Phu Cat Industrial Development Area (ha)	55	155	330
Accumulated Value-Added of Industrial Production (US$ Million)	94 (Year 2005)	362 (Year 2010)	1,129 (Year 2020)

Note: JICA Study Team

The details of estimation are referred to Table A-8.3.8.

4) Estimated EIRR

Using the economic costs and benefits above-mentioned, the value of EIRR was estimated to be 18.1 %. The table of cash flow is shown in Table A-8.3.9.

(2) Estimation of FIRR

Similarly in the case of EIRR estimation, the assumptions for the financial analysis were based on the studies of "Previous HHTP JICA Study" and "MOSTE Study," and several reviews were made.

1) Basic Assumptions of Analysis

This financial analysis aims at evaluation in terms of investment for the components of industrial zone and high grade housing (detached type and row house type) zone. These components are analyzed as a whole in M/P stage. Other component such as middle- low-grade housing zone is assumed to be excluded as an evaluation objective, because such component is considered to be non-profitable and has public benefits.

2) Assumptions of Costs

(a) Infrastructure costs

In the financial analysis, the infrastructure costs include such basic component as public works. The following is the summary of the total financial costs of infrastructure:

Table A-8.2.7 Financial Costs of Infrastructure: Phu Cat

Unit: US$ Million

Phase	Phase-1A	Phase-1B	Phase-2
Incremental Total Costs	91	89	193

Note: JICA Study Team

The infrastructure costs for Phu Cat Area such as water supply, sewerage, electricity, and telecommunication were estimated by the proportional distribution on a basis of land area or population size from the total costs for the whole Project areas.

(b) Reinvestment

Since the details of cost components are uncertain, the reinvestment is roughly assumed once every 20 years for the total infrastructure costs in each Phase.

(c) Land rent cost

In this analysis, the unit land rent cost for the components composed of industrial zone, and high-grade housing zone is assumed to be US$ 0.10 per square meter annually, which is equivalent to the value of "Case-2 in the Previous HHTP JICA Study."

(d) Land compensation and relocation costs

In the "Previous HHTP JICA Study," the costs of the land compensation and relocation costs for HHTP Area has been estimated. According to these estimation results, the average costs per hectare of the land compensation and relocation were obtained to be US$ 10,500 and US$ 5,900, respectively. For this analysis, the above mentioned values are assumed to be applied for the estimation of land compensation and relocation costs.

The following are the estimated results of land rent cost, land compensation cost and relocation cost:

Table A-8.2.8 Estimated Costs of Land Rent, Land Compensation and Relocation

	Phase-1A	Phase-1B	Phase-2
Incremental Total Objective Area (ha)	66	110	211
Incremental Land Rent Cost (US$ 1,000)	66	110	211
Land Compensation (US$ 1,000)	693	1,155	2,220
Relocations (US$ 1,000)	389	649	1,247

Note: JICA Study Team

3) Estimation of Financial Revenues

(a) Land lease for industrial zone

The unit price of land lease for industrial zone is assumed to be US$ 45 per square meter for the period of lease of 50 years, which is equivalent to US$ 0.90 per square meter annually. The following are the results of revenue estimation:

Table A-8.2.9 Revenue Estimation: Industrial Zone

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	55	100	175
Incremental Land Lease Revenue (US$ 1,000)	495	900	1,579

Note: JICA Study Team

(b) Land lease for high-grade housing zone

The unit price of land lease for high-grade housing zone is assumed to be US$ 10 per square meter monthly. The following are the results of revenue estimation:

Table A-8.2.10 Revenue Estimation: High-Grade Housing Zone

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	11	10	36
Incremental Land Lease Revenue (US$ 1,000)	13,200	12,000	43,200

Note: JICA Study Team

(c) Assumption of schedule of land lease

The schedule of land lease is assumed as follows:

Table A-8.2.11 Schedule of Land Lease: Phu Cat

Year	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
1)	5%	35%	30%	20%	10%	-	-	-	-	-
2)	-	5%	35%	30%	20%	10%	-	-	-	-

Source: JICA Study Team based on Previous HHTP JICA Study

Note: 1) Industrial park zone

2) High-grade housing zone

4) Estimated FIRR

Using the financial costs and revenues mentioned above, the value of FIRR was estimated to be 13.7 %. The table of cash flow is shown in Table A-8.3.10.

8.3 Dong Xuan Area

(1) Estimation of FIRR

The assumptions for the financial analysis were based on those in the case of "HHTP Area" and "Phu Cat Area" in the above mentioned analysis.

1) Basic Assumptions of Analysis

For the case of the Dong Xuan Area, this financial analysis aims at evaluation in terms of investment for the component of high-grade housing (detached type and row house type) zone. The component is analyzed in Master Plan stage. Other component such as middle- low-grade housing zone is assumed to be excluded as an evaluation objective, because such component is considered to be non-profitable and have public benefits.

