



**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)**

**VIETNAM ROAD ADMINISTRATION (VRA)**

**THE STUDY FOR ROADSIDE STATION MASTER PLAN**

**IN THE SOCIALIST REPUBLIC OF VIETNAM**

**FINAL REPORT**



**March 2009**

**Mitsubishi Research Institute, Inc.**

**ALMEC Corporation**

VTO
JR
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The following foreign exchange rates are applied in this study.

USD\$1.00 = 17,311.5Vietnam Dong  
(As of February 2009)

Hoa Binh province



Bac Giang province



Ninh Binh province



Photo: Soil Breaking Ceremony at the Pilot Project Sites





**Photo Roadside Station in Hoa Binh province**

## FOREWORD

In response to the request from the Government of the Socialist Republic of Vietnam, the Government of Japan decided to conduct “The Study for Roadside Station Master Plan in the Socialist Republic of Vietnam” and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA dispatched a study team headed by Mr. HATANAKA, Kunio of Mitsubishi Research Institute, during the period from February 2007 to February 2009. The study team conducted the study with the Vietnamese counterpart team and held a series of discussions with the officials concerned of the Government of Vietnam. After the team returned to Japan, further studies were made and then the report was finally completed.

I hope that this report will contribute to the improvement of road transport safety as well as to the regional promotion in Vietnam.

I wish to express my sincere appreciation to the officials concerned of the Government of Vietnam for their close cooperation extended to the study team.

March 2009



TSUNO, Motonori  
Chief Representative of Vietnam Office  
Japan International Cooperation Agency

**THE STUDY FOR ROADSIDE STATION MASTER PLAN IN VIETNAM**  
**FINAL REPORT**

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## ACRONYMS

DARD	Department of Agriculture and Rural Development
DF/R	Draft Final Report
DOT	Department of Transport
F/R	Final Report
FY	Fiscal Year
GOV	Government of Vietnam
IC/R	Inception Report
IT/R	Interim Report
JICA	Japan International Cooperation Agency
MARD	Ministry of Agriculture and Rural Development
M/M	Minutes of Meetings
MOT	Ministry of Transport
MPI	Ministry of Planning and Investment
NGO	Non Governmental Organization
NH	National Highway
PC	People's Committee
PPP	Public-Private Partnership
PR/R	Progress Report
S/C	Steering Committee
S/W	Scope of Works
TEDI	Transport Engineering and Design Institute
VRA	Vietnam Road Administration

# EXECUTIVE SUMMARY

# **Introduction**

## **1. Purpose of the Study**

### **1.1 Background of the Study**

Due to efforts by the Government of Vietnam (hereinafter referred to as the “GOV”) as well as international donors assistances in improving and rehabilitating principal national highways, recent improvement of road network in Vietnam has been playing crucial roles for its economic development. However, such road improvement produces also negative social impacts in the increased number of people who die from traffic accidents. This is based on the fact that countermeasures for traffic safety cannot catch up the road improvement which enables vehicle velocity much faster than before. It is also said that, since the economic growth in rural areas is far less than that in urban areas, road improvement in rural areas does not sufficiently contribute to the rural development, thus income gaps between two areas tending to become bigger and bigger.

In order to alleviate such social issues by promoting regional development and by attaining more positive effects of road network improvement, the GOV has been studying, as one of policy tools, the introduction of Michinoeki system with reference to Japanese examples. It was in 2002 that the Ministry of Transport (hereinafter referred to as “MOT”), by its Minister’s notification, instructed the Vietnam Road Administration (hereinafter referred to as the “VRA”) of MOT to elaborate a master plan of rest and service facilities along some national roads, equivalent to Michinoeki. The Transport Engineering and Design Institute (hereinafter referred to as “TEDI”), a research institute under MOT, completed in March 2003 a draft preliminary master plan (interim report). Although it specifies number of districts to construct Michinoeki as well as general facilities to be prepared, much more examination should be carried out to find out measures to promote regional development and policies/strategies to expand network of Michinoeki. Therefore, there exists actually no official master plan of Michinoeki yet.

Under such circumstances, the GOV, with a view to upgrading the traffic safety and to promoting local industries and regional development, made an official request to Japan for a development study of Michinoeki covering whole national roads in Vietnam. In response to this request, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) carried out a preparatory study in May-June, 2006 and summarized the contents of such study in the Minutes of Meeting (hereinafter referred to as “M/M”) and the Scope of Work (hereinafter referred to as “S/W”). Both M/M and S/W were signed in December, 2006, and it was decided to start a development study entitled “The Study for Roadside Stations Master Plan in the Socialist Republic of Vietnam (hereinafter referred to as the “Study”)” for a period of approximately nineteen months.

## **1.2 Purpose of the Study**

As described in S/W, the Study has 2 objectives; 1) to formulate a master plan of roadside stations in Vietnam; and 2) to develop a guideline/manual for planning, investment and management of roadside stations through pilot projects. To accomplish these objectives, technical assistance to the GOV is to be provided with a view to upgrading its draft master plan of Michinoeki to a more efficient policy tool and to urging its realization. These objectives are explained more concretely as follows.

- (a) To improve the existing draft master plan or to elaborate a new draft master plan of Michinoeki, as a policy framework to be approved by the GOV. This sustainable and realistic strategy should be also agreed upon by stakeholders concerned.
- (b) To implement Michinoeki pilot projects, through which desirable measures are to be tested, evaluated and utilized for the final master plan and a guideline/manual of Michinoeki, thus aiming at realization of further Michinoeki construction.
- (c) To transfer, through joint collaboration on the above two items, to Vietnamese side, technical know-how required for all process of Michinoeki project, i.e. from planning, designing to operation and management.

## 2. Study Area

### 1) Study Area for Nation-wide Master Plan

The nation-wide Master Plan covers the whole national roads of Vietnam.



**Figure2.1 Study Area for Nation-wide Master Plan**

## 2) Study Area for Pilot Project and Provincial Master Plan

Pilot projects were conducted in three provinces nearby Hanoi.

- (1) National Highway No.1    KM. 113+000 (L)    Bac Giang Province
- (2) National Highway No.1    KM. 267+000 (R)    Ninh Binh Province
- (3) National Highway No.6    KM. 102+400 (L)    Hoa Binh Province

Provincial Master Plan was drawn up with respect to 3 provinces i.e. Hoa Binh province, Ninh Binh province and Bac Giang province, which are target provinces for Pilot Project.



**Figure 2.2 Pilot Project Sites and Target Area for Provincial Master Plan**



### 3. Study Implementation Body

#### 3.1 Study Team

The JICA Study team members are as follows.

Japanese experts	HATANAKA Kunio	Team Leader
	IWATA Shizuo	Deputy Team Leader/ Local Economic Development
	SAKURADA Yoichi	Michinoeki Planning
	MORI Hiroshi	Traffic Demand Forecast
	SHIMIZU Fumio	Business Development Planning (1)
	IWASAKI Masayoshi	Business Development Planning (2)
	ABE Tomoko	Regional Planning
	KUSANO Makine	Facility Planning
	NAGASE Yasunori	Facility Design/Cost Estimate/Tender Document
	NISHIKATSU Katsuaki	Construction Supervision
	AIKAWA Arata	Construction Supervision
	FURUTA Naoya	Environmental and Social Considerations
	OKANO Mikio	Economic and Financial Analysis
	IWASAKI Aki	Coordination
JICA Vietnam Office	Phan Le Binh	Program officer

In addition to the JICA Study Team, several survey teams were composed to implement various field surveys and interviews.

#### 3.2 Study Organization

Study Organization is as follows:

- Counterpart: Vietnam Road Administration (VRA)
- Steering Committee: Vietnam Road Administration (VRA), Ministry of Transport (MOT), Ministry of Planning and Investment (MPI), Ministry of Agriculture and Rural Development (MARD), Hoa Binh provincial Department of Transport, Ninh Binh provincial Department of Transport, Bac Giang provincial Department of Transport

#### 3.3 Study Schedule

Study Schedule is as follows:

- The first field work in Ha Noi : February, 2007 - March, 2007
- The second field work in Ha Noi : May, 2008 - March, 2009
- The third field work in Ha Noi : May, 2009 - March, 2010

# **1. Importance and Necessity of Michinoeki in Vietnam**

The necessity of introduction of Michinoeki in Vietnam can be explained from two viewpoints, namely road transportation and local socio-economic development.

Michinoeki in Vietnam are expected 1) to improve road traffic condition, and 2) to promote socio-economic development in areas where Michinoeki are allocated.

## **(1) Michinoeki for Road Traffic**

### **a. Promoting road traffic safety**

Michinoeki provides rest/relaxation. Drivers can take sufficient rest to alleviate their fatigue in Michinoeki and continue driving further. Michinoeki will improve road traffic safety.

### **b. Improving road travel activities**

There exists a large amount of needs for long-distance transportation in Vietnam. To meet such user needs, many long-distance bus networks are being operated, covering nation-wide areas. Currently there exist some roadside facilities which are similar to Michinoeki. Few facilities, however, meet with requirements for the comfortable mobility of drivers and passengers. Michinoeki provides better and reliable services for road users so that drivers and passengers will be able to travel easily for a long distance.

## **(2) Michinoeki for Local Community**

Many drivers and passengers arrive at Michinoeki from various cities, districts, and villages. Residents living around Michinoeki will have opportunities to meet with people of other regions. The residents also meet consumers who will buy local products. The consumers' direct reactions will make local people work actively with motivation to improve quality of their products.

Another role of Michinoeki in socio-economic activities is the provision of information on local areas for visitors. Information about sightseeing, culture, and history of the areas will attract the visitors. Michinoeki could possibly build up local community in roadside area.

## 2. Basic Idea for Development of Michinoeki

This chapter firstly discusses the basic concept and functions of Michinoeki in Vietnam. Then the basic strategy for promoting the nation-wide development of Michinoeki in Vietnam will be discussed in detail.

### 2.1 Basic Functions of Michinoeki

The following five functions is determined as the basic functions of Michinoeki in Vietnam. These functions are not independent but some parts are overlapped to each other.

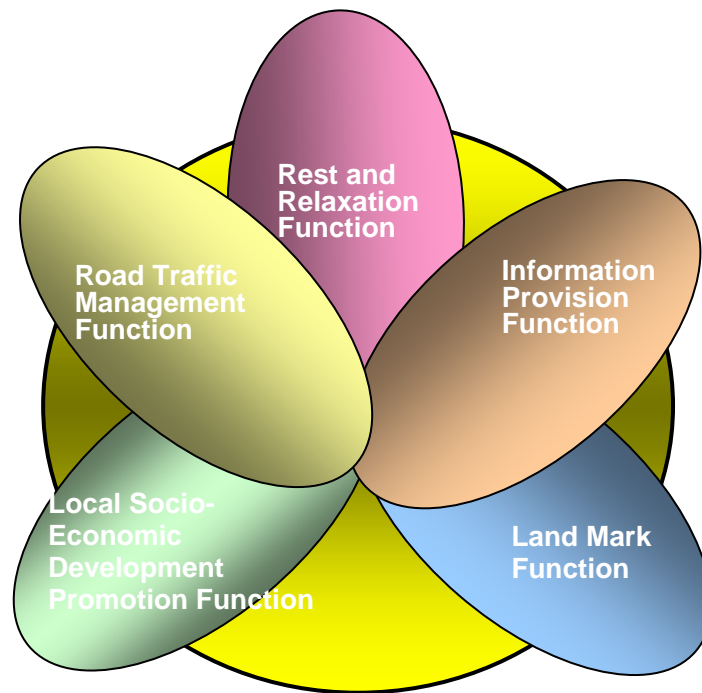


Figure 2.1.1 Basic Functions of Vietnamese Michinoeki

### 2.2 Idea of Development Plan of Michinoeki

This section discusses basic strategy for developing Michinoeki based on the previously discussed concept and functions.

#### (1) Approach for Development

The following sentences indicate the key points in development.

- Michinoeki is a public road infrastructure which is constructed on roadside area. Therefore Michinoeki should be supervised by MOT and/or VRA in central government level while by provincial PC in local level.
- Michinoeki is a community infrastructure that promotes or contributes to the vitalization of the region. Therefore Michinoeki should be planned and operated under the direct participation of local community.
- Private fund and idea are welcome because Michinoeki should be a user-oriented facility and commercial activity is the important bases to realize and assure Michinoeki operation for public function.

## (2) Distribution of Michinoeki

Michinoeki should be distributed so that their functioning accomplishes their goal. The following sections identify the key factors in selecting the Michinoeki site, target roads of Michinoeki, and creating the collaborative relationship among Michinoeki in a form of Michinoeki network. Six points below are the key factors to efficiently allocate Michinoeki.

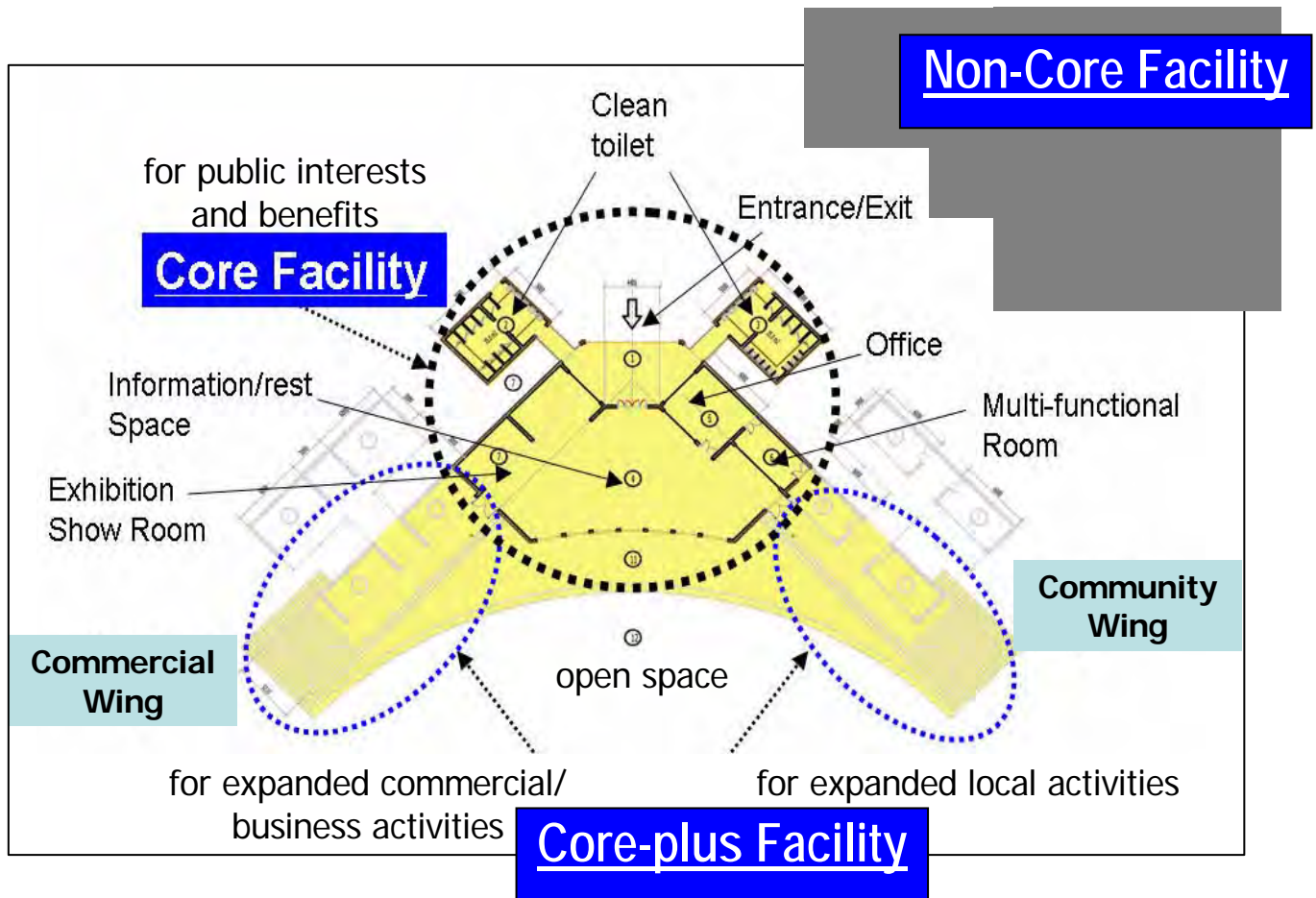
**Table 2.2.1 Ideas for Site Selection**

Basic Functions	Example of Criteria for Site Selection
Rest and Relaxation	Site Interval: A. In case of 50km/h cruising speed(high grade national highway): ---> every 200km (equivalent to 4hours driving) ---> every 100km (equivalent to 2hours driving) B. In case of 30km/h cruising speed(lower grade national highway or provincial road): ---> every 120km (equivalent to 4hours driving) ---> every 60km (equivalent to 2hours driving)
Information Provision	-Major tourism spots -Places where information of the road, road traffic, tourism and regional condition can be easily updated.
Local Socio -Economic Development Promotion	-Area where ownership and capacity of local community is high -Area which can affluently provide local special products, cultural resources and tourism resources and so forth.
Road Traffic Management	-Places near interchanges of expressways and highways -Near black spots or the road section with potentiality of traffic accident.
Land Mark	-Provincial gateway as an entrance to the province. -Road intersection and other spots of people gathering

## 2.3 Classification of Type of Michinoeki

### (1) Category of Facility

Michinoeki has multi-purpose functions. Now the facilities of Michinoeki are classified into three categories i.e., “Core Facility”, “Core-plus Facility” and “non-Core Facility”. More detailed discussion regarding these three categories is as follows;



**Figure 2.3.1 Three categories of Michinoeki facility and their basic layout**  
Source: JICA Study Team

## (2) Standard type

There will be a various types of Michinoeki. Each Michinoeki can choose facilities from many kinds of options. However, Core Facility should be indispensable, which should meet minimum requirements. It is preferable to settle Core-plus Facility adjacent to Core Facility.

The following table describes three types of Michinoeki. The table consists of the conditions of roadside area in horizontal column and the road/traffic volumes in vertical column. The condition of roadside area is a kind of indicator implying the degree of region's attractiveness. Road and traffic volume is an indicator of the expected number of visitors.

**Table 2.3.1 Three Standard Types of Michinoeki**

Condition of Roadside Area Road and Traffic Volume		Urban	Suburbs	Tourism Area	Rural Area	Mountainous Area
National Highway	Traffic Volume (High)	TYPE-1			TYPE-2	
	Traffic Volume (Low)		TYPE-2		TYPE-3	
Provincial Road			TYPE-2		TYPE-3	

Source: JICA Study Team

## 3. Mechanism and Policy for Michinoeki Development

Development plan for Michinoeki is quite new to Vietnam. Therefore, it requires a careful examination with respect to possible conflicts with the existing legal framework. This chapter describes relevant legal frameworks in the fields of planning, construction and operation of Michinoeki.

### 3.1 Legal framework

#### (1) Laws and Rules related with Michinoeki at Development Stages

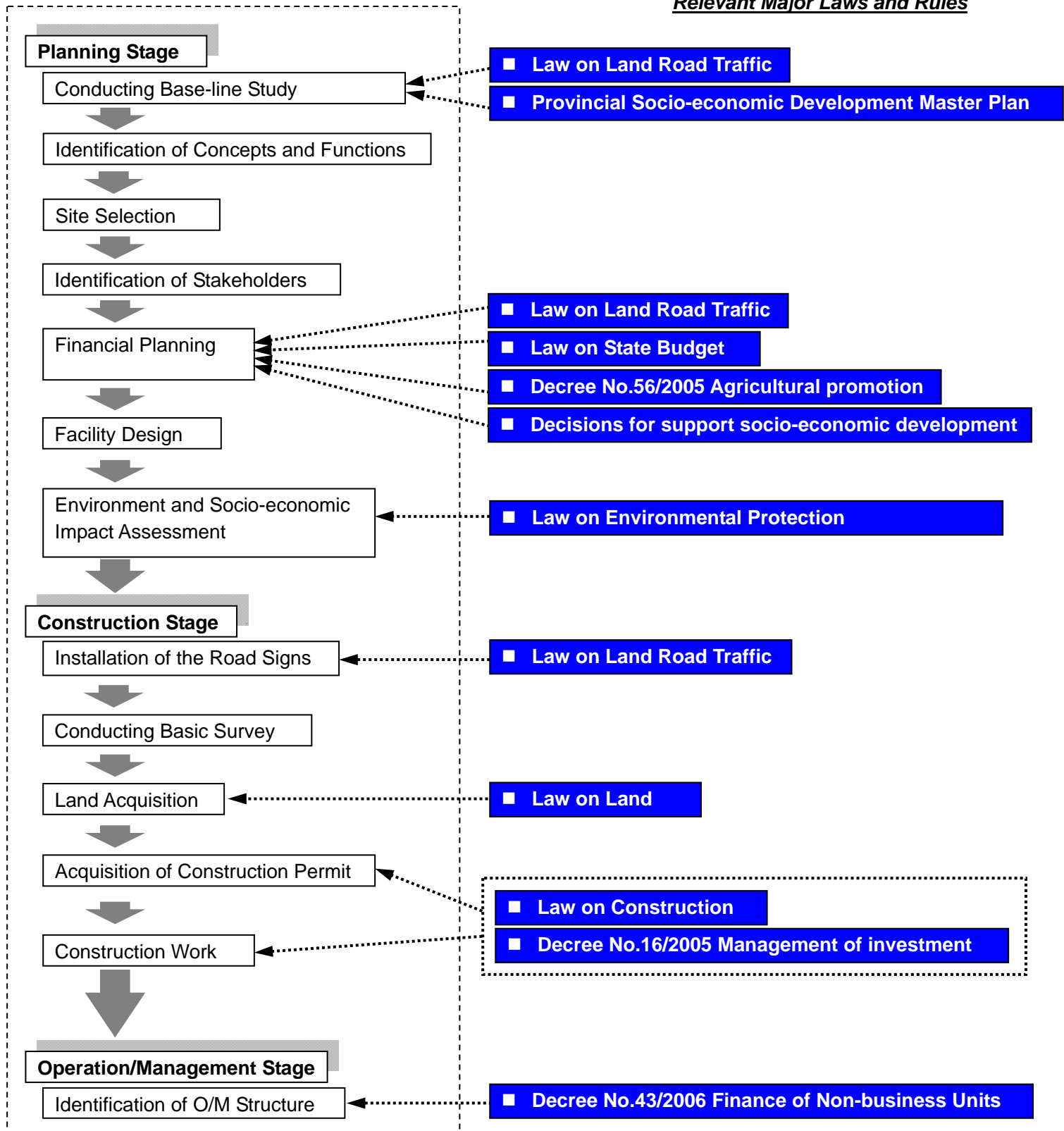
Needless to say, investors as well as operators of Michinoeki must comply with all laws promulgated in Vietnam. Therefore, in the process of planning and developing Michinoeki, all relevant laws and rules should be studied. The major relevant laws, decrees, decisions, regulations and so forth are identified and discussed in this section.

The flowchart in next page identifies and shows major legal frameworks, relevant to each stage of planning, constructing and operating/managing Michinoeki.



**Major Michinoeki Development Activity**

**Relevant Major Laws and Rules**



**Figure 3.1.1 Major Michinoeki Development Activities and Relevant Legal Framework**  
Source: JICA Study Team

## 3.2 Financial Scheme

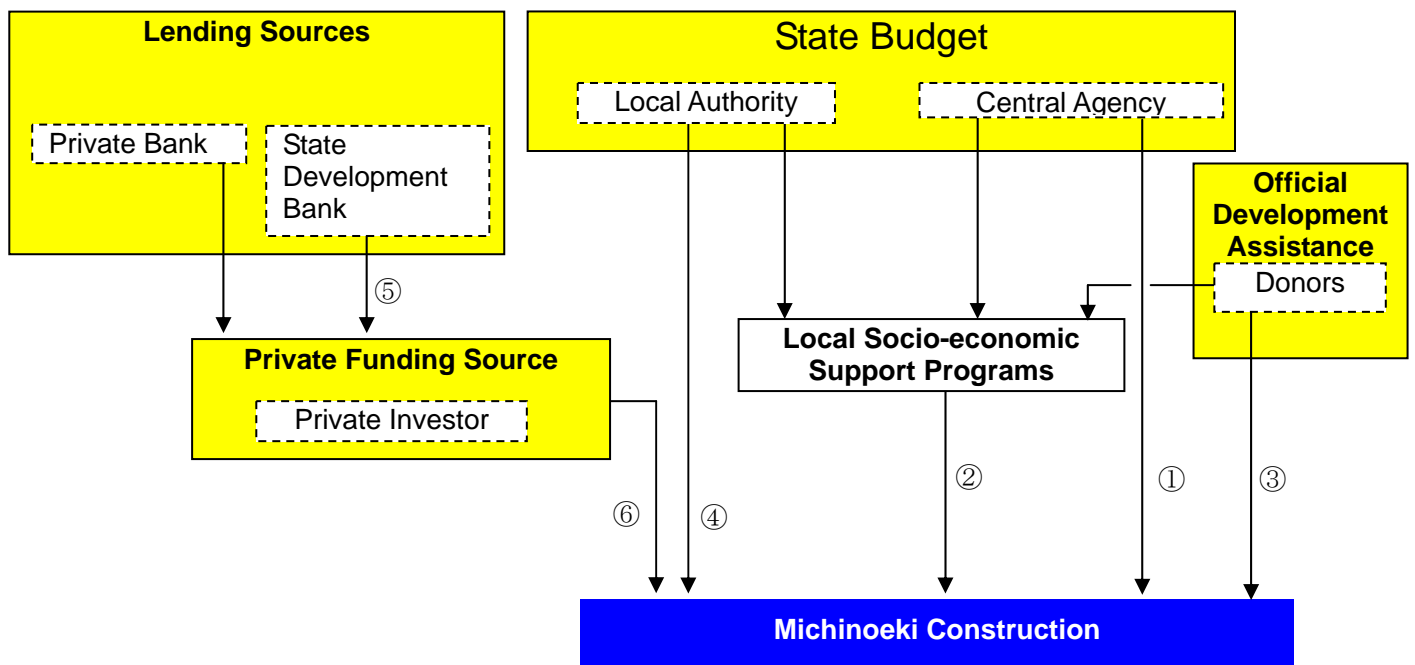
This section discusses the construction and the operation/management respectively, taking into account of the different features of development activities.

### (1) Financial Source

#### 1) Construction

Six kinds of funding sources are identifiable for the stage of the construction of Michinoeki.

- ① Direct allocation of central state budget
- ② Fund allocation via local socio-economic support programs
- ③ Direct allocation of ODA fund
- ④ Direct allocation of local state budget
- ⑤ Lending sources coming from either private bank or state development bank
- ⑥ Private investment fund in case of having the private body's active involvement



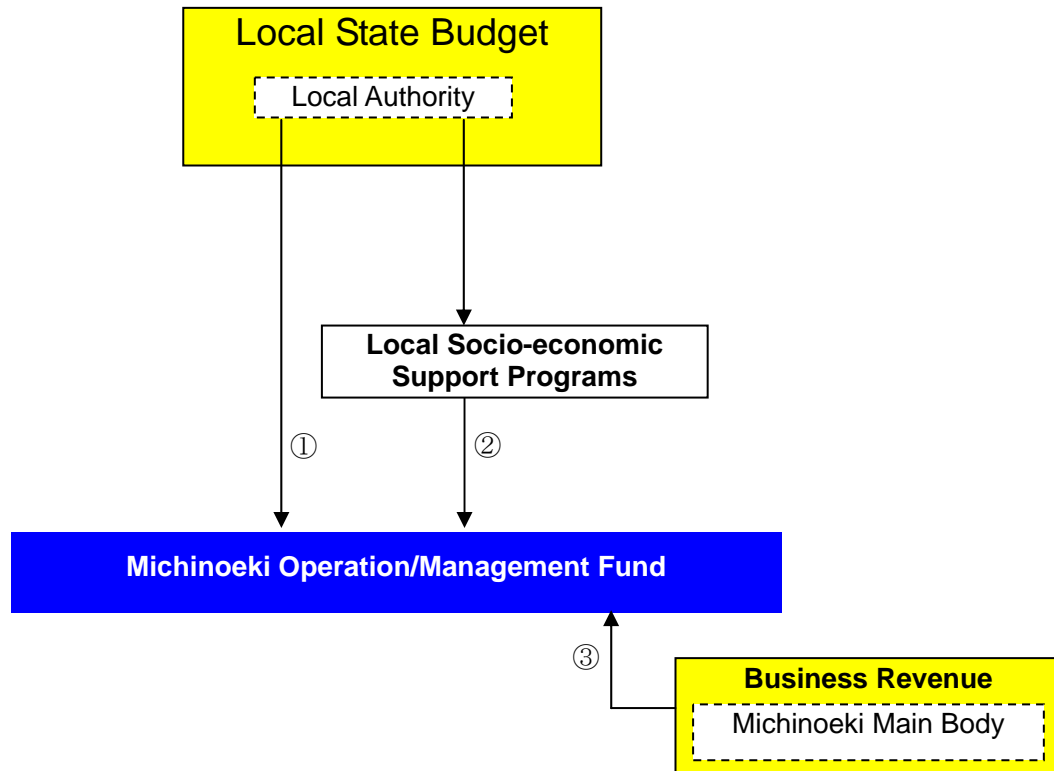
**Figure 3.2.1 Possible options for Michinoeki construction funding sources**

Source: JICA Study Team

## 2) Operation/management

Three kinds of funding sources can be identified at the stage of operation/management of Michinoeki.

- ① Direct allocation of local state budget
- ② Fund allocation via local socio-economic support programs
- ③ Private investment fund in case of private body's active involvement



**Figure 3.2.2 Possible options for Michinoeki Operation/Management funding sources**  
Source: JICA Study Team

## (2)Investment type

As for the investment in Michinoeki, public entities are able to become an investor and private enterprises as well as SOE (State Owned Enterprises) are also able to invest in Michinoeki. The mixed entities of public and private can also be investors. The table 3.2.1.1 – 3.2.1.3 show the typical combination of Michinoeki investors.

**Table 3.2.1 Combination of investors and operators corresponding to “Full Public Type”**

Type		Investor	Operator
Objective	Facility		
Land	for Core & Core-plus	Provincial Authority	-
	for non-Core	Private Entity or SOE	-
Core Facility		Provincial Authority	Provincial Authority
Core-plus Facility		Provincial Authority	Provincial Authority
non— Core Facility		Private Entity or SOE	Private Entity or SOE <u>under the supervision of</u> <u>Provincial Authority</u>

**Table 3.2.2 Combination of owners and operators corresponding to “Public-Private Type”**

Type		Investor	Operator
Objective	Facility		
Land	for Core & Core-plus	Provincial Authority	-
	for non-Core	Private Entity or SOE	-
Core Facility		Provincial Authority	Private Entity or SOE <u>commissioned from</u> <u>Provincial Authority</u>
Core-plus Facility		Private Entity or SOE	
non— Core Facility		Private Entity or SOE	Private Entity or SOE <u>under the supervision of</u> <u>Provincial Authority</u>

**Table 3.2.3 Combination of owners and operators corresponding to “Full Private Type”**

Type		Investor	Operator
Objective	Facility		
Land	for Core & Core-plus	Private Entity or SOE	-
	for non-Core	Private Entity or SOE	-
Core Facility		Private Entity or SOE	Private Entity or SOE <u>under the supervision of</u> <u>Provincial Authority</u>
Core-plus Facility		Private Entity or SOE	
non— Core Facility		Private Entity or SOE	

### 3.3 Stakeholders and their Roles

Michinoeki is a new infrastructure in Vietnam. Therefore relevant stakeholders and their roles should be clearly identified.

#### (1) Expected roles of Stakeholders

Lists of the above-mentioned stakeholders and their expected roles are described in following Table.

**Table 3.3.1 List of Relevant Stakeholders and their expected Roles**

Classification		Stakeholder	Roles
Governments	Central Government	MOT-VRA	MOT-VRA will be responsible for accreditation of Michinoeki in the light of required public functions.
		MARD	MRAD will be responsible for promotion of local socio-economic development by utilization of Michinoeki.
		MONRE	MONRE will take care of social and environmental consideration in the field of Michinoeki development.
		MOF	MOF will be responsible for financial matters mainly at construction stage of Michinoeki in accordance with the Law of Land Road Traffic.
		MPI	MPI will be responsible for ODA contact.
		MOC	MOC will be responsible for development of urban construction master plan taking account of Michinoeki functions.
		MOCST	MOCST will be responsible for promotion of culture, sports and tourism activity taking account of Michinoeki functions.
		MOIT	MOIT will be responsible for vitalization of industrial and trade activity taking account of Michinoeki functions.
	Province	People's Committee, DOT, DOC, DPI,DOF, DARD, DOIT, DOCST etc.	Provincial PC will be responsible for land procurement and compensation enforcement. DOT will be responsible for practical operation activity as a road administrator. Other departments of local authority will be responsible for, in particular, financial matter and personnel affairs.
	District	People's Committee, Division of Economic Infrastructure, etc	Stakeholders concerned will be responsible for , in particular, development of related facilities, actual management, worker dispatch, business support, support for forming local group.
	Commune	People's Committee	Stakeholders concerned will be responsible for , in particular, support for development of local special products.

(Continued)

Classification		Stakeholder	Roles
Donors		JICA, the World Bank, ADB, other bilateral donors	Stakeholders concerned will be responsible for financial and technical support
Local SMEs	inhabitants,	Local inhabitants	Stakeholders concerned will participate in planning, management and monitoring as a member of Michinoeki Local Working Group, and act as a facility user
		Association of architecture	
		Women's group	
		Agricultural cooperative	
		NGOs	
		Owner of similar facility nearby, cooperative facility	
Private enterprises and Organizations	Transportation Enterprises	Bus company, Taxi company, Other transportation company (forwarder, tracking, etc.)	Operation/management body, investors and act as a facility user
	Service Provision Enterprises	Restaurant, Accommodations, Local souvenir makers, Souvenir distributor, Foods and consumer goods distributor, Tourism enterprise	Operation/management body, investor and act as a facility user and service provider
	Other Private Enterprises	Trading company, Constructor, Other private company	Investor and provider of related services

### 3.4 Mechanism for Operation and Management of Michinoeki

#### (1) Operation/management activity items

The following table shows the operation/management activity items.

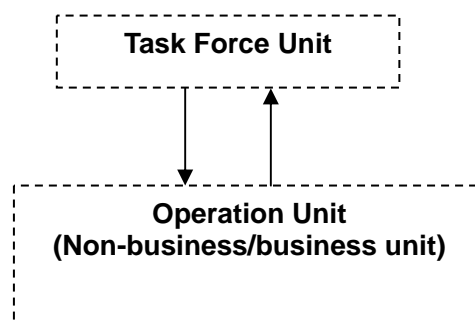
**Table 3.4.1 Operation/Management Activity Items**

Classification	Corresponding Activity	Details of Activity
Basic Activity	Very basic activity in terms of physical maintenance and economic sustainability	<ul style="list-style-type: none"> <li>• Facility management and repair</li> <li>• Guard and cleaning the facility</li> <li>• Management of operation cost</li> <li>• Management of revenue and expenditure</li> <li>• Management of personnel affairs</li> </ul>
Non-commercial Activity at Core facility	Activity for road traffic and local community	<ul style="list-style-type: none"> <li>• Information provision (creation and management of information contents, development and maintenance of information provision apparatus and so forth)</li> <li>• Local socio-economic development promotion (management of quality of local special products and sales promotion)</li> <li>• Local human resource development (training and so forth)</li> <li>• Public information provision e.g. traffic safety campaign</li> </ul>
Non-Commercial Activity at Core+ facility	Socio-economic Activity by local community by selling local products to visitor	<ul style="list-style-type: none"> <li>• Management of tenant contract, supervision of activity and instruction</li> <li>• Propaganda and sales promotion aiming at improvement of profitability</li> </ul>
Commercial Activity at Non-core facility	Activity for commercial service to visitors	<ul style="list-style-type: none"> <li>• Management of tenant contract, supervision of activity and instruction</li> <li>• Propaganda and sales promotion aiming at improvement of profitability</li> </ul>

#### (2) Standard Organization

##### 1) Type of Organization

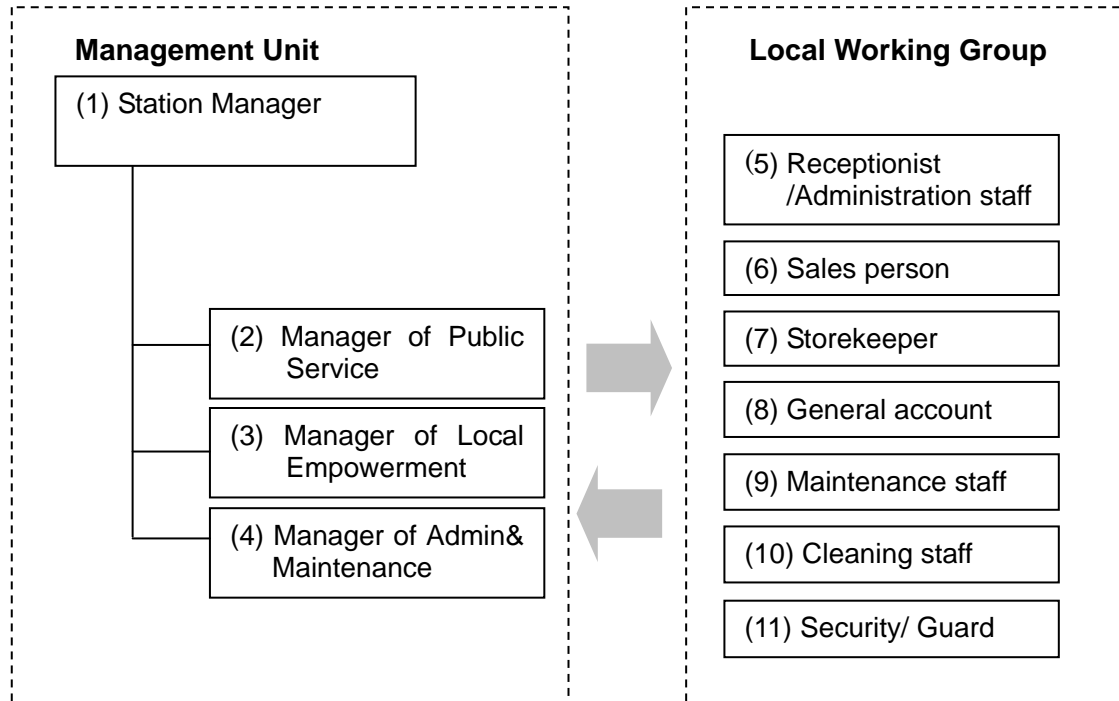
The task force unit is in charge of approval of the overall planning of operation/management activity of Michinoeki and supervision of routine activity of Michinoeki. The member of the Task Force Unit will consist of the officers of local authorities such as the provincial People's Committee, the district People's Committee, the commune People's Committee, such department of provincial government as DOT, DARD, DPI, DOF and so forth.



**Figure 3.4.1 Michinoeki Operation/Management Structure**

## 2) Example of Structure of Operation Unit

Following example shows that the Michinoeki management unit will basically consist of 4 staffs such as a station manager, a manager of public service, a manager of local empowerment and a manager of administrative matter and maintenance.



**Figure 3.4.2 Michinoeki Management Unit and Local Working Group**



### 3.5 Impact of Michinoeki and its Social and Environmental Consideration

When planning, constructing and operating Michinoeki, careful investigation of impact of Michinoeki is indispensable. Michinoeki development has both positive impact and negative impact.

#### 3.5.1 Overview of Impact of Michinoeki

As for Michinoeki impact, we can anticipate, in general, that both positive and negative impacts may arise in social, economic, traffic, and environmental aspects

It should be noted that although this table shows expected general impacts of Michinoeki, the real impacts arising from actual Michinoeki project may change, depending on its location, function and size etc.

**Table 3.5.1 Overview of Michinoeki impacts in different aspects**

Aspect	Expected Impacts
Traffic	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impacts on safety, comfortableness and convenience of road traffic thanks to comfortable resting space, useful road traffic information, and road traffic information provided by Michinoeki.</li> <li>- Michinoeki may have negative impacts on road traffic condition in surrounding area due to traffic concentration to the Michinoeki.</li> </ul>
Economy	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impacts on local employment, income generation, and economic development by sales of local products, employment of its staff and tourism promotion in surrounding area.</li> <li>- Michinoeki may have negative impacts on local economy if it overturns existing similar facilities and if local governments have to subsidize its operation and running costs due to its poor financial performance.</li> </ul>
Social	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impact on local society through, for example, promotion of social participation of women, income generation of the poor or ethnic minority, raising awareness for hygiene, improvement of information accessibility, and increasing training opportunity.</li> <li>- Michinoeki may have negative impacts on local society if it causes loss of livelihood measures by resettlement or land expropriation, conflicts within the area, and degradation of cultural and historical heritages.</li> </ul>
Environment	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impacts on landscape improvement.</li> <li>- Michinoeki may have negative impacts through degradation of ecology, soil erosion, noise, and vibration during its construction, and waste water and solid waste during its operation period.</li> </ul>

## 4. Michinoeki Development Master Plan

### 4.1 Nation-wide Master Plan

Based on the discussion in previous chapter, this chapter discusses nation-wide Michinoeki development plan including target year of Michinoeki development, target amount of Michinoeki distributed over nation-wide area and introduction of new scheme of accreditation.

Target Year of the Plan is **2020**. Currently, future highway network has been planned with the target year of 2020. The Michinoeki development plan should comply with the existing national road network plan.

#### 4.1.1 Distribution of Michinoeki

In Michinoeki development plan, one of the objectives is how to establish effective Michinoeki collaboration within the entire Michinoeki network. Strategic distribution is a basis for the collaboration.

The following table shows Target of Distribution of Michinoeki in Michinoeki Development Plan. This is a standard, and can be changed based on the regional characteristics.

**Table 4.1.1 Target of Distribution of Michinoeki (Standard)**

Year	Distribution
2015	<ul style="list-style-type: none"> <li>➤ Every <b>200 km</b> along National Highway.</li> <li>➤ At least one Michinoeki in one province</li> </ul>
2020	<ul style="list-style-type: none"> <li>➤ Every <b>100 km</b> along National Highway</li> <li>➤ Additional Michinoeki along provincial roads</li> </ul>

#### **4.1.2 Accreditation of Michinoeki**

This sections discusses an accreditation procedure as a new administrative process for implementing Michinoeki planning. Accreditation process is necessary for ensuring public feature of Michinoeki.

##### **(1) Introduction of Accreditation**

In order to secure the public functions, it is required to create a new institutional system. It is necessary either to clearly define the administrative body which is in charge of securing Michinoeki's public functions or to stipulate some existing administrative entities to the responsibility of securing them.

Such new institutional system is "Accreditation". Accreditation includes following tasks;

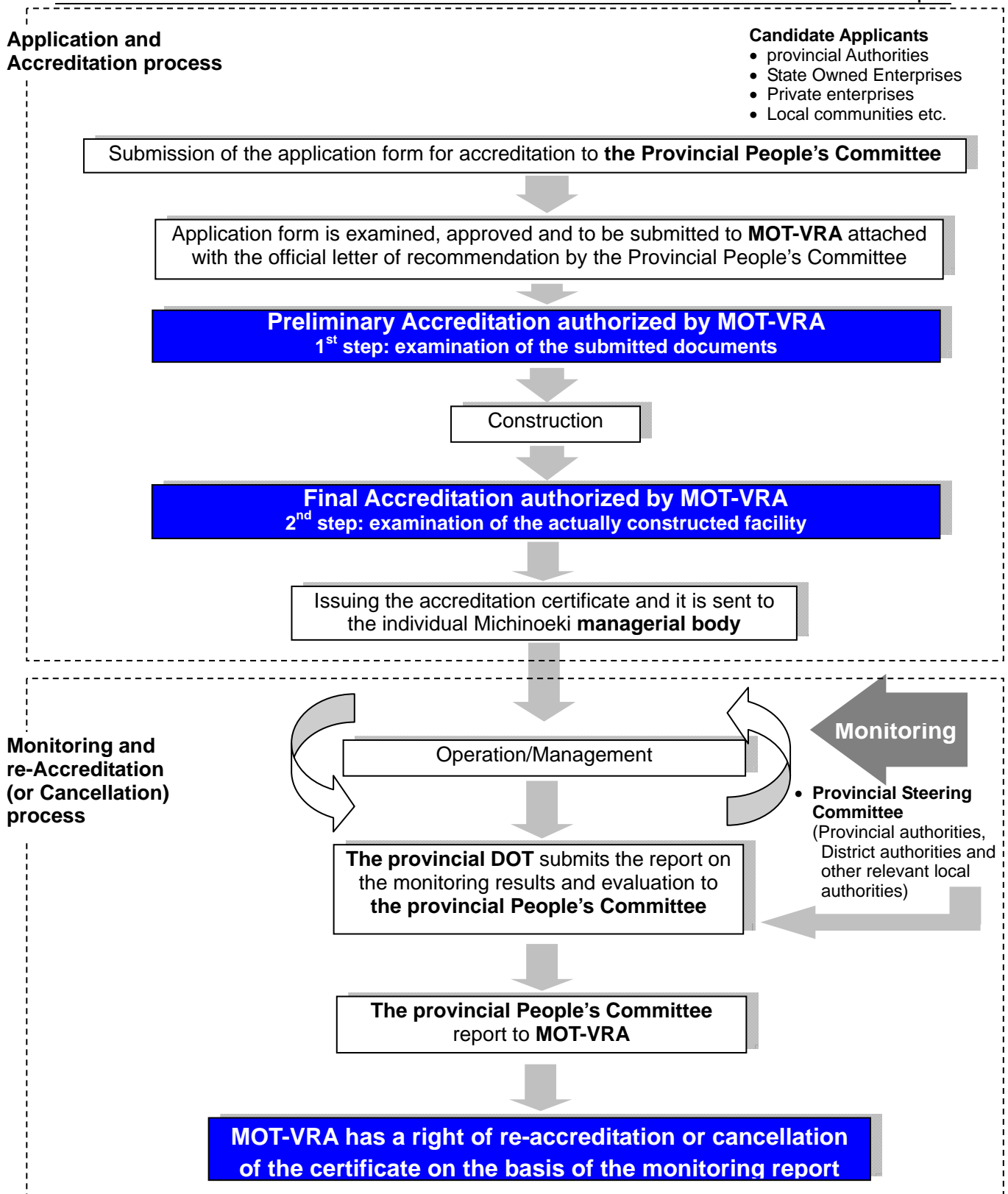
##### **1) The basic conditions of accreditation**

- Accreditation stipulates that the administrative body which is in charge of making final decision of accreditation should be the Ministry of Transport (MOT) - Vietnam Road Administration (VRA).
- Accreditation has its own criteria and specific requirements to ensure Michinoeki as a public facility.
- Accreditation requires for applicants who seek to acquire accreditation certificate to follow its own procedure as well as its own application form.
- Accreditation allow all the entities including not only public entities but also private bodies to apply to accreditation of Michinoeki on the ground that said applicants follow the accreditation procedure and satisfy the accreditation criteria.

##### **2) Accreditation of new facility and existing facility**

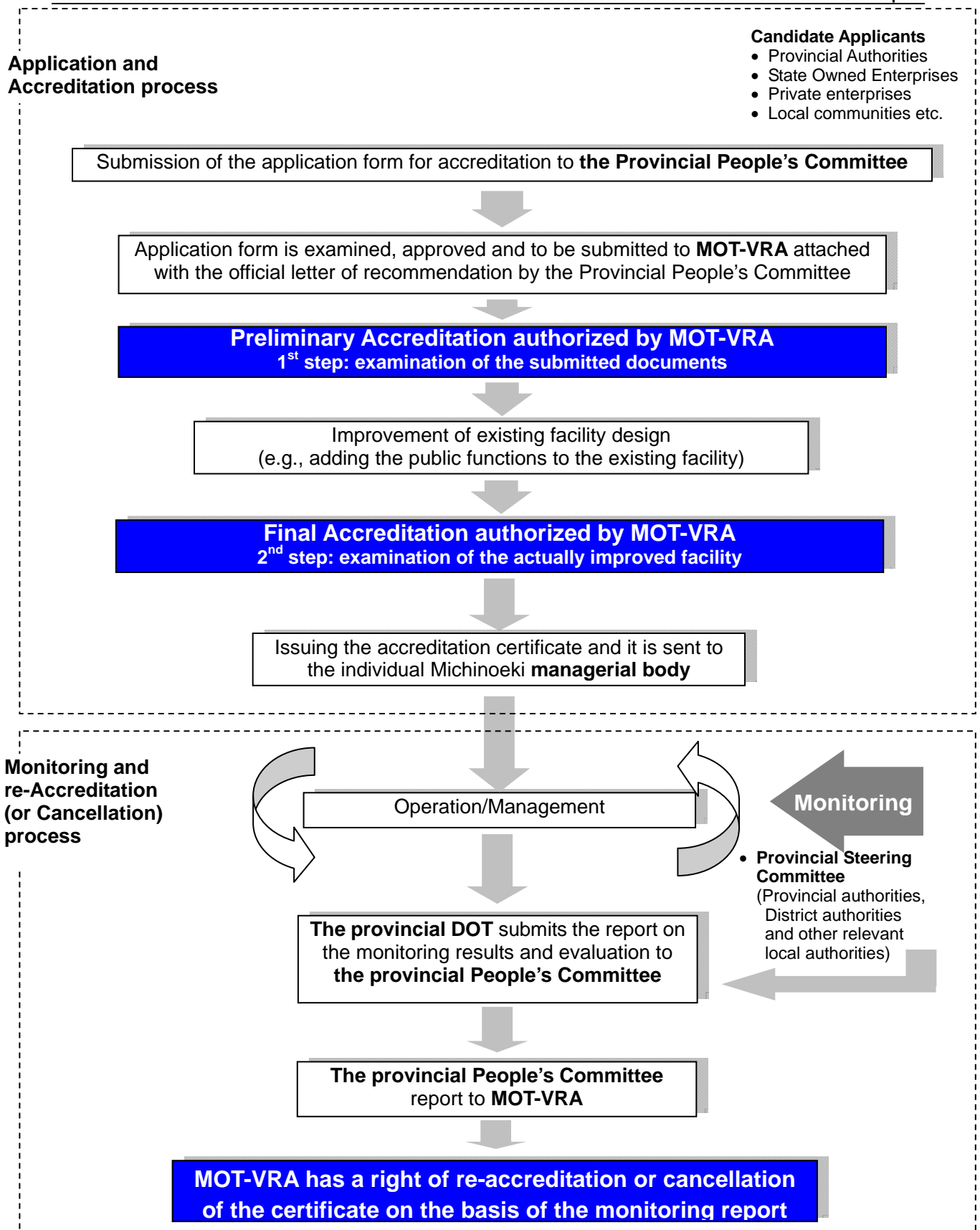
- Accreditation process has two different procedures. The one is for accreditation of newly developed facility and the other is for accreditation of existing similar facilities. As for newly developed facility, the applicant can take into account of required functions at the planning and designing stage of applied Michinoeki. On the other hand, the applicant who has existing similar facility can also apply the accreditation if the applicant is to improve the facility design based on the accreditation criteria. The latter case can contribute to spread of Michinoeki without big amount of public construction cost.
- In case of the accreditation for the existing similar facility, the existing facility is basically a commercial facility operated by the private entities. Therefore, in order to satisfy with accreditation criteria, the public function should be added to said applied existing similar facility. For instance, to add the road and regional information provision facility, local socio-economic development promotion facility and to expand parking space may be necessary.

On the following page, two kinds of accreditation process for either newly developed facility or existing facility are shown.



**Figure 4.1.1 Proposed Procedure for Accreditation of Michinoeki in case of newly developed Michinoeki**

Source: JICA Study Team



**Figure 4.1.2 Proposed Procedure for Accreditation of Michinoeki in case of accreditation for existing similar facility**

Source: JICA Study Team

### **4.1.3 Programs**

This section discusses some programs ensuring Michinoeki development plan.

#### **(1) Technical Development**

Technical support is necessary to be introduced in order to spread Michinoeki over nation-wide area in Vietnam based on this Michinoeki development Master Plan. Technical development should be conducted at each stage of planning, construction and operation/management.

#### **(2) Development of Relevant Databases and Information Network**

Michinoeki is expected to function as an information provision facility. Information includes not only road and road traffic related information but also cultural, historical and tourism information in neighboring region. Therefore information providers should not be limited to road and road traffic administrators. Local community including local authority, local groups, local industrial associations and even local inhabitants are expected to get involved with such activities as preparation and provision of regional information. Database should contain, for instance, road map, general road traffic condition, natural hazard condition, regional cultural/historical situation and tourism information.

#### **(3) Establishment of Michinoeki Development Promotion Organizations**

As for Michinoeki development promotion organization, possibilities are either to newly develop such organization or to utilize existing organizations. For the time being, such existing organization as, for instance, Vietnam Automobile Transportation Association (VATA) can be considered as Michinoeki alliance organization.

### **4.1.4 Budgetary Planning**

#### **(1) Source of Funds**

Initial cost of Michinoeki will be roughly 20-30 Billion VND. Annual expense will be 2.5-3.5 Billion VND. This cost includes cost of commercial activity that belongs to private partners. In Pilot projects, land acquisition cost and ground work cost were finally paid by private partners. Annual expense contains cost for profitable activity that should belong to private partners.

As for the budget of the national government, the budget should be used to support initial cost of the Core facility and, if necessary, the Core-plus facility. And other expected use of the national budget is the promotion activities of Michinoeki.

#### **(2) Application of Regional Socio-economic Development Promotion Fund**

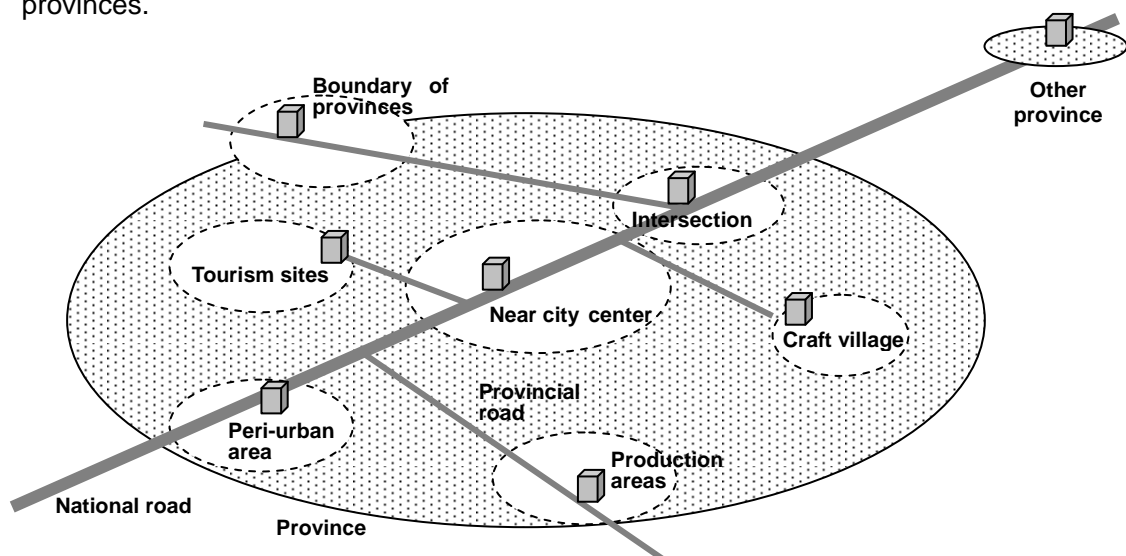
There exist plenty of local socio-economic development promotion programs and their budget. By making most of these funds, it may be possible to conduct personnel training and support operation expenditure. Development of Michinoeki specific local vitalization fund should be considered by taking a long-term view for the future.

## 4.2 Provincial Master Plan

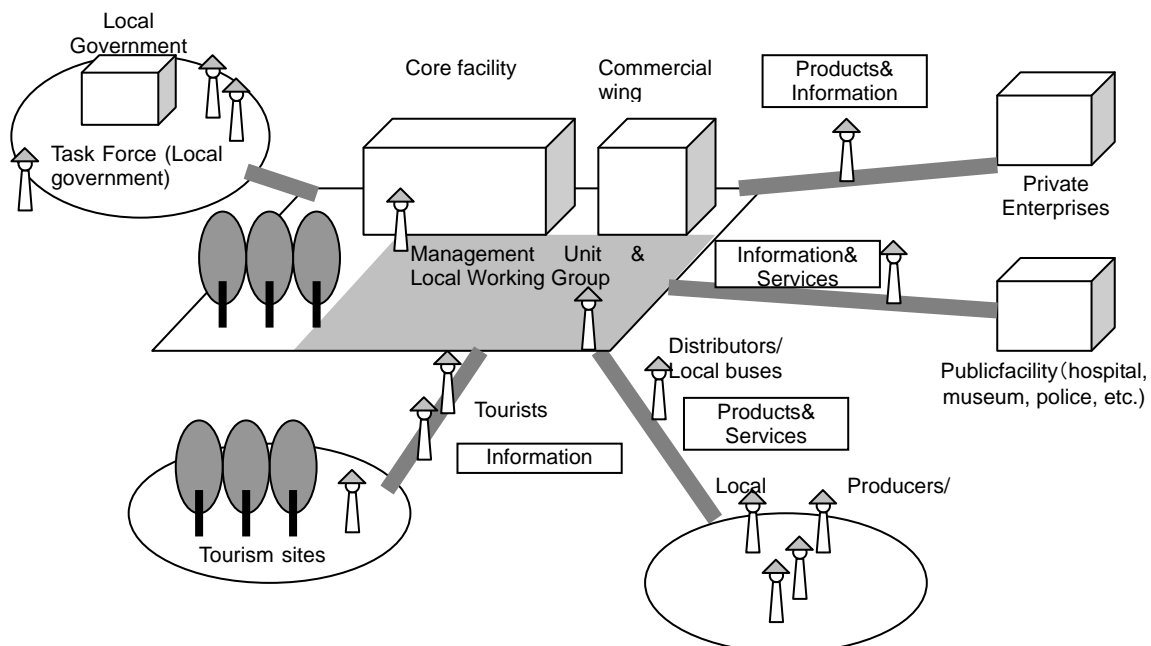
### 4.2.1 Purpose

The owner of the Michinoeki facility, which is designated as a public road infrastructure as well as a community facility, is the provincial government. The Michinoeki can be regional and local promotion centers in provincial level.

After development of the first Michinoeki in a province based on the target of central master plan, the capacity and benefits of the first facility will be strengthened and enhanced when this station will make a linkage with other facilities and sites of tourism and productions along road network in neighboring area, inside of province and with other provinces.



**Figure 4.2.1 Image of Michinoeki Network in Province**  
Source: JICA Study Team



**Figure 4.2.2 Image of Local Network in center of Michinoeki**  
Source: JICA Study Team

#### **4.2.2 Provincial Master Plan of Hoa Binh Province**

Since traffic volume is very low in Hoa Binh province, drastic commercial activities and economic profitability cannot be expected in Hoa Binh. But as a gateway to northern-west provinces of ethnic culture, Michinoeki in Hoa Binh have opportunities to promote local products, culture and tourism sites with natural, clean and traditional images.

**Strategy A “Appropriate road traffic management”:** Since traffic volume and potential of commercial activities are limited in mountainous area, intersections of national and provincial roads are preferable location for Michinoeki, in terms of market and information accessibility.

**Strategy B “Promotion of local economic activities”:** Michinoeki development in Hoa Binh should focus on socio-economic development in remote area, which rural people easily access to market. There are various local products such as vegetable, fruits, food, handicrafts, etc.

**Strategy C “Establishment of participation mechanism of local community”:** To strengthen capacity of local organizations such as agricultural cooperatives, women’s unions, farmer’s unions, etc., existing activities can be promoted in Michinoeki. For instance, training for handicrafts funded by industrial extension fund will be conducted in multi-purpose room, and trial sales will be conducted in open market space or shop.

**Strategy D “Sustainable operation and management”:** The advantage of Hoa Binh is availability of various types of funds and supports from GOV, NGOs and donors. Though business potential for private sector is not high enough, technical and financial supports from them can be applied for sustainable operation and management.

**Strategy E: “Establishment of institutional mechanism”:** Since new construction of Michinoeki by private developers may not be expected, integration with related projects such as road improvement, rural development are important.



### 4.2.3 Provincial Master Plan of Ninh Binh Province

Since traffic volume of NH-1A is high in Ninh Binh province, many road users and tourists will visit to Ninh Binh Michinoeki. In addition, it is located in the center of Ninh Binh town as well as nearby popular tourism sites of Tam Coc river cruise, Hoa Lu historical area and local embroidery villages, this Michinoeki can be a kind of tourism and handicraft promotion center of Ninh Binh.

**Strategy A “Appropriate road traffic management”:** Though the basic road infrastructure is enough, communication network among central-regional-local level should be strengthened. Especially NH-12B is a strategic inter-provincial road between Ninh Binh and Hoa Binh and northern mountainous areas, which passes by Cuc Phuong National park, so it is recommended to develop new Michinoeki along NH-12B.

**Strategy B “Promotion of local economic activities”:** There are various kinds of handicrafts and tourism sites in Ninh Binh province. There are many local small craft villages and households. They are lack of market access and opportunities for direct sales and technical improvement. In this context, functions for local product development& sales and training should focus on these individual households or small groups.

**Strategy C “Establishment of participation mechanism of local community”:** Participation opportunities for local industry development will be provided both for (i) individual, household level for technical improvement and market access opportunities, (ii) SMEs and companies to promote products and expand business opportunities, (iii) local organizations for strengthening organization capacity and activities.

**Strategy D “Sustainable operation and management”:** The pilot Michinoeki will be operated by Ninh Binh Bus Terminal Enterprise, as a public non-business unit. This enterprise is a public non-business unit with profit, under an umbrella of DOT of Ninh Binh Province, and has other bus terminals in province. So it might be easy to expand Michinoeki network of the province to improve and strengthen functions and capacity of existing terminals as authorized Michinoeki in future.

**Strategy E: “Establishment of institutional mechanism”:** Michinoeki development in Ninh Binh will be involved in both public and private sectors in future, it is necessary to establish clear role sharing mechanism including land acquisition, infrastructure and utility development, and relevant activities.

#### **4.2.4 Provincial Master Plan of Bac Giang Province**

Since traffic volume of NH-1A is high in Bac Giang province, many road users and tourists will visit to Bac Giang Michinoeki. But disadvantage is there are not so many attractive areas for tourists as destination. So pilot Michinoeki should be focus on functions of traffic management, relaxation and information provision, rather than local socio-economic development at the first period. To make road users including buses and tourists recognize the Michinoeki to stop over is the short-term objective.

**Strategy A “Appropriate road traffic management”:** Many buses, trucks and tourist buses are included in these long-distance road users. So the priority is appropriate passenger services of Michinoeki which provide resting space, information, traffic guidance, health care.

**Strategy B “Promotion of local economic activities”:** Michinoeki supports to offer opportunities and spaces for training, quality inspection, trial sales and marketing, etc. in cooperation with local organization (ex. Women’s Union) and private sectors.

**Strategy C “Establishment of participation mechanism of local community”:** Since pilot Michinoeki is developed near the center of province, it is important to plan how to involve in community and producers in remote area, especially ethnic minority people in Son Dong and Yen Dung districts and in other remote areas.

**Strategy D “Sustainable operation and management”:** As a model of public-private partnership operation mechanism, pilot Michinoeki which will be managed Bac Ha Co. Ltd. Should be operated under adequate structure of Michinoeki’s with relevant role-sharing.

**Strategy E: “Establishment of institutional mechanism”:** Michinoeki development in Bac Giang will be involved in both public and private sectors in future, it is necessary to establish clear role sharing mechanism including land acquisition, infrastructure and utility development, and relevant activities.

## 5. Recommendations and Suggestions

In this chapter, we recapitulate our recommendations and suggestions with a view to establish an effective and realistic Michinoeki system in the Socialist Republic of Vietnam. Some of them are already mentioned in the previous chapters, but they are classified in this chapter in accordance with the nature of each issue.

It is to be said that some of such recommendations and suggestions might not be immediately applied in Vietnam, due to various reasons and this is maybe because of our ignorance of Vietnamese rules and regulations in detail. We would appreciate it very much if Vietnamese government could be generous enough for such ignorance and could understand well our good will of proposing them, only with a purpose of introducing a better system in Vietnam.

We sincerely wish to see some of our recommendations or proposals incorporated in future in the Vietnamese “Michinoeki Policy”.

### (1) Establishment of Coordination Mechanism

#### 1) Establishment of a Coordination Mechanism at Central Government Level

Michinoeki is defined as one of “Road Traffic Infrastructure” facility by the Law on Road Traffic revised in 2008, the construction of Michinoeki is under the jurisdiction of the Government which provides direction to MOT, MARD, MOIT or MOCST. Although these Ministries have specific functions and tasks of their own, they are closely involved from the view point of regional development such as promotion of local products or tourism, same as MONRE, MOC from the view point of permits for land for Michinoeki construction, construction permits, environmental consideration, MPI and MOF for securing construction cost or operation cost. This is the reason why it is desirable to have such a coordinating mechanism to ensure a harmonized policy among ministries concerned, having common understanding on the necessity of promoting Michinoeki in Vietnam. We are proposing to establish a committee for such coordination. Duty of the committee: Consultation on policy issues regarding Michinoeki and discussion on “Annual report of Michinoeki” to be prepared by MOT-VRA

Members of the committee: Representatives of Ministries concerned under the chairmanship of MOT-VRA

< Issues to be examined in construction, operation, and management of Michinoeki >

- Procedures of Michinoeki
- Policy measures to promote and assist Michinoeki
- Demarcation of duties among Ministries concerned
- Demarcation of duties between central government and provincial authorities
- Ministerial decrees, orders or regulations necessary for the realization of Michinoeki policy
- Other issues related to Michinoeki

## **2) Establishment of a Coordination Mechanism at Provincial Level**

It is also expected to establish a coordinating mechanism to ensure an harmonized policy among provincial authorities concerned, like at central government level. We believe that such coordinating committee at provincial level can examine the establishment of Planning for Development of Michinoeki that is harmonized with the Plan for economic development of their local area and provide expenditures or subsidies from provincial own budget putting local flavors to each Michinoeki.

### **(2) Elaboration of Implementing Program**

#### **1) Elaboration of Implementing Program of Michinoeki**

It is expected that MOT-VRA will elaborate as soon as possible an implementation program of national Michinoeki development, based on JICA Michinoeki Master Plan and with a view to realize concrete projects.

The first phase of such implementation program, with target year of 2015, is supposed to cover 80-100 Michinoeki which will be implemented during the first 5 years. We would like to propose to take into account following points for such elaboration.

- Priority on sections with high volume of traffic: We can expect to reduce a considerable number of accidents and to render services to large number of passengers by one Michinoeki.
- Maximum use of private initiatives: We encourage private investors to construct Michinoeki wherever they are interested, by providing them technical assistance, if necessary, and by securing public functions of Michinoeki. Encouragement of private sector is also expected to contribute to the reduction of public expenditures.
- Priority of location with more local participation: If other conditions are same, we recommend to prioritize the location where local stakeholders' participation is more strong.

The implementation program should also contain an estimation of total cost with an annual requirement. Regarding the construction cost, we propose to estimate approximately the number of each of three types of Michinoeki (Type 1~3) and to estimate financial requirement from state budget, provincial budget, borrowing from State Development Bank or other banks, and private investment. It is of course quite important to endeavor to secure necessary public budget after such cost estimation.

## **2) Elaboration of Provincial Master Plan**

In harmony with the implementation program of Michinoeki on national highway, a provincial master plan is expected to be elaborated by each province. Such master plan will focus on expected services and functions of Michinoeki planned in the province, as well as on future network of Michinoeki on main provincial roads.

### **(3) Flexible Utilization of Different Funds**

#### **1) Budgetary Appropriations by Central Government**

Since Michinoeki is defined as one of “road traffic infrastructure” facility by Law on Road Traffic revised, public expenditures from state budget are fully justified. These Michinoeki which have moderate investment capital compared with the investment capital of roads, but their effect of regional economic development is very significant and have critical role in reduction of traffic accidents. Therefore, we have to secure public fund wherever such fund is necessary, while maximizing the private investment wherever it is possible. Therefore, it is desirable to secure budgetary appropriations by central government for each fiscal year, as estimated by the implementation program.

In a longer run, we suggest to include the construction cost of basic infrastructure (core facilities, car parking area and core plus facilities) of Michinoeki to provide public services for new road construction projects or large scale road rehabilitation projects.

It is also expected to examine the possibility of using Michinoeki as a tool of other policies like regional development policy, tourism development policy or one village one product policy, and to allocate to Michinoeki financial budget or subsidies under such policy.

#### **2) Establishment of “Special Lending Program for Michinoeki” by Vietnam Development Bank**

Private investors are expected to play an important role in the construction and operation of Michinoeki. In order to facilitate their financial arrangement, we propose to establish a special lending program for Michinoeki by the Vietnam Development Bank. The terms of such lending, i.e. interest rate, lending period and grace period should be more advantageous than ordinary lending operations. It is without saying that eligible projects for such privileged borrowing are those which have obtained prior approval for accreditation.

### **3) Elaboration of “Michinoeki Program” for International Donors**

We suggest formulating programs or projects so that international donors like World Bank, Asian Development Bank or JICA can easily take them up in their lending program when forming loaned projects of construction of land traffic infrastructure. Followings are some examples.

- Program loan of Michinoeki: This program aims to construct certain number of Michinoeki which will satisfy certain criteria previously agreed upon between the Vietnamese government and donor. This program mainly focuses on regions/areas where private investment can be hardly expected. It is also recommended to include in the program, cost for technical assistance for operation as well as cost for medium and post evaluation.
- Inclusion in regional development projects or in poverty alleviation projects: We define Michinoeki as one of core facilities of regional development or poverty alleviation. We can expect to construct some Michinoeki under such projects financed by international donors.
- Inclusion in new road construction projects: We include necessary number of Michinoeki in new road construction projects under international donors funding. Good justification is also that Michinoeki is one of land road traffic infrastructure.

### **4) The Use of Private Activities**

Financial participation of private sectors is necessary to implement Michinoeki under the constraint of national and provincial budgets. In order to promote private investment, some measures should be introduced.

Examples are;

(For land accredited as a site for Michinoeki)

- Simple and fast procedure for the acquisition of the right of the land use
- Free or low charge on the land use
- Exemption of taxes on the land

(For buildings of Michinoeki)

- Some subsidy for construction of Core / Core+ facilities in case a private sector has those facilities. For example, 70% subsidy for a resting facility, 100% subsidy to an information facility, 50% subsidy for a facility of local development.

(For Operation of Michinoeki)

- Some subsidy for operation of an information facility and to a facility of local development in case a private sector manages those facilities.

#### **(4) Establishment of the Schemes**

##### **1) Schemes for Accreditation**

MOT-VRA will be the authority for the accreditation, and will accredit Michinoeki by itself for a while. In the future the function of the accreditation can be entrusted to an authorized organization, namely “the Vietnam Association of Michinoeki”.

Accredited Michinoeki should include not only new Michinoeki but also Michinoeki under operation as long as they satisfy the standards, with some additional works on existing facility, if needed.

If Michinoeki is accredited, it will have a merit that visitors may increase thanks to the guaranteed service and facilities. It is one idea that the accredited Michinoeki has a right of tax exemptions. The merit of the applicant should match the cost of the applicant for the accreditation.

##### **2) Early Establishment of the Related regulations and rules**

The related ministries and departments are recommended to draft the regulations and rules to establish and promote Michinoeki. MOT-VRA are suggested to draft promptly “the Standard of Implementation of Michinoeki”, “ the Standard of Management of Michinoeki”, “Accreditation Scheme” and other basic rules.

This is legal basis to accredit Michinoeki of the nationwide Michinoeki network.

#### **(5) Technical Assistance**

##### **1) Assistance to Project Formation**

It is recommended to consider some measures to assist technically the formulation of Michinoeki projects that have been recommended in the Master Plan and the Action Plans. Some parts of the assistance may have to be entrusted to private consultants, and other parts can be done by the MOT-VRA and by other related ministries. It will be one idea that MOT-VRA has an organization named as “the Michinoeki Assistance Room (tentative)”

It will also be necessary to establish a financial assistance for such project formulation including feasibility studies.

##### **2) Assistance to Project Implementation**

It is also recommended to consider some measures to support the implementation and management of Michinoeki with technical and the financial assistances.

Technical assistances include training of the staff of Michinoeki. It will be an idea that MOT-VRA dispatches a “Michinoeki Advisor” to the sites of Michinoeki.

Financial assistance should be considered both in the construction stage and the operation stage and implemented at the same time in case of construction of new road or major road upgrading works.

### **3) The Use of know-how acquired in the JICA Study**

It is recommended for MOT-VRA to use the know-how which has been acquired during the JICA Study including the pilot projects. Especially, the ideas and experiences in the pilot projects and training in Japan should be transferred to as many persons as possible. MOT-VRA is recommended to establish a system to accumulate and transfer such know-how and experiences.

### **4) Training Program**

Training Program conducted during the JICA Study is a good prototype of the future training program. MOT-VRA is recommended to initiate the training by referring to this prototype. In future, the program should be modified or enhanced with the Vietnamese experiences of Michinoeki and with the special features of each district.

## **(6) Others**

### **1) Dissemination of the concept of Michinoeki**

Michinoeki is a new concept in Vietnam. It is important to disseminate this idea to many officers, residents, and road users. Some ideas to realize effectively such dissemination of concept are; an organization for promoting Michinoeki, homepages and leaflets, indication of Michinoeki in an official road map, and promotion activities with local tourism companies.

### **2) Service Areas in Expressway**

Service areas in expressways are not exactly the same, as, but similar to Michinoeki in the point that they are installed for traffic safety and comfort of drivers and passengers. It is an idea to study the relations of service area and Michinoeki when service areas are constructed and operated.



# MAIN REPORT

# Introduction

## 1. Purpose of the Study

### 1.1 Background of the Study

Due to efforts by the Government of Vietnam (hereinafter referred to as the “GOV”) as well as international donors assistances in improving and rehabilitating principal national highways, recent improvement of road network in Vietnam has been playing crucial roles for its economic development. However, such road improvement produces also negative social impacts in the increased number of people who die from traffic accidents. This is based on the fact that countermeasures for traffic safety cannot catch up the road improvement which enables vehicle velocity much faster than before. It is also said that, since the economic growth in rural areas is far less than that in urban areas, road improvement in rural areas does not sufficiently contribute to the rural development, thus income gaps between two areas tending to become bigger and bigger.

In order to alleviate such social issues by promoting regional development and by attaining more positive effects of road network improvement, the GOV has been studying, as one of policy tools, the introduction of Michinoeki system with reference to Japanese examples. It was in 2002 that the Ministry of Transport (hereinafter referred to as “MOT”), by its Minister’s notification, instructed the Vietnam Road Administration (hereinafter referred to as the “VRA”) of MOT to elaborate a master plan of rest and service facilities along some national roads, equivalent to Michinoeki. The Transport Engineering and Design Institute (hereinafter referred to as “TEDI”), a research institute under MOT, completed in March 2003 a draft preliminary master plan (interim report). Although it specifies number of districts to construct Michinoeki as well as general facilities to be prepared, much more examination should be carried out to find out measures to promote regional development and policies/strategies to expand network of Michinoeki. Therefore, there exists actually no official master plan of Michinoeki yet.

Under such circumstances, the GOV, with a view to upgrading the traffic safety and to promoting local industries and regional development, made an official request to Japan for a development study of Michinoeki covering whole national roads in Vietnam. In response to this request, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) carried out a preparatory study in May-June, 2006 and summarized the contents of such study in the Minutes of Meeting (hereinafter referred to as “M/M”) and the Scope of Work (hereinafter referred to as “S/W”). Both M/M and S/W were signed in December, 2006, and it was decided to start a development study entitled “The Study for Roadside Stations Master Plan in the Socialist Republic of Vietnam (hereinafter referred to as the “Study”)” for a period of approximately nineteen months.

## **1.2 Purpose of the Study**

As described in S/W, the Study has 2 objectives; 1) to formulate a master plan of roadside stations in Vietnam; and 2) to develop a guideline/manual for planning, investment and management of roadside stations through pilot projects. To accomplish these objectives, technical assistance to the GOV is to be provided with a view to upgrading its draft master plan of Michinoeki to a more efficient policy tool and to urging its realization. These objectives are explained more concretely as follows.

- (a) To improve the existing draft master plan or to elaborate a new draft master plan of Michinoeki, as a policy framework to be approved by the GOV. This sustainable and realistic strategy should be also agreed upon by stakeholders concerned.
- (b) To implement Michinoeki pilot projects, through which desirable measures are to be tested, evaluated and utilized for the final master plan and a guideline/manual of Michinoeki, thus aiming at realization of further Michinoeki construction.
- (c) To transfer, through joint collaboration on the above two items, to Vietnamese side, technical know-how required for all process of Michinoeki project, i.e. from planning, designing to operation and management.

## 2. Study Area

### 1) Study Area for Nation-wide Master Plan

The nation-wide Master Plan covers the whole national roads of Vietnam.



Figure2.1 Study Area for Nation-wide Master Plan

## 2) Study Area for Action Plan

Action plans were drawn up in 3 regions i.e., Northern region, Central region and Southern region shown as follows:

### a. Study Area for Northern Action Plan



Figure2.2 Study Area  
Table2.1 Target Roads

National Highway(NH) No.	Section	Length	Provinces along Roads
NH No.1	Ha Noi – Lang Son	150km	Bac Ninh, Bac Giang, Lang Son
NH No.1	Ha Noi - Vinh	250km	Ha Tay, Ha Nam, Thanh Hoa, Ninh Binh, Nghe An
NH No.6	Ha Noi – Son La	250km	Ha Tay, Hoa Binh, Son La
NH No.279	Son La – Dien Bien Phu	50km	Son La, Dien Bien

## b. Study Area for Central Action Plan

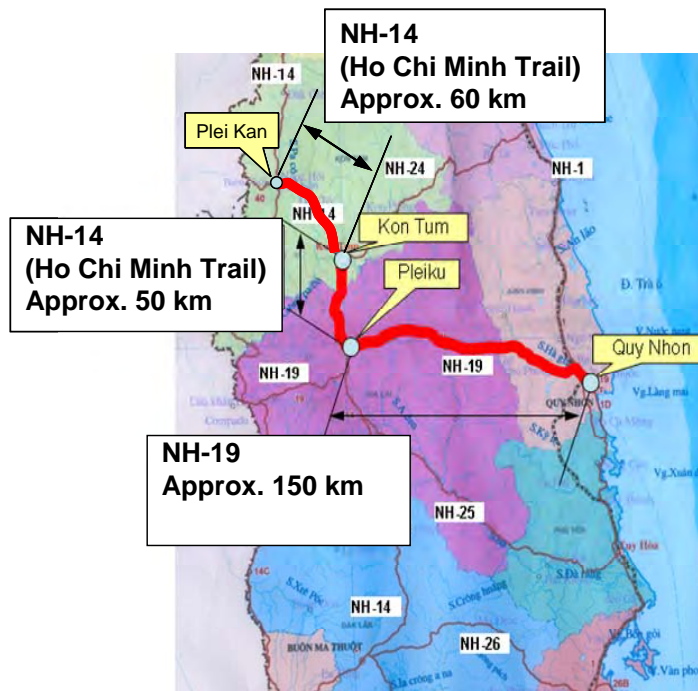


Figure2.3 Study Area

Table2.2 Target Roads

National Highway(NH) No.	Section	Length	Provinces along the road
NH No.19	Quy Nhon – Pleiku	150km	Binh Dinh, Gia Lai
NH No.14	Pleiku – Kon Tum	50km	Gia Lai, Kon Tum
NH No.14	Kon Tum – Plei Kan	60km	Dak Ha, Dak To, Ngoc Hoi

## c. Study Area for Southern Action Plan



Figure2.4 Study Area

Table2.3 Target Roads

National Highway(NH) No.	Section	Length	Provinces along the road
NH No.1	Ho Chi Minh City – Ca Mau	350km	Long An, Vinh Long, Hau Giang, Can Tho, Soc Trang, Bac Lieu, Ca Mau



### 3) Study Area for Pilot Project and Provincial Master Plan

Pilot projects were conducted in three provinces nearby Hanoi.

- (1) National Highway No.1    KM. 113+000 (L)    Bac Giang Province
- (2) National Highway No.1    KM. 267+000 (R)    Ninh Binh Province
- (3) National Highway No.6    KM. 102+400 (L)    Hoa Binh Province

Provincial Master Plan was drawn up with respect to 3 provinces i.e. Hoa Binh province, Ninh Binh province and Bac Giang province, which are target provinces for Pilot Project.



**Figure 2.5 Pilot Project Sites and Target Area for Provincial Master Plan**

### 3. Study Implementation Body

#### 3.1 Study Team

The JICA Study team members are as follows.

Japanese experts	HATANAKA Kunio	Team Leader
	IWATA Shizuo	Deputy Team Leader/ Local Economic Development
	SAKURADA Yoichi	Michinoeki Planning
	MORI Hiroshi	Traffic Demand Forecast
	SHIMIZU Fumio	Business Development Planning (1)
	IWASAKI Masayoshi	Business Development Planning (2)
	ABE Tomoko	Regional Planning
	KUSANO Makine	Facility Planning
	NAGASE Yasunori	Facility Design/Cost Estimate/Tender Document
	NISHIKATSU Katsuaki	Construction Supervision
	AIKAWA Arata	Construction Supervision
	FURUTA Naoya	Environmental and Social Considerations
	OKANO Mikio	Economic and Financial Analysis
	IWASAKI Aki	Coordination
JICA Vietnam Office	Phan Le Binh	Program officer

In addition to the JICA Study Team, several survey teams were composed to implement various field surveys and interviews.

#### 3.2 Study Organization

Study Organization is as follows:

- Counterpart: Vietnam Road Administration (VRA)
- Steering Committee: Vietnam Road Administration (VRA), Ministry of Transport (MOT), Ministry of Planning and Investment (MPI), Ministry of Agriculture and Rural Development (MARD), Hoa Binh provincial Department of Transport, Ninh Binh provincial Department of Transport, Bac Giang provincial Department of Transport

#### 3.3 Study Schedule

Study Schedule is as follows:

- The first field work in Ha Noi : February, 2007 - March, 2007
- The second field work in Ha Noi : May, 2008 - March, 2009
- The third field work in Ha Noi : May, 2009 - March, 2010



# **1. Importance and Necessity of Michinoeki in Vietnam**

The necessity of introduction of Michinoeki in Vietnam can be explained from two viewpoints, namely road transportation and local socio-economic development.

## **1.1 Michinoeki for Road Traffic and Local Community**

Michinoeki in Vietnam are expected 1) to improve road traffic condition, and 2) to promote socio-economic development in areas where Michinoeki are allocated.

### **(1) Michinoeki for Road Traffic**

#### **a. Promoting road traffic safety**

Traffic accident is a serious issue in Vietnam which should be resolved as early as possible. Serious accidents happen as the result of some causal factors. Among them one factor is a human action. Drivers who take little rest hardly concentrate on safe driving, and they tend to take wrong actions which will bring about accidents. They may hit pedestrians and other vehicles.

Michinoeki provides rest/relaxation. Drivers can take sufficient rest to alleviate their fatigue in Michinoeki and continue driving further. Michinoeki will improve road traffic safety.