2) Assumptions of Costs

(a) Infrastructure costs

In the financial analysis, the infrastructure costs include such basic component as public works. The following is the summary of the total financial costs of infrastructure:

Table A-8.3.1 Financial Costs of Infrastructure: Dong Xuan

Phase	Phase-1A	Phase-1B	Phase-2
Incremental Total costs	98	102	260

Note: JICA Study Team

The infrastructure costs for Dong Xuan Area such as water supply, sewerage, electricity, and telecommunication were estimated by the proportional distribution on a basis of land area or population size from the total costs for the whole Development areas.

(b) Reinvestment

Since the details of cost components are uncertain, the reinvestment is roughly assumed once every 20 years for the total infrastructure costs in each Phase.

(c) Land rent cost

In this analysis, the unit land rent cost for the component of high grade housing zone is assumed to be US$ 0.10 per square meter annually, which is equivalent to the value of "Case 2 in the Previous HHTP JICA Study."

(d) Land compensation and relocation costs

In the "Previous HHTP JICA Study," the costs of the land compensation and relocation costs for HHTP Area have been estimated. According to these estimation results, the average costs per hectare of the land compensation and relocation were obtained to be US$ 10,500 and US$ 5,900, respectively. For this analysis, the above mentioned values are assumed to be applied for the estimation of land compensation and relocation costs. The following are the estimated results of land rent cost, land compensation cost and relocation cost:

Table A-8.3.2 Estimated Costs of Land Rent, Land Compensation and Relocation

	Phase-1A	Phase-1B	Phase-2
Incremental Total Objective Area (ha)	15	15	78
Incremental Land Rent Cost (US$ 1,000)	15	15	78
Land Compensation (US$ 1,000)	158	158	819
Relocations (US$ 1,000)	89	89	460

Note: JICA Study Team

3) Estimation of Financial Revenues

(a) Land lease for high-grade housing zone

The unit price of land lease for high-grade housing zone is assumed to be US$ 10 per square meter monthly. The following are the results of revenue estimation:

Table A-8.3.3 Revenue Estimation: High-Grade Housing Zone

	Phase-1A	Phase-1B	Phase-2
Incremental Objective Area (ha)	15	15	78
Incremental Land Lease Revenue (US$ 1,000)	18,000	18,000	93,600

Note: JICA Study Team

(b) Assumption of schedule of land lease

The schedule of land lease is assumed as follows:

Table A-8.3.4 Schedule of Land Lease

Year	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
Implemen -tation	-	5%	35%	30%	20%	10%				

Source: JICA Study Team based on Previous HHTP JICA Study

4) Estimated FIRR

Using the financial costs and revenues mentioned above, the value of FIRR was estimated to be 18.1 %. The table of cash flow is shown in Table A-8.3.11.

8.4 Summary of the Evaluation

The results of preliminary economic and financial analysis are summarized as below:

Table A-8.3.5 Summary of IRR

	EIRR	FIRR
HHTP Area	18.2%	15.5%
Phu Cat Area	18.1%	13.7%
Dong Xuan Area	-	18.1%

Source: JICA Study Team

According to the "Previous HHTP JICA Study", the opportunity cost of capital in Vietnam is assumed to be 8 – 10%. The obtained information from commercial bank in Hanoi indicates that the recent interest rate for loan is approximately 13 %.

Considering the above conditions, it can be roughly said that while the Projects are economically feasible, an effort for seeking funds with lower financing cost will be required in terms of financial aspect, although FIRR values are exceed the level of interest rate.

Table A-8.3.6 Estimation of Value Added for HHTP Area

(1) Estimation of Industrial Productivity Based on the Unit Values in the Previous JICA Study

	ISIC Code	Japanese Industrial Code	Products Description	Estimated Number of Enterprises in HHTP	Lot Area / Factory (ha / enterprise)	Development Area (ha)	Number of Employees per Enterprises (Persons)	Estimated Number of Employees (Persons)	Industrial Productivity per Employee (US$/person)	Estimated Industrial Productivity (Million US$)
Catergory 1	242	206	Pharmaceuticals	1	4.62	4.62	338	338	239,645	81.0
	331	323	Medical Equipment, etc.	1	1.48	1.48	248	248	44,444	11.0
	242	205	Detergents, Surfactants, Paints, etc.	0	2.95	0.00	204	0	122,549	0.0
Catergory 2	300	298	Office Equip., Air-conditioners, etc.	1	1.77	1.77	273	273	56,777	15.5
Catergory 3	322	304	Communications Equip, CD, CD-ROM	2	1.26	2.52	296	592	39,763	23.5
	291	297	Industrial Electrical Machinery/Equip.	1	1.54	1.54	248	248	32,258	8.0
	319	309	Other Electrical/Electronic Products	2	2.14	4.28	267	534	30,899	16.5
	331	329	Other Precision Instruments	1	1.12	1.12	225	225	40,000	9.0
	312/319	308	Electrolic Parts/Devises, etc.	2	0.96	1.92	228	456	16,082	7.3
	332	325	Optical Equipment and Lenses	1	1.26	1.26	276	276	18,116	5.0
	333	327	Watches/Clockes and Parts	1	1.20	1.20	266	266	18,797	5.0
Catergory 4	300,323,331	305,306	Computers, X ray Equip., VTR, etc.	2	1.43	2.86	330	660	63,636	42.0
	293	302	Electrical Home Appliance	1	1.74	1.74	311	311	35,370	11.0
	343	311	Motor Vehicles and Parts, etc.	0	2.91	0.00	327	0	22,936	0.0
	292	296	Special Industrial Machinery	1	2.12	2.12	195	195	38,462	7.5
	291	299	Other General machinery/Equip.	0	1.46	0.00	188	0	26,596	0.0
	281/289	294	Metal Processing Machinery/Equip.	1	2.04	2.04	207	207	27,375	5.7
	261	251	Glass and Glass Products	0	3.69	0.00	278	0	43,165	0.0
	Total			18		30.47	261	4,829	50,937	246.0

Category 1	135,546
Category 2	56,777
Category 3	27,988
Category 4	36,791

(2) Reviewed Estimation of Value Added Based on the MOSTE Study, April 1998 (50% of Value in Previous JICA)

Category	Estimated Total Number of Enterprises in HHTP	Lot Area / Factory (ha / enterprise)	Development Area (ha)	Average Number of Employees per Enterprises (Persons)	Estimated Number of Employees (Persons)	Assumed Average Industrial Productivity per Employee (US$/person)	Estimated Industrial Productivity (Million US$)
Category 1	2			263	526	67,773	36
Category 2	1			273	273	28,389	8
Category 3	10			258	2,580	13,994	36
Category 4	5			262	1,310	18,396	24
	18						104

Table A-8.3.6 Estimation of Value Added for HHTP Area (continued)

(Using "Growth Ratio")		(For MOSTE Study) (Million US$)	Factory Lot Area (ha) April '98	This Study	Ratio	Estimated Value Added			(Million US$)					Adopted	
	1998							1998						1998	
	1999							1999						1999	
	2000							2000						2000	
	2001							2001						2001	
	2002	46.8						2002	69.1					2002	69.1
	2003	72.8						2003	107.5					2003	107.5
	2004	93.6						2004	138.2					2004	138.2
	2005	***104.0***	30.47	***45.0***	**147.7%**	***153.59***		**2005**	***153.6***					**2005**	153.6
1.0845	2006	112.8					1.0845	2006	166.6					2006	166.6
	2007	122.3						2007	180.7		***59.0***			2007	239.6
	2008	132.7						2008	195.9		***91.8***			2008	287.7
	2009	143.9						2009	212.5		***118.0***			2009	330.5
	2010	156.0		***70.6***	***156.9%***			2010	**230.4**	**2010**	**361.5**			**2010**	361.5
1.0589	2011	165.2					1.0589	2011	244.0	2011	382.8			2011	382.8
	2012	174.9						2012	258.4	2012	405.4			2012	405.4
	2013	185.2						2013	273.6	2013	429.2			2013	429.2
	2014	196.2						2014	289.7	2014	454.5			2014	454.5
	2015	207.7						2015	306.8	2015	481.3			2015	481.3
	2016	219.9						2016	324.8	2016	509.6			2016	509.6
	2017	232.9						2017	344.0	2017	539.7		***160.5***	2017	700.2
	2018	246.6						2018	364.2	2018	571.4		***249.7***	2018	821.1
	2019	261.1						2019	385.7	2019	605.1		***321.0***	2019	926.1
	2020	276.5		***109.9***	***244.2%***			2020	**408.4**	2020	640.7	**2020**	**997.4**	**2020**	997.4
1.0333	2021	285.7					1.0333	2021	422.0	2021	662.1	2021	1030.6	2021	1,030.6
	2022	295.2						2022	436.1	2022	684.1	2022	1064.9	2022	1,064.9
	2023	305.1						2023	450.6	2023	706.9	2023	1100.4	2023	1,100.4
	2024	315.2						2024	465.6	2024	730.4	2024	1137.0	2024	1,137.0
	2025	325.7						2025	481.1	2025	754.8	2025	1174.9	2025	1,174.9
	2026	336.6						2026	497.1	2026	779.9	2026	1214.0	2026	1,214.0
	2027	347.8						2027	513.7	2027	805.9	2027	1254.5	2027	1,254.5
	2018	259.0						2028	530.8	2028	832.7	2028	1296.2	2028	1,296.2
	2019	267.6						2029	548.4	2029	860.4	2029	1339.4	2029	1,339.4
	2030	383.7						2030	566.7	2030	889.1	2030	1384.0	2030	1,384.0
	2031	396.5						2031	585.6	2031	918.7	2031	1430.1	2031	1,430.1
	2032	409.7						2032	605.1	2032	949.3	2032	1477.7	2032	1,477.7
	2033	423.3						2033	625.2	2033	980.9	2033	1526.9	2033	1,526.9
	2034	437.4						2034	646.0	2034	1013.6	2034	1577.8	2034	1,577.8
	2035	452.0						2035	667.6	2035	1047.3	2035	1630.3	2035	1,630.3
	2036	467.0						2036	689.8	2036	1082.2	2036	1684.6	2036	1,684.6
	2037	482.6						2037	712.8	2037	1118.2	2037	1740.7	2037	1,740.7
	2038	498.7						2038	736.5	2038	1155.5	2038	1798.7	2038	1,798.7
	2039	515.3						2039	761.0	2039	1193.9	2039	1858.6	2039	1,858.6
	2040	532.4						2040	786.4	2040	1233.7	2040	1920.4	2040	1,920.4
															36603.9