#### **b. Improving road travel activities**

There exists a large amount of needs for long-distance transportation in Vietnam. To meet such user needs, many long-distance bus networks are being operated, covering nation-wide areas. Especially, in rural area, no other public transport method is provided for a long-distance travel except bus. For individual movement, Passenger cars have been dramatically increased these days. Needs of the improvement in road travel activity are increasing.

Currently there exist some roadside facilities which are similar to Michinoeki. Few facilities, however, meet with requirements for the comfortable mobility of drivers and passengers. Michinoeki provides better and reliable services for road users so that drivers and passengers will be able to travel easily for a long distance.

### **(2) Michinoeki for Local Community**

Many drivers and passengers arrive at Michinoeki from various cities, districts, and villages. Residents living around Michinoeki will have opportunities to meet with people of other regions. The residents also meet consumers who will buy local products. The consumers' direct reactions will make local people work actively with motivation to improve quality of their products.

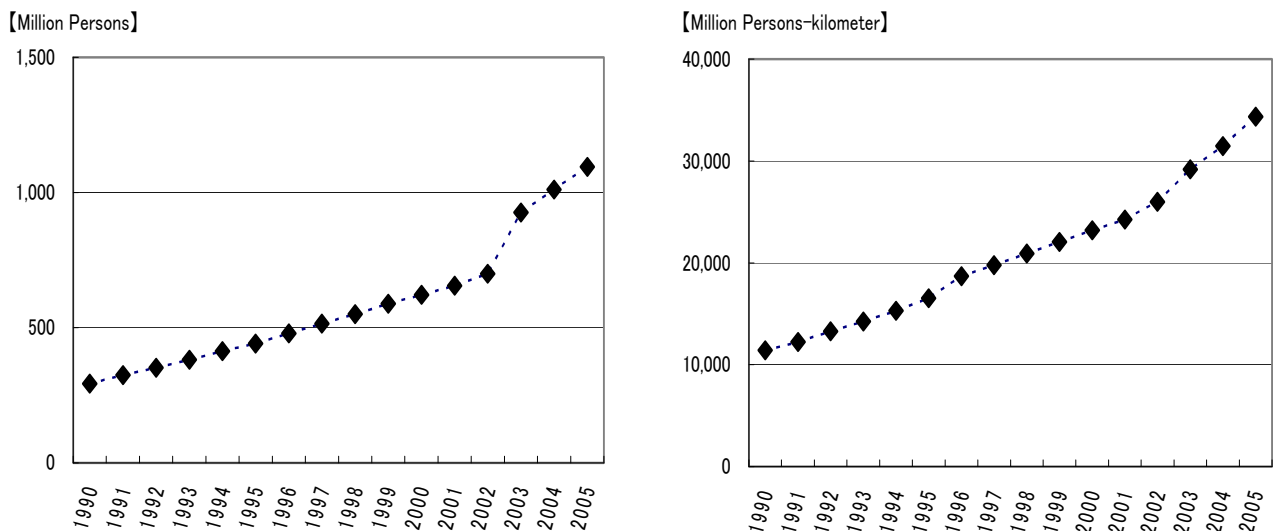
Another role of Michinoeki in socio-economic activities is the provision of information on local areas for visitors. Information about sightseeing, culture, and history of the areas will attract the visitors. Michinoeki could possibly build up local community in roadside area.

## 1.2 Current Status of Road Traffic Condition

Road traffic is rapidly increasing in Vietnam. Accordingly traffic accident is increasing. It is quite important to establish road facilities for traffic safety. Michinoeki is one of the expected facilities that contribute to traffic safety.

### (1) Increase of Passenger Transport

Road traffic volume has been drastically increasing in Vietnam. Figure 1.1 shows the annual number of passenger transport carried by vehicle. Since 1990, traffic volume has been constantly increasing. After 2000 the speed of the increase is accelerated. Average annual rate of increase during 2000 and 2005 is approximately 11% for passenger transport and 8% for passenger-kilometer transport.



**Figure 1.2.1 Passenger Road Traffic Volume in Vietnam**

Source: Statistical Yearbook of Vietnam, 2005

## (2) Increase of Traffic Accident

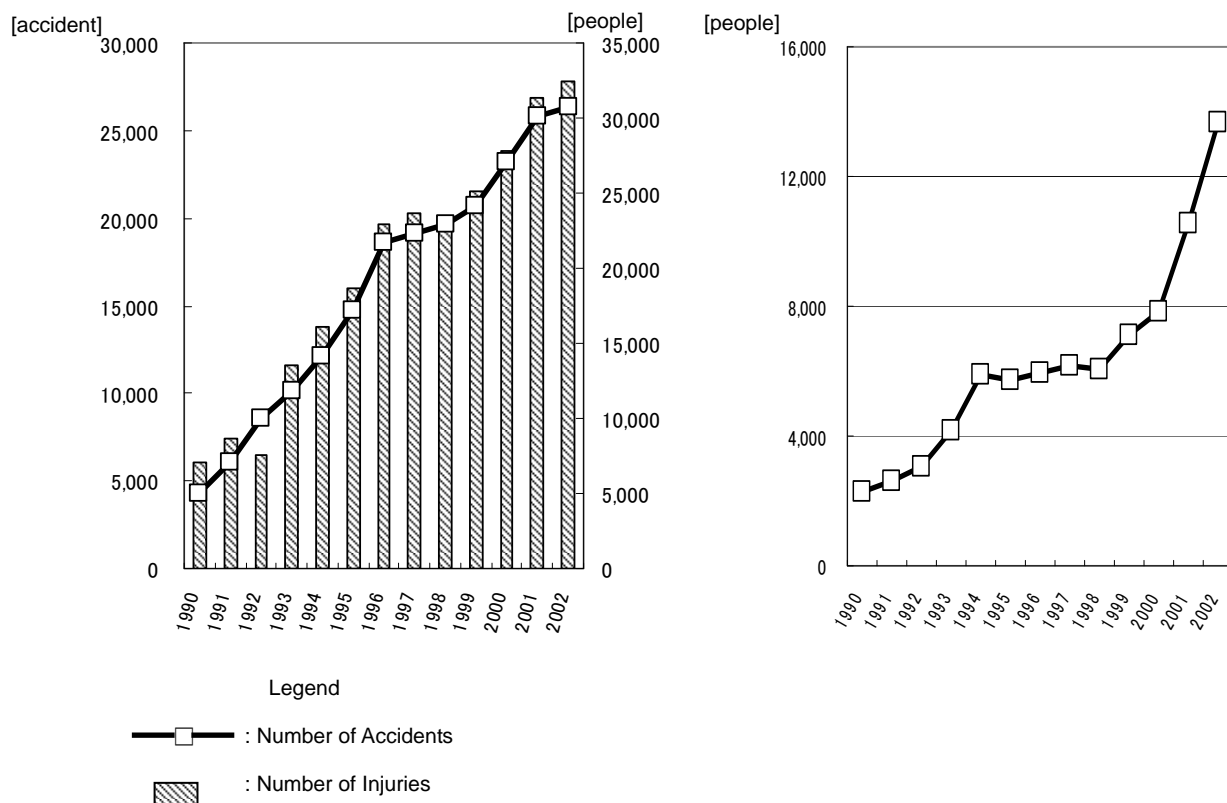
Recently number of road traffic accident and injuries, as well as death toll, caused by road traffic accident has been increasing significantly as shown in the following table and figure.

As for average annual rate of increase from 1992 to 2002, number of accidents, injuries and death toll are 16%, 16%, and 12% respectively. AS for 5 year increase rate is 7%, 7%, 17% respectively. Under such devastated road traffic accident condition, Michinoeki is expected to play the role of alleviating drivers' fatigue and, as a result, contributing to reduction of road traffic accident.

**Table 1.2.1 Recent Trend of Traffic Accident in Nation-Wide Vietnam**

Year	Number of Accidents [accidents]	Death Toll [persons]	Number of Injuries [persons]
1990	6,110	2,268	4,956
1991	7,382	2,602	7,114
1992	6,470	3,077	10,048
1993	11,582	4,140	11,854
1994	13,760	5,897	14,174
1995	15,999	5,728	17,167
1996	19,638	5,932	21,718
1997	20,262	6,148	22,340
1998	19,975	6,067	22,975
1999	21,538	7,095	24,179
2000	23,866	7,840	27,083
2001	26,874	10,548	30,175
2002	27,848	13,683	30,711

Source: NTSC (National Traffic Safety Committee) data



**Figure 1.2.2 Recent Trend of Number of Accidents and Injuries in Nation-Wide Vietnam**  
Source: NTSC data

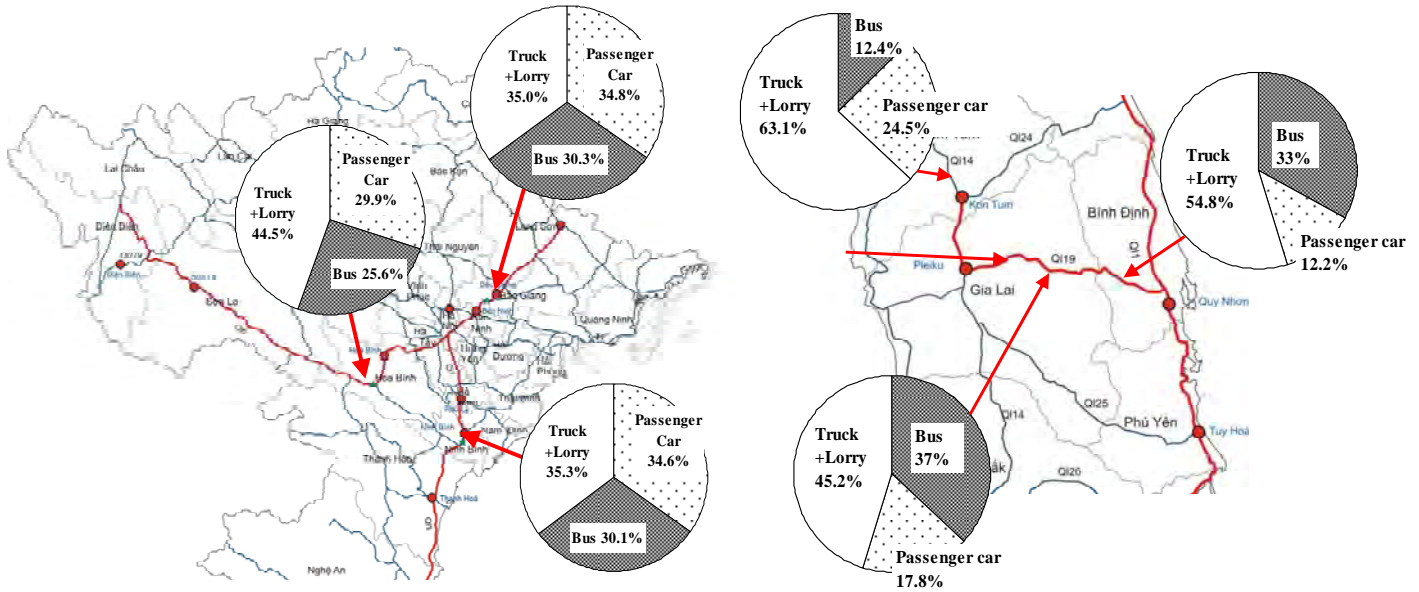
**Figure 1.2.3 Recent Trend of Death Toll in Nation-Wide Vietnam**  
Source: NTSC data

### **(3) Vehicles in National Highways**

It can be said that motorization has not been prevalent over the nation-wide Vietnam as compared to other developed countries. Major transport means of Vietnamese people within cities is a motorbike while a long-distance-bus is the major one for the transport between cities.

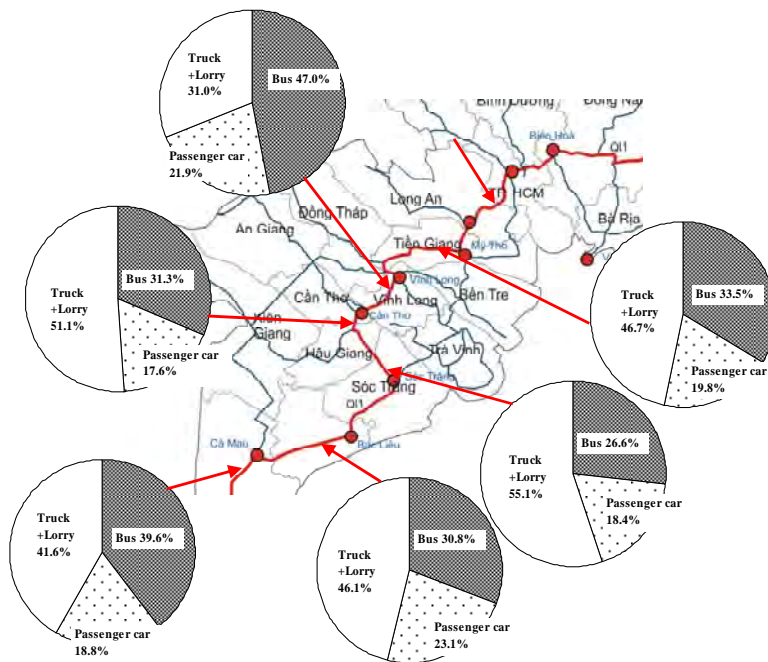
The following figures are the result by a field survey, which was conducted in 3 regions such as northern region, central region and southern region. The portions of each vehicle i.e., passenger cars, buses and trucks are approximately 20-35%, 20-40% and 30-50% respectively. Trucks are the major traffic in night time, and buses are the major traffic in day time.

Michinoeki is mainly targeting drivers and passengers. In planning the Michinoeki service quality and facility design, above facts should be taken into account.



**Figure 1.2.4 Share of Vehicle Type (northern region) Figure 1.2.5 Share of Vehicle Type (central region)**

Source: JICA Study Team



**Figure 1.2.6 Share of Vehicle Type (southern region)**

Source: JICA Study Team

## 1.3 Current and Future Road Network

Road network is now being built up as an urgent national policy. New national highway and expressways are under planning.

### (1) Current Road Network

Road Network includes national highways, provincial roads, districts roads, communal roads, thoroughfares, and special-use roads. The target road of Michinoeki is trunk roads for a long travel. It means that mainly national highways and major provincial roads are targets.

**Table 1.3.1 Length of Roads**

Type	Length(km)	
	1999	2006
National Highway	15,520	17,295
Provincial Highway	18,344	23,138
District Road	37,437	54,962
Communal Road	134,463	141,442
Others	11,370	14,950
<b>Total</b>	<b>224,639</b>	<b>251,787</b>

Source: Vietnam Transport Safety Master Plan December, 2007

Figure 1.3.1 (next page) is a network of national highways. It connects cities, districts, and villages throughout the nation.

The National Highway No.1 (NH-1) is a trunk highway. However it is difficult to expand NH-1 since the road is close to seashore and mountains and there are few space for expansion. Therefore the construction of a new road which is a by-pass of NH-1 is being planned. Besides, the constructions of radiant road networks are planned so that they will connect Hanoi with other rural areas and HCMC with other rural areas. Thus road network crossing vertically and horizontally, and radiant road network are forming the Vietnamese nation-wide road network.

Furthermore, cross-border transport infrastructure connecting Lao PDR, Cambodia and China have become an important transport infrastructure from the view point of the ASEAN economic corridor. Therefore construction of much further road traffic infrastructure is required.



**Figure 1.3.1 Current Road Network**

Source: Vietnam Road Administration

## (2) Planned Road Network

In order to meet increasing road traffic demand, there are many plans of upgrading and expanding the existing road as well as constructing the new road network. Table 1.3.2 is the list of National Highway development project.

**Table 1.3.2 List of National Highway Development Plan**

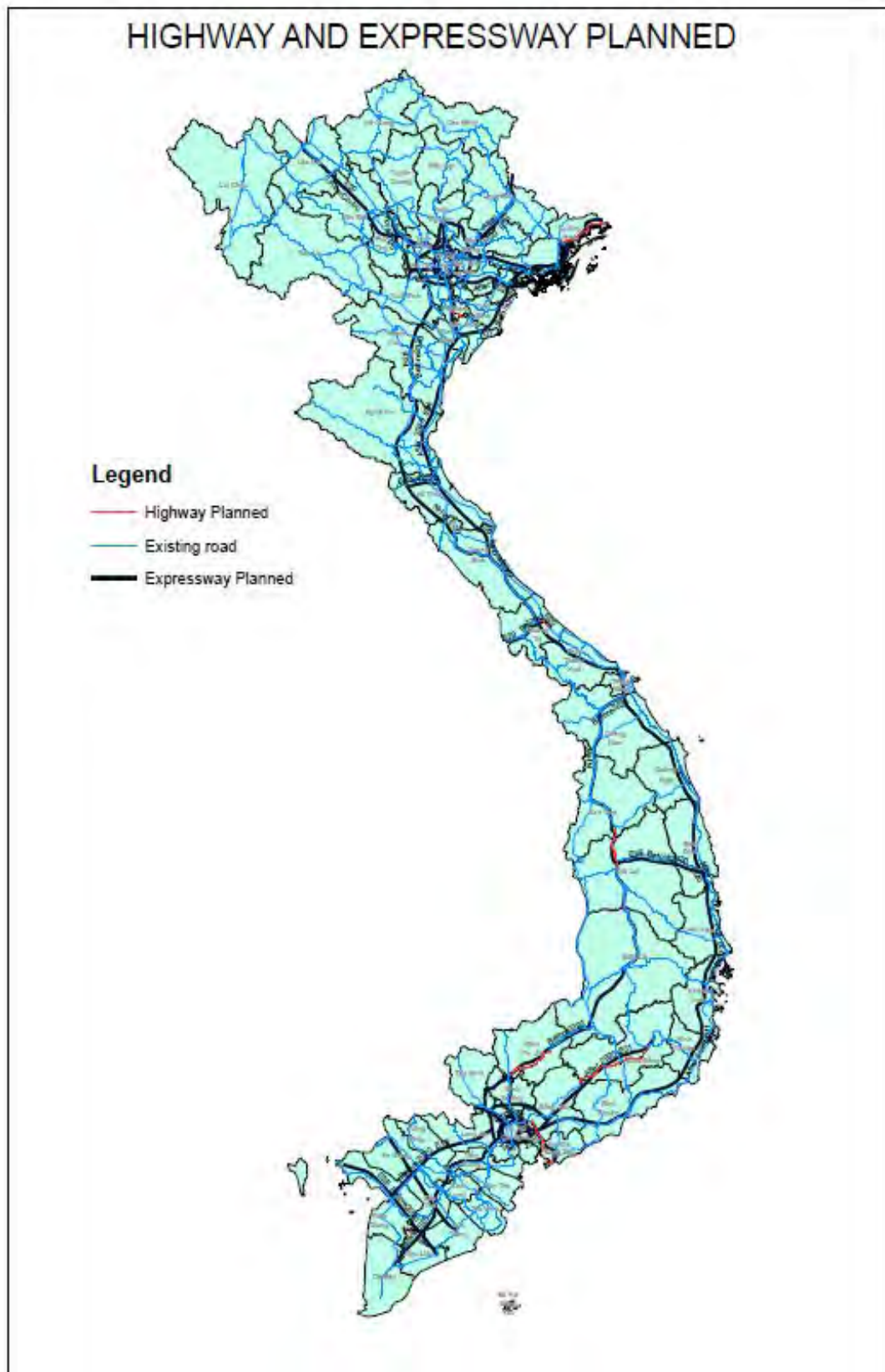
Section		Length [km]	No of lane	Total Cost [Billion VND]	Implementation Period	Project Status
<b>Urban Streets</b>						
1	Hanoi Expressway Ring Road 3 NoiBai-MaiDich	20.2	6	8,640	2006-2010	F/S ongoing
2	Ring Road 3 HCMC	91	6	24,800	2006-2010	F/S available
<b>Primary Road Network Development</b>						
1	Upgrading NH 18A, MongDuong-MongCai	122	2	3,200	2006-2010	
2	Economic axle-road: DanPhuong-PhucTho -SonTay	24	6	1,120	2006-2010	BOT F/S Approved
3	DoXa-QuanSon Highway	30	6	1,600	2006-2010	BOT contract is being negotiated
4	Upgrading NH 6: BaLa-XuanMai	20	4	720	2006-2010	
5	Expanding NH 51 DongNai, BaRia-VungTau	85.6	6	608	2006-2010	
6	Upgrading NH 14: DongXoi-ChonThanh	34	4	512	2006-2010	
7	Upgrading NH 21: PhuLy-NamDinh	35	2	608	2006-2010	
8	Upgrading NH 14: GiaLai-KonTum	30	4	928	2006-2010	
9	Upgrading NH 1: DongHa- QuangTri	10	4	304	2006-2010	
10	LaHa-DucPho bypass-NH1 (15km)	15	4	464	2006-2010	
11	DinhVu bridge	N/A	N/A	1,552	2008-2010	
12	VanTien bridge	1,341m	4	N/A	2006- >2010	
13	VinhThinh bridge	3,880m	6	1,121	2006-2010	
<b>Secondary Road Network Development</b>						
1	Upgrading NH 20: DauGiay-LienKhuong	250	2	416	2006-2010	
2	New Coastal Road	100	N/A	5,360	2006-2010	VRA is considering alignment

Sources: 1. Project List in Decision 412/2007/QD-TTg  
2. FDI call project list in Decision 1290/2007/QD-TTg  
3. Other MOT data



Expressways are now under construction or under planning as nation-wide road network. Expressway development activates road transportation. Current Expressway projects are mostly located around Hanoi and HMC and are planned to connect both cities. The current and planned National Highways and Expressway networks are shown in the following figure.

After the construction of Expressways, long-distance road transportation may be shifted from the national highways to the Expressways. However, construction density of Expressways is not as high as that of the National Highways, and the coverage of service area of Expressways is limited. Furthermore, newly constructed Expressways will induce the new road traffic demand. Therefore, it can be said that Michinoeki as a basic road transport infrastructure, constructed along the National Highways, will continue to have important roles.



**Figure1.3.2 Network for Future National Highways and Expressways**  
Source: Vietnam Road Administration

**Table 1.3.3 List of Expressway Development Plan**

Section		Length [km]	No of lane	Total Cost [Billion VND]	Finance Source	Implementation Period	Project Status
North-South East coast expressway							
1	Lang Son – Bac Giang – Bac Ninh	130	6	12,220	N/A	2010-2020	
2	Cau Gié – Ninh Binh Phase1	56	4	7,692	GB, CBond	2006-2010	Under Construction
3	Ninh Binh – Thanh Hoa	75	6	12,380	N/A	2010-2020	Preliminary available F/S
4	Thanh Hoa – Vinh	140	6	22,120	N/A	2010-2020	Preliminary available F/S
5	Vinh – Ha Tinh	20	6	2,080	N/A	2010-2020	
6	Ha Tinh – Quang Tri	277	4	21,610	N/A	2010-2020	
7	Quang Tri – Da Nang	178	4	18,160	N/A	2010-2020	
8	Da Nang – Quang Ngai	131	4	17,820	N/A	2010-2020	F/S ongoing
9	Quang Ngai – Quy Nhon	150	4	23,700	N/A	2010-2020	
10	Quy Nhon – Nha Trang	240	4	24,960	N/A	2010-2020	
11	Nha Trang – Dau Giay	378	6	55,940	N/A	2010-2020	
12	HCMC – Long Thanh – Dau Giay	55	8	18,880	JBIC, ADB	2010-2020	F/S,D/D available
13	Long Thanh – Nhon Trach – Ben Luc	45	8	12,340	N/A	2010-2020	
14	HCMC- Trung Luong	40	8	13,200	GB	2010-2020	Under Construction
15	Trung Luong – My Thuan – Can Tho	92	6	26,250	BOT	2010-2020	F/S ongoing; BOT under considering
16	Can Tho – Ca Mau	150	4	24,750	N/A	2010-2020	
North-South West coast expressway							
17	Doan Hung – Hoa Lac – Pho Chau	457	6	53,930	N/A	2010-2020	
18	Ngoc Hoi – Chon Thanh – Rach Gia	864	6	96,770	N/A	2010-2020	
Expressway in North region							
19	Ha Noi – Hai Phong	105	6	18,592	BOT	2008-2010	Construction started on May/2008 (investor: VDB, VCB)
20	Ha Noi – Lao Cai Phase1	264	4	12,297	ADB	2008-2011	F/S available, D/D ongoing
21	Ha Noi – Thai Nguyen Phase1	62	4	5,180	JBIC	2005-2010	Constructors' bidding ongoing
22	Thai Nguyen – Cho Moi	28	6	2,940	N/A	2010-2020	
23	Lang – Hoa Lac	30	6	7,733	GB; PB	2010-2020	Construction Ongoing
24	Hoa Lac – Hoa Binh	26	6	2,550	N/A	2010-2020	
25	Bac Ninh – Ha Long	136	6	19,040	N/A	2010-2020	F/S NoiBai-HaLong (Year 1998) Available
26	Ha Long – Mong Cai	128	6	13,820	N/A	2010-2020	
27	Ninh Binh – Hai Phong – Quang Ninh	160	4	13,760	N/A	2010-2020	
Expressway in central region							
28	Hong Linh – Huong Son	34	4	2,450	N/A	2010-2020	
29	Cam Lo – Lao Bao	70	4	4,900	N/A	2010-2020	
30	Quy Nhon – Pleiku	160	4	12,000	N/A	2010-2020	

Sources: 1. Project List in Decision 412/2007/QĐ-TTg

2. FDI call project list in Decision 1290/2007/QĐ-TTg

3. MOT Expressway plan proposal by 7056/TTr-BGTVT dated on Nov.5, 2007

**Table 1.3.3 List of Expressway Development Plan**

(Continued)

Section		Length [km]	No of lane	Total Cost [Billion VND]	Finance Source	Implementation Period	Project Status
<b>Expressway in south region</b>							
31	Dau Giay – Da Lat	189	4	19,280	BOT	2010-2020	Preliminary F/S available
32	Bien Hoa – Vung Tau	76	6	12,160	N/A	2010-2020	BOT F/S available (Year 2000)
33	HCMC – Thu Dau Mot – Chon Thanh	69	8	20,010	N/A	2010-2020	
34	HCMC – Moc Bai	55	6	7,480	N/A	2010-2020	
35	Soc Trang – Can Tho – Chau Doc	200	4	24,200	N/A	2010-2020	
36	Ha Tien – Rach Gia – Bac Lieu	225	4	27,230	N/A	2010-2020	
<b>Expressway ring road sytem in Hanoi</b>							
37	Ring road No 3	56	6	17,990	N/A	2010-2020	F/S MaiDich-ThanhTri ongoing
38	Ring road No 4	125	8	34,500	N/A	2010-2020	Preliminary F/S available
<b>Expressway ring road sytem in HCMC</b>							
39	Ring road No 3						

Sources:

1. Project List in Decision 412/2007/QD-TTg
2. FDI call project list in Decision 1290/2007/QD-TTg
3. MOT Expressway plan proposal by 7056/TTr-BGTVT dated on Nov.5, 2007

Note: GB = Government budget; CBond = Construction Bond; PB = Provincial budget, BOT=Build Operate Transfer

## 1.4 Roadside facilities similar to Michinoeki

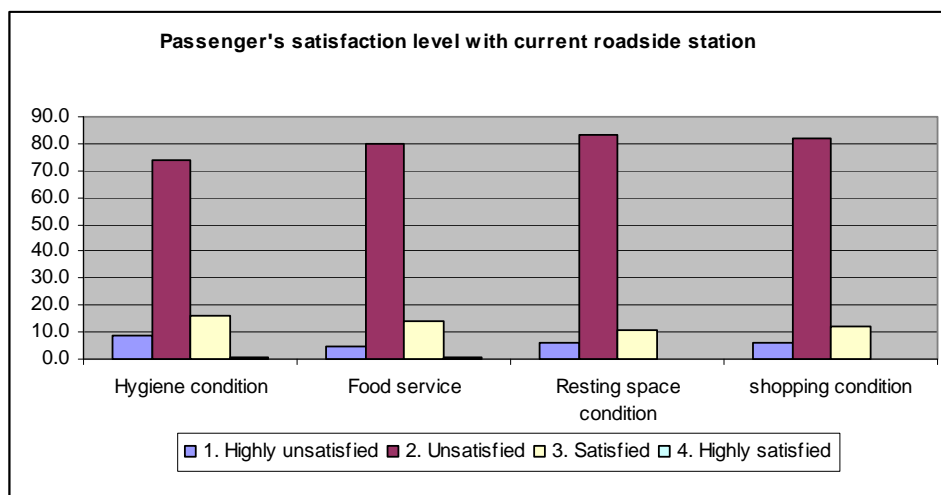
There are many roadside facilities such as restaurants, shops, and parking lots. However their contribution to road safety is limited. Moreover, in terms of socio-economic activity, most existing facilities are not deeply involved in local community.

### (1) Current Facilities

There exist restaurants with parking lots around major highways. For instance, in northern region there are many facilities along 700km of roads, NH-1 (Hanoi – Lang Son, Hanoi – Vinh), NH-6 (Hanoi – Son La), and NH-279 (Son La – Dien Bien Phu). All of these facilities are commercial facilities and not necessarily suitable for comfortable resting.

Their services do not necessarily fulfill satisfactions of users; some are too small to rest, some don't have enough space for parking, and others have poor hygienic condition.

Based on the results of the survey of user's satisfaction for existing resting facilities, which JICA Study Team conducted in northern region, bus passengers are dissatisfied with such factors in high ratio as poor hygiene of facilities, poor quality of food services, small resting spaces, and poor sales services. New and well organized resting facility has to be developed to meet the road user's needs.



**Figure 1.4.1 Passenger's Satisfaction Level with Current Roadside Facilities**  
Source: JICA Study Team

### (2) Needs for Roadside Facilities

On main national routes, the major trip pattern is long-distance movement. The bus traffic has grown significantly from 2003 to 2007 at NH-1 and NH-6, along which the sites of Pilot Projects are located. The increasing rates are approximately 10% and 20~30% for NH-1 in Ninh Binh and NH-6 in Hoa Binh, respectively.

There exists the fact that many provincial residents are pursuing the opportunity to work in urban area. Long-distance movements by using middle- or small-sized buses from big city such as Hanoi to distant rural cities are increasing. Together with the increased traffic demand for trading, visiting and tourism activities, the needs of improving the comfort of mobility are booming, and thus resting facilities at roadsides are strongly demanded.

## **2. Basic Idea for Development of Michinoeki**

This chapter firstly discusses the basic concept and functions of Michinoeki in Vietnam. Then the basic strategy for promoting the nation-wide development of Michinoeki in Vietnam will be discussed in detail.

### **2.1 Concept and Functions of Michinoeki**

Michinoeki is basically a public facility which is expected to provide public service. Therefore, Michinoeki quite differs from existing roadside facilities, most of which are operated by private entities. This section discusses the concept and functions of Michinoeki from the viewpoint of public characteristics.

#### **(1) Basic characteristics of Michinoeki**

##### **1) A Roadside Spot for “Free drop-in” and “Entrancement of local community”**

Michinoeki can be described as a road-side infrastructure with a “drop-in” spot function. Drivers can park their vehicles and they, as well as passengers, can take rest by dropping in at the site.

Also Michinoeki can be one of the centers of socio-economic activities in the region. Road is an infrastructure which is used for smooth and comfortable transportation. The area where road passes through is merely passing area. Michinoeki with “drop-in spot” function will be a tool to prevent roadside areas from being merely such passing points. Michinoeki is an entrance to the region, where regional specialties are sold and local information are provided for visitors.

Roadside areas will be vitalized in terms of economic as well as social dimension. In addition, local inhabitants can enhance local charm by communicating with road-users.

##### **a. Difference from commercial roadside facilities**

In order to clarify public characteristics of Michinoeki, it is better to specify differences from those of similar facilities. The list of the facilities similar to Michinoeki would include private drive-ins, restaurants, and petro stands along highways. They sell goods to drivers and passengers, and they sometimes provide local information.

These facilities are operated by private owners. Local residents usually do not participate in the facilities. The owners of private facilities are not interested in public service, which is generally considered as unprofitable. Given that service is not free-of-charge, users are confined to those who are interested in pay service.

Major visitors of Michinoeki are drivers and passengers, and local residents can also be the visitors. The latter includes children and elderly people who come to Michinoeki on foot. Local people use the facility as a market space for selling and buying local special products. Local residents will be a service providers as well as users of space and related facilities.

##### **b. Difference from service areas on expressways**

Expressways sometimes have facilities called “service areas” which provide public services to road users. Expressway is separated from the access of local community. Participation by local inhabitants at the stage of planning or operation is limited.

The concept of Michinoeki that the facility is a junction of visitors and local community can be applied to service areas in expressways. However in this report, Michinoeki along expressway is out of the scope.

### **c. Michinoeki as a facility of local community**

Unlike private drive-ins on highways and service areas on expressways, Michinoeki aims to be a facility open to the region as well as unspecified people. Therefore, in principle, anybody can access to the facility and visitors should not be restricted. In this sense, services including health care, education, and regional information, which are considered highly public, can be provided to meet the needs of a wide range of users.

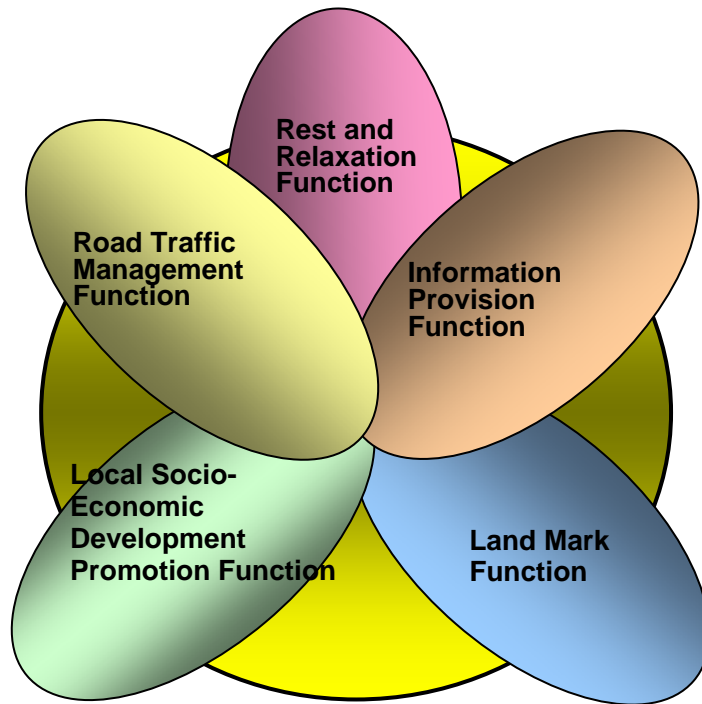
## **2) Basic Functions**

In Vietnam, improvement of intercity roads has been hastened, and traffic volume of vehicles such as passenger cars, buses, trucks and trailers has been increasing significantly. Additionally, in current driving patterns, the vehicles traveling in a long-distance run for three or four hours or longer without any rest. Therefore, there is a concern about worsening driving safety by fatigues of passengers and drivers and the needs of comfort.

Based on the recognition regarding current road traffic conditions in Vietnam, the next five functions is determined as the basic functions of Michinoeki in Vietnam.

- <Function-1> Rest and Relaxation Function
  - <Function-2> Road Traffic Management Function
  - <Function-3> Information Provision Function
  - <Function-4> Local Socio-Economic Development Promotion Function
  - <Function-5> Landmark Function

These functions are not independent but some parts are overlapped to each other.



**Figure 2.1.1 Basic Functions of Vietnamese Michinoeki**

#### **a. Rest and relaxation service**

People who go out by a vehicle often try to avoid traveling to the regions that are not equipped with facilities for driving fatigue reduction and toilet breaks. When tired, road users who travel through those regions park their cars on the roadside for a nap inside cars. They may get off the cars to feel refreshed. However, those on-the-road parking vehicles hamper the smooth traffic flow of road network and threaten the safety of traffic.

The installation of rest/relaxation and toilet facilities at the locations where everyone has access makes it possible for road users to travel for longer hours and distances. Michinoeki can function as a relay point, reducing driving fatigue. In addition, for people who refrained from going out due to the lack of such facilities, the scheme would be conducive to the reduction of mobility constraints, especially for women.

By using effectively the rest/relaxation service of Michinoeki, road users are able to overcome the mobility constraints, which ultimately lead and contribute to the promotion of a wide-range and more frequent movements. In addition, by reducing driving fatigue, Michinoeki can eradicate beforehand the negative effects of fatigue on driving behaviors of drivers and thus improve road safety.

Such roles of Michinoeki will undoubtedly make a significant contribution to bringing about a social impact on the promotion of more comfortable and safer vehicle travels.



### **b. Road traffic management**

Information of road network and traffic conditions is basic needs of drivers. The guidance information about road networks includes how to get to the places and whether traffic is closed. Such basic information will be available at Michinoeki. It will also support road users' smooth driving and contribute to the improvement in road safety.

Michinoeki can reserve a space for road management. Michinoeki can provide parking lots for road maintenance vehicles or patrol vehicles. Another example for traffic management is campaigns. The road authority can have campaigns for traffic safety by using Michinoeki as a campaign site.

### **c. Information provision service**

Visitors sometimes need Information on tourist spots, natural resources, history and culture of the region. The information service on these matters directly leads to the self-promotion of the region to visitors. In other words, it would attract visitors into further inland by promoting the region and letting them know local characteristics. Visitors will, via exposing themselves to the tourism information or cultural resources hitherto unknown to them, enjoy new discoveries. Therefore, it is assumed that it will trigger socio-economic activities of the region and encourage visitors to buy local specialties. Information service on these matters is believed to create opportunities for enhanced communication between visitors and local people.

It is not only to visitors but also to local inhabitants that Michinoeki aims at providing information as its service. Information type that local people want to be provided through Michinoeki is not confined to economic services like sales of goods, but includes public services such as health, education, anti-disaster measures. By offering simple textual information, they may also cover information like locations and departments of clinics/hospitals, basic information related to preventive medicine and educational information.

To sum up, information service in Michinoeki aims at contributing to the improvement in social stability of the region by enhancing road users' safety, security, and comfortable mobility, promoting communication between local people and road users, and upgrading public service quality for inhabitants of the region.

### **d. Local socio-economic development promotion**

Local socio-economic development promotion includes providing a market space where visitors can purchase local specialties. At the same time, efforts to make visitors realize the charm of region, as is described in information service function, should be made.

If visitors appreciate and buy local specialties, it would lead to the increase in income standards of local community. Such a move would contribute to the regional economic development and revitalize various economic activities like agriculture, craftworks and tourism in the region. In addition, it could make local producers discover a new sales opportunity and trigger new innovative activities such as creating new local specialties or processing agricultural products to generate added-value.

#### **e. Land mark**

Michinoeki can function as a local symbol to raise local people's awareness of regional uniqueness. At the same time, drivers can utilize Michinoeki as a land mark, guiding them so that they can easily reach at Michinoeki. Local authorities as well as local community people can utilize and appeal Michinoeki as local distinctive features.

### **(2) Services and Facilities in Michinoeki**

In accordance with the functions of Michinoeki, the following services are provided and facilities are installed in Michinoeki.

#### **a. Rest and relaxation service**

Rest and relaxation services will be provided with the aim of alleviating driving fatigue and realizing much more comfortable vehicular trip. Below are the examples of the services and facilities that fit to such purposes;

- A Big space enough for easy parking
- A resting and relaxation space being equipped with, for instance, comfortable long chairs
- A clean toilet
- A washing facility for hands, feet, faces and so forth
- Tasty meals, snacks, café so that visitors can enjoy relaxing time

#### **b. Road traffic management**

The purpose of the provision of road traffic management service is to promote smoother, more comfortable and safer vehicular trip. Below are the examples of the services and facilities that fit to such purposes;

- Up-to-date roadmap information
- Emergency information such as a road traffic accident, hazard points on the roads
- Parking spaces for patrol vehicles for road maintenance
- Traffic safety campaign utilizing Michinoeki for propaganda activities
- Emergency aid service in case of traffic accidents

#### **c. Information provision**

Michinoeki will provide the information service with the aim of guiding drivers to the location they head for and appealing local distinctive features to visitors. Below are the examples of the services and facilities that fit to such purposes;

- Local information such as local events, histories, cultures, and sightseeing spots.

#### **d. Local socio-economic development promotion**

Michinoeki can promote local socio-economic activities by functioning as a local market, a meeting space, an agricultural processing space. Below are the examples of the services and facilities that

fit to such purposes;

- A space for advertising local distinctive products
- A market space for selling local products
- A meeting and gathering space for local people
- A space for displaying drawings and crafts made by local people
- A space for the training of processing agricultural products

**e. Landmark**

Michinoeki can function as a local symbol and a guide to the region. Below are the examples of the services and facilities that fit to such purposes;

- A space where good sight can be seen
- A space where some symbolic monument can be installed

## 2.2 Idea of Development Plan of Michinoeki

This section discusses basic strategy for developing Michinoeki based on the previously discussed concept and functions.

### (1) Approach for Development

The following sentences indicate the key points in development.

- Michinoeki is a public road infrastructure which is constructed on roadside area. Therefore Michinoeki should be supervised by MOT and/or VRA in central government level while by provincial PC in local level.
- Michinoeki is a community infrastructure that promotes or contributes to the vitalization of the region. Therefore Michinoeki should be planned and operated under the direct participation of local community.
- Private fund and idea are welcome because Michinoeki should be a user-oriented facility and commercial activity is the important bases to realize and assure Michinoeki operation for public function.

#### a. Michinoeki is a public road infrastructure

The Law on Land Road Traffic amendment, which will be promulgated within year of 2009, will stipulate Michinoeki as one of the road traffic infrastructures. In fact Michinoeki should be attached to a road in order for vehicle drivers to drop by directly Michinoeki and its road should be treated as one infrastructure both in a construction and an operation stage.

The service provided by Michinoeki includes public services such as road's and regional information provision service and resting service, which are provided in free-of-charge. Michinoeki is a public space any person can access. As authorities of road traffic and road infrastructure, MOT and/or VRA should supervise Michinoeki at central government level while provincial PC should do so at local level.

#### b. Michinoeki is a community infrastructure

Michinoeki will provide local people with chances to sell their products, and may go further to provide chances to develop new products. It is also expected that local people establish active interrelationship between visitors from other region by providing local information such as tourism information and local culture. In order to provide such local services in an appropriate manner, local people's active participation in planning, development and operation of Michinoeki is indispensable. Moreover, local people's direct involvement with the Michinoeki project may raise the local people's consciousness of ownership and their positive attitude toward activities relating to socio-economic vitalization of the region.

#### c. Private fund and idea is welcome

Private fund is welcome since governmental and provincial funds are limited. Private idea is

welcome since Michinoeki should be a user-oriented facility where ideas of private enterprises can be fully adopted. Many drivers and passengers as well as local people visit Michinoeki. There will be an opportunity for private enterprises to conduct commercial activities. As Michinoeki is public space, unrestricted commercial activities are not preferable. However, to some extent, some commercial business will be accepted under the supervision of public authority.

## **(2) Distribution of Michinoeki**

Michinoeki should be distributed so that their functioning accomplishes their goal. The following sections identify the key factors in selecting the Michinoeki site, target roads of Michinoeki, and creating the collaborative relationship among Michinoeki in a form of Michinoeki network.

### **1) Factors and approach**

Six points below are the key factors to efficiently allocate Michinoeki.

#### **a. Break time interval**

To successfully perform Michinoeki's main function "rest & relax of drivers and passengers", Michinoeki should be located within a certain interval of road section. Article 63 of the Law on Land Road Traffic (revised version) says that "In a day, driving time of drivers should not be over 10 hours in total and 4 consecutive hours. Transport operators and drivers are bound to this regulation". This article can provide one of the viewpoints in determining the interval.

#### **b. Traffic volume**

Traffic volume is obviously one of basic factors in constructing Michinoeki. If the volume of traffic is high enough, the necessity of Michinoeki will be significant and there will yield much incentive for local residents to join in Michinoeki project as local activists.

#### **c. Land use condition**

It is preferable that Michinoeki is located in a suburban or rural area in order to avoid bringing about such negative and inefficient effects on existing traffic flow as traffic congestion.

#### **d. Coexistence with existing similar facilities**

There exist many roadside facilities similar to Michinoeki especially along major national highways. However most of them are commercial facilities operated by private owners. Some of them can be competitive with Michinoeki, if their services reach to a certain level of satisfaction. Because Michinoeki is a public facility and is constructed in accordance with state socio-economic policies, the conflicts of interests with private activity should be avoided.

#### **e. Accessibility**

As Michinoeki is a roadside facility, it should be accessible from the road directly.

Another point of consideration is the smooth and comfortable accessibility, which is preferable because Michinoeki is expected to attract many vehicles to drop by. For example, a site near junctions of trunk roads is a preferable location of Michinoeki.

**f. Local Needs**

Michinoeki is a local facility in a sense that local people's active participation in planning and operation/management is significant to its success. If local people have little interest or involvement in Michinoeki, it would be hard to keep its successful functioning. Active needs of local community are very important to successful functioning of Michinoeki.

Location of Michinoeki must be selected on the basis of above-mentioned factors. It is preferable, though, to adopt those criteria for the site selection in a flexible way. The site of Michinoeki should be determined carefully by examining and taking account of the condition of surrounding area of the site.

Table 2.2.1 describes and suggests the criteria for site selection, based on the expected functions of Michinoeki. The investor of Michinoeki should investigate the impacts of Michinoeki on road traffic and local community.

**Table 2.2.1 Ideas for Site Selection**

Basic Functions	Example of Criteria for Site Selection
Rest and Relaxation	Site Interval: A. In case of 50km/h cruising speed(high grade national highway): ---> every 200km (equivalent to 4hours driving) ---> every 100km (equivalent to 2hours driving) B. In case of 30km/h cruising speed(lower grade national highway or provincial road): ---> every 120km (equivalent to 4hours driving) ---> every 60km (equivalent to 2hours driving)
Information Provision	-Major tourism spots -Places where information of the road, road traffic, tourism and regional condition can be easily updated.
Local Socio-Economic Development Promotion	-Area where ownership and capacity of local community is high -Area which can affluently provide local special products, cultural resources and tourism resources and so forth.
Road Traffic Management	-Places near interchanges of expressways and highways -Near black spots or the road section with potentiality of traffic accident.
Land Mark	-Provincial gateway as an entrance to the province. -Road intersection and other spots of people gathering

## 2) Target roads of Michinoeki and local strategy

Michinoeki is expected to promote safer traffic and comfortable traveling especially for long trips. In this sense, National Highways have priority as target roads for the construction of Michinoeki. At the same time, though, some provincial roads have large enough traffic volume and actually serve for long vehicular trips. These roads can be the candidates as well for the target roads of Michinoeki.

A Provincial government can construct Michinoeki along provincial roads if necessary. The national plan of Michinoeki network development intends to focus on the national level, such as developing the national standard and constructing Michinoeki nationwide, rather than the provincial level. Therefore, provincial authorities are recommended to draw up their own plans for provincial Michinoeki development on the basis of the general nation-wide development plan and its guideline. In general, provincial development plans should be in line with the national plan development guideline.

All Michinoeki throughout the nation are supposed to have similar idea of Michinoeki, and have a commonality in the light of its concept. However, its functions can vary and depend on the local characteristics. Traffic volume and vehicle types differ according to the region. Each community has its unique culture as well as socio-economic activity. Therefore, it is better that Michinoeki development plan, including its design and operation, is drawn up in each region. A provincial development plan is expected to make the concept of Michinoeki fit for the provincial characteristics.

### **3) Collaboration in a form of Michinoeki network**

To improve the quality of the travel of drivers and passengers and make their long-distance movement comfortable, it is desirable to build Michinoeki at a certain interval. In addition, from the viewpoint of traffic management, it is a good idea that plural Michinoeki collaborate with each other. If plural Michinoeki are located along a road, each Michinoeki can provide drivers with information regarding road traffic condition of way ahead road section. From that point of view, Michinoeki should be located in a form of network rather than stand-alone.



## 2.3 Classification of Type of Michinoeki

Michinoeki can consist of three types of facilities; those facilities are classified according to its characteristics. Also, Michinoeki itself can be classified into three types in terms of traffic volume on the front road and its roadside area characteristics (urban or suburbs, etc.).

### (1) Category of Facility

The first major feature of Michinoeki is that it is a non-commercial service facility with a close relationship with road traffic and local community. The second feature is that it is a promotion facility for local socio-economic activities, operated by local inhabitants. The additional feature is that it is a commercial service facility, which may attract private investors.

Michinoeki has above-mentioned multi-purpose functions. Now the facilities of Michinoeki are classified into three categories i.e., “Core Facility”, “Core-plus Facility” and “non-Core Facility”. More detailed discussion regarding these three categories is as follows;

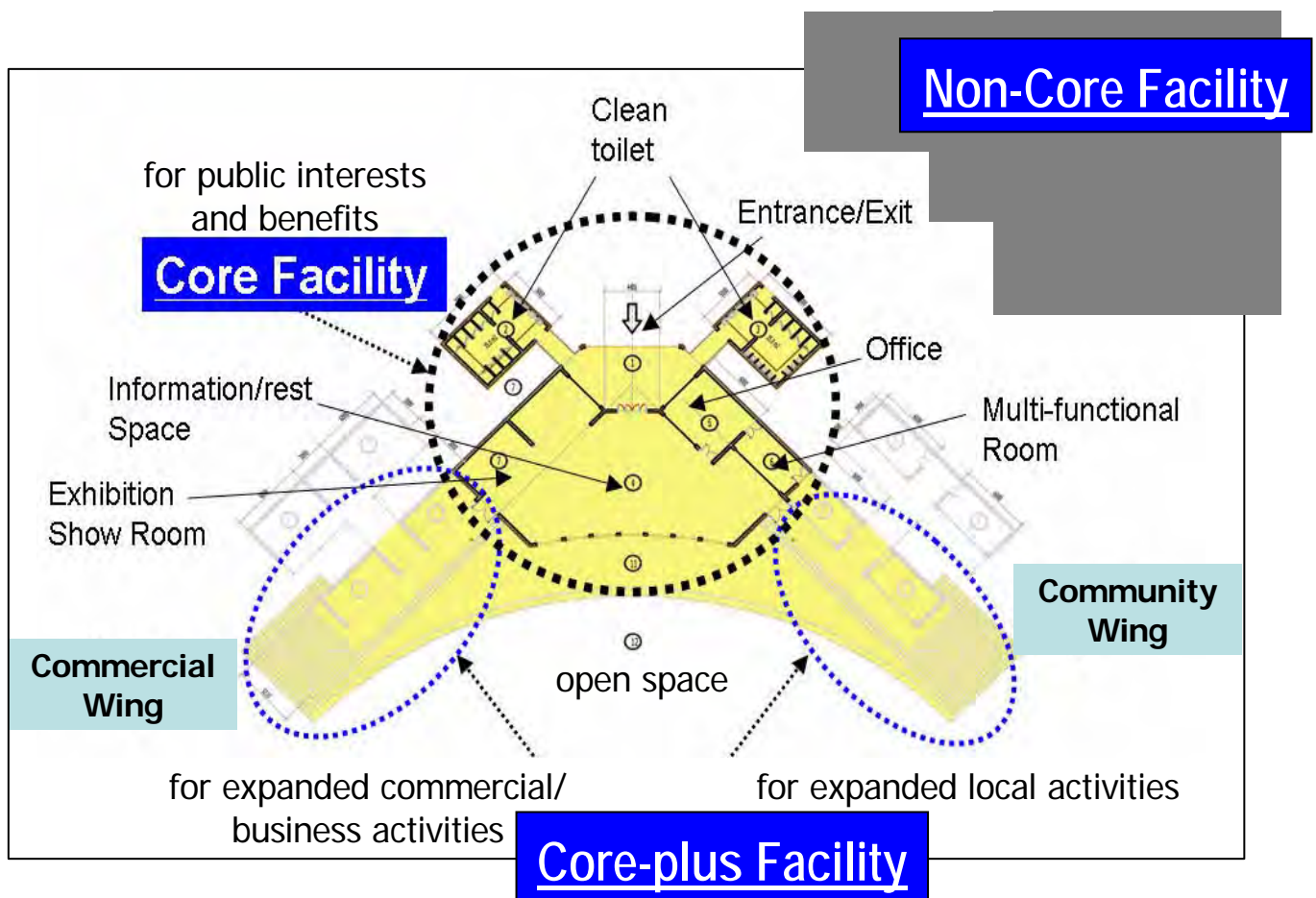


Figure 2.3.1 Three Categories of Michinoeki Facility and Their Basic Layout

Source: JICA Study Team

## 1) Core Facility

Core-facility provides non-commercial service, which includes such free-of-charge services as provision of space for clean toilet, gathering space for visitors and local people, and rest and relaxation space for drivers/passengers.

Table 2.3.1 shows Core facility in detail: each function of Core facility, expected activities, and the corresponding specific facility.

**Table 2.3.1 Michinoeki Functions, Activities and Corresponding Example Facilities in “Core Facility”**

Michinoeki functions	Corresponding activities	Specific facilities (basically free-of-charge)
Rest and relaxation	<ul style="list-style-type: none"> <li>• Dropping-by by a vehicle</li> <li>• Taking a rest and alleviating driving fatigue</li> <li>• Cleaning hands, face and feet after the long distance vehicular trip</li> <li>• Utilizing a clean toilet</li> </ul>	<ul style="list-style-type: none"> <li>• Parking lot</li> <li>• Rest/Relaxation space</li> <li>• Washing place</li> <li>• Clean toilet</li> </ul>
Information Provision	<ul style="list-style-type: none"> <li>• Checking road/traffic condition</li> <li>• Getting hold of various local conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Road/traffic condition information provision</li> <li>• Local historical/cultural /tourism/event guide information provision</li> </ul>
Traffic Management	<ul style="list-style-type: none"> <li>• Local authority conducts traffic safety campaign</li> <li>• Emergency call and reply in case of road traffic accident</li> <li>• First aid treatment in case of road traffic accident</li> </ul>	<ul style="list-style-type: none"> <li>• Venue for traffic safety campaign</li> <li>• Rapid response system to traffic accident</li> <li>• First aid facility</li> </ul>
Local socio-economic development promotion	<ul style="list-style-type: none"> <li>• Carrying out the training activity in processing local products etc. to local inhabitants</li> </ul>	<ul style="list-style-type: none"> <li>• Venue for personnel training</li> </ul>
Land Mark	<ul style="list-style-type: none"> <li>• Guiding drivers to Michinoeki and utilizing Michinoeki as a local symbol</li> </ul>	<ul style="list-style-type: none"> <li>• Local symbolic tower</li> </ul>

Services provided at the Core Facility are basically public services. Most of them should be free-of-charge and non-profitable services, in which no private enterprises may be involved.

Therefore, the assumed main operation/management body of Core Facility is a local authority such as provincial PC, district PC and local road administrators.

## 2) Core-plus Facility

Core-plus facility serves for local socio-economic development promotion, which includes such services as provision of space for sales and exhibition of local special products, venue for local events, gathering space for local people and visitors and so forth.

Table 2.3.2 shows Core-plus facility in detail: each function of Core-plus facility, expected activities, and the corresponding specific facility.

**Table 2.3.2 Michinoeki Functions, Activities and Corresponding Example Facilities in “Core-plus Facility”**

<b>Michinoeki functions</b>	<b>Corresponding activities</b>	<b>Specific facilities (some are free-of-charge and the others are chargeable with low price)</b>
Local socio-economic development promotion	<ul style="list-style-type: none"> <li>• Bring in and display local special products</li> <li>• Having local festival and relevant events</li> <li>• Local people and visitors gathering together</li> </ul>	<ul style="list-style-type: none"> <li>• Sales/exhibition of local products</li> <li>• Venue for local event</li> <li>• Community gathering space</li> </ul>

Core-plus facility has two aspects. One is for community and another is for business. In Figure 2.3.1 which illustrates a sample layout of Michinoeki, there are a community wing and commercial wing. Some services in commercial wing generate certain profit, whose value is generally low and which is generated by local products. The profit will be too small to attract private investors.

Therefore, the assumed main operation/management body of Core-plus Facility should be a local community including local inhabitants, local industrial associations, and local residential group.

## 3) Non-Core Facility

Non-Core facility serves for commercial service which produces profits. This facility may be operated basically by private enterprises.

Table 2.3.3 shows Non-Core facility in detail: each function of Non-Core facility, expected activities, and the corresponding specific facility.

**Table 2.3.3 Michinoeki Functions, Activities and Corresponding Example Facilities in “Non-Core Facility”**

<b>Michinoeki functions</b>	<b>Corresponding activities</b>	<b>Specific facilities (basically chargeable)</b>
Rest and relaxation	<ul style="list-style-type: none"> <li>• Taking regular meal or beverages</li> <li>• Purchasing souvenirs or some goods</li> <li>• Injecting gas into a vehicle</li> <li>• Fixing a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Restaurant/Café</li> <li>• Retail shop</li> <li>• Petro stand</li> <li>• Car repair shop</li> <li>• Accommodation</li> </ul>

The services provided at Non-Core Facility are basically profitable. Therefore, the assumed main operation/management body of this facility is a private enterprise. The local authority should administrate the operation to prevent Michinoeki from deteriorating its public characteristics.

## **(2) Standard type**

There will be a various types of Michinoeki. Each Michinoeki can choose facilities from many kinds of options. However, Core Facility should be indispensable, which should meet minimum requirements. It is preferable to settle Core-plus Facility adjacent to Core Facility.

Core Facility is a fundamental facility which can serve as a free-of-charge facility and will produce no profit on currency basis. Core-plus Facility may bring about some profit, but the profit will not be large enough given that it is produced by local residents. The purpose of settling Core-plus Facility is not to earn a large profit but to promote local socio-economic activity. Although Non-Core Facility is not necessarily requisite in terms of Michinoeki's basic function, it will attract the private investors to join.

If a Michinoeki can expect only small number of visitors, it will be difficult for such Michinoeki to expect large revenue that can compensate for all of its operation/management expenditure. To the contrary, as to such Michinoeki placed along a road with a large traffic volume, it can expect enough revenue to compensate for all the expenditures necessary for its operation/management activity. So there can be various type of Michinoeki as just stated. Taking account of such different types of each Michinoeki, which is mainly discriminated by financial condition, the schemes of operation/management should be planed and examined in different manners.

The financial condition of Michinoeki directly depends on the traffic volume on the front road and the characteristics of its roadside area (urban or suburbs, etc.). If traffic volume on the road in front of Michinoeki is big enough, it may be able to expect large number of users. In this case, it can expect sufficient revenue to cover all the operation/management expenditures and thus it might not be necessary to prepare for the heavy recourse to the support from the state budget.

On the other hand, if traffic volume is small and the sufficient revenue from a Michinoeki is hard to

expect, the support from the state budget may be indispensable to sustain Michinoeki with its well functioning. In this regard, the condition of roadside area indicates the potential of region.

In the region where there exist abundant local special products such as agricultural special products, crafts or some other local distinctive special products, such regional resources could attract vehicle drivers and passengers. To the contrary, regions such as devastated mountainous area or rural area where very little local resources are expected may have difficulty in attract drivers and passengers to drop by.

There are three standard types of Michinoeki. They are defined on the basis of above discussion. Each standard type is described as follows;

#### **TYPE-1**

- “TYPE-1” is constructed along a national highway with high traffic volume.
- The condition of roadside area is either urban, suburb or tourism spot
- A large number of visitors are expected.
- Fairly good financial performance is expected.
- This type can possibly be operated in cooperation with private enterprises.

#### **TYPE 2**

- “TYPE-2” is constructed along a national highway with high traffic volume or low traffic volume, or along a major provincial road
- The condition of roadside area is either urban, suburb, tourism spot or rural area
- “TYPE-2” can not be expected to have as many visitors as “TYPE-1.”
- Financial performance of “TYPE 2” may not be expected as well as “TYPE-1.”
- “TYPE-2” may need to have public interventions in the form of financial support.

#### **TYPE 3**

- “TYPE-3” is constructed along either a national highway with low traffic volume or a provincial road.
- The condition of roadside area is either rural area or mountainous area.
- The number of users may be very small and business revenue may also be in small amount.
- “TYPE-3” may be difficult to be operated on a basis of self-paying system.
- Public interventions in the form of financial support will be indispensable for ensuring Michinoeki’s well functions

Table 2.3.4 describes these three types of Michinoeki. The table consists of the conditions of roadside area in horizontal column and the road/traffic volumes in vertical column. The condition of roadside area is a kind of indicator implying the degree of region's attractiveness. Road and traffic volume is an indicator of the expected number of visitors.

**Table 2.3.4 Three Standard Types of Michinoeki**

Condition of Roadside Area  Road and Traffic Volume		Urban	Suburbs	Tourism Area	Rural Area	Mountainous Area
		TYPE-1			TYPE-2	
National Highway	Traffic Volume (High)		TYPE-2		TYPE-3	
	Traffic Volume (Low)					
Provincial Road						

Source: JICA Study Team

Relationship of Facility Category and Type is listed in Table 2.3.5. This table shows conceptual relationship. Supports from the state budget should be carefully considered on the basis of different financial conditions corresponding to the types of Michinoeki. Also facility layout and its size should be carefully planned and examined in consideration with the financial condition of Michinoeki.

**Table 2.3.5 Facility Category and Type of Michinoeki**

		Type 1	Type 2	Type 3
Facility	Core	○	○	○
	Core-plus	○	○	△
	Non-Core	○	△	×
Size		Large	Medium	Small

Note: ○ necessary to offer, △ possible, depends on conditions,  
× difficult (but not impossible)

### (3) Facility Construction Pattern

Michinoeki takes two patterns in terms of facility construction. These are “All-in-one type” and “Stand-alone type”.

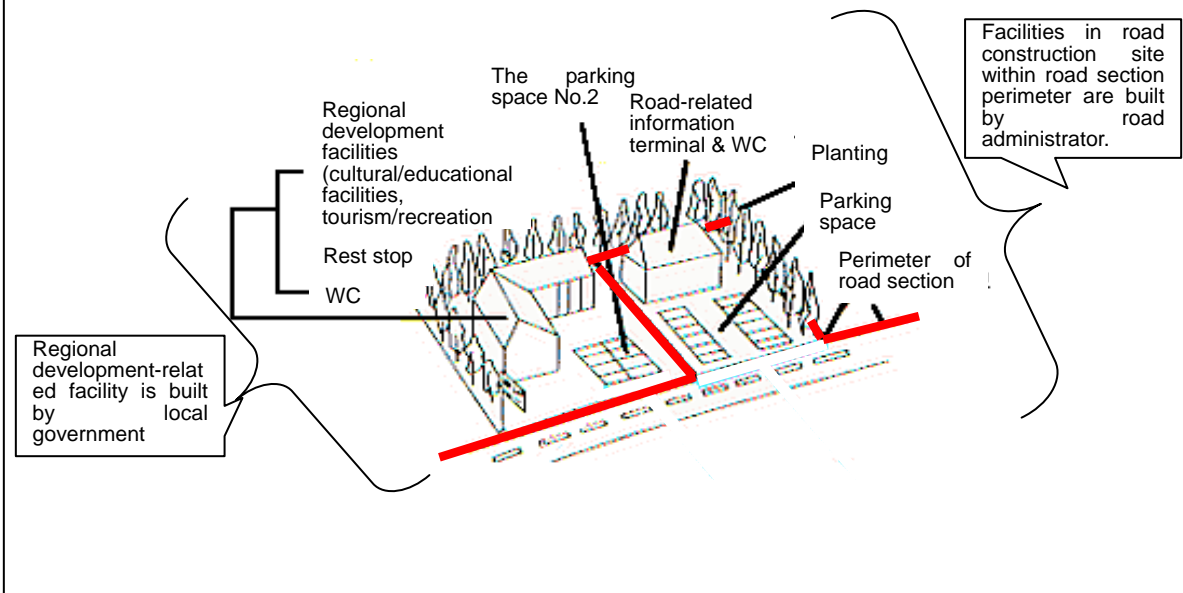
#### 1) All-in-one Type

For all-in-one type facility construction, road administrator and local government tie up to implement facility construction. General responsibility sharing patterns for this type of facility can be shown as below.

- Facilities with road administrator acting as a main body for construction: parking space within government-owned land for road construction, road-related information service facility, toilets, etc.
- Facilities with local government acting as a main body for construction: products sales facility for local specialties, market, exhibition facilities for local specialties.

#### BOX 1: Pattern example of construction for Japanese Michinoeki (All-in-one type)

As described in the figure below, road administrator builds facilities (road-related information terminal, toilets, parking space) for road construction site, while local government prepares the land adjacent to road construction site and constructs local development facility, toilets, and parking space. This example illustrates that road administrator and local government in the region forms a partnership for preparing land and building facilities to construct Michinoeki



## 2) Stand-alone Type

For stand-alone type facility construction, either local government in the region or central government plays a main role in facility construction. In other words, all facilities including parking space, toilets, products sales facility are constructed by either local government in the region or central government.

### **BOX 2: Example of construction for HSC (Highway Service Center) in Thailand (Stand-alone-type)**

Three HSCs are operated by the Department of Highways' local organization and the operation of the HSC in Khun Tan is being outsourced to private sector.

Although the main purpose of the HSC is to provide rest and relaxation service, parking space, toilets, food service for road users, various local specialties are gathered from a wide range of regions for sales by serving a new function conducive to "one village, one product" campaign that Prime Minister Thaksin advocated. This function to promote "one village, one product" campaign resembles Michinoeki regional alliance function.



External appearance of HSC (Highway Service Center) in Khun Tan in Thailand



#### **(4) Successful Examples of Michinoeki in Japan**

This section focuses on successful examples of Michinoeki in Japan. Main prerequisites for success extracted from successful examples are given below.

- A presence of a prime mover with strong leadership
- Efforts towards co-existence and co-prosperity with the region
- A compact facility construction by making effective use of existing facilities to reduce construction and maintenance costs
- A presence of an initiative for local inhabitants' group as a core of the operation
- A thorough employment strategy focusing on local inhabitants
- A product development showing regional characteristics and commitment to the products
- A grant of incentives by commendation scheme to the operating body of Michinoeki
- A grant of authorization based on public accreditation

##### **1) Prime Mover**

The presence of prime mover with a strong leadership largely affects the success of Michinoeki. In case of Michinoeki, most of the prime movers are in fact station masters and they often bring the Michinoeki to a successful conclusion. In various regions, there are many popular station masters who are unique and deeply committed to their regions. Looking at successful Michinoeki, prime movers have been consistently engaged in Michinoeki from planning stage as a station master. Afterwards, they verified to ensure the completion of facility construction and observe continuously if initial image of facility was actually achieved at the operation stage and if there is any measure necessary to improve operation.

Prime movers are responsible for coordination over conflict of interests with regional inhabitants such as owners of existing facilities and tenaciously make unsparing efforts for gaining understanding from local inhabitants over the concept of Michinoeki

It is often the case that staff of local government assumes roles of prime movers due to the neutral nature of the position from economic, political, and social aspects. However, they are not necessarily senior officials.

### **BOX 3: A prime mover dubbed as a charismatic station master**

After giving up his position as a section chief of tourism planning in Tomiura town, the station master of Michinoeki Tomiura / Loquat Club" came to grapple with every aspect of the project ranging from planning to post-construction operation management. His achievement involves product development using loquat, a special speciality, and launch of "blanket order" that pulls in visitors by binding magnetic resources together in a wide-ranging manner. As a result, he succeeded in expanding local economy and making surplus management sustainable. In addition, he addressed a wide-ranging regional development in a multilateral manner by rediscovering regional culture (e.g. puppet show) and promoting local industries using internet.

In a medium scale and financially weak town like Tomiura, a large scale facility to pull in a large number of people could not be constructed and there was no financial strength to cover the loss of operational body. In addition, it was necessary to push ahead the project as the whole town without adopting principle of the nodal system. Against such a severe backdrop, the station master implemented streamlining throughout the region in terms of software infrastructure by keeping new facility construction to a minimum. Further, he introduced "Eco Museum" that is a revitalization measure of natural park area in France as a means to vitalize his own town.

In other words, the success of this Michinoeki can be attributed to passionate commitment and consistent attitude of one station master who deeply understands his region and passionately addresses the project from planning stage to operation stage without fear of embracing various fresh ideas.



External appearance of Michinoeki Tomiura

## **2) Efforts towards Co-existence and Co-prosperity with the region**

At the time of opening Michinoeki, concerns over a possible drop in sales of existing facilities in the neighborhood may be voiced from regional inhabitants. They may feel pressured thinking that mere private stores cannot be competitive in price due to the involvement of public body in Michinoeki.

In order to dispel concerns and doubts, above-mentioned prime mover should take an initiative and make efforts to win understanding for the concept of Michinoeki from regional inhabitants. In doing so, it is essential to focus on setting up cooperative relationship to promote the regional development rather than on avoiding competition. As a result of these efforts, there are many successful examples that made co-existence and co-prosperity a reality in Japan.

### **BOX 4: A search for co-existence and co-prosperity between the region and Michinoeki through discussions**

At the Michinoeki Tomiura, explanations for the concept of Michinoeki were tenaciously made.

At the time of opening, in order to avoid competitions as much as possible, less competing processed goods went on sale as new products, paying maximum attention to goods sales at existing store. They were sold well, and Michinoeki visitors came to call at surrounding facilities as well. The fruits of such spillover effect throughout the region were co-existence and co-prosperity with the local community.

It is significant to recognize that competitions cannot be completely avoided. Most importantly, efforts are crucial to persuade local people to know that their understanding is indispensable for its sustainability since Michinoeki possesses a public facility-like disposition as well. In other words, it is necessary to try to foster regional momentum towards co-existence and co-prosperity by putting their wisdoms together. The keyword for success in case example is not “an avoidance of competition” but “co-existence and co-prosperity”.

### 3) Compact Facility Construction

There are successful examples for building a facility in size to meet fiscal scales of villages by making effective use of existing facility to reduce construction costs. Such compact facilities to match their fiscal scales not only contributes to reduction of construction costs but also achieves an cut-down of operation costs by keeping maintenance cost at appropriate level and avoids deteriorating financial status of Michinoeki

In case business takes a favorable turn at the operation stage, Michinoeki can be rebuilt or operated as compact and flexible infrastructure by expanding the scale of its facilities in an appropriate manner.

#### **BOX 5: From a compact facility to a larger facility with a phased development**

At Michinoeki Tomiura, a new facility called "Hana-club" was built. It started from small facilities where visitors can enjoy flower picking by setting up several simply-built plastic greenhouses. For construction, an existing warehouse was effectively used without starting from scratch. This facility gradually enhances people's reputation. As this reputation further spread by word of mouth, flowers and melons of "Hana-club" are sold well. The feature of Michinoeki is a compact and flexible facility, starting from in an appropriate scale, with the possibility to gradually expand its scale when business takes a favorable turn.



"Hana-club" making effective use of plastic greenhouse and warehouse

#### **4) An Initiative for Local Inhabitants' Group at Operation Stage**

There are successful examples that achieved a generation of revenue and a reactivation of operation due to regional groups and energetic women's groups who displayed their initiatives as driving force at operation stage. These groups are characterized by their keen awareness of the issues including regional development and agricultural promotion and by their enthusiastic attitude. In addition, it is reported that successful examples often involve the participation of regional women's group, which tells that women's contribution to the regional development is outstanding.

##### **BOX 6: Presence of a regional inhabitant's group as a core of operation**

At the Michinoeki Meihou, farmers' wives voluntarily started tomato raising as well as the production and sales of ketchup. Their business was put on track and played a major role in securing Michinoeki's operating revenue.

At the Michinoeki Uchiko Fresh Park Karari, female farmers form their groups and requested town office to additionally build food processing plant for local women within Michinoeki compound. They make a profit by engaging themselves in the production of processed foods at restaurant, bakery, and smokehouse. The establishment of A Ra Date na Michinoeki was triggered by regional development activities by the group to discuss regional development in "Iketsuki".

To sum up, the success of Michinoeki often owes much to the initiatives of regional inhabitants' group (especially women's) as a core of operation.

### 5) A Thorough Employment and Tenant Strategy for Regional Inhabitants

By implementing a thorough employment strategy, goods for sales came to strongly represent regional characteristics. In fact, there are examples to generate profits from combination of such goods and sales system unique to the region. In particular, the employment of former workers from experimental laboratory and provincial research institute for agriculture as well as the elderly with technical know-how yielded results by utilizing knowledge of technicians who are well-informed about regional needs. The tenant's system is adopted for market space by setting extremely low tenant fees. Local inhabitants achieved a success outcome as a result of paving the way for self-production and self-sales.

#### **BOX 7: Direct sales of local agricultural products taking advantage of a thorough employment and tenant strategy for regional inhabitants**

There are successful examples taking advantage of a thorough employment strategy for Michinoeki operation. By employing former workers from experimental laboratory of government organization and provincial research institute for agriculture as well as human resources well-informed about regional needs, Michinoeki Tomiura makes effective use of technical know-how accumulated for a long time by these former workers. These efforts led to the success in product development and generation of profits by fully utilizing regional characteristics. Further, a thorough employment of regional inhabitants also contributed to the improvement in regional income standards. "Michinoeki Meihou" employs a few dozens of local people who are mainly female. The tenant's system is adopted for the market space where local farmers are doing direct marketing and a small volume of agricultural produces from local kitchen gardens are also sold there. A Ra Date na Michinoeki also takes a tenant system and local farmers are selling their agricultural produces by direct marketing. The production of agricultural produces is led by regional inhabitants' group called a producers' association. They are engaged in upgrading the quality of goods sold at Michinoeki by promoting efficiency in production system of agricultural produces and by adding values to these products.

Therefore, Michinoeki is conducive to preservation of regional characteristics and development of regional economy since human resources for operating the facility and producers of agricultural produces are also regional inhabitants.

## 6) Development of Selling Goods reflecting Regional Characteristics

There exist some successful examples that gained profits through the sales activity with developing and digging up local distinctive specialties. The prerequisites of popular products can be said that they reflect producer's tenacity, regional distinctive stories, regional flavor, originality. And processed products that can be added value could become possible popular products.

### BOX 8: Product development representing regional characteristics

By using loquats that are regional speciality, Michinoeki Tomiura succeeded in making unique ice cream. By using tomatoes that are the new line of local agricultural industries started by local farmers' wives, Michinoeki Meihou succeeded in producing and selling ketchup. Further, at Michinoeki with good sales results, newly developed products are produced and sold after adding unique devices such as processing regional specialties. Michinoeki, heavily dependent on external force for purchasing goods from outside of the region, will end up losing its unique characteristics and their sales would drop sharply.



A loquat soft ice cream  
of Michinoeki Tomiura



A tomato ketchup of  
of Michinoeki Meihou

## 7) A Grant of Incentives and Responsibility by Commendation Scheme to the Operating Body of Michinoeki

The commendation scheme targeting Michinoeki nationwide is introduced for triggering incentives to make an ingenious operation plan and increase profits and for enhancing better services provision for users.

### BOX 9: Incentives for Michinoeki operation by the commendation scheme

Targetting Michinoeki nationwide, the commendation scheme titled "Michinoeki grand prix" has been introduced and its judges are composed of academic intellectuals, journalists, and representatives of private organizations. Michinoeki appraised excellent are announced to the public. The commendation scheme like this improves the quality of service provided at Michinoeki and promotes the creation of unique characteristic. As a result, it is considered that the scheme leads to an increase in operating revenue and a successful operation.

### **8) A Grant of Authorization based on Public Accreditation by Logo Marks**

From the initial stage of Michinoeki operation, a grant of authorization was introduced to publically announce that the users of the facility could use the facility safely and service standards thereof maintain the level set by the government, which contributes to an increase in the number of users.

#### **BOX 10: A national grant of authorization by logo marks**

The authorization for Michinoeki is given by central government (Ministry of Land, Infrastructure, and Transport) following the receipt of registration application. Such an authorization scheme aims to ensure a certain level of service standard and give an official assurance as a facility that can be used by users safely. Due to this scheme, the facility succeeds in attracting a number of visitors.



Symbolic logo mark of Michinoeki authorized by central government



### **3. Mechanism and Policy for Michinoeki Development**

Development plan for Michinoeki is quite new to Vietnam. Therefore, it requires a careful examination with respect to possible conflicts with the existing legal framework. This chapter describes relevant legal frameworks in the fields of planning, construction and operation of Michinoeki.

#### **3.1 Legal framework**

##### **(1) Legal position of Michinoeki**

###### **a. Traffic Infrastructure**

So far there has been no specific law which specializes in Michinoeki. Michinoeki can be stipulated as a road traffic facility that aims at securing road traffic safety and promoting as well as providing more convenient road traffic service in Vietnam. This defines Michinoeki as the road traffic related infrastructure and Michinoeki should be operated together with the road infrastructure itself.

###### **b. Responsibility for supervising the management**

Operation and maintenance of the national road is entrusted to the provincial authorities. The provincial authorities will be responsible for the operation of Michinoeki, which is settled along national highways or provincial highways. Chairman of provincial people's committee should be responsible for regulating and organizing the management of Michinoeki within the management scope.

###### **c. Ownership of Michinoeki and official investment**

There can be various types of ownerships of Michinoeki. Any organization including the Government, provinces, other local authorities, private companies, and their joint-enterprise can be an owner of Michinoeki.

Some Michinoeki can be invested by 100% of private money. Even if no public fund is used for that Michinoeki, however, it must play public roles as long as it is Michinoeki. Otherwise, such a road side facility should not be called as Michinoeki.

###### **d. Governmental Support**

As Michinoeki is a public facility and its socio-economic benefit is large and wide-ranging enough, state budget should be used to construct Michinoeki if necessary. The Government determines the rules of Michinoeki, and accredits Michinoeki according to such rules, and construct directly as one of road traffic facility.

Table 3.1.1 describes the appropriateness of governmental support in finance. Governmental support will be appropriate where no or little revenue is expected.

**Table 3.1.1 Appropriateness of Governmental Support in Finance**

Type of Facility	Revenue expectation	Appropriateness of State Budget Support
Plot of Land	No	High
Core Facility	No	High
Core-plus Facility	Yes	Medium
non-Core Facility	Yes	Low

#### e. Operation/Management

Vietnamese law has a legal framework stipulating the right of autonomy and self - responsibility for the operation/management for public non-business organization.\*) Operation of Core-plus Facility is not necessarily non-profit, but it is quite important that such operating unit is treated as a non-business unit. Core-plus facility is designed for community activity. Local community sells local products and returns a part of the profit to Michinoeki. If Michinoeki's operating unit is admitted as a non-business unit, DECREE NO.43: Article 9 will be applied.

It stipulates the classification of non-business units in terms of the level of expected revenue as follows;

TYPE-A: Units having non-business revenues for self-assuring all regular operation expenses (called non-business units self-assuring operation expenses for short)

TYPE-B: Units having non-business revenues for self-assuring part of regular operation expenses, with the remainder of regular expenses covered with the state budget (called non-business units partially self-assuring operation expenses for short)

TYPE-C: Units having low non-business revenues, units having no revenues and having all regular operation expenses covered with the state budget (called non-business with all operation expenses covered with the state budget for short)

CIRCULAR 71 specifically stipulates the numerical criteria for identification of above three types.

The formula is applied as follows;

$$\begin{aligned} & \text{(Level of self-assurance of regular operation expenses of a unit [\%])} \\ & = [\text{Total non-business revenues}] / [\text{Total regular operation expenses}] \times 100 [\%] \end{aligned}$$

TYPE-A is defined being based on the level of self-assurance with the value which is 100% or higher. TYPE-B is defined being based on the level of self-assurance with the value which is between over 10% and less than 100%. And TYPE-C is defined being based on the level of self-assurance with the value which is 10% or less.

\*) Decree No.43/2006/ND-CP of April 25, 2006, providing the right of autonomy and self-responsibility for task performance, organizational apparatus, payroll and finance of public non-business units, being accompanied with Circular No.71/2006/TT-BTC of August 9, 2006, guiding the implementation of the government's Decree No.43/2006/ND-CP of April 25, 2006

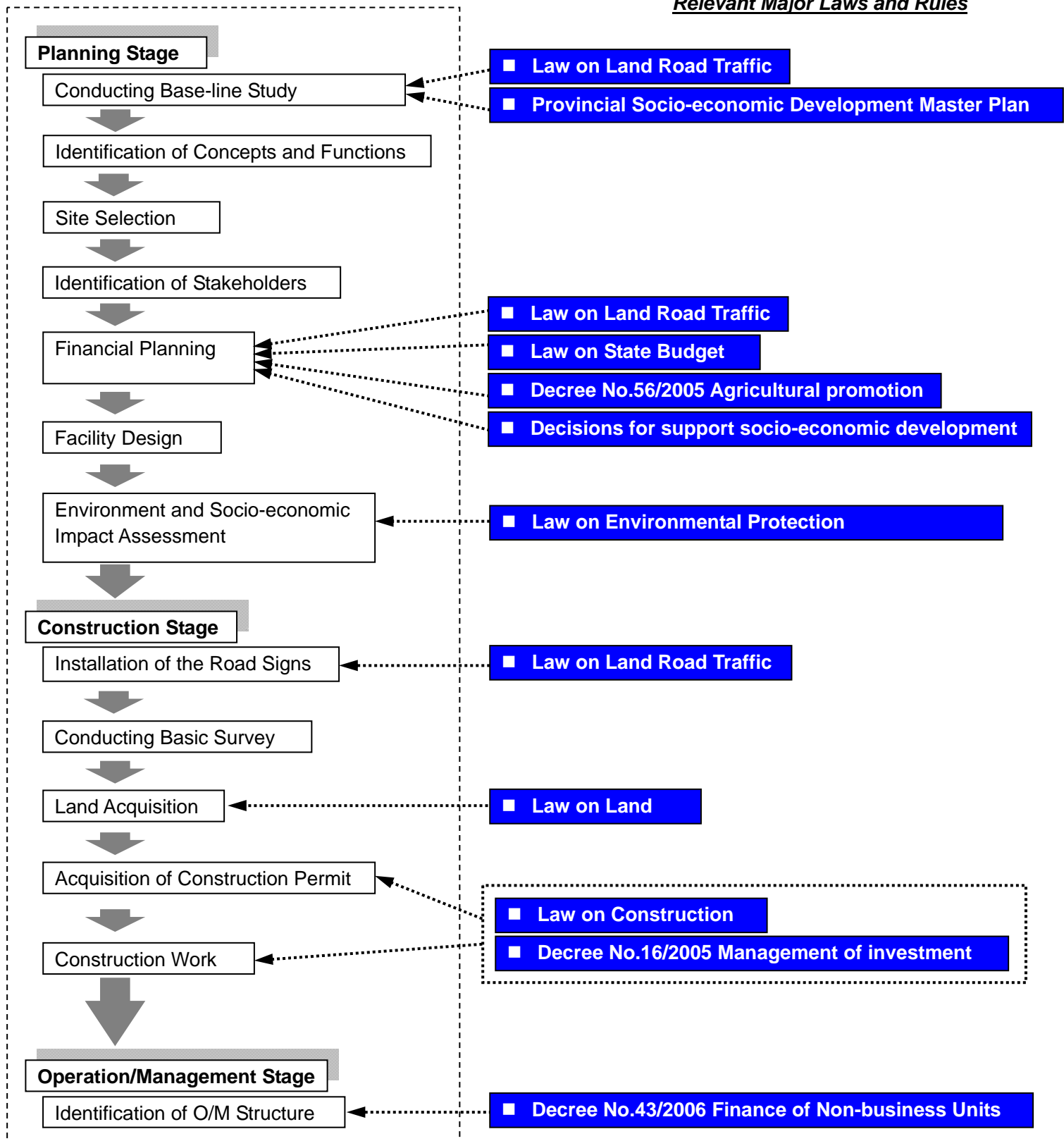
## **(2) Laws and Rules related with Michinoeki at Development Stages**

Needless to say, investors as well as operators of Michinoeki must comply with all laws promulgated in Vietnam. Therefore, in the process of planning and developing Michinoeki, all relevant laws and rules should be studied. The major relevant laws, decrees, decisions, regulations and so forth are identified and discussed in this section.