Table A-8.3.7 Estimation of EIRR for HHTP Area in Hoa Lac and Xuan Mai Development (Master Plan Phase)

EIRR = 18.2%

(Million US$)

	Cost of Infrastructure (Internal)	Cost of Infrastructure (External)	Cost of Factory Building by Investors	Cost of Machinery and Equipment by Investors	Total Costs	Estimated Value Added	Estimated Agricultural Production	Total Benefits	Balance
1998					0.0			0.0	0.0
1999	0.0	0.0			0.0			0.0	0.0
2000	0.0	0.0			0.0			0.0	0.0
2001	51.1	75.3	9.0	31.5	166.9		0.3	-0.3	-167.2
2002	51.1	75.3	63.0	220.5	409.9	69.1	0.3	68.8	-341.1
2003	51.1	75.3	54.0	189.0	369.4	107.5	0.4	107.2	-262.2
2004	51.1	75.3	36.0	126.0	288.4	138.2	0.4	137.9	-150.5
2005	0.0	0.0	18.0	63.0	81.0	153.6	0.4	153.2	72.2
2006	42.5	43.5	5.1	18.0	109.1	166.6	0.7	165.9	56.8
2007	42.5	43.5	35.8	126.0	247.8	239.6	0.7	238.9	-8.9
2008	42.5	43.5	30.7	108.0	224.7	287.7	0.8	286.9	62.2
2009	42.5	43.5	20.5	72.0	178.5	330.5	0.8	329.6	151.2
2010	0.0	0.0	10.2	36.0	46.2	361.5	0.8	360.7	314.4
2011	0.0	0.0	0.0	31.5	31.5	382.8	0.9	381.9	350.4
2012	0.0	0.0	0.0	220.5	220.5	405.4	0.9	404.4	183.9
2013	0.0	0.0	0.0	189.0	189.0	429.2	1.0	428.3	239.3
2014	0.0	0.0	0.0	126.0	126.0	454.5	1.0	453.5	327.5
2015	0.0	0.0	0.0	63.0	63.0	481.3	1.1	480.2	417.2
2016	74.9	54.0	7.9	45.5	182.3	509.6	2.4	507.2	325.0
2017	74.9	54.0	55.0	318.5	502.4	700.2	2.5	697.7	195.2
2018	74.9	54.0	47.2	273.0	449.1	821.1	2.6	818.5	369.4
2019	74.9	54.0	31.4	182.0	342.3	926.1	2.8	923.4	581.0
2020	0.0	0.0	15.7	91.0	106.7	997.4	2.9	994.5	887.8
2021	51.1	75.3	9.0	31.5	166.9	1,030.6	3.0	1,027.6	860.7
2022	51.1	75.3	63.0	220.5	409.9	1,064.9	3.2	1,061.8	651.9
2023	51.1	75.3	54.0	189.0	369.4	1,100.4	3.3	1,097.1	727.7
2024	51.1	75.3	36.0	126.0	288.4	1,137.0	3.5	1,133.6	845.2
2025	0.0	0.0	18.0	63.0	81.0	1,174.9	3.6	1,171.3	1,090.3
2026	42.5	43.5	5.1	45.5	136.6	1,214.0	3.8	1,210.2	1,073.6
2027	42.5	43.5	35.8	318.5	440.3	1,254.5	4.0	1,250.5	810.1
2028	42.5	43.5	30.7	273.0	389.7	1,296.2	4.2	1,292.0	902.3
2029	42.5	43.5	20.5	182.0	288.5	1,339.4	4.4	1,335.0	1,046.5
2030	0.0	0.0	10.2	91.0	101.2	1,384.0	4.6	1,379.4	1,278.2
2031	0.0	0.0	0.0	31.5	31.5	1,430.1	4.8	1,425.3	1,393.8
2032	0.0	0.0	0.0	220.5	220.5	1,477.7	5.1	1,472.7	1,252.2
2033	0.0	0.0	0.0	189.0	189.0	1,526.9	5.3	1,521.6	1,332.6
2034	0.0	0.0	0.0	126.0	126.0	1,577.8	5.6	1,572.2	1,446.2
2035	0.0	0.0	0.0	63.0	63.0	1,630.3	5.8	1,624.5	1,561.5
2036	74.9	54.0	7.9	45.5	182.3	1,684.6	6.1	1,678.5	1,496.2
2037	74.9	54.0	55.0	318.5	502.4	1,740.7	6.4	1,734.3	1,231.9
2038	74.9	54.0	47.2	273.0	449.1	1,798.7	6.7	1,792.0	1,342.9
2039	74.9	54.0	31.4	182.0	342.3	1,858.6	7.0	1,851.5	1,509.2
2040	0.0	0.0	15.7	91.0	106.7	1,920.4	7.4	1,913.1	1,806.4
Total	1,348.0	1,382.4	879.2	5,610.0	9,219.6	36,603.9	121.6	36,482.2	27,262.6

Table A-8.3.8 Estimation of FIRR for HHTP Area

(US$ 1,000)

FIRR= 15.5%

	Costs					Revenues					Net Cash Flow
	Land Rent	Land Compen.	Relocation	Infra.	Total	Indusrial Zone	Software Park	Land Rent Business	Land Rent House	Total	
1998											
1999	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2001	75	788	443	31,375	32,680	20	6	0	0	26	-32,654
2002	75	0	0	31,375	31,450	162	24	600	300	1,086	-30,364
2003	75	0	0	31,375	31,450	284	36	4,800	2,400	7,520	-23,931
2004	75	0	0	31,375	31,450	365	48	8,400	4,200	13,013	-18,438
2005	75	0	0	0	75	405	60	11,400	5,400	17,265	17,190
2006	126	531	299	23,325	24,280	417	76	12,000	6,000	18,493	-5,788
2007	126	0	0	23,325	23,451	497	100	12,600	6,300	19,497	-3,953
2008	126	0	0	23,325	23,451	566	120	16,800	8,400	25,886	2,436
2009	126	0	0	23,325	23,451	612	140	20,400	10,200	31,352	7,902
2010	126	0	0	0	126	635	160	22,800	11,400	34,995	34,870
2011	126	0	0	0	126	635	168	24,000	12,000	36,803	36,678
2012	126	0	0	0	126	635	176	24,000	12,000	36,811	36,686
2013	126	0	0	0	126	635	184	24,000	12,000	36,819	36,694
2014	126	0	0	0	126	635	192	24,000	12,000	36,827	36,702
2015	126	0	0	0	126	635	200	24,000	12,000	36,835	36,710
2016	233	1,127	633	51,525	53,518	653	206	24,000	12,000	36,859	-16,659
2017	233	0	0	51,525	51,758	777	224	25,800	13,380	40,181	-11,577
2018	233	0	0	51,525	51,758	883	236	38,400	23,040	62,559	10,801
2019	233	0	0	51,525	51,758	954	248	49,200	31,320	81,722	29,964
2020	233	0	0	0	233	989	260	56,400	36,840	94,489	94,256
2021	233	0	0	31,375	31,608	989	272	60,000	39,600	100,861	69,253
2022	233	0	0	31,375	31,608	989	284	60,000	39,600	100,873	69,265
2023	233	0	0	31,375	31,608	989	296	60,000	39,600	100,885	69,277
2024	233	0	0	31,375	31,608	989	308	60,000	39,600	100,897	69,289
2025	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2026	233	0	0	23,325	23,558	989	320	60,000	39,600	100,909	77,351
2027	233	0	0	23,325	23,558	989	320	60,000	39,600	100,909	77,351
2028	233	0	0	23,325	23,558	989	320	60,000	39,600	100,909	77,351
2029	233	0	0	23,325	23,558	989	320	60,000	39,600	100,909	77,351
2030	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2031	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2032	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2033	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2034	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2035	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676
2036	233	0	0	51,525	51,758	989	320	60,000	39,600	100,909	49,151
2037	233	0	0	51,525	51,758	989	320	60,000	39,600	100,909	49,151
2038	233	0	0	51,525	51,758	989	320	60,000	39,600	100,909	49,151
2039	233	0	0	51,525	51,758	989	320	60,000	39,600	100,909	49,151
2040	233	0	0	0	233	989	320	60,000	39,600	100,909	100,676

Table A-8.3.9 Estimation of Value-Added for Each Year (Phu Cat)