The flowchart in next page identifies and shows major legal frameworks, relevant to each stage of planning, constructing and operating/managing Michinoeki.

### **Major Michinoeki Development Activity**

### **Relevant Major Laws and Rules**



**Figure 3.1.1 Major Michinoeki Development Activities and Relevant Legal Framework**  
Source: JICA Study Team

## **1) Planning Stage**

### **[For Overall matters]**

#### **■ Law on Land Road Traffic (amendment)**

One of the objectives of the base-line survey is to grasp the current situations of road and road traffic. It will form the important knowledge base for carrying out the planning activity. Also, for making a plan in nation-wide scale of an appropriate assignment of Michinoeki, it is necessary to comprehend future plans of the road infrastructure development.

The Law on Land Road Traffic amendment, which has been approved by the Vietnamese National Assembly in October 2008, is stipulating the definition of road traffic infrastructure. Basically, base-line study about the road and road traffic conditions should be carefully conducted from the viewpoints of the detailed descriptions stipulated in the Law on Land Road Traffic.

#### **■ Provincial Socio-economic Development Master Plan**

Each province has its own master plan in the field of socio-economic development. This master plan contains such items as socio-economic development goals and numerical targets, development objectives and orientations, covering the field of agriculture, industries, social domains, infrastructure development and other broad domains. Among such domains, emphasis should be put on specific domains by taking into account of the regional distinctive characteristics, measures and implementation policies, and an organization which is in charge of implementation and supervision of the master plan as well as the list of specific programs and projects.

Michinoeki development plan designed in the specific region must comply with the basic orientation of the local socio-economic development policy direction. Specifically, Michinoeki development plan must keep conformity with the provincial socio-economic development master plan.

### **[For Financial matters]**

#### **■ Law on State Budget**

Law on State Budget is the most basic legal framework which stipulates rules and procedures with respect to all kinds of allocation of national and local state budget. The Law on State Budget stipulates in detail, regarding the rights of and responsibilities for the budget estimate and state budget allocation, the central/local governmental structure and their specific roles. The law stipulates the type of the state revenue and expenditure as well as specific items of revenue and expenditure.

Local authorities such as provincial People's Committee and district People's Committee must follow the law in order to acquire the sufficient and appropriate budget on the annual basis. When developing and operating Michinoeki, the local authority shall estimate the construction cost as well as annual operation/management cost, based on the certain term of Michinoeki development plan. In addition, the local authority shall draw up the official document describing the necessity of certain amount of state budget as a funding source of Michinoeki construction and operation/management. Then the local authority shall submit the above-mentioned

official document to the People's Committee or the Government for acquisition of the final approval.

Basically Michinoeki should be a public facility. Therefore it provides a reason as well as justification for introducing the state budget into the construction and operation/management of Michinoeki. Actual amount of the state budget to be introduced shall be decided after considering various factors such as significance of Michinoeki in the region, expected number of users, amount of beneficiaries, and so forth.

- **Decree No.56/2005 on agricultural promotion**
- **Decisions for support of socio-economic development**

There may not exist a budgetary mechanism through which certain amount of budget is automatically and permanently allocated every year. However, there exist some support programs under which some funds for specific support are expected to be allocated. Support programs in Table 3.1.2 are the examples which were promulgated in the past. Current support funds were allocated based on these support programs, including Decree NO.56/2005 and some decisions for the support programs for socio-economic developments. In case of Michinoeki development, therefore, the local authorities should identify the appropriate support programs from the viewpoint of Michinoeki's functions relating to local socio-economic conditions.

For instance, given that Michinoeki is explicitly designed to promote local socio-economic developments, applicable support programs may include a policy to support poor ethnic minority households of low standard of living, or a policy to support short-term vocational trainings for impoverished labors in rural or mountainous areas. In most cases, support funds will be applied based on the approval of the above-mentioned support programs in the specific field of social activity in specific region.

**Table 3.1.2 List of the Examples of Support Programs**

Legal Document No.	Date of Issue	Title of the Legal Document
Decree NO. 56/2005/NĐ-CP	26/04/2005	On Agricultural Promotion and Fishery Promotion
Decision NO. 26/2008/QĐ-TTg	05/02/2008	Some Policies and Mechanisms to Support Socio-economic Development of the Provinces in Mekong River Delta till 2010.
Decision NO. 134/2004/QĐ-TTg	20/7/2004	Some Policies to Support Poor Ethnic Minority Households of Difficulty-hit Livelihood on Land for Production, Homestead Land, House, and Domestic Water.
Decision NO. 81/2005/QĐ-TTg	18/04/2005	Policies to Support Short-term Vocational Training to Rural Labors.
Decision NO. 02/2001/QĐ-TTg	02/2001	On the Policy to Support Investment from Fund for Development Support to the Projects on Production, Processing of Goods for Export, and to Projects for Agricultural Production.

## **2) Construction Stage**

### **[For overall matters]**

#### **■ Law on Land Road Traffic**

According to the Law on Land Road Traffic amendment, the Road Signs which guide the road users to Michinoeki on the highway has to follow the international standard which was approved at the international conference held in Vietnam. Therefore, the road signs which are to be installed along the national highways should strictly follow the procedure stipulated in the Law.

Michinoeki has its own logo symbolizing itself. However, putting the logo on the road signs already installed along national highways may be hard. Therefore, its logo is only applicable within the Michinoeki operating area and can be used as a kind of trademark which is attached on the products sold at the shops in the facilities of Michinoeki.

### **[For land acquisition related matters]**

#### **■ Law on Land**

In the procedure of constructing Michinoeki, land acquisition is indispensable at its very beginning. Whole land of nationwide Vietnam belongs to the entire people as well as the state as the representative owner. Therefore, the procedures of land acquisition, disposal and transfer have to strictly follow the requirement stipulated in the Law on Land. Land acquisition must be properly performed so that the state administrative body approves the grant of the land use right or lease right. Generally speaking, the term of the land use right shall not be longer than 50 years.

The Law on Land requests applicants, who wish to acquire the right of land use, to satisfy the specific requirements. For instance, one of the requirements is about the purpose of the land use: The use of the land should comply with the state master plan on socio-economic development. In order to benefit from the exemption from land use tax or land use fee, it is necessary that the purpose of land use should conform to the purpose of public usage. For example, what is constructed on the land is the public

infrastructure, or the public-oriented activity will be engaged in on the land, and so forth.

To secure the land use right on the specific area, the applicants should fill out the official application form which is stipulated in the Law on Land and submit it to the provincial People's Committee. Provincial People's Committee is the state administrative body of the locality/province who is in charge of making the final decision on approval.

**[For construction permit related matters]**

■ **Law on Construction**

Prior to the commencement of the construction work, construction permit must be officially issued in a form of official document by the state administrative body. The Law on Construction stipulates some specific requirements for the applicants to acquire construction permit. The Law on Construction also stipulates a specific procedure for acquisition of construction permit step by step.

As one of requirements to acquire the construction permit, the purpose of the construction of specific infrastructure in specific construction site should follow the local construction master plan.

The Law on Construction also stipulates the responsibility of People's Committee. According to the Law on Construction, provincial People's Committee is in charge of issuing the construction permit for large-scale construction works, including special buildings and religious buildings. Likewise, district People's Committee is in charge of the same matter in urban area as well as commune center area, and communal People's Committee is responsible for the matter in rural residential area.

■ **Decree No.16/2005 on management of investment**

This Decree provides guidelines for implementing the above-mentioned Law on Construction with respect to formulation and implementation of investment projects for construction, contracts in construction activities, conditions applicable to capability of organizations and individuals for project formulation, for survey and design, and for execution and supervision of execution of building works.

The investors as well as contractors should follow this decree when engaging in the actual construction work.

**3) Operation/Management Stage**

■ **Decree No.43/2006 on finance of Non-business Units**

The Decree stipulates specific types of the operation/management structure as well as the financial scheme for public activity which is undertaken by the public entities. The types of the operation/management are classified into three categories in the Decree. The first type is "a unit which has non-business revenues for self assuring all regular operation expenses". The second type is "a unit which has non-business revenues for self assuring part of regular operation expenses, with the remainder of regular expenses covered with state budget". The third type is "a unit which has no revenues and has all regular operation expenses covered with the state budget". These basic three types are clearly stipulated in the Decree. And head of the corresponding unit



shall draw up the official document containing the estimates of revenues and regular operation/management expenditures. Then the head of unit shall submit the document to state finance agencies. State finance agencies shall consider and verify the unit's revenue and expenditure estimates and proposed state budget funds for assuring routine activities. After verification of the state finance agencies, above-mentioned documents shall be sent to the People's Committee. The People's Committee is the state entity who makes final decision on the approval.

Michinoeki is basically a public facility. In general, it may be hard to expect the sources of large amount of revenue. Especially, in general, little revenue would be expected at the very beginning of the operation/management stage. Therefore, the initial operation/management form of Michinoeki will require the state budget as one of funding sources in order to compensate the expenditure for routine activities. When the business situation is improved after the elapse of a certain period of time, the type of unit could be changed into the unit which asks for much less state support budget.

This legal framework could be one of the applicable legal bases when considering the appropriate operation/management structure for Michinoeki.

## 3.2 Financial Scheme

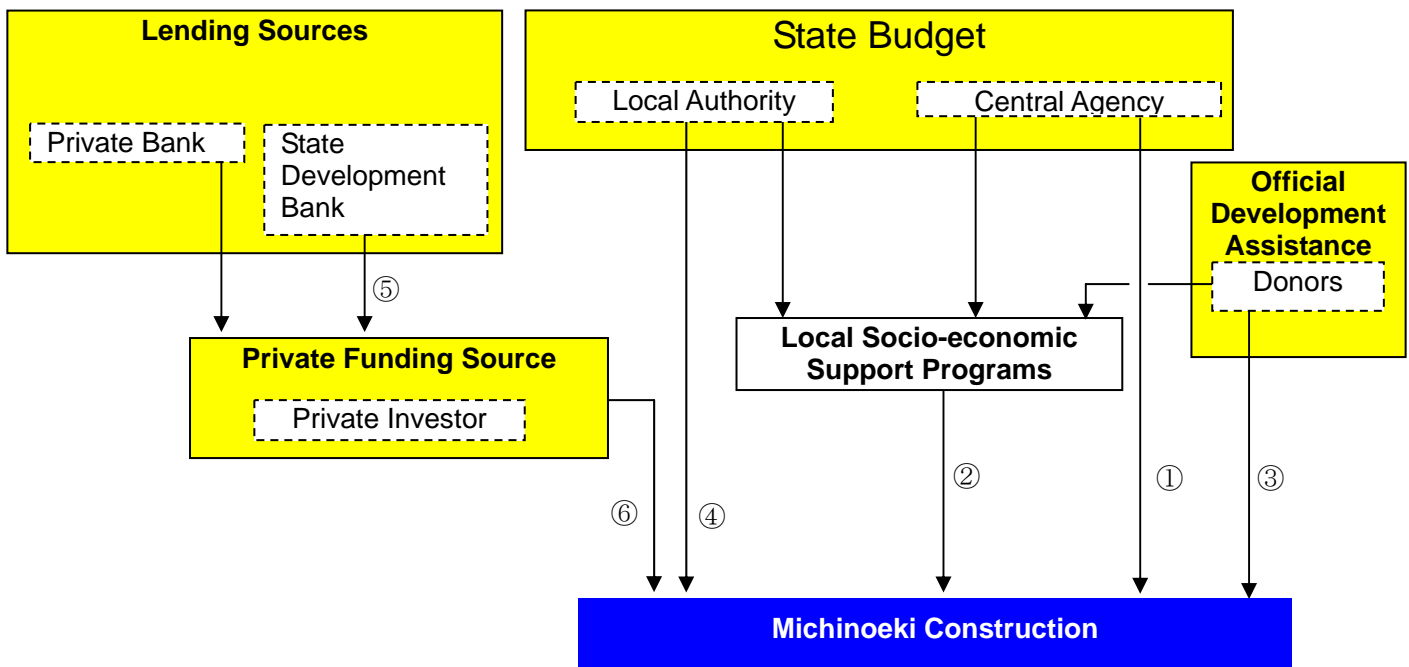
This section identifies the possible financial sources and examines the possibility of applying them to the Michinoeki development. The section discusses the construction and the operation/management respectively, taking into account of the different features of development activities.

### (1) Financial Source

#### 1) Construction

Six kinds of funding sources are identifiable for the stage of the construction of Michinoeki.

- ① Direct allocation of central state budget
- ② Fund allocation via local socio-economic support programs
- ③ Direct allocation of ODA fund
- ④ Direct allocation of local state budget
- ⑤ Lending sources coming from either private bank or state development bank
- ⑥ Private investment fund in case of having the private body's active involvement



**Figure 3.2.1 Possible Options for Michinoeki Construction Funding Sources**

Source: JICA Study Team

#### ① Direct allocation of central state budget

Michinoeki will be stipulated as a road infrastructure in the Law on Land Road Traffic amendment. Therefore fund for construction of Michinoeki may come from the central budget which is allocated to road construction. Ministry of Transport will be in charge of management of such central budget.

#### ② Fund allocation via local socio-economic support programs

Central governments as well as local authorities are responsible for making some specific support programs for local socio-economic vitalization. Such support programs have their own budget which is to be approved by the National Assembly and Prime Minister. If

Michinoeki can be clearly defined as a regional development infrastructure, then it may be possible to get supportive construction fund from the specific programs.

**③ Direct allocation of ODA fund**

This is the fund from an Official Development Assistance of bilateral aid or funds from international development agencies including the World Bank and ADB. In such case, careful project preparation must be carried out with the incorporation of MOT/VRA, depending on the requirements of each funding agency.

**④ Direct allocation of local state budget**

In case that the provincial or district authorities are the investors, the funding sources of construction may come from provincial budget or district budget. Local authorities shall ask the National Assembly to approve the allocation of above-mentioned local funding sources every year.

**⑤ Lending sources coming from either private bank or state development bank**

Such lending sources come from either private bank or the Vietnam Development Bank. The latter special fund has been established aiming at supporting and promoting social development activities. Economic preferential conditions include tax exemption, low lending interest rate, long repayment period and so forth.

**⑥ Private investment fund in case of private body's active involvement**

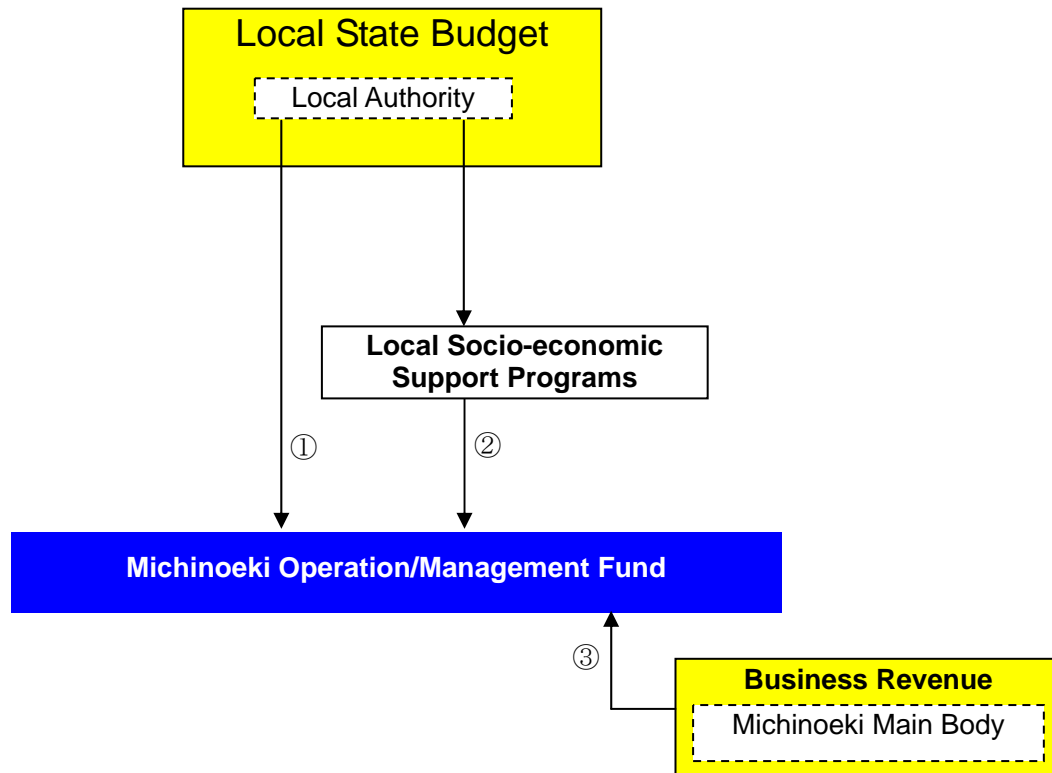
In case that the private enterprise is the investor, such private entity's capital can be the funding source. Furthermore, even the private entity can make the most of the economic preferential lending sources as stated previously. Private enterprises include not only pure private companies but also Joint-stock companies.

When constructing Michinoeki, one or more than two options will be applied from the list of above-mentioned financial schemes, by taking into account of the actual condition.

## b. Operation/management

Three kinds of funding sources can be identified at the stage of operation/management of Michinoeki.

- ① Direct allocation of local state budget
- ② Fund allocation via local socio-economic support programs
- ③ Private investment fund in case of private body's active involvement



**Figure 3.2.2 Possible Options for Michinoeki Operation/Management Funding Sources**

Source: JICA Study Team

### ① Direct allocation of local state budget

In case that the provincial or district authorities are the investors, the funding sources of operation/management may come from provincial budget or district budget. Local authorities shall ask the provincial People's Committee or the People's Council to approve the allocation of above-mentioned local funding sources every year.

### ② Fund allocation via local socio-economic support programs

Local authorities are responsible for making some specific local socio-economic development support programs. Such support programs have their own budget. If Michinoeki can be clearly defined as such development support infrastructure, then it may be possible to get local supportive operation/management funding source.

### ③ Business revenue based on the daily commercial activity at Michinoeki

Commercial revenue collected through daily activities can be part of the operation/management funding sources. However, since Michinoeki is basically a public facility, large enough profit to compensate for the operation/management expenditure may be difficult to be acquired. Therefore business revenue may well be supplemental as a funding source.

In the actual operation/management of Michinoeki, one or more than two options will be applied from the list of above-mentioned financial schemes, by taking account of such actual conditions as the condition of a facility owner, business activities and financial condition. In case of introducing governmental budgetary support, target activities to be supported by the fund must be non-business activity.

## (2)Investment type

As for the investment in Michinoeki, public entities are able to become an investor and private enterprises as well as SOE (State Owned Enterprises) are also able to invest in Michinoeki. The mixed entities of public and private can also be investors. The table 3.2.1.1 – 3.2.1.3 show the typical combination of Michinoeki investors.

**Table 3.2.1 Combination of Investors and Operators Corresponding to “Full Public Type”**

Type		Investor	Operator
Objective	Facility		
Land	for Core & Core-plus	Provincial Authority	-
	for non-Core	Private Entity or SOE	-
Core Facility		Provincial Authority	Provincial Authority
Core-plus Facility		Provincial Authority	Provincial Authority
non – Core Facility		Private Entity or SOE	Private Entity or SOE under the supervision of Provincial Authority

**Table 3.2.2 Combination of Owners and Operators Corresponding to “Public-Private Type”**

Type		Investor	Operator
Objective	Facility		
Land	for Core & Core-plus	Provincial Authority	-
	for non-Core	Private Entity or SOE	-
Core Facility		Provincial Authority	Private Entity or SOE commissioned from Provincial Authority
Core-plus Facility		Private Entity or SOE	
non – Core Facility		Private Entity or SOE	Private Entity or SOE under the supervision of Provincial Authority

**Table 3.2.3 Combination of Owners and Operators Corresponding to “Full Private Type”**

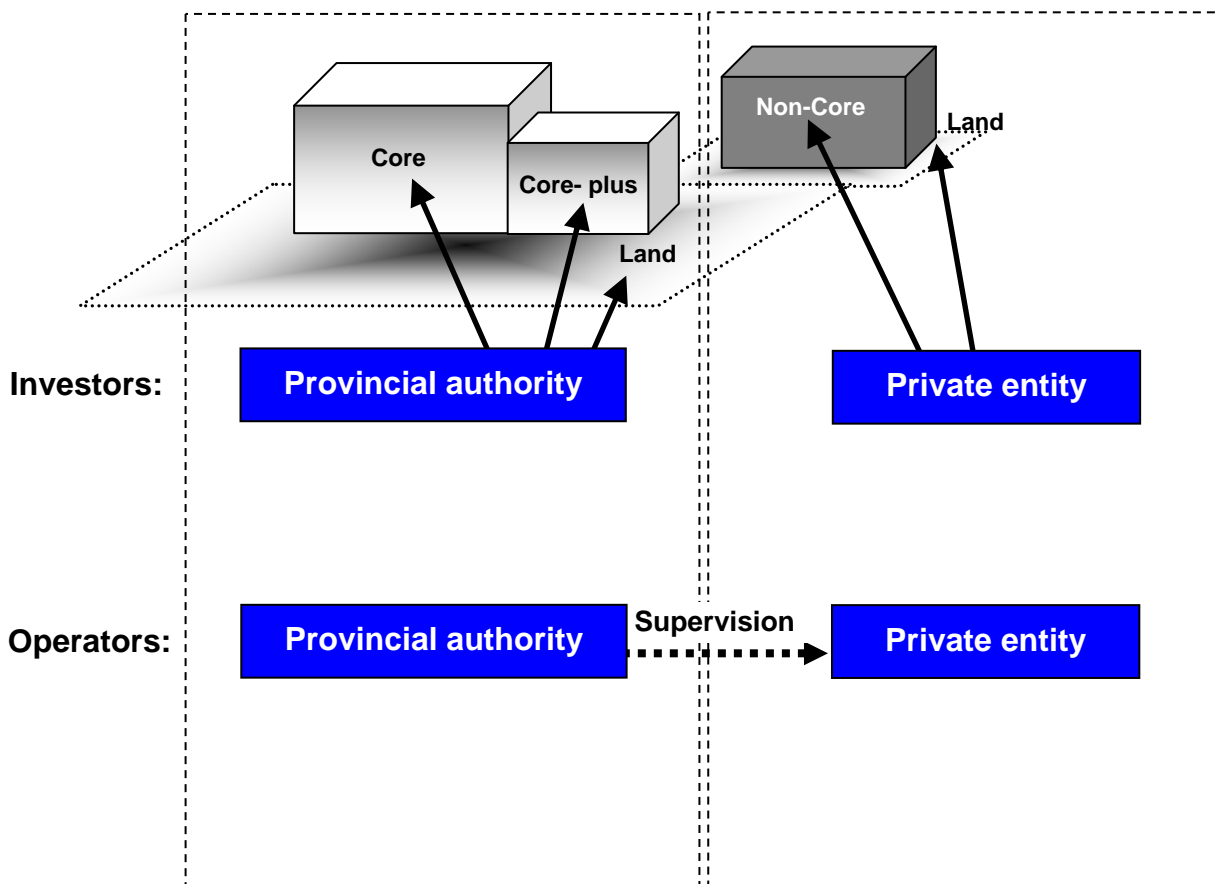
Type		Investor	Operator
Objective	Facility		
Land	for Core & Core-plus	Private Entity or SOE	-
	for non-Core	Private Entity or SOE	-
Core Facility		Private Entity or SOE	Private Entity or SOE under the supervision of Provincial Authority
Core-plus Facility		Private Entity or SOE	
non – Core Facility		Private Entity or SOE	

Following figures explain the combinations mentioned in the above tables.

### 1) Full Public Investment type

As for investment stage, both Core Facility and Core-plus Facility are invested by a provincial authority. Land use right for construction of above facilities is also acquired by a provincial authority. A private entity may join in investment in the development of non-Core Facility. Land use right for construction of non-Core Facility is obtained by a private entity.

As for operation stage, both Core Facility and Core-plus Facility are operated by a provincial authority. Non-Core Facility is operated by a private entity under the supervision of a provincial authority.



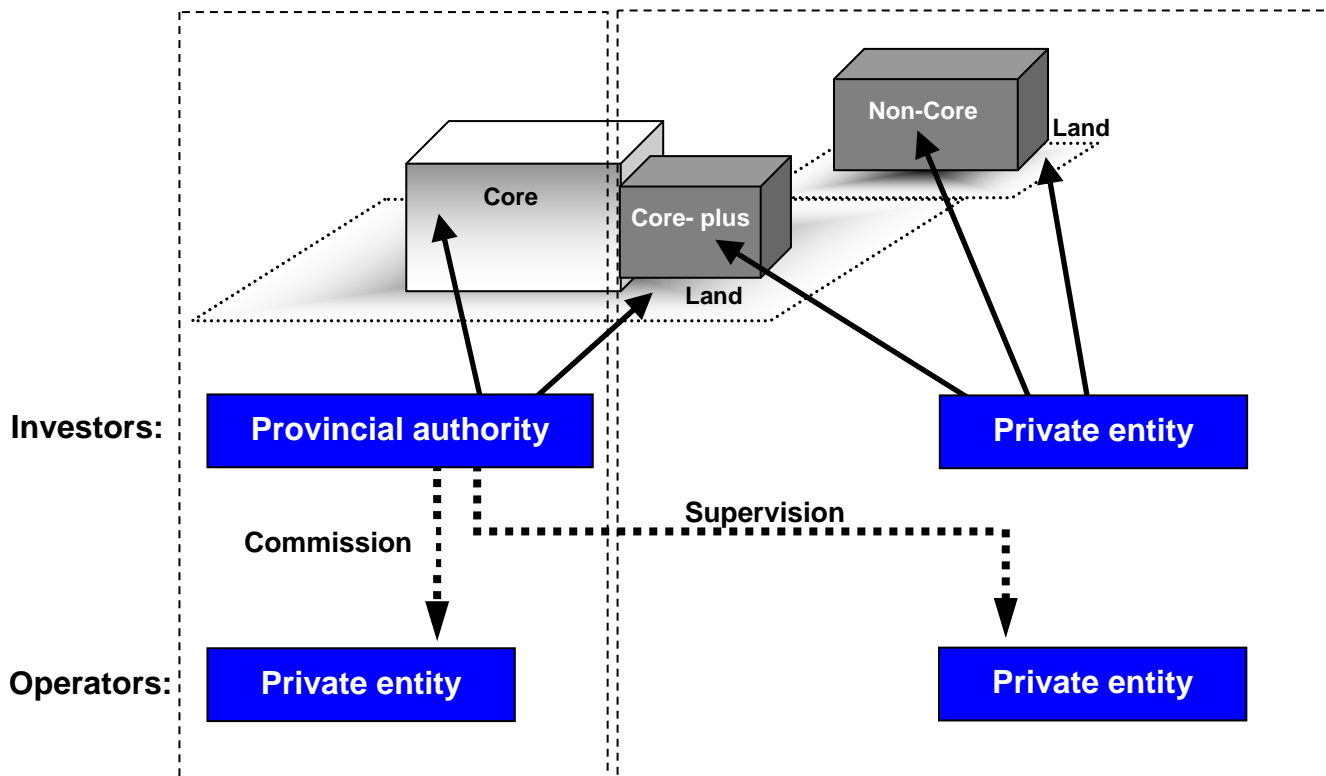
**Figure 3.2.3 Conceptual Diagram for Full-Public Investment**

Source: JICA Study Team

## 2) Type of Investment of Public Authority Collaborating with Private Entities

At the investment stage, Core Facility as well as land serving for Core and Core-plus Facilities are invested by a provincial authority, while Core-plus and non-Core Facilities as well as land for construction of non-Core Facility are invested by a private entity.

At the operation stage, a private entity is in charge of operation of Core, Core-plus and non-Core Facilities. Non-Core Facility is operated under the supervision of provincial authority, while Core and Core-plus Facility may be operated under the concession contract between provincial authority and private entity.



**Figure 3.2.4 Conceptual Diagram for Public-Private investment**

Source: JICA Study Team

*footnote:*

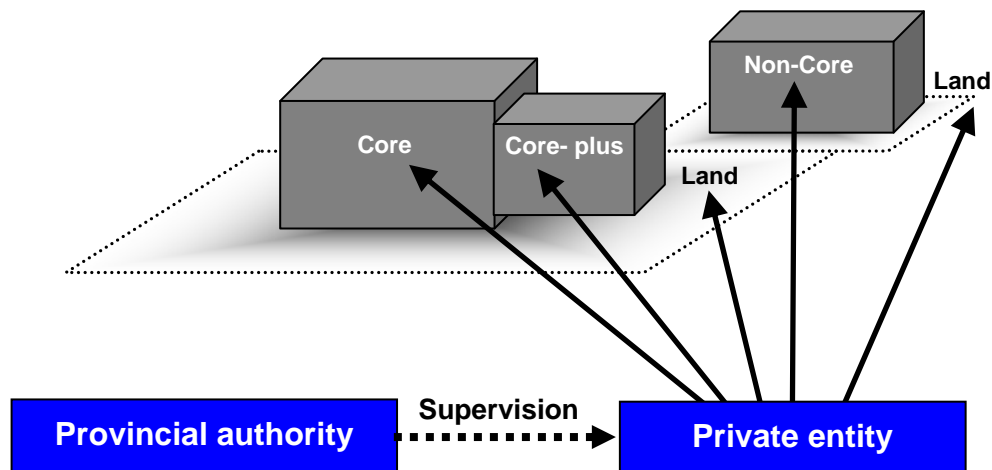
As for this type of investment and operation, a private entity may invest in not only Core-plus facility but also Core facility. The provincial authority invests only in the land acquisition. Then after the completion of construction, a private entity is commissioned to operate both Core and Core-plus facility within certain period from the provincial authority. At the end of the period of commission, a private entity transfer the facility to the provincial authority. Such BOT related investment and operation form may be able to be applied to this case.



### 3) Full Private Investment type

Land and all three facilities such as Core, Core-plus and non-Core Facilities are invested by a private entity. The ownership belongs to a private entity. However operation activity is supervised by a provincial authority from the viewpoint of achievement of public functions.

This type includes the case that a former private resting facility changes itself into Michinoeki through the accreditation process, which is to be explained in Chapter 3.

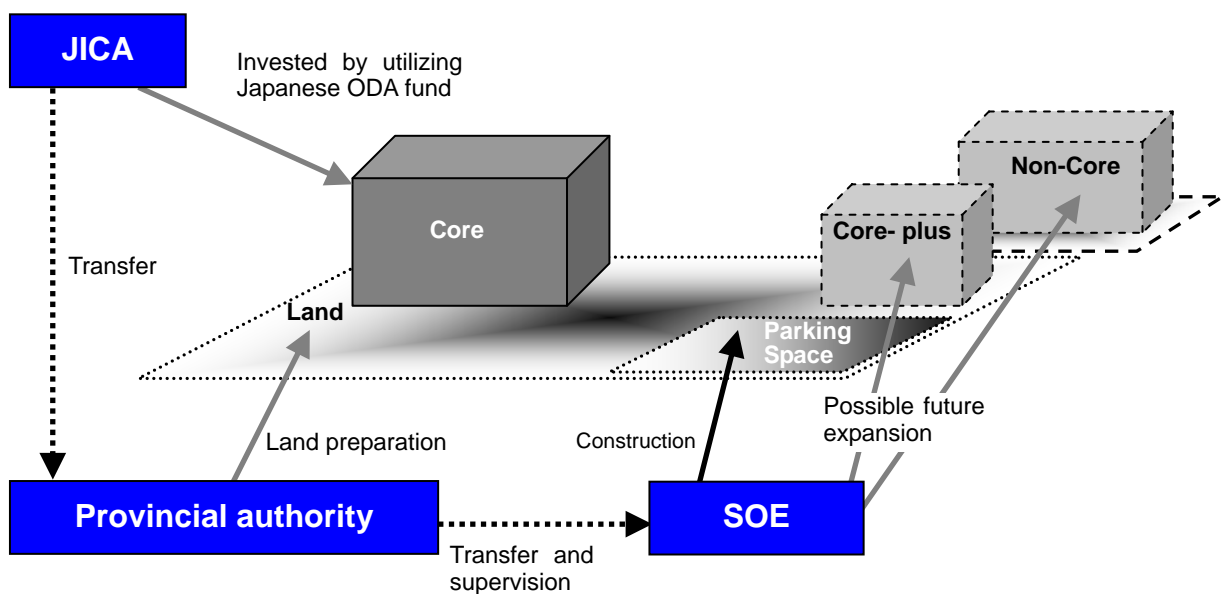


**Figure 3.2.5 Conceptual Diagram for Full-Private Investment**

Source: JICA Study Team

### BOX Pilot Project (the case of Ninh Binh province and Hoa Binh province)

In the case of Ninh Binh and Hoa Binh, the land for Core Facility was prepared by provincial authority. The Core Facility was invested by JICA utilizing Japanese ODA fund. After the completion of construction of Core Facility, the facility was transferred to provincial authority. And provincial authority then transferred the facility to the State Owned Enterprise, which is responsible for operation/management of the facility. Therefore the final owner of the facility is the SOE in both Ninh Binh and Hoa Binh. And the SOE invested in construction of parking space surrounding Core Facility. It can be expected that the SOE will invest in construction of Core-plus Facility as well as non-Core Facility, cooperating with and supervised by provincial authority.

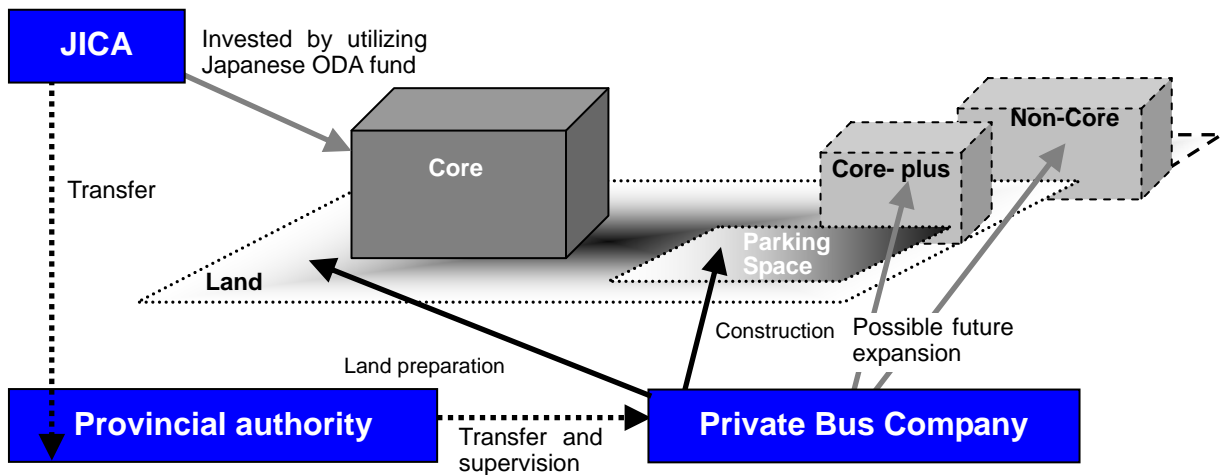


**Figure 3.2.6 Combination of Investors in the Case of Ninh Binh Province and Hoa Binh Province**

Source: JICA Study Team

### BOX Experiences of the Pilot Study (the case of Bac Giang province)

In the Bac Giang case, the land for Core Facility was prepared by a private bus operating company. The Core Facility was invested by JICA utilizing Japanese ODA fund. After the completion of construction of Core Facility, the facility was transferred to Bac Giang provincial authority. And Bac Giang provincial authority transferred the facility to the private bus operating company. Therefore the final owner of the facility is the private bus operating company. And the bus company invested in construction of parking space surrounding Core Facility. It can be expected that the bus company will invest in construction of Core-plus Facility as well as non-Core Facility, cooperating with and supervised by Bac Giang provincial authority.



**Figure 3.2.7 Combination of Investors in the Case of Bac Giang Province**

Source: JICA Study Team

### **3.3 Stakeholders and their Roles**

Michinoeki is a new infrastructure in Vietnam. Therefore relevant stakeholders and their roles should be clearly identified.

#### **(1) Initiative of the Project**

Basically, provincial authority should be responsible for Michinoeki operation and management. It is obvious that traffic management and promotion of local socio-economic development are the important tasks for provincial authority. Therefore, the provincial authority should play a major role of the Michinoeki development project.

Also the Department of Transport (DOT), as the governmental entity which is in charge of managing the road traffic infrastructure related matters, shall be responsible for arranging the responsibility sharing among relevant authorities so as to ensure stable progress in the Michinoeki development project with incorporation of MARD.

On the basis of the above-mentioned overall project implementation structure, relevant authorities shall be responsible for each of their tasks.

#### **(2) Activity in Each Stage**

General idea for major relevant stakeholders and their roles at each stage of planning, construction and operation/management are stated as follows:

##### **1) Preliminary planning stage**

Michinoeki planning body consisting of local authorities or private enterprise may be responsible for planning Michinoeki so as to meet functional requirements and facility requirements in the light of Michinoeki concept. At the preliminary planning stage, it is desirable that such various stakeholders as district government, commune government, residential people's group and local SMEs are expected to actively participate.

##### **2) Accrediting Michinoeki**

The Ministry of Transport (the Vietnam Road Administration) shall be responsible for making final decision of accreditation as well as cancellation of the accreditation certificate which was once assured. Provincial People's Committee shall submit the application form for accreditation to the Ministry of Transport (the Vietnam Road Administration). Applicants who may be either local authority or private entity shall fill in the application form and submit the form to the provincial People's Committee.

##### **3) Financial and Technical aspect**

As for financial support for construction cost or technical support for human resource development, The Ministry of Transport or other central governments concerned will be responsible for these supportive actions in cooperation with the provincial People's Committee. International aid organizations should support in terms of financial and technical aspect based on the requirement submitted by Vietnamese central governments. Local authority such as provincial government, district government and commune government shall be responsible for

making support programs in terms of ensuring financial sustainability in the light of highly public functions of Michinoeki.

#### **4) Construction of Michinoeki**

According to the Law on Construction, the provincial People's Committee shall be responsible for approval of construction permit. Applicants who ask the construction permit to the provincial People's Committee shall follow the procedure stipulated in the Law on Construction properly. As for construction work, if public entity is the project owner, selection of the constructor through transparent bidding procedure shall be properly conducted under the supervision of relevant local authority. On the other hand, in case of private enterprise, the contract with construction enterprise may be made individually.

#### **5) Operation and management of Michinoeki**

As for main Michinoeki operation/management body, the Michinoeki management unit, local working group are responsible for operation/management activity. Above the Michinoeki management unit, the task force unit consisting of such local authorities as the provincial People's Committee, relevant departments of provincial government, district government, commune government should be established as a supervision and monitoring organization.

### (3) Expected roles of Stakeholders

Lists of the above-mentioned stakeholders and their expected roles are described in following Table.

**Table 3.3.1 List of Relevant Stakeholders and Their Expected Roles**

Classification		Stakeholder	Roles
Governments	Central Government	MOT-VRA	MOT-VRA will be responsible for accreditation of Michinoeki in the light of required public functions.
		MARD	MRAD will be responsible for promotion of local socio-economic development by utilization of Michinoeki.
		MONRE	MONRE will take care of social and environmental consideration in the field of Michinoeki development.
		MOF	MOF will be responsible for financial matters mainly at construction stage of Michinoeki in accordance with the Law of Land Road Traffic.
		MPI	MPI will be responsible for ODA contact.
		MOC	MOC will be responsible for development of urban construction master plan taking account of Michinoeki functions.
		MOCST	MOCST will be responsible for promotion of culture, sports and tourism activity taking account of Michinoeki functions.
		MOIT	MOIT will be responsible for vitalization of industrial and trade activity taking account of Michinoeki functions.
	Province	People's Committee, DOT, DOC, DPI,DOF, DARD, DOIT, DOCST etc.	Provincial PC will be responsible for land procurement and compensation enforcement. DOT will be responsible for practical operation activity as a road administrator. Other departments of local authority will be responsible for, in particular, financial matter and personnel affairs.
	District	People's Committee, Division of Economic Infrastructure, etc	Stakeholders concerned will be responsible for , in particular, development of related facilities, actual management, worker dispatch, business support, support for forming local group.
	Commune	People's Committee	Stakeholders concerned will be responsible for , in particular, support for development of local special products.

(Continued)

Classification		Stakeholder	Roles
Donors		JICA, the World Bank, ADB, other bilateral donors	Stakeholders concerned will be responsible for financial and technical support
Local SMEs	inhabitants,	Local inhabitants	Stakeholders concerned will participate in planning, management and monitoring as a member of Michinoeki Local Working Group, and act as a facility user
		Association of architecture	
		Women's group	
		Agricultural cooperative	
		NGOs	
		Owner of similar facility nearby, cooperative facility	
Private enterprises and Organizations	Transportation Enterprises	Bus company, Taxi company, Other transportation company (forwarder, tracking, etc.)	Operation/management body, investors and act as a facility user
	Service Provision Enterprises	Restaurant, Accommodations, Local souvenir makers, Souvenir distributor, Foods and consumer goods distributor, Tourism enterprise	Operation/management body, investor and act as a facility user and service provider
	Other Private Enterprises	Trading company, Constructor, Other private company	Investor and provider of related services

### 3.4 Mechanism for Operation and Management of Michinoeki

The keys for successful Michinoeki are well arranged operation/management structure and activity. This section discusses recommended operation/management structure and organization as well as responsibility sharing among relevant stakeholders.

#### (1) Operation/management activity items

Table 3.4.1 shows the operation/management activity items.

**Table 3.4.1 Operation/Management Activity Items**

Classification	Corresponding Activity	Details of Activity
Basic Activity	Very basic activity in terms of physical maintenance and economic sustainability	<ul style="list-style-type: none"> <li>• Facility management and repair</li> <li>• Guard and cleaning the facility</li> <li>• Management of operation cost</li> <li>• Management of revenue and expenditure</li> <li>• Management of personnel affairs</li> </ul>
Non-commercial Activity at Core facility	Activity for road traffic and local community	<ul style="list-style-type: none"> <li>• Information provision (creation and management of information contents, development and maintenance of information provision apparatus and so forth)</li> <li>• Local socio-economic development promotion (management of quality of local special products and sales promotion)</li> <li>• Local human resource development (training and so forth)</li> <li>• Public information provision (traffic safety campaign and so forth)</li> </ul>
Non-Commercial Activity at Core+ facility	Socio-economic Activity by local community by selling local products to visitor	<ul style="list-style-type: none"> <li>• Management of tenant contract, supervision of activity and instruction</li> <li>• Propaganda and sales promotion aiming at improvement of profitability</li> </ul>
Commercial Activity at Non-core facility	Activity for commercial service to visitors	<ul style="list-style-type: none"> <li>• Management of tenant contract, supervision of activity and instruction</li> <li>• Propaganda and sales promotion aiming at improvement of profitability</li> </ul>



## **(2) Monitoring activity items**

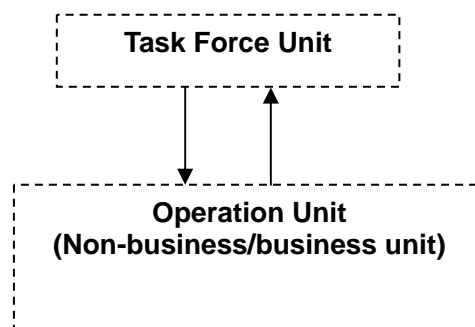
It is a continuous activity to monitor daily affairs, including customer satisfaction, cost management and occurrence of incidents. Performance of Michinoeki operation will be evaluated based on the monitoring results. Specific activities are as follows:

- To grasp customer satisfaction by using questionnaire and interviewing visitors
- To listen to users' voice regarding further needs as well as complaint at the regularly setting meetings
- Monitoring expenditure and business revenue
- To keep carefully watching cleanness in the garden as well as building
- To observe relevant activity of responsible stakeholders
- To observe condition of public service provision (especially such careful attention is necessary as to whether or not the private entities are keeping public functions)
- To grasp the number of visitors
- To grasp appropriateness of contents of information provision
- Confirmation of security condition

## **(3) Standard Organization**

### **1) Type of Organization**

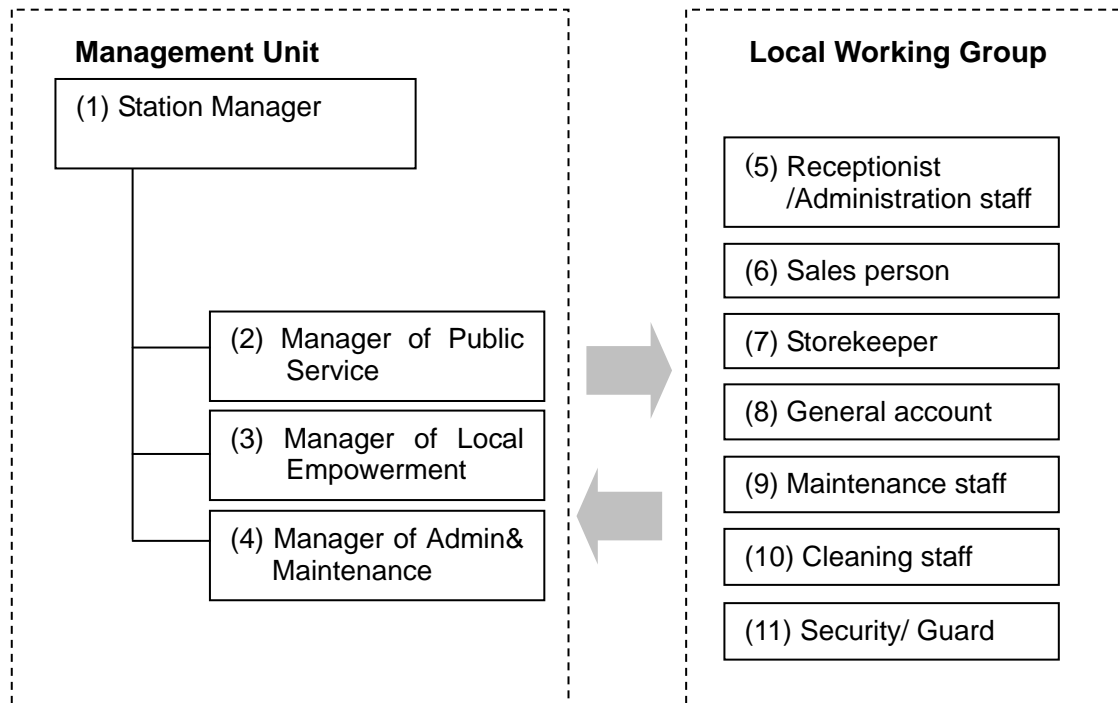
The task force unit is in charge of approval of the overall planning of operation/management activity of Michinoeki and supervision of routine activity of Michinoeki. The member of the Task Force Unit will consist of the officers of local authorities such as the provincial People's Committee, the district People's Committee, the commune People's Committee, such department of provincial government as DOT, DARD, DPI, DOF and so forth.



**Figure 3.4.1 Michinoeki Operation/Management Structure**

## 2) Example of Structure of Operation Unit

Following example shows that the Michinoeki management unit will basically consist of 4 staffs such as a station manager, a manager of public service, a manager of local empowerment and a manager of administrative matter and maintenance.



**Figure 3.4.2 Michinoeki Management Unit and Local Working Group**

A station manager is the chief of the Michinoeki main body staffs. It is desirable that this post is occupied by an officer on the list of the local authority. However in case of private entity owned Michinoeki, private person can also become a station manager. The station manager should be one who is enthusiastically hoping for improvement of social welfare in the local community. The unit is responsible for Michinoeki actual daily activity of operation/ management.

The Michinoeki Local Working Group will consist of 7 staffs such as receptionist, sales person, store keeper, general account person, maintenance staff, cleaning staff, security guard. These staffs will come from, in particular, local inhabitants group, local industrial associations, local SMEs. This working group will support to develop Michinoeki operation related activity itself.

### **3.5 Impact of Michinoeki and its Social and Environmental Consideration**

When planning, constructing and operating Michinoeki, careful investigation of impact of Michinoeki is indispensable. Michinoeki development has both positive impact and negative impact. Especially negative impact should be taken care and should take appropriate action to avoid further spread of such negative affects. This chapter discusses the items related to impact as well as general methodology for monitoring impacts.

#### **3.5.1 Overview of Impact of Michinoeki**

Michinoeki is resting space along the national road network. But its unique characteristics also lie in its local economic vitalizing function by selling local products and promoting tourism in surrounding area. Meanwhile, increasing visitors to Michinoeki might cause negative impacts to the located site such as impacts on natural environment, and competition with existing similar facilities.

With these characteristics of Michinoeki mentioned above, we can anticipate, in general, that both positive and negative impacts may arise in social, economic, traffic, and environmental aspects described in Table 3.5.1

Readers may be cautioned that although this table shows expected general impacts of Michinoeki, the real impacts arising from actual Michinoeki project may change, depending on its location, function and size etc.

**Table 3.5.1 Overview of Michinoeki Impacts in Different Aspects**

Aspect	Expected Impacts
Traffic	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impacts on safety, comfortableness and convenience of road traffic thanks to comfortable resting space, useful road traffic information, and road traffic information provided by Michinoeki.</li> <li>- Michinoeki may have negative impacts on road traffic condition in surrounding area due to traffic concentration to the Michinoeki.</li> </ul>
Economy	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impacts on local employment, income generation, and economic development by sales of local products, employment of its staff and tourism promotion in surrounding area.</li> <li>- Michinoeki may have negative impacts on local economy if it overturns existing similar facilities and if local governments have to subsidize its operation and running costs due to its poor financial performance.</li> </ul>
Social	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impact on local society through, for example, promotion of social participation of women, income generation of the poor or ethnic minority, raising awareness for hygiene, improvement of information accessibility, and increasing training opportunity.</li> <li>- Michinoeki may have negative impacts on local society if it causes loss of livelihood measures by resettlement or land expropriation, conflicts within the area, and degradation of cultural and historical heritages.</li> </ul>
Environment	<ul style="list-style-type: none"> <li>+ Michinoeki may have positive impacts on landscape improvement.</li> <li>- Michinoeki may have negative impacts through degradation of ecology, soil erosion, noise, and vibration during its construction, and waste water and solid waste during its operation period.</li> </ul>

### 3.5.2 Details of Impact and Affected Groups

Aforementioned negative and positive impacts associated with Michinoeki development in terms of traffic, economic, social and environmental aspects do not evenly affect to every stakeholder. Rather, these impacts will create different degree of impacts to different stakeholders. Stakeholders related to Michinoeki can be categorized into four major groups shown in Table 3.5.2.

**Table 3.5.2 Major Stakeholder Groups Related to Michinoeki and Their Characteristics**

Stakeholder group	Brief description
Road users	– Driver, bus passengers, private car passengers, motorbike drivers etc.
Michinoeki operating entities and service providers	– Michinoeki operating entities, tenants (restaurant, goods seller), bus operators, local products (agricultural products and handicrafts) producers etc.
Neighboring residents and communities	– Neighboring tourism areas, businesses (fuel station, restaurant etc.), local products (agricultural products and handicrafts) producers, neighboring residents etc.
Local governments	– Commune PCs, district PCs etc.

Prior to starting the development of Michinoeki, it is necessary to anticipate possible positive and negative impacts for each stakeholder groups in advance. It is also necessary to elaborate measures to maximize positive impacts as well as mitigation measures to minimize negative impacts. After the Michinoeki starts its operation, it is necessary to monitor and evaluate how much extent the expected impacts are realized and how mitigation measures function in order to improve management of Michinoeki as well as future planning of Michinoeki. Based on these backgrounds, the table 3.5.3 summarizes the overview of impacts or Michinoeki development in terms of traffic, economic, social and environmental aspects and affected stakeholder groups by these impacts.

**Table 3.5.3 Overview of Impacts of Michinoeki and Affected Groups**

Aspect	Expected Impact	Item	Overview of Impacts	Affected Group			
				Road Users	Michi-no-Eki management entities and service providers	Neighboring residents and communities	Local governments
Traffic	+	Safety	Ensuring safety driving by appropriate rests and route choices, drivers' awareness improvement by road traffic safety campaign	○		○	
	+	Comfortableness	Improvement of comfortableness of road users by appropriate rests, eat and drink service and local products purchase	○			
	+	Convenience	Improvement of convenience by appropriate road information and traffic related service provision	○			
	-	Neighboring road traffic	Worsening of neighboring road traffic condition such as increase of traffic jam, increase of accident and environmental degradation caused by traffic concentration for Michi-no-Eki			○	
Economy	+	Local products sales at Michi-no-Eki	Increase of sales of products and services at Michi-no-Eki		○		
	+	Employment	Increase of employment by Michi-no-Eki construction and operation			○	
	+	Tourism development	Increase of tourists in neighboring areas by tourism information provision at Michi-no-Eki			○	
	+	Local products sales	Increase of local products sales in the region by information provision at Michi-no-Eki; increase of added value; advance of products development; improvement of products distribution and market expansion			○	
	+	Regional employment, income, economy, tax revenue etc.	Increase of employment, income, economic activity and tax revenue in the region caused by Michi-no-Eki				○
	—	Public expenses for Michi-no-Eki development and operation	Public expenses by local government for Michi-no-Eki operation				○
	-	Competition with existing similar facilities	Decrease of sales in existing similar shops			○	
Society	+	Gender	Increase of social participation opportunity and income of women by Michi-no-Eki operation and products manufacturing and sales			○	
	+	Poor people and ethnic minorities	Increase of social participation opportunity and income of poor people and ethnic minorities by Michi-no-Eki operation and products manufacturing and sales			○	
	+	Public health	Improvement of regional public health condition (improvement of water supply and sewerage) and awareness for public health		○	○	
	+	Information, communication and education	Increase of training opportunity and access to various information at Michi-no-Eki		○	○	
	-	Resettlement, land expropriation	Resettlement and loss of means of life by land expropriation by Michi-no-Eki development			○	
	-	Conflict in the region	Arising conflicts with existing shops and between beneficiaries and non-beneficiaries			○	
	-	Cultural and historical heritage, traditional value	Impact to cultural and historical heritages, and traditional values by Michi-no-Eki development and increase of Michi-no-Eki users			○	○
Environment	-	Water quality	Ground and underground water pollution by excessive waste water from Michi-no-Eki			○	
	-	Air quality	Worsening of air quality by concentration of traffic to Michi-no-Eki			○	
	-	Noise and vibration	Noise and vibration by trucks at Michi-no-Eki construction and various events at Michi-no-Eki			○	
	-	Topography and soil	Soil erosion and impact to flooding by land filling			○	
	-	Species and ecology	Impact to surrounding ecosystems by land filling and waste water			○	
	+/-	Landscape	Improvement of landscape by Michi-no-Eki development or worsening of landscape by inappropriate design			○	
	-	Solid waste	Worsening of environment by inappropriate treatment of solid waste			○	
	-	Odor	Odor from unsanitary toilet and inappropriate treatment of waste			○	

Source: JICA Study Team

### 3.5.3 Basic Framework of Impact Evaluation

As mentioned above, it is necessary to monitor and evaluate impacts of Michinoeki development projects from planning stage to operating stage of Michinoeki. The objective of impact evaluation can be summarized as follows.

- To recognize and evaluate current situation and issues of local environment and society in order to maximize positive impacts and minimize negative impacts of Michinoeki development to the local environment and society
- To monitor and evaluate the impacts of Michinoeki development in order to improve Michinoeki operation & management and future planning of Michinoeki

In order to achieve these objectives, impact evaluation can be divided into two major categories i.e. (1) *Ex-ante* evaluation (from planning, designing, construction, until beginning of operating stage), (2) *Ex-post* evaluation (operating stage). Overview of each category of impact evaluation is summarized in the table 3.5.4 below.

**Table 3.5.4 Overview of Impact Evaluation in Each Step of Michinoeki Development**

Step	Overview
<i>Ex-ante</i> evaluation (from planning, designing, construction, until beginning of operating stage)	<ul style="list-style-type: none"> <li>- To study on social, economic, traffic and environmental baseline of Michinoeki planned area as well as possible positive and negative impacts to be caused by planned Michinoeki in order to minimize negative impacts and maximize positive impacts of Michinoeki to local environment and society</li> <li>- To elaborate mitigation measures for expected negative impacts, to reflect these mitigation measures to Michinoeki development plan and design, and to elaborate monitoring plan</li> <li>- During construction and beginning of operating period, to monitor whether mitigation measures elaborated at planning &amp; designing stage are properly implemented</li> <li>- To monitor impacts based on the monitoring plan elaborated beforehand and check whether unforeseen issues are arisen or there are any possibility of unexpected problems to be arisen</li> </ul>
<i>Ex-post</i> evaluation (operating stage)	<ul style="list-style-type: none"> <li>- After certain period of the operation, to study on social, economic, traffic and environmental situation of Michinoeki located area and to evaluate both positive and negative impacts quantitatively as much as possible by comparing before and after the Michinoeki development</li> <li>- To utilize result of the impact evaluation for improvement of the Michinoeki operation and planning &amp; operation of other Michinoeki</li> </ul>

### **3.5.4 Ex-ante Impact Evaluation**

Important points in *ex-ante* impact evaluation include:

- A) To grasp baseline;
- B) To assess positive and negative impact by Michinoeki development taking into account design & operation planning of the Michinoeki; and
- C) To elaborate mitigation measures for anticipated negative impacts, to incorporate those mitigation measures to design and operation plan, and to monitor these impacts (social and environmental consideration)

It should be noted that *ex-ante* impact evaluation is recommended to carry out after the location, scale and activity of the Michinoeki project were at least roughly decided. The practical methods for *ex-ante* impact evaluation include using checklists, experts' judgment, and quantitative analysis by mathematical models. With its function and scale of Michinoeki, using checklist and experts' judgment together with supplementary surveys are thought to be effective to evaluate impacts of Michinoeki within a limited time and budget.

It is also recommended to select important items out of all the items listed in Table 3.5.3 beforehand (scoping process), because it is time and cost consuming task to evaluate every single item which may not necessarily have significant importance in certain condition. Then, it is recommended to carry out in detailed study for those items selected in the scoping process.

Although those items listed in Table 3.5.3 may have either positive or negative impact depending on different conditions, items which tend to have negative impact and an example of checklist for those negative items is shown in Table 3.5.5. In addition, an example of monitoring plan is shown in Table 3.5.6.

In parallel with the planning and designing process of Michinoeki project, it is necessary to incorporate mitigation measures to Michinoeki plan and design in order to minimize anticipated negative impacts. At the same time, it is also very important to elaborate a monitoring plan and carry out monitoring activities for important times from construction period until the beginning of the operation period in order to check whether the mitigation measures are properly implemented, any unforeseen problems are arisen, and there is any possibility for any unforeseen problems to be arisen.

Considering the scale and facility of Michinoeki, it is likely that most of the significant negative impacts can be avoided or minimized by using these tools at the time of planning.



**Table 3.5.5 Check List of Evaluating Negative Impacts**

Element	Check Item	Yes/ No	Reason
Road traffic in surrounding area	- Is the Michinoeki properly planned regarding its site selection, layout plan, and entrance road etc. so that it does not cause increase of traffic jam or traffic accidents?		
Similar businesses / facilities in surrounding area	- Will the Michinoeki plan cause serious negative impact to similar businesses and facilities in surrounding area? - Is the Michinoeki plan properly disclosed to these people? Are transparency and equity secured in the process of planning?		
Gender, poverty, ethnic minority	- Does socially vulnerable groups such as women, poor, ethnic minorities participate in planning process of the Michinoeki and are their rights properly secured?		
Resettlement, land expropriation	- Is there any involuntarily resettlement? Was the land expropriation properly compensated? - Doesn't the land expropriation cause serious impacts for the livelihood of the people?		
Conflict	- Is designing and planning process of the facility and management transparent and fair enough? - Won't the planned Michinoeki cause serious conflict in the area?		
Cultural and historical heritage, traditional value	- Won't the planned Michinoeki seriously affect on cultural and historical heritages, and traditional values in the region?		
Water quality	- Is an appropriate waste water treatment facility included in the facility design and management plan? - Is an appropriate water source secured?		
Air quality	- Will the dust and other pollutants during the construction and operation be properly managed?		
Noise and vibration	- Will the noise and vibration during the construction and operation be properly managed?		
Topography and soil	- Will the soil erosion and water flow be properly managed during land filling work?		
Species and ecology	- Is there any endangered species or ecology in surrounding area?		
Landscape	- Does the facility design fit the surrounding landscape?		
Solid waste	- Does a proper solid waste management plan included in facility and management plan?		
Odor	- Does a proper management plan of odor sources such as toilet, waste water and solid waste be included in facility design and management plan?		

Source: JICA Study Team

**Table 3.5.6 Examples of Mitigation Measures and Monitoring Items**

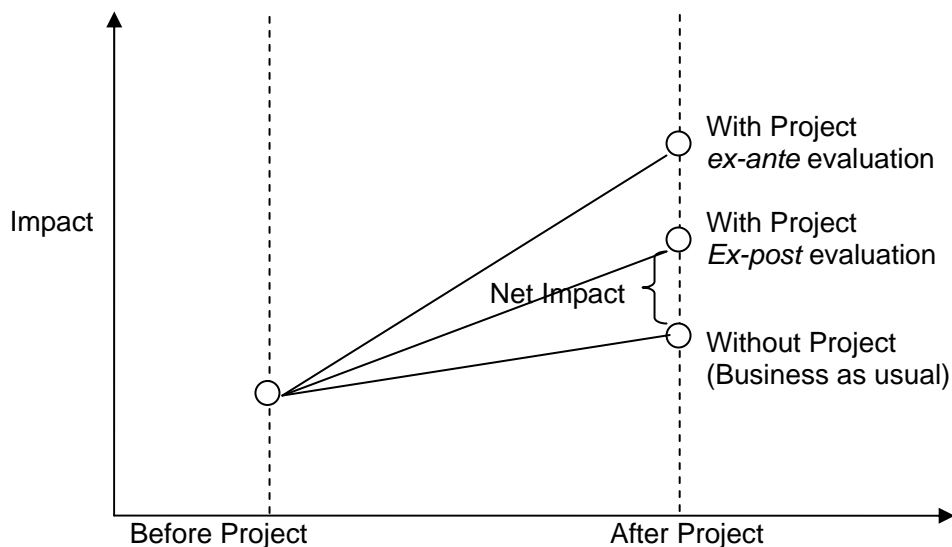
Element	Mitigation measures	Monitoring items(method)
Road traffic in surrounding area	- Appropriate site selection, appropriate entrance road design and layout plan	- Traffic condition, number of accidents (statistics, interview)
Similar businesses / facilities in surrounding area	- Ensuring participation of people in similar businesses and facilities in surrounding area from the beginning of facility design and management planning	- State of the similar facilities and their views (interview, questionnaire)
Gender, poverty, ethnic minority	- Ensuring participation from the planning stage and implement necessary measures	- Degree of the participation and their views (interview, questionnaire)
Resettlement, land expropriation	- Ensuring proper compensation and securing means of livelihood	- State of the compensation, their livelihoods and views (interview, questionnaire)
Conflict	- Ensuring participation from the planning stage and securing transparency and fairness of the process	- Views of stakeholders (interview, questionnaire)
Cultural and historical heritage, traditional value	- Ensuring appropriate measures not to impact on cultural and historical heritages during construction and operation	- State of the conservation of cultural and historical heritages (interview, questionnaire)
Water quality	- Ensuring appropriate water intake and waste water treatment in facility design and management	- State of waste water treatment, quality of waste water (site visit, interview)
Air quality	- Ensuring appropriate measures to secure air quality during construction and operation	- State of air quality (site visit, interview)
Noise and vibration	- Ensuring appropriate measures to prevent noise and vibration during construction and operation	- State of noise and vibration (site visit, interview)
Topography and soil	- Ensuring appropriate measures to prevent soil erosion and flooding during construction and operation	- State of soil erosion and flooding (site visit, interview)
Species and ecology	- Avoiding protected areas, areas with endangered species and vulnerable ecology	- State of ecology (site visit, interview)
Landscape	- Ensuring facility design suitable with surrounding landscape	- State of landscape (site visit, interview)
Solid waste	- Coordination with waste management authority and including waste management plan in the management plan	- State of waste management (site visit, interview)
Odor	- Ensuring to include appropriate measures to prevent bad smell from toilets, waste water and solid waste	- State of odor (site visit, interview)

Source: JICA Study Team

### 3.5.5 Ex-post Impact Evaluation

The main objective of *ex-post* evaluation is to grasp the actual impact of Michinoeki development after its operation and apply lessons learned from the evaluation for the Michinoeki operation improvement and other Michinoeki planning and operation. In this respect, *ex-post* impact evaluation is usually carried out after certain period of time after the operation begins when the effect of project is thought to be realized. In addition, *ex-post* evaluation is usually carried out with focusing on positive impacts.

Generally speaking, project impacts are evaluated by comparing “Project Case” with “Without Project Case” (business as usual case) as shown in a conceptual figure below. Although there are many tools and methods including mathematical models and statistical theories for this kind of evaluation, it is possible to apply simpler method such as simple comparison of before and after the project, assuming “Without Project Case” (business as usual) is constant.



**Figure 3.5.1 Concept of Ex-ante Impact Evaluation**

Source: JICA Study Team

Since *ex-post* evaluation for Michinoeki in Vietnam can be regarded as a practical tool to improve operation and management of Michinoeki and future planning of other Michinoeki, it is reasonable to select and focus only on important elements and evaluate them by simple method.

Table 3.5.1 shows examples of indicators and survey methods for each element in *ex-post* impact evaluation. Although this example shows a set of standard indicators, it is not necessary to measure all these indicators as mentioned before. Rather, to focus on some important elements depending on each Michinoeki development plan and to evaluate only those important elements seem to be sufficient.

In terms of practical survey designing, it is anticipated to carry out several surveys summarized in table 3.5.7. It is expected to design in detail these kinds of surveys in accordance with the real situation of each Michinoeki setting.

**Table 3.5.7 Examples of Indicators and Methods for *Ex-post* Impact Evaluation**

Aspect	Expected Impact	Item	Overview of Impacts	Examples of Indicators (Measurement Methods)
Traffic	+	Safety	Ensuring safety driving by appropriate rests and route choices, drivers' awareness improvement by road traffic safety campaign	Number of accidents (statistics), drivers' awareness (questionnaire)
	+	Comfortableness	Improvement of comfortableness of road users by appropriate rests, eat and drink service and local products purchase	Awareness of drivers and passengers (questionnaire)
	+	Convenience	Improvement of convenience by appropriate road information and traffic related service provision	Awareness of drivers and passengers (questionnaire)
	-	Neighboring road traffic	Worsening of neighboring road traffic condition such as increase of traffic jam, increase of accident and environmental degradation caused by traffic concentration for Michi-no-Eki	Status of traffic jam, number of accidents, awareness of residents (direct measurement, questionnaire, and interview)
Economy	+	Local products sales at Michi-no-Eki	Increase of sales of products and services at Michi-no-Eki	Sales at Michi-no-Eki, and profit (interview)
	+	Employment	Increase of employment by Michi-no-Eki construction and operation	Number of employees in Michi-no-Eki construction and operation (interview)
	+	Tourism development	Increase of tourists in neighboring areas by tourism information provision at Michi-no-Eki	Number of tourists in neighboring tourist places, and sales of hotels and other tourist places (statistics, questionnaire, interview)
	+	Local products sales	Increase of local products sales in the region by information provision at Michi-no-Eki; increase of added value; advance of products development; improvement of products distribution and market expansion	Sales of local products in surrounding area, number of items, and level of recognition (statistics, questionnaire, interview)
	+	Regional employment, income, economy, tax revenue etc.	Increase of employment, income, economic activity and tax revenue in the region caused by Michi-no-Eki	Number of employees, average income, regional domestic products, and tax revenue in surrounding area (statistics, questionnaire)
	—	Public expenses for Michi-no-Eki development and operation	Public expenses by local government for Michi-no-Eki operation	Operation and management scheme, and financial balance (interview, statistics)
	-	Competition with existing similar facilities	Decrease of sales in existing similar shops	Status of neighboring similar facilities (number and activity) (interview, questionnaire, site visit)
Society	+	Gender	Increase of social participation opportunity and income of women by Michi-no-Eki operation and products manufacturing and sales	Status of social participation of women, and income generation opportunity (interview, questionnaire)
	+	Poor people and ethnic minorities	Increase of social participation opportunity and income of poor people and ethnic minorities by Michi-no-Eki operation and products manufacturing and sales	Income opportunity and income level of poor people and ethnic minorities (interview, questionnaire)
	+	Public health	Improvement of regional public health condition (improvement of water supply and sewerage) and awareness for public health	Awareness of residents (interview, questionnaire)
	+	Information, communication and education	Increase of training opportunity and access to various information at Michi-no-Eki	Awareness of residents (interview, questionnaire)
	-	Resettlement, land expropriation	Resettlement and loss of means of life by land expropriation by Michi-no-Eki development	Status of resettlement, land expropriation and compensation (interview)
	-	Conflict in the region	Arising conflicts with existing shops and between beneficiaries and non-beneficiaries	Awareness of stakeholders (interview)
	-	Cultural and historical heritage, traditional value	Impact to cultural and historical heritages, and traditional values by Michi-no-Eki development and increase of Michi-no-Eki users	Status of cultural and historical heritages and awareness of residents (statistics, questionnaire, site visit)
Environment	-	Water quality	Ground and underground water pollution by excessive waste water from Michi-no-Eki	Water quality, and perception of residents (statistics, direct measurement, interview, questionnaire)
	-	Air quality	Worsening of air quality by concentration of traffic to Michi-no-Eki	Air quality, and perception of residents (statistics, direct measurement, interview, questionnaire)
	-	Noise and vibration	Noise and vibration by trucks at Michi-no-Eki construction and various events at Michi-no-Eki	Noise and vibration level and its perception of residents (statistics, direct measurement, interview, questionnaire)
	-	Topography and soil	Soil erosion and impact to flooding by land filling	Level of soil erosion and flooding, and perception of residents (statistics, site visit, interview, questionnaire)
	-	Species and ecology	Impact to surrounding ecosystems by land filling and waste water	State of ecosystems and species, and perception of residents (site visit, interview, questionnaire)
	+/-	Landscape	Improvement of landscape by Michi-no-Eki development or worsening of landscape by inappropriate design	State of landscape and district image, and perception of residents (site visit, questionnaire, interview)
	-	Solid waste	Worsening of environment by inappropriate treatment of solid waste	Amount of waste, collection and treatment of wastes, and perception of residents (site visit, interview, questionnaire)
	-	Odor	Order from unsanitary toilet and inappropriate treatment of waste	Level of odor, and perception of residents (site visit, interview, questionnaire)

Source: JICA Study Team

**Table 3.5.8 Examples of Survey Design for *Ex-post* Evaluation**

Type of Survey	Objectives of Survey	Indicators	Analysis Method
Road User Survey (interview, questionnaire, direct measurement)	<ul style="list-style-type: none"> <li>- To grasp degree of improvement in safety, comfortableness, and convenience of road users (drivers and passengers)</li> </ul>	<ul style="list-style-type: none"> <li>- Subjective judgment by road users on improvement in safety, comfortableness, and convenience</li> <li>- Number of accidents, and state of traffic congestion</li> </ul>	<ul style="list-style-type: none"> <li>- Comparison between before and after project</li> </ul>
Regional economic impact survey (questionnaire, interview)	<ul style="list-style-type: none"> <li>- To grasp regional ripple effect of Michinoeki development</li> </ul>	<ul style="list-style-type: none"> <li>- Product sales and items sold at Michinoeki</li> <li>- Number of employees at Michinoeki</li> <li>- Sales and income of local products producers</li> <li>- Level of recognitions of local products</li> <li>- Sales of other services (restaurant etc.)</li> <li>- Number of tourists and guests in accommodations</li> <li>- Sales in neighboring business enterprises</li> <li>- Income of neighboring residents</li> <li>- Local government expenses and tax revenue</li> </ul>	<ul style="list-style-type: none"> <li>- Comparison between before and after project</li> <li>- Comparison between beneficiaries and non-beneficiaries</li> </ul>
Regional social impact survey (questionnaire, interview)	<ul style="list-style-type: none"> <li>- To grasp regional social impact by Michinoeki development</li> </ul>	<ul style="list-style-type: none"> <li>- Participation and income opportunity of women, ethnic minorities, poor people</li> <li>- Training opportunity (number of participants, duration, outcome)</li> <li>- Awareness of public health</li> <li>- Income and properties</li> <li>- Life style and values</li> <li>- Subjective evaluation for Michinoeki</li> </ul>	<ul style="list-style-type: none"> <li>- Comparison between before and after project</li> <li>- Comparison between beneficiaries and non-beneficiaries</li> </ul>
Regional environmental impact survey (questionnaire, interview, direct measurement)	<ul style="list-style-type: none"> <li>- To grasp environmental impact of Michinoeki development</li> </ul>	<ul style="list-style-type: none"> <li>- Subjective evaluation for surrounding environment (landscape, water, air, noise and vibration etc.)</li> <li>- Measurement of each environmental element</li> </ul>	<ul style="list-style-type: none"> <li>- Comparison between before and after project</li> <li>- Comparison between affected area and non-affected area</li> </ul>

Source: JICA Study Team

## **4. Michinoeki Development Master Plan**

### **4.1. Nation-wide Master Plan**

Based on the discussion in previous chapter, this chapter discusses nation-wide Michinoeki development plan including target year of Michinoeki development, target amount of Michinoeki distributed over nation-wide area and introduction of new scheme of accreditation.

#### **4.1.1 Purpose of the Plan and Target Year**

This section discusses the purpose of Michinoeki development in nation-wide Vietnam and target year for construction of Michinoeki.

##### **(1) Purpose**

Michinoeki is a newly developed infrastructure based on a concept which is quite new in Vietnam. The Government has a leadership to promote Michinoeki and has to show the plan for future settlement. Michinoeki can be settled alone for the purpose of road traffic and local community. But it will be better for drivers to drop by Michinoeki within a certain interval of driving time. A Michinoeki development plan should be drawn up in a form of Michinoeki network. The Nation-wide Michinoeki Development Plan is drawn up for the purpose that;

- 1) Description of a policy along which Michinoeki should be installed in Vietnam
- 2) Description of a strategy which Michinoeki development plan should follow
- 3) Promotion of involvement of private investors who are willing to secure profit through public activity at Michinoeki
- 4) Description of promotion of a plan which Vietnamese governments expected to do.

##### **(2) Target Year**

Target Year of the Plan is 2020. Currently, future highway network has been planned with the target year of 2020. The Michinoeki development plan should comply with the existing national road network plan.

#### 4.1.2 Distribution of Michinoeki

This section discusses the distribution plan in nation-wide Vietnam. It firstly defines target year and will propose target number of construction of Michinoeki.

##### (1) Strategic Distribution

Michinoeki is one of road service facilities and each Michinoeki can serve drivers and passengers independently. Provinces and investors may develop Michinoeki independently. However, if two Michinoeki are located close to each other, the use of them may not be efficient. As an investment plan using national budget, Michinoeki Development plan should refer to the distribution plan of Michinoeki. Furthermore, as mentioned in the previous section, in Michinoeki development plan, one of the objectives is how to establish effective Michinoeki collaboration within the entire Michinoeki network. Strategic distribution is a basis for the collaboration.

##### (2) Target of Distribution

As mentioned above, site selection should be considered in case by case. It is not good idea to determine fixed criteria. However, for the purpose of investment, it is helpful to determine total amount of investment. Target of distribution is determined for this purpose.

Common criterion for allocating Michinoeki is the interval of allocation. By the Law of Land Road Traffic, 4 hours will be maximum time for continuous driving. This number leads to 200km interval where average speed is 50km/h. This interval is adopted as minimum standard of this Development Plan. This interval will be a target of the first stage of the Plan. Another idea in the first stage is that at least one Michinoeki is installed. Michinoeki is a new concept in Viet Nam. It is important to spread the concept through the Nation. After the first stage is completed, the work in following stage is to increase number of Michinoeki.

The Table 4.1.1 shows Target of Distribution of Michinoeki in Michinoeki Development Plan. This is a standard, and can be changed based on the regional characteristics.

**Table 4.1.1 Target of Distribution of Michinoeki (Standard)**

Year	Distribution
2015	Every 200 km along National Highway. At least one Michinoeki in one province
2020	Every 100 km along National Highway Additional Michinoeki along provincial roads

#### BOX

In Japan, Bureau of Public Roads of the Ministry of Land, Infrastructure, Transport and Tourism defines the location standard of Michinoeki as below.

##### A. Standard of traffic volume

- General national route which traffic volume is over approx.5,000 cars/day
- Prefectural highway which traffic volume is over 5,000 cars/day and take the role of long-distance trip traffics

##### B. Settlement interval

- Intervals are from 10 to 20 km. In maximum, approx.25km

##### C. Other attention

- On main arterial roads, settle Michinoeki at certain intervals in consideration with another Michinoeki and existing private facilities which have resting space, and enriched resting facility
- In the area where it is needed to activate, promote exchanges and regional alliances, and support the fascination and energy of the area.
- Correspond to growth and spread of leisure traffic and traffic of holidays
- Attention to position related to resting facilities on highway (SA, PA) or interchanges, and cooperate with highway to the point of resting and information provision

### (3) Expected Number of Michinoeki

Total length of National Highway is 17,295 km as of 2006. Assuming the total length of National Highway will be the same as the length in 2006, the following calculation can be used to estimate the future number of Michinoeki.

Number of Michinoeki in 2015

$$\begin{aligned} &= \text{Total length of Current National Highway Network (2008)} / \text{Target interval in 2015} \\ &= 17,295 / 200 \\ &= \text{approx. 80 Michinoeki} \end{aligned}$$

Number of Michinoeki in 2020

$$\begin{aligned} &= \text{Total length of National Highway Network in 2020} / \text{Target interval in 2020} \\ &= 17,295 / 100 \\ &= \text{approx. 160 Michinoeki} \end{aligned}$$

Note) Above-mentioned numbers are rough estimations by using standard interval. Actual number will be determined by detailed study for installing each Michinoeki in each province. Provincial Michinoeki may be added to the above number.

### (4) Expressway and Michinoeki

In Vietnam, nation-wide expressway development plans including north-south crossing expressway development plan are now being drawn up, some of which are now under construction. It is expected that service areas serving as resting facilities for drivers will be constructed along the expressways. There exist some service areas along planed expressways and the entity which is responsible for operation and management of the facility has not been fixed yet. In the future, it is expected that VRA or provincial authority will become responsible for operation and management of all service areas including the ones which were constructed by



private enterprises. The expressways' service areas, which perform the function of promotion of traffic safety, improvement of traffic service and additional function of promotion of local socio-economic development with participants of local inhabitants, will possibly fulfill the Michinoeki requirements.

### **4.1.3 Accreditation of Michinoeki**

This sections discusses an accreditation procedure as a new administrative process for implementing Michinoeki planning. Accreditation process is necessary for ensuring public feature of Michinoeki.

#### **(1) Some issues on the current mechanisms and policies**

##### **1) Issues at Planning Stage**

At the planning stage of Michinoeki development, basic functions should follow public oriented ones. In order to ensure the functions of Michinoeki as public ones, the way of authorization of such public functions should be clearly defined at the planning stage.

In carrying out the base-line survey, issues should be extracted from the viewpoint of public welfare. Concepts and functions should follow public characteristics such as rest/relaxation function serving unspecified vehicle drivers and passengers, public information provision service, traffic management function, local socio-economic activity promotion function and so forth.

Public functions closely relates to its financial planning. As discussed previously, financial source of Michinoeki may owe state budget to some extent. In order to secure the approval on such state financial support, the basic functions of Michinoeki should comply with public functions.

The basic idea of facility design should also comply with public characteristics. Michinoeki consists of three facility groups. One is "Core" facility and the other two are "Core-plus" facility and "Non-Core" facility. "Core" facility complies with public function. The other two relate to both public and commercial activity.

Environment and socio-economic impact assessment also closely relates to public functions. This impact assessment should be conducted in region-wide scale since the environment and socio-economic impact of construction of Michinoeki may affect the surrounding areas extensively which is not limited to the area adjacent to the construction site. Such impact assessment should be necessary since Michinoeki is considered a social and region oriented facility i.e., Michinoeki should be defined as a public facility.

On the basis of above-mentioned public function related matters, it is necessary to introduce newly developed authentication system to ensure the public role of Michinoeki. Simultaneously, it is also necessary to designate some state management administrative agencies which are responsible for accreditation of Michinoeki as a public functioning facility.

## **2) Issues at Construction Stage**

At the construction stage of Michinoeki development, much more rapid procedure than usual for land acquisition and acquisition of construction permit as well as tax exemption related economic preferential policy may attract the Michinoeki investors to join in Michinoeki development plan. Therefore such preferential policy intervention may contribute to promotion of spread of Michinoeki in nation-wide area.

One of grounds for assurance of introduction of such preferential policy should be public function which requires Michinoeki to embody. More specifically, the Law on Land stipulates the condition necessary for exemption of land use fees as follows;

- Land for construction of cultural, health care, educational and training, sport and physical education facilities serving public interest and other public facilities for non-business purposes (\*Source: the Law on Land section 3, article 33)

In order to acquire above-mentioned procedural and economic preferential treatment, Michinoeki has to hold public function. Also it is necessary to identify some administrative body who is in charge of assuring public functions of Michinoeki.

## **3) Issues at Operation/Management Stage**

At the operation/management stage of Michinoeki development, also assurance of public functions for Michinoeki activity is indispensable.

At the operation/management stage, annual routine expenditure needs to be supported by state budget partially or whole scale. It is obvious that state budget could not be adopted as a supportive financial source unless the support objective would be clearly assured as a public facility. Decree No.43/2006, which stipulates support scheme for operation/management of non-business units, stipulates the conditions and institutional framework only for such organizational structure that is engaged in non-business activity i.e., activities that contributes to the improvement of public welfare.

In that above-mentioned context, it is necessary to develop some institutional framework which assures public functions and characteristics of Michinoeki. Also it is necessary to clearly identify the administrative body which is in charge of assuring public function of Michinoeki along the newly developed institutional framework.

## **(2) Introduction of Accreditation**

As repeatedly discussed in the previous sections, Michinoeki is basically a public facility. Therefore Michinoeki development project should be endowed with many opportunities for making most of various kinds of state support programs. Michinoeki's public functions should be assured clearly and objectively. Otherwise it is very hard for Michinoeki to discriminate itself from other similar roadside facilities which are operated by private owners.

In order to secure such public functions, it is required to create a new institutional system. It is necessary either to clearly define the administrative body which is in charge of securing Michinoeki's public functions or to stipulate some existing administrative entities to the responsibility of securing them.

Such new institutional system is "Accreditation". Accreditation includes following tasks;

### **1) The basic conditions of accreditation**

- Accreditation stipulates that the administrative body which is in charge of making final decision of accreditation should be the Ministry of Transport (MOT) - Vietnam Road Administration (VRA).
- Accreditation has its own criteria and specific requirements to ensure Michinoeki as a public facility.
- Accreditation requires for applicants who seek to acquire accreditation certificate to follow its own procedure as well as its own application form.
- Accreditation allow all the entities including not only public entities but also private bodies to apply to accreditation of Michinoeki on the ground that said applicants follow the accreditation procedure and satisfy the accreditation criteria.

### **2) Accreditation procedures**

- Accreditation stipulates that applicants should submit the application form to the Provincial People's Committee first. After examining and approving the application form, Provincial People's Committee should submit the application form together with an official letter of recommendation drawn up by the People's Committee to MOT-VRA.
- MOT-VRA should examine the application form and approve it if the condition of the application satisfies the accreditation criteria. At this stage, approval is still preliminary one. In order to secure the final approval, applicants should ask MOT-VRA to examine the actual facility after completion of construction. The accreditation completes through above-mentioned two step procedures.
- After the final approval of accreditation based on the above-mentioned two step procedures, local steering committee, which includes local government officials, should monitor and supervise Michinoeki's daily activity in the light of Michinoeki's basic functions.
- In case that an applicant is a provincial authority, a provincial authority can submit the

application form directly to MOT-VRA without any kinds of preliminary examinations. The examination of the application should be done through above-mentioned two step procedures.

3) Accreditation of new facility and existing facility

- Accreditation process has two different procedures. The one is for accreditation of newly developed facility and the other is for accreditation of existing similar facilities. As for newly developed facility, the applicant can take into account of required functions at the planning and designing stage of applied Michinoeki. On the other hand, the applicant who has existing similar facility can also apply the accreditation if the applicant is to improve the facility design based on the accreditation criteria. The latter case can contribute to spread of Michinoeki without big amount of public construction cost.
- In case of the accreditation for the existing similar facility, the existing facility is basically a commercial facility operated by the private entities. Therefore, in order to satisfy with accreditation criteria, the public function should be added to said applied existing similar facility. For instance, to add the road and regional information provision facility, local socio-economic development promotion facility and to expand parking space may be necessary.

4) Monitoring and evaluation of accredited Michinoeki

- The provincial Department of Transport (provincial DOT) as one of local steering committee members should report the daily activities of Michinoeki to the provincial People's Committee. The provincial People's Committee should examine the report and report them to MOT-VRA.
- The System assures MOT-VRA to have the right to cancel the accreditation certificate based on the report of results of monitoring and evaluation regarding the activity of Michinoeki, which is reported by the provincial People's Committee.

On the following page, two kinds of accreditation process for either newly developed facility or existing facility are shown.

**Application and Accreditation process****Candidate Applicants**

- provincial Authorities
- State Owned Enterprises
- Private enterprises
- Local communities etc.

Submission of the application form for accreditation to **the Provincial People's Committee**

Application form is examined, approved and to be submitted to **MOT-VRA** attached with the official letter of recommendation by the Provincial People's Committee

**Preliminary Accreditation authorized by MOT-VRA**  
1<sup>st</sup> step: examination of the submitted documents

Construction

**Final Accreditation authorized by MOT-VRA**  
2<sup>nd</sup> step: examination of the actually constructed facility

Issuing the accreditation certificate and it is sent to the individual Michinoeki **managerial body**

**Monitoring and re-Accreditation (or Cancellation) process**

Operation/Management

**Monitoring**

- **Provincial Steering Committee**  
(Provincial authorities, District authorities and other relevant local authorities)

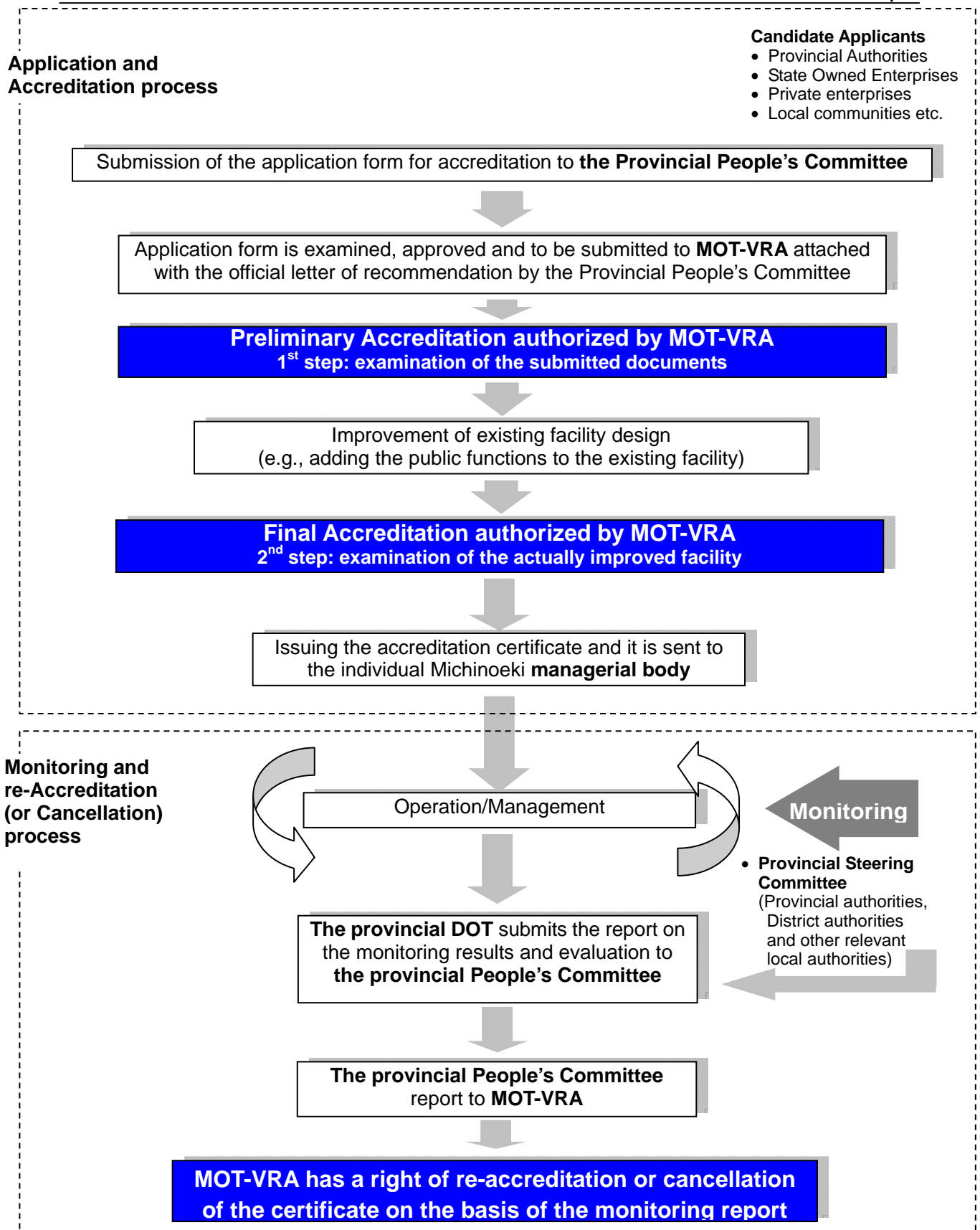
**The provincial DOT submits the report on the monitoring results and evaluation to the provincial People's Committee**

**The provincial People's Committee report to MOT-VRA**

**MOT-VRA has a right of re-accreditation or cancellation of the certificate on the basis of the monitoring report**

**Figure 4.1.1 Proposed Procedure for Accreditation of Michinoeki in Case of Newly Developed Michinoeki**

Source: JICA Study Team



**Figure 4.1.2 Proposed Procedure for Accreditation of Michinoeki in Case of Accreditation for Existing Similar Facility**

Source: JICA Study Team

Advantages of the receipt of the accreditation are as follows;

1. Enjoyment of technical support
2. Possible financial support in a form of governmental direct investment or funding
3. Improvement of reliability (to guarantee on qualities of facility and service provision)
4. Permission of usage of common Michinoeki logo mark
5. Membership of Michinoeki union (tentative) (the exchange of information among each Michinoeki and the participation to related campaigns)
6. Increase of number of visitors and stabilization of financial condition on the basis of above-mentioned advantages

Accredited facility as Michinoeki can be expected to receive various kinds of economic preferential treatment such as state budget support, access to the opportunity for utilizing preferential lending scheme and so forth. Also accredited Michinoeki can expect legal procedural preferential treatment such as more rapid acquisition of land use right as well as construction permit than usual and so forth. However, if the accreditation conditions, which is required in advance, is violated after construction and operation of Michinoeki, the accreditation should be cancelled basing on the strict examination conducted by the administrative body which is stipulated to be in charge. The Ministry of Transport (the Vietnam Road Administration) should have the right to make final decision of cancellation of accreditation certificate.

### **(3) Criteria of accreditation**

In order to be accredited, applied roadside facility should satisfy some conditions according to the following criterions.

- a. Applied facility should be located along national highway or provincial highway.
- b. Applied facility should have core facility consisting of large enough parking space, clean toilet, rest/relaxation space for visitors, information provision facility, gathering venue for local inhabitants and local symbolic facility.
- c. Applied facility should satisfy with following basic functions;
  - Rest/relaxation Service Provision Function
  - Road Traffic Management Support Function
  - Information Provision Function
  - Local Socio-economic Development Promotion Function
  - Landmark Function
- d. Applied facility should function as a public facility. Planning, construction and operation/management body should be clearly shown to ensure the public function.
- e. Such an owner of applied facility as local authority, local community and private enterprise can be an applicant for Michinoeki accreditation.



#### **4.1.4 Programs**

This section discusses some programs ensuring Michinoeki development plan.

##### **(1) Technical Development**

Technical support is necessary to be introduced in order to spread Michinoeki over nation-wide area in Vietnam based on this Michinoeki development Master Plan. Technical development should be conducted at each stage of planning, construction and operation/management.

Namely at the planning stage, technical development activities relate to:

- Selection of construction site
- Baseline survey on socio-economic condition on candidate construction site
- Concept and function formulation
- Preliminary environmental, social and financial assessment
- Schematic design of the facility
- Extraction of potential stakeholders
- Development of overall implementation plan

At the construction stage, technical matters relate to:

- Detailed construction site survey
- Detailed facility design
- Acquisition of construction permit
- Preparation of tendering
- Construction supervision

At the operation/management stage, technical development is needed from the following viewpoints as:

- Development of operation/management framework
- Identification of operation/management activities
- Identification of responsibility sharing among relevant stakeholders
- Products development
- Promotion of overall operation/management activities

Specifically, products development and promotion of activities at operation/management stage should include the following technical activities:

- Product development
  - Identification of potential local products
  - Selection of items for Michinoeki original product development
  - Technical advice on improvement of design, quality control

- Promotion of activities
  - Development of information and promotion items
  - Announcement and coordination with relevant agencies
  - Preparation for official opening ceremony
  - Preparation for Events
  - Evaluation and Consultation for Sustainable Promotion Activities
  - Encourage participation and cooperation from local organizations and communities

Above-mentioned technical developments are recommended to be conducted according to the Michinoeki planning, construction and operation/management manual being established by JICA through this Master Plan study.

## **(2) Development of Relevant Databases and Information Network**

Michinoeki is expected to function as an information provision facility. Information includes not only road and road traffic related information but also cultural, historical and tourism information in neighboring region. Therefore information providers should not be limited to road and road traffic administrators. Local community including local authority, local groups, local industrial associations and even local inhabitants are expected to get involved with such activities as preparation and provision of regional information. Database should contain, for instance, road map, general road traffic condition, natural hazard condition, regional cultural/historical situation and tourism information.

Michinoeki should be constructed in a form of network rather than stand-alone form so that plural Michinoeki can connect with each other in terms of exchanging information. Such synergetic activities make Michinoeki functions much more attractive and effective.

## **(3) Establishment of Michinoeki Development Promotion Organizations**

As for Michinoeki development promotion organization, possibilities are either to newly develop such organization or to utilize existing organizations. For the time being, such existing organization as, for instance, Vietnam Automobile Transportation Association (VATA) can be considered as Michinoeki alliance organization.

## 4.1.5 Budgetary Planning

This section discusses budget allocation planning for construction and operation of Michinoeki.

### (1) Cost of Michinoeki

#### 1) Initial Cost

The initial cost of Michinoeki consists of cost planning, cost of designing, cost of land acquisition, and cost of construction. Cost of construction is composed of ground work, building, parking pavement, Interior equipment, and other items such as guide signs. In the Pilot Study conducted in the northern region the cost of constructing core-facilities is about 9-10 billion VND (Table 5.5.1). The cost of construction depends on the size, design, ground condition, and others (i.e. weather condition).

Total initial cost is the sum of this minimum construction cost and additional construction cost and cost of pre-construction costs. It depends on cases. In roughly saying initial cost will be around 20-30 Billion VND as a total.

**Table 4.1.2 Composition of Construction Cost**

Item	Composition	Amount
1.Core Facility	53.3%	4.8 - 5.3
2.Exterior Facility	5.7%	0.5 - 0.6
Sub total	59.0%	5.3 - 5.9
3.Access Utilities	2.7%	0.2 - 0.3
4.Inner Road	18.2%	1.6 - 1.8
5.Parking Space	18.9%	1.7 - 1.9
6.Others	1.2%	0.1
Sub Total	41.0%	3.6 - 4.1
Total	100.0%	9-10 Billion VND

Source: JICA Study Team

Note) Land preparation cost is not included

#### 2) Operation Cost

Operation Cost is, for instance, composed of the following items:

- Personnel expense
- Maintenance cost (water, electricity, clearing and others)
- Depreciation cost
- Tax
- Miscellaneous expenses (commission fee for external lecturer, purchase of study materials, etc.)

Operation cost may depend on regional characteristics and operation form which differs from each Michinoeki, however in case of the pilot project, annual cost is roughly estimated about 2.5 billion VND in 2010 and 3.4 billion VND in 2020 shown in the following table.

**Table 4.1.3 Annual Operation Cost [MVND: million VND]**

Cost items	2010 year	2020 year
Salary	430	770
General administration	215	335
Maintenance	245	650
Publicity and others	80	170
Depreciation	375	375
Income tax (assumed net profit)	1,120 (3,990)	1,060(3,780)
<b>Total</b>	<b>2,465</b>	<b>3,360</b>

\*footnote

- ✓ Salary: station manager(1 person) =4 MVND/ManMonth, Deputy manager (3 persons) =3.2MVND/ManMonth, Support staffs (7 persons) =2.4 MVND/ManMonth, part time worker (6 persons only from February to April) = 1.6MVND/ManMonth
- ✓ General administration: 50% of Salary
- ✓ Maintenance: Electricity consumption cost =103 MVD/year, Water consumption =62 MVD/year, Clearing =23 MVD/year, Others= 19 MVD/year
- ✓ Publicity and others: cost for delivering poster, printings and others
- ✓ Depreciation: initial value(=construction cost) / durable year(=25year)
- ✓ Income tax: tax rate is 28% imposing net profit
- ✓ Salary increase rate is assumed to be 6% per year and inflation rate 8% per year

Source: JICA Study Team

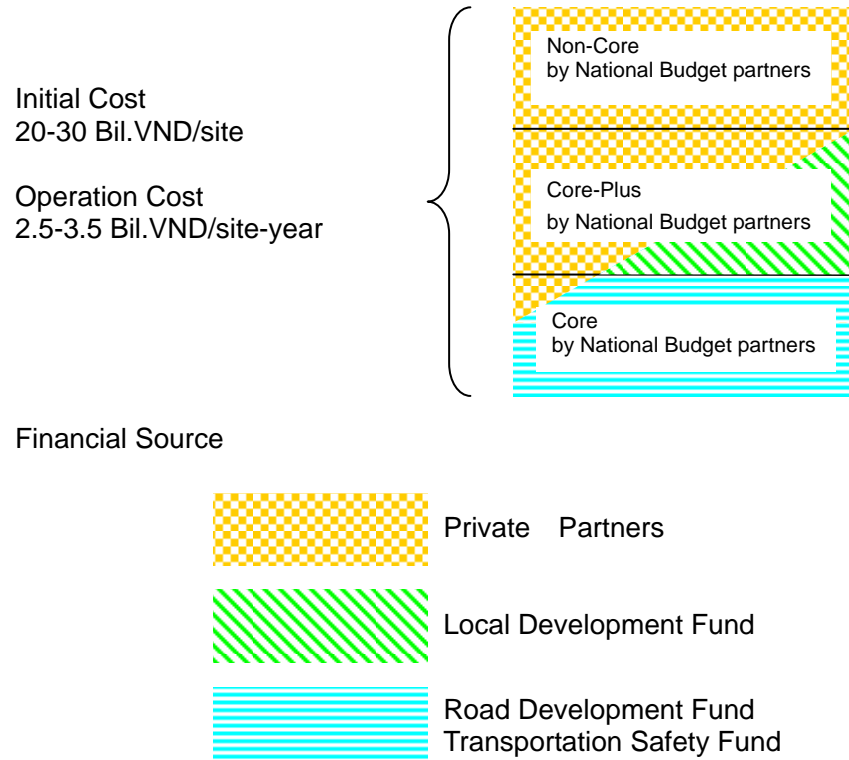
## (2) Budget for Michinoeki Development

### 1) Source of Funds

Initial cost of Michinoeki will be roughly 20-30 Billion VND. Annual expense will be 2.5-3.5 Billion VND. This cost includes cost of commercial activity that belongs to private partners. In Pilot projects, land acquisition cost and ground work cost were finally paid by private partners. Annual expense contains cost for profitable activity that should belong to private partners.

As for the budget of the national government, the budget should be used to support initial cost of the Core facility and, if necessary, the Core-plus facility. And other expected use of the national budget is the promotion activities of Michinoeki.

Under the current legal framework, it is difficult to procure the specific fund for construction of Michinoeki. Therefore, private sector investment should be promoted, however it may be possible for VRA to be direct investor in Michinoeki development in the light of road infrastructure development and promotion of traffic safety. The provincial budget could partly be applied to operation/management fund of Michinoeki.



**Figure 4.1.3 Example of Financial Sources for Initial and Operation Costs**  
 Source: JICA Study Team

## **2) Application of Regional Socio-economic Development Promotion Fund**

There exist plenty of local socio-economic development promotion programs and their budget. By making most of these funds, it may be possible to conduct personnel training and support operation expenditure. Development of Michinoeki specific local vitalization fund should be considered by taking a long-term view for the future.

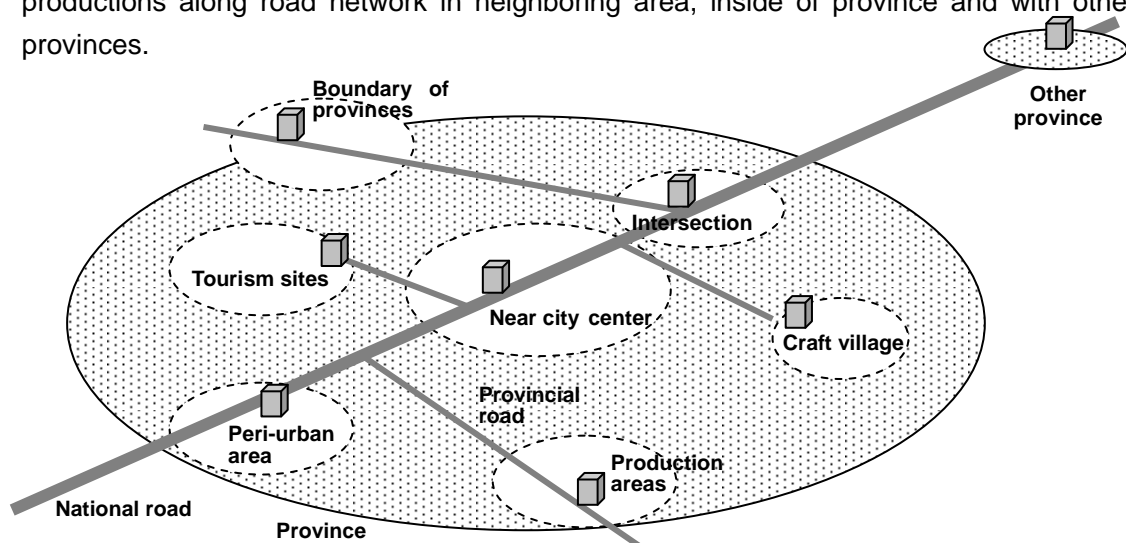
## 4.2 Provincial Master Plan

### 4.2.1 Purpose

#### (1) Necessity of Provincial/Local Network of Michinoeki

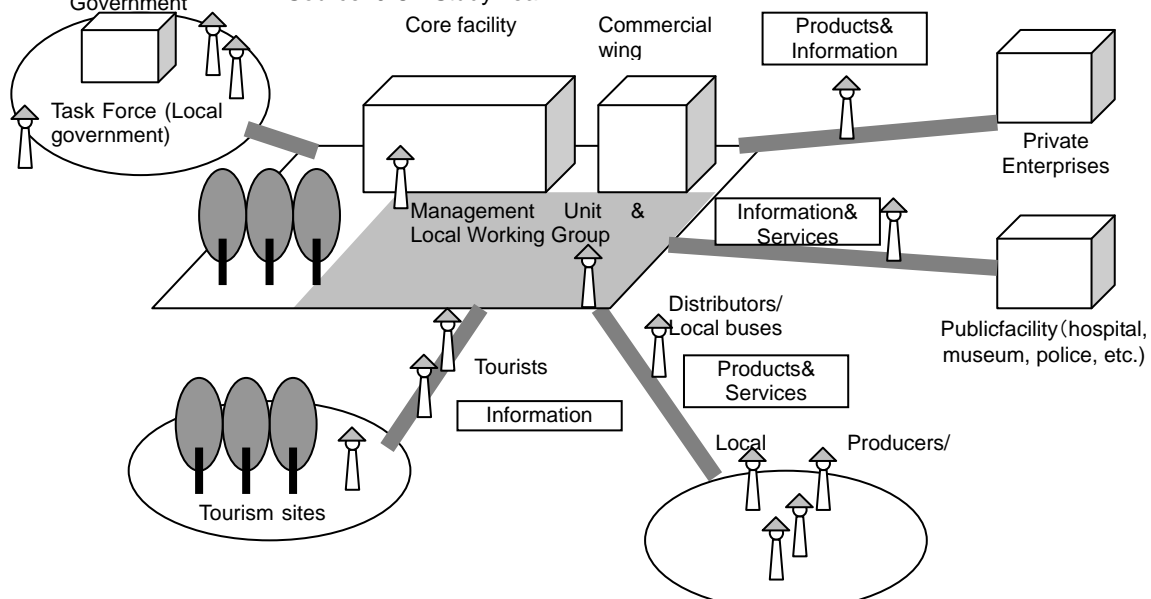
The owner of the Michinoeki facility, which is designated as a public road infrastructure as well as a community facility, is the provincial government. The Michinoeki aim to contribute to effective transport management as well as local socio-economic development, these facilities can be regional and local promotion centers in provincial level.

After development of the first Michinoeki in a province based on the target of central master plan, the capacity and benefits of the first facility will be strengthened and enhanced when this station will make a linkage with other facilities and sites of tourism and productions along road network in neighboring area, inside of province and with other provinces.



**Figure 4.2.1 Image of Michinoeki Network in Province**

Source: JICA Study Team



**Figure 4.2.2 Image of Local Network in Center of Michinoeki**

Source: JICA Study Team

## **(2) Role of Provincial Governments for Michinoeki Development**

Michinoeki will be developed by either provincial governments or private sectors based upon National Michinoeki network. The detailed planning such as site selection, concept formulation as well as assignment of stakeholders and implementation bodies need to be discussed in provincial level to develop Michinoeki as a community facility with local identity and participation of local governments and communities.

Main roles of provincial governments are to provide direct assistance to plan, develop, manage of Michinoeki and its provincial network, as well as to coordinate among relevant stakeholders. In this context, basic tasks of provincial government is are follows;

- 1) Concept formulation (regional setting, accordance with provincial policy, role sharing with private sector, etc.)
- 2) Project formulation (approval of project, assignment of body for development/ coordination/ operation, etc.)
- 3) Provision of appropriate guidance and concrete support measures in corporate in provincial policies and National Master Plan
- 4) Allocation of subsidy or financial support

Physical development such as infrastructure and utility development, site preparation, and construction of facility depend upon the project condition, whether other financial resources (private sector's involvement, donor's support, etc) are available or not.

## **(3) Planning Framework for Provincial Michinoeki Master Plan**

The Michinoeki Master Plan of Hoa Binh, Ninh Binh and Bac Giang will be proposed by implementing pilot projects of planning, construction and operation, as well as by verifying applicability of proposed policies and institutional arrangement.

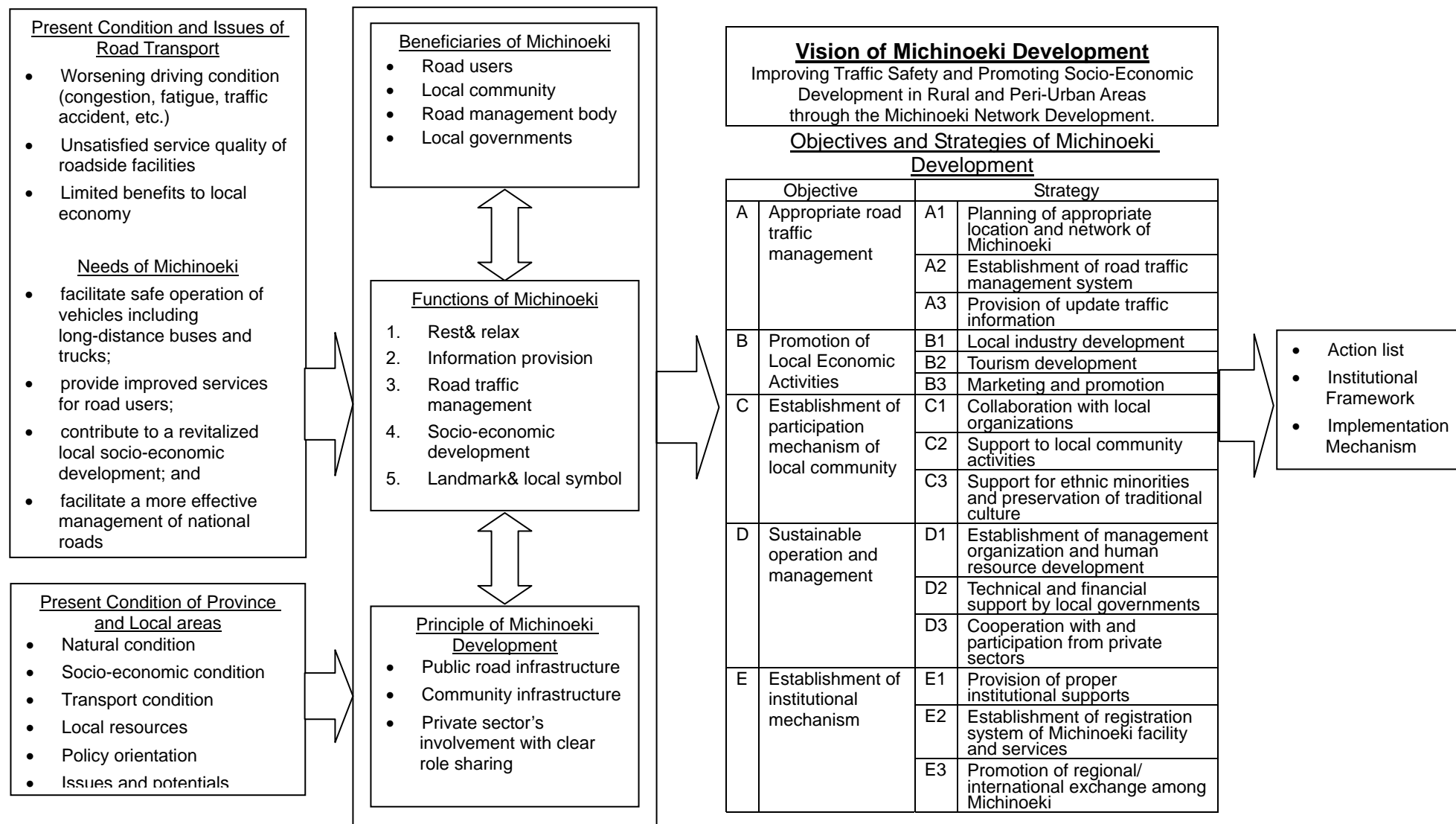
The purposes of Provincial Master Plan are as follows:

- 1) To provide orientation for Michinoeki and network development, in conjunction with provincial policy orientation and related transport and socio-economic development activities.
- 2) To identify necessary actions (projects) for sustainable operation and expansion of Michinoeki network in conjunction with the central master plan.
- 3) To provide specific policies and assistance measures for sustainable development and operation of Michinoeki

The planning framework for Provincial Master Plan is shown in Figure 4.2.1.2.

Based on this framework, Provincial Master Plan of Hoa Binh is preliminary proposed in this Progress Report (3).





**Figure 4.2.3 Planning Framework for Roadside Development Master Plan**

Source: JICA Study Team

## **4.2.2 Provincial Master Plan of Hoa Binh Province**

### **(1) Present Condition of Hoa Binh Province**

#### **a) Natural Condition**

**Location:** Hoa Binh is a mountainous province, which is contiguous to Red River Delta, has many roads, waterways that connect with Ha Noi, Phu Tho, Ha Nam, Ninh Binh provinces. The province is the gate way to mountainous northwest, is 76 kilometers far from Hanoi to the Southwest. Hoa Binh is contiguous to Phu Tho and Ha Noi in north, to Ninh Binh and Thanh Hoa in south, to Ha Noi and Ha Nam in east, and to Son La in west.

**Terrain:** Hoa Binh is the mountainous province with terrain divided into two distinguished regions: the higher with the average height of 600-700m, accounting 46% and the lower with the average height of 100-200m. Geologically, Hoa Binh is regarded as the buffet zone between the North delta and the Northwest mountainous region. The terrain of Hoa Binh is separated by many valleys with relatively flat and fat fields. It is the above geological and natural feature formed hundreds of large and small caves, hot springs with dreamlike and charming sights attracting tourists.

**Climate:** The climate is tropical monsoon, cold winter, little of rainfall, hot summer, much of rainfall. The average temperature every year is over 23 degrees centigrade. In July, the temperature is highest, average temperature is from 27 to 29 degrees centigrade. In January, the temperature is lowest, average temperature is from 15.5 to 16.5 degrees centigrade. Besides, river system in Hoa Binh located equally with big rivers: Da River, Boi River, Buoi River, Lang River, Bui River.

#### **b) Socio-Economic Condition**

**Population:** Population According to 2005 census statistic, the population of the whole Hoa Binh province is app. 810 thousands including 15 ethnic groups. Six (6) groups of Muong, Kinh, Thai, Tay, Dao, Mong account for 99.92% of the total population of the province and Muong people are considered native people and owners of the land, holding a fairly stable rate of 63%. Hoa Binh is located in the Northern-west region with four (4) provinces of Lai Chau, Dien Bien, Son La and Hoa Binh. The poverty rate of this region is the worst in Vietnam (62.3%). Among 4 provinces, economic condition of Hoa Binh is relatively better since it locates next to Ha Noi. According to the household living standard survey in 2004, the average monthly income is 292,000VND/person, which is the 57<sup>th</sup> of 64 provinces. 82% of labor population belongs to agricultural sector.

**Administrative Units:** There are 10 districts and towns in Hoa Binh: Da Bac, Mai Chau, Tan Lac, Lac Son, Kim Boi, Luong Son, Lac Thuy, Yen Thuy, Ky Son, and Hoa Binh town that have 214 communes, small towns, streets.

**Economic development:** According to the statistics of year 2006, average GDP per capita is 5.5 million VND. Rate of Economic growth in the period of 1991-2000 is 7.3%, being expected to account for 7.6-9.5% in the period of 2000-2010. Currently, the province's economy has been having structure movement towards decreasing the density of agriculture, increasing the density of industry, construction and service. As the statistics of year 2006, the density of

agriculture is 44.1%, industry and construction is 23.3% (not including GDP of Hoa Binh hydroelectric power plant) and service and tourism is 32.6% of total provincial GDP.

**Trading and market:** Hoa Binh province has the advantage of being the center of turnover from Lai Chau, Son La to Hanoi by NH-6 and then to the other provinces having demand (mainly corn, fruit, tea, coffee-beans, silk...). Otherwise, goods from Hanoi are also carried by NH-6 through Hoa Binh to Moc Chau, and from there one part of the goods move to Lao, the other to Son La, Dien Bien. Potential products of Hoa Binh are tea, peanut, soybeans, fruit, sugar, black tea, mushroom, sesame...and some products from wood, rattan, bamboo, brocade. A part of them are exported to foreign countries and the rest are moved to inner market such as Hanoi, Son La, Ninh Binh, Ninh Binh. Among them, the density of provisions is 48% of total value of goods out of the province. Hoa Binh Province has a network of point of sale and markets covering townships and towns. In the period of 2006-2010 the province prepares building some small-size supermarkets and developing the retail system of Luong Son, Kim Boi, Tan Lac Districts.

**Table 4.2.1 Socio-Economic Condition of Hoa Binh by Districts**

	Name of City and District	No. of Communes	Population	Area (km <sup>2</sup> )	Population Density (pop/km <sup>2</sup> )	Poverty rate (%)	Length of Provincial Road (km)	Length of District Road (km)	Total Length of Road (km)	Road Density (%)
1	Hoa Binh	14	83,607	132.79	629.62	4.58	25	69	94	1.12
2	Cao Phong	13	41,014	254.60	161.09	24.78	33	175	208	5.07
3	Da Bac	21	51,800	820.19	63.16	48.77	81	416	497	9.59
4	Kim Boi	37	142,370	680.76	209.13	43.07	41	621	662	4.65
5	Ky Son	10	35,307	202.04	174.75	16.69	23	134	157	4.45
6	Lac Son	29	132,384	581.42	227.69	43.28	27	592	619	4.68
7	Lac Thuy	13	50,140	282.16	177.70	28.30	31	246	277	5.52
8	Mai Chau	18	82,014	374.69	218.88	12.20	21	264	285	3.48
9	Tan Lac	22	49,670	520.38	95.45	39.41	22	255	277	5.58
10	Yen Thuy	24	78,791	530.9	148.41	40.30	32	460	492	6.24
11	Luong Son	13	63,033	293.72	214.60	30.85	27	253	280	4.44
	<b>Total</b>	<b>214</b>	<b>810,130</b>	<b>4,674</b>	<b>173.34</b>	<b>31.31</b>	<b>363</b>	<b>3,485</b>	<b>3,848</b>	<b>4.75</b>

Source: Socio-Economic Statistics of Hoa Binh Province

### c) Transport condition

As the traffic point of the routes linking to Truong Son western lines, Hoa Binh plays an important role in developing economy and ensuring national security. The national road network in Hoa Binh is consisted of NH-6, 12B, 15 and 21. In general, these are winding and up-down passing through mountainous area, though pavement condition has been improved.

The center of Hoa Binh is Hoa Binh city far from the Hanoi capital 76km. NH-6 passes through Hoa Binh with length of 125km, linking Hanoi, the northern delta to the Northwest and upper Laos. The NH-12B, 15, 21 link Hoa Binh province and Ninh Binh, Thanh Hoa, Ha Nam provinces. In addition, HCMC Road developed along NH-21, which passes through eastern area running north and south.

Transport sector develops relatively faster than the other surrounding provinces, especially road traffic. According to the statistics of 2003, total quantity of delivery vans are 706,

passenger cars are 214. Rotated goods are 49 million tons/km and passengers are 141 million persons/km. Currently, all districts in the province have bus stops, but the density of bus stops is still sparse. The bus stops are planned by the province, managed by the districts. Establishment of a new bus stop has to be carried out under the Regulations for bus stop: Regulation № 08/2005/QĐ-BGTVT; QĐ 16/2007/QĐ-BGTVT to be proposed on 26th of March 2007 by Transport Ministry.

**Table 4.2.2 Relevant Policies of Hoa Binh Province**

No.	Source	Title/Content
1	Decision No. 19/2006/QĐ-BTNMT dated 01/12/2006 of the Ministry of Natural Resources & Environment	On the issuance of the geographic names of the administration units of Vietnam as represented on the Map (Part 9 – Hoa Binh Province)
2	National Political Publishing House - 2005	Hoa Binh Monography
3	Dept. of Statistics – Hoa Binh Province	Statistical Yearbook - 2005 of Hoa Binh Province
4	Hoa Binh People Committee - 2005 (New version)	Report on "The 5-year Socio-Economic Development Plan of Hoa Binh Province from 2006 till 2010 "
5	Department of Industry – 2001	Planning for Industry - Craft Industry Development of Hoa Binh Province in the period 2010- 2010
6	Decision of Hoa Binh People Committee – October 2004	On the "Approval of Planning for Rural Industries Development till 2010"
7	Department of Agriculture & Rural Development - 2004	Report on "Planning for Rural Industries Development of Hoa Binh Province till 2010"
8	Dept. of Culture & Information - Hoa Binh Museum (updated – 2007)	List of Relics and Places of Scenic Beauty being recognized at national level in Hoa Binh
9	Dept. of Culture & Information - Hoa Binh Museum (updated)	Reports on the Relics spots in Hoa Binh Province: Xom Mo II (Cao Phong Dist., an ancient hamlet being typical for the Muong hamlets of Muong people with age-old traditional culture); Ban Van (Mai Chau Dist. - traditional houses of stilts, brocade weavings mostly of Thai People); Ban Lac (Mai Chau Dist., Thai people with ancient traditional habits, customs identity, traditional houses of stilts and brocade weaving craft; traditional folk songs and musical instruments and dancing's...)
10	Dept. of Culture & Information - Hoa Binh Museum (updated)	Festivals and Folklores of Hoa Binh province (36 types)
11	Dept. of Trade and Tourism (updated)	Integrated Brochures on Tourism Introduction in Hoa Binh
12	Tan Lac District People Committee – 2005	Planning for Tourism Development in Tan Lac District from 2005-2020 (Brief Commentary)
13	Districts People Committees of Tan Lac, Mai Chau, Cao Phong, and Ky Son – 2002/2003	Socio-Economic Development Master Plan of Tan Lac, Mai Chau, Cao Phong, and Ky Son Districts in the period 2001-2010 (Revised and Supplemented in accordance with the Direction CT32/CT/TTg in 1998
14	Resolution No. 11/2008/NQ-CP dated of 29/April/2008 of the Government	On the adjustment of land use planning till 2010 and 5-year land use plan (2006-2010) of Hoa Binh Province

#### **d) Local Resources**

**General:** Hoa Binh has suitable soil for many types of industrial crops (sugar cane, cassava, tea, bamboo sprout...); fruit trees (oranges, tangerines, pineapples, litchy, and longan). From which, it can develop making agricultural and forest products industry, like: sugar, starch, dried tea, canned fruits. Besides, agricultural soil surface holds 55% of area, planted forest surface holds 41% of area. There are many pieces of economic forest which are permitted to be planted and exploited to serve agricultural and forest products industry.

**Agricultural products:** Cultivation products are fairly various, including provisions, foods, industrial crops, fruit and medicinal plants. Provisions and foods are mainly rice, corn, sweat potato, cassava, vegetables, beans, cucumber, watermelon. Some of which are exported such as pickled cucumber, pickled young ginger, pickled capsicum and pepper-leaves. The products from industry crops involve sugar cane, peanut, sesame, cotton, tea and coffee. Tea is an export article of Hoa Binh but the amount of exported tea is unstable and has decreasing tendency. Highland districts of Hoa Binh province are famous for a kind of special tea namely Snow Tea that has been being revived and freshly planted. Major fruit are longan, litchi, persimmon, custard apple, apricot, plum and the kinds of segmented fruits.

**Husbandry:** Husbandry ranks second after the cultivation in Hoa Binh. The major cattle and poultry are buffalos, cows, chickens, ducks, swans, geese, pigs, goats, horses, stags and bees. Beef, goat meat, bred chicken, Muong pork, duck and bee's honey are prestigious products of Hoa Binh province.

**Natural resources:** Hoa Binh has many types of minerals, among them; some types were exploited, like: asbestos, coal, mineral water, limestone, etc. Noticeably, stone, mineral water, clay have large reserve. Hoa Binh's precious resource is mineral water, which locates essentially at Kim Boi, Lac Son districts. Moreover, natural resources of Hoa Binh also have many metal mines, like: gold, copper, lead, mercury, antimonite, pyrites, phosphoric, etc. IN addition, forestry-processing products exists long-time in Hoa Binh, mainly household products from rattan, bamboo, cotton, bee's honey, dry foodstuff such as thin-top mushroom, cat's ear, bamboo sprout serve local areas.

**Handicrafts and small industry products:** Handicrafts of Hoa Binh develop mostly basing on available natural resources with the materials being products that are exploited and produced locally. The main industries are mechanical, manufacturing and repairing industry (including products from metals, machines, devices and traffic means); building materials industry (limestone, brick, cement...); mineral exploiting and processing industry (stone for building materials, mineral water, coal, materials for making fertilizer and gold); and agricultural – forest product processing and consumption goods producing industry (textile, handicraft and fine arts – wooden furniture, household products from rattan, bamboo..., broom, pickled cucumber, pickled capsicum...). Hoa Binh province has some relatively famous traditional handicrafts of the ethnic minority groups which still exist such as brocadeing, brewing “*Ruou Can*” so-called wine (wine drunk out of a jar through pipes), making products from rattan, bamboo, etc. However, due to the lack of attention to developing investment, some of them has gradually fallen into oblivion. The majority of producers are households or groups with ragged and highly spontaneous producing scale. Hoa Binh is promoting building the trade name of Hoa Binh

Ruou Can to develop the commodity.

**Aquaculture products:** Aquaculture in Hoa Binh develops with a system of rivers, springs, lagoons and lakes distributing round the province. Around Da River, there are smoked fish processing and producing enterprises serving inner and outer consumption. However, production is still inconsiderable, reasonable and dependent on the quantity of fish to be caught from Da River.

**Tradition and Culture:** Hoa Binh is regarded as the ancient Viet people's cultural cradle with limestone mountainous forests creating a screen for residence community of ancient inhabitants. Hoa Binh culture is used as scientific terminology of international archaeology for the culture covering from the South of China to the East of Sumatra and having existed for a long time: from 3000 years to 4000 years before now. The concentration of cultural relics in Hoa Binh made archaeologists name the culture after the province's name. Simultaneously, Hoa Binh is the province where Muong people focus most and Muong culture is the most concentrated with Muong villages (Bi, Vang, Thanh, Dong). Hoa Binh province still maintains "Mo Muong" called Muong sorcerers' songs with great values of both artistic culture and human culture. Besides are the other cultural values such as festivals, Gong art, clothes (most famous for Muong skirt upper-hem), architecture, eating and drinking and especially Muong calendar. About the Hoa Binh culture, it is indispensable to talk about other ethnic groups living long-standing together with Muong people in Hoa Binh such as Thai, Dao, Tay and Mong. Despite not being the major group, they also have remarkable contribution to the general cultural picture of Hoa Binh. With long-standing developing process and multination feature, Hoa Binh has many cultural historic relics and festival being full of nations' characters. Archeological remains and system of commune houses, temples, shrines relating to the Hoa Binh culture are unique and attractive to tourists. Regarding culture conservation, Hoa Binh province has a historic museum with many relics of archaeology, culture and history. The province's scheme is more investment into the culture conservation through renewing the provincial museum to be located on Hoa Binh city and developing system of traditional rooms and showrooms in inner districts.

**Tourism:** Hoa Binh is located on center tourism zone including Hanoi capital and 14 surrounding provinces/cities. Hoa Binh is specified as secondary staying center of Son La, Lai Chau and Hoa Binh area. Tourism services of the province involve currently. Hoa Binh has many beautiful landscapes, profound historical culture, so that it can develop many types of tourism. In details, there are six ethnic groups: Muong, Kinh, Thai, Tay, Dao, Mong that have diversified culture, customs to create advantageous condition for developing cultural tourism. Nowadays, the famous tourist area is Lac village of Thai minorities in Mai Chau district.

- Heritage tourism (visiting ethnic villages of Muong, Thai, H'Mong people, archaeological sites, historic-cultural relics, revolutionary vestiges, historic legends)
- Ecological green tourism (visiting beauty spots, caves, forests such as Da River, Thuong Tien original forest (Kim Boi district), Hang Kia forest – Paco (Mai Chau district), Phu Canh forest (Da Bac district), Ngoc spring and Vua Ba (Luong Son district)
- Medical tourism (mineral water and hot spring site in Kim Boi and Lac Son, Hoa Binh lake)

- Religious tourism (Thac Princess Temple, Mother Temple and Fairy Pagoda, etc.)
- Others (conference tourism; holiday tourism, leisure tourism, etc.)

However, because of the poor tourism infrastructure, the staying period of tourists is still short. In 2003, there were about 123.781 participations visiting Hoa Binh of whom the majority are inner travelers (holding approximately 83.1%). Foreign tourists visiting Hoa Binh are mostly from European countries, followed by Asian and American countries. The foreign travelers have tended to accelerate in recent years.

## (2) Issues and Potentials for Michinoeki Development of Hoa Binh Province

To set up development orientation of Michinoeki in province, issues and potentials are analyzed in terms of traffic economic, social, environmental aspects.

**Table 4.2.3 Issues and Potentials for Michinoeki Development in Hoa Binh**

	Issues	Potentials
Traffic	<ul style="list-style-type: none"> <li>Poor road network</li> <li>Fragile road condition from disaster</li> </ul>	<ul style="list-style-type: none"> <li>Market accessibility to Hanoi and China</li> <li>Main trunk road connected to northern-west provinces</li> </ul>
Economic	<ul style="list-style-type: none"> <li>Scattered and small-scale production area</li> <li>Low and unsafe quality of products</li> <li>Unstable seasonal condition of products</li> <li>Indirect sales by way of middlemen (material provision and distribution)</li> </ul>	<ul style="list-style-type: none"> <li>Various local products (food, vegetable, fruits, crafts)</li> <li>Various financial sources for mountains areas (Industrial Extension Fund for training, donor's fund)</li> <li>Popular tourism sites (Mai Chau, Kim Boi, etc.)</li> </ul>
Social	<ul style="list-style-type: none"> <li>Poverty of ethnic minorities in mountainous area</li> <li>Loss of traditional values of crafts and culture</li> <li>Lack of capacity and knowledge of local people (market, transport, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Provincial image of nature, ethnic culture, cleanness, etc.</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>Frequent natural disaster</li> </ul>	<ul style="list-style-type: none"> <li>Abundant local materials and natural resources</li> </ul>

Source: JICA Study Team



**Figure 4.2.4 Photos of Potential Resources in Hoa Binh**

Source: JICA Study Team

## (3) Orientation and Vision for Michinoeki Development of Hoa Binh Province

The development orientation of Michinoeki in Hoa Binh province, as a model of poor mountainous area, will be proposed; "To contribute local economic opportunities and socio-cultural improvement with environmental friendly manner especially for ethnic minority



communities.”

Since traffic volume is a few, drastic commercial activities and economic profitability cannot be expected in Hoa Binh. But as a gateway to northern-west provinces of ethnic culture, Michinoeki in Hoa Binh have opportunities to promote local products, culture and tourism sites with natural, clean and traditional images.

To contribute poverty alleviation of ethnic minorities and in mountainous area in a long-term, involvement of ethnic minority groups are significant. The Michinoeki in remote area can act as local community center, local market, etc. To develop Michinoeki and network in poor remote area, it is necessary to pay attention:

- to develop local bus transport network and distribution network of products
- to give priority for job opportunities in stations
- to give opportunity for promotion of ethnic culture and products
- to provide training opportunities for illiteracy, handicraft making, accounting, etc.

**Strategy A “Appropriate road traffic management”:** Since traffic volume and potential of commercial activities are limited in mountainous area, intersections of national and provincial roads are preferable location for Michinoeki, in terms of market and information accessibility. Proposed locations by DOT are (i) intersection between NH-6 and NH-15 (near Mai Chau), (ii) intersection between NH-6 and HCMC road (Hang Tram), (iii) intersection between NH-21 and HCMC Road (Thanh Ha) or NH-21 and provincial road 438 (Chi Ne), and (iv) new bypass of Hoa Binh City (see Figure 2.3.4).

In mountainous area, roads are often closed to traffic because of landslide, flooding, accidents. Since national and provincial roads are main trunk road for mountainous area, drivers and passengers must wait for its recovery and opening to traffic. To prevent traffic accidents and to inform traffic condition in advance to road users, update road information as well as weather information are significant.

**Strategy B “Promotion of local economic activities”:** Michinoeki development in Hoa Binh should focus on socio-economic development in remote area, which rural people easily access to market. There are various local products such as vegetable, fruits, food, handicrafts, etc. These products should be improved with attractive design, clean and safe quality, to sell as souvenirs for road users who come to homeland, domestic and international tourists, etc. Tourism information should be gathered, and cultural and traditional values can be promoted by conducting local festivals and events. There are many bike and bicycle travelers in this province for trekking, facility of rest room and shower are preferable for them. Michinoeki will be one of the provincial tourism spots in future.

**Strategy C “Establishment of participation mechanism of local community”:** To strengthen capacity of local organizations such as agricultural cooperatives, women’s unions, farmer’s unions, etc., existing activities can be promoted in Michinoeki. For example, training for handicrafts funded by industrial extension fund will be conducted in multi-purpose room, and trial sales will be conducted in open market space or shop. NGO’s and donor’s support activities can be promoted, too. For example, by collecting and promoting these innovative

and leading activities, Tan Lac Michinoeki as the first station in Hoa Binh, this station will be a good model station for the transmission of information and capacity development.

**Strategy D “Sustainable operation and management”:** The advantage of Hoa Binh is availability of various types of funds and supports from GOV, NGOs and donors. Though business potential for private sector is not high enough, technical and financial supports from them can be applied for sustainable operation and management. People’s Committees of province, district and commune should have initiative for O&M to integrate multi sectoral issues and activities related to traffic management, tourism development, local product development, cultural and natural preservation, ethnic minority support, etc.

**Strategy E: “Establishment of institutional mechanism”:** Since new construction of Michinoeki by private developers may not be expected, integration with related projects such as road improvement, rural development are important. Functions and facilities of Michinoeki are integrated into these new facilities along roads. The Michinoeki complex development will be significant both for economic and social aspects. Integrated plan not only commercial facilities (hotel, petrol station, super market, etc.) but also public facilities such as museum, library, hospital and clinic are considered to contribute to local communities.

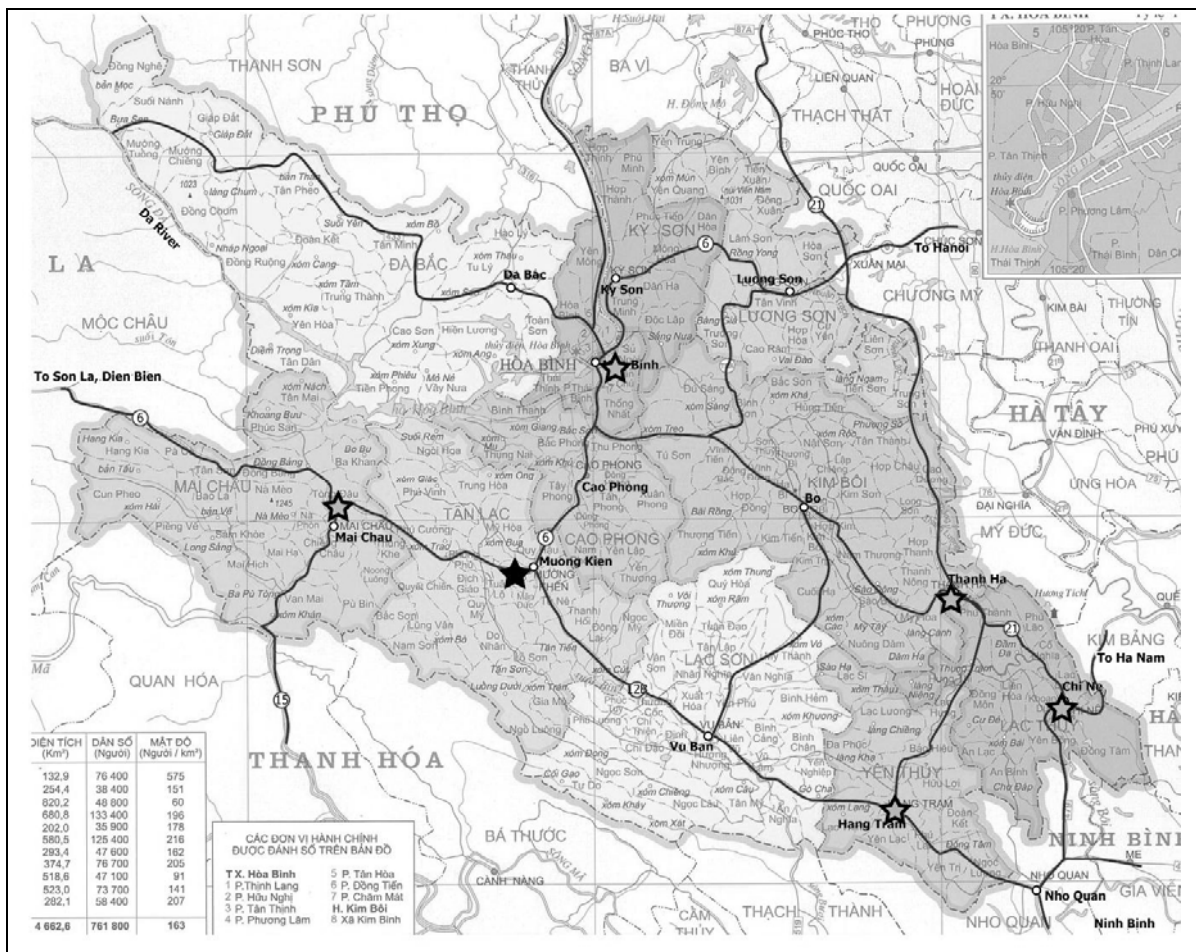


Figure 4.2.5 Proposed Location of Future Michinoeki in Hoa Binh

Source: JICA Study Team based on interview of DOT

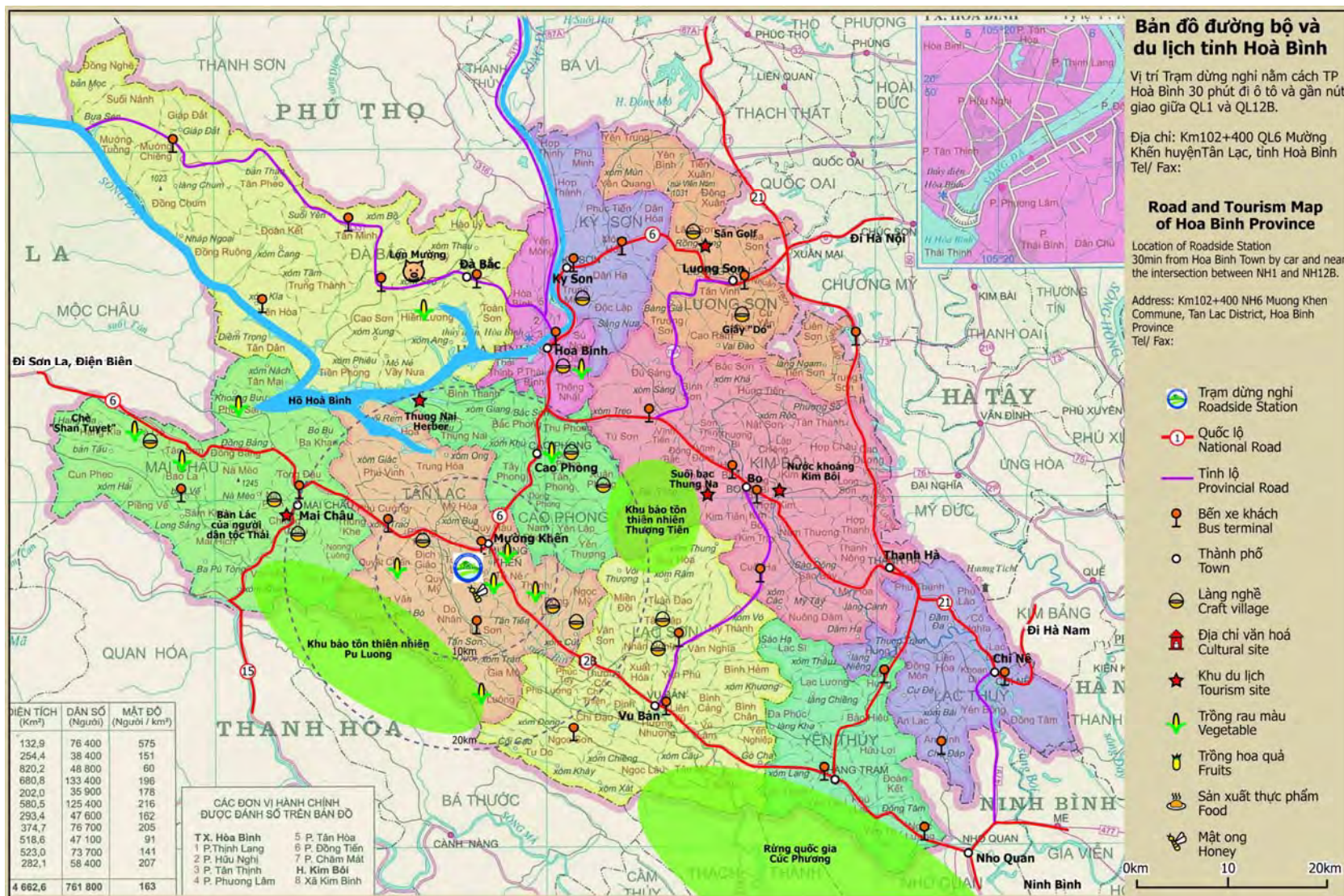


Figure 4.2.6 Road and Tourism Map of Hoa Binh Province

Source: JICA Study Team based on interview of DOT



## 4.2.3 Provincial Master Plan of Ninh Binh Province

### (1) Present Condition of Ninh Binh Province

#### a) Natural Condition

**Geography:** Ninh Binh Province, which covers an area of 1420.7 sq. km, is more than 90km far from Hanoi. It borders Ha Nam Province in the north, the South China Sea in the east, Thanh Hoa Province in the south, and Hoa Binh Province in the west. Ninh Binh lies in the Red River Delta Area, being influenced by Hanoi Capital and the economic growth triangle of Hanoi, Hai Phong & Quang Ninh. This special advantage enables Ninh Binh to become an important link as a distribution center of the Northern Delta to Central and Southern Vietnam. On geographical aspect, Ninh Binh has favorable conditions for economy and trade development.

**Topography:** As Ninh Binh is situated in the area adjacent to the Red River Delta and the sedimentary rock band in the west, and in the depressed area of the Red River Delta adjoining the South China Sea, it has a diverse topography. It encompasses plains, mountains, hills, depressed area and coastal area. On topography, Ninh Binh has three distinct geographical areas:

- Mountainous area and semi-mountainous area comprise of limestone mountain range, sandstone mountains and soil hills intermixed with narrow valleys, marshes, and low lying fields around the mountainsides. This area possesses natural minerals, especially limestone, which is potential for production of building materials, such as cement, and for tourism development as well as for growing fruit trees and industrial crops.
- Delta is an alluvial land, which is suitable for agriculture development to meet domestic consumption and export demand.
- Coast and sea are favorable for growing crops and husbandry, and exploitation of onshore and offshore resources.

**Climate:** Ninh Binh lies in the inter tropical monsoon zone. There are four seasons, including spring, summer, autumn and winter. It is often cold in the winter because of the influence by coastal climate, forests and mountains with a relatively dry weather by early winter and wet weather in the second half of winter. The mean annual temperature is about 23 degree with lowest temperature ranging from 13 degree to 15 degree in January and with highest temperature of 28.5 degree in July. The total hours of sunshine are more than 1,100 annually. Ninh Binh's weather is determined by two monsoons. The winter monsoon lasts from November to March while the summer monsoon starts in May and ends in September.

**Natural minerals:** Ninh Binh has several kinds of minerals that can be utilized for the development of local industries:

- Clay is widely distributed in the low-lying mountains and hills in the districts of Tam Diep, Gia Vien and Yen Mo. It is used for making bricks, ceramic tiles and as a raw material of the foundry industry.

- Peat: can be found in Gia Son (Gia Vien District), Son Ha, Nho Quan Town (Nho Quan District) with a small reserve of about 2 million tons. It is used for producing bacterial fertilizers.
- Mineral water can be tapped at Kanh Ga Spring and Cuc Phuong National Park with a big reserve and the temperature of 53-54 degree.
- Ninh Binh has some other minerals, such as antimony, pyrite, gold, lead, zinc, sand, clay etc., which are widely distributed around low-lying mountains and hills nearby the villages of Tam Diep, Gia Vien and Yen Mo.

#### **b) Socio-Economic Condition**

**Population:** Population of Ninh Binh 912,460,000 people account for 1.2% Vietnamese population. With 86.4 per cent of the total population living in rural area and a mere 13.6% living in urban one, Ninh Binh is ranking amongst plain provinces that possess a low percentage of urban population. The province's population density is 660 persons/km<sup>2</sup>, equivalent to 55.2 % of the figure of the Red River plain region and 2.7 times as much as the figure of the whole country. The density is, however, different among districts. The provincial capital Ninh Binh has the biggest density with 5,553 persons/km<sup>2</sup>, followed by Yen Khanh district 1,018 persons/sq km. The lowest density is seen in Nho Quan district with 287 persons/km<sup>2</sup>.

**Minority:** The province's population is made up of 23 ethnic communities, of which the Kinh account for 98.3%. The rest of the population is the Muong.

**Industry:** The population is very young, which is an abundant source of labor for the province. The labor force includes 525,277 persons, 12,730 of which are seeking for jobs. Among employed laborers, 70.4% work in the agricultural, forestry and fisheries sector, 16.8 per cent work in the construction industry sector and 12.8% work in the service sector. Currently, the number of laborers working in the industry and service sectors is on the rise while the number of workers working in agriculture is declining. The number of trained laborers represents 11.4% of the total number of employed laborers, which is lower than the 16.6% figure of the red river plain region and 12.3% figure of the whole country.

#### **c) Transport Condition**

NH-1A runs from the north to the south, take the role of the main interior transport route. The length of the road route which passes Ninh Binh city is 9.4 km, the surface width: 15 – 30 m, the running width: 12 – 15 m, high-quality bitumen road surface. The position of research area has the advantage and is very suitable to the project on moving the central stop out of the southern gateway and become the southern external stop with the construction scale of 2.0 - 3.0 ha.

The NH-1A and 10 play an important role as the main interior transport route. Over the last years, the town has perfected step by step the system of interior transport by the interior transport system planning formed by the city's people committee and approved by the city's people committee. The total length of main urban road is 54.5 km, of which the urban area road is 34.2 km in total.

The rate of transport land reaches around 55% compared to the rate of necessary transport land. The density of main transport road: reach 3.23 km<sup>2</sup>, equivalent to 50% compared to the necessary demand.

Day River is in the east-north and also the administrative border between Ninh Binh and Nam Dinh, Van River and national railway route is in the east-south. In the east, it is expected that it will be the city vinculum route and the north-south national railway highway. Hanoi - Ha Nam - Ninh Binh and Ninh Binh - Thanh Hoa – Nghe An highways are in the east south and the south.

These are the great advantages over the external transport system, but they still face the difficulties in the development and expansion of urban space.

**Table 4.2.4 Relevant Policies of Ninh Binh Province**

No.	Source	Title/Content
1	Decision No. 19/2006/QĐ-BTNMT dated 01/12/2006 of the Ministry of Natural Resources & Environment	On the issuance of the geographic names of the administration units of Vietnam as represented on the Map (Ninh Binh Province)
2	Dept. of Statistics	Statistical Yearbook in 2005 of Ninh Binh Province
3	Ninh Binh People Committee – 2006 (New version)	Decision on the "Orientation for Sustainable Development of Ninh Binh Province (Agenda 21 for Ninh Binh Province)
4	Ninh Binh People Committee – 2006 (New version)	Plan for 5-year Socio-Economic Development of Ninh Binh Province in the period 2006-2010
5	Dept. of Industry - 1998	Planning for Industry, Small and Craft Industry Development of Ninh Binh up to 2010
6	Dept. of Agriculture and Rural Development - 2004 (DARD)	Orientation for The 5-year Plan for Development of Agriculture and Rural Area of Ninh Binh from 2006-2010
7	Dept. of Agriculture and Rural Development - 2005	Summary Report on "Project for Checking, Supplementing of the Socio-Economic Development Master Plan in Agriculture and Rural Area of Ninh Binh (2005-2010)
8	Department of Transportation	Maps of Ninh Binh Districts
9	Dept. Branch of Agro-Forestry-Fishery Processing and Rural Industries- 2003 (DARD)	Planning for Development of Rural Industries in Ninh Binh Province till 2010
10	Dept. of Agriculture and Rural Development - 2007	Program for the Preservation and Development of Traditional Villages of Ninh Binh Province from 2008-2010 and the vision up to 2020
11	Dept. of Trade of Ninh Binh – 2005	Project on "Planning for Development of Network of Trade Center, Supermarket in Ninh Binh Province" in the period 2006-2020.
12	Ninh Binh People Committee - 2005	Decision on the "Approval of Planning for Development of Market Network in Ninh Binh Province till 2010 and vision to 2015"
13	Department of Culture and Information (DOCI) - 2007	Festivals in Ninh Binh Province (List)
14	Department of Culture and Information (DOCI) - 2007	List of Relics & Places of Scenic Beauty being recognized at national level in Ninh Binh
15	Administration of Tourism of Ninh Binh (ADT) - 2006	Tourism Development Master Plan in Ninh Binh in the period 2007-2015 and vision to 2020 (Summary Report)
16	Administration of Tourism	Impression about Ninh Binh – Ninh Tourism (CD, VCD)
17	Resolution No. 04/2007/NQ-CP dated of 23/January/2007 of the Government	On the adjustment of land use planning till 2010 and 5-year land use plan (2006-2010) of Ninh Binh Province

#### d) Local Resources

**Handicrafts:** Local industries, especially handicrafts in Ninh Binh has changed great steps since 1996 with new market oriented products such as sea-grass products, embroidery, water hyacinth, banana barks, young rice stem products. Many products have been export successfully and have good reputation in international market such as Sea-grass mat, embroidery products, bamboo-rattan wares, pineapple, cucumber.

In the province, there are 105.485 households working in different local industries, accounting for 54.6% of total households of the province. The number of people working in the field of local industries is 171.130 people, accounting for 46.5% of the total labour of the province.

Some districts have lot of people participating in production of local industries like Kim Son (73,433 people, 88% its population), Yen Khanh (37,134 people, 54.3% its population) and Hoa Lu (17,662 people, 41% its population). The distribution of main groups are as follows:

- Food processing: Most of the district has small food processing industry such wine, rice powder, rice vermicelli. However, Tam Diep town is famous tea processing, canned fruits (Dong Giau JSC),...Yen Khanh district is famous for food processing such as rice vermicelli, dry pancake, mushroom, soya curd, etc.
- Fresh vegetables and flowers: Ninh Binh town
- Embroidery: Nho Quan, Gia Vien, Hoa Lu, Yen Khanh and Yen Mo districts
- Natural fiber woven crafts (ex. sea-grass, bamboo-rattan wares, water hyacinth): Gia Vien, Yen Khanh, Yen Mo & Kim Son district

**Tourism:** Ninh Binh is known as a destination for tourists with many beautiful places like Bich Dong cave, Cuc Phuong National Garden, etc. The number of visitors to Ninh Binh has increased from 401,516 in 2000 to 1,011,371 in 2005 (average e growth rate of 20.3%/year), of which the number of Vietnamese visitors increased from 318,738 people to 590,965 people (13.1%/year) and especially, the number of foreigners increased from 82,778 to 420,406 people (38.4%/year). The revenue of tourism increased from 14.7 billion in 2000 to 66 billion in 2005, of which the main source of income was from services (65%-70%) of the local state owned enterprises (over 80%).

The revenue from selling goods increased from 1,3 billion in 2000 to 3.9 billion VND in 2005 (24.6%/year) and revenue from catering services also increased from 4.7 billion to 19.2 billion in 2005 (32.5%/year). Ninh Binh town is leading place to attract tourists (27.3 billion in 2005) and followed by Hoa Lu district (19.9 billion in 2005). The impressive growth rate of tourists and their purchasing power brought about a promising future for the operation of Michinoeki – A worthwhile place for tourists to buy local products.

Taking into account the potential of tourism development in Ninh Binh, the Ninh Binh People Committee has approved the tourism plan up to 2010, of which the main tourism products in Ninh Binh include Culture tourism; Research tourism; Entertainment tourism; Week-end tourism; Sport tourism (mountain climbing, cave exploring); Hunting tourism and Disease treatment tourism.



**Table 4.2.5 Tourism Areas and Routes in Ninh Binh Province**

Tourism places certified as local and international relics	<ul style="list-style-type: none"> <li>• Hoa Luu tourism places (cave, cultural relic, river, Dinh King temple, Le King temple, Hoa Lu citadel),</li> <li>• Tam Coc - Bich Dong tourism place, cultural relic, annual festival</li> <li>• Phat Diem church</li> <li>• Cuc Phuong national park and Van Long tourist place</li> </ul>
Tourist routes	<ul style="list-style-type: none"> <li>• Ninh Binh – Hoa Lu – Tam Coc – Bich Dong</li> <li>• Ninh Binh town – Hoa Lu</li> <li>• Ninh Binh town – Tam Coc – Bich Dong</li> <li>• Ninh Binh – Cuc Phuong – Ky Phu – Quynh Luu revolution foundation – Tam Diep</li> <li>• Ninh Binh – Phat Diem – Con Thoi – Hon Ne</li> </ul>
Tourist resorts of investment plan	<ul style="list-style-type: none"> <li>• Tam Coc – Bich Dong Tourist Site and Hoa Lu Citadel</li> <li>• Tourist Resort in the center of Ninh Binh Town, covering Duc Thuy Son, Ngoc My Nhan (Beauty Pearl) and Ky Lan Lake</li> <li>• National Parks of Cuc Phuong, Ky Phu and Dong Chuong</li> <li>• Tourist Sites, including Kenh Ga – Van Trinh, Van Long, Dich Long and Hoa Lu Cave.</li> <li>• Tam Diep – Bien Son Defense Line in Tam Diep town.</li> <li>• Yen Dong and Yen Thang Lakes, Ma Tien and Tu Thuc Caves</li> <li>• Phat Diem Stone Cathedral and Con Thoi Coastal Resort</li> </ul>
Craft villages at tourism spots up to 2020	<ul style="list-style-type: none"> <li>• Ninh Hai embroidery village</li> <li>• Ninh Van stone carving village</li> <li>• Kim Son sea grass handicraft village</li> <li>• Ninh Phong carpentry village, and</li> <li>• Gia Van Fine-art handicraft village</li> </ul>

## (2) Issues and Potentials for Michinoeki Development of Ninh Binh Province

To set up development orientation of Michinoeki in province, issues and potentials are analyzed in terms of traffic economic, social, environmental aspects.

**Table 4.2.6 Issues and Potentials for Michinoeki Development in Ninh Binh**

	Issues	Potentials
Traffic	<ul style="list-style-type: none"> <li>• Flooding at several low land areas affecting transport condition</li> </ul>	<ul style="list-style-type: none"> <li>• Favorable transport condition with national road network (NH-1A, NH-10, 12A, 12B, 59A, 45)</li> <li>• Favorable Location as a gate connecting North to South regions</li> <li>• High traffic volume of NH-1A</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• High rate of poor households in mountains areas and highlands</li> <li>• Low productivity and quality of plant and livestock varieties</li> <li>• Under-developed craft industry and craft villages</li> </ul>	<ul style="list-style-type: none"> <li>• Access to foreign funding resources for development is favorable</li> <li>• Promoting tourism (landscape, historical, ecology)</li> <li>• Craft development with tourism sector</li> </ul>
Social	<ul style="list-style-type: none"> <li>• High rate of poor households in mountains areas and highlands</li> </ul>	<ul style="list-style-type: none"> <li>• High name-value and image of province with handicrafts and tourism</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Flooding at several low land areas affecting production.</li> </ul>	<ul style="list-style-type: none"> <li>• Abundant natural resources of Red River delta</li> <li>• Promoting tourism (landscape, historical, ecology)</li> </ul>

Source: JICA Study Team

		
Tam Coc river boat tour	Ninh Binh Embroidery	Shrimp paste
		
Cuc Phuong National Park		Phat Diem Stone Church

**Figure 4.2.7 Photos of Potential Resources in Ninh Binh**

Source: JICA Study Team

### (3) Orientation and Vision for Michinoeki Development of Ninh Binh Province

The development orientation of Michinoeki in Ninh Binh province, as a model of tourism and handicraft area with high traffic volume, will be proposed; “To provide comfortable space and services for road users and attract with tourism and handicraft resources.”

Since traffic volume of NH-1A is high, many road users and tourists will visit to Ninh Binh Michinoeki. In addition, it is located in the center of Ninh Binh town as well as nearby popular tourism sites of Tam Coc river cruise, Hoa Lu historical area and local embroidery villages, this Michinoeki can be a kind of tourism and handicraft promotion center of Ninh Binh.

To contribute local tourism and industry promotion for income generation of rural people, it is necessary to pay attention:

- to develop local bus transport network and distribution network of products
- to provide opportunities to exhibit local products and tourism information
- to provide training opportunities for design, quality control, packaging, etc.

**Strategy A “Appropriate road traffic management”:** Though the basic road infrastructure is enough, communication network among central-regional-local level should be strengthened. Especially NH-12B is a strategic inter-provincial road between Ninh Binh and Hoa Binh and northern mountainous areas, which passes by Cuc Phuong National park, so it is recommended to develop new Michinoeki along NH-12B. In addition, Ninh Binh Michinoeki is located in the center of the province, distribution network is important for delivery of local products. Since the Michinoeki will be managed by Ninh Binh Bus Terminal Enterprise under DOT’s management, distribution and communication system by buses should be established , and traffic safety activities should be promoted for local bus drivers and users.

**Strategy B “Promotion of local economic activities”:** As mentioned, there are various kinds of handicrafts and tourism sites in Ninh Binh province, and many people are engaged in these local industry sector. Though there are many competitive tourism companies and trading companies for export, there are many local small craft villages and households, which are only in charge of subcontract work, and not belong to any local cooperatives and groups. They are lack of market access and opportunities for direct sales and technical improvement. In this context, public functions such as local product development& sales and training should focus on these individual households or small groups, rather than competitive business entities.

In addition, most of visitors and tourists get information in Hanoi or other areas. Though export of handicrafts is competitive, limited companies and SMEs are engaged in. If local and original information of these tourism sites and local products are available, and means of transport are provided at Michinoeki (ex. provincial tourism bus, local bus, taxi), visitors can easily access to these local sites. Exchanging activities such as training, events, open market among producers and craftsmen in the province should be promoted for capacity development and future collaboration business opportunities.

**Strategy C “Establishment of participation mechanism of local community”:** In general, the main purpose of the cooperative group is to link grassroots farmers to support one another in terms of seed, capital, production techniques, and contract-based consumption of agricultural products, making them to be the core organization in promoting the development of cooperative economy into model of effective performance cooperatives. At present, most of the cooperatives rely on the self-financing basis to carry out business activities. A few cooperatives get loan from banks with small amount of money and mainly use for short-tem business schemes. Michinoeki should only accept the products with clear origin and all of the products should be at good quality (safe, fresh, nice packing...), therefore, the cooperative groups and cooperatives should be well-trained to meet that requirement.

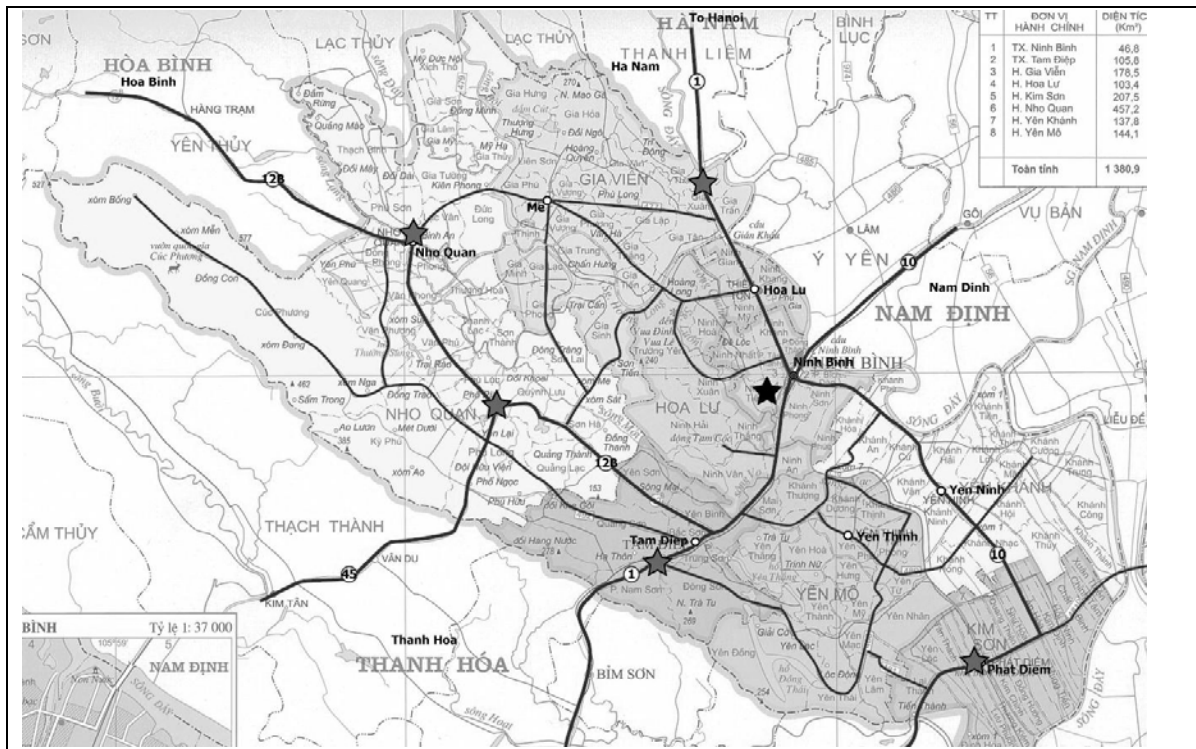
In this context, participation opportunities for local industry development will be provided both for (i) individual, household level for technical improvement and market access opportunities (ex. provision of training, open market and events), and (ii) SMEs and companies to promote products and expand business opportunities (ex. rental of sales space), and (iii) local organizations (ex. cooperatives, associations, unions) for strengthening organization capacity and activities (ex. provision of training, quality inspection, consultation and advisory).

**Strategy D “Sustainable operation and management”:** The pilot Michinoeki will be operated by Ninh Binh Bus Terminal Enterprise, as a public non-business unit. This enterprise is a public non-business unit with profit, under an umbrella of DOT of Ninh Binh Province, and has other bus terminals in province. So it might be easy to expand Michinoeki network of the province to improve and strengthen functions and capacity of existing terminals as authorized Michinoeki in future. It is necessary to support training on capacity development of staffs of these state-owned or public sectors.

In addition, since there are various types of private sectors such as trading, tourism companies in the province, there is a potential to involve in them to develop Michinoeki which both public and private functions are integrated. For sustainable operation, it is important to focus both on

socio-economic activities for rural areas and on commercial activities for profits.

**Strategy E: “Establishment of institutional mechanism”:** Michinoeki development in Ninh Binh will be involved in both public and private sectors in future, it is necessary to establish clear role sharing mechanism including land acquisition, infrastructure and utility development, and relevant activities. If public sector will focus on traffic management and local socio-economic promotion in the core facility, private sector such as trading companies, handicraft SMEs, tourism companies can participate in to manage commercial activities for financial sustainability. To make a linkage between these private sectors in Hanoi and HCMC is also important to pull in more tourists and customers.



**Figure 4.2.8 Proposed Location of Future Michinoeki in Ninh Binh**

Source: JICA Study Team based on interview of DOT



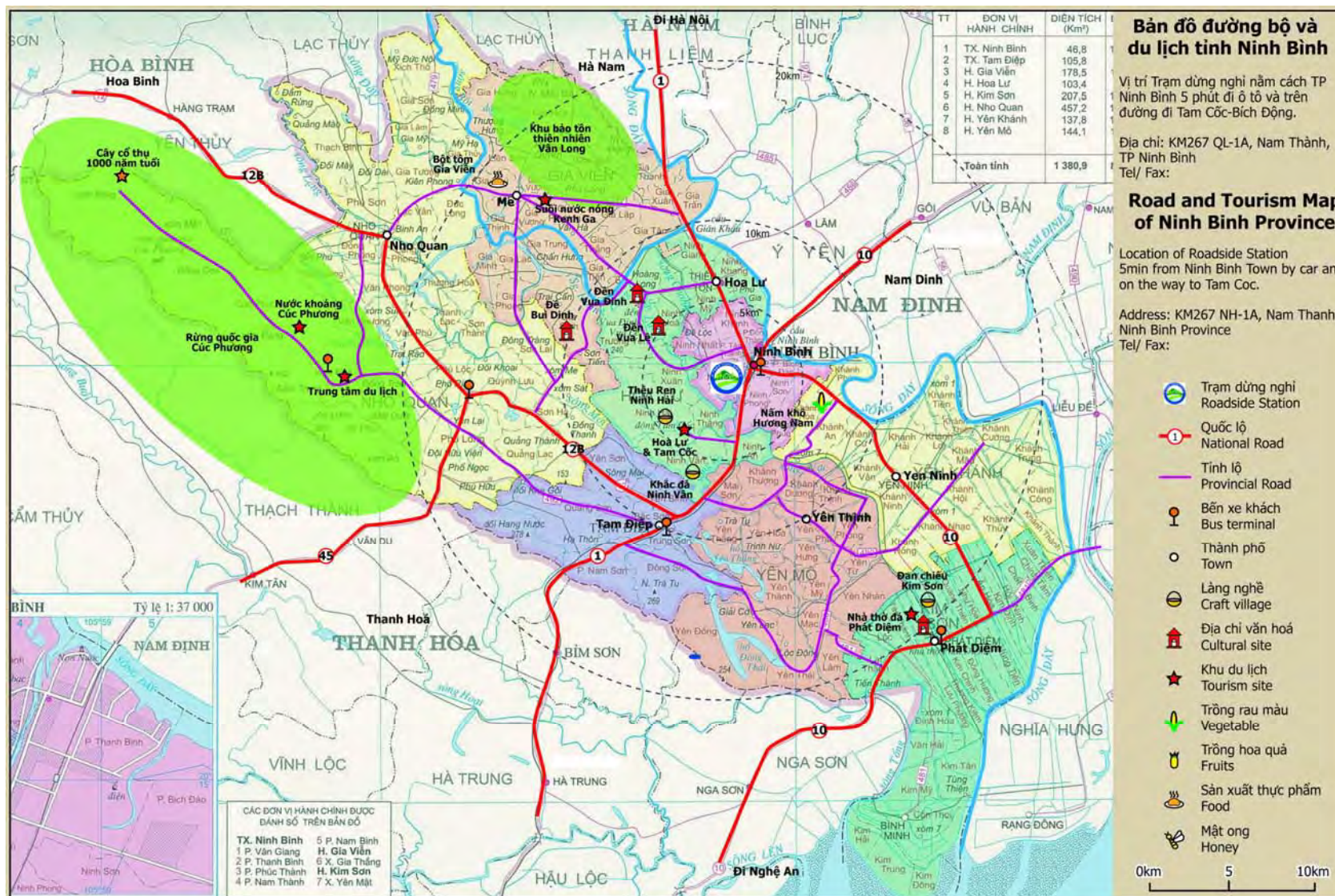


Figure 4.2.9 Road and Tourism Map of Ninh Binh Province

Source: JICA Study Team based on interview of DOT

## 4.2.4 Provincial Master Plan of Bac Giang Province

### (1) Present Condition of Bac Giang Province

#### a) Natural Condition

**Location:** Bac Giang is a mountainous province which is located between Eastern North provinces and Red river delta provinces and Ha Noi Capital. Its natural area is 3,823.3 square kilometers; To the South, it is close to Bac Ninh and Hai Duong provinces, to the North it is next to Lang Son province, to the East it is next to Quang Ninh province and to the West it is close to Thai Nguyen province and Ha Noi Capital. In comparison with other Northern mountainous provinces, the geographical location of Bac Giang is better. It is only 50km far from Hanoi Capital. Furthermore, it is not far from other big industrial centres and cities of “Northern Intensive Economic Triangle” : Ha Noi – Hai Phong- Quang Ninh which are having fast economic growth, attracting more foreign investment, innovating constantly new technologies and doing more foreign trade, etc.