(Using "Growth Ratio")		(MOSTE HHTP Study) (Million US$)	Factory Lot Area (ha) April '98	This Study	Ratio			Assumed Factor for Phu Cat 0.5 (Million US$)						Adopted (Phu Cat)	
	1998							1998						1998	
	1999							1999						1999	
	2000							2000						2000	
	2001							2001						2001	
	2002	46.8						2002	42.3					2002	42.3
	2003	72.8						2003	65.7					2003	65.7
	2004	93.6						2004	84.5					2004	84.5
	2005	*104.0*	**30.47**	*55.0*	**180.5%**	*187.73*		**2005**	*93.9*					**2005**	93.9
1.0845	2006	112.8					1.0645	2006	100.0					2006	100.0
	2007	122.3						2007	106.4		*105.0*			2007	211.4
	2008	132.7						2008	113.3		*163.4*			2008	276.6
	2009	143.9						2009	120.6		*210.0*			2009	330.6
	2010	156.0		*155.0*	*281.8%*			2010	**128.3**	**2010**	**361.7**			**2010**	361.7
1.0589	2011	165.2					1.0389	2011	133.3	2011	375.8			2011	375.8
	2012	174.9						2012	138.5	2012	390.4			2012	390.4
	2013	185.2						2013	143.9	2013	405.6			2013	405.6
	2014	196.2						2014	149.5	2014	421.4			2014	421.4
	2015	207.7						2015	155.3	2015	437.8			2015	437.8
	2016	219.9						2016	161.4	2016	454.8			2016	454.8
	2017	232.9						2017	167.7	2017	472.5		*269.8*	2017	742.3
	2018	246.6						2018	174.2	2018	490.9		*419.7*	2018	910.5
	2019	261.1						2019	180.9	2019	509.9		*539.6*	2019	1,049.5
	2020	276.5		**330.4**	*600.7%*			2020	**188.0**	2020	529.8	**2020**	**1,129.3**	**2020**	1,129.3
1.0333	2021	285.7					1.0133	2021	190.5	2021	536.8	2021	1144.3	2021	1,144.3
	2022	295.2						2022	193.0	2022	544.0	2022	1159.5	2022	1,159.5
	2023	305.1						2023	195.6	2023	551.2	2023	1175.0	2023	1,175.0
	2024	315.2						2024	198.2	2024	558.5	2024	1190.6	2024	1,190.6
	2025	325.7						2025	200.8	2025	566.0	2025	1206.4	2025	1,206.4
	2026	336.6						2026	203.5	2026	573.5	2026	1222.5	2026	1,222.5
	2027	347.8						2027	206.2	2027	581.1	2027	1238.7	2027	1,238.7
	2018	259.0						2028	208.9	2028	588.9	2028	1255.2	2028	1,255.2
	2019	267.6						2029	211.7	2029	596.7	2029	1271.9	2029	1,271.9
	2030	383.7						2030	214.5	2030	604.6	2030	1288.8	2030	1,288.8
	2031	396.5						2031	217.4	2031	612.7	2031	1306.0	2031	1,306.0
	2032	409.7						2032	220.3	2032	620.8	2032	1323.3	2032	1,323.3
	2033	423.3						2033	223.2	2033	629.1	2033	1340.9	2033	1,340.9
	2034	437.4						2034	226.2	2034	637.4	2034	1358.8	2034	1,358.8
	2035	452.0						2035	229.2	2035	645.9	2035	1376.8	2035	1,376.8
	2036	467.0						2036	232.2	2036	654.5	2036	1395.1	2036	1,395.1
	2037	482.6						2037	235.3	2037	663.2	2037	1413.7	2037	1,413.7
	2038	498.7						2038	238.5	2038	672.0	2038	1432.5	2038	1,432.5
	2039	515.3						2039	241.6	2039	681.0	2039	1451.5	2039	1,451.5
	2040	532.4						2040	244.8	2040	690.0	2040	1470.9	2040	1,470.9
															33906.4

Table A-8.3.10 Estimation of EIRR for Phu Cat Area in Hoa Lac and Xuan Mai Development (Master Plan Phase)

EIRR = 18.1%

(Million US$)