**Terrain:** Mountain terrain (account for 72% area of province) is divided by differential height, nature forest has fertility land. Hollow mountain can plant fruit tree, industrial trees such as litchi, orange, leman, custard apple, persimmon, tea tree, bean...raise animal, domestic fowls, and aquatic. Midland terrain (account for 28% area of province) is hill and hill alternates delta. Midland area can plant tree for food, foodstuff, fruit tree, industrial tree, raise animal and domestic fowls, and aquatic.

**Climate:** Bac Giang effected by north-eastern monsoon , has 4 seasons: winter (cold), summer (hot), spring (warm, cool), autumn (cool). Average temperature 22 0 C - 23 0 C, humidity 73% -87%. rainfall satisfy demand for doing farm, and other activities. Sun shines 1,500 – 1,700 hours. This climate is good for plant tropical trees.

**Land Condition:** Landing condition at Bac Giang is suitable for developing agriculture and forestry With a mountainous terrain of 78% and midland terrain of 22%, Bac Giang have potential to develop forestry, long-time forestry trees and various fruit trees which bring good products for domestic customers and foreign travelers.

**Table 4.2.7 Land Type of Bac Giang Province**

Land Type	Area (ha)	(%)
Farming Land	257,506	67.4
Non farming land	90,039	23.6
Unused land	34,787	9.1
Total	382,332	100.0

#### b) Socio-Economic Condition

**Population:** There are nine districts and one city (Bac Giang City) belonging to Bac Giang province. Their names are 1) Bac Giang City – economic, cultural and political centre of the province ; 2) Yen Dung Dist.; 3) Viet Yen Dist.; 4) Hiep Hoa Dist.; 5) Tan Yen Dist.; 6) Lang Giang Dist.; 7) Yen The Dist.; 8) Luc Nam Dist.; 9) Luc Ngan Dist.; 10) Son Dong Dist. Among them, six districts are mountainous and one district is highland with the total number of 229 communes, wards and towns. In 2005, the population of the province was 1.58 million persons with 27 ethnics of which minorities such as Muong, Nung, Tay, San Chay, Thai, San Diu, Dao,

H'mong, etc. covered 12.9%; the population density is 413 persons/km<sup>2</sup>, rural population covered 90.2% and urban one covered 9.8%. 962,631 persons were of labor age (covering 60.2% of the whole provincial population) and around 894,196 persons were work-people. They were mainly farming laborers (covering 74% of the whole provincial work-people).

**Administrative Unit:** Bac Giang has 9 districts and 1 city (in which: 6 mountainous districts, 1 highland district). Bac Giang has 2 mountainous and midland areas alternate delta, midland includes Bac Giang city and 2 districts (Hiep Hoa, Viet Yen), mountainous area includes 7 districts Son Dong, Luc Nam, Luc Ngan, Yen The, Tan Yen, Yen Dung, Lang Giang (in which: a part of Luc Ngan, Luc Nam, Yen The, and Son Dong are high mountain).

**Economic development:** Industrial and craft production were encouraged to develop. Upto now, there are five industrial groups: Fertilizer-chemical; Construction materials; Agro-forestry products processing; Mechanical manufacturing and assembling; Garment. Industrial zones and bases have been set up. The provincial government has encouraged manufactured moving to these sites for more development.

**Industry:** Upto now about 40 investors have applied for the engagement in Dinh Tram Industrial zone (Viet Yen district), among them 33 were approved by the provincial government with the total investment of appr.70billion Vietnam dong and 5.9million US\$. 16 investors were permitted to have the investment at Song Khe - Noi Hoang Industrial zone with the total area of 32.09ha and the registered capital of 194 billion Vietnam Dong and 0.35million US\$. Among them, eight have been under construction and five have put their factories into operation. Quang Chau Industrial zone with the total area of 426 ha will be put into operation soon. The estimated capital for infrastructure work is appr.700 billion Vietnam dong and invested by Sai Gon- Bac Giang Company of Infrastructure for Industrial Zone.

Upto now, the districts and city have plan to reserve appr.260ha of land for industrial development. About 20 bases with the total area of 234ha have been established which have attracted 70 projects, among them 50 projects were put into real operation. There are five bases in Bac Giang city (56.2ha), two bases in Lang Giang district (20ha), one base in Viet Yen district (19ha). Over 100 enterprises with the investment capital of appr.350billion Vietnam dong and over 4,000 employees are operating.

### **c) Transport condition**

The transportation condition is rather convenient with main highways, railway which are being and will be rehabilitated. Bac Giang locates at the link between Lang Son province and Ha Noi Capital, therefore it is quite suitable to build up a Station here for passengers travelling along these areas.

Some national important roads go through Bac Giang province such as landway, railway and waterway. The highway NH-1A and railway from Ha Noi to Lang Son and upto Dong Dang border gate are very important ways. When the economic corridor Nan Ninh (China)- Lang Son – Ha Noi- Hai Phong comes into operation, the goods production, transportation and dealing will much develop. The national way NH-31 from Bac Giang to Luc Nam, Luc Ngan, Son Dong districts meets with the national way No.4A (Lang Son province) and goes to Mui Chua port, Tien Yen and links with Mong Cai border gate (Quang Ninh province). The national

way NH-279 from Ha Mi (Son Dong district) to Tan Son (Luc Ngan district) links with the national way NH-1A. The national way NH-37 from Luc Nam to Hon Suy and then to Sao Do district (Hai Duong province) meets with the national way No.18 and then lead to Hai Phong port or deep water Cai Lan port (Quang Ninh province).

The railway Luu Xa –Kep-Ha Long links Thai Nguyen province with Quang Ninh province which goes through Yen The district, Lang Giang district and Luc Nam district. The waterways are on Thuong, Cau and Luc Nam rivers with the total distance going through the province of 347km. And 189km are exploited for year-through transportation.

**Table 4.2.8 Relevant Policies of Bac Giang Province**

No.	Source	Title/Content
1	Decision No. 19/2006/QĐ-BTNMT dated 01/12/2006 of the Ministry of Natural Resources & Environment	On the issuance of the geographic names of the administration units of Vietnam as represented on the Map (Part 13 – Bac Giang Province)
2	Dept. of Statistics - 2006 of Bac Giang Province	Statistical Yearbook in 2006 of Bac Giang Province (Summary Version)
3	Dept. of Statistics - 2005 of Bac Giang.	Statistical Data in 2005 of Bac Giang Province
4	Bac Giang People Committee Document	Socio-Economic Development Master Plan of Bac Giang Province from 2006 to 2020
5	Bac Giang People Committee Document	Bac Giang Monography - Dictionary
6	Bac Giang People Committee Document	Socio- economic Development Master Plan of Bac Giang Province from 2006 to 2020
7	Bac Giang People Committee Document	Tourism Development Master Plan of Bac Giang from 1997 to 2010
8	Viet books 2004	Bac Giang Tourism
9	Dept. of Industry.	Industrial Development Plan from 2006 to 2020
10	Yen Dung District People Committee.	Agriculture and Rural Development Plan of Yen Dung District from 2006 to 2010
11	Yen Dung District People Committee.	Statistical data of Yen Dung District in 2005
12	Bac Giang People Committee Document.	Trade Development Master Plan of Bac Giang Province till 2010 and vision up to 2020
13	Dept. of Industry.	Project Proposal on "Development on Agro-Forestry Products Processing till 2010 and orientation up to 2015
14	Dept. of Agriculture & Rural Development. (DARD)	Assessment on Current Status and Orientation for Planning of Agriculture and Rural Areas Economy Development of Bac Giang Province till 2020
15	Dept. of Culture & Information (DOCI).	Culture on Traditional Craft in Bac Giang province
16	Bac Giang Museum - 2006	Cultural Heritage of Bac Giang Province on Intangible Culture
17	Decision No. 05/2008/QĐ-UBND dated of 23 January 2008 of the Provincial People Committee of Bac Giang	On the issuance of the Regulation, Procedure of land delivery, land hiring, land recovery, allowing transfer of land use purpose for organizations, households, individuals in Bac Giang provincial area.
18	Decision No. 106/2007/QĐ-UBND dated of 28 December 2007 of the Provincial People Committee of Bac Giang	On the issuance of the "Regulation on assignment, decentralization and authorization for implementing the of construction planning and of management of investment project of work construction in Bac Giang provincial area".

#### d) Local Resources

**General:** The production of industry and small scale industry as well as rural craft were



encourage to develop. Industrial zone and industrial clusters were formed to attract the investment to the locality. However, it can state that Bac Giang has no traditional craft villages, some trades exist but most are in a small scale, backward technology, low capacity, very few high quality products. In recent years, the development of craft villages and creation of new craft village were paid great attention. The province had many encouragement to support rural trade, restored and developed craft villages, supported for 268 projects, among which 6,200 labours were trained in rural craft village, mainly in bamboo rattan ware, handicraft, embroidery, carpentry, etc. Some craft villages were also supported by the province in infrastructure such as Bamboo rattan ware in Tang Tien, wine production in Van Ha (Viet Yen), Carpentry in Dong Thuong (Yen Dung), rice vermicelli in Thu Duong (Luc Ngan). Name of some craft villages have become famous and proud of Bac Giang people.

**Agricultural products:** Food plants with grains: In 2005, 127,351 ha (among them, rice plant : 114,044 ha, corn plant: 13,307 ha). Total output of food plants with grains reached to 600,899 tons (rice: 556,638 tons, corn: 44,261 tons) which increased 98,900 tons in comparison with the year of 2000 (19,7%) or 193,900 tons (47,6%) in comparison with the year of 1997.

- Short-term Industrial plants: They were mainly groundnut and soybean plants. In the year of 2005, the total groundnut planting area was 10,942ha with yield of 20,588 tons which increased appr.12,000 tons in comparison with that of the year of 2000 and 14,000 tons in comparison with that of the year of 1997. The total soybean planting area was 4,234ha with the yield of 6,094ha which decreased appr.400 tons in comparison with that of the year of 200 and which increased 800 tons in comparison with that of the year of 1997.
- Vegetables: The total planting area was 18,275ha with the yield of 221,817 tons which increased 69,000 tons in comparison with that of the year 2000 and 78,400 tons in comparison with that of the year of 1997. There are various kinds of vegetables such as bean, cabbage, cauliflower, squash, chayote, mustard green, tomato, cucumber, young corn, lettuce, celery, water cress, colza, kohlrabi, water morning glory, pumpkin buds, carrot, young tomato, young cucumber, spicy vegetables, etc.
- Fruit trees: The total planting area in the year of 2005 was 51,803 ha which increased over 10,000ha in comparison with that of the year of 2000 with the total yield of appr.190,000 tons. Among them, litchi covered 68,500 tons which increased appr.35,000 tons in comparison with that of the year of 2000 and 60,000 tons with that of the year of 1997.

**Breeding:** Breeding is always considered as the main production in agriculture which supplies main food source and income to over 90% of provincial farmers. In the year of 2005, over 100,000 tons of live-weight pulp, 3 million of breeding pigs, 74 million of eggs. Aquatic rearing consists of fish, turtle, shrimp, etc. The value structure obtained over 31% of the total agriculture.

**Land source:** Bac Giang has 382,200 ha (including: 123 thousand ha for agriculture, 110 thousand ha for forestry , 66,5 thousand ha for urban, and other less). Bac Giang has many favorable condition to develop industry, agriculture, forestry, and aquatic products. Agriculture

land to cultivate rice, vegetable, fruit in order to support Ha Noi and other province. Province has plan to move thousands ha land for rice to develop fruit tree, industrial tree, and aquatic with higher value. More than 20 thousand is a big potential for enterprises, investor, plant forest, and aquatic agriculture processing.

**Forest source:** 129,164 ha for forestry in 2005, about 30,000 ha hill and mountain land to develop forestry with wooden amount 3,5 mil. m<sup>3</sup>, 500 mil. bamboo and *neohouzeaua* trees. Bac Giang has many rivers, streams, lakes, tree of virgin forest, these create attractive environment.

**Mineral resource:** Bac Giang province has discovered 63 mines with 15 kinds of minerals (including: coal, metal, industrial mineral, building material. Those material source are important to develop industry such as coal mines: Yen The, Luc Ngan, Son Dong with 114 mil tons reserves (including: anthraxes, thin coal, peat). Dong Ri coal mine has 107.3 mil. tons reserves that available to develop industry, about 100 thousand tons bronze ore in Luc Ngan and Son Dong. 3 mil. tons enamel in Yen Dung, 16 clay mines with 360 mil. m<sup>3</sup> reserves in Viet Yen-Lang Giang-Luc Nam-Yen The-Hiep Hoa (in which : 100 m<sup>3</sup> clay in Tan Yen-Viet Yen-Hiep Hoa-Luc Nam).

**Handicrafts and small industry products:** Activities in learning new job, recovering and developing the old craft work have been done in the whole province. New enterprises, cooperatives, unions, groups have been formed. 268 different projects have been supported by the provincial government. Under these projects, 6,200. persons at rural craft villages have been trained with bamboo weaving, embroidery, furniture making, sewing, art articles manufacturing, etc. Some craft villages have been financed by the provincial government in constructing the infrastructure such as Tang Tien Bamboo Wares village, Van Ha Vodka Brewing village (Viet Yen district); Dong Thuong Furniture village (Yen Dung district); Thu Duong dry rice noodle village (Luc Ngan district).

**Tourism:** As Bac Giang province locates in the Northern tourist area and it is nearby Ha Noi capital, Ha Long bay – one of the world's heritages, Con Son-Kiep Bac tourist chain, it has advantage to develop the tourism in various types. The potentials of Bac Giang are not big, but plentiful which consist of :

- **Historical and Cultural monuments:** Over 1,300 historical and cultural monuments exist in the whole province and over 100 ones were listed. Some well known places are i) Xuong Giang citadel ( Bac Giang City) which symbolizes the victory over Minh enemies 15th century ii) Mac citadel which was built up in the centuries of 16th and 17th and lies from Quang Ninh province to Cao Bang province and goes through Luc Nam district; iii) Duc La Pagoda (Yen Dung district ) was used to be Buddha centre under Tran regime in the 8th century); and iv) Bo Da pagoda (Viet Yen district) used to be Buddha centre under Le regime in the centuries of 7th and 8th, etc.
- **Folk festivals:** Over 300 different festivals are recognized. Many ethnics are living together in the same area with typical folk activities such as: “Quan ho” singing, San Chi Folk song, Cao Lan folk song, Tay-Nung folk song, Tho Ha festival, Rain spray festival (Viet Yen district), Boat contest at Tieu village (Hiep Hoa district), An Chau

festival (Son Dong district), Bo Da Pagoda festival, Duc La Pagoda festival.

- Sight-seeing places: Bac Giang has no big and famous place, but it has some places of nature which attract travellers such as i) Cam Son lake is situated at Luc Ngan district with total surface area of 2,600 ha and hundreds of islands and it is surrounded by hilly and mountainous chains which create a beautiful combination, ii) Mo spring locates at Nghia Phuong commune, Luc Nam district. In this area, there are three temples (Ha, Trung and Thuong temples) which were constructed in the centuries of 15th and 16th under Le regime. The waterfall and natural pools are really attractive iii) Nguyen Sinh prohibited virgin forest locates at An Lac commune, Son Dong district with total area of 7,153 ha which is a wildlife conservation with 236 species of plant, 255 species of precious medical plant, 37 species of animals, 73 species of bird, 18 species of reptile, etc.

## (2) Issues and Potentials for Michinoeki Development of Bac Giang Province

To set up development orientation of Michinoeki in province, issues and potentials are analyzed in terms of traffic economic, social, environmental aspects.

**Table 4.2.9 Issues and Potentials for Michinoeki Development in Bac Giang**

	Issues	Potentials
Traffic	<ul style="list-style-type: none"> <li>Many routes are unpaved, especially the routes in the mountain and midland.</li> </ul>	<ul style="list-style-type: none"> <li>There is a lot of traffic and passengers of NH-1A which connect Hanoi to Chinese border.</li> <li>The management body of Michinoeki (Bac Ha Co. Ltd.) operates local buses and inter-provincial buses to Hanoi.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>Low increased income rate of local people</li> <li>Low GDP (250US\$/persons/yr)</li> <li>Under-developed industry sector and poor industry-agriculture linkage</li> <li>Low annual export value: 39US\$/person (300 US\$/person in whole country)</li> </ul>	<ul style="list-style-type: none"> <li>Promising resources of fruit trees and food crops for processing and export</li> <li>High potentials in developing craft industry and craft villages</li> <li>Increasing rate of export value</li> </ul>
Social	<ul style="list-style-type: none"> <li>High ratio of poor households: 16.3%</li> </ul>	<ul style="list-style-type: none"> <li>Good governance and management of PPC and provincial governments under urbanization process</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>Low clean water supply resources</li> </ul>	<ul style="list-style-type: none"> <li>Abundant agricultural products resources, especially industrial plants, fruit trees</li> </ul>

Source: JICA Study Team



**Figure 4.2.10 Photos of Potential Resources in Bac Giang**

Source: JICA Study Team

### **(3) Orientation and Vision for Michinoeki Development of Bac Giang Province**

The development orientation of Michinoeki in Bac Giang province, as a model of comfortable facility for road users for stopping over and relaxation, will be proposed, “To provide convenient and attractive space for road users by promoting local information and products.”

Since traffic volume of NH-1A is high, many road users and tourists will visit to Bac Giang Michinoeki. But disadvantage is there are not so many attractive areas for tourists as destination. So pilot Michinoeki should be focus on functions of traffic management, relaxation and information provision, rather than local socio-economic development at the first period. To make road users including buses and tourists recognize the Michinoeki to stop over is the short-term objective.

To contribute for traffic safety and management, and enhance local trade and tourism capacity, it is necessary to pay attention:

- to develop traffic management system in collaboration with Michinoeki, road management unit and transport service providers
- to develop local bus transport network and distribution network of products
- to develop original products for road users for relaxation
- to provide training opportunities for local organizations (ex. Women’s Union), etc.

**Strategy A “Appropriate road traffic management”:** Though Bac Giang is not far from Hanoi Capital, road users of NH-1A take long trip from Chinese border, Lang Son, and to go to central and south Vietnam. Many buses, trucks and tourist buses are included in these long-distance road users. So the priority is good and appropriate passenger services of Michinoeki which provide resting space, information, traffic guidance, health care, etc. After establishment of pilot Michinoeki with proper service and facility along NH-1A, other Michinoeki development should be promoted which is in line with provincial road network.

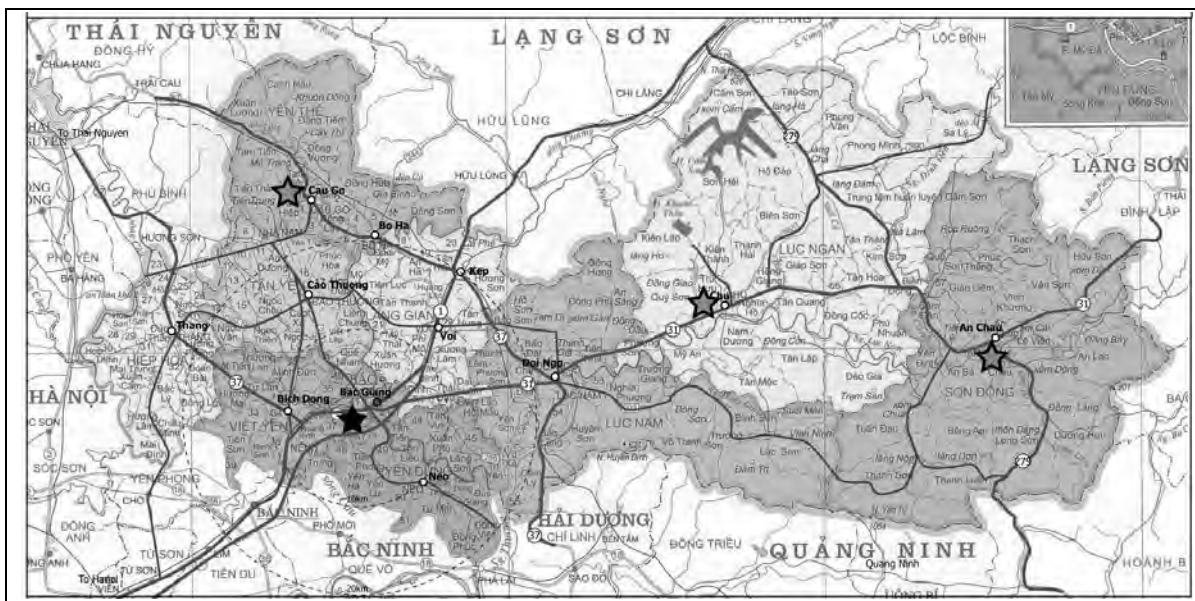
**Strategy B “Promotion of local economic activities”:** Economic structure has been shifted from agricultural sector to industrial sector in Bac Giang. The integration of agriculture-industry development is important. There are various local products and resources, which have not been developed well but with potential. These products like fruits, Banh Da Ke, flowers, bamboo wares can be developed with good design and quality improvement for Michinoeki customers. In that context, Michinoeki supports to offer opportunities and spaces for training, quality inspection, trial sales and marketing, etc. in cooperation with local organization (ex. Women’s Union) and private sectors. Since there are wide range of production areas in mountainous area, establishment of stable distribution network of products need to be developed. It is recommended to develop “local agricultural tourism” which enjoy flower and fruits gathering at Michinoeki or local production areas.

**Strategy C “Establishment of participation mechanism of local community”:** Since pilot Michinoeki is developed near the center of province, it is important to plan how to involve in community and producers in remote area, especially ethnic minority people in Son Dong and Yen Dung districts and in other remote areas. In addition, involvement of local organizations

such as Women's Union, Farmer's Union are necessary for development human resources capacity, local activities and events.

**Strategy D “Sustainable operation and management”:** As a model of public-private partnership operation mechanism, pilot Michinoeki which will be managed Bac Ha Co. Ltd. Should be operated under adequate structure of Michinoeki's with relevant role-sharing. The concern is how to sustain appropriate public functions and services in line with profitable commercial activities. (ex. restaurant, guest houses, car maintenance and spare parts supply). Provincial PC need to monitor its activities and outputs, and reflect to annual provincial plan for development for future expansion of Michinoeki network in Bac Giang.

**Strategy E: “Establishment of institutional mechanism”:** Michinoeki development in Bac Giang will be involved in both public and private sectors in future, it is necessary to establish clear role sharing mechanism including land acquisition, infrastructure and utility development, and relevant activities. Preferable policies for land acquisition, utility development and business license, etc. for private sectors shall be developed for Michinoeki development by private sectors.



**Figure 4.2.11 Proposed Location of Future Michinoeki in Bac Giang**

Source: JICA Study Team based on interview of DOT



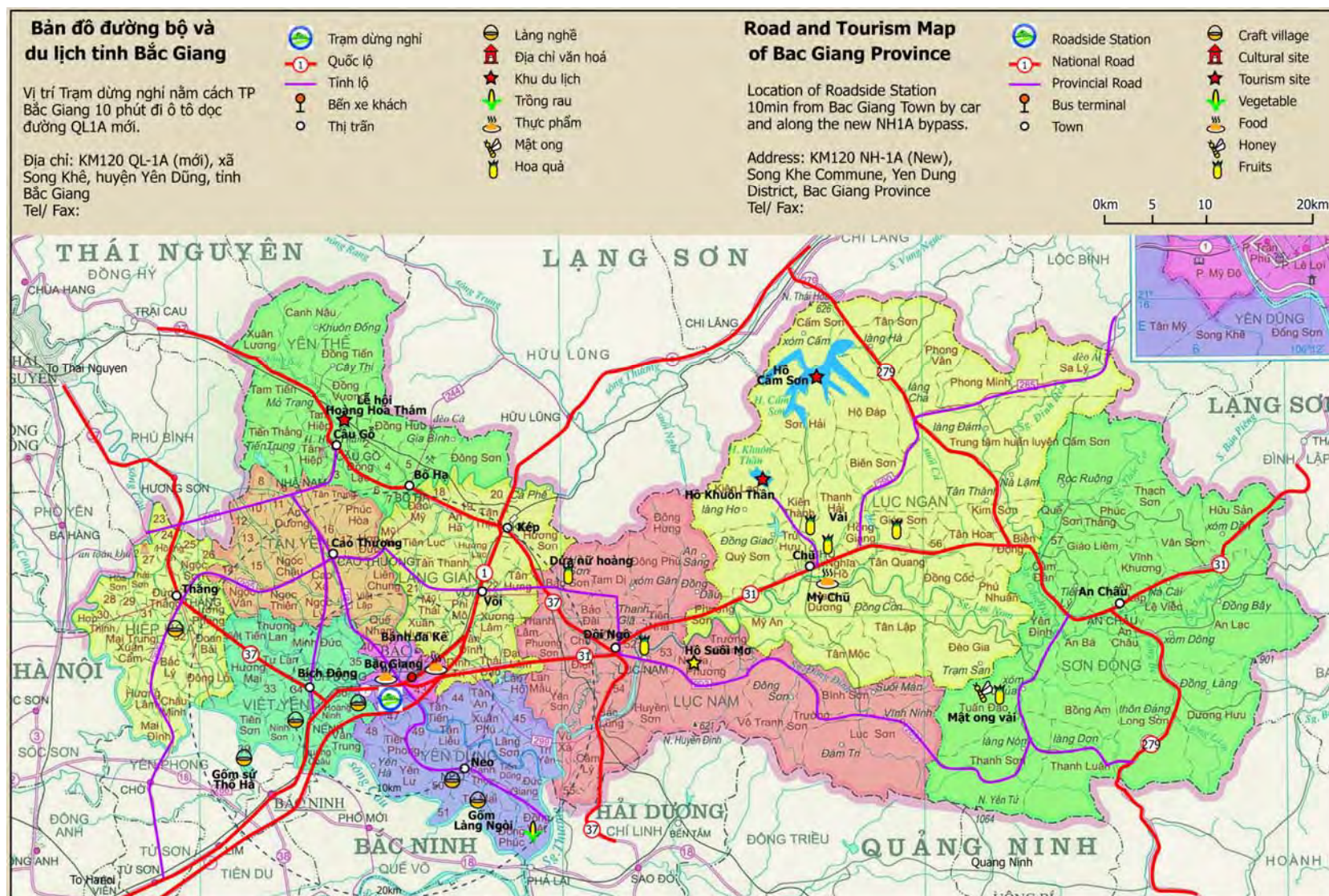


Figure 4.2.12 Road and Tourism Map of Bac Giang Province

Source: JICA Study Team based on interview of DOT

## 5 Recommendations and Suggestions

In this chapter, we recapitulate our recommendations and suggestions with a view to establish an effective and realistic Michinoeki system in the Socialist Republic of Vietnam. Some of them are already mentioned in the previous chapters, but they are classified in this chapter in accordance with the nature of each issue.

It is to be said that some of such recommendations and suggestions might not be immediately applied in Vietnam, due to various reasons and this is maybe because of our ignorance of Vietnamese rules and regulations in detail. We would appreciate it very much if Vietnamese government could be generous enough for such ignorance and could understand well our good will of proposing them, only with a purpose of introducing a better system in Vietnam.

We sincerely wish to see some of our recommendations or proposals incorporated in future in the Vietnamese “Michinoeki Policy”.

### **(1) Establishment of Coordination Mechanism**

#### **1) Establishment of a Coordination Mechanism at Central Government Level**

Michinoeki is defined as one of “Road Traffic Infrastructure” facility by the Law on Road Traffic revised in 2008, the construction of Michinoeki is under the jurisdiction of the Government which provides direction to MOT, MARD, MOIT or MOCST. Although these Ministries have specific functions and tasks of their own, they are closely involved from the view point of regional development such as promotion of local products or tourism, same as MONRE, MOC from the view point of permits for land for Michinoeki construction, construction permits, environmental consideration, MPI and MOF for securing construction cost or operation cost. This is the reason why it is desirable to have such a coordinating mechanism to ensure a harmonized policy among ministries concerned, having common understanding on the necessity of promoting Michinoeki in Vietnam. We are proposing to establish a committee for such coordination. Duty of the committee: Consultation on policy issues regarding Michinoeki and discussion on “Annual report of Michinoeki” to be prepared by MOT-VRA

Members of the committee: Representatives of Ministries concerned under the chairmanship of MOT-VRA

< Issues to be examined in construction, operation, and management of Michinoeki >

- Procedures of Michinoeki
- Policy measures to promote and assist Michinoeki
- Demarcation of duties among Ministries concerned
- Demarcation of duties between central government and provincial authorities
- Ministerial decrees, orders or regulations necessary for the realization of Michinoeki policy
- Other issues related to Michinoeki



## **2) Establishment of a Coordination Mechanism at Provincial Level**

It is also expected to establish a coordinating mechanism to ensure a harmonized policy among provincial authorities concerned, like at central government level. We believe that such coordinating committee at provincial level can examine the establishment of Planning for Development of Michinoeki that is harmonized with the Plan for economic development of their local area and provide expenditures or subsidies from provincial own budget putting local flavors to each Michinoeki.

Good coordination will be one of key to success since various relevant stakeholders will take part in development of Michinoeki and their collaboration together with each other will be indispensable.

## **(2) Elaboration of Implementing Program**

### **1) Elaboration of Implementing Program of Michinoeki**

It is expected that MOT-VRA will elaborate as soon as possible an implementation program of national Michinoeki development, based on JICA Michinoeki Master Plan and with a view to realize concrete projects.

The first phase of such implementation program, with target year of 2015, is supposed to cover 80-100 Michinoeki which will be implemented during the first 5 years. We would like to propose to take into account following points for such elaboration.

- Priority on sections with high volume of traffic: We can expect to reduce a considerable number of accidents and to render services to large number of passengers by one Michinoeki.
- Maximum use of private initiatives: We encourage private investors to construct Michinoeki wherever they are interested, by providing them technical assistance, if necessary, and by securing public functions of Michinoeki. Encouragement of private sector is also expected to contribute to the reduction of public expenditures.
- Priority of location with more local participation: If other conditions are same, we recommend to prioritize the location where local stakeholders' participation is more strong.

The implementation program should also contain an estimation of total cost with an annual requirement. Regarding the construction cost, we propose to estimate approximately the number of each of three types of Michinoeki (Type 1~3) and to estimate financial requirement from state budget, provincial budget, borrowing from State Development Bank or other banks, and private investment. It is of course quite important to endeavor to secure necessary public budget after such cost estimation.

## **2) Elaboration of Provincial Master Plan**

In harmony with the implementation program of Michinoeki on national highway, a provincial master plan is expected to be elaborated by each province. Such master plan will focus on expected services and functions of Michinoeki planned in the province, as well as on future

network of Michinoeki on main provincial roads.

### **(3) Flexible Utilization of Different Funds**

#### **1) Budgetary Appropriations by Central Government**

Since Michinoeki is defined as one of “road traffic infrastructure” facility by Law on Road Traffic revised, public expenditures from state budget are fully justified. These Michinoeki which have moderate investment capital compared with the investment capital of roads, but their effect of regional economic development is very significant and have critical role in reduction of traffic accidents. Therefore, we have to secure public fund wherever such fund is necessary, while maximizing the private investment wherever it is possible. Therefore, it is desirable to secure budgetary appropriations by central government for each fiscal year, as estimated by the implementation program.

In a longer run, we suggest to include the construction cost of basic infrastructure (core facilities, car parking area and core plus facilities) of Michinoeki to provide public services for new road construction projects or large scale road rehabilitation projects.

It is also expected to examine the possibility of using Michinoeki as a tool of other policies like regional development policy, tourism development policy or one village one product policy, and to allocate to Michinoeki financial budget or subsidies under such policy.

#### **2) Establishment of “Special Lending Program for Michinoeki” by Vietnam Development Bank**

Private investors are expected to play an important role in the construction and operation of Michinoeki. In order to facilitate their financial arrangement, we propose to establish a special lending program for Michinoeki by the Vietnam Development Bank. The terms of such lending, i.e. interest rate, lending period and grace period should be more advantageous than ordinary lending operations. It is without saying that eligible projects for such privileged borrowing are those which have obtained prior approval for accreditation.

### **3) Elaboration of “Michinoeki Program” for International Donors**

We suggest formulating programs or projects so that international donors like World Bank, Asian Development Bank or JICA can easily take them up in their lending program when forming loaned projects of construction of land traffic infrastructure. Followings are some examples.

- Program loan of Michinoeki: This program aims to construct certain number of Michinoeki which will satisfy certain criteria previously agreed upon between the Vietnamese government and donor. This program mainly focuses on regions/areas where private investment can be hardly expected. It is also recommended to include in the program, cost for technical assistance for operation as well as cost for medium and post evaluation.
- Inclusion in regional development projects or in poverty alleviation projects: We define Michinoeki as one of core facilities of regional development or poverty alleviation. We can expect to construct some Michinoeki under such projects financed by international donors.
- Inclusion in new road construction projects: We include necessary number of Michinoeki in new road construction projects under international donors funding. Good justification is also that Michinoeki is one of land road traffic infrastructure.

### **4) The Use of Private Activities**

Financial participation of private sectors is necessary to implement Michinoeki under the constraint of national and provincial budgets. In order to promote private investment, some measures should be introduced.

Examples are;

(For land accredited as a site for Michinoeki)

- Simple and fast procedure for the acquisition of the right of the land use
- Free or low charge on the land use
- Exemption of taxes on the land

(For buildings of Michinoeki)

- Some subsidy for construction of Core / Core+ facilities in case a private sector has those facilities. For example, 70% subsidy for a resting facility, 100% subsidy to an information facility, 50% subsidy for a facility of local development.

(For Operation of Michinoeki)

- Some subsidy for operation of an information facility and to a facility of local development in case a private sector manages those facilities.

#### **(4) Establishment of the Schemes**

##### **1) Schemes for Accreditation**

MOT-VRA will be the authority for the accreditation, and will accredit Michinoeki by itself for a while. In the future the function of the accreditation can be entrusted to an authorized organization, namely “the Vietnam Association of Michinoeki”.

Accredited Michinoeki should include not only new Michinoeki but also Michinoeki under operation as long as they satisfy the standards, with some additional works on existing facility, if needed.

If Michinoeki is accredited, it will have a merit that visitors may increase thanks to the guaranteed service and facilities. It is one idea that the accredited Michinoeki has a right of tax exemptions. The merit of the applicant should match the cost of the applicant for the accreditation.

##### **2) Early Establishment of the Related regulations and rules**

The related ministries and departments are recommended to draft the regulations and rules to establish and promote Michinoeki. MOT-VRA are suggested to draft promptly “the Standard of Implementation of Michinoeki”, “ the Standard of Management of Michinoeki”, “Accreditation Scheme” and other basic rules. This is legal basis to accredit Michinoeki of the nationwide Michinoeki network.

Above-mentioned policy interventions will be one of key factors to the control and guide Michinoeki to follow the policy target as desired and avoid uncontrolled issues of roadside service provision as previously encountered. All of the stakeholders, especially private entities, who are interested in Michinoeki, could not take part in the Michinoeki development project smoothly without above-mentioned legal framework.

#### **(5) Technical Assistance**

##### **1) Assistance to Project Formation**

It is recommended to consider some measures to assist technically the formulation of Michinoeki projects that have been recommended in the Master Plan and the Action Plans. Some parts of the assistance may have to be entrusted to private consultants, and other parts can be done by the MOT-VRA and by other related ministries. It will be one idea that MOT-VRA has an organization named as “the Michinoeki Assistance Room (tentative)”

It will also be necessary to establish a financial assistance for such project formulation including feasibility studies.

##### **2) Assistance to Project Implementation**

It is also recommended to consider some measures to support the implementation and management of Michinoeki with technical and the financial assistances.

Technical assistances include training of the staff of Michinoeki. It will be an idea that

MOT-VRA dispatches a “Michinoeki Advisor” to the sites of Michinoeki.

Financial assistance should be considered both in the construction stage and the operation stage and implemented at the same time in case of construction of new road or major road upgrading works.

### **3) The Use of know-how acquired in the JICA Study**

It is recommended for MOT-VRA to use the know-how which has been acquired during the JICA Study including the pilot projects. Especially, the ideas and experiences in the pilot projects and training in Japan should be transferred to as many persons as possible. MOT-VRA is recommended to establish a system to accumulate and transfer such know-how and experiences.

### **4) Training Program**

Training Program conducted during the JICA Study is a good prototype of the future training program. MOT-VRA is recommended to initiate the training by referring to this prototype. In future, the program should be modified or enhanced with the Vietnamese experiences of Michinoeki and with the special features of each district.

## **(6) Others**

### **1) Dissemination of the concept of Michinoeki**

Michinoeki is a new concept in Vietnam. It is important to disseminate this idea to many officers, residents, and road users. Some ideas to realize effectively such dissemination of concept are; an organization for promoting Michinoeki, homepages and leaflets, indication of Michinoeki in an official road map, and promotion activities with local tourism companies.

### **2) Service Areas in Expressway**

Service areas in expressways are not exactly the same, as, but similar to Michinoeki in the point that they are installed for traffic safety and comfort of drivers and passengers. It is an idea to study the relations of service area and Michinoeki when service areas are constructed and operated.

## **ANNEX I**

### **Michinoeki Development Action Plan**

# 1. Objectives and Scope of Action Plan

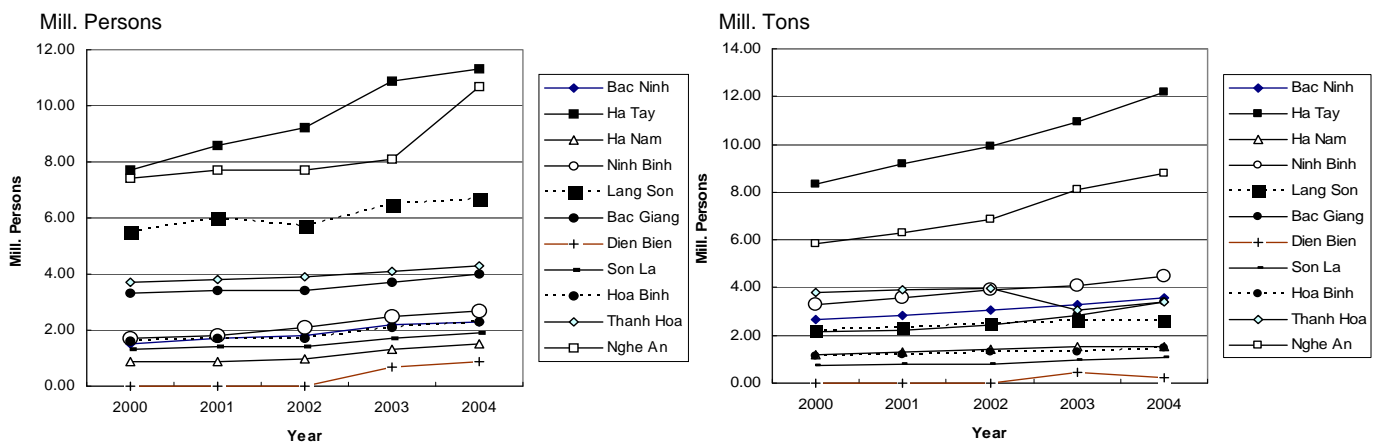
## 1.1. Objectives

### (1) Necessity of the Development of Michinoeki

This section discusses the development needs of Michinoeki in Vietnam mainly from the following 5 viewpoints: 1) Increasing trend of recent traffic volume, 2) Raise of demand for comfortable mobility, 3) Necessity of improvement of less qualified existing facilities, 4) Promotion of socio-economic activity in roadside areas and 5) Needs to maintain plural Michinoeki as “lines”. Subsections that follow will deal with discussion items along with the viewpoints.

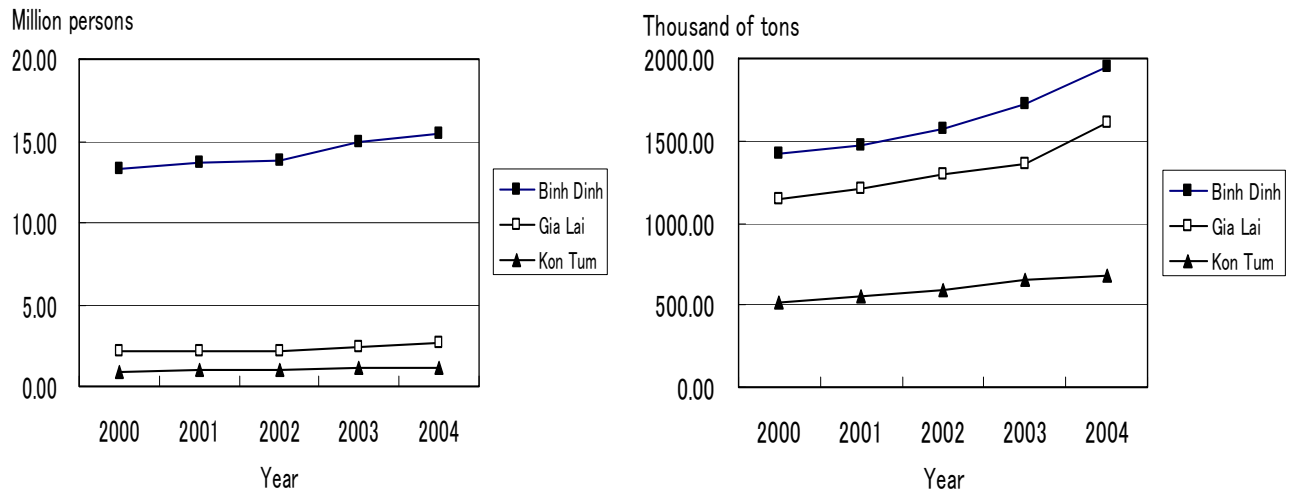
#### 1) Increasing trend of recent of traffic volume

The traffic for passengers and cargo all over the nation has been increasing significantly. The volume expands at an annual rate of 10% from 2000 to 2004 in Vietnam. The traffic volume in Provinces in northern, central and southern region is also increasing noteworthy. It shows an average annual growth rate of 7% and 6% for passengers and cargo respectively. Such increasing vehicles as well as their drivers and passengers are reflected on increasing number of potential users of Michinoeki in the future.

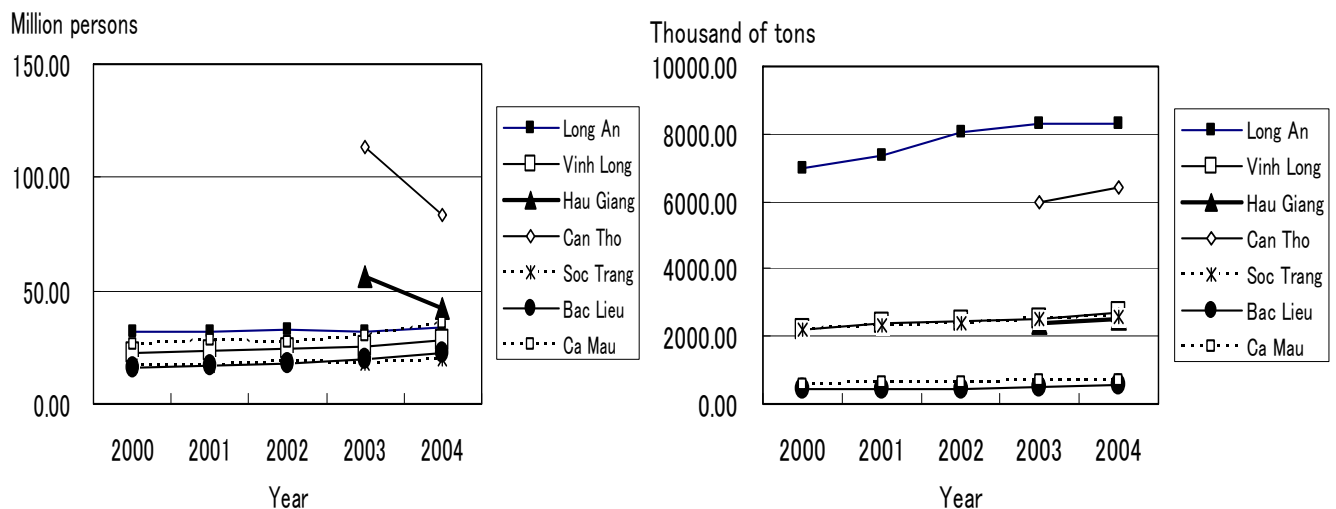


**Figure 1.1.1 Increase of Passengers and Traffic Volumes in Northern Vietnam**

Source: VRA Statistics

**Figure 1.1.2 Increase of Passengers and Traffic Volumes in Central Vietnam**

Source: VRA Statistics

**Figure 1.1.3 Increase of Passengers and Traffic Volumes in Southern Vietnam**

Source: VRA Statistics

## 2) Raise of demand for comfortable mobility

Major trip patterns at main national routes are long-distance movements. The bus traffic has grown significantly from 2003 to 2007 at National Highway NO.1 and National Highway NO.6, along which the sites of Pilot Projects are located. The increasing rates are approximately 10% and 20~30% for National Highway NO.1 at Ninh Binh and National Highway NO.6 at Hoa Binh respectively.

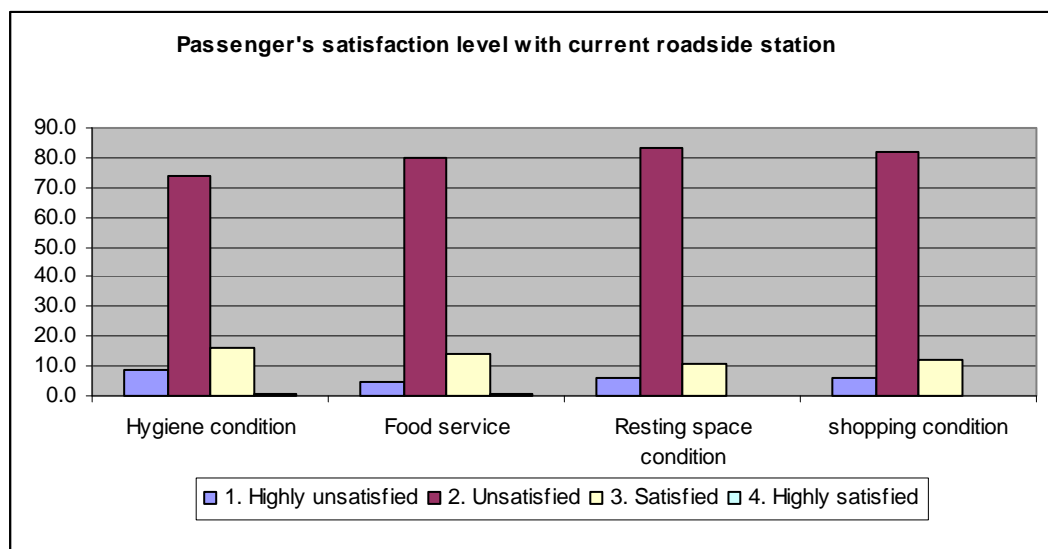
As more and more provincial residents work in urban areas, long-distance transport by small- or middle-sized busses that link big cities (such as Ha Noi) and distant rural cities are on the increase. In line with the trend, there has been an increasing need for roadside resting facilities to make long-distance transportation more comfortable.



### 3) Necessity of improvement of less qualified existing facilities

There are few facilities, however, that satisfy the need for comfortable long-distance transportation. There are many resting facilities along 700km of surveyed roads (National Highway No. 1 (Ha Noi – Lang Son, and Ha Noi – Vinh) and National Highway No. 279 (Son La – Dien Bien Phu)). But these commercially-run facilities are not designed to provide users' need for public services. These facilities are either too small, not equipped with enough parking or resting space, or not maintained in good hygienic condition.

The user satisfaction survey for existing resting facilities shows that bus passengers are highly dissatisfied with existing facilities in terms of hygienic condition, food service, resting space, and sales service.



**Figure 1.1.2 Passenger's Satisfaction Level with Current Roadside Station**

Source: JICA Study Team

### 4) Promotion of socio-economic activity in roadside areas

As a gathering place for many people coming from different areas by buses or passenger cars, a roadside facility provides an opportunity for local residents to make social and/or economic relationship with those people. At Michinoeki, local product sellers can find potential customers, and obtain valuable marketing information through direct feedbacks to their products.

At the same time, by providing communal and tourist information, Michinoeki serves to activate and solidify social relationships among local residents and between local residents and visitors.

**5) Needs to maintain plural Michinoeki as “lines”**

To make a comfortable journey of long-distance passengers, it is desirable to implement Michinoeki at a certain interval. Michinoeki also functions as a bus stop, as a bus picks up passengers at Michinoeki. instead of random roadside places. It will contribute to an improved condition of road safety, and ensure ensure efficient and punctual bus operation.

In addition, through information sharing and coordination among different Michinoeki, information concerning tourism, community events, and specialty products will be shared among local community members and Michinoeki users.

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## 1.2. Scope of Action Plan

The recognitions as mentioned above are reflected to the action plan for the development of Michinoeki in northern Vietnam with the details as follow:

### (1) Target roads and Provinces in Northern Region

Four routes of national highways are chosen as target road networks.

#### 1) Ha Noi – Lan Song (National Highway NO. 1)

This section of the highway is a road of approx. 150km that extends from Ha Noi, and borders with Yunnan Province of China. A Project Project of Bac Giang is located along the road. Farmland stretches eastward from the road.

#### 2) Ha Noi – Vinh (National Highway NO 1)

The section of the highway is a road of approx. 250km from Ha Noi to South Vietnam. A Pilot Project site of Ninh Binh is located along the road. The section is relatively urbanized, and there are several sightseeing spots along the road.

#### 3) Ha Noi – Hoa Binh – Dien Bien Phu (National Highway NOs 6 and 279)

The section of the highway is a road of approx. 300km that extends from Ha Noi and borders with Laos. A Pilot Project site of Hoa Binh is located along the road. Along the road are a mountainous area, farmland, and settlements of ethnic minority groups.



Figure 1.2.1 Overview of Target Roads

Table 1.2.1 Target Roads

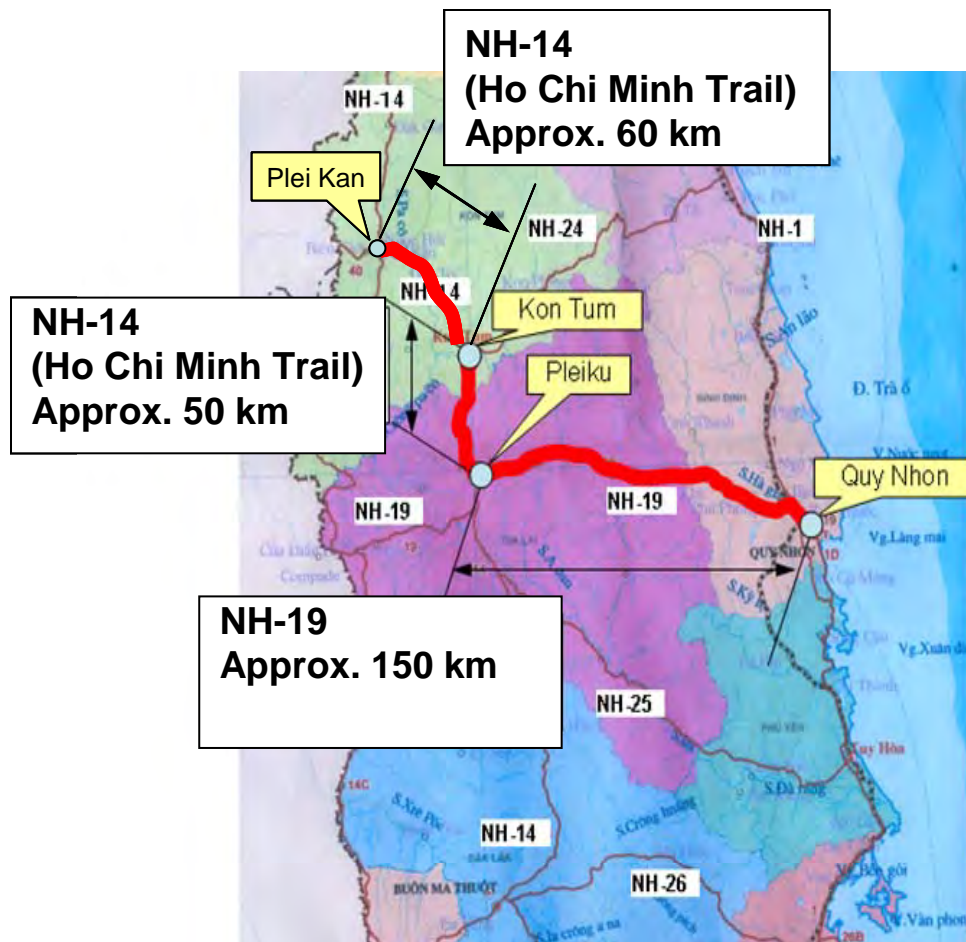
Highway No.	Section	Length	Provinces along Roads
HWY No.1	Ha Noi – Lang Son	150km	Bac Ninh, Bac Giang, Lang Son
HWY No.1	Ha Noi - Vinh	250km	Ha Tay, Ha Nam, Thanh Hoa, Ninh Binh, Nghe An
HWY No.6	Ha Noi – Son La	250km	Ha Tay, Hoa Binh, Son La
HWY No.279	Son La – Dien Bien Phu	50km	Son La, Dien Bien

## (2) Target Roads and Provinces in Central region

Objective roads and provinces are shown in the following table and figure.

**Table 1.2.2 Objective Roads and Provinces of the Action Plan in the Central Region**

National Highway	Section	Length	Provinces along the road
NH No.19	Quy Nhon – Pleiku	150km	Binh Dinh, Gia Lai
NH No.14	Pleiku – Kon Tum	50km	Gia Lai, Kon Tum
NH No.14	Kon Tum – Plei Kan	60km	Dak Ha, Dak To, Ngoc Hoi



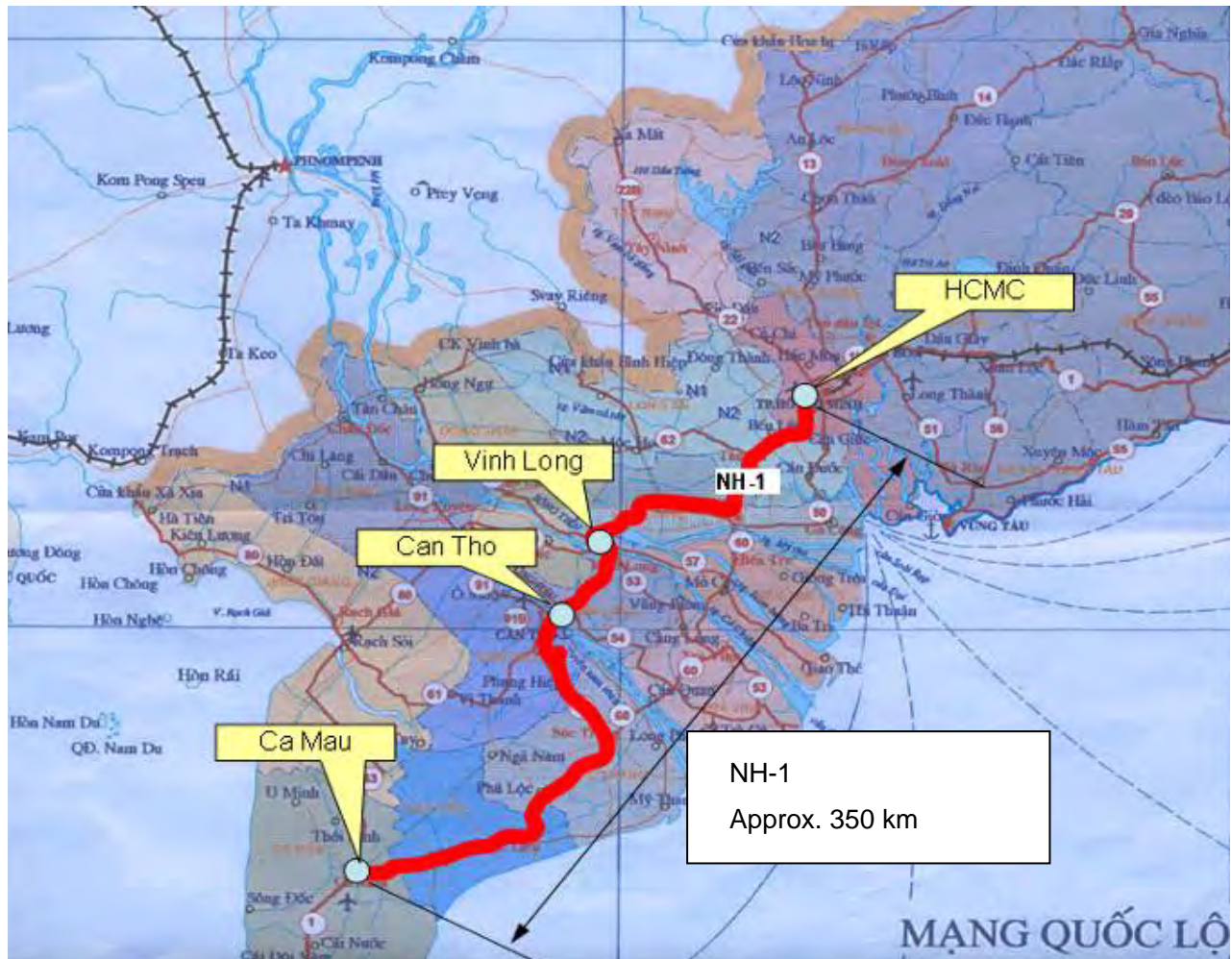
**Figure 1.2.2 Objective Roads and Provinces of the Action Plan in the Central Region**

### (3) Target Roads and Provinces in Southern Region

Objective roads and provinces are shown in the following table and figure.

**Table 1.2.3 Objective Roads and Provinces of the Action Plan in the South**

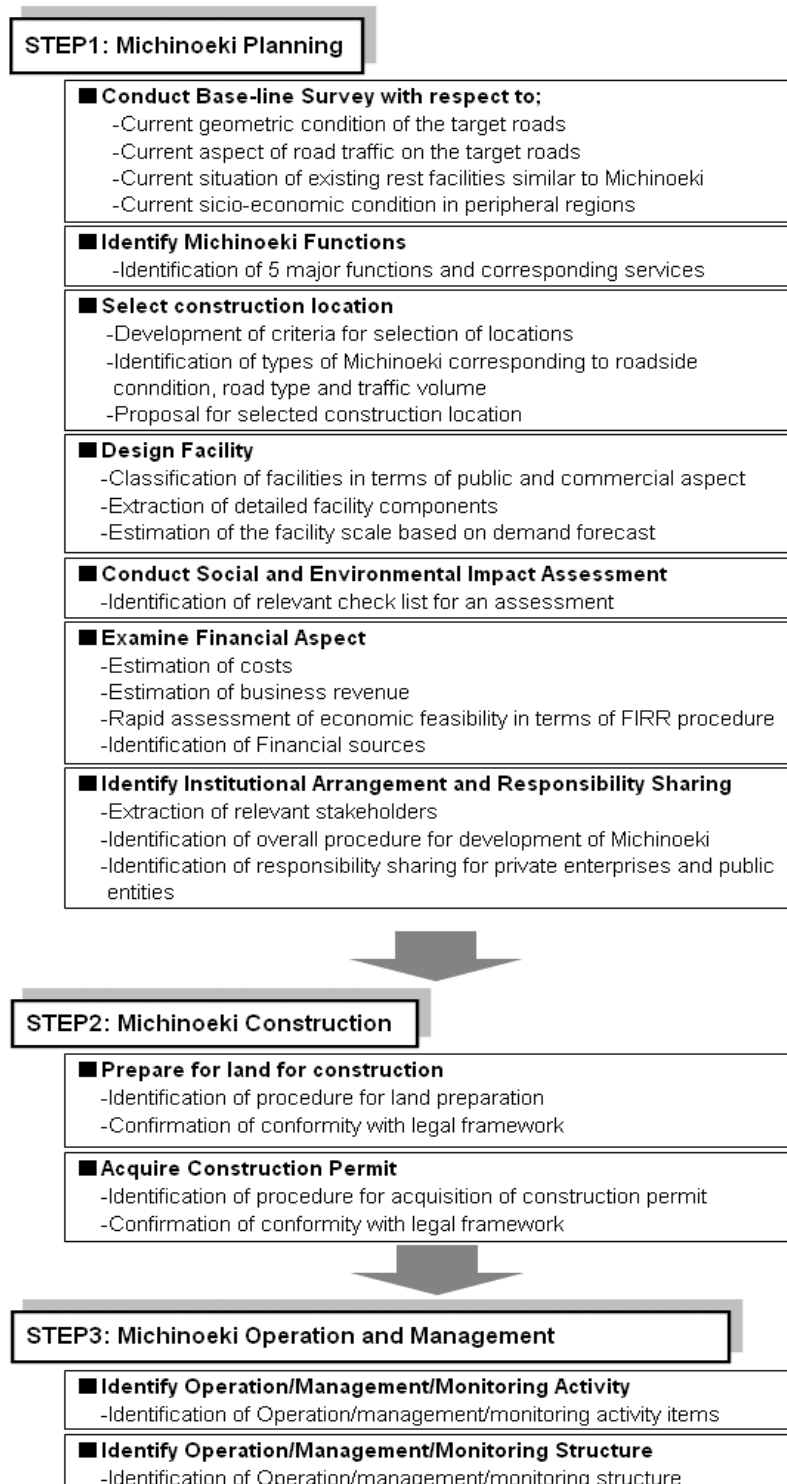
National Highway	Section	Length	Provinces along the road
NH No.1	Ho Chi Minh City – Ca Mau	350km	Long An, Vinh Long, Hau Giang, Can Tho, Soc Trang, Bac Lieu, Ca Mau



**Figure 1.2.3 Objective Roads and Provinces of the Action Plan in the South**

#### (4) Planning procedure of the Action Plan

Shown below are Action Plan flow of project development, construction, and operation.



**Figure 1.2.4 Flow of Planning Action Plan**

Source: JICA Study Team

### **Action Plan, Pilot Projects, and Master Plan**

The Action Plan aims to establish Michinoeki along national highways in the northern region of Vietnam. It describes the site selection criteria, types of Michinoeki to be constructed, details of facilities and scales, methodologies of development, and stakeholders' roles. The outcome of the plan is measured in consideration of its socio-economic impact to roadside areas. The plan functions as guidelines for the planning, construction, and operation/management of Pilot Projects in Bag Gian, Ninh Binh, and Hoa Binh. Findings obtained through these Pilot Projects will be reflected back to the Action Plan.

The Master Plan details a basic approach to construct Michinoeki networks throughout the nation and along the regions. The plan contains the conceptual plan of site allocation, stakeholders' responsibilities, and actions needed to be taken by the Government. The study through the Action Plan (and the findings obtained from Pilot Projects) will be consolidated into the Master Plan.



## 2. STEP1: Michinoeki Planning

STEP 1: Michinoeki Planning can be broken down with several sub-steps, and each sub-step comprises of a number of corresponding action plans as shown below:

### ■STEP1.1: Conduct Base-line Survey with respects to:

- ▶ Current geometric condition of the target roads
- ▶ Current level of road traffic on the target roads
- ▶ Current situation of existing rest facilities similar to Michinoeki
- ▶ Current socio-economic condition in peripheral regions

### ■STEP1.2: Identify Michinoeki Functions

- ▶ Identify 5 major functions and corresponding services of Michinoeki

### ■ STEP1.3: Make site selection:

- ▶ By specifying the development procedure of site selection criteria.
- ▶ By identifying types of Michinoeki to be constructed on the road based on roadside conditions, road types, and traffic volumes..
- ▶ By determining pilot project sites.

### ■STEP1.4: Design Facility:

- ▶ Based on the classification of facilities determined with public and commercial aspects of a facility.
- ▶ Based on the clarification of necessary facility components.
- ▶ Based on the estimate of the facility scale determined through demand forecast.

### ■STEP1.5: Conduct Social and Environmental Impact Assessment:

- ▶ Through a set of relevant check lists for the assessment.

### ■STEP1.6: Examine Financial Aspect:

- ▶ Based on a cost estimate.
- ▶ Based on an estimate of business revenue.
- ▶ Based on a rapid assessment of economic feasibility.

### ■STEP1.7: Identify Institutional Arrangement and Responsibility Sharing through:

- ▶ The identification of relevant stakeholders.
- ▶ The identification of overall development procedure of Michinoeki.
- ▶ The identification of responsibility sharing between private enterprises and public entities.

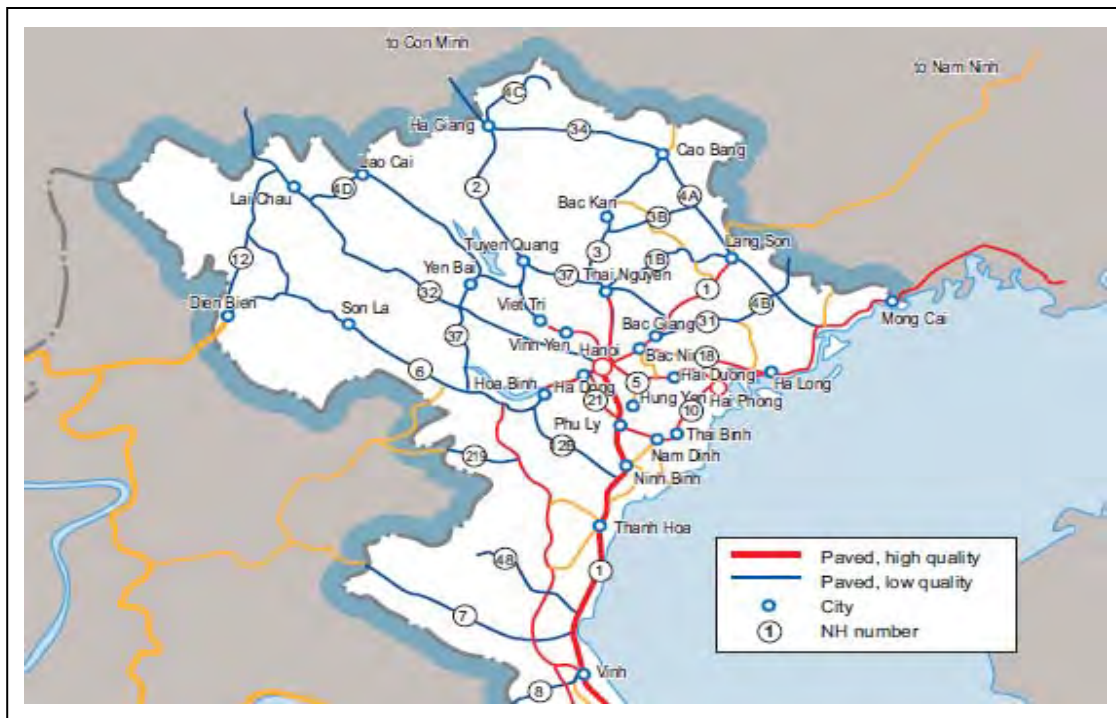
## 2.1. STEP1.1: Base-line Survey

### 2.1.1 Base-line Survey in Northern Vietnam

#### 2.1.1.1 Existing Road System and Services

##### (1) Current Road Network in Northern Vietnam

Three major trunk roads in northern region—National Highway No. 1, No. 3, and No. 5—cover Red River Delta region. National Highway No. 6 covers the north western mountainous and hillside areas. Starting from Lang Son province, National Highway No. 1 borders with China, goes through Hue, Da Nang, and Ho Chi Minh, and reaches the southern city of Ca Mau. Out of its total distance of approx. 2,200km, the road section of National Highway No. 1 that runs through the northern region is 450km. The section starts from Lang Son province, and extends to the provincial capital of Nghe Anh, Vinh.



**Figure 2.1.1 National and Major Provincial Road Network in Northern Vietnam**

National Highway No. 1, a major trunk road of Vietnam's nationwide road network, plays an important role in the northern region. It runs through the northern region with major cities and some major international tourist cities such as Nich Binh. National Highway No. 3, a major trunk road of approximately 280km, starts from Ha Noi, goes through Thai Nguyen, and reaches Cao Ban province that borders with China. Along the highway, the development of some new roadside facilities is now in progress. Approximately 110km of National Highway No. 5 runs across the eastern area, and links between Ha Noi and Hai Phong. In western area, National Highway No. 6 forms a link of approximately 330km between Ha Noi and Son La. Further ahead, approx. 160km of National highway No. 6 and No. 279 extends to Dien Bien Phu, a city near Laos border. Along National Highway No. 6 are some attractive tourism spots, such as Hoa Binh and Mai Chau,

famous for distinctive cultural traditions and handicrafts of ethnic minority groups. In addition to these major trunk roads, National Highway No. 32, which is located in a typical mountainous poverty area, forms a link between Ha Noi and Lai Chau. Approximately 310km of National Highway No. 2 runs side by side with National Highway No. 5, and goes through Ha Noi to Ha Giang province that borders with China. These national highways and their feeder road networks of provincial roads plays an important role to provide inter-provincial road transport in the northern region.

## **(2) Condition of Road Network and Services**

### **1) Physical condition**

#### **a. Ha Noi – Lang Son Road Section**

- The section of approx. 160km stretching from Ha Noi to the China border provides a backbone of international cargo transport.
- With a financial support from a syndicate of Asian Development Bank (ADB) and Japan Bank of International Cooperation (JBIC), the section's renovation was completed in 2002. The pavement condition index of the section is 95.
- Lang Son province is considering a plan to develop a road, as an Economic Corridor, that stretches from Nam Ninh to Ha Noi, and includes the section mentioned above. At the same time, the province advocates the need for the development of roadside resting facilities based on the forecasted increase of a traffic volume.
- The road section runs across four provinces that stretch from the eastern part to the western part of Vietnam: Ha Tay, Bac Ninh, Bac Giang, and Lang Son. Along 40km of the road section from Ha Noi to Bac Gian are farmlands and urban areas with roadside facilities, such as restaurants, vehicle repair shops, and gas stations. But, along 120km of the section from Bac Gian, there are only a few small villages and no major roadside resting facility.

#### **b. Ha Noi – Vinh Road Section**

- This road section is a zone from Ha Noi to Ho Chi Minh via Hue, with the length of approx. 300km to Vinh. There are several large sightseeing spots along the road; therefore this road section is an arterial road of sightseeing. Moreover, this road is also an arterial road of cargo transportation; therefore there is a heavy traffic volume of large trucks at night.
- This road section had been reformed by road project in 1994 financed by a loan syndicate of the World Bank (WB) and JBIC.
- This road section stretches from north to south across five provinces: Ha Tay, Ha Nam,

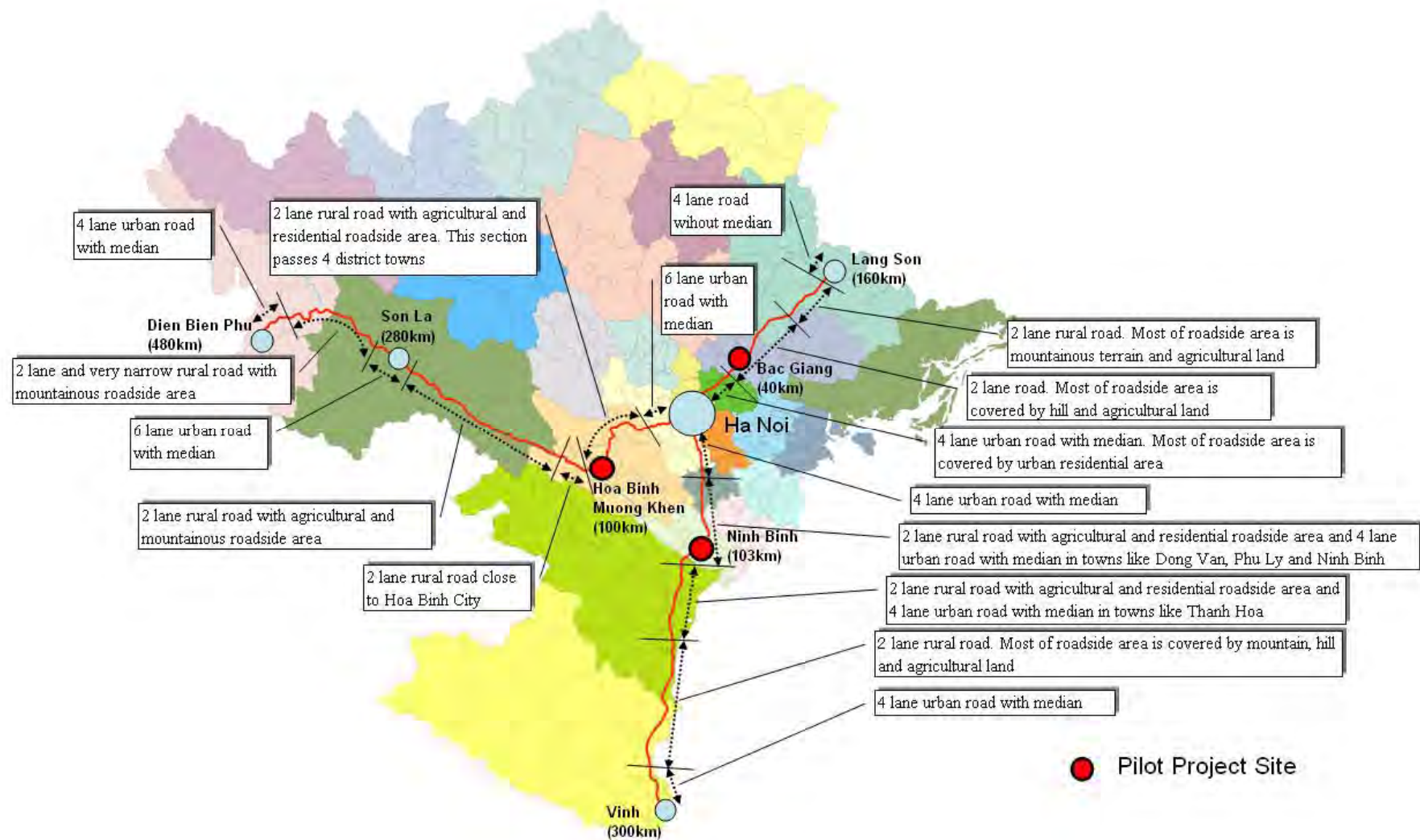
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Ninh Binh, Thanh Hoa, and Vinh.

- In this road section, particularly the zone from Ha Noi to Thanh Hoa with the length of approx. 160km, urban areas and farmlands alternate. In a central district of an urban area, eight tracks of the road is divided by a central island into four tracks in each direction. Outside the area, the rural road has two lanes each way. In a zone of approx. 140km that stretches southward from Thanh Hoa to Vinh, farmlands and hills alternate.
- Due to the heavy traffic, there are many resting facilities along the road in this section.
- Pavement and other road conditions of a major part (90%) of the roads in these sections are good. Particularly good is the road condition of the section from Thanh Hoa to Vinh due to the regular maintenance carried out by WB, a loan syndicate.

#### **c. Ha Noi – Dien Bien Road**

- The total 480km of this road section consists of 280km of National Highway NO 6, from Ha Noi to Son La, and the 200km section from Son La to Dien Bien Phu via National Highway NO 6 and 279.
- In this road section, there are popular tourist spots, such as Hoa Binh and Mai Chan, that are famous for distinctive cultural objects and practices of minority groups. This survey's pilot project site is a road section that stretches for approx. 100km from Ha Noi to Muong Khen, Hoa Binh Province. In the road section that has several resting facilities, urban areas and farmlands alternates along the road. In the road section of approx. 380km that stretches from Muong Khen to Dien Bien Phu, there is a continuous row of farmlands on steep mountainous areas. The road section stretches over some highly impoverished regions with few resting facilities.
- With the guarantee bond issued by the government, the Ministry of Transport upgraded the road section. While the section from Ha Noi to Son La has been in service for two years now, two sections—National Highway No. 6 from Son La to Tuan Giao and National Highway No. 279 from Tuan Giao to Dien Bien Phu—are not yet paved and still under improvement construction. The upgraded service of these zones is scheduled to be launched in 2009.
- This road section is across four provinces, Ha Tay, Hoa Binh, Son La, and Dien Bien.



**Figure 2.1.2 Conditions of the Subjective Roads**

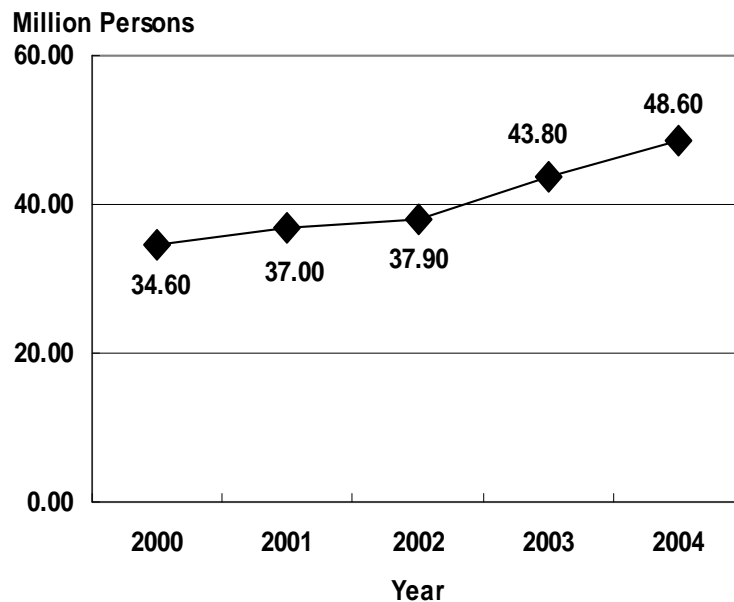
Source: JICA Study Team

Note: A number in the bracket shows a distance from Ha Noi (km)

### (3) Road Transport Services

#### 1) Volume of Passenger Transport

Recently the traffic volume in northern region has been drastically increasing. The figure below shows the volume of passenger transport: the total volume of passenger transport carried in northern region to 11 provinces along National Highway No. 1. 300km of National Highway No. 1 runs from Lang Son province to Nghe Anh province. Approx. 490km of National Highway No. 6 and No. 279 form a link between Ha Noi, Son La, and Dien Bien Phu. Since 2000, the traffic has constantly been on the increase with an annual increase rate of approximately 7%.

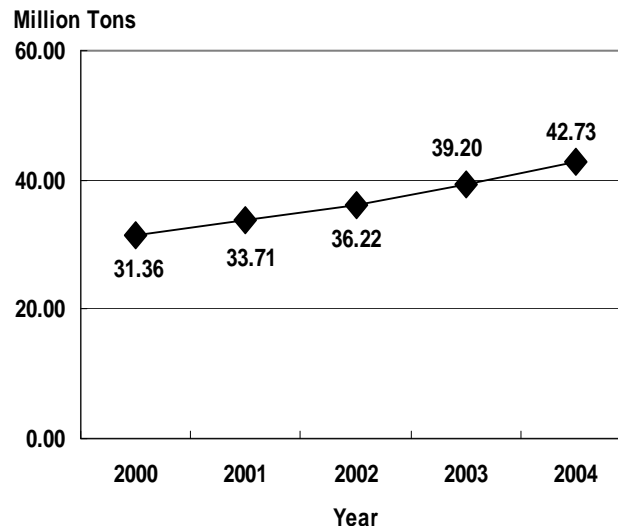


**Figure 2.1.3 Traffic Volume of Passengers Carried by the Road Transport Means**

Source: Statistical Yearbook of Vietnam, 2005

## 2) Volume of Freight Transport

The following figure shows the volume of freight transport carried by road transport in the northern region. In a similar manner to the trend of passenger transport, the freight transport has constantly been on the increase since 2000 with the annual increase rate of approximately 6%.



**Figure 2.1.4 Traffic Volume of Freight Carried by the Road Transport Means**

Source: Statistical Yearbook of Vietnam, 2005

Note: The above statistics contains local transport only

## 3) Traffic Condition

In what follow, the current traffic situation at each road section will be explained. The traffic volume of a target road section will be sorted out by 24-hour traffic volume-data at main road cross-sections. The set of data was obtained by Vietnam Road Administration (VRA) at each quarter from 2004 to 2006 (i.e. the data is the latest available one).

### a. Ha Noi – Lang Son Road Section

- Two points were chosen from the road section from Bac Gian to the east. The latest data of 2006 shows that the 24-hour traffic volume—total traffic volume excluding two-wheel motor bikes and bicycles—is approx. 2,500-2,800 cars per day. Classified by car types, the traffic volume of Bac Giang comprises of approx. 35% of freight vehicles (trucks and lorries) and approx. 65% of passenger cars (busses and family cars). With the assumption that all the passenger cars use Michinoeki, the maximum number of passenger cars that use Michinoeki will be approx. 1,600-1,800 vehicles per day.
- In view of the above VRA survey from 2004 to 2006, while the traffic volume near Bac Gian gradually decreased, the volume near Lang Son was on the increase.

**b. Ha Noi – Vinh Road Section**

- We identified two points on this road section where VRA takes action of measurement of traffic volume data; the first point covers from Ha Noi to Ninh Binh, the second point covers from Ninh Binh to Vinh. According to the data in 2006, the latest data, the 24-hour traffic volume is approx. 7,700~13,000 cars per day (total traffics: excluding two-wheel motor bikes and bicycles). From the traffic volume data of Ninh Binh from this survey, classified by the car types of this area, the component percentage are approx. 43% and 57% for freight vehicles (trucks and lorries) and passenger cars (buses and family cars), respectively. From all vehicles using Michinoeki, the maximum traffic volume of passenger cars using Michinoeki (under the assumption that all passenger cars use Michinoeki) is approx. 4,400~7,400 vehicles per day. This is the maximum traffic volume from all of surveyed road sections.
- From the viewpoint of above VRA traffic survey, from 2004 to 2006, the traffic volume increases notably near Vinh. It grew at an average rate of approx. 18% each year from 2004 to 2006.

**c. Ha Noi – Dien Bien Phu Road Section**

- We identified two points on this road section where VRA takes action of measurement of traffic volume-data; the first point covers from Hoa Binh to Son La, the second point covers from Son La to Dien Bien Phu. According to the data in 2006, the latest data, the 24-hour traffic volume is approx. 200~1,000 cars per day (total traffics: excluding two-wheel motor bikes and bicycles), while at Hoa Binh and to the west, the 24-hour traffic volume is approx. 200 cars per day. From the traffic volume data of Ninh Binh from this survey, classified by the car types of this area, the component percentage are approx. 44% and 53% for freight vehicles (trucks and lorries) and passenger cars (buses and family cars), respectively. From all vehicles using Michinoeki, the maximum traffic volume of passenger cars using Michinoeki (under the assumption that all passenger cars use Michinoeki) is approx. 100~500 vehicles per day. This is the minimum traffic volume from all of surveyed road sections.
- From the viewpoint of above VRA traffic survey, from 2004 to 2006, the traffic volume increases notably near Hoa Binh. On the other hand, the traffic volume at Hoa Binh and to the west remains at the same level.

**d. Trends of traffic volume classified from car types**

- Moreover, classified from car types, the annual growths of traffic density at Ninh Binh of National Highway NO 1 are approx. 5%, 5% and 10% for At Bac Giang of National Highway NO 1, the annual growths are approx. 6%, 10%, and 15% for family cars, buses, and lorries, respectively. On the other hand, at Hoa Binh of National Highway NO 6, the



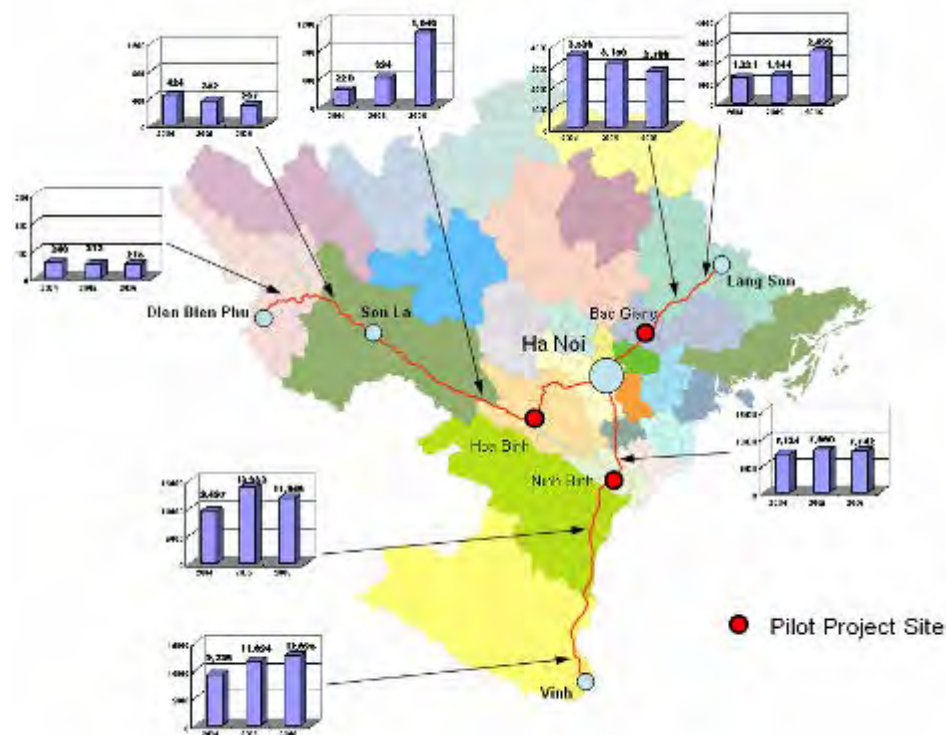
annual growths are approx. 30% and 20~40% for family cars and buses, respectively.

- As mentioned above, among passenger transportations, the traffic volume of buses is totally growing significantly. Therefore, the growth of bus passengers, which are supposed to become users of Michinoeki, is assumed to be notably.

**Table 2.1.1 Average Annual Growth Ratio of Traffic Volume**

average ratio(03-07)	Cars	small bus	Large bus	Lorry (2 axles)	Truck (>=3 axles)
NH1 Ninh Binh	1.05	1.05	1.07	1.14	1.05
NH1 Bac Giang	1.06	1.08	1.15	1.16	1.17
NH6 Hoa Binh	1.29	1.19	1.38	1.06	1.13

The figure of the traffic situation mentioned above is shown as follows;



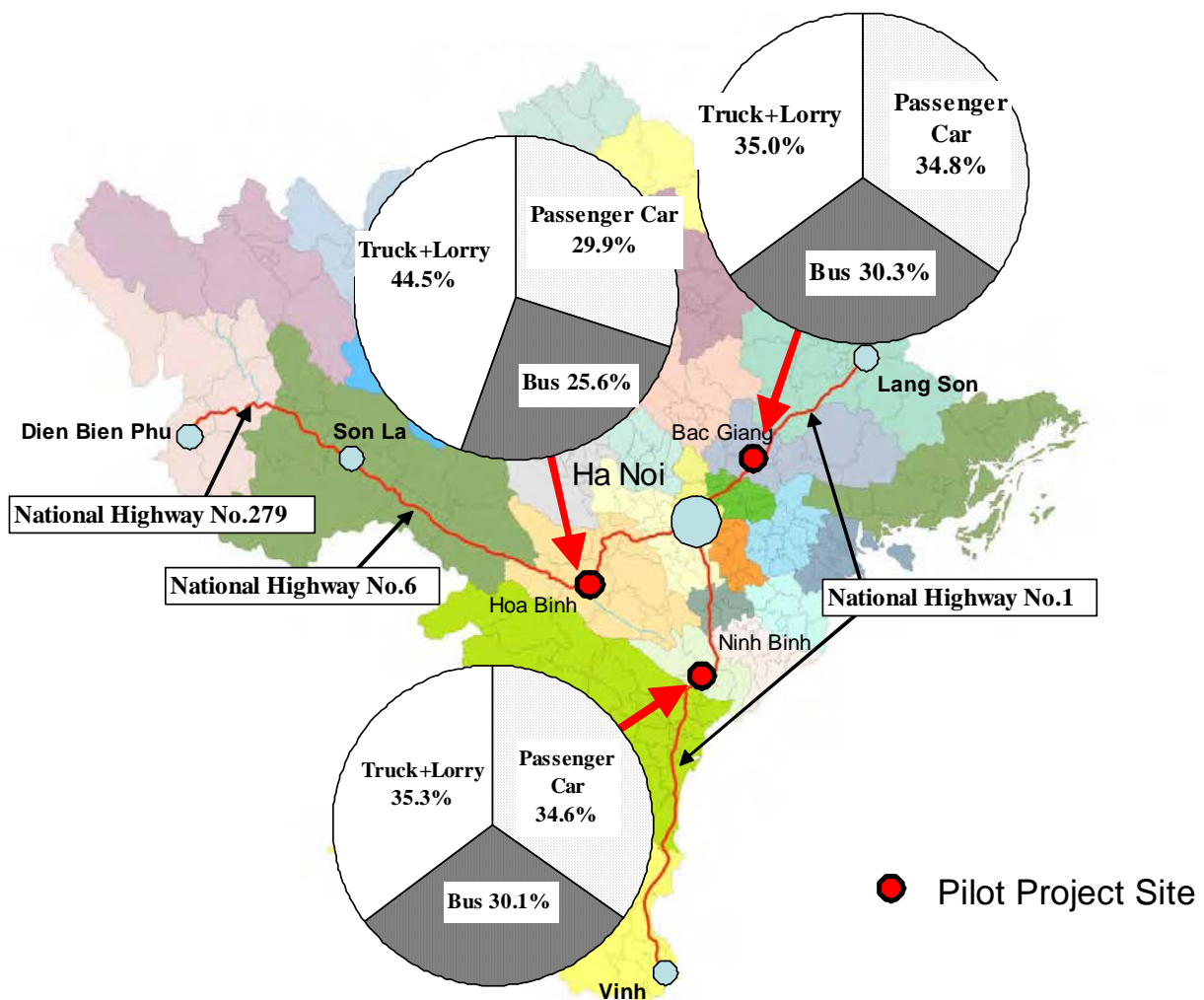
**Figure 2.1.5 The Shift of Cross-Sectional Traffic at the Main Points of the Action Road**

Source: JICA Study Team

Note: The numbers are total traffic volume excluding motor bikes and bicycles.

#### 4) Vehicle Composition

The following figure shows a vehicle composition obtained through the field survey in which traffic volume count (24 hours week day) was conducted in early March, 2007 at 3 target Pilot Project sites. The result shows that three traffic volumes of (1) passenger cars, (2) buses, and (3) lorries/trucks are equally divided with each component's share of approx. 30%. Considering the fact that most of the trucks and lorries constitute a traffic at night, major beneficiaries of Michinoeki are passengers carried by day-time transport means: passenger cars and buses. While the average daily traffic of passenger cars is about the same as that of buses in terms of the number of vehicles, buses carry a larger number of passengers than passenger cars. It may thus be assumed that bus passengers constitute a majority of Michinoeki's potential users.

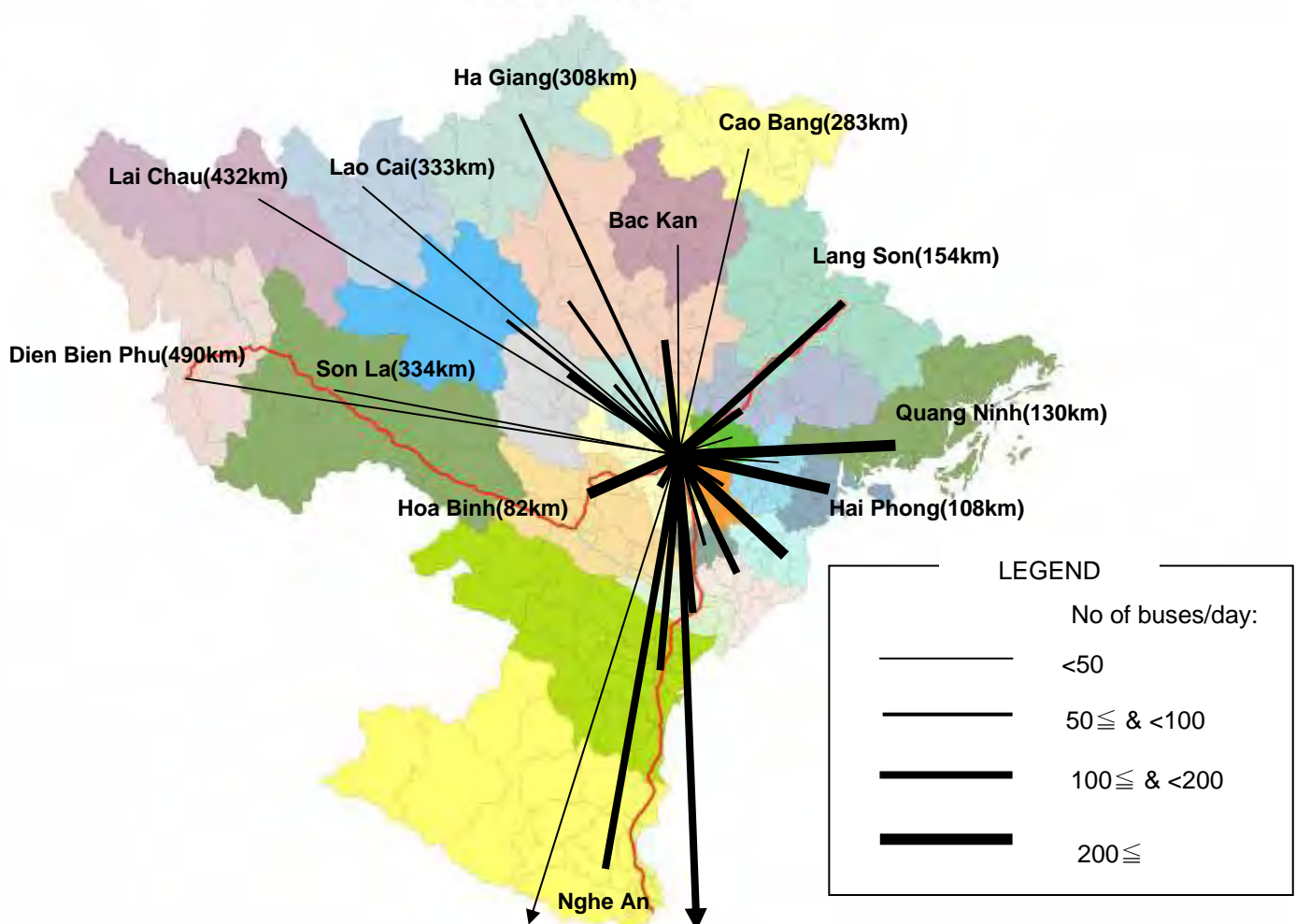


**Figure 2.1.6 Composition of Vehicle Type**

Source: JICA Study Team

## 5) Present Aspect of the Bus Service Provision

In the field survey, data on bus operations (ex. service frequency and routes) was collected to examine the status of bus operation in northern Vietnam. Shown in the following map are service frequencies and final destinations of major long-distance bus routes. The frequency of bus service in the eastern region is much higher than those in other regions, and the service frequency on National Highway No. 1 and No. 5 are much higher compared to those on other national roads. In the northern region, there are a number of very long distance bus routes, such as Ha Noi – Dien Bien Phu (490km), Ha Noi – Lai Chau (432km), Ha Noi – Lao Cai (333km), and Ha Noi – Son La (334km). Travel time of these bus services ranges from 6 hours to 9 hours under the assumption that an average travel speed is about 50km/hour. In consideration of these very long-distance bus services operated over the whole northern region, it is necessary to take appropriate measures to alleviate travel fatigue and enhance travel comfort. One way to do that is to provide resting service at Michinoeki on the roadside in northern Vietnam.



**Figure 2.1.7 Present Aspects for Long Distance Bus Route in Northern Vietnam**

Source: JICA Study Team

#### (4) Existing Roadside Resting Facilities

This section examines the current situation of roadside resting facilities in northern Vietnam.

##### 1) Classification of the existing facilities

Existing roadside resting facilities can be classified into 5 types as shown in the following table:

**Table 2.1.2 Classifications of Existing Roadside Facilities**

Type	Characteristics	Examples
Hotel Type	Roadside facilities as small guesthouses which provide beds and rest services at comparatively low prices	
Restaurant Type	Roadside facilities which mainly provide food services	
Garage Type	Roadside facilities which provide repair, maintenance and washing services of vehicles	
Gas Station Type	Roadside facilities which mainly provide fuel services of vehicles	
Roadside Market Type	Roadside facilities which provide roadside-market-like services using roadside places	

Source: JICA Study Team

## 2) Units of roadside facilities classified by target road sections

The figure shown below classifies the total 1,353 existing facilities into the above mentioned five types. Among these types of facilities, the restaurant type is the largest in number, followed by garage type and gas-station type.

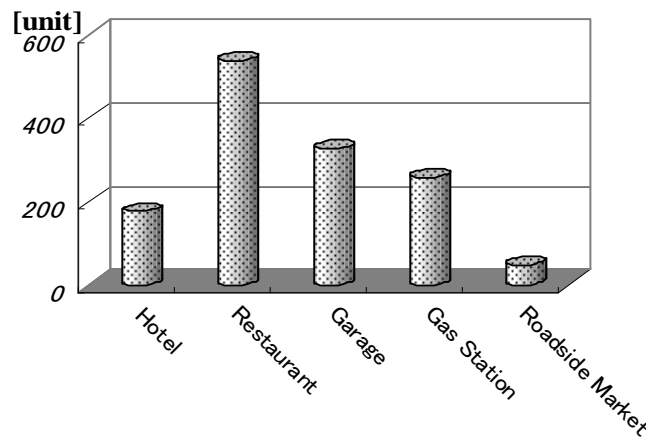


Figure 2.1.8 Total Units of Roadside Facilities of Subject Road Sections

Table 2.1.3 Total Units of Roadside Facilities of Subject Road Sections

Type	Number
Hotel	177
Restaurant	541
Garage	327
Gas Station	259
Roadside Market	49
<b>Total</b>	<b>1,353</b>

Source: JICA Study Team

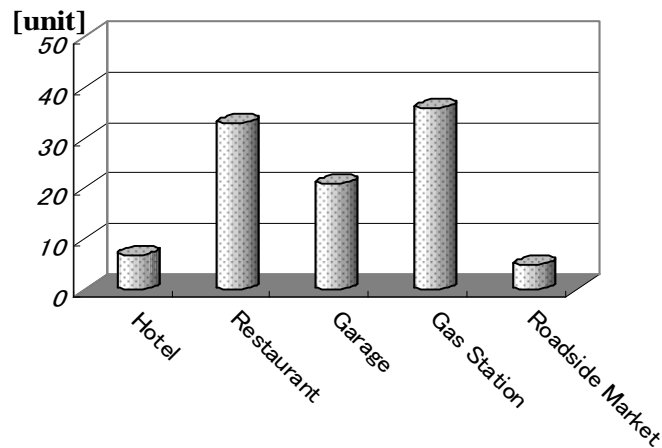


Figure 2.1.9 Units of Roadside Facilities of Road Section from Ha Noi to Lang Son

Table 2.1.4 Units of Roadside Facilities of Road Section from Ha Noi to Lang Son

Type	Number
Hotel	7
Restaurant	33
Garage	21
Gas Station	36
Roadside Market	5
<b>Total</b>	<b>102</b>

Source: JICA Study Team

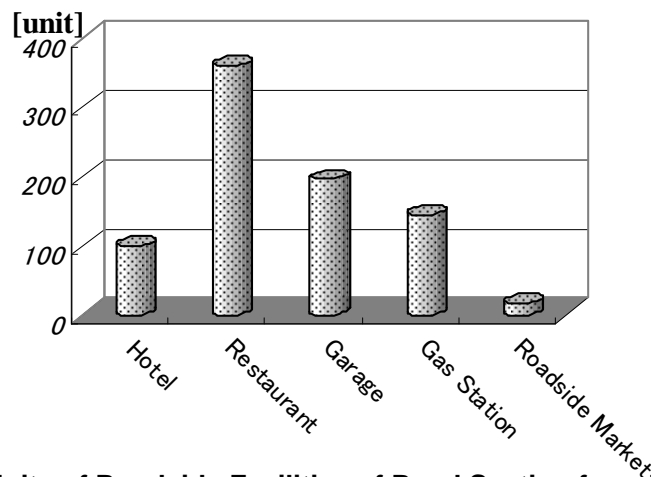
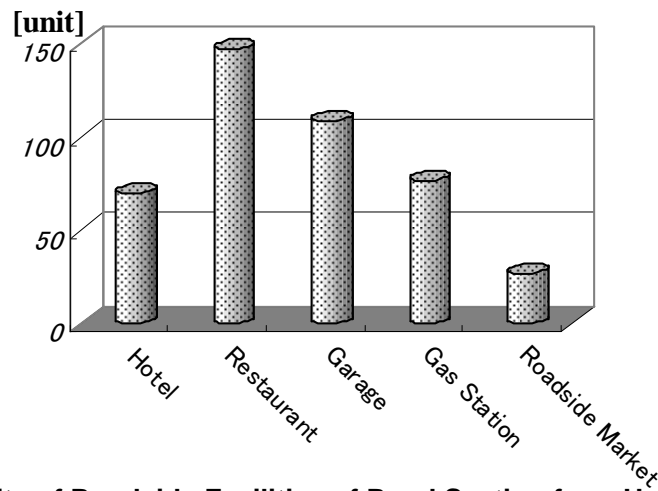


Figure 2.1.10 Units of Roadside Facilities of Road Section from Ha Noi to Vinh

Table 2.1.5 Units of Roadside Facilities of Road Section from Ha Noi to Vinh

Type	Number
Hotel	100
Restaurant	361
Garage	197
Gas Station	146
Roadside Market	17
<b>Total</b>	<b>821</b>

Source: JICA Study Team



**Figure 2.1.11 Units of Roadside Facilities of Road Section from Ha Noi to Dien Bien**

**Table 2.1.6 Units of Roadside Facilities of Road Section from Ha Noi to Dien Bien**

Type	Number
Hotel	70
Restaurant	147
Garage	109
Gas Station	77
Roadside Market	27
<b>Total</b>	<b>430</b>





Source: JICA Study Team

As seen above, there is a large number of roadside facilities at target road sections, particularly in the section between Ha Noi to Vinh along National Highway No. 1 due to its heavier traffic volume than those in other national highways. However, these facilities are far from satisfactory in terms of their sizes, service qualities, functions, etc. In the list shown below, five types of these existing facilities are summarized with the following points of view:

- Size of facilities (square measure)
- Functions and services
- Enterprising bodies
- Conclusion and discussion



## A. Hotel Type

Size of facilities	Functions and services	Enterprising bodies	Conclusion and discussion
<p>From the viewpoint of site areas, almost all of them are very small and smaller than 200m<sup>2</sup>. On the other hand, at road sections from Ha Noi to Lang Son and from Ha Noi to Vinh, there are several facilities which have site areas over 2,000 m<sup>2</sup>. However, the comparison ratio of them is about 10% of all. At the section from Ha Noi to Dien Bien Phu, there are few facilities over 500 m<sup>2</sup>.</p> <p>Square Meter</p> <p>3,000~</p> <p>~3,000</p> <p>~2,000</p> <p>~1,000</p> <p>~900</p> <p>~800</p> <p>~700</p> <p>~600</p> <p>~500</p> <p>~400</p> <p>~300</p> <p>~200</p> <p>~100</p> <p>0.0 10.0 20.0 30.0 40.0 50.0</p> <p>□ Hanoi-Dien Bien Phu        ▨ Hanoi-Vinh        ■ Hanoi-Lang Son</p>	<ul style="list-style-type: none"> <li>• The functions are for accommodations only. The providing services are also usual lodgment services only.</li> <li>• The facilities stand along the roads. therefore, it is easy to access by vehicles.</li> <li>• As shown by "Size of facilities", many of the facilities are small and most of all are guest-house type.</li> <li>• Most of the facilities stand on the edge of the Routes, therefore, parking lots on the properties are limited, or are not seen. The users of local-area facilities are coming by buses or motor bikes.</li> <li>• In local areas, entrances of the facilities have the functions like stops of long-distance buses. At the entrances, passengers lay down their baggage and wait standing for buses. Then drivers pick up them.</li> </ul> <div>   </div> <div>   </div>	<p>The enterprising bodies of the facilities for maintenances and managements are almost private businesses of local residents. However, at 10% of all facilities along the road sections from Ha Noi to Vinh, from Ha Noi to Dien Bien Phu, Joint-stock Enterprise is the enterprising body.</p> <p>Ha Noi-Lang Son Road Section</p> <ul style="list-style-type: none"> <li>-Private Sector: 100%</li> <li>-Joint-stock Enterprises: 0%</li> <li>-State-owned Enterprises 0%</li> </ul> <p>Ha Noi-Vinh Road Section</p> <ul style="list-style-type: none"> <li>-Private Sector: 90%</li> <li>-Joint-stock Enterprises: 8%</li> <li>-State-owned Enterprises 2%</li> </ul> <p>Ha Noi-Dien Bien Phu Road Section</p> <ul style="list-style-type: none"> <li>-Private Sector: 90%</li> <li>-Joint-stock Enterprises: 8%</li> <li>-State-owned Enterprises 2%</li> </ul>	<ul style="list-style-type: none"> <li>• At these three road sections, there are 180 hotel-type roadside facilities. Almost of them are small-sized and are limited to accommodation use. Supportive functions other than them (resting, sales) are merely seen. However, in the countryside, some facilities are used as spontaneous bus stops of long-distance buses.</li> <li>• The areas of sites are very narrow, and there are almost no parking lots for family cars or buses. Therefore, the accesses of users are limited to route buses or motor bikes.</li> <li>• Almost of all enterprising bodies are private sectors. Therefore, these facilities should be small and mono-functioned.</li> <li>• In Michinoeki plan, the facilities can obtain functions as accommodation facilities, by build small accommodation facilities in their properties.</li> </ul>





## B. Restaurant Type

Size of facilities	Functions and services	Enterprising bodies	Conclusion and discussion
<p>From the viewpoint of site areas, almost all of them are very small and smaller than 200m<sup>2</sup>. On the other hand, at a road section from Ha Noi to Lang Son, there are several facilities which have site areas over 2,000 m<sup>2</sup>. However, the comparison ratio of them is about 10% of all.</p> <p>Square Meter</p> <p>3,000~</p> <p>~3,000</p> <p>~2,000</p> <p>~1,000</p> <p>~900</p> <p>~800</p> <p>~700</p> <p>~600</p> <p>~500</p> <p>~400</p> <p>~300</p> <p>~200</p> <p>~100</p> <p>0.0 10.0 20.0 30.0 40.0 50.0</p> <p>□ Hanoi-Dien Bien Phu        ▨ Hanoi-Vinh        ■ Hanoi-Lang Son</p>	<ul style="list-style-type: none"> <li>• The functions are a meal function, and resting and sales function corresponding to the meal function. The providing services are a meal service and a coffee/tea service and resting and souvenir sales service corresponding to them. In addition, at the huge facilities, there are toilets which are for visitors only. However, at small facilities, toilets are served for both of visitors and employees.</li> <li>• As the size of facilities is larger, the functions and services are more various. In the facilities which own site areas larger than 2,000 m2, in addition to restaurants, there are often toilets, washing facilities, tea spaces, Kiosks, and souvenir sales spaces.</li> <li>• The share of hybrid functioned restaurant type facilities like mentioned above is very small. Almost all of these type facilities are small and equip tables, chairs, and a small kitchen.</li> <li>• The problem is a very poor quality of hygiene. At food spaces, kitchen garbage is scattered and some facilities stink. Moreover, the hygiene conditions of toilets are extremely poor.</li> </ul> <p>Typical Restaurant Type Facility</p> <p>Typical Toilet Facility</p> <p>Lack of Hygienic Condition</p> <p>Lack of Hygienic Condition</p>	<p>The enterprising bodies of the facilities for maintenances and managements are almost private sectors of local residents.</p> <p>Ha Noi-Lang Son Road Section</p> <p>-Private Sector: 100%        -Joint-stock enterprises: 0%        -State-owned Enterprises 0%</p> <p>Ha Noi-Vinh Road Section</p> <p>-Private Sector: 99%        -Joint-stock Enterprises: 1%        -State-owned Enterprises 0%</p> <p>Ha Noi-Dien Bien Phu Road Section</p> <p>-Private Sector: 99%        -Joint-stock Enterprises: 1%        -State-owned Enterprises 0%</p>	<ul style="list-style-type: none"> <li>• At these three road sections, there are approx. 540 restaurant-type roadside facilities. Almost of them are small-sized.</li> <li>• Among existing large-scaled facilities, some of them are is equal to Michinoeki as resting facilities.</li> <li>• However, almost of all enterprising bodies are private sectors by local habitants, there is almost no facility having public-function like regional development promoting function which can secure profits.</li> <li>• The hygiene conditions inside facilities are very poor and are disfavored in users. Particularly, maintenance controls of toilets are very bad, so the toilets are unsanitary facilities.</li> <li>• Among large-scale facilities, some facilities sell local specialties, but there are very few distinctive products. In addition, local inhabitants seem not to participate in distributing plans.</li> </ul>





### C. Garage Type

Size of facilities	Functions and services	Enterprising bodies	Conclusion and discussion
<p>Most facilities of this type are small-scale ones. From the view point of site areas, many of them are extremely small and smaller than 100m<sup>2</sup>. Most of them are from 30 to 50m<sup>2</sup>.</p> <p>Square Meter</p> <p>3,000~</p> <p>~3,000</p> <p>~2,000</p> <p>~1,000</p> <p>~900</p> <p>~800</p> <p>~700</p> <p>~600</p> <p>~500</p> <p>~400</p> <p>~300</p> <p>~200</p> <p>~100</p> <p>0.0 20.0 40.0 60.0 80.0 100.0</p> <p>□ Hanoi-Dien Bien Phu ▨ Hanoi-Vinh ■ Hanoi-Lang Son</p>	<ul style="list-style-type: none"> <li>The functions are for the supports of repairs and washings for the vehicles which users own. The providing services are also repair, car parts replacement, and car washing. There are few cases to establish facilities having other function next to facilities of this type. The facilities of this type are almost mono-functional.</li> </ul> <p>Typical Garage Type Facility</p> <p>Typical Garage Type Facility</p> <p>Large-scale facility</p> <p>Typical Garage Type Facility</p>	<p>The enterprising bodies of the facilities for maintenance and management are mostly private sectors of local residents. However, 1~5% of all facilities, Joint-stock Enterprises or State-owned Enterprises are the enterprising bodies of the facilities for maintenance and management. The facilities, whose enterprising bodies are other than private sectors, are comparatively large-scale ones.</p> <p><b>Ha Noi-Lang Son Road Section</b></p> <ul style="list-style-type: none"> <li>-Private Sector: 95%</li> <li>-Joint-stock Enterprises: 0%</li> <li>-State-owned Enterprises 5%</li> </ul> <p><b>Ha Noi-Vinh Road Section</b></p> <ul style="list-style-type: none"> <li>-Private Sector: 97%</li> <li>-Joint-stock Enterprises: 2%</li> <li>-State-owned Enterprises 1%</li> </ul> <p><b>Ha Noi-Dien Bien Phu Road Section</b></p> <ul style="list-style-type: none"> <li>-Private Sector: 95%</li> <li>-Joint-stock Enterprises: 5%</li> <li>-State-owned Enterprises 0%</li> </ul>	<ul style="list-style-type: none"> <li>At these three road sections, there are approx. 330 garage-type roadside facilities. Most of them are small-sized.</li> <li>The existing garage-type facilities are specialized in car repair, car parts replacement and car-wash, therefore, they must not be large-scaled.</li> <li>In Michinoeki plans, the facilities can equip same functions as Michinoeki, by constructing these facilities in the same area. From the existing examples, those examples which have areas under 100 m<sup>2</sup> are useful as references.</li> </ul>

## D. Gas Station Type

Size of facilities	Functions and services	Enterprising bodies	Conclusion and discussion
<p>Compared with Hotel type and Restaurant type facilities, most facilities of this type are smaller than 200m<sup>2</sup>, and they have comparatively large areas; the facilities which areas are about 500m<sup>2</sup> or over 2,000m<sup>2</sup> can be seen. On the other hand, there are a few facilities which areas are 200m<sup>2</sup> or smaller, sticking to the premise along the road, and there are always one people for one facility.</p> <p><b>Size of facilities (Square Meter)</b></p> <p>Y-axis categories: ~3,000, ~2,000, ~1,000, ~900, ~800, ~700, ~600, ~500, ~400, ~300, ~200, ~100</p> <p>X-axis categories: 0.0, 10.0, 20.0, 30.0, 40.0, 50.0</p> <p>Legend: □ Hanoi-Dien Bien Phu, ▨ Hanoi-Vinh, ■ Hanoi-Lang Son</p>	<ul style="list-style-type: none"> <li>The original function is a fuel service for vehicles. However, in many cases, resting facilities like toilets, meal or coffee/tea serving spaces, Kiosks are settled next to the fuel facilities.</li> <li>Among the facilities over 1,000 m<sup>2</sup>, there are often seen such hybrid-functional large-scale facilities as mentioned above. These facilities have high-similarities to Michinoeki.</li> <li>The hygiene circumstances of toilets of the facilities are generally not good. The status of maintenance is poor.</li> </ul> <div>   </div> <div>   </div>	<p>The enterprising bodies of management and maintenance are shared by private sectors and State-owned Enterprises. In addition, at the section from Ha Noi to Dien Bien Phu, approx. 10% of all facilities are managed and maintained by Joint-stock Enterprise as an enterprising body.</p> <p><b>Ha Noi-Lang Son Road Section</b></p> <ul style="list-style-type: none"> <li>-Private Sector: 60%</li> <li>-Joint-stock Enterprises: 0%</li> <li>-State-owned Enterprises 40%</li> </ul> <p><b>Ha Noi-Vinh Road Section</b></p> <ul style="list-style-type: none"> <li>-Private Sector: 55%</li> <li>-Joint-stock Enterprises: 0%</li> <li>-State-owned Enterprises 45%</li> </ul> <p><b>Ha Noi-Dien Bien Phu Road Section</b></p> <ul style="list-style-type: none"> <li>-Private Sector: 45%</li> <li>-Joint-stock Enterprises: 10%</li> <li>-State-owned Enterprises 45%</li> </ul>	<ul style="list-style-type: none"> <li>At these three road sections, there are approx. 260 gas-station-type roadside facilities. Compared to hotel- and restaurant-type, they are comparatively large.</li> <li>About a half of enterprising bodies are public undertakers, in addition to private sectors.</li> <li>Some of the facilities of which scale is relatively large are giving importance on not only fuel functions but also functions of snack services and resting services for users. There are similarities to Michinoeki.</li> <li>However, their services are originally fuel services; there are no examples which give public services particularly promotions of regional improvement. And it seems that no local people are getting involved with facility planning and operation.</li> </ul>

## E. Roadside Market Type

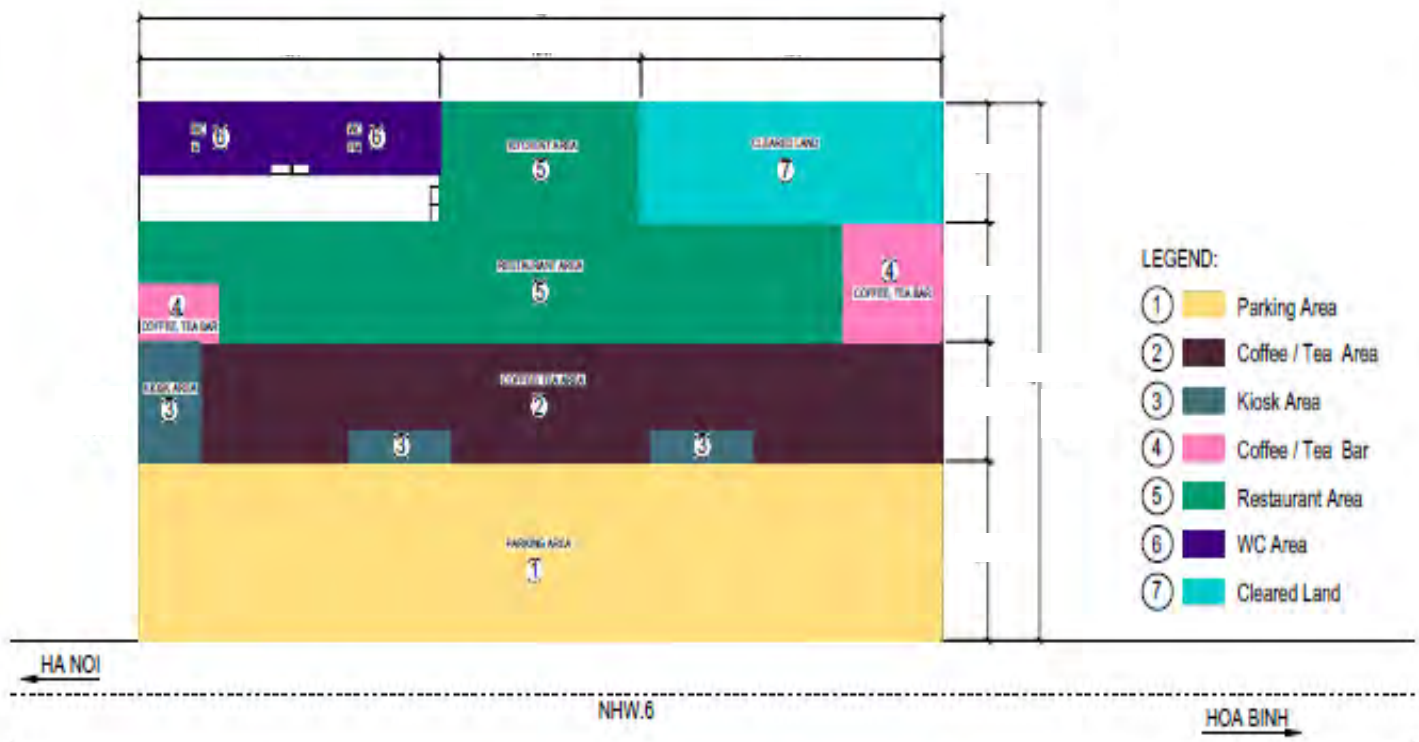
Size of facilities	Functions and services	Enterprising bodies	Conclusion and discussion
<p>Almost all of the markets of this type have no definition of facilities. These markets distribute agricultural goods on simplified mobile carriages and have no home positions. Some distributors occupy pedestrian passages illegally. And some of these facilities are formed spontaneously by farmers, like free-markets.</p>	<ul style="list-style-type: none"> <li>The functions are to distribute souvenirs, such as agricultural goods, artifacts, fabrics, and rice biscuits. However, distributors which configure the markets are local farmers, artisans and merchants, and there is no intention to provide well-planned functions and services.</li> </ul> <div>  <p>Typical Roadside Market</p>  <p>Typical Roadside Market</p>  <p>Typical Roadside Market</p>  <p>Illegal Roadside Shop</p> </div>	<p>All of the enterprising bodies are the local people and are micro stores. In addition, including stalls on the roads, they contain spontaneous commerce of illegal small offices.</p>	<ul style="list-style-type: none"> <li>Michinoeki's aim is a regional improvement by introduce and distribute of agricultural goods and artifacts to visitors. The fact of existing market type roadside facilities shows demands of such a movement.</li> <li>However, these types of facilities are aimless and spontaneous. Therefore, they have possibilities to threaten traffic safety of the roads.</li> <li>The expectation for Michinoeki is to absorb existing facilities which conceive threats of traffic safety and to promote local specialty systematic.</li> <li>In addition, application of public information and propaganda at Michinoeki is hoped to promote serving information of local specialty which has not promoted before.</li> </ul>

### 3) Case-study of a roadside facility which owns existing multi-functions

This section provides a case study of the existing roadside facility near Hoa Binh along National Highway No. 6 with details such as its size, functions, facility components, and facility utilization. Based on the consideration, it will examine whether and how the facility is similar to Michinoeki.

#### a. Scale

- Out of its total site area of 1,800m<sup>2</sup>, the gross floor of the target facility (hereafter “the Facility”) is 1,200 m<sup>2</sup>, and its parking area 600 m<sup>2</sup>.
- The Facility is located along the roadside, and surrounded by farmlands and a hillside. In the area nearby, there is no other facility with functions comparable to the Facility.
- In front of the Facility and facing the road is a parking lot that may accommodate five big busses.
- Inside the Facility are resting places, such as a souvenir shop, a restaurant, a kitchen, and a coffee/tea serving area. The restaurant and the coffee/tea serving space will accommodate maximum 200 people. The facility also has washrooms and toilets separately for men and women.



**Figure 2.1.12 Floor View of Existing Facility Similar to Michinoeki**

Source: JICA Study Team



**b. Functions and facilities**

Not equipped with accommodation or car repair facility, this roadside facility provides resting services as listed below:

- A charge-free parking place
- A charge-free car-washing facility (self-service washing using hosepipe from tap water)
- Charge-free toilets separated by men and women (Water closets. The hygiene condition is comparably good.)
- A charge-free washing facility for hands, feet and faces
- A restaurant (with plenty of items)
- Coffee/tea and light meal providing facilities (which provide green teas and sweetness)
- A roadside shop (Distributions of canned-juices, beers, and snacks)
- A sales space for local specialty (microbrews, stitch works, fabrics, artifacts, fruits, etc.)



**Figure 2.1.13 Cases of Existing Similar Facilities**

Source: JICA Study Team

### c. Utilization study

Shown in the following table is the result of the utilization survey of the Facility that was conducted for 12 hours of a weekday in July, 2007. The result shows that there are two conspicuous groups of facility users: the highest usage rate by vehicle type is that of 30-55 seated busses (approx. 10%), followed by that of 29 seated or smaller busses (approx. 4%). The average stay-time at the Facility is 25-30 minutes, regardless of vehicle type. As there were 60 cars that stopped at the Facility, there were approx. 1,725 passengers that used the Facility, based on the assumed average numbers of passengers by vehicle type as follow: motor cycle (1), passenger car (2), small bus (15), big bus (40), and lorry (2). Among these facility users, 1,700 passengers or 99% are bus passengers.

**Table 2.1.7 Facility Using Rate and Average Stopping Duration by Vehicle Type**

Vehicle Type	Traffic Volume (1)	Traffic Volume (2)	Facility Usage Rate ((2)/(1) [%])	Average Stay-Time [minutes]
Motor Cycle	2,462	7	0.3	25
Passenger Car	632	3	0.5	25
Tractor	1	0	0.0	
Small Bus (less than 30 seats)	229	10	4.4	25
Big Bus (more than 30 and up to 55 seats)	385	39	10.1	30
Lorry	448	1	0.2	20
Truck	66	0	0.0	
Total (excluding Motorcycle and Tractor)	4,223 (1,761)	60 (53)	-	-

Source: JICA Study Team

Note: "Traffic Volume (1)" indicates all passing traffic volume (day-time 12hour-traffic volume). "Traffic volume (2)" indicates the number of cars which stop at the Facility (day-time 12 hours).

- Located on a hillside and with no settlement nearby, the Facility is 30 minutes away from Hoa Binh urban area. The average transportation time for bus passengers—the predominant majority of facility users—is two hours. The environment inside the bus is far from comfortable: buses are heavily packed, and passengers have to endure long hours of chalking condition.
- At the Facility, passengers first go to the toilet or the washing facility to clean their hands or feet. Some of them may then go to the restaurant for lunch or supper. During lunch hours, the restaurant is always crowded. Some others stretch out at the coffee/tea serving space. A small number of passengers walk around the souvenir shop.
- In short, during the average stay-time of about 30 minutes on the way of long hours of transportation, the Facility is used for a limited number of purposes: toilet (washroom) break, relaxation, and meal taking.



**d. Similarity to Michinoeki**

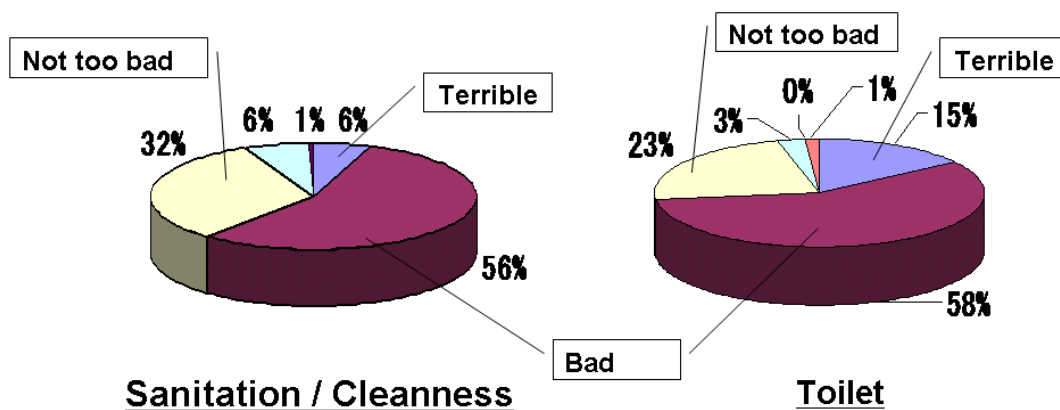
- With the utilization pattern of the Facility—toilet break, relaxation, and meal taking—quite similar to that of Michinoeki, it is assumed that the Facility can be used as Michinoeki.
- The Facility, however, is run by a private company to seek for maximum (or, at least, stable) profits, it is not operated to maximize regional and/or public benefits, such as the promotion of local industries. Although the Facility provides a distribution channel for local specialties, these products are not properly promoted at the Facility, lacking in distinctiveness, symbolic values, or specifically regional characteristics.
- In addition, probably due to a high maintenance/control cost, the hygienic conditions of toilet, restaurant, and resting space are far from satisfactory.

#### 4) Customer satisfaction and user needs to existing roadside rest facilities

Interviews were conducted with bus passengers to examine whether they were satisfied with existing roadside rest facilities. The interview survey shows that most of the users are significantly dissatisfied with the service of these facilities due primarily to the poor hygienic condition within the building, and particularly of the toilet.

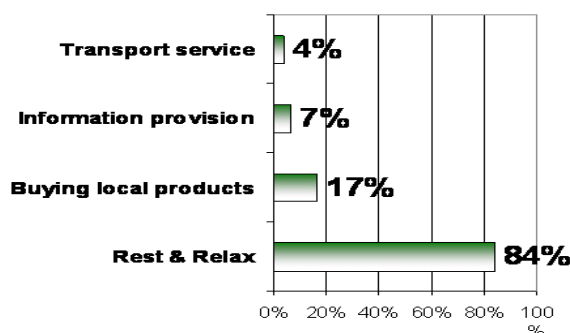
##### BOX

Interviews were conducted with 145 long-distance bus passengers of a target bus route that links Ha Noi and Son La. The length of the route is 280km, or approximately 7 hours travel including 1 hour of rest time. A line of questions in the interview asked about the degree of satisfaction with these facilities. Revealed in the interview was a particularly high level of dissatisfaction with the poor hygienic condition within a building and of toilet.

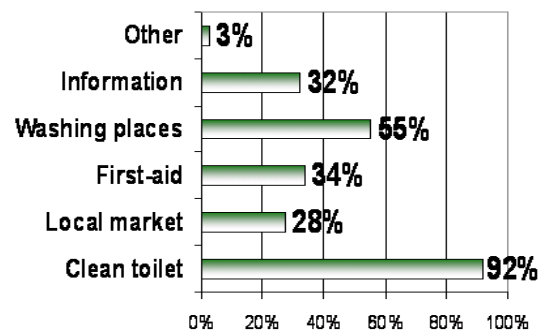


In terms of required functions and facility components of Michinoeki, clean toilet and washroom facilities are highly demanded, as well as rest and relaxing functions.

##### Desired Functions



##### Desired Facilities



## 2.1.1.2 Regional Socio-Economic Aspect

### (1) Regional Development Context

As Viet Nam borders with China, Lao, and Cambodia, the regional integration with neighboring countries plays a pivotal role to promote economic development and enhance competitiveness. Viet Nam's national road network has been expanded and linked to regional corridors and nationwide network points. At the same time, there is a widening socio-economic gap between urban and rural areas. Though poverty alleviation is one of the major policy targets of Vietnamese government, there are only a limited number of measures to allocate the gains from infrastructure development to poverty reduction. In addition, since Viet Nam is an agricultural country with wealth of productive land and labor resources, industrialization and rural development should be well-balanced to achieve sustainable development and poverty alleviation in rural areas.

### 1) Socio-Economic Condition

#### a. GDP

Though Vietnam is still one of the poorest countries in the world with a per capita gross domestic product (GDP) of about US\$ 400, the country is in a transitional stage from a closed economy to an open economy. Viet Nam's economic pillar is its northeastern south and Mekong River regions that produce more than 50% of Viet Nam's total GDP. In the case of the Mekong River delta, more than half of the GDP comes from agriculture. On the other hand, almost 90% of the GDP of the northeastern south comes from industrial and service sectors. 70% of that of the Red River Delta region comes from service sectors. Regarding per capita GDP, the northeastern southern region has the highest value, of VND 7.8 million.

**Table 2.1.8 GDP Growth Rates by Sector**

Item		2002	2003	2004	2005
Growth Rate (%)	Total GDP	7.1	7.3	7.8	8.4
	Agriculture/Forestry/Fishery	4.2	3.6	4.4	4.0
	Industry/Construction	9.5	10.5	10.2	10.7
	Service	6.5	6.5	7.3	8.5
Total GDP (billion VND)		535,762	613,443	715,307	839,211

Source: General Statistical Office, "Statistical Yearbook 2006"

#### b. Agriculture

Agriculture accounts for 22% of GDP, 30% of exports and 60% of employment. The majority of the rural population makes its living by growing and selling crops (rice accounts for 45% of agricultural production), raising and selling livestock and fish, and from forest products. The key areas of Vietnamese agriculture are two deltas – the Red River Delta and the Mekong River Delta. The agricultural development in these two areas

has already reached their limit: The rate of cultivated area to total land area is high and the share of rice-producing area in total agriculture area is also high. The areas other than the two major deltas mentioned above are, in general, handicapped because of a mountainous and hilly topography except for the areas along small rivers. The ratio of cultivated land area to the total land area in these areas is relatively small and the percentage of areas for rice production is also limited. Therefore, the major products in these areas are industrial crops for export such as coffee, tea, rubber, cashew, etc.

One of the major characteristics of Vietnamese agriculture is that the cultivated land area per farmer is decreasing as population increases. The produce per cultivated land area has not shown an increase since it reached 5.3 ton/ha in the Red River Delta and 4.1 ton/ha in the Mekong River Delta in the 1990s. This means that the food production system in deltas has already used all their available technology. Vietnamese agriculture seems to have reached the apex of its production: There is no room for further increase in food production volume per land area, because of the population increase in the rural area, the lack of cultivable land and the saturation of land productivity.

### **c. Poverty**

Though poverty rate has been decreased remarkably from 58.1% in 1993-1994, 19.5% in 2004 and 18.1% in 2006, poverty reduction is still the most crucial issue. The main source of rural poverty reduction has been economic growth with the liberalized agriculture, improved farm productivity and crop diversification. The speed of poverty reduction seems to be slowing down. Greater emphasis must be placed on growth of off-farm employment and service in rural area, together with social development. According to the World Bank, wide spatial variations persist in rural poverty rates, with lagging regions including the North-West (54% estimated to be living in poverty in 2004), North Central Coast (41%), and Central Highlands (33%). Poverty incidence among ethnic minorities remains twice as high as that within the rural population as a whole (69% in 2002, compared with the rural average of 36%). Most worryingly, poverty reduction among ethnic minorities has slowed significantly in recent years.

## **2) Urban and Rural Development Pattern**

### **a. Urbanization Trend**

Currently, nearly 50% of the urban population of Vietnam is living in Ha Noi and HCMC. Growth rates of population of Ha Noi and HCMC are 1.7% while it is 1.1% in whole country. The urbanization process has little strict land-use control and other management measures. It is not an explicit phenomenon all over the country, although the income imbalance between urban and rural dwellers. Urbanization causes migration to happen especially sub-urban areas of Ha Noi and HCMC. Most immigrants to Ha Noi came from urban areas in the region, while the other provinces have higher rate of migrants from

rural areas. Poor migrants are usually the temporary or seasonal low-paid workers in local areas or urban centers.

#### **b. Socio-economic gaps of urban and rural areas**

The urbanization and modernization of Vietnam has been rapidly proceeded nationwide, especially surrounding regions of Ha Noi and HCMC. Economic activities and entities are clustered in urban areas, and rural population has been absorbed to urban areas. Though modernization and industrialization are the political orientation, how to create job opportunity and economic activities for prevention of outflow of rural population is a critical issue since more than 80% of population lives in rural areas.

### **3) Promotion of Local Products and Resources**

#### **a. Rural and agricultural development**

Agriculture and rural development is one of the main issues of 10-year strategy. With three quarters of the population and about 90% of poor living in rural areas, rural and development is vital for poverty alleviation and improvement of people's livelihood, especially in disadvantaged areas. The main issues for rural and agricultural development are; (i) improvement of agricultural productivity and quality, (ii) promotion and diversification of agricultural products, (iii) market competitiveness with marketing channels and infrastructure improvement, (iv) development and promotion of off-farm products such as handicrafts, and (v) capacity development toward market-oriented economy.

#### **b. Local Product Development**

There are many difficulties for local product development in rural areas. While there are many local food producers, the quality of food processing and that of products themselves are still low, which has raised an increasing concern about food safety and sanitation. As market channels in rural areas, especially those for producers, are quite limited, many local producers have to sell their products through middlemen. In addition, conventional local products are facing difficulties in meeting market demands and increasing productivity and quality in a sustainable manner, as many farmers these days are producing not only rice, but also industrial crops such as tea, peanuts, and flowers. Local producers, however, do not have sufficient knowledge to improve product quality, enhance competitiveness, and meet customer demands.

##### **• Production process**

It has not been fully recognized that local products in rural areas suffer from the insufficiency of food processing technology, the low economic value and limited variety of products, and the lack of market competitiveness. Food processing is carried out by local

producers in unclean areas without any safety measures or their own houses. The lack of transparency in the production process deprives these products of reliability.

- **Product quality**

There does not exist a set of production standards or a grading system of products. Many local food products sold on the roadside are placed under high temperature and high humidity condition without any measures taken to keep them afresh. In addition, the product packaging is not visually attractive to customers, and not designed to ensure food hygiene and safety.

- **Skills and knowledge of producers**

Most of the rural products are produced by order of SMEs and buyers, and do not develop their own products. Only a few handicraft producers develop their own products, and try to attract customers by advertising their brands or opening their production sites to the public. While the number of roadside vendors is on the increase, they do not have the knowledge and skill to attract customers through enhanced product design and quality, as well as well-organized sales promotion.

- **Sales network and measures**

Production sites of local products are scattered across a wide area., which causes a difficulty for local producers to ensure efficient delivery as well as direct access to the market. As a result, producers only take orders from middlemen of raw materials and half-finished products for unstable and low prices. Some producers/households living near national roads sell their products directly to customers at roadside kiosks. But their sales activities are not well-coordinated, and end up producing an unsafe road condition for car drivers.

The expansion of a road network may bring more opportunities for producers in rural areas to sell their products directly to road users and buyers. To realize these opportunities, it is necessary to raise local producers' awareness to the opportunities, upgrade their skills to enhance market competitiveness, and establish stable sales channels for local producers.

Production process	 Unsafe production area	 Unclean product processing	 Unclean product processing
Product quality	 Unclean package of honey	 Food security trademark	 Producer's photo for certification
Skills and knowledge of producers	 Embroidery for local use by ethnic minorities	 Plenty of raw material producers	 Trained young embroider
Sales methods	 sales network by middlemen	 Roadside vendors	 Various local products at roadside kiosk

**Figure 2.1.14 Current Condition of Local Product Development**

Source: JICA Study Team

**c. Tourism development**

For private trip, most Vietnamese tourists tend to use local long-distance bus service, and international tourists chartered bus service. In general, the quality of these bus services is low: unpleasant environment for passengers, unfriendly attitude of bus drivers and conductors, inadequate provision of tourist and commercial information, limited opportunities for rest break, poor service quality of roadside resting facilities, etc.

#### **4) Rural Development Issues and Policies**

Drawn up from the “Comprehensive Poverty Reduction and Growth Strategy” (CPRGS), the “Strategy for Socio-economic Development 2001-2010” (SEDP) aims to achieve poverty reduction through a comprehensive economic development approach and goal setting, and plays a vital role to determine Viet Nam’s development policies and strategies. Since regional development is an integrated attempt, for examples, of regional economic integration, poverty alleviation, and local socio-economic development, a regional development plan is made of separate components that are carried out by several government bodies. When focused on development of Michinoeki, major issues of rural development may be summarized to the following three points: (i) regional integration, (ii) rural industrial development, and (iii) policies of disadvantaged area.

##### **a. Regional integration**

The development of the GMS and the ASEAN highways will increase the international recognition of the sub-region as a growth area, as well as promote the smoother regional flow of goods and people. Infrastructure development, such as cross-border road network development, accelerates Viet Nam’s regional development, enhances its economic competitiveness, and expands and solidifies its relationship with neighboring countries to bring in more tourists.

##### **b. Rural industrial development**

SEDP sees rural industrialization as one of its primary goals. To realize the goal, it is necessary to solve a number of problems that are suffered by major players of Viet Nam’s rural economic activities: small households. Included in these problems are: (i) the lack of scale merit, (ii) limited access to professional knowledge and skills, (iii) wide disparities in the speed of development between regions, (iv) insufficient development of transportation infrastructure, market facilities, etc., (v) lack of access to market information and insufficient development of an institutional framework, and (vi) lack of access to micro-finance service to purchase raw materials and production equipment.

For a long time, rural industry has played an important part in Viet Nam’s rural development process. So far, rural industry not only has created jobs for farmers, but also served to construct and maintain their cultural identities through the production of traditional farming products that were passed from generation to generation. Today, however, there is an increasing momentum of industrialization and modernization at the national level, and also that of economic integration at an international level. As a result, there is a rising pressure to reduce labor surplus in rural areas and move the workforce into urban areas. The income differential between rural and urban areas is thought to be widened soon. Rural trade development should thus have a growing importance to sustain rural economy and increase the overall rate of social and economic development in Viet Nam.

There occurred substantial changes after the implementation of economic reform policies centered around the government’s Decision No. 132/2000/GQ-T Tg on encouraging rural



trade policies. The policies have revitalized a number of traditional trades such as embroidery, weaving brocade, making pottery, weaving rattan products, etc., and developed many new ones including agriculture product processing, ornament production, and handicraft production of water-plant plaiting products. Target industries and activities for development specified in the Degree No. 66/2006/ND-CP on “Development of rural industries” include: (i) agricultural, forestry, aqua-cultural products processing and preservation, (ii) building materials, furniture, bamboo craft products, ceramic products, glass products, garment and textile, light mechanics, (iii) material treatment and processing in supply for rural industries, (iv) handicraft industries, (vi) potted plant business, and (vii) vocational training, transfer; rural industries’ production consultants.

While nationwide development plans for rural industries are formulated by the Ministry of Agriculture and Rural Development (MARD), the implementation of these plans are led by provincial and local governments, so that rural industries are enhanced with regional and local flavors. With a keen interest in “One Village One Product” program in Japan and eastern South Asian countries, MARD plays an extremely important role in the process of economic structure reorganization, and industrialization and rural development promotion.

#### **c. Policy for disadvantaged areas**

Two key documents on poverty reduction in Viet Nam are the Comprehensive Poverty Reduction and Growth Strategy (CPRGS) Program and the Hunger Eradication and Poverty Reduction (HEPR) Program (a national target program as part of the CPRGS). These programs cover various high-profile issues that require coordinated efforts among line ministries, other government bodies, and civil society. HEPR aims at providing assistance to poor households to reduce its share of total households to less than 10%. The appointed coordinator for the implementation of the HEPR Program is the Ministry of Labour, Invalids and Social Affairs (MOLISA). In addition to HEPR, the government has implemented the Program on Socio-Economic Development of Extremely Disadvantaged Areas (Program 135) in the 2006-2010 period with the Committee for Ethnic Minority Affairs (CEMA) as its coordinator. This program is meant to provide small socio-economic infrastructure to target areas such as communities of disadvantaged ethnic minorities and those located in mountainous, border, remote, and isolated areas.

### **5) Road-based Regional Development**

Under the current progress of economic growth, urbanization, motorization, and industrialization, transport infrastructure, especially that of road transport, has rapidly been developed in Viet Nam. Road development promotes urbanization of rural areas, provides an enhanced level of convenience, and offers an increased accessibility to the city center and various public services to the rural population, especially those in mountainous areas. However, it has now become evident that Vietnam’s transport infrastructure has a number of problems: (i) increasing traffic congestion and accidents,

(ii) shrinking demand for conventional national roads in the process of new highway and bypass developments rural areas, (3) changing land-use and deteriorating environmental conditions, etc. Road development projects should thus proceed in line with regional development, ameliorate its negative impact, and maximize its socio-economic, cultural, and environmental effects to the region. To do that, it is important to draw up a plan with a well-balanced approach that utilizes roadside areas, as well as a road network, to contribute to effective socio-economic development.

#### **a. Integrated development**

The expansion of safe and convenient road access serves both to strengthen international competitiveness and to promote regional integration and independence. Road development, especially that of cross border roads, promotes international integration through the construction of a flexible, accessible, and cost-effective international network of trade, distribution, and tourism. In addition, as the road infrastructure in Viet Nam—a nationwide network that even covers remote areas—is one of the most convenient means of transport both for passengers and cargos, it promotes the flow of various goods, information, and people between roadside and remote areas and among regions through the network. Regional integration, it should be pointed out, does not necessarily be confined to physical and economic ones, but also entails social and cultural ones, as the flow of goods, information, and people generates both tangible and intangible forms of social and cultural interactions among regions.

#### **b. Local socio-economic development**

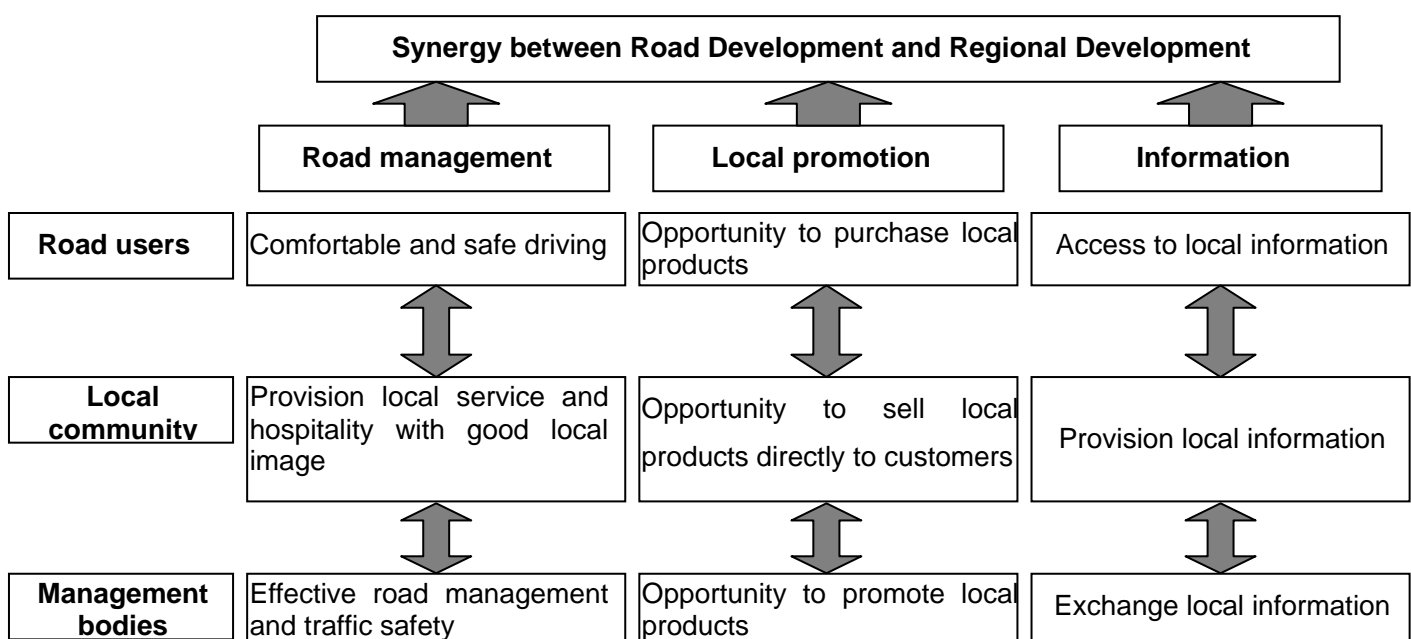
Road network serves as a lifeline for local people that provides access not only to public services and markets, and also to families, friends, and acquaintances living in neighboring areas. While most of the local products are sold at the moment through community markets, market places have been shifted to roadside areas to sell more products and attract more customers, which pushed up land prices of good roadside land lots. In consequence, the economic gaps are widening between city dwellers/roadside residents and those living in hinterlands.

Road development in rural area generates various economic opportunities to farmers and local people. In the past, as there were few facilities in rural areas, farmers had to sell their products to road users at their roadside stands. At present, local bus services not only give local people an efficient access to the city center, but also deliver goods from the city center to remote areas. By providing direct truck access to villages, rural development made it easy for buyers and distributors to visit to production areas, and thereby increased the product shipment volume. At the same time, there were many shops and enterprises constructed along the road. Enhanced accessibility provided by road development should thus be seen as an important factor to trigger social-economic development in rural areas.

#### **c. Development issues**

Issues of road-based regional development are summarized as follows;

- Maximization of benefits of each beneficiary (ex. Local people and community, governments, private sectors, international society) by road development
- Synergy effects of international and regional coordination with road networks in terms of social, economical, cultural and environmental aspects
- Effective development of roadside areas as a part of integrated network for local community with providing market and service access, distribution network, communication opportunities, etc.
- Proper management and coordination mechanism of roads and provinces for regional development and integration



**Figure 2.1.15 Road-based Regional Development**

Source: JICA Study Team

## 6) Development Opportunities for Michinoeki

Michinoeki is a roadside facility to provide service to road users as well as local people. It can be a significant tool for regional development which local community is the main actor for service provision and operation with support of public and private sectors. Michinoeki is not only a roadside facility but also a regional promotion center which provides various functions like market, information, training, community space, etc. These multiple functions of Michinoeki will contribute socio-economic and cultural development as well as capacity development of local community. Michinoeki development as a regional and local station will contribute; (i) to promote local products, (ii) to promote tourism, and (iii) to develop human resource and community for regional development.

### a. Promotion of local products

Handicrafts, industrial crops and small industrial products are strategically promoted in rural areas for rural industrialization and these local products provide more benefits to farmers compare to rice. But most of these products don't have local originalities and the quality is still poor, since technique and financial resource are limited and market information is lacking in rural area. Though labor resource is abundant in rural area, promotion measures and opportunities of local products are still limited. Michinoeki will perform as a local promotion center to strengthen competitiveness of products, with local characteristics and materials. It is necessary to develop Michinoeki as a core center for local market mechanism, including product development, quality control and distribution system. To promote tourism by bus, quality of rest facilities and bus services need to be improved with more attractive tourism spots. If Michinoeki will perform as a tourism information center, it can provide comfortable and safe space for tourists to relax and enjoy tourism information on site. In addition, once local tourism network will be developed, Michinoeki will be a place of departure of local tourism. Michinoeki Tourism plan will be promoted and originality and attractiveness of local tourism spots can be strengthened and promoted by promotion activities and spaces for local tourism.

### b. Development of human resource and local community

Employment creation and vocational training are important issues nationwide. Under the process of urbanization, farmers lose their lands and need to find other jobs, and rural people change income resources from rice to industrial crops for getting higher income effectively. Michinoeki performs as a local market to promote these local products including fresh foods and handicrafts. Quality control and improvement is strictly managed to promote high-quality and safe products. At the same time, skill training can be provided by conducting workshops, or provision of advises. Since rural farmers don't have any special skills and knowledge, necessary skills in Michinoeki are simple and easy with their initiatives. The advantage is they can continue their original jobs and promote them. To develop human resource for Michinoeki, it is necessary to collaborate with related local agencies such as vocational schools, Women's Unions, Farmer's Unions, etc.

## 7) Present Socio-Economic Condition in Roadside Areas

Northern part of Vietnam consists of 28 provinces, including Red River Delta, North East and North West regions.

Red River Delta is one of the largest rice producing area in Vietnam. The share of output value of agriculture is 16.1% of nationwide. In addition, craft promotion is major local industry as off-farming work or for main income generation. Dong Xuan Market in Ha Noi is the biggest market in northern region. Therefore, so many local products are gathered to Ha Noi thanks to good traffic condition in this region.

North East, North West and North Central Coast regions are hilly or mountainous. HPI is very high and these poor are mostly ethnic minorities. Most of products are sold at local markets or for captive use. Handicraft is a tradition of ethnic minorities of mountainous area. There are some popular tourism areas such as Sapa in Lao Cai, Dien Bien Phu in Dien Bien, and Mai Chau in Hoa Binh. These are the areas where ethnic minorities can earn cash at the local market by selling traditional handicrafts to both domestic and international tourists.

For Michinoeki development in north, it is necessary to consider regional condition of Red River Delta and the other mountainous regions in different manner.

### a. Ha Noi – Lang Son Road Section

This section passes through suburban and rural area in Red River Delta. Thanks to NH-1 and its bypass, accessibility from provincial towns to Ha Noi is good. Therefore local products from the town can be carried to Ha Noi. There are national and provincial roads which connect from NH-1 to remote districts, so if distribution network can be developed for Michinoeki by utilizing local network of bus and distributors.

Bac Giang is a mountainous province which is located between Eastern North provinces and Red river delta provinces and Ha Noi Capital. In comparison with other Northern mountainous provinces, the geographical location of Bac Giang is better. It is only 50km far from Ha Noi Capital. Furthermore, it is not far from other big industrial centers and cities of “Northern Intensive Economic Triangle” including Ha Noi – Hai Phong- Quang Ninh which are having fast economic growth, attracting more foreign investment, innovating constantly new technologies and doing more foreign trade, etc. Bac Giang locates at the link between Lang Son province and Ha Noi Capital, therefore it is quite suitable to build up a Station here for passengers traveling along these areas.

As Bac Giang province locates in the Northern tourist area and it is nearby Ha Noi capital, Ha Long Bay – one of the world’s heritages, Con Son-Kiep Bac tourist chain, it has advantage to develop the tourism in various types. The potentials of Bac Giang are not big, but plentiful which consist of historical cultural resources.

**Table 2.1.9 Historical and Cultural Resources**

Historical and cultural monuments	<ul style="list-style-type: none"> <li>• Xuong Giang citadel in Bac Giang City which symbolizes the victory over Minh enemies 15th century</li> <li>• Mac citadel which was built up in the centuries of 16th and 17th and lies from Quang Ninh province to Cao Bang province and goes through Luc Nam district</li> <li>• Duc La Pagoda in Yen Dung district was used to be Buddha center under Tran regime in the 8th century</li> <li>• Bo Da pagoda (Viet Yen district) used to be Buddha center under Le regime in the centuries of 7th and 8th</li> </ul>
Folk festival	<ul style="list-style-type: none"> <li>• “Quan ho” singing</li> <li>• San Chi Folk song</li> <li>• Cao Lan folk song</li> <li>• Tay-Nung folk song</li> <li>• Tho Ha festival</li> <li>• Rain spray festival in Viet Yen district</li> <li>• Boat contest at Tieu village, Hiep Hoa district</li> <li>• An Chau festival in Son Dong district</li> <li>• Bo Da Pagoda festival</li> <li>• Duc La Pagoda festival</li> </ul>
Scenic area	<ul style="list-style-type: none"> <li>• Cam Son lake in Luc Ngan district: total surface area of 2,600 ha and hundreds of islands and it is surrounded by hilly and mountainous chains</li> <li>• Mo Spring (waterfall and natural pools) at Nghia Phuong commune, Luc Nam district: three temples (Ha, Trung and Thuong temples) which were constructed in the centuries of 15th and 16th under Le dynasty</li> <li>• Nguyen Sinh prohibited virgin forest at An Lac commune, Son Dong district: 7,153 ha of a wildlife conservation area</li> </ul>

After entering to Lang Son province, hilly road is appeared. Lang Son is a frontier mountainous province in the Northeast of Vietnam, connecting with the 253km-long borderline of China. There are two (2) border gates of China, 30km far from Lang Son City. The one is Huu Nghi border for passengers where there is a friendship gate as a historical symbol of China and Vietnam. The other is Tan Thanh border where is the main logistic gate between China.

Ai Chi Lang is in Chi Lang commune, Chi Lang district in Lang Son province. It is located along NH1A on the way from Ha Noi to Lang Son and 110km away from Ha Noi and 60km from the border. Ai Chi Lang is an oval narrow valley, surrounded with high mountains, curved with Thuong River and spotted with various summits of mountains. At present, Ai Chi Lang is a historic relic with gorgeous natural landscapes which attract many tourists. Local products such as fruits, pickled bamboo shoots are sold at kiosks as well as by roadside vendors.

		
Ceramic ("Su My nghe Quang Minh")	"Lang Ngoi" porcelain art	Bamboo plate mat
		
Embroidery	Fruits	Dried rice cake "Banh Da Ke"
		
Soft rice cake "Banh Duc"	"Quan Ho" folk song	Cam Son Lake

**Figure 2.1.16 Local Products and Resources in Bac Giang Province**

Source: JICA Study Team

		
Huu Nghi gate to China	Tan Thanh gate to China	NH-1 at Chi Lang
		
Shopping by road users	Products at Chi Lang (fruits, pickles)	Individual roadside vendors

**Figure 2.1.17 Local Resources in Lang Son Province**

Source: JICA Study Team



From the viewpoint of regional and local industry development, the potentials and issues for Michinoeki development in this section are summarized as follows:

- Potential users: In addition to local passengers, it is popular for Vietnamese from Ha Noi to visit the border gates to buy Chinese products as one-day trip. Though there are few popular scenic areas along this section, there is a potential road users who buy local products as souvenirs.
- Potential of products: Though there are plenty of local products (fruits, vegetables, handicrafts, etc.), the quality of products is insufficient to sell to road users. For example, though there are various tasty foods like “Banh Da Khe” and fruits, the size and quantity of sales are too large for passengers to eat on the way for driving. For middle distance driving to the city, it is important to develop attractive products for road users and tourists. To deliver local products from remote districts, cooperation with local distribution network (local bus delivery, distributors, etc.) is essential.
- Potential manpower: There are individual vendors who sell products along NH-1. It is important to secure selling space for them for traffic safety and sanitation. Local cooperatives and unions (farmer’s union and women’s union) are willing to improve products for increase productivity and sales. In Bac Giang, Farmers’ Union should be more active to be representatives to set up a distribution network for their members. Women’s Union has various activities for local industry promotion. The involvement of these local organizations is vital for local industry promotion at Michinoeki.

#### **b. Ha Noi – Vinh Road Section**

This section passes provincial cities like Phu Ly of Ha Nam province, Ninh Binh of Ninh Binh province, Thanh Hoa of Thanh Hoa province, and Vinh of Nghe An province. From Ha Noi to Ninh Binh, there are many roadside facilities and interval is short between cities. After passing by Ninh Binh, there are few facilities in rural areas. At the same time, Thanh Hoa and Nghe An are large and poor provinces with forest and mountainous areas. How to integrate convenient roadside service for drivers, local products as well as empowerment opportunity for rural development is essential in this section.

Ninh Binh is known as a destination for tourists with many beautiful places. The number of visitors to Ninh Binh has increased from 401,516 in 2000 to 1,011,371 in 2005 (average growth rate of 20.3%/year), of which the number of Vietnamese visitors increased from 318,738 people to 590,965 people (13.1%/year) and especially, the number of foreigners increased from 82,778 to 420,406 people (38.4%/year). The revenue of tourism increased from 14.7 billion in 2000 to 66 billion in 2005, of which the main source of income was from services (65%-70%) of the local state owned enterprises (over 80%).

The most important tourism places certified as local and international relics include: Hoa Luu tourism places (cave, cultural relic, river, Dinh King temple, Le King temple, Hoa Lu



citadel), Tam Coc - Bich Dong tourism place, cultural relic, annual festival; Phat Diem church; Cuc Phuong national park and Van Long tourist place. Five main tourist routes has been also set up, including:

- Ninh Binh - Hoa Lu - Tam Coc - Bich Dong
- Ninh Binh town - Hoa Lu
- Ninh Binh town - Tam Coc - Bich Dong
- Ninh Binh - Cuc Phuong - Ky Phu - Quynh Luu revolution foundation - Tam Diep
- Ninh Binh - Phat Diem - Con Thoi - Hon Ne

Local industry in Ninh Binh has changed great steps since 1996 with new market oriented products such as Sea-grass products, embroidery, water hyacinth, banana barks, young rice stem products. Many products have been export successfully and have good reputation in international market such as Sea-grass mat, embroidery products, bamboo-rattan wares, pineapple, cucumber, etc.. Ninh Binh handicraft is a kind of brand name, especially embroidery. Quality and competitiveness of Ninh Binh handicrafts are higher than in other areas, and these are exported to France, Japan, US, etc. These are the popular production areas and products:

- Food processing (wine, rice powder, rice vermicelli, tea, canned fruits, mushroom, soya curd, etc.): Tam Diep town, Yen Khanh district
- Fresh vegetables, flowers; Ninh Binh town
- Embroidery: Nho Quan, Gia Vien, Hoa Lu, Yen Khanh and Yen Mo district
- Sea-grass, bamboo-rattan wares, water hyacinth in Gia Vien, Yen Khanh, Yen Mo and Kim Son district

**Figure 2.1.18 Local Resources in Ninh Binh**

Source: JICA Study Team

Both Thanh Hoa province and Nghe An province are covering large area where is lying between the North and Central Vietnam. The land consists of mountains and forests in the west, midlands, plains and coast. Thanh Hoa province is the residence of over 20 ethnic minority groups (16.4% of total population) which is the cradle of the ancient Viet people. Sam Son seaside with the length of 3 km from Lach Hoi to Truong Le mountain, where is wonderful condition for relax and sea bathe. Ben En National garden has various flora and fauna in the natural area of 634 ha including Hai Van Mountain.

Nghe An has many beautiful beaches, especially, Cua Lo, Nghi Thiet, Quynh Phuong, Dien Thanh are very famous. Nghe An has variable potentialities for the development of tourism. Coastal line is very long with many well-known beautiful beaches, such as: Cua Lo, Cua Hoi, Quynh Phuong, Nghi Thiet and Dien Thanh with attractive beauties. Nghe An is a land of human culture with rich traditional cultural entities. The province has nearly 1,000 cultural and historical vestiges, of which, 111 vestiges have been ranked as national ones.

From the viewpoint of regional and local industry development, the potentials and issues for Michinoeki development in this section are summarized as follows;

- Potential users: Pilot project site in Ninh Binh is a suitable location in terms of both interval of 267km (2.5hours) from Ha Noi and local industry promotion of Ninh Binh. Since Ninh Binh is a major destination for tourists from Ha Noi as well as major production area of handicraft, Michinoeki in Ninh Binh will be popular for tourists and SMEs of local products. Vinh city is the popular first day's destination for long-distance drivers to HCMC, where take more than 7 hours from Ha Noi. So there are local roadside service facilities clustered, and there is a big bus terminal of Nghe An including accommodation facility. From Ninh Binh to Nghe An, there are few roadside facilities except for towns and Thanh Hoa city. In addition, since both Thanh Hoa and Nghe An are large stretching west and east, accessibility of remote mountainous area of west is important for rural development of province. If Michinoeki will be developed near the

intersection of NH-45 of Thanh Hoa or NH-48 and NH-7 of Nghe An, potential users will be expanded not only passengers of NH-1 but also local people of remote area.

- Potential of products: Since there are large volume of passengers of NH-1, grocery and drink service is a main commodity for road users. But to differentiate from other roadside facilities as well as to promote local industry, original product sales and service provision are vital. As mentioned above, handicrafts in Ninh Binh are the major products. Though there are several competitive SMEs and cooperatives for export and mass production, there are many individual households which sell their products at local markets and at home for middlemen. Michinoeki in Ninh Binh will contribute these producers who don't have market access. Original services and performance such as demonstration and training of handicrafts, tourism information provision will be integrated to promote these local products. In case of Thanh Hoa and Nghe An, ethnic minorities products such as brocade, rattan and bamboo will be sold. As proposed, if Michinoeki will be developed where is convenient to remote area, this will provide market opportunity for rural and ethnic people.
- Potential manpower: There are both SMEs and individual producers of handicrafts in Ninh Binh. Though it is a good opportunity for SMEs to promote their products, what is important is to provide opportunity of market access and empowerment for individual producers and farmers. In addition, for tourism promotion, corroboration with tourism agencies is essential. In case of Thanh Hoa and Nghe An, cooperation with NGOs which support ethnic minorities will be effective for ethnic minority group empowerment.

### **c. Ha Noi – Dien Bien Phu Road Section**

This section passes mountainous region of Hoa Binh, Son La and Dien Bien Phu, where is one of the poorest areas in Vietnam. Though the traffic volume of NH-6 is small, this is a trunk road for remote area, especially for ethnic minority people.

Hoa Binh is located on center tourism zone including Ha Noi capital and 14 surrounding provinces/cities. Hoa Binh is specified as secondary staying center of Son La, Lai Chau and Hoa Binh area. Foreign tourists visiting Hoa Binh are mostly from European countries, followed by Asian and American countries. The foreign travelers have tended to accelerate in recent years. Tourism services of the province involve currently:

- Heritage tourism (visiting ethnic villages of Muong, Thai, H'Mong, archaeological sites, historic-cultural relics, revolutionary vestiges, etc.)
- Green tourism (visiting beauty spots, caves, forests, Da River)
- Medical tourism (mineral water site in Kim Boi, Lac Son, Hoa Binh lake)
- Religious tourism (Thac Princess Temple- Thac Bo, Mother Temple- Lac

Thuy)

- Conference tourism; Holiday tourism, Leisure tourism.

There are agricultural cooperatives which have been supported by JICA's Technical Assistance Program of "Enhancing Functions of Agricultural Cooperatives in Vietnam." This program aims to enhance the capacity of agricultural cooperatives. And one pilot cooperative and five satellite cooperatives in Hoa Binh have been involved in this program. In addition, Japan Volunteer Center (Japanese NGO) has a program of participatory rural development in Hoa Binh and Son La.



**Figure 2.1.19 Popular Local Products and Resources in Hoa Binh Province**

Source: JICA Study Team

Son La has many high mountains and streams, and shares 250km border with the People's Democratic Republic of Laos in the South. Two big plateaus are Son La and Moc Chau where NH-6 passes these towns. Moc Chau Plateau is located at an altitude of 1,000m, 99km away from Ha Noi. There is a 14,000ha prairie for raising cattle, growing tea and coffee. There is a factory producing black tea for export. Milk from Moc Chau

Plateau is famous in North Vietnam, which produces condensed milk, yoghurt and other daily products. Since the climate in Moc Chau is ideal, this is a popular place for sightseeing and recreation. Son La has 12 ethnic groups with their own cultures and life styles. The Thai people had developed a writing system early in their history. They still keep 500 versions of Thai ancient literary works and the most famous epic is “Song tru xon xao” (Seeing off the Sweetheart). Thai people have the beautiful “xoe” dance and brocade weaving craft with 30 kinds of specific decorative patterns. The Muong are famous for metal work and drilling matchlock’s barrels. They also enjoy singing and dancing. The ethnic groups here have many festivals and traditional games associated with their faiths and religions.

Dien Bien Province is north-westernmost part of Vietnam, which 70.5% of the total area is covered by forest, slope and high mountainous area. It has a border with the People’s Democratic Republic of Laos and Yunnan Province of China. The only delta is Muong Thanh where Dien Bien Phu City locates. Dien Bien has beautiful landscapes with several ethnic groups. This province has a famous historicval site like Dien Bien Phu battlefield, the site of the final battle in the French War. There is the Muong Thanh Airport in Dien Bien Phu City, so tourists can access by light aircraft from Ha Noi. To build up Dien Bien city as a main tourist center, the provincial government establishes main tourism routes and clusters as follows:

- A tourist route along NH-12 and NH-4D (Tay Trung border gate - Dien Bien city - Muong Lay town – Lao Cai)
- A national tourism route along NH-279 (Dien Bien city – Tuan Giao – Pha Din mountain pass – Son La province)
- Dien Bien cluster – Pa Khoang – Muong Phang
- Muong Lay cluster - ecological tourist area of Da river
- Tuan Giao cluster – Pa Din – Muong Nhe, Pu Nhi

From the viewpoint of regional and local industry development, the potentials and issues for Michinoeki development in this section are summarized as follows:

- Potential users: The location of Michinoeki in Hoa Binh is preferable because; i) it locates near the intersection of NH-6 (to Son La) and NH-12 (to Ninh Binh) where various road users as well as local people easily access, ii) landscape from the site is good with mountains and rice fields to have a rest and relax for passengers, iii) it locates on the way to Mai Chau, the major tourism site, and there are various traditional cultural sites and eco tourism sites in surrounding area. So local and tourism information can be easily disseminated, and iv) there are local organizations and NGOs which work for rural development and capacity development, which have potential to utilize Michinoeki as one of the activity sites. So it is expected users of Michinoeki in Hoa Binh will be diversified not only road users and

tourists, but also local communities as a community center for multi-purpose. In case of Son La and Dien Bien Phu provinces, these preferable conditions are the same if it is located near towns where people can easily access. It is necessary to consider the location carefully how local community easily access to Michinoeki and take part in activities.