	Cost of Infrastructure (Internal)	Cost of Infrastructure (External)	Cost of Factory Building by Investors	Cost of Machinery and Equipment by Investors	Total Costs	Estimated Value Added	Estimated Agricultural Production	Total Benefits	Balance
1998					0.0			0.0	0.0
1999	0.0	0.0			0.0			0.0	0.0
2000	0.0	0.0			0.0			0.0	0.0
2001	27.7	75.3	5.5	19.3	127.8		0.1	-0.1	-127.9
2002	27.7	75.3	38.5	134.8	276.3	42.3	0.1	42.1	-234.1
2003	27.7	75.3	33.0	115.5	251.5	65.7	0.1	65.6	-185.9
2004	27.7	75.3	22.0	77.0	202.0	84.5	0.1	84.4	-117.6
2005	0.0	0.0	11.0	38.5	49.5	93.9	0.1	93.8	44.3
2006	29.7	43.5	10.0	35.0	118.2	100.0	0.4	99.5	-18.7
2007	29.7	43.5	70.0	245.0	388.2	211.4	0.5	211.0	-177.2
2008	29.7	43.5	60.0	210.0	343.2	276.6	0.5	276.1	-67.1
2009	29.7	43.5	40.0	140.0	253.2	330.6	0.5	330.1	76.9
2010	0.0	0.0	20.0	70.0	90.0	361.7	0.5	361.2	271.2
2011	0.0	0.0	0.0	19.3	19.3	375.8	0.5	375.2	356.0
2012	0.0	0.0	0.0	134.8	134.8	390.4	0.6	389.8	255.1
2013	0.0	0.0	0.0	115.5	115.5	405.6	0.6	405.0	289.5
2014	0.0	0.0	0.0	77.0	77.0	421.4	0.6	420.7	343.7
2015	0.0	0.0	0.0	38.5	38.5	437.8	0.7	437.1	398.6
2016	52.0	54.0	17.5	96.5	220.0	454.8	1.4	453.4	233.4
2017	52.0	54.0	122.8	675.5	904.3	742.3	1.4	740.8	-163.4
2018	52.0	54.0	105.2	579.0	790.2	910.5	1.5	909.0	118.8
2019	52.0	54.0	70.2	386.0	562.2	1,049.5	1.6	1,047.9	485.8
2020	0.0	0.0	35.1	193.0	228.1	1,129.3	1.6	1,127.7	899.6
2021	27.7	75.3	5.5	19.3	127.8	1,144.3	1.7	1,142.6	1,014.9
2022	27.7	75.3	38.5	134.8	276.3	1,159.5	1.8	1,157.7	881.5
2023	27.7	75.3	33.0	115.5	251.5	1,175.0	1.9	1,173.1	921.6
2024	27.7	75.3	22.0	77.0	202.0	1,190.6	2.0	1,188.6	986.6
2025	0.0	0.0	11.0	38.5	49.5	1,206.4	2.1	1,204.3	1,154.8
2026	29.7	43.5	10.0	96.5	179.7	1,222.5	2.2	1,220.3	1,040.6
2027	29.7	43.5	70.0	675.5	818.7	1,238.7	2.3	1,236.4	417.7
2028	29.7	43.5	60.0	579.0	712.2	1,255.2	2.4	1,252.8	540.6
2029	29.7	43.5	40.0	386.0	499.2	1,271.9	2.5	1,269.4	770.2
2030	0.0	0.0	20.0	193.0	213.0	1,288.8	2.6	1,286.2	1,073.2
2031	0.0	0.0	0.0	19.3	19.3	1,306.0	2.7	1,303.2	1,284.0
2032	0.0	0.0	0.0	134.8	134.8	1,323.3	2.9	1,320.4	1,185.7
2033	0.0	0.0	0.0	115.5	115.5	1,340.9	3.0	1,337.9	1,222.4
2034	0.0	0.0	0.0	77.0	77.0	1,358.8	3.2	1,355.6	1,278.6
2035	0.0	0.0	0.0	38.5	38.5	1,376.8	3.3	1,373.5	1,335.0
2036	52.0	54.0	17.5	96.5	220.0	1,395.1	3.5	1,391.7	1,171.6
2037	52.0	54.0	122.8	675.5	904.3	1,413.7	3.6	1,410.1	505.8
2038	52.0	54.0	105.2	579.0	790.2	1,432.5	3.8	1,428.7	638.4
2039	52.0	54.0	70.2	386.0	562.2	1,451.5	4.0	1,447.6	885.4
2040	0.0	0.0	35.1	193.0	228.1	1,470.9	4.2	1,466.7	1,238.6
Total	875.2	1,382.4	1,321.6	8,030.0	11,609.2	33,906.4	69.1	33,837.3	22,228.1

Table A-8.3.11 Estimation of FIRR for Phu Cat Area

(US$ 1,000)

FIRR= 13.7%

	Costs					Revenues			
	Land Rent	Land Compen.	Relocation	Infra.	Total	Indusrial Zone	Land Rent House	Total	Net Cash Flow
1998									
1999	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0
2001	66	693	389	22,750	23,898	25	0	25	-23,874
2002	66	0	0	22,750	22,816	198	660	858	-21,958
2003	66	0	0	22,750	22,816	347	5,280	5,627	-17,190
2004	66	0	0	22,750	22,816	446	9,240	9,686	-13,131
2005	66	0	0	0	66	495	11,880	12,375	12,309
2006	176	1,155	649	22,300	24,280	540	13,200	13,740	-10,540
2007	176	0	0	22,300	22,476	855	13,800	14,655	-7,821
2008	176	0	0	22,300	22,476	1,125	18,000	19,125	-3,351
2009	176	0	0	22,300	22,476	1,305	21,600	22,905	429
2010	176	0	0	0	176	1,395	24,000	25,395	25,219
2011	176	0	0	0	176	1,395	25,200	26,595	26,419
2012	176	0	0	0	176	1,395	25,200	26,595	26,419
2013	176	0	0	0	176	1,395	25,200	26,595	26,419
2014	176	0	0	0	176	1,395	25,200	26,595	26,419
2015	176	0	0	0	176	1,395	25,200	26,595	26,419
2016	387	2,220	1,247	48,325	52,179	1,474	25,200	26,674	-25,505
2017	387	0	0	48,325	48,712	2,026	27,360	29,386	-19,326
2018	387	0	0	48,325	48,712	2,500	42,480	44,980	-3,732
2019	387	0	0	48,325	48,712	2,816	55,440	58,256	9,543
2020	387	0	0	0	387	2,974	64,080	67,054	66,666
2021	387	0	0	22,750	23,137	2,974	68,400	71,374	48,236
2022	387	0	0	22,750	23,137	2,974	68,400	71,374	48,236
2023	387	0	0	22,750	23,137	2,974	68,400	71,374	48,236
2024	387	0	0	22,750	23,137	2,974	68,400	71,374	48,236
2025	387	0	0	0	387	2,974	68,400	71,374	70,986
2026	387	0	0	22,300	22,687	2,974	68,400	71,374	48,686
2027	387	0	0	22,300	22,687	2,974	68,400	71,374	48,686
2028	387	0	0	22,300	22,687	2,974	68,400	71,374	48,686
2029	387	0	0	22,300	22,687	2,974	68,400	71,374	48,686
2030	387	0	0	0	387	2,974	68,400	71,374	70,986
2031	387	0	0	0	387	2,974	68,400	71,374	70,986
2032	387	0	0	0	387	2,974	68,400	71,374	70,986
2033	387	0	0	0	387	2,974	68,400	71,374	70,986
2034	387	0	0	0	387	2,974	68,400	71,374	70,986
2035	387	0	0	0	387	2,974	68,400	71,374	70,986
2036	387	0	0	48,325	48,712	2,974	68,400	71,374	22,661
2037	387	0	0	48,325	48,712	2,974	68,400	71,374	22,661
2038	387	0	0	48,325	48,712	2,974	68,400	71,374	22,661
2039	387	0	0	48,325	48,712	2,974	68,400	71,374	22,661
2040	387	0	0	0	387	2,974	68,400	71,374	70,986

Table A-8.3.12 Estimation of FIRR for Dong Xuan Area

(US$ 1,000)

FIRR= 18.1%

	Costs					Revenues			Net Cash Flow
	Land Rent	Land Compen.	Relocation	Infra.	Total		Land Rent House	Total	
1998									
1999	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0
2001	15	158	89	24,475	24,736	0	0	0	-24,736
2002	15	0	0	24,475	24,490	0	900	900	-23,590
2003	15	0	0	24,475	24,490	0	7,200	7,200	-17,290
2004	15	0	0	24,475	24,490	0	12,600	12,600	-11,890
2005	15	0	0	0	15	0	16,200	16,200	16,185
2006	30	158	89	25,550	25,826	0	18,000	18,000	-7,826
2007	30	0	0	25,550	25,580	0	18,900	18,900	-6,680
2008	30	0	0	25,550	25,580	0	25,200	25,200	-380
2009	30	0	0	25,550	25,580	0	30,600	30,600	5,020
2010	30	0	0	0	30	0	34,200	34,200	34,170
2011	30	0	0	0	30	0	36,000	36,000	35,970
2012	30	0	0	0	30	0	36,000	36,000	35,970
2013	30	0	0	0	30	0	36,000	36,000	35,970
2014	30	0	0	0	30	0	36,000	36,000	35,970
2015	30	0	0	0	30	0	36,000	36,000	35,970
2016	108	819	460	65,000	66,387	0	36,000	36,000	-30,387
2017	108	0	0	65,000	65,108	0	40,680	40,680	-24,428
2018	108	0	0	65,000	65,108	0	73,440	73,440	8,332
2019	108	0	0	65,000	65,108	0	101,520	101,520	36,412
2020	108	0	0	0	108	0	120,240	120,240	120,132
2021	108	0	0	24,475	24,583	0	129,600	129,600	105,017
2022	108	0	0	24,475	24,583	0	129,600	129,600	105,017
2023	108	0	0	24,475	24,583	0	129,600	129,600	105,017
2024	108	0	0	24,475	24,583	0	129,600	129,600	105,017
2025	108	0	0	0	108	0	129,600	129,600	129,492
2026	108	0	0	25,550	25,658	0	129,600	129,600	103,942
2027	108	0	0	25,550	25,658	0	129,600	129,600	103,942
2028	108	0	0	25,550	25,658	0	129,600	129,600	103,942
2029	108	0	0	25,550	25,658	0	129,600	129,600	103,942
2030	108	0	0	0	108	0	129,600	129,600	129,492
2031	108	0	0	0	108	0	129,600	129,600	129,492
2032	108	0	0	0	108	0	129,600	129,600	129,492
2033	108	0	0	0	108	0	129,600	129,600	129,492
2034	108	0	0	0	108	0	129,600	129,600	129,492
2035	108	0	0	0	108	0	129,600	129,600	129,492
2036	108	0	0	65,000	65,108	0	129,600	129,600	64,492
2037	108	0	0	65,000	65,108	0	129,600	129,600	64,492
2038	108	0	0	65,000	65,108	0	129,600	129,600	64,492
2039	108	0	0	65,000	65,108	0	129,600	129,600	64,492
2040	108	0	0	0	108	0	129,600	129,600	129,492

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