- Potential of products: There are many fresh vegetables, fruits and foods in mountainous areas which are difficult to buy in cities. In addition, not only products for sales, but also cultural events and demonstrations, tourism service, etc. will attract users. Original and integrated service provision is vital especially for ethnic groups in mountainous provinces.
- Potential manpower: Since most of local people in this area are ethnic minorities who are not accustomed to market economy and service industry, it is important how they will raise awareness of and be trained for service provision. To provide technical advice and support for training and empowerment for Michinoeki operation, cooperation with other related activities by local governments and NGOs is vital. This cooperation will be the key for sustainable operation and utilization by local communities.

In case of Hoa Binh, DOT has a willingness to enhance provincial Michinoeki network in future. For rural development in mountainous province, initiative of provincial and local governments is vital for network development. It is proposed that Pilot Michinoeki in Hoa Binh will be a mother station of network, and satellite stations will be developed along other national roads and provincial roads. As a case study for network development in province, action plan in Hoa Binh province will be proposed in next step.

## 2.1.2 Base-line Survey in Central Vietnam

### 2.1.2.1 Existing Road System and Services

#### (1) Current Road Network in Central Vietnam

Target road network is shown as follows; more detailed condition of target road is described in the following pages.

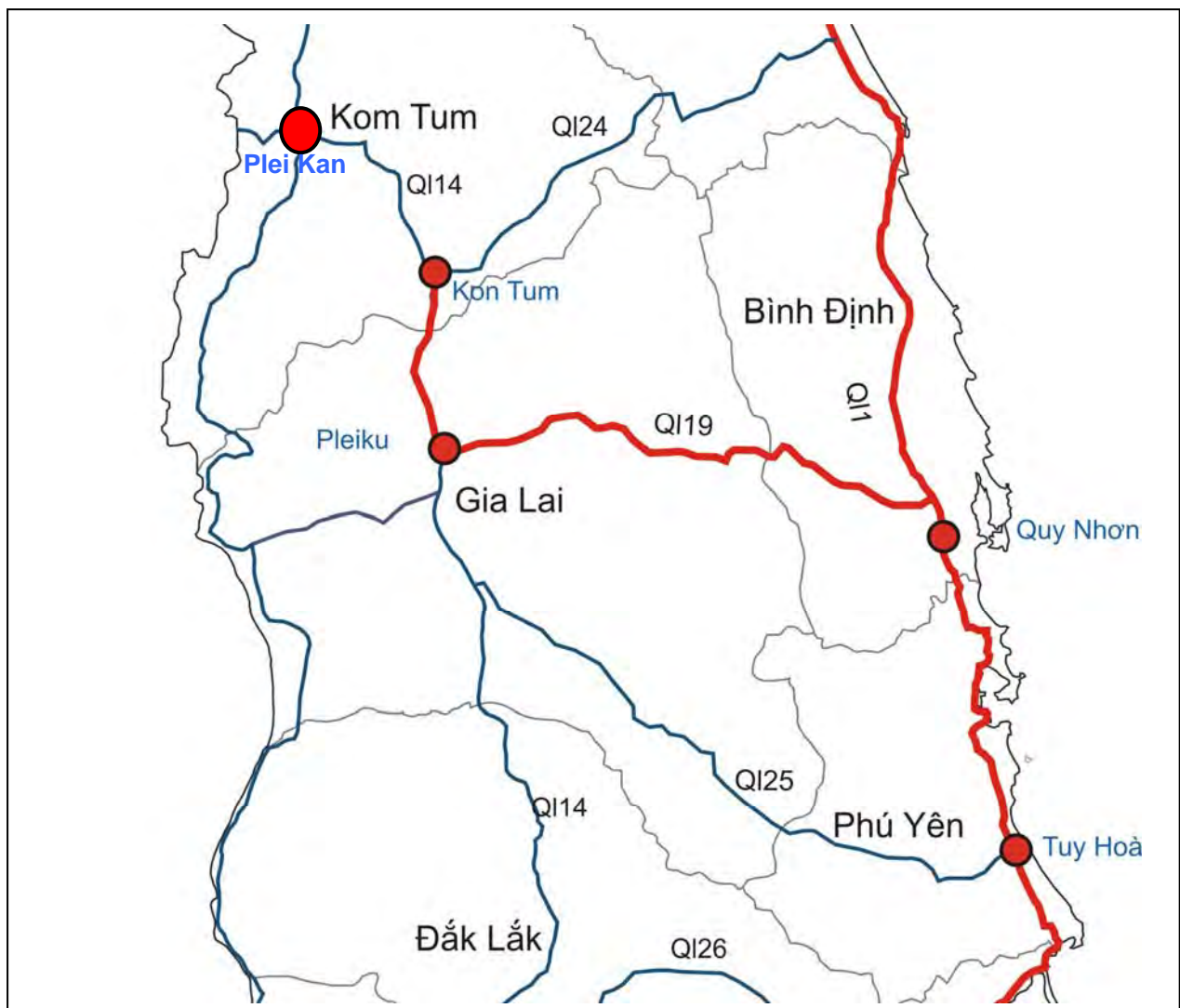


Figure 2.1.20 Target Road Network in Central Region

The target road section can be classified into 2 sections such as Quy Nhon – Pleiku Section (National Highway No. 19) and Pleiku – Kontum Section (National Highway No. 14). Condition of these two target road sections are as follows;

**a. Quy Nhon – Pleiku Section (National Highway No.19)**

This Road was constructed during Vietnam War for years. It has been upgraded by domestic fund in 1996 under VRA management. The Road is overall evaluated in good condition (75% in good and 25% in fair status). Currently, there are routine and periodical maintenance which are being carried out on the Road. It is also reported that traffic is increasing rapidly.

**b. Pleiku – Kontum Section (National Highway No. 14)**

The Road was also constructed long time ago. Currently, maintenance work such as AC/DBST overlay and road widening are underway. In general, the Road is in good condition except a very short section in Bad status (72% in good, 26% in fair and 2% in bad status). It is reported that this Road will be upgraded under Ho Chi Minh Highway Project – Phase 2.

**c. Transport Network Integration**

The Target Road is a very important Link between the Central Coastal Region and the Central High Land area. The Road also plays an important role to integrate transport between Quy Nhon Port and Po Y Cross-Border Facility (Kontum province to Lao) and Duc Co Cross-Border Facility (Gia Lai province to Cambodia). In addition, the Road is also a Link between existing the National Highway No. 1 and Ho Chi Minh Highway which will support the transport and economic development purposes. Therefore, the Road would be paid attention to upgrade and arranged with functional facilities.

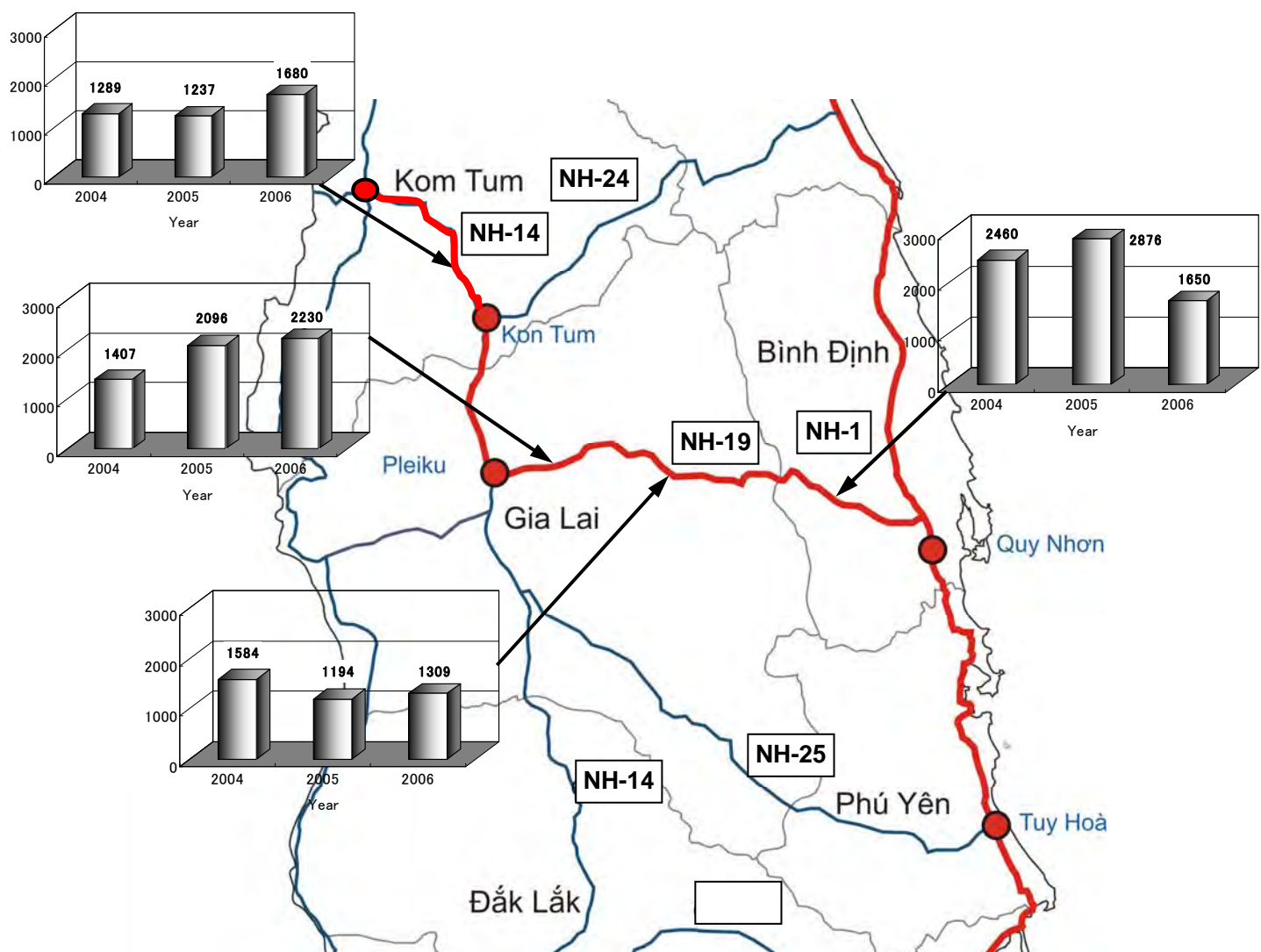


## (2) Road Transport Services

### 1) Trends of Traffic volume

Here we examine the traffic situations of target road sections. The traffic volume of the target road sections are sorted out by 24-hour traffic volume-data of main road cross-sections, from 2004 to 2007 (latest data), conducted by Vietnam Road Administration (VRA) at each quarter. We explain the current traffic situation at each road section as below.

- AADT(Average Annual Daily Traffic): approximately 2,000 vehicles per day for the Target Road' mid-block section of NHW No. 19 and No.14
- Traffic growth rate: 10-20%



**Figure 2.1.21 Trends of Traffic Volume in Central Region**

Source: JICA Study Team

## 2) Vehicle Composition

The following figure shows a vehicle composition obtained through the field survey in which traffic volume count (24 hours week day) was conducted in early January, 2008 at 4 points. The result shows that three traffic volumes of (1) passenger cars, (2) buses, and (3) lorries/trucks are divided with each component's share of approx. 12%, 30% and 50% respectively. Considering the fact that most of the trucks and lorries constitute a traffic at night, major beneficiaries of Michinoeki are passengers carried by day-time transport means: passenger cars and buses. While the average daily traffic of passenger cars is about one third of that of buses in terms of the number of vehicles, buses carry a larger number of passengers than passenger cars. It may thus be assumed that bus passengers constitute a majority of Michinoeki's potential users.

**Figure 2.1.22 Vehicle Composition in Central Region**

Source: JICA Study Team

### (3) Existing Roadside Resting Facilities

There are plenty of similar roadside facilities at subjective road section. Particularly, there are many similar facilities on trunk roads because of heavier traffic volume. However, these facilities have many troubles in sizes, qualities of services, functions, etc. The existing similar roadside facilities can be classified into five types as follows.

**Table 2.1.10 Classifications of Existing Similar Roadside Facilities**

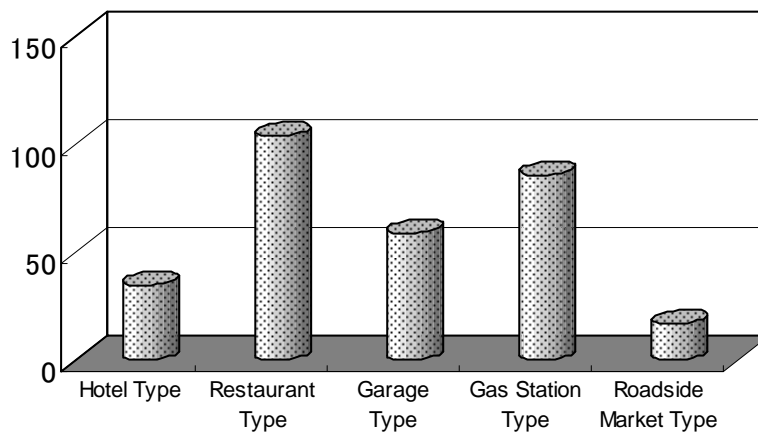
Category	Feature
Hotel Type	Roadside facilities as small guesthouses which provide beds and rest services at comparatively low prices.
Restaurant Type	Roadside facilities which provide food services mainly.
Garage Type	Roadside facilities which provide repair, maintenance and washing services of vehicles.
Gas Station Type	Roadside facilities which provide fuel services of vehicles mainly.
Roadside Market Type	Roadside facilities which provide roadside-market-like services using roadside places.



**Figure 2.1.23 Classification of Existing Roadside Similar Facilities**

Source: JICA Study Team

Following table shows total number of similar facilities for target roads and summary of the similar facilities analysis are reported in below:



**Figure 2.1.24 Number of Similar Roadside Facilities for Each Type (Central Region)**

**Table 2.1.11 Number of Similar Roadside Facilities for Each Type (Central Region)**

Type	Total Number
Hotel Type	35
Restaurant Type	104
Garage Type	59
Gas Station Type	86
Roadside Market Type	17
<b>Total</b>	<b>301</b>

Source: JICA Study Team

### 1) Hotel Type

Most of similar roadside facilities were constructed in and after 1990 (92%). Most of them are small-scale facility with limited parking area, and from private sector. They usually locate at urban area or near by. There are 3 large-scale hotels such as Hoang Anh Gia Lai Hotel, Pleiku Hotel and Hung Yen Hotel. However, Joint-stock is the type of ownership for the three big Hotels.

### 2) Restaurant Type

Most of similar roadside facilities were constructed in and after 1990 (90%). Most of them are small-scale facility with limited parking area, poor toilet condition and low standard of Hygiene. There are many facilities locate at station km 108 (Mang Yang Pass) and km 45 on National Highway No.19. Most of them are from private sector with a small number (<10%) arranged with other facility such as Kiosk, coffee shop etc.

### 3) Garage Type (total 16 interviews)

Same as the above similar roadside facilities, most of them were constructed in and after 1990 (80%). Most of them are small-scale and from private sector. As a result, minor repairing service is main capability of the facilities.

### 4) Roadside Market Type

Most of them are small-scale and used by local people. Also, most of them are managed by local authority.

## 2.1.2.2 Regional Socio-economic Aspect

Central region of Vietnam is composed of South Central Coast along Pacific Ocean and Central Highlands with border of Laos and Cambodia. The urban center of Central Region is Da Nang City. Hue of Thua Thien Hue province and Hoi An of Quang Nam province are the world heritage, so now tourism sector has been growing. The landscape along NH-1 of Central Region is good and there are several areas where qualified roadside facilities are clustered. On the contrary, the selected target road (NH-19 and NH-14) passes through poor mountainous areas in Central Highlands where ethnic minority live. Since NH-14 (HCMC Route) has been improved, it is important to consider how to connect two trunk roads of NH-1 and NH-14 horizontally and to improve roadside conditions which contribute to rural and local industry development.



**Figure 2.1.25 Potential Local Resources in Central Region**  
Source: JICA Study Team



Major local products in Binh Dinh, Gia Lai and Kon Tum are categorized i) fruits, ii) processed agro-forestry and aquatic products, and iii) handicrafts. There are many products have potential to sell at Michinoeki as refreshment of drivers and passengers, souvenirs with local originality.

Province	Fruits	Processed agro-forestry and aquatic products,	Handicrafts
Binh Dinh	 Mango, orange, pineapple, banana, young coconut, etc.	 Bau Da wine, meat roll, dried/frozen sea products, coconut milk girdle cake, fish sauce, Kudzu powder, coconut oil, etc.	 Art carpentry, palm-leaf conical hat, art pottery, sedge products, coconut fiber handicrafts, brocade, incense, rattan, forge products, etc.
Kon Tum	 Milk fruits, orange, tangerine, watermelon, banana, mango	 Coffee, processed rice, Kudzu powder, sugar, etc.	 Bamboo and rattan, brocade, art carpentry, etc.
Gia Lai	 Fresh flowers, milk fruits, orange tangerine, watermelon, banana, mango, durian, etc.	 Bamboo tube rice, processed rice, coffee, Kudzu powder, peppercorn, sugar, green tea, bee's honey, etc.	 Brocade, traditional musical instruments, art carpentry, etc.

**Figure 2.1.26 Local Products along Target Roads in Central Region**

Source: JICA Study Team

## 2.1.3 Base-line Survey in Southern Vietnam

### 2.1.3.1 Existing Road System and Services

#### (1) Current Road Network in Southern Vietnam

Target road network and peripheral regions are as follows:

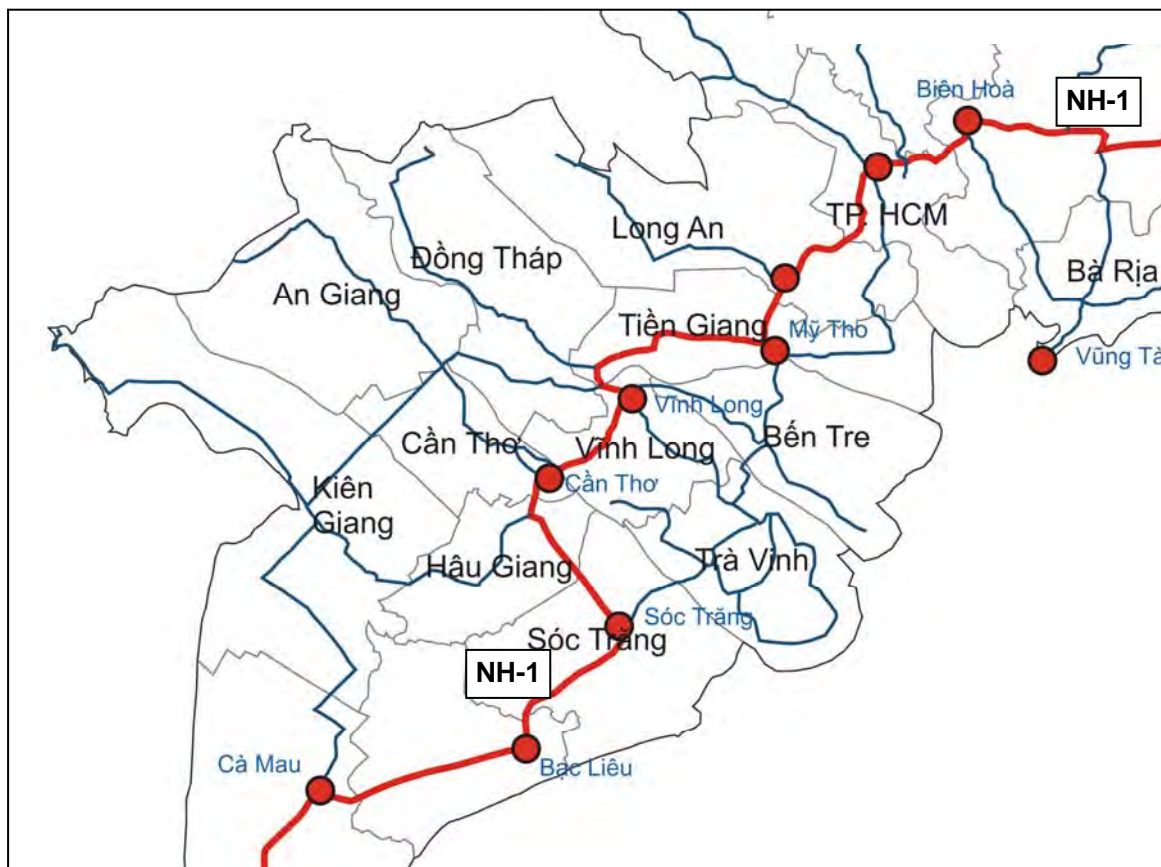


Figure 2.1.27 Target Road Network and Peripheral Regions

The target road section is Ho Chi Minh City – Ca Mau (National Highway No. 1). Condition of this target road section is as follows;

**a. Ho Chi Minh City – Ca Mau (National Highway No.1)**

This Road is a key transport arterial in Mekong Delta Region. It has been upgraded by ODA fund by Co-financial Donors of WB and JBIC. In addition, the section of Ho Chi Minh – My Thuan Bridge later has been widened by the Government Fund. There are different section of Road such as Ho Chi Minh – My Thuan Bridge (four carriageways), My Thuan Bridge – Ca Mau City (2 carriageways with shoulders), and Ca Mau City – Nam Can Town (only two lanes-two ways). The Ho Chi Minh City – Can Tho section has been put in to operation for about 10 years. However, construction work is underway for the remaining sections. It is reported that Government Fund will finance to widen section My Thuan Bridge – Can Tho City up to 4-motorized lane-Highway in 2008. In addition, Can Tho – Nam Can section will be completed by 2010 (2 carriageways with shoulders). In overall, the Target Road is in good condition (82% in good and 18% in fair status). Currently, there are many short sections of Can Tho – Ca Mau which have been just put in to operation. It is also reported that Traffic is increasing rapidly.

**b. Transport Network Integration**

The Target Road goes via 8 of 13 provinces in Mekong Delta Region such as Long An, Tien Giang, Vinh Long, Can Tho, Hau Giang, Soc Trang, Bac Lieu, and Ca Mau. The other provinces are Ben Tre, Tra Vinh, Dong Thap, An Giang, Kien Giang which all have connection to the Road. In addition, WB is financing the Mekong Delta Transport Infrastructure Development Project which particular upgrades the NHW No. 91 (Dong Thap Province) and NHW No. 53, 54 (Tra Vinh Province). WB upgraded-Road is feeding the Target Road. Also, Water Northern Transport Mekong Corridor and Southern Costal Corridor are also being improved by the WB project. Furthermore, ADB is financing the Road Southern Costal Corridor under Greater Mekong Sub-Region Project. The ADB project will upgrade the Road Link (Vietnam part) from Xa Xia Cross-Border Facility to Ca Mau City. Also the ADB Road will connect with The Target Road. In all, The Target Road is confirmed as a very important transport arterial in Mekong Delta and be generating a lager number of Traffic under Transport Network Integration.

**c. Operation and Maintenance Constraint**

It is reported that there are about 30 weak bridges (operating Load less than H30) on the Target Road. This limitation is negative to the Road Capacity. In addition, interview has been made with RRMU7 official regarding the maintenance budget. It is reported that a threshold of 50%-70% of the maintenance demand is currently practice. This limited fund is challenging the Road physical condition.



### (3) Road Transport Services

#### 1) Trends of Traffic volume

Traffic data has been collected from VRA for the year 2004 to 2007 for the Target Road. Details of traffic volume and traffic composition for a number location on Roads are stated in following Figure 1. Traffic data then has been analyzed by the Team in consideration of filed survey. Preliminary results are followings:

- AADT: approximately. 21,000 vehicle per day for the Target Road' mid-block section of Ho Chi Minh – My Thuan Bridge.
- AADT: approximately. 5000 vehicle per day for the Target Road' mid-block section of My Thuan – Soc Trang.
- AADT: approximately. 3000 vehicle per day for the Target Road' mid-block section of Soc Trang – Ca Mau.
- Traffic growth rate: 10-20%

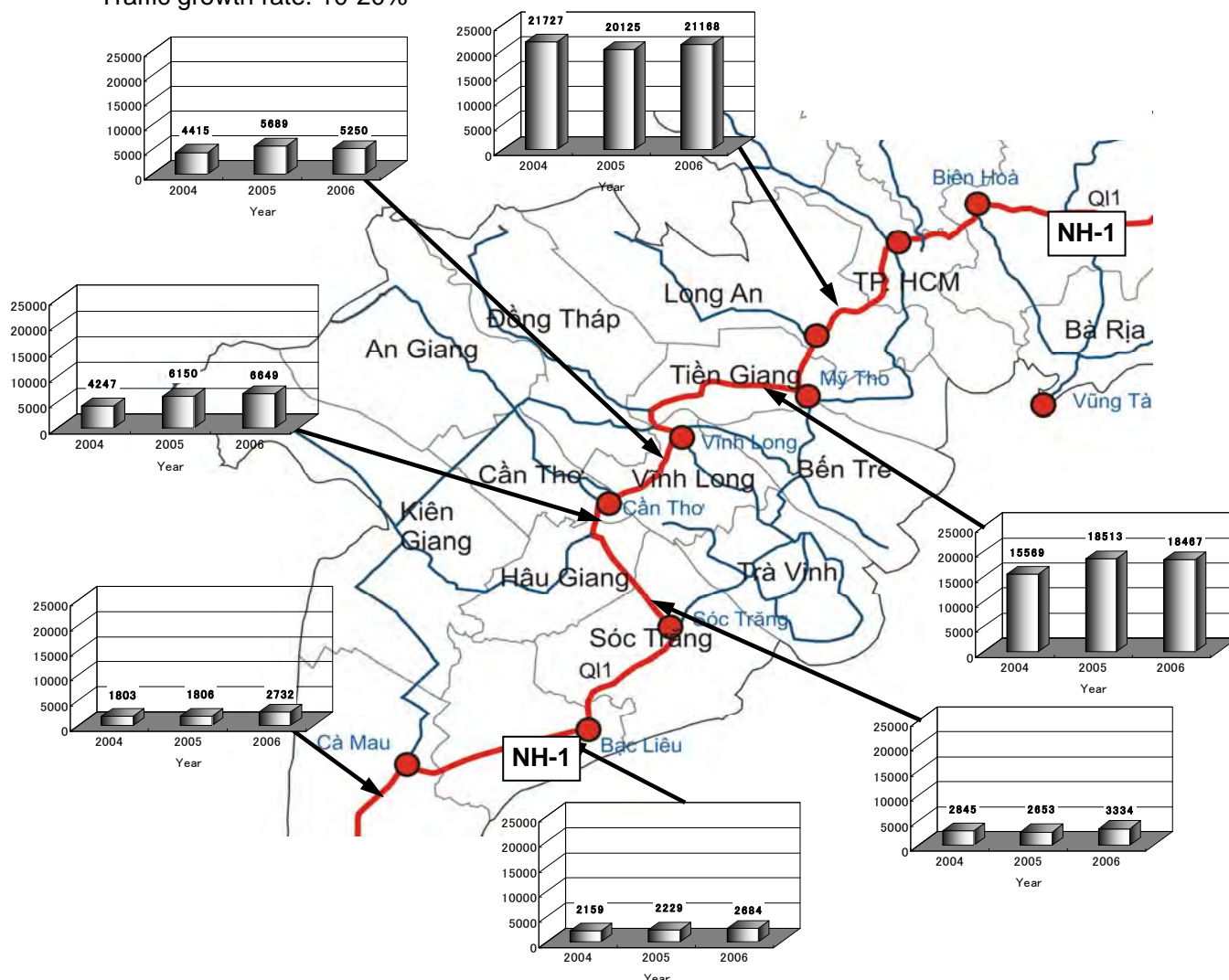
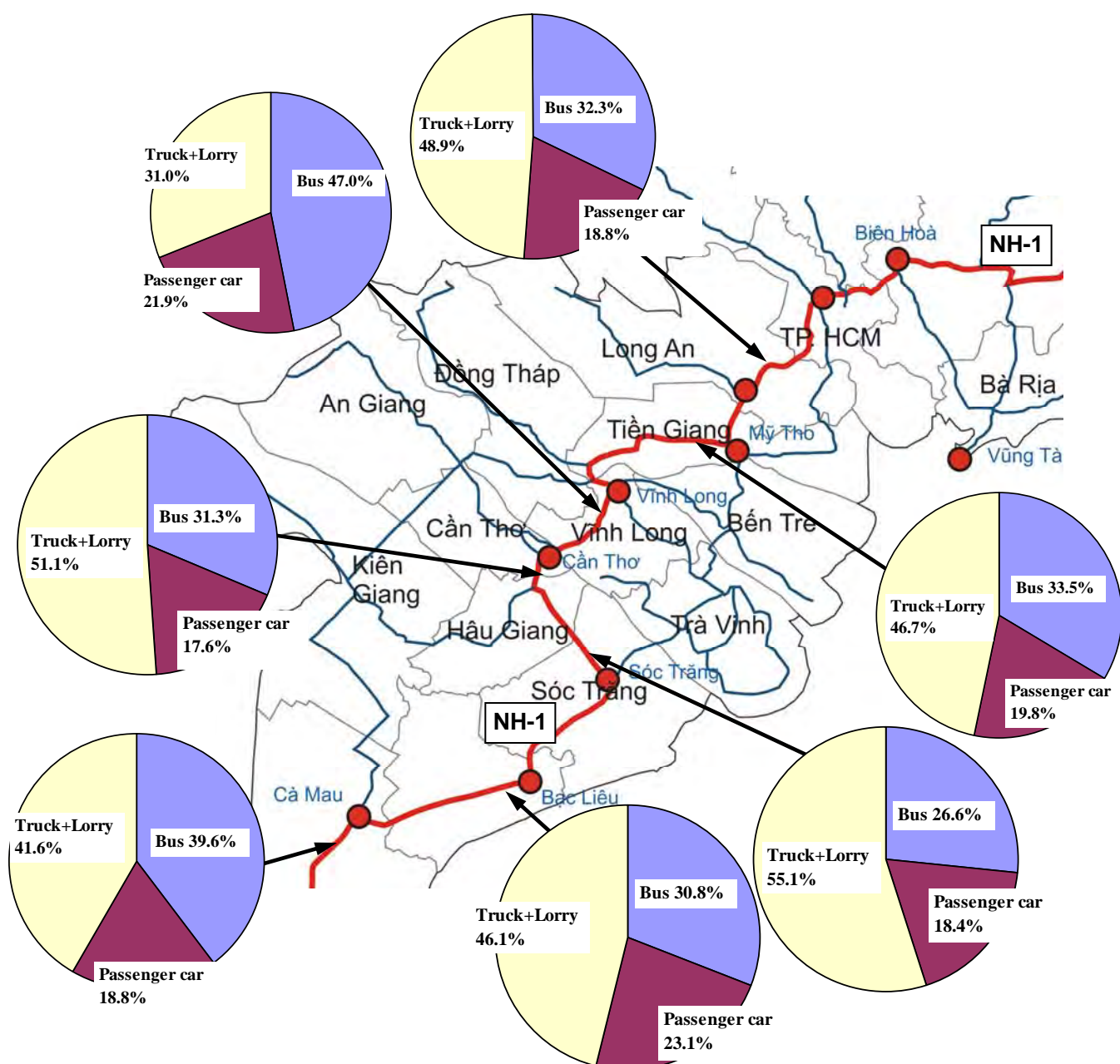


Figure 2.1.28 Trends of Traffic Volume in Central Region  
Source: JICA Study Team

## 2) Vehicle Composition

The following figure shows a vehicle composition obtained through the field survey in which traffic volume count (24 hours week day) was conducted in early January, 2008 at 4 points. The result shows that three traffic volumes of (1) passenger cars, (2) buses, and (3) lorries/trucks are divided with each component's share of approx. 20%, 30% and 50% respectively. Considering the fact that most of the trucks and lorries constitute a traffic at night, major beneficiaries of Michinoeki are passengers carried by day-time transport means: passenger cars and buses. While the average daily traffic of passenger cars is about one third of that of buses in terms of the number of vehicles, buses carry a larger number of passengers than passenger cars. It may thus be assumed that bus passengers constitute a majority of Michinoeki's potential users.



**Figure 2.1.29 Vehicle Composition in Central Region**

Source: JICA Study Team

#### (4) Existing Roadside Resting Facilities

Following table shows total number of similar facilities for target roads and summary of the similar facilities analysis are reported in below:

**Table 2.1.12 Number of Similar Roadside Facilities for Each Type  
(Southern Region)**

Type	Total Number
Hotel Type	209
Restaurant Type	345
Garage Type	109
Gas Station Type	265
Roadside Market Type	43
<b>Total</b>	<b>971</b>

Source: JICA Study Team

##### 1) Hotel Type

There are many the similar roadside facilities on the road, and most of them were constructed in and after 2000 (80%). Most of them are small-scale facility with limited parking area, and from private sector. They usually locate at urban area or near by. There are some large-scale hotels such as Phu My Hung Hotel, Ngoc Suong Hotel and Cong Tu Hotel and some others. Those big-scale hotels usually have extra services such as restaurant, karaoke, massage etc.

##### 2) Restaurant Type

There are many restaurants on the road. Most of similar roadside facilities were constructed in and after 2000. Their capacity varies from small-scale to big-scale. Most of them have limited parking area, poor WC condition and low standard of Hygiene. However, there are large-scale facilities locating in Tien Giang province which have similar functions of Michinoeki such as Van Map, Tam Ri II, Minh Phat, Mien Tay, Minh Phu, and Mekong. Most of them are from private sector.

##### 3) Garage Type

Most of them are small-scale and from private sector. As a result, minor repairing service is main capability of the facilities.

##### 4) Gas-Station Type

There are many stations on the Road. Most of them are private, small-scale, and Agent for Provincial Gas-supply companies. However, there are some facilities which are large-scale, having extra function such as restaurant, garage, Kiosk etc. The typical large-scale facilities are No. 1932 and Binson facility.

### **5) Roadside Market Type**

Most of them are small/ medium-scale and used by local people. It is noted that most of Market locate close to crossing river. Also, most of them are managed by local authority.



### 2.1.3.2 Regional Socio-economic Aspect

Mekong delta is fertile and warm enough to produce rice, fruits, processed seafood, etc. There are many roadside facilities by private sectors operated where sell these local foods with good quality. Tourists visit to My Tho and Can Tho for Mekong River tours, and there are qualified hotels and resort areas near Mekong River and seaside.

It is necessary to plan Michinoeki network not only along NH-1 but also connecting national and provincial roads which runs to remote areas to the border of Cambodia. Michinoeki river network can be proposed which contribute to inland waterway and river trip for tourists.

		
Existing roadside restaurant by private sector	Original products	Performance of traditional music

**Figure 2.1.30 Current Roadside Service Condition of South**

Source: JICA Study Team

		
Mekong river tour	Mekong river market	Riverside gas station for boat

**Figure 2.1.31 Mekong River**

Source: JICA Study Team

			
Water hyacinth products (Long An)	Cherry (Tien Giang)	Pomero (Vinh Long)	Bamboo basket (Can Tho)
			
Woven fruits basket (Hau Giang)	Chinese sausage (Soc Trang)	Salt (Bac Lieu)	Mangrove chopstick (Ca Mau)

**Figure 2.1.32 Local Products along Target Roads in South Region**

Source: JICA Study Team

## 2.2. STEP1.2: Identification of Michinoeki Functions

As discussed in Chapter 1, In Vietnam, improvement of intercity roads has been hastened, and traffic volume of vehicles such as passenger cars, buses, trucks and trailers have been increasing significantly. Many long-distance vehicles are operated in Vietnam. Additionally, in current driving patterns, the buses run for three or four hours or longer, without any rest. Therefore, there is a concern of worsening driving safety and comfort by fatigues of passengers and drivers. Taking account of such background, the idea of Michinoeki functions in Japan is assumed to be reasonably applicable for Michinoeki in Vietnam.

Based on the above recognition, the next five functions can be shown as the basic functions on Michinoeki in Vietnam.

- <Function-1> Rest and Relaxation Function
- <Function-2> Information Provision Function
- <Function-3> Road Traffic Management Function
- <Function-4> Local Socio-Economic Development Promotion Function
- <Function-5> Landmark Function

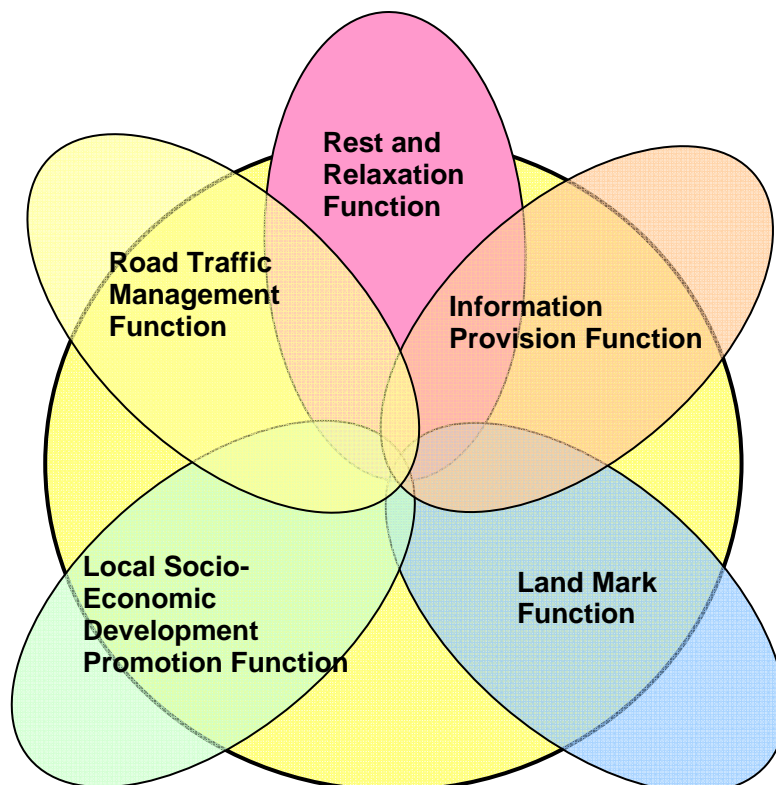


Figure 2.2.1 Basic Functions of Vietnamese Michinoeki

### **(1) Rest and Relaxation Function**

Michinoeki provides rest and relaxation services for road users. Drivers and passengers of long-distance buses are assumed to be main users of Michinoeki. Examples of services are as follows;

- Parking lots with big enough space
  - Resting/relaxation space provision
  - Clean toilet services
  - Washing facilities for hands, feet, faces
  - Meals, snacks, café services
- etc.

### **(2) Information Provision Function**

Michinoeki provides Information for road users. The providing information includes local events, location of sightseeing spots, and introductions of local feature, in addition to basic road information such as roadmap information, and hazard information. Examples of services are as follows;

- Roadmap information
  - Various local information (Local events, histories, cultures, sightseeing spots etc.)
- etc.

### **(3) Road Traffic Management Function**

Michinoeki supports the road management and road traffic operation. Michinoeki has a supportive function as a place for educating traffic safety. Moreover, the facilities have a basic function for emergency aid. Examples of services are as follows;

- Stocking and disclosing location information such as hazard points of roads
  - Parking lots for patrol vehicles for road maintenance
  - Campaign of traffic safety (using Michinoeki as advertisement space)
  - Function for emergency aid in case of traffic accidents
- etc.

### **(4) Local Socio-Economic Development Promotion Function**

Michinoeki supports advertisement and promotion of local products for road users who visit Michinoeki. In addition, the facilities are able to function as meeting houses of the area, places

to display, places as craft centre of local specialty and artifact, and places to train processing agricultural goods. Examples of services are as follows;

- Advertisement and promotion of local products for road users
  - Distribution of local products
  - Function as a meeting house for local people
  - A space for display of drawings and crafts made by local people
  - Place to train processing agricultural good or local products
- etc.

#### **(5) Landmark Function**

Michinoeki as a local landmark can indicate local characteristics to visitors in a symbolic manner. Therefore Michinoeki as a local symbolic landmark can contribute to enhancement of raise of local identity.

- Placement of a tower which has a local symbolic value
- etc.



## 2.3. STEP1.3: Selection of Construction Location

### 2.3.1. Allocation Criteria

#### 2.3.1.1 Criteria for Selection of Locations

To locate Michinoeki along the road sections systematically, location criteria should be clarified.

The basic components of the criteria are;

- a. Spacing of location
- b. Traffic volume of front road
- c. Avoidance from urban area
- d. Avoidance of competence against existing commercial facilities
- e. Consideration of road network
- f. Consideration of eagerness of local community
- etc.

#### BOX

In Japan, Bureau of Public Roads of the Ministry of Land, Infrastructure, Transport and tourism defines the location standard of Michinoeki as below.

##### A. Standard of traffic volume

- General national route which traffic volume is over approx.5,000 cars/day
- Prefectural highway which traffic volume is over 5,000 cars/day and take the role of long-distance trip traffics

##### B. Settlement interval

- Intervals are from 10 to 20 km. In maximum, approx.25km

##### C. Other attention

- On main arterial roads, settle Michinoeki at certain intervals in consideration with another Michinoeki and existing private facilities which have resting space, and enriched resting facility
- In the area where it is needed to activate, promote exchanges and regional alliances, and support the fascination and energy of the area.
- Correspond to growth and spread of leisure traffic and traffic of holidays
- Attention to position related to resting facilities on highway (SA, PA) or interchanges, and cooperate with highway to the point of resting and information provision

Criteria for selection of locations for Michinoeki in Vietnam can be described as follows;

< Criteria -1> Break time interval

<Criteria -2> Traffic volume

<Criteria -3> Land use

<Criteria -4> Coexistence with existing similar facilities

<Criteria -5> Accessibility

<Criteria -6> Local needs

### <Criteria -1> Break time interval

The intervals of Michinoeki should correspond to break time interval to meet road users' resting needs. If Michinoeki are located within appropriate interval for road users, users can be given resting services with proper intervals. This is one of the most basic requirements. In this survey, the Study Team conducted interview survey to bus passengers, which are assumed to be principle users of Michinoeki. According to the results of the survey, two hours are adapted as the maximum interval of location of Michinoeki. This is assumed to be approx. 100km under the assumption of 50km/hr as scheduled speed.

#### BOX

In this survey, the Study Team conducted an interview with passengers of a long-distance bus.

This bus runs 280km from Ha Noi to Son La by approx. seven hours (including resting time twice, 30min each). According to the survey results, 93% of passengers hoped to have rest at least once. About desirable resting interval, 90% of the passengers answered that from two to four hours.

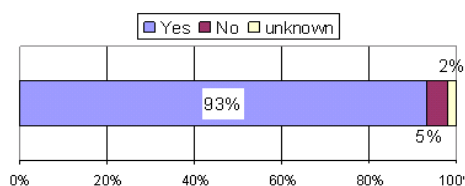


Figure 2.3.1 Intention to Take a Rest

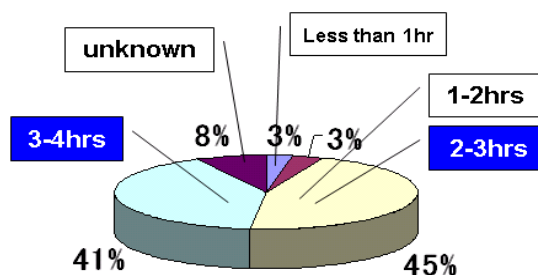


Figure 2.3.2 Desirable Resting Interval

Source: JICA Study Team

### <Criteria -2> Traffic volume

Michinoeki is basically a public facility, and is open to public. In a sense of public economy Michinoeki should have enough number of beneficiaries, i.e. big enough traffic volume.

In a sense of financial feasibility, traffic volume is necessary to keep Michinoeki in a good financial condition. Therefore revenue from road users is one of the sources to cover the expense for operation/management. However, even if traffic volume is not large enough, there is an option that small Michinoeki is to be developed to satisfy the strong needs of Michinoeki in the area.

### <Criteria -3> Land use

In urban areas, there exist many commercial facilities such as restaurant and café which are operated by private enterprises. These facilities are used not only by road users, but also by local people. Meanwhile, Michinoeki needs a wide area for parking lots, It is not preferable to settle Michinoeki in urbanized area.

Therefore, Michinoeki should be located other than large cities and even if it is located in local area, it should not be the center of local cities, such the district center.

**<Criteria -4> Coexistence with existing similar facilities**

Several large roadside facilities similar to Michinoeki are located along target road sections. These are mainly restaurant and gas station type facilities, and bus stations. In these roadside facilities, complex services of free-of-charge toilets, restaurant and café, resting space, Kiosk, and souvenir shops, are already provided. Michinoeki should not compete with these facilities, but should try to co-exist.

Therefore, it should be avoided developing new Michinoeki which has similar functions to such existing facilities nearby. On the other hand, establishment of Michinoeki near existing facilities may provide an opportunity to establish complex facility which has both of public service and commercial service.

**BOX**

In Japan, there are 868 Michinoeki, as of August 2007, and a number of them are not newly constructed and their origins are existing similar facilities.

In Japan, local authorities or public organizations can submit the application of Michinoeki to National Road Administrator. Then it judges infrastructure of the facility and appropriateness of management. If the facility fulfills standards of Michinoeki, Road Administrator issues certificate of Michinoeki. Some of such Michinoeki were once commercial museum or souvenir distributing facilities and they add parking lots, clean toilets, and information provision apparatuses to change into Michinoeki.

However, the certificates of the Michinoeki are limited to the facilities which are managed and maintained by local authorities or public organizations, restaurants and private commercial facilities are not certified as Michinoeki. The reason is that public nature may be deteriorated if Michinoeki is owned by private enterprising bodies.

In Vietnam, most of the facilities similar to Michinoeki are managed by private enterprises. If this authorization system is applied in Vietnam, most of the facilities are owned by private commercial facilities. If this procedure is adapted, it will be needed that such commercial facilities should have some certification for public use.

**<Criteria -5> Accessibility**

Michinoeki is desirable to be located near an intersection of the arterial road where many vehicles and road users from several areas can come together. In addition, the accessibility can be improved by provision of road map information of road network and area information of the area at Michinoeki. Therefore, Michinoeki is preferable to locate near an intersection of arterial roads.

**<Criteria -6> Local needs**

The body of the planning, maintenance and management should be local communities of the areas. The needs and eagerness of the members related to the local authorities, private enterprises, and local people, are significantly important factors for successful Michinoeki. In order to establish successful Michinoeki, the individual needs of the area and measure for grasp of the level of the needs must be properly developed.

### **2.3.2.2 Classification of selected Michinoeki in terms of the previously proposed types**

There will be a various type of Michinoeki. Michinoeki can choose facilities from many kinds of options. However construction of Core Facility should be indispensable, which should meet minimum requirements, and it is preferable to settle Core-plus Facility adjacent to Core Facility.

Core Facility is a fundamental facility which can be served as a free-of-charge facility and will produce no benefits in terms of currency basis. Core-plus Facility may bring about profit however such profit will not be large enough because they are produced by local residents. The purpose of settlement of this type of facilities is not earning a large profit but promotion of local socio-economic activity. Although non-Core Facility is not necessarily constructed in the light of the Michinoeki's basic function, it may attract the private investors to join.

If the expected number of visitors is small, it may be difficult for such Michinoeki to expect large enough revenue to compensate for all the operation/management expenditure. To the contrary, as to such Michinoeki as is placed along a road with a large traffic volume, such Michinoeki could be expected to get enough revenue to compensate for all the expenditure for operation/management activity. Taking account of such different types of Michinoeki, which is discriminated mainly in terms of financial condition, operation/management schemes should be considered in different manner.

Financial condition of Michinoeki directly depends on the traffic volume on the front road and condition of roadside area. If traffic volume on the road in front of Michinoeki is big enough, large number of users may be able to be expected. In this case, sufficient revenue to cover all the operation/management expenditure may be expected and support from the state budget might not be taken account so seriously.

To the contrary, if traffic volume is small and sufficient revenue is hard to be expected, then support from the state budget may be indispensable for keeping sustainability of such Michinoeki. Condition of roadside area relates to the regional potential. In the area where there exist abundant local special products such as agricultural special products, crafts and some other local distinctive special products, attractive regional resources could allure vehicle drivers and passengers. To the contrary, devastated mountainous area or rural area where very little local resources are expected may be hard to attract drivers and passengers to drop by.

Standard types of Michinoeki are defined on the basis of the above discussion. There are three types stated as below;

**Table 2.3.1 Michinoeki Types Corresponding to Roadside Condition, Road and Traffic Volume**

Condition of Roadside Area Road and Traffic Volume		Urban	Suburbs	Tourism Area	Rural Area	Mountainous Area
National Highway	Traffic Volume (High)	TYPE-1			TYPE-2	
	Traffic Volume (Low)		TYPE-2		TYPE-3	
Provincial Road						

Source: JICA Study Team

### TYPE-1

- “TYPE-1” is constructed along national highway with high traffic volume.
- Condition of roadside area is either urban, suburbs or tourism spots
- A large number of visitors are expected.
- Fairly good financial performance is expected.
- This type can possibly be operated in cooperation with private enterprises.

### TYPE 2

- “TYPE-2” is constructed along national highway with high traffic volume or low traffic volume or provincial road
- Condition of roadside area is either urban, suburbs, tourism spots or rural area
- “TYPE-2” can not be expected to have as many visitors as “TYPE-1”
- Financial performance of “TYPE 2” may not be expected as “TYPE-1”.
- “TYPE-2” may need to have public interventions in terms of financial support.

### TYPE 3

- “TYPE-3” is constructed along either national highway with low traffic volume or provincial road.
- Condition of roadside area is either rural area or mountainous area.
- Number of users may be very small and business revenue is also small amount.
- “TYPE-3” may be difficult to be operated on a basis of self-paying system.
- Public interventions in terms of financial support may be indispensable for ensuring sustainability.

These three types can be described in the following table. The table consists of condition of roadside area in horizontal column and road/traffic volume in vertical column. A condition of roadside area is a kind of indicator of degree of regional attractiveness. Road and traffic volume is an indicator of expected number of visitors.

Type-1 is located in an area with high traffic volume and roadside area consists of urban or suburban or tourism area where roadside attractiveness is very high. Number of visitors of Type-1 can be expected to have large number of visitors. Also regional potential can be expected to be very high. Therefore Type-1 is an attractive type for private investors as stated previously.

Type-2 is located in two places of the table. One is that Type-2 is located in an area with high traffic volume however roadside area is a rural area therefore regional attractiveness is not so high. The other is that Type-2 is located in an area with low traffic volume however roadside area is endowed with relatively good attractiveness. Expected number of visitors of Type-2 can be estimated more than Type-3 but less than Type-1.

Type-3 is located in an area with low traffic volume and roadside area is rural and mountainous area where roadside attractiveness is very low. Number of visitors of Type-3 will be expected to be very low and financial condition will have difficulties. Therefore public support will be indispensable for Type-3.

## 2.3.2 Proposed Locations

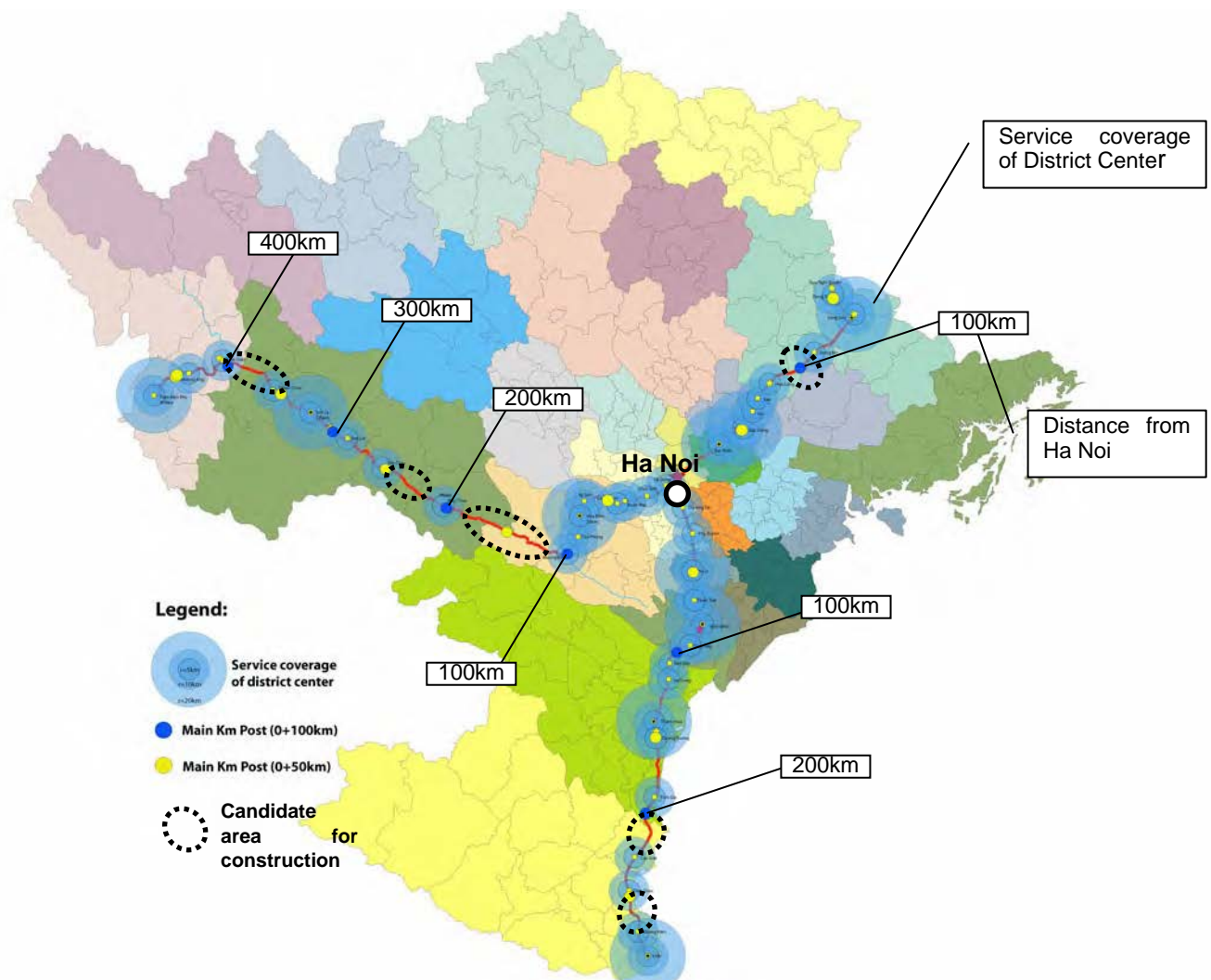
Locations of Michinoeki are proposed based on the criteria mentioned above.

### 2.3.2.1 Proposed Locations in Northern Vietnam

#### (1) Locations based on some criteria

##### 1) Adoption of <criteria-1>Break time interval / <criteria-3>Land Use

According to the criteria-1, the location interval should meet with minimum resting interval and should avoid existing principal city areas such as district center and provincial center, the area shown below can be the selected candidate area based on the criteria-1.



**Figure 2.3.3 Candidate Area for Construction of Michinoeki Selected in the Light of Criteria 1 and 3**

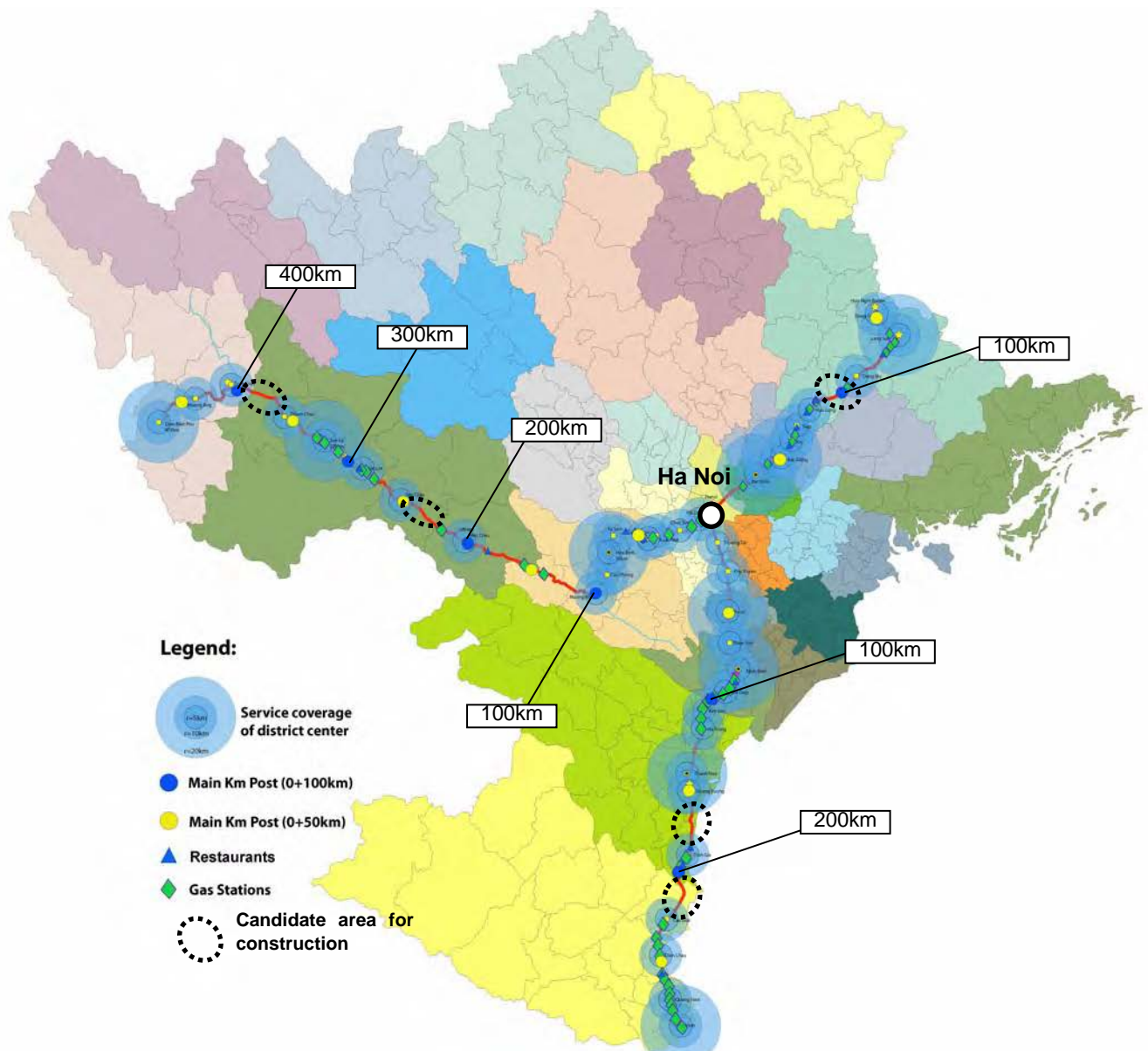
Source: JICA Study Team

Note: Restaurants and Gas Stations shown above is the facility of which area is more than 1,000 m<sup>2</sup>

## 2) Adoption of <Criteria-4>Coexistence with existing similar facilities

In addition, from the viewpoint of guaranteeing the function of existing similar facilities, two approaches can be applicable to select candidate sites.

One approach is that areas near existing similar facilities should not be candidate sites from the viewpoint of avoidance of conflict of interests against them. Based on this approach, the candidate area of construction of Michinoeki is selected as follows;



**Figure 2.3.4 Candidate Area for Construction of Michinoeki Selected in the Light of Criteria 1, 3 and 4**

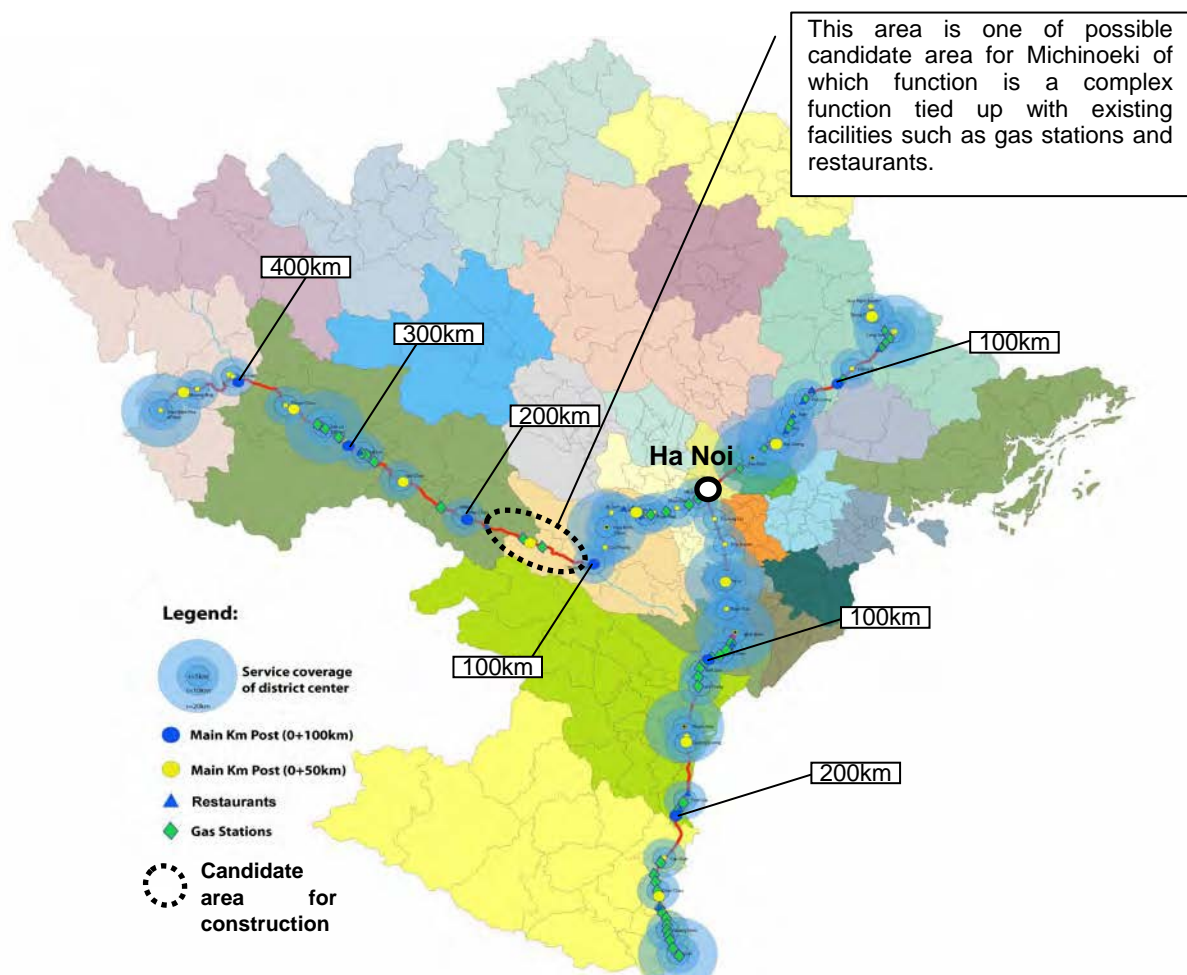
Source: JICA Study Team

Note: Restaurants and Gas Stations shown above is the facility of which area is more than 1,000 m<sup>2</sup>



Another approach is to carry forward the planning of Michinoeki which has complex function tied up with existing facilities and to develop Michinoeki nearby the area of existing facilities. Based on this approach, Michinoeki is settled next to existing facilities and provides services which are not provided at existing facilities, then the new facility is hoped to provide additional functions other than before and to meet more needs of people.

Of course, when adopting this approach, an agreement of tie-up with the owner of the existing facility is indispensable. In such case, role sharing is needed such that existing facilities provide commercial services such as meal provision service, souvenir sales service, while Michinoeki provides public services such as traffic safety and regional development related services.



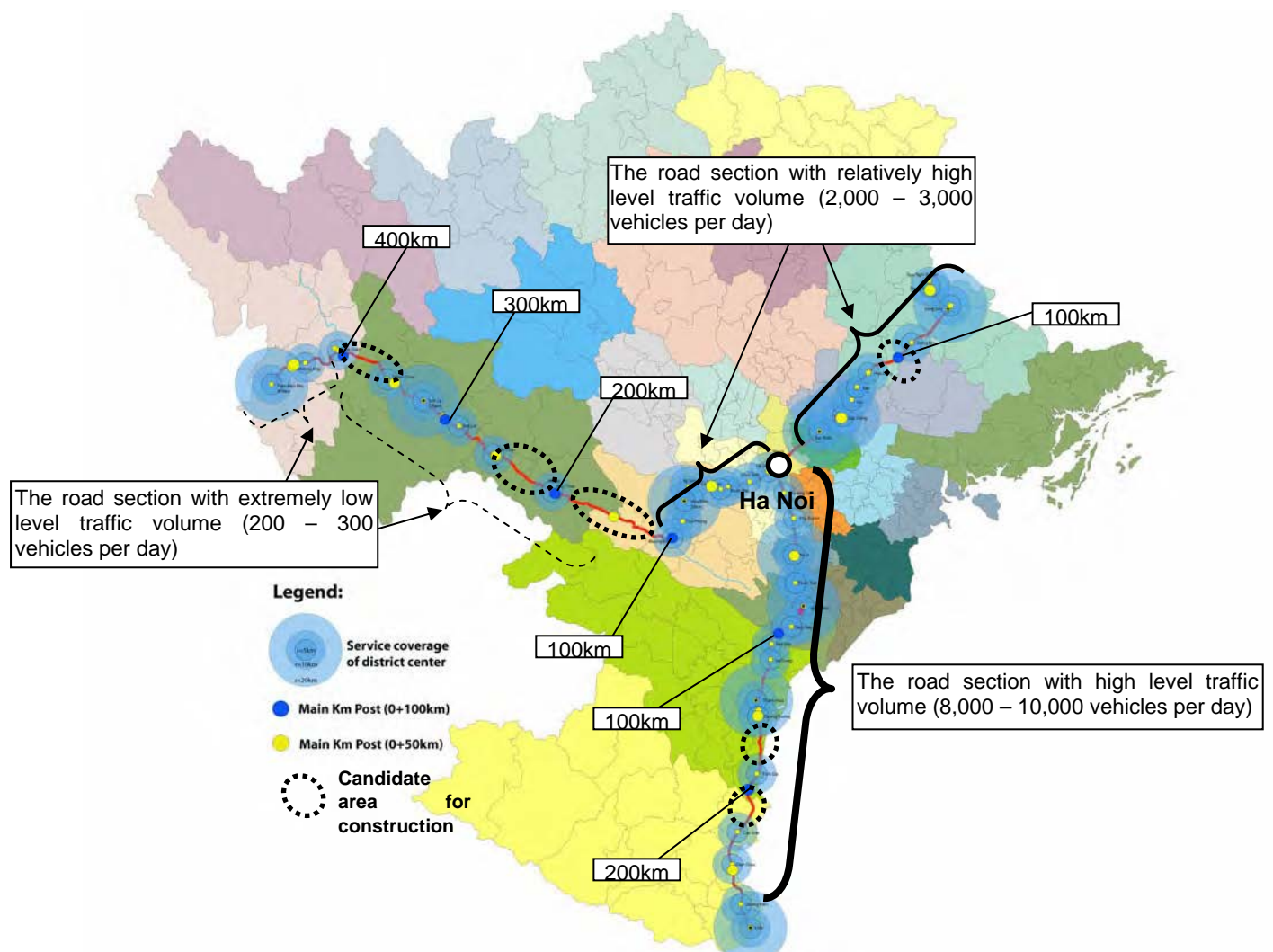
**Figure 2.3.5 Candidate Area for Construction of Michinoeki Selected in the Light of Criteria 1, 3 and 4**

Source: JICA Study Team

Note: Restaurants and Gas Stations shown above is the facility of which area is more than 1,000 m<sup>2</sup>

### 3) Adoption of <criteria-2>Traffic Volume

From the viewpoint of ensuring the project revenue of Michinoeki, the section from Ha Noi to Vinh at National Highway NO 1, which traffic volume is 8,000~10,000cars/day, is appropriate target road of Michinoeki. However, it can be said that the facility may conflict bitterly with existing private commercial facilities. At the road like this, the facility should be planned as the complex facility which is tied up with existing facility, rather than taking an approach to settle the facility at service blank area. On the other hand, the area from Hoa Binh to the west, the traffic volume is relatively low and may be difficult to get big enough commercial revenue. However, in the area along such roads, there are few private commercial facilities, and are the blank area for services to the road users. According to this situation, it is important to plan to maintain Michinoeki in minimum and appropriate size to meet small commercial revenue.



**Figure 2.3.6 Feature of Traffic Volume on the Objective Road Sections**

Source: JICA Study Team

#### **4) Adoption of <criteria-5>Accessibility**

As one of criteria for selection of locations of Michinoeki, accessibility should be carefully considered. This criterion includes consideration of crossing of main routes, T- intersections, and points where the plural traffic lines crossing with each other from various directions.

#### **5) Adoption of <criteria-6>Needs of the area**

As the last criteria for selection of location of Michinoeki, the criteria concerning human factors such as eagerness of the local people nearby the candidate site and presence of area leader should be carefully examined.

#### **6) Selection of candidate construction area**

Candidate areas for construction of Michinoeki in northern region were hypothetically selected based on the area selection criteria. General idea of the candidate area selection can be given as follows;

##### **a. Target area selection in Ha Noi-Vinh section on Highway No.1**

Target areas are selected. The first area is located in Ninh Binh province and it is one of the Pilot Project sites, which is 100km far from Ha Noi. The second area is located in between Thanh Hoa province and Vinh Province, which is approximately 250 km far from Ha Noi.

##### **b. Target area selection in Ha Noi-Lang Son section on Highway No.1**

3 target areas are selected. The first area is located in Bac Giang province and it is one of the Pilot Project sites, which is approximately 50km far from Ha Noi. The second area is located in Lang Son, which is 100km far from Ha Noi. And the third area is located in the Vietnam China border area, which is approximately 150km far from Ha Noi. The third area can be selected as an alternative candidate to the second area.

##### **c. Target area selection in Ha Noi-Dien Bien Phu section on Highway No.6**

3 target areas are selected. The first area is located in Hoa Binh province and it is one of the Pilot Project sites, which is approximately 100km far from Ha Noi. The second area is in Moc Chau area, which is approximately 200km far from Ha Noi. The third area is located in between Son La and Dien Bien Phu, which is approximately 400 km far from Ha Noi.

## (2) Proposed Locations and Identification of types for Michinoeki

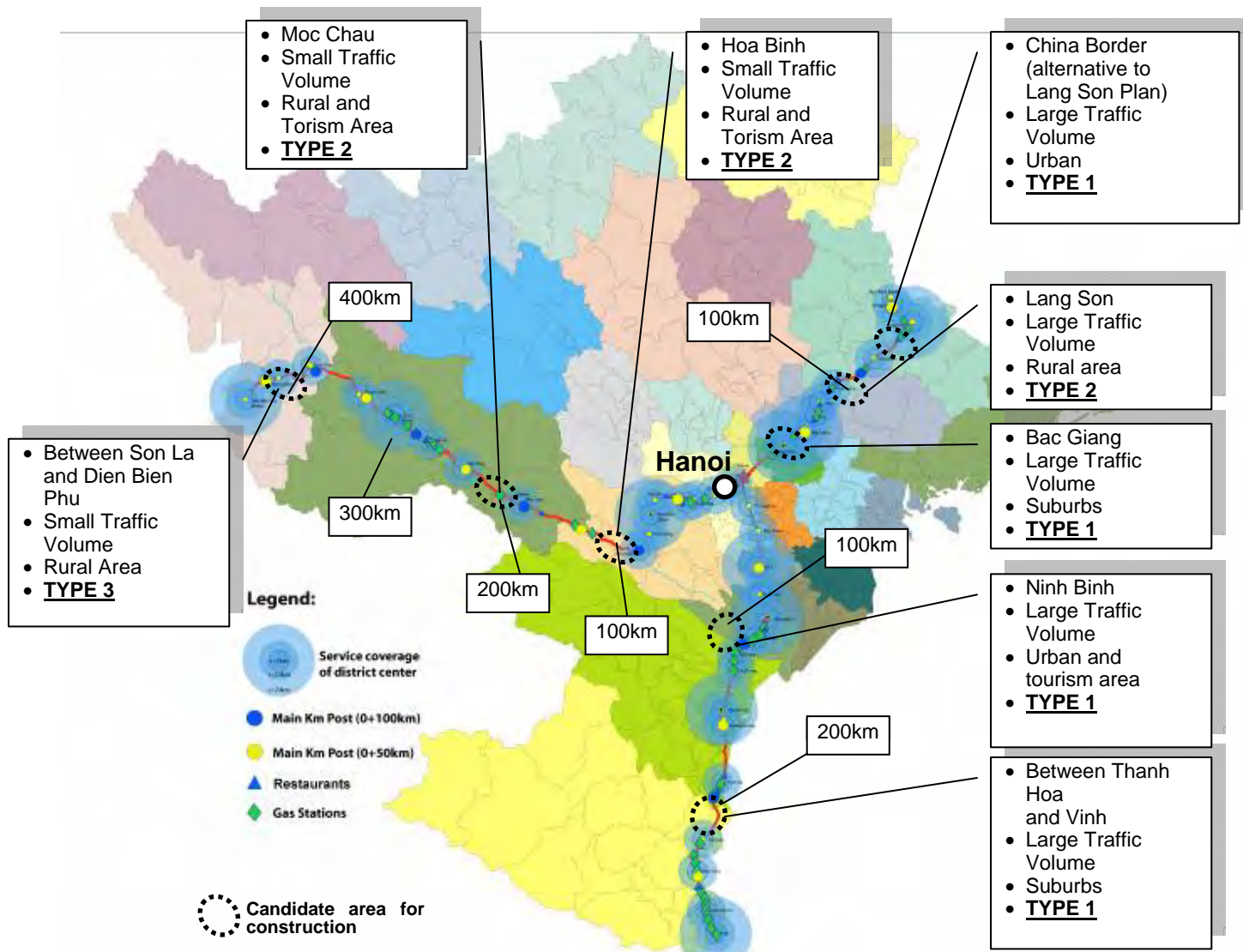
Hypothetically selected candidate areas as shown in previous section can be characterized in terms of road, road traffic volume and condition of roadside area as follows:

**Table 2.3.2 Classification of Selected Candidate Areas**

Candidate Area	Target Road	Condition of Road Traffic Volume	Condition of Roadside Area	Corresponding Type
Ha Noi-Vinh section on Highway No.1				
Ninh Binh	NH No.1	Large (more than 10,000 vehicles per day)	Urban and Tourism Area	TYPE 1
Between Thanh Hoa and Vinh	NH No.1	Large (more than 10,000 vehicles per day)	Suburbs	TYPE 1
Ha Noi-Lang Son section on Highway No.1				
Bac Giang	NH No.1	Large (approx. 3,000 vehicles per day)	Suburbs	TYPE 1
Lang Son	NH No.1	Large (approx. 2,500 vehicles per day)	Rural Area	TYPE 2
Vietnam China border area	NH No.1	Large (approx. 2,500 vehicles per day)	Urban	TYPE 1
Ha Noi-Dien Bien Phu section on Highway No.6 and No.279				
Hoa Binh	NH No.6	Small (less than 1,000 vehicles per day)	Rural and Tourism Area	TYPE 2
Moc Chau	NH No.6	Small (less than 1,000 vehicles per day)	Rural and Tourism Area	TYPE 2
Between Son La and Dien Bien Phu	NH No.279	Small (less than 200 vehicles per day)	Rural Area	TYPE 3

Source: JICA Study Team

Based on selected candidate areas and above-mentioned types and functions for Michinoeki, the specific proposed types of Michinoeki at the selected area are shown below.



**Figure 2.3.7 Proposed Area for Construction of Michinoeki and Their Type**

Source: JICA Study Team

Note: Restaurants and Gas Stations shown above is the facility of which area is more than 1,000 square meter

### 2.3.2.2 Proposed Locations in Central Vietnam

#### (1) Locations based on some criteria

##### 1) Adoption of <criteria-1>Break time interval

According to the criteria-1, the location interval should meet with minimum resting interval and should avoid existing principal city areas such as district center and provincial center, the area shown below can be the selected candidate area based on the criteria-1.

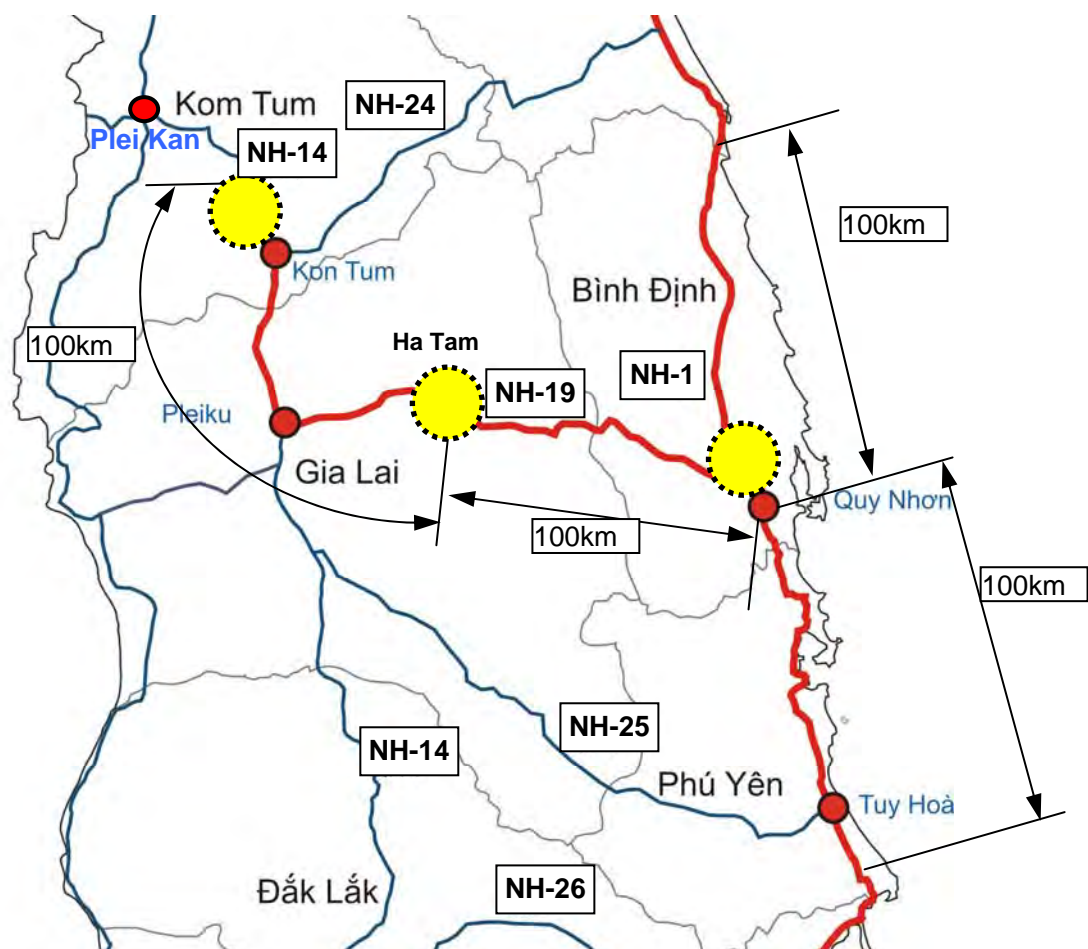


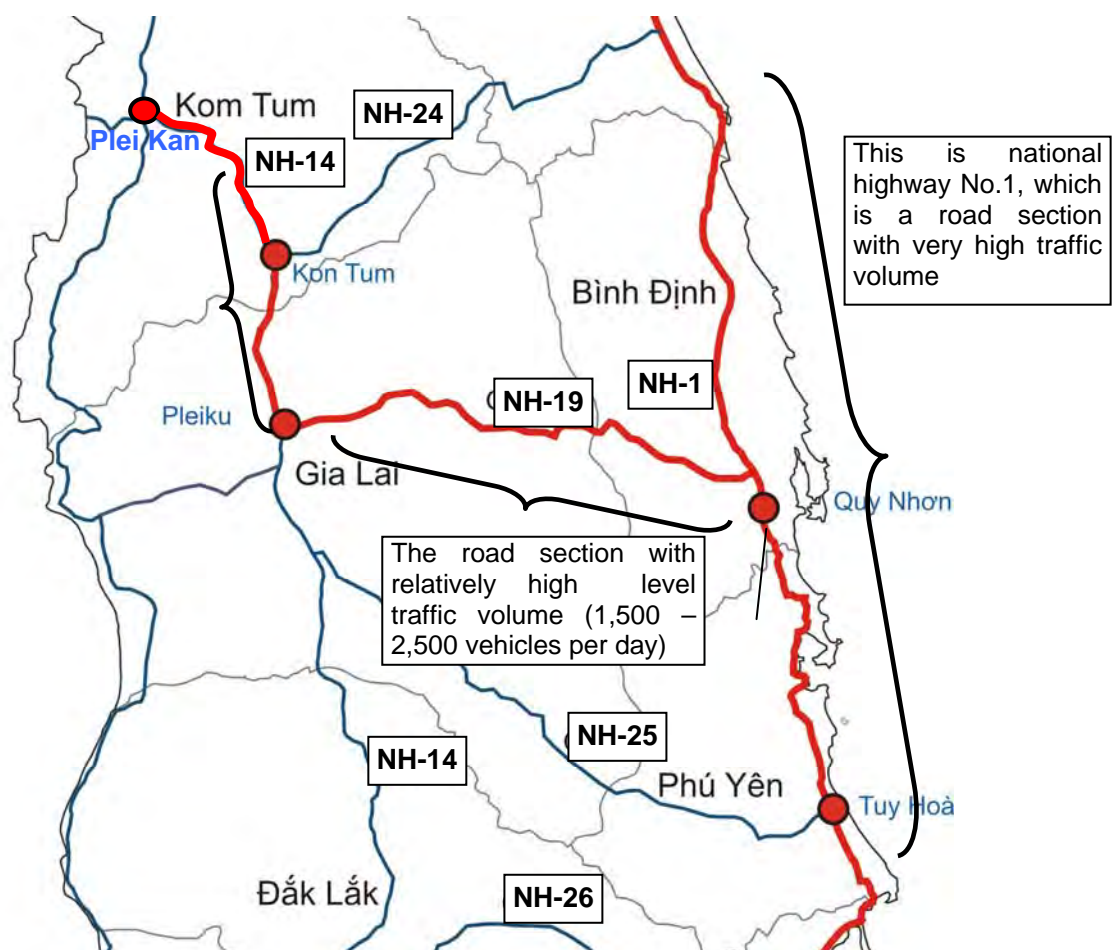
Figure 2.3.8 Candidate Area for Construction of Michinoeki Selected in the Light of Criteria 1

Source: JICA Study Team



## 2) Adoption of <criteria-2>Traffic Volume

From the viewpoint of ensuring the project revenue of Michinoeki, the section National Highway NO 1, which traffic volume is 8,000~10,000cars/day, is appropriate target road of Michinoeki. However, it can be said that the facility may conflict bitterly with existing private commercial facilities. At the road like this, the facility should be planned as the complex facility which is tied up with existing facility, rather than taking an approach to settle the facility at service blank area. On the other hand, the area from Pleiku to the north, the traffic volume is relatively low and may be difficult to get big enough commercial revenue. It is important to plan to maintain Michinoeki in minimum and appropriate size to meet small commercial revenue.



**Figure 2.3.9 Feature of Traffic Volume on the Objective Road Sections**

Source: JICA Study Team

**3) Adoption of <criteria-5>Accessibility**

As one of criteria for selection of locations of Michinoeki, accessibility should be carefully considered. This criterion includes consideration of crossing of main routes, T- intersections, and points where the plural traffic lines crossing with each other from various directions.

**4) Adoption of <criteria-6>Needs of the area**

As the last criteria for selection of location of Michinoeki, the criteria concerning human factors such as eagerness of the local people nearby the candidate site and presence of area leader should be carefully examined.



## (2) Proposed Locations and Identification of types for Michinoeki

Based on selected candidate areas and above-mentioned types and functions for Michinoeki, the specific proposed types of Michinoeki at the selected area are shown below.

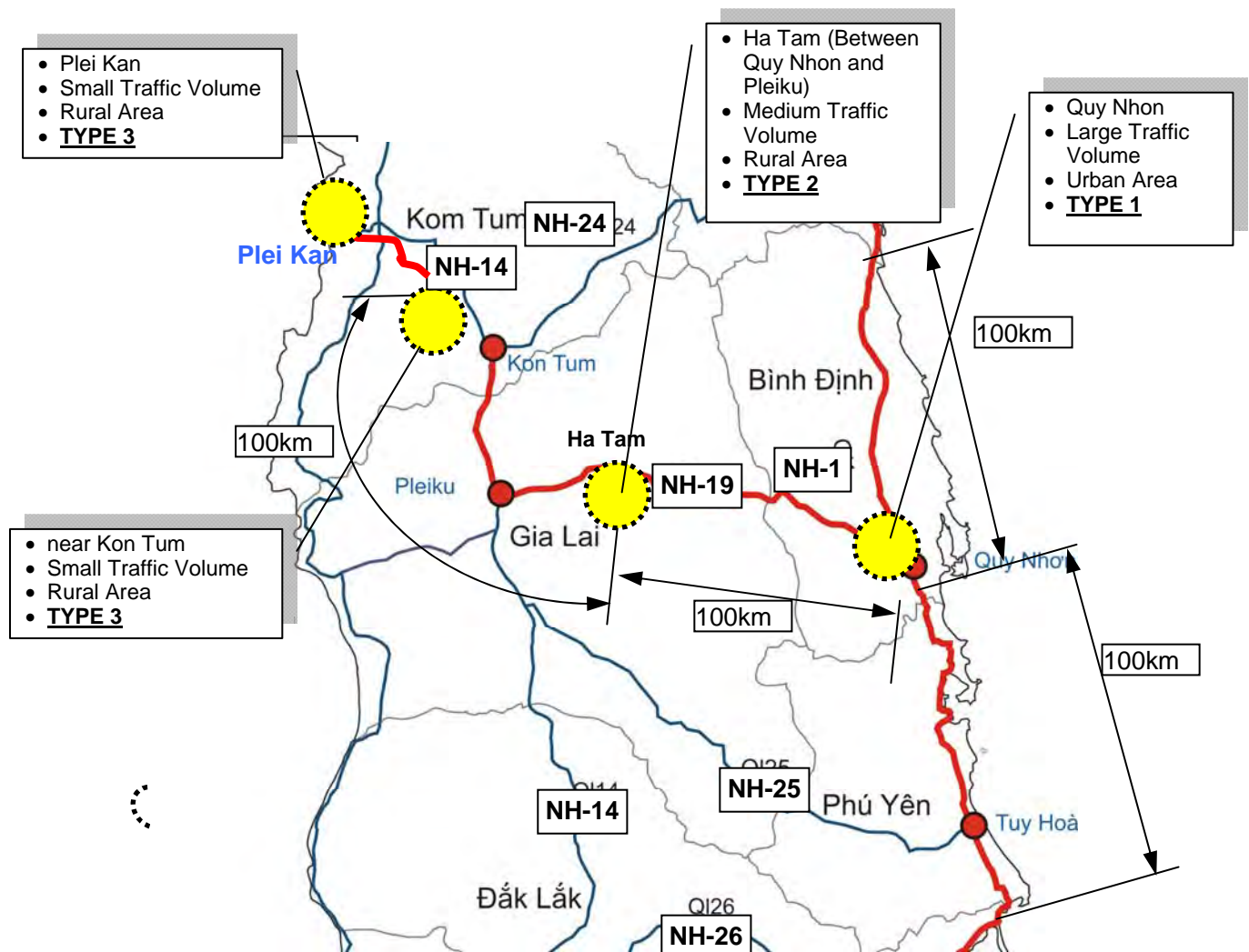


Figure 2.3.10 Proposed Area for Construction of Michinoeki and Their Type

Table 2.3.3 Classification of Selected Candidate Areas

Candidate Area	Target Road	Condition of Road Traffic Volume	Condition of Roadside Area	Corresponding Type
Quy Nhon-Pleiku section on Highway No.19				
Quy Nhon	NH No.1 and No.19	Large (more than 10,000 vehicles per day)	Urban Area	TYPE 1
Ha Tam (between Quy Nhon and Pleiku)	NH No.19	Medium (approx. 2,000 vehicles per day)	Rural Area	TYPE 2
Pleiku –Kon Tum section on Highway No.14				
near Kon Tum	NH No.14	Small (approx. 1,300 vehicles per day)	Rural Area	TYPE 3

Source: JICA Study Team

### 2.3.2.3 Proposed Locations in Southern Vietnam

#### (1) Locations based on some criteria

##### 1) Adoption of <criteria-1>Break time interval

According to the criteria-1, the location interval should meet with minimum resting interval and should avoid existing principal city areas such as district center and provincial center, the area shown below can be the selected candidate area based on the criteria-1.

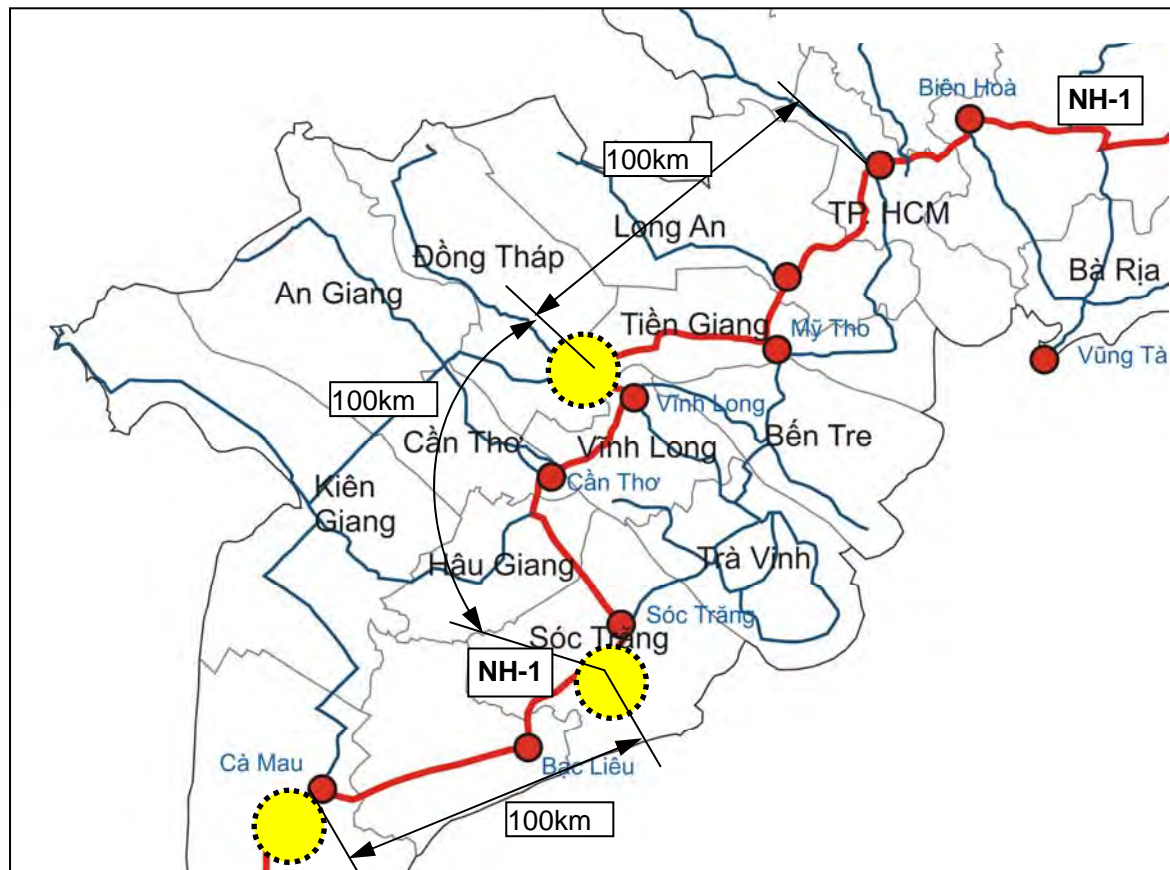
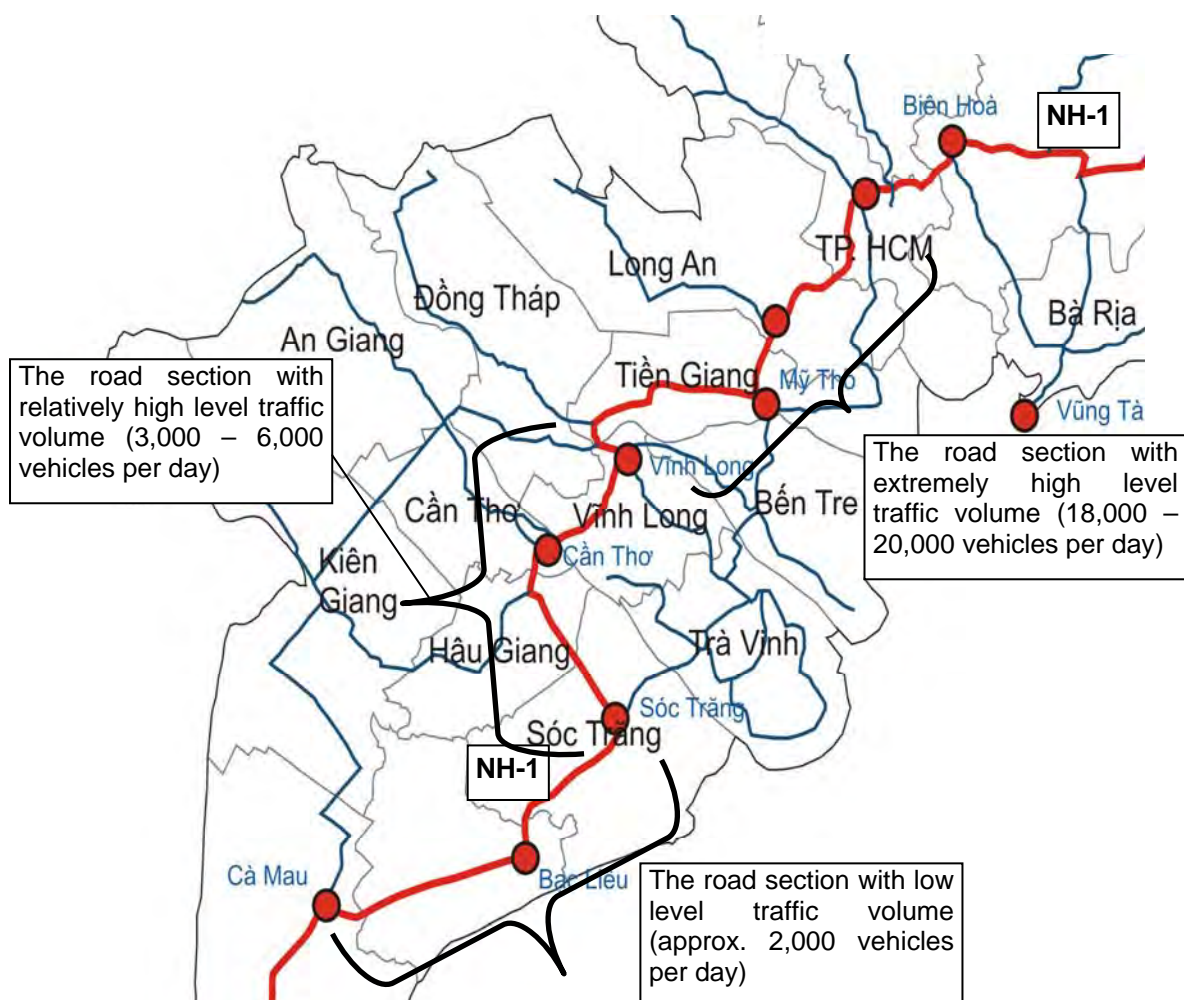


Figure 2.3.11 Candidate Area for Construction of Michinoeki Selected in the Light of Criteria 1

Source: JICA Study Team

## 2) Adoption of <criteria-2>Traffic Volume

From the viewpoint of ensuring the project revenue of Michinoeki, the section from Ha Noi to Vinh at National Highway NO 1, which traffic volume is 8,000~10,000cars/day, is appropriate target road of Michinoeki. However, it can be said that the facility may conflict bitterly with existing private commercial facilities. At the road like this, the facility should be planned as the complex facility which is tied up with existing facility, rather than taking an approach to settle the facility at service blank area. On the other hand, the area from Hoa Binh to the west, the traffic volume is relatively low and may be difficult to get big enough commercial revenue. However, in the area along such roads, there are few private commercial facilities, and are the blank area for services to the road users. According to this situation, it is important to plan to maintain Michinoeki in minimum and appropriate size to meet small commercial revenue.



**Figure 2.3.12 Feature of Traffic Volume on the Objective Road Sections**

Source: JICA Study Team

**3) Adoption of <criteria-5>Accessibility**

As one of criteria for selection of locations of Michinoeki, accessibility should be carefully considered. This criterion includes consideration of crossing of main routes, T- intersections, and points where the plural traffic lines crossing with each other from various directions.

**4) Adoption of <criteria-6>Needs of the area**

As the last criteria for selection of location of Michinoeki, the criteria concerning human factors such as eagerness of the local people nearby the candidate site and presence of area leader should be carefully examined.

## (2) Proposed Locations and Identification of types for Michinoeki

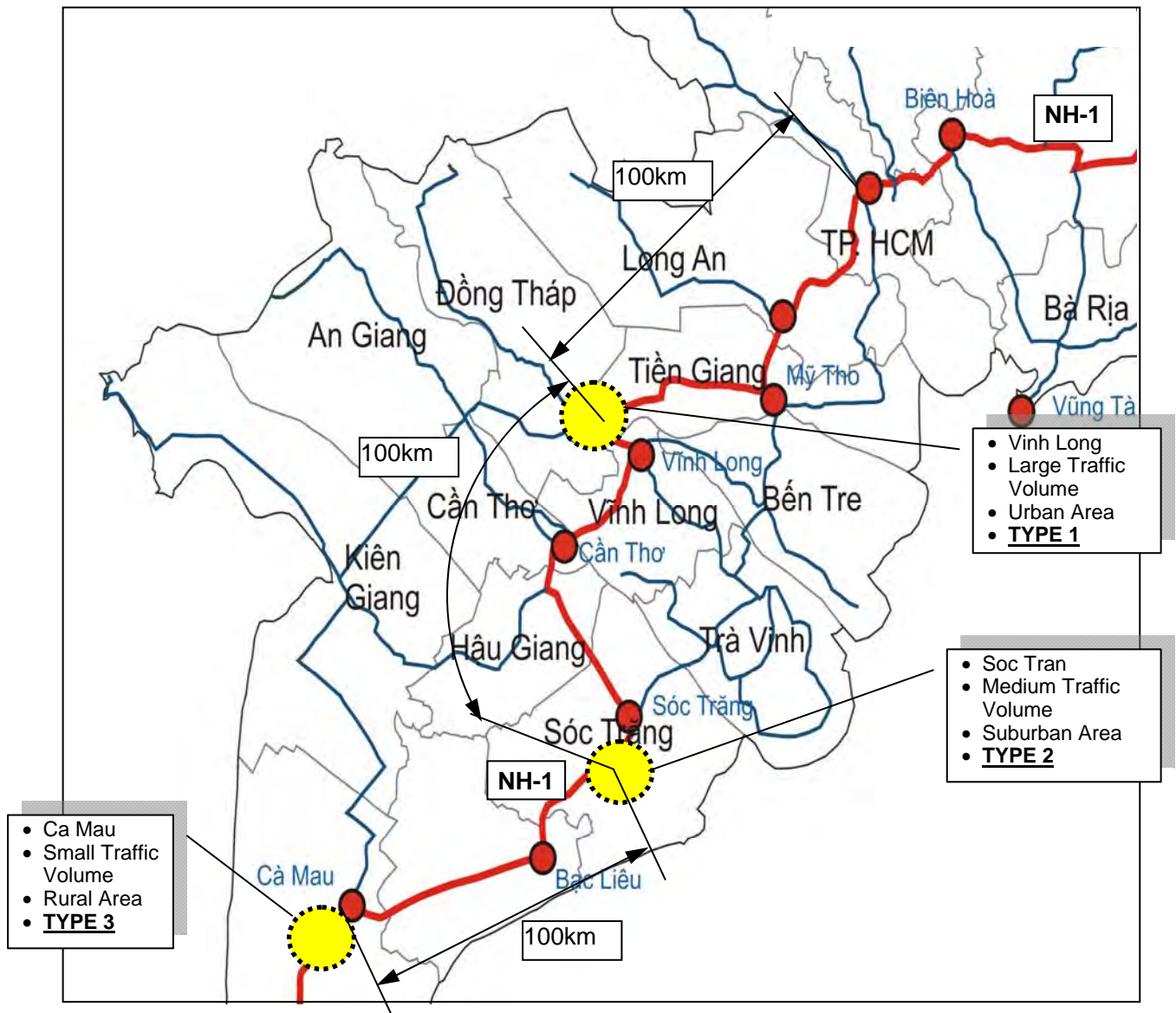
Hypothetically selected candidate areas as shown in previous section can be characterized in terms of road, road traffic volume and condition of roadside area as follows:

**Table 2.3.4 Classification of Selected Candidate Areas**

Candidate Area	Target Road	Condition of Road Traffic Volume	Condition of Roadside Area	Corresponding Type
HCMC-Vinh Long section on Highway No.1				
Vinh Long	NH No.1	Large (more than 20,000 vehicles per day)	Urban and Tourism Area	TYPE 1
Vinh Long –Soc Trang section on Highway No.1				
Soc Trang	NH No.1	Medium (approx. 5,000 vehicles per day)	Suburbs	TYPE 2
Soc Trang –Ca Mau section on Highway No.1				
Ca Mau	NH No.1	Small (approx. 2,000 vehicles per day)	Rural Area	TYPE 3

Source: JICA Study Team

Based on selected candidate areas and above-mentioned types and functions for Michinoeki, the specific proposed types of Michinoeki at the selected area are shown below.



**Figure 2.3.13 Proposed Area for Construction of Michinoeki and Their Type**

Source: JICA Study Team



## 2.4 STEP1.4: Facility Design

### 2.4.1 Classification of Facility

According to provision of services, facilities shown above are classified into three types; Public Service Provision Type, Local Development Promotion Type, and Commercial Service Provision Type. For instance, traffic safety campaigns and emergency life guard services are provided as Public Service Provision Type. And services such as sales of local specialties, and services provided at local event park, are regional development services which both of supplier body and consumer body are local people. In this document, facilities providing three kinds of services as mentioned above can be called as “Core Facility”, “Core-Plus Facility”, and “Non-Core Facility” respectively. However, it should be noted that Non-Core Facility is a private facility which is to be planned, constructed and operated by pure private enterprises. The features of each facility are as follows.

**Table 2.4.1 Classification of Facilities and Characteristics**

Classification of Facility		Characteristic
Michinoeki	Core Facility	A facility which serves as Public Service Provision Type. The assumed main planning, construction, operation and management body of the said facility is a local authority and road administrator.
	Core-Plus Facility	A facility which serves as Local Development Promotion Type. The assumed main planning, construction, operation and management body of the said facility is a local authority and a local community.
Other Facility	Non-Core Facility (Private Facility)	A facility which serves as Commercial Service Provision Type. The assumed main planning, construction, operation and management body of the said facility is a private enterprise.

Examples of detailed facilities corresponding to the basic functions and classification of facility are shown as follows;

**Table 2.4.2 Example of Facilities Corresponding to Basic Functions and Classified Facility**

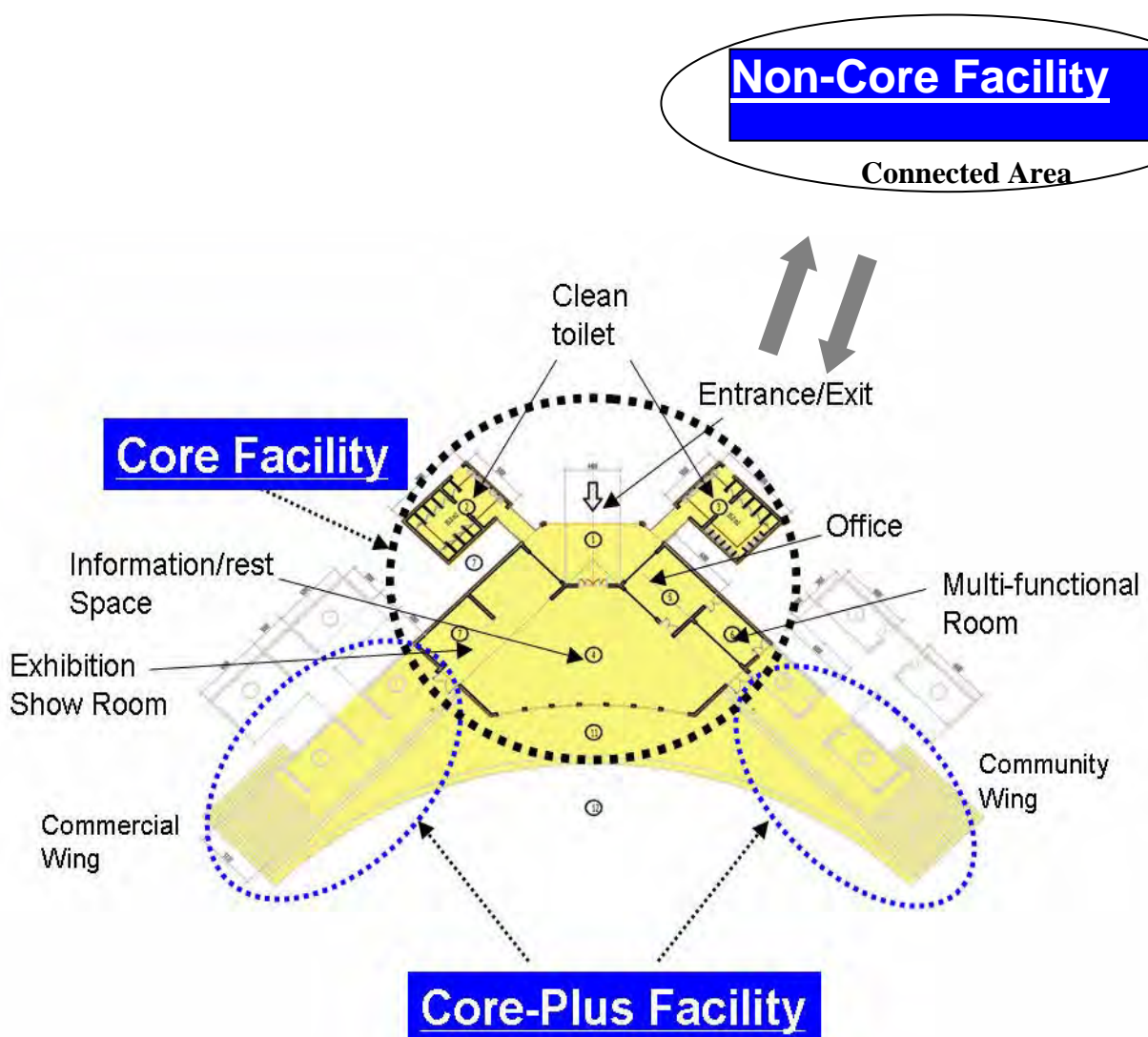
<div>Classification of Facility</div> <div>Basic Functions</div>	Core Facility (Public Service Provision Type)	Core-Plus Facility (Local Development Promotion Type)	Non-Core Facility (Commercial Service Provision Type)
Rest/Relaxation Service Provision	<ul style="list-style-type: none"> <li>• Parking lot</li> <li>• Rest/Relaxation space</li> <li>• Washing place</li> <li>• Clean toilet</li> <li>• Others</li> </ul>	N/A	<ul style="list-style-type: none"> <li>• Restaurant/Café</li> <li>• Retail shop</li> <li>• Others</li> </ul>
Information Provision	<ul style="list-style-type: none"> <li>• Road/traffic condition information provision</li> <li>• Local historical/cultural /tourism/event guide information provision</li> <li>• Public telephone</li> <li>• Facility guidance</li> <li>• Others</li> </ul>	N/A	N/A
Road Traffic Management	<ul style="list-style-type: none"> <li>• Venue for traffic safety campaign</li> <li>• Rapid response system to traffic accident</li> <li>• First aid facility</li> <li>• Others</li> </ul>	N/A	N/A
Local Socio-economic Development Promotion	N/A	<ul style="list-style-type: none"> <li>• Sales/exhibition of local products</li> <li>• Venue for local event</li> <li>• Community gathering space</li> <li>• Others</li> </ul>	N/A
Land Mark	<ul style="list-style-type: none"> <li>• Local symbolic Tower</li> <li>• Others</li> </ul>	N/A	N/A

Source: JICA Study Team



### 2.4.2 Facility layout

The enterprising bodies differ with each other depending on types of facilities. Major division are these three; local authority、private enterprise、and local community. As previously discussed, a facility which a local authority manages and maintains is called as “Core Facility”, a facility which a local community manages and maintains is called as “Core-Plus Facility”, and a facility which a private enterprise manages and maintains is called as “Non-Core Facility”. Basic layout of each of Core, Core Plus, and Non-Core facility are shown below. In addition, some of Non-Core facilities are settled next to Michinoeki area and are planned, maintained and managed by private enterprises individually. Therefore some of them have no connections to Core- or Core-Plus facilities.



**Figure.2.4.1 Basic Facility Layout Pattern**

Source: JICA Study Team

## 2.5 STEP1.5: Social and Environmental Impact Assessment

### 2.5.1 Overview of Impact of Michinoeki

Michinoeki is not only a resting space along the national road network. But its unique characteristics lie in its local economic vitalizing function by selling local products and promoting tourism in surrounding area. Meanwhile, increasing visitors to Michinoeki might cause negative impacts on the located site such as impacts on natural environment, and competition with existing similar facilities.

With these characteristics of Michinoeki mentioned above, we can anticipate, in general, both positive and negative impacts may arise in social, economic, traffic, and environmental aspects described in following Table.

It is necessary to recognize that this table shows expected general impacts of Michinoeki but real impacts arising from real Michinoeki project may change depending on its location, function and size etc.

**Table 2.5.1 Overview of Michinoeki Impacts in Different Aspects**

Aspect	Expected Impacts
Traffic	<ul style="list-style-type: none"> <li>• Michinoeki may have positive impacts on safety, comfortableness and convenience of road traffic due to comfortable resting space, useful road traffic information, and road traffic information provided by Michinoeki</li> <li>• Michinoeki may have negative impacts on road traffic condition in surrounding area due to traffic concentration to the Michinoeki</li> </ul>
Economy	<ul style="list-style-type: none"> <li>• Michinoeki may have positive impacts on local employment, income generation, and economic development by sales of local products, employment of its staff and tourism promotion in surrounding area</li> <li>• Michinoeki may have negative impacts on local economy if it overturns existing similar facilities and if local governments have to subsidize its operation and running costs due to its poor financial performance</li> </ul>
Social	<ul style="list-style-type: none"> <li>• Michinoeki may have positive impact on local society through, for example, promotion of social participation of women, income generation of the poor or ethnic minority, raising awareness for hygiene, improvement of information accessibility, and increasing of training opportunity.</li> <li>• Michinoeki may have negative impacts on local society if it causes loss of livelihood measures by resettlement or land expropriation, conflicts within the area, and degradation of cultural and historical heritages.</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Michinoeki may have positive impacts on landscape improvement</li> <li>• Michinoeki may have negative impacts through degradation of ecology, soil erosion, noise, and vibration during its construction, and waste water and solid waste during its operation period</li> </ul>

Source: JICA Study Team

### 2.5.2 Details of Impact and Affected Groups

Aforementioned negative and positive impacts associated with Michinoeki development in terms of traffic, economic, social and environmental aspects do not evenly affect on every stakeholder. Rather, these impacts will create different degree of impacts on different stakeholders.

Stakeholders related to Michinoeki can be categorized into four major groups shown below.

**Table 2.5.2 Major Stakeholder Groups Related to Michinoeki and Their Characteristics**

Stakeholder group	Brief description
Road users	<ul style="list-style-type: none"> <li>• Driver, bus passengers, private car passengers, motorbike drivers etc.</li> </ul>
Michinoeki operating entities and service providers	<ul style="list-style-type: none"> <li>• Michinoeki operating entities, tenants (restaurant, goods seller), bus operators, local products (agricultural products and handicrafts) producers etc.</li> </ul>
Neighboring residents and communities	<ul style="list-style-type: none"> <li>• Neighboring tourism areas, businesses (fuel station, restaurant etc.), local products (agricultural products and handicrafts) producers, neighboring residents etc.</li> </ul>
Local governments	<ul style="list-style-type: none"> <li>• Commune PCs, district PCs etc.</li> </ul>

### (3) Basic Framework of Impact Evaluation

As mentioned above, it is necessary to monitor and evaluate impacts of Michinoeki development projects from planning stage to operating stage via construction stage of Michinoeki. The objective of impact evaluation can be summarized as follows.

- To recognize and evaluate current situation and issues of local environment and society in order to maximize positive impacts and minimize negative impacts of Michinoeki development to the local environment and society
- To monitor and evaluate the impacts of Michinoeki development in order to improve Michinoeki operation & management and future planning of Michinoeki

In order to achieve these objectives, impact evaluation can be divided into two major categories i.e. (1) *ex-ante* evaluation (from planning, designing, construction, until beginning of operating stage), (2) *ex-post* evaluation (operating stage). Overview of each category of impact evaluation is summarized in the table on the following page.

**Table 2.5.3 Overview of Impact Evaluation in Each Step of Michinoeki Development**

Step	Overview
Ex-ante evaluation (from planning, designing, construction, until beginning of operating stage)	<ul style="list-style-type: none"> <li>• To study on social, economic, traffic and environmental baseline of Michinoeki planned area as well as possible positive and negative impacts to be caused by planned Michinoeki in order to minimize negative impacts and maximize positive impacts of Michinoeki to local environment and society</li> <li>• To elaborate mitigation measures for expected negative impacts, to reflect these mitigation measures to Michinoeki development plan and design, and to elaborate monitoring plan</li> <li>• During construction and beginning of operating period, to monitor whether mitigation measures elaborated at planning &amp; designing stage are properly implemented</li> <li>• To monitor impacts based on the monitoring plan elaborated beforehand and check whether unforeseen issues are arisen or there are any possibility of unexpected problems to be arisen</li> </ul>
Ex-post evaluation (operating stage)	<ul style="list-style-type: none"> <li>• After certain period of the operation, to study on social, economic, traffic and environmental situation of Michinoeki located area and to evaluate both positive and negative impacts quantitatively as much as possible by comparing before and after the Michinoeki development</li> <li>• To utilize result of the impact evaluation for improvement of the Michinoeki operation and planning &amp; operation of other Michinoeki</li> </ul>

### 2.5.3 Ex-ante Impact Evaluation

Important points in *ex-ante* impact evaluation include:

- To grasp baseline;
- To assess positive and negative impact by Michinoeki development taking into account design & operation planning of the Michinoeki; and
- To elaborate mitigation measures for anticipated negative impacts, to reflect those mitigation measures to design and operation plan, and to monitor these impacts (social and environmental consideration)

It should be noted that *ex-ante* impact evaluation is recommended to carry out after the location, scale and activity of the Michinoeki project were at least roughly decided.

The practical methods for *ex-ante* impact evaluation include using checklists, experts' judgment, and quantitative analysis by mathematical models. With its function and scale of Michinoeki, using checklist and experts' judgment together with supplementary surveys are thought to be effective to evaluate impacts of Michinoeki within a limited time and budget.

It is also recommended to select important items out of all the items beforehand (scoping process), because it is time and cost consuming task to evaluate every single item which may not necessarily have significant importance in certain condition. Then, it is recommended to carry out in detailed study for those items selected in the scoping process.

Those items may have either positive or negative impact depending on different conditions. Items which tend to have negative impact and an example of checklist for those negative items and an example of monitoring plan are shown in the following Tables.

In parallel with the planning and designing process of Michinoeki project, it is necessary to reflect mitigation measures to Michinoeki plan and design in order minimize anticipated negative impacts. At the same time, it is also very important to elaborate a monitoring plan and carry out monitoring activities for important times from construction period until the beginning of the operation period in order to check whether the mitigation measures are properly implemented, any unforeseen problems are arisen, and there is any possibility for any unforeseen problems to be arisen. Considering the scale and facility of Michinoeki, it is likely most of the significant negative impacts can be avoided or minimized by using these tools at the time of planning.

**Table 2.5.4 Check List of Evaluating Negative Impacts**

Element	Check Item	Yes/ No	Reason
Road traffic in surrounding area	<ul style="list-style-type: none"> <li>Is the Michinoeki properly planned regarding its site selection, layout plan, and entrance road etc. so that it does not cause increase of traffic jam or traffic accidents?</li> </ul>		
Similar businesses /facilities in surrounding area	<ul style="list-style-type: none"> <li>Will the Michinoeki plan cause serious negative impact to similar businesses and facilities in surrounding area?</li> <li>Is the Michinoeki plan properly disclosed to these people? Are transparency and equity secured in the process of planning?</li> </ul>		
Gender, poverty, ethnic minority	<ul style="list-style-type: none"> <li>Does socially vulnerable groups such as women, poor, ethnic minorities participate in planning process of the Michinoeki and are their rights properly secured?</li> </ul>		
Resettlement, land expropriation	<ul style="list-style-type: none"> <li>Is there any involuntarily resettlement? Was the land expropriation properly compensated?</li> <li>Doesn't the land expropriation cause serious impacts for the livelihood of the people?</li> </ul>		
Conflict	<ul style="list-style-type: none"> <li>Is designing and planning process of the facility and management transparent and fair enough?</li> <li>Won't the planed Michinoeki cause serious conflict in the area?</li> </ul>		
Cultural and historical heritage, traditional value	<ul style="list-style-type: none"> <li>Won't the planned Michinoeki seriously affect on cultural and historical heritages, and traditional values in the region?</li> </ul>		
Water quality	<ul style="list-style-type: none"> <li>Is an appropriate waste water treatment facility included in the facility design and management plan?</li> <li>Is an appropriate water source secured?</li> </ul>		
Air quality	<ul style="list-style-type: none"> <li>Will the dust and other pollutants during the construction and operation be properly managed?</li> </ul>		
Noise and vibration	<ul style="list-style-type: none"> <li>Will the noise and vibration during the construction and operation be properly managed?</li> </ul>		

**Table 2.5.4 Check List of Evaluating Negative Impacts (Continued)**

Element	Check Item	Yes/ No	Reason
Topography and soil	• Will the soil erosion and water flow be properly managed during land filling work?		
Species and ecology	• Is there any endangered species or ecology in surrounding area?		
Landscape	• Does the facility design fit the surrounding landscape?		
Solid waste	• Does a proper solid waste management plan included in facility and management plan?		
Odor	• Does a proper management plan of odor sources such as toilet, waste water and solid waste be included in facility design and management plan?		

**Table 2.5.5 Examples of Mitigation Measures and Monitoring Items**

Element	Mitigation measures	Monitoring items(method)
Road traffic in surrounding area	• Appropriate site selection, appropriate entrance road design and layout plan	• Traffic condition, number of accidents (statistics, interview)
Similar businesses / facilities in surrounding area	• Ensuring participation of people in similar businesses and facilities in surrounding area from the beginning of facility design and management planning	• State of the similar facilities and their views (interview, questionnaire)
Gender, poverty, ethnic minority	• Ensuring participation from the planning stage and implement necessary measures	• Degree of the participation and their views (interview, questionnaire)
Resettlement, land expropriation	• Ensuring proper compensation and securing means of livelihood	• State of the compensation, their livelihoods and views (interview, questionnaire)
Conflict	• Ensuring participation from the planning stage and securing transparency and fairness of the process	• Views of stakeholders (interview, questionnaire)
Cultural and historical heritage, traditional value	• Ensuring appropriate measures not impacting on cultural and historical heritages during construction and operation	• State of the conservation of cultural and historical heritages (interview, questionnaire)
Water quality	• Ensuring appropriate water intake and waste water treatment in facility design and management	• State of waste water treatment, quality of waste water (site visit, interview)
Air quality	• Ensuring appropriate measures to secure air quality during construction and operation	• State of air quality (site visit, interview)
Noise and vibration	• Ensuring appropriate measures to prevent noise and vibration during construction and operation	• State of noise and vibration (site visit, interview)
Topography and soil	• Ensuring appropriate measures to prevent soil erosion and flooding during construction and operation	• State of soil erosion and flooding (site visit, interview)

**Table 2.5.5 Examples of Mitigation Measures and Monitoring Items (Continued)**

Element	Mitigation measures	Monitoring items(method)
Species and ecology	<ul style="list-style-type: none"> <li>Avoiding protected areas, areas with endangered species and vulnerable ecology</li> </ul>	<ul style="list-style-type: none"> <li>State of ecology (site visit, interview)</li> </ul>
Landscape	<ul style="list-style-type: none"> <li>Ensuring facility design suitable with surrounding landscape</li> </ul>	<ul style="list-style-type: none"> <li>State of landscape (site visit, interview)</li> </ul>
Solid waste	<ul style="list-style-type: none"> <li>Coordination with waste management authority and including waste management plan in the management plan</li> </ul>	<ul style="list-style-type: none"> <li>State of waste management (site visit, interview)</li> </ul>
Odor	<ul style="list-style-type: none"> <li>Ensuring to include appropriate measures to prevent bad smell from toilets, waste water and solid waste</li> </ul>	<ul style="list-style-type: none"> <li>State of odor (site visit, interview)</li> </ul>

## **2.6 STEP1.6: Financial Aspect**

In this section, we discuss the general idea of the sales revenue, operating cost and economic feasibility for Michinoeki. The estimation of several values was conducted on the basis of the actual condition of Pilot Project.

### **(1) Items of costs and revenues**

The items of costs and revenues of Michinoeki operation can be listed as follows:

#### **1) Items of costs**

- Personnel expenses for employees
- Expenses for expendable supplies
- Expenses for lighting and fuel
- Expenses for facility repair
- Miscellaneous expenses for sales products development (commission fee for external lecturer, expenses for purchasing study materials and so forth)
- Miscellaneous expenses for training for local people
- Expenses for purchasing selling goods (beverages for drink bar, sales goods for Kiyosk, etc.)
- Others

#### **2) Items of revenues**

- Tenant revenue
- Revenue for sales fee
- Revenue coming from selling goods
- Others



## (2) Financial Sources

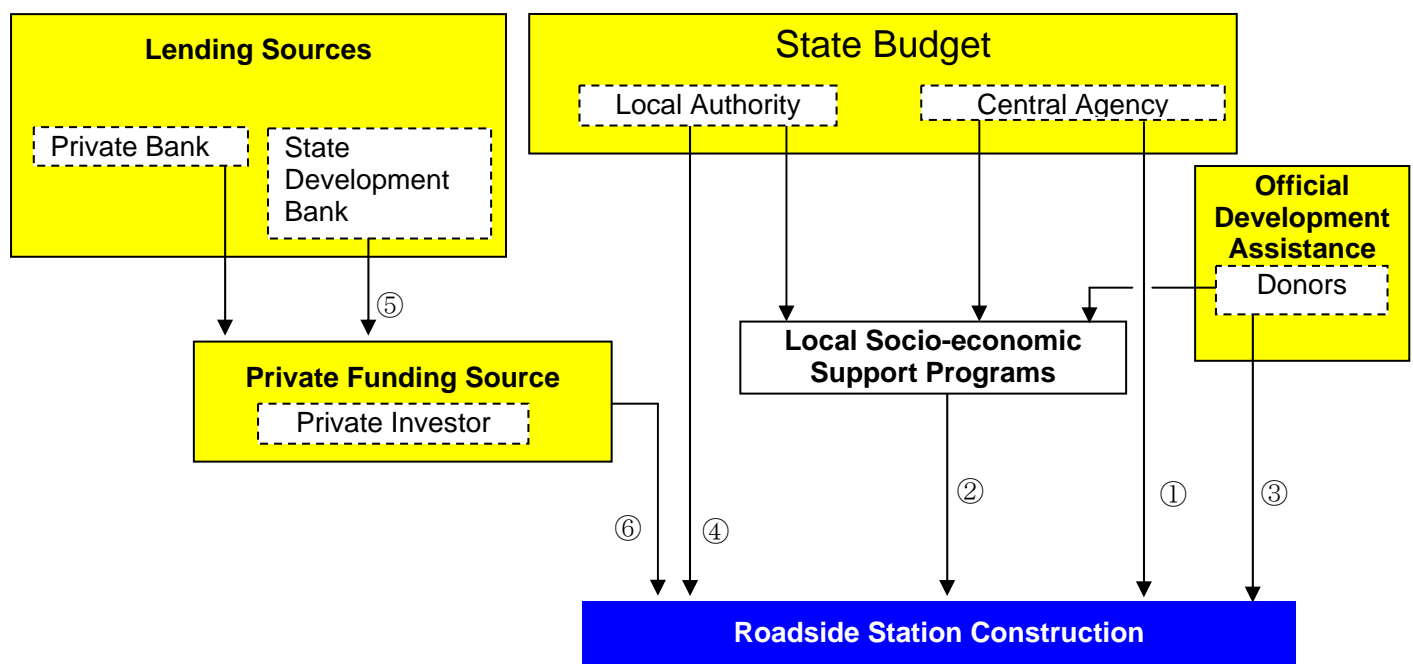
Michinoeki is basically a public facility and its socio-economic benefit would be expected to be large enough for both road users and local community in the roadside areas. However, as discussed previously, Michinoeki can not necessarily acquire large enough revenue to compensate for whole costs of construction as well as operation/management. Therefore financial sources including state budget support should be carefully examined in order to ensure Michinoeki's sustainability in terms of economic and financial dimension.

Financial sources can be identified as follows. Such sources can be identified in construction stage and operation/management stage respectively.

### 1) Construction stage

Six kinds of funding sources can be identified at the stage of construction of the Michinoeki.

- ① Direct allocation of central state budget
- ② Fund allocation via local socio-economic support programs
- ③ Direct allocation of ODA fund
- ④ Direct allocation of local state budget
- ⑤ Lending sources coming from either private bank or state development bank
- ⑥ Private investment fund in case of private body's active involvement



**Figure 2.6.1 Possible Options for Michinoeki Construction Funding Sources**

Source: JICA Study Team

**① Direct allocation of central state budget**

Michinoeki will be stipulated as a road infrastructure in the Law on Land Road Traffic amendment. Therefore fund for construction of Michinoeki may come from the central budget which is allocated to road construction. Ministry of Transport will be in charge of management of such central budget.

**② Fund allocation via local socio-economic support programs**

Central governments as well as local authorities are responsible for making some specific local socio-economic vitalization support programs. Such support programs have their own budget which is to be approved by the National Assembly and Prime Minister. If Michinoeki can be clearly defined as a regional development infrastructure, then it may be possible to get supportive construction fund from the specific programs.

**③ Direct allocation of ODA fund**

This is the fund from an Official Development Assistance of bilateral aid or funds from international development agencies including the World Bank and ADB. In such case, depending on the requirements of each funding agency, careful project preparation must be carried out with the incorporation of MOT/VRA.

**④ Direct allocation of local state budget**

In case that the provincial or district authorities are the investors, the funding sources of construction may come from provincial budget or district budget. Local authorities shall ask the National Assembly to approve the allocation of above-mentioned local funding sources every year.

**⑤ Lending sources coming from either private bank or state development bank**

Such lending sources come from either private bank or the Vietnam Development Bank. The latter special fund has been established aiming at supporting and promoting social development activities. Economic preferential conditions include tax exemption, low lending interest rate, long repayment period and so forth.

**⑥ Private investment fund in case of private body's active involvement**

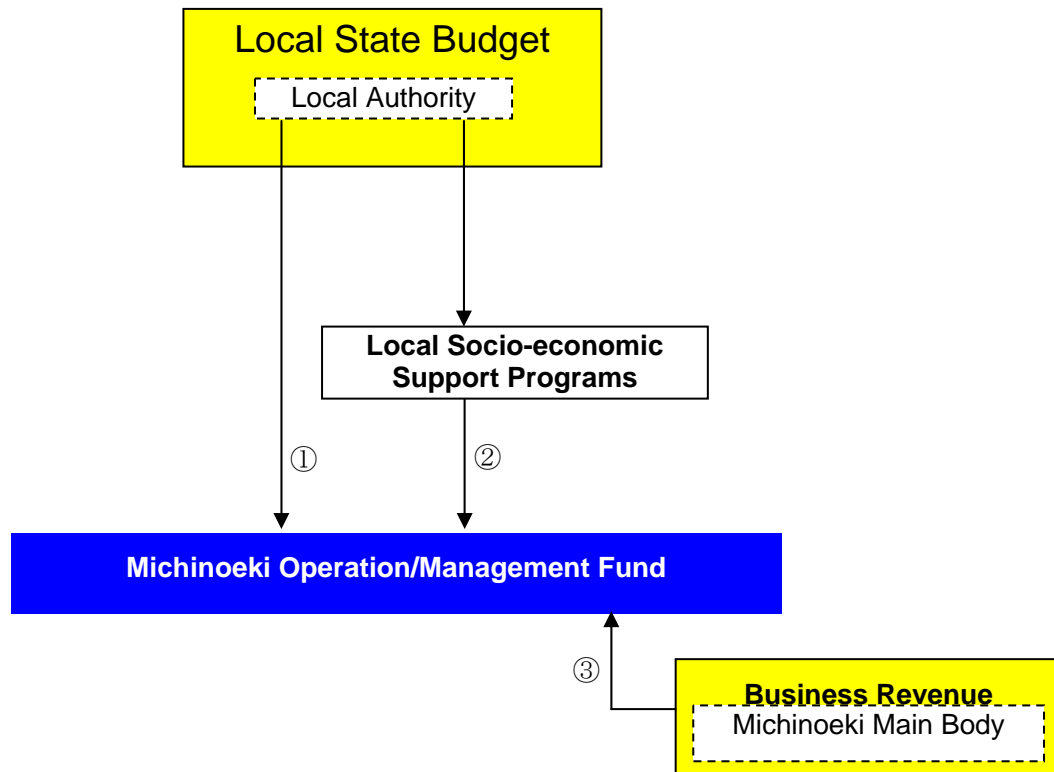
In case that the private enterprise is the investor, such private entity's capital can be the funding source. Furthermore, even the private entity can make the most of the economic preferential lending sources as stated previously. Private enterprises include not only pure private companies but also Joint-stock companies.

In case of actual construction of Michinoeki, one or more than two options will be applied from among above-mentioned financial schemes taking account of actual financial condition.

## 2) Operation/management

Three kinds of funding sources can be identified at the stage of operation/management of Michinoeki.

- ① Direct allocation of local state budget
- ② Fund allocation via local socio-economic support programs
- ③ Private investment fund in case of private body's active involvement



**Figure 2.6.2 Possible Options for Michinoeki Operation/Management Funding Sources**  
Source: JICA Study Team

**① Direct allocation of local state budget**

In case that the provincial or district authorities are the investors, the funding sources of operation/management may come from provincial budget or district budget. Local authorities shall ask the provincial People's Committee or the People's Council to approve the allocation of above-mentioned local funding sources every year.

**② Fund allocation via local socio-economic support programs**

Local authorities are responsible for making some specific local socio-economic development support programs. Such support programs have their own budget. If Michinoeki can be clearly defined as such development support infrastructure, then it may be possible to get local supportive operation/management funding source.

**③ Business revenue being based on the daily commercial activity at Michinoeki**

Commercial revenue acquiring through the daily activity can be one of operation/management funding sources. However, since Michinoeki is basically a public facility, large enough profit to compensate for the operation/management expenditure may be difficult to be expected. Therefore business revenue may be the supplemental funding source.

In case of actual operation/management of Michinoeki, one or more than two options will be applied from among above-mentioned financial schemes taking account of such actual conditions as condition of a facility owner, business activity and financial condition. In case of introduction of governmental budgetary support, objective activity to be supported must be non-business activity.

## **2.7 STEP1.7: Institutional Arrangement and Responsibility Sharing**

In developing Michinoeki, such items should be clearly identified as relevant stakeholders who will be involved with planning, construction and operation/management, the roles of such stakeholders and points to note regarding institutional aspects in planning, construction and operation/management. These items are discussed in the following part in general.

### **(1) Initiative of the project**

Basically, provincial authority should be responsible for Michinoeki operation and management. It is obvious that traffic management and promotion of local socio-economic development are the important tasks for provincial authority. Therefore, the provincial authority should play a major role of the Michinoeki development project.

Also the department of transport (DOT), as the governmental entity which is in charge of management of road traffic infrastructure related matters, shall be responsible for arrangement of responsibility sharing among relevant authorities so as to ensure stable progress in the Michinoeki development project with incorporation of MARD.

On the basis of the above-mentioned overall project implementation structure, relevant authorities shall be responsible for each of their tasks.

### **(2) Activity in each stage**

General idea for major relevant stakeholders and their roles at each stage of planning, construction and operation/management are stated as follows:

#### **a. Preliminary planning stage**

Michinoeki planning body consisting of local authorities or private enterprise may be responsible for planning Michinoeki so as to meet functional requirements and facility requirements in the light of Michinoeki concept. At the preliminary planning stage, it is desirable that such various stakeholders as district government, commune government, residential people's group and local SMEs are expected to actively participate.

#### **b. Accrediting Michinoeki**

As discussed previously, the Ministry of Transport (the Vietnam Road Administration) shall be responsible for making final decision of accreditation as well as cancellation of the accreditation certificate which was once assured. Provincial People's Committee shall submit the application form for accreditation to the Ministry of Transport (the Vietnam Road Administration). Applicants who may be either local authority or private entity shall fill in the application form and submit the form to the provincial People's Committee.

#### **c. Supporting financial and technical aspect**

As for financial support for construction cost or technical support for human resource development, The Ministry of Transport or other central governments concerned will be responsible for these supportive actions in cooperation with the provincial People's Committee. International aid organizations should support in terms of financial and technical

aspect based on the requirement submitted by Vietnamese central governments. Local authority such as provincial government, district government and commune government shall be responsible for making support programs in terms of ensuring financial sustainability in the light of highly public functions of Michinoeki.

**d. Construction of Michinoeki**

According to the Law on Construction, the provincial People's Committee shall be responsible for approval of construction permit. Applicants who ask the construction permit to the provincial People's Committee shall follow the procedure stipulated in the Law on Construction properly. As for construction work, if public entity is the project owner, selection of the constructor through transparent bidding procedure shall be properly conducted under the supervision of relevant local authority. On the other hand, in case of private enterprise, the contract with construction enterprise may be made individually.

**e. Operation and management of Michinoeki**

As for operation and management, Michinoeki main operation body, the Michinoeki management unit, local working group are responsible for operation/management activity. Above the Michinoeki management unit, the task force unit consisting of such local authorities as the provincial People's Committee, relevant departments of provincial government, district government, commune government should be established as a supervision and monitoring organization.

### (3) Expected roles of Stakeholders

Lists of the above-mentioned stakeholders and their expected roles are described in following Table.

**Table 2.7.1 List of Relevant Stakeholders and Their Expected Roles**

Classification		Stakeholder	Roles
Governments	Central Government	MOT (VRA), MARD, MONRE, MOF, MPI, MOC, MOCST, MOIT	MOT(VRA) will be responsible for accreditation of Michinoeki All divisions share roles of, in particular, planning, approval, budget sharing, monitoring, ODA contact
	Province	People's Committee, DOT, DOC, DPI, DOF, DARD, DOIT, DOCST etc.	Provincial PC will be a project owner and responsible for land procurement and compensation enforcement. DOT will be responsible for practical business activity Other departments of local authority will be responsible for, in particular, financial matter, personnel affairs
	District	People's Committee, Division of Economic Infrastructure, etc	Stakeholders concerned will be responsible for, in particular, development of related facilities, actual management, worker dispatch, business support, support for forming local group
	Commune	People's Committee	Stakeholders concerned will be responsible for, in particular, actual management, worker dispatch, business support, support for forming local group
Donors		JICA, JBIC, WB, ADB, UNIDO, UNESCO	Stakeholders concerned will be responsible for financial and technical support
Local inhabitants, SMEs		Local inhabitants	Stakeholders concerned will participate in planning, management and monitoring as a member of Michinoeki Local Working Group, and act as a facility user
		Association of architecture	
		Women's group	
		Agricultural cooperative	
		NGOs	
		Owner of similar facility nearby, cooperative facility	
Private enterprises and Organizations	Transportation Enterprises	Bus company, Taxi company, Other transportation company (forwarder, tracking, etc.)	Operation/management body, investors and act as a facility user
	Service Provision Enterprises	Restaurant, Accommodations, Local souvenir makers, Souvenir distributor, Foods and consumer goods distributor, Tourism enterprise	Operation/management body, investor and act as a facility user and service provider
	Other Private Enterprises	Trading company, Constructor, Other private company	Investor and provider of related services

#### (4) Procedure of Michinoeki Development

##### 1) Development Body and Development Procedure

Two cases were explained as follows:

##### a. A case that public entity is a development body

Although it is desirable that provincial PC is fully responsible for development of Michinoeki<sup>1</sup> the road administrator such as VRA at central level or PDOT at local level can be responsible for construction of a part of Michinoeki infrastructure since Michinoeki is a road facility which is aiming at improvement of safe and convenient condition of road traffic.

The facilities that the road administrator should be responsible for may include such road traffic safety and convenience related facilities as parking space, clean toilet, access road, road information provision facility and resting facility. As for resting facility, it may be shared with local socio-economic development promotion facility. Therefore cost sharing should be determined based on the consultation meeting together with a road administrator and provincial PC.

**Table 2.7.2 Type of Michinoeki Facility**

Type		Detailed facilities for which provincial PC is responsible at the construction stage	Detailed facilities for which road administrator is responsible at the construction stage
Stand-alone Type	Constructed by provincial PC independently	Parking space Clean toilet Resting facility Access road Road/regional information apparatus Local communities' facility Regional development facility Glass and Tree Other facilities and apparatus	—
Combination Type	Constructed by a Province (a settler of Michinoeki) and a road operator	Part of resting facility Regional information apparatus Local communities' facility Regional development facility Glass and Tree Other facility and apparatus	Parking space Clean toilet Access road Road information apparatus Part of resting facility

<sup>1</sup> According to Vietnamese Law on Organization of the People's Councils and People's Committees, November 26, 2003, Decree No.171/2004/ND-CP, September 29, 2004, provincial P C's direct involvement with the business activity is not allowed. Therefore in case of implementation of any business activity, such public corporation as State Owned Enterprise must be responsible for business activity under the supervision of provincial PC.



**b. A case that private enterprise is involved with development of Michinoeki**

Above-mentioned development procedure shows 100% public entity's involvement pattern. However it is obvious that a private enterprise can be an investor as well. As for the latter development type, such business types as joint-stock-company type and private enterprise initiative type can be considered.

- **Joint-Stock-Company Type**

In this type, a private enterprise invests in developing new stock company in cooperation with such local authority as provincial government. After the joint-stock company is established, the company is responsible for investment in development of Michinoeki.

- **Private Enterprise Initiative Type**

In this type, a private enterprise 100% invests in development of Michinoeki. In case of invitation of a private enterprise as an investor, provision of several incentives may be indispensable. Such incentives, for instance, can be stated as follows:

- Public subsidy for construction cost
- Michinoeki development project is listed as one of objective project for such economic favorable treatment as rent exemption and/or corporate tax exemption.
- Introduction of local tax exemption related policy which can be done under the discretion of provincial PC.
- Introduction of land procurement related undertakings, for instance, provision of free of charge land use right in case that said land will be utilized on the purpose of public usage and more rapid land procurement procedure.
- Provision of a venue and opportunity for commercial propaganda.
- Provision of naming rights
- Provision of priority usage right for such transport business entities as bus operator and truckers.
- Financial support from regional economic association and so forth.

### 3. STEP2: Michinoeki Construction

At the step2: Michinoeki construction, the corresponding action items can be identified as follows;

#### ■STEP2.1: Prepare for land for construction

- ▶ Identification of procedure for land preparation
- ▶ Conformity with legal framework

#### ■STEP2.2: Acquire Construction Permit

- ▶ Identification of procedure for acquisition of construction permit
- ▶ Conformity with legal framework

### 3.1. STEP2.1: Land Preparation

As for land preparation, it is stipulated in Vietnamese “Law on Land” and “Decree providing for Implementation of Law of Land”. In this section, detailed procedure for preparation of land for Michinoeki construction is discussed according to these two legal frameworks.

#### Pattern of land preparation

There exist mainly 3 patterns for land preparation in Vietnam.

- Land allocation pattern in which registration of land use right is necessary
- Pattern for lease of land
- Pattern for conversion of land use purpose

\*Source: “Law on Land”, Section 3, article 31-37

As for land allocation, land use fee can be exempted depending on the purpose of land use as shown in the following table. It should be noted that descriptions shown in the bottom columns which are circled by thick line are related to the case of Michinoeki construction.

**Table 3.1.1 Land Use Fee and Land Use Pattern**

The case for exemption of land use fee	The case for necessity of land use fee
• The case for the purpose of being engaged in agriculture, forestry, fishery and /or salt production activity in agricultural land	• The case for the purpose of construction of residential houses
• The case for the purpose of research and development in the field of agriculture	• The case for the purpose of construction or sales or lease of such infrastructure as residential houses which are invested by enterprises
• The case for the purpose of construction of residential houses for people who are forced to move due to the land development plan	• The case for the business purpose of production of agricultural and forestry goods and/or salt being conducted by private enterprises
• The case that local community use the agricultural land or non-agricultural land is used for the purpose of conducting religious activity	• The case for the purpose of investment by foreigners
• The case for the purpose of construction of non-profit building which serves as increase of such social welfare related activity as cultural, health, educational, sports and so forth	• The case for the business purpose of construction of building by private enterprises or individuals

\*Source: “Law on Land”, Section 3, article 33-34

As shown within the thick frame, when the land is used for the purpose of provision of public service, which corresponds to the case of construction of “Core” facility, the land use fee will be exempted. On the other hand, when individuals or organizations use the land for the purpose of pursuing profitability, which corresponds to construction of “Core plus” or “Non-Core” facility, the land use fee will be requested to pay.

It should be noted that Michinoeki is basically a facility for public use. Especially the public characteristics for “Core” facility is clearly defined while “Non-Core” facility is obviously a commercial facility. “Core plus” facility is basically a public facility, although this facility can be used as a small shop for selling local special products. Such characteristics of Michinoeki have to be clearly defined in such legal framework as “Law on Land Road Traffic”.

If accreditation system that legally guarantees the public feature of Michinoeki is developed, the accreditation certificate can allow applicants, who apply the registration of land use right, to get exemption from payment of land use fee. If the accreditation system can work in such way, the accreditation system can attract private enterprises as a sort of incentive system for promoting private sector’s participation in development of Michinoeki.

## **(2) Procedure for land preparation**

According to Vietnamese “Law on Land”, applicants for registration of land use right have to carry out following three procedures.

- Confirmation of conformity between the purpose of land use and such plans as “Land use zoning” and “Land use planning” in peripheral areas
- Choice of land allocation or lease of land
- Submission of application form

\*Source: “Law on Land”, Section 2, article 22、 Section 3, article 37

### **1) Conformity between the purpose of land use and such plans as “Land Use Zoning” and “Land Use Planning” in peripheral areas**

Such governmental entities as central government, people’s committee of city under central authority, provincial people’s committee, district people’s committee and communal people’s committee are obliged to draw up “Land Use Zoning” and “Land Use Planning” under the prescription of Vietnamese “Law on Land”. “Law on Land” stipulates the requisite contents which have to be considered in these two land use plans as follows;

#### **a. Requisite contents which has to be considered in “Land Use Zoning”**

- Long and medium term socio-economic development plan, strategic plan for national defense and security and overall national/regional plan
- National socio-economic development plan
- Long and medium term sectoral development plan
- Requests for environmental protection
- Requests for protection and maintenance of historical and cultural heritages
- Present aspects and requests for land use
- Scientific technical progress in land use
- The results of previous long and medium term development plan

The term of validity is 10 years. The “Land Use Zoning” has to be drawn up being based on above-mentioned items and has to clarify the basic direction of land use and planning target.

#### **b. Requisite contents which has to be considered in “Land Use Planning”**

- Long and medium term development plan which is drawn up and approved by national governmental entity
- 5 year and/or annual national socio-economic development plan
- Requests for land use raised by organizations, individuals and local communities
- The results of previous land use plan

The term of validity is 5 years as to national level, provincial level and level of city under central authority while it is 1 year as to the other governmental entities. "Land Use Planning" has to be drawn up being based on above-mentioned items and has to clarify the concrete planning contents.

Applicants have to pay careful attention so that the purpose of land use complies with above-mentioned plans.

### **c. Choice of land allocation or lease of land**

The "Law on Land" stipulates that when applicants prepare for the land, they can choose either land allocation or lease of land under the approval of people's committee. When applicants choose land allocation, they are exempted from paying land use fee in case that they use the land for the purpose of construction of public facility. When applicants choose lease of land, any kind of exemption of land use fee can not be expected.

### **d. Submission of application form**

"Law on Land" stipulates that when applicants are to get either land allocation or lease of land, they have to submit following official application form to the authority which is in charge of management of land in province or city under central authority or people's committee.

- Application form for land allocation or lease of land
- Outline for the investment project
- Overall plan for compensation for resettlement related issue
- Extracts of administrative map of land which is to be applied

BOX : Land recovery and Compensation in Vietnam

\*Source: "Law on Land", Section 4, article 38-44

(1) The main bodies which are in charge of land recovery

The Vietnamese main bodies which are in charge of land recovery are;

1) People's committee of provinces or cities under the central government

In case of land recovery for Vietnamese organizations, religious entities, Vietnamese inhabitants who are living in overseas' countries and other than the following 2) people, foreign organizations and foreign individuals

2) People's committee of districts, towns and cities in provinces

In case of land recovery for households, individuals, citizen groups, Vietnamese people who have Vietnamese nationality and living in overseas' countries and have right of purchase of residential houses located on the residential land

The bodies which are in charge of land recovery are also in charge of compensation.

(2) The procedure of land recovery

1) Prior announcement of the purpose and plan of land recovery

The organization which is in charge of land recovery has to open an announcement to people who are to be recovered their used land with respect to (a) purpose, (b) time schedule, (c) plan of land recovery, (d) outline of plan of compensation, land preparation and resettlement by 90 days before (in case of agricultural land) or 180 days before (non-agricultural land) prior to start the land recovery.

BOX : Land recovery and Compensation (Continued)

2) Official announcement of the land recovery planning

After the approval of both the plan of land recovery and compensation by related governmental entities, they come into effect and people have to follow them when they are opened to public.

3) Compulsory land recovery and object to a decision

A person subject to land recovery who does not follow the decision, the people's committee can exercise its right of compulsory land recovery. Although a person subject to land recovery has no right to refuse it, a person can object to a decision.

4) Land allocation

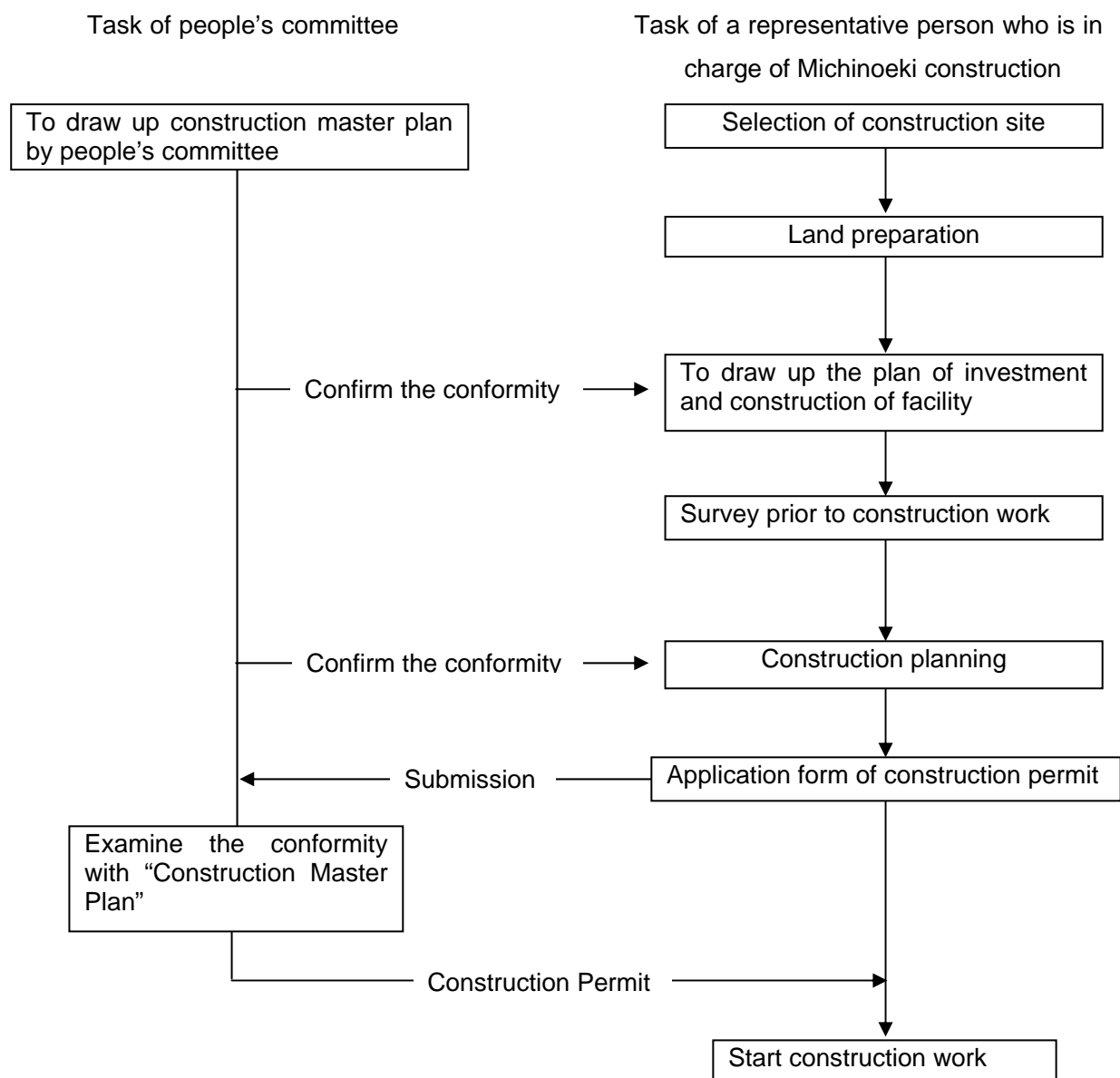
It is not until the land is recovered and compensation is finished that the people's committee can allocate the land to applicants.

## 3.2. STEP2.2: Acquisition of Construction Permit

### (1) Procedure for acquisition of construction permit

\*Source : "Law on Construction, 2003"

After acquisition of certificate of land use right or contract certificate of lease of land, construction permit needs to be acquired in order to commence the construction work of Michinoeki. General procedure for issuance of construction permit is as follows;



**Figure 3.2.1 Procedure for Acquisition of Construction Permit**

Source: JICA Study Team

More detailed descriptions as to the above procedure are as follows;

## **(2) Construction Master Plan**

### **1) Outline**

In Vietnam, the construction master plan is obliged to be developed in each administrative regional unit. The requests stipulated in “Law on Construction” can be shown as follows;

\* Source: “Law on Construction”, Chapter II, Section 1, article 11

- Time of valid for the construction master plan is 5 to 10 years
- The budget necessary for drawing up the construction master plan is prepared by the government
- People’s committee is responsible for drawing up the construction master plan
- The construction master plan has to comply with following existing plans;
  - Socio-economic development plan in the target region
  - Long and medium term land use plan
  - National policy for defense and security

Construction master plan consists of following 3 plans.

- Regional Construction Master Plans
- Urban Construction Master Plans
- Master Plans for Construction of Rural Residential Areas

Requisite elements for above 3 master plans are as follows;

#### **a. Regional Construction Master Plan**

- Ministry of Construction is responsible for development of construction master plan in key areas and inter-provincial areas.
- People’s committee of provinces and cities under central authority are in charge of development of construction master plan in each of administrative area.
- Requisite contents of the construction master plan include (a) forecasts of nation-wide, urban and rural population within a duration of more than 10 years ahead, which comply with regional socio-economic development plan, (b) basic industrial assignment plan and socio-technical infrastructure development plan, which comply with the period of forecast of population and (c) urban development system and housing assignment plan in rural areas.
- The regional construction master plan has to include (a) urban and rural residential area, (b) agricultural area, (c) forest area, (d) tourism spots, (e) environmental protection area, (f) natural resource area and (g) other special area.



**b. Urban Construction Master Plan**

- Ministry of Construction is responsible for development of construction master plan for newly industrialized cities, inter provincial cities, high-tech zone and special economic zone.
- As for the other areas, such governmental entities as provincial government, district government, government of town and city within province are in charge of development of construction master plan.
- Requisite contents include population forecast, development direction, target area for development and protection area.

**c. Master Plans for Construction of Rural Residential Areas**

- Provincial people's committee is responsible for development of the plan
- Requisite contents include population forecast, allocation plan of such facility as production facility, small scale industrial facility and facility for production of traditional crafts, and development direction.
- District people's committee is responsible for approval of the plan.

**(3) Investment Projects for Construction Works**

- The plan of investment projects for construction work has to be developed by the investor so that the socio-economic efficiency of the plan can be evaluated. The plan has to include the purpose of construction, location of construction site, construction scale, construction technology, environmental technology, budget, constructing period, facilities for protection of fire and explosion and environmental impact assessment.
- As for religious building and small scale building, eco-technical report has to be submitted, which is substituted for the plan of investment projects for construction work. The eco-technical report includes almost same contents as previously stated.

**(4) Design for Construction Works**

- Design for construction works has to comply with construction plan, construction master plan, landscape, natural condition, architectural regulation, approved investment project for construction works, construction technology, construction standard, standard for protection of fire and explosion.
- The plan has to include technology plan, used function, architectural plan, the life of building, construction plan of building, plan for protection of fire and explosion, energy consumption plan for achievement of high productivity, plan for environmental protection, budget and construction costs.
- The plan consists of preliminary design, technical design and design drawings for execution of building works.

**(5) Construction Permit**

- Application form for construction permit consists of (a) application for issuance of a construction permit, (b) design drawings for construction of works and (c) documents on land use right.
- Items subject to construction permit include (a) location of construction site and routes, (b) type of construction work, (c) standard height of construction work, (d) border line of location of construction site, (e) environmental protection, (f) safety treatment and (g) effectiveness of construction permit.
- People's committee is responsible for issuance of construction permit. Provincial people's committee is in charge of issuance of construction permit for large-scale construction work, special building and religious building. District people's committee is in charge of issuance for construction work in urban area and commune center area in district area. Communal people's committee is responsible for issuance for rural residential area which is regulated by communal regulation.

## 4. STEP3: Michinoeki Operation, Management and Monitoring

At the step3: Michinoeki operation, management and monitoring, the corresponding action items can be identified as follows;

### ■STEP3.1: Identify Operation/Management/Monitoring Activity

► Identification of Operation/management/monitoring activity items

### ■STEP3.2: Identify Operation/Management/Monitoring Structure

► Identification of Operation/management/monitoring structure

## 4.1. STEP3.1: Operation/management/monitoring activity items

### Operation/management activity items

Operation/management activity items can be summarized in the following Table.

**Table 4.1.1 Table Operation/Management Activity Items**

Classification	Corresponding Activity	Details of Activity
Basic Activity	Very basic activity in terms of physical maintenance and economic sustainability.	<ul style="list-style-type: none"> <li>• Facility management and repair</li> <li>• Guard and cleaning the facility</li> <li>• Management of operation cost</li> <li>• Management of revenue and expenditure</li> <li>• Management of personnel affairs</li> </ul>
Public Service Provision Activity	Activity for provision of public service for Michinoeki users	<ul style="list-style-type: none"> <li>• Information provision (creation and management of information contents, development and maintenance of information provision apparatus and so forth)</li> <li>• Local socio-economic development promotion (management of quality of local special products and sales promotion)</li> <li>• Local human resource development (training and so forth)</li> <li>• Public information provision (traffic safety campaign and so forth)</li> </ul>
Commercial Service Provision Activity	Activity for provision of commercial service for Michinoeki users	<ul style="list-style-type: none"> <li>• Management of tenant contract, supervision of commercial activity and instruction</li> <li>• Propaganda and sales promotion aiming at improvement of profitability</li> </ul>

**(2) Monitoring activity items**

This is a continuous activity with respect to monitoring daily affairs including customer satisfaction, cost management and occurrence of incidents. Based on the monitoring results, performance of Michinoeki operation is evaluated. Specific activities are as follows:

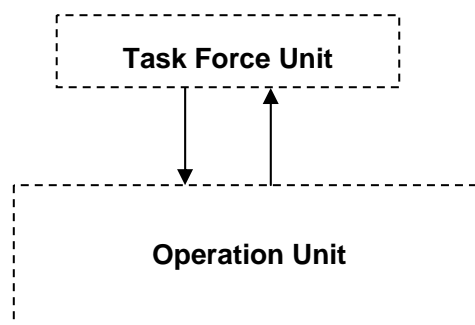
- To grasp customer satisfaction through questionnaire and interview with visitors
- To listen to users' voice regarding further needs as well as complaint at the regularly setting meetings
- Monitoring expenditure and business revenue
- To keep watching carefully cleanness in the garden as well as building
- To observe relevant activity of responsible stakeholders
- To observe condition of public service provision (especially such careful attention is necessary as whether or not the private entities are leaning on commercial activity excessively.)
- To grasp the number of visitors
- To grasp appropriateness of contents of information provision
- Confirmation of security condition

## 4.2. STEP3.2: Operation/management and monitoring structure

Operation/management and monitoring structure is illustrated as shown in following Figure and explained as follows:

### (1) Proposed Standard Type of organization

The proposed standard type of organization can be described as below. Basically the organization may consist of two main bodies. The one is the task force unit and the other is the operation unit.



**Figure 4.2.1 Proposed Michinoeki Operation/Management Structure**

### (2) Task Force Unit

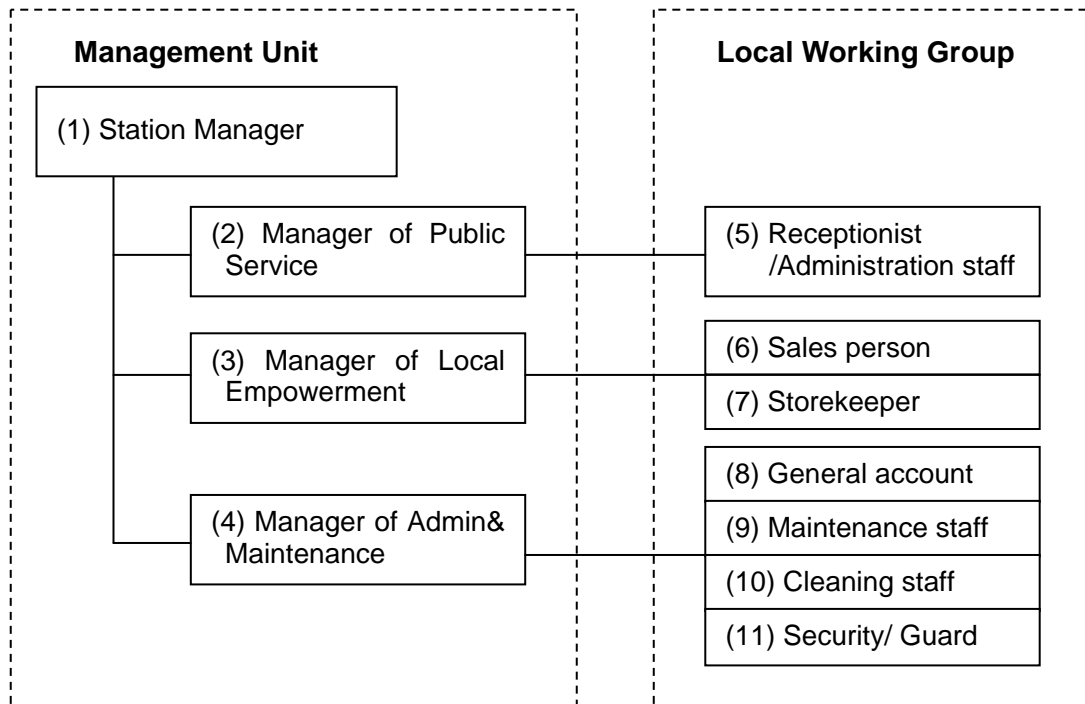
The task force unit is in charge of approval of the overall planning of operation/management activity of Michinoeki and supervision of routine activity of Michinoeki. The member of the Task Force Unit will consist of the officers of local authorities such as the provincial People's Committee, the district People's Committee, the commune People's Committee, such department of provincial government as DOT, DARD, DPI, DOF and so forth.

### (3) Operation Unit

Operation unit will consist of management unit and local working group. Management unit will basically consist of 4 staffs such as a station manager, a manager of public service, a manager of local empowerment and a manager of administrative matter and maintenance.

A station manager is the chief of the Michinoeki main body staffs. It is desirable that this post is occupied by an officer on the list of the local authority. However in case of private entity owned Michinoeki, private person can also become a station manager. The station manager should be one who is enthusiastically hoping for improvement of social welfare in the local community. The unit is responsible for Michinoeki actual daily activity of operation/ management.

The Michinoeki Local Working Group will consist of 7 such as receptionist, sales person, storekeeper, general account person, maintenance staff, cleaning staff, security guard. These staffs will come from , in particular, local inhabitants group, local industrial associations, local SMEs. This working group will support to develop Michinoeki operation related activity itself.



**Figure 4.2.2 Proposed Management Unit and Local Working Group**

## **ANNEX II**

### **Pilot Project**

## **1. Outline of the Pilot Projects**

### **(1) Objective**

Pilot projects were designed and included in the Study, because Michinoeki is a new concept in Vietnam. The objectives of the pilot project are specifically as follows:

- a) To formulate and implement plans on Michinoeki and verify their viability from economics, financial, social, environmental, technical and management viewpoints, and to verify reasons and need for Government intervention.
- b) To develop a mechanism for sustainable development with participation of private sector and local people and communities.
- c) To learn lessons from implementation of the pilot projects for input to the Master Plan.
- d) To facilitate transfer of technical and management knowledge resigned for effective operation and management of Michinoeki in sustainable manner.
- e) To facilitate better understanding of Vietnamese people and generate economic and social effects of Michinoeki.

### **(2) The Concept and Scope**

Pilot project consists all necessary aspects for Michinoeki development in order to examine applicability of the concept of Michinoeki to Vietnam from physical development aspects, from local economic development encouragement and finally from institutional aspects such as local community involvement, and adequate management and operation system formulation.

Basic role of Michinoeki in Vietnam include: (i) to facilitate safe operation of vehicles including long-distance buses, trucks and other vehicles; refueling, minor repair, safety campaign, first-aid, rescue, traffic information, etc, (ii) to provide improved services for road users, especially for passengers and drivers; toilet, resting, refreshing, eating, shopping, information, etc, (iii) to contribute to the enhancement of local socio-economic development: employment, local products sale, community service, etc, (iv) to facilitate more effective management of national roads: road traffic information and monitoring on traffic situation, accidents, road conditions, construction work, etc. Michinoeki is an oasis in road network, Michinoeki fuction as catalyst for local economic development, Michinoeki is a place for empowerment of local people, Michinoeki can be a landwork in province, Michinoeki provides an opportunity for improved management of regional and road network and Michinoeki can also generate new road transport based economic and social services covering the entire country.



While potential roles of Michinoeki are extensive, the pilot projects focus on three main functions:

- (i) Road Transport Support:** Michinoeki provides road users with rest and relaxation as well as necessary information to enhance safety, convenience, and comfort of travel.
- (ii) Empowerment and Development of Local Socio-economy:** Michinoeki provides opportunities for local economic development and empowerment of local people and communities.
- (iii) Land Mark Effects:** Michinoeki can promote local identity and function as a symbol of province as well as Vietnam-Japan cooperation.

The beneficiaries of the Michinoeki extended widely to include road users (passengers, drivers and operators), communities and local people, and road administrator.

An important aspect of the pilot project Michinoeki is to develop and ensure provision of basic function such as parking, toilet, resting, first aid, travel information, empowerment of local economic activities and people, etc which are basically non profitable and therefore must be responsible by Central and local governments. While many Michinoeki like facilities developed in Vietnam are weak in the non-profitable but economically needed functions. For this, role-sharing between public and private sector is duly attended in the Study.

**Table 1.1 Role Sharing between Public and Private Sectors**

	Core	Core Plus	Non-Core
Road Transport Support and Management	<ul style="list-style-type: none"> <li>• Parking</li> <li>• Toilet</li> <li>• Rest/refresh</li> <li>• Travel information</li> <li>• First-aid/rescue</li> <li>• Roads/traffic information</li> </ul>	<ul style="list-style-type: none"> <li>• Pay toilet/shower</li> </ul>	<ul style="list-style-type: none"> <li>• Massage</li> </ul>
Local Social-Economic Development	<ul style="list-style-type: none"> <li>• Empowerment of local people</li> <li>• Community campaign (safety, social issues)</li> <li>• Basic community services (if necessary)</li> </ul>	<ul style="list-style-type: none"> <li>• Shops</li> <li>• Restaurants</li> </ul>	<ul style="list-style-type: none"> <li>• Amusement centers</li> <li>• Shopping centers</li> </ul>
Symbolism	<ul style="list-style-type: none"> <li>• Regional identity</li> <li>• Michi-no-Eki as a significant landmark</li> </ul>		
PPP	<div style="display: flex; justify-content: space-between; align-items: center;"> <div>Public</div> <div style="width: 60%;"></div> <div>Private</div> </div>		

Source: JICA Study Team

Pilot project components and programs which are applied to every pilot project in three Provinces of Ninh Binh, Bac Giang and Hoa Binh will be shared among key players including JICA, province, private sector and community.

**Table 1.2 Development Components for Michinoeki Pilot Project and Key Role Players**

Component	Sub-component	Activities and Service Facilities	Responsible Body			
			JICA	LG	PE	CBO
MnE Facilities Construction	Land and infra preparation	Land acquisition, land filling, infra	--	●	○	--
	Facilities design and bidding	Core facilities, public toilet, etc	●	○	○	○
	Facilities construction	Facilities, road & parking, utilities	●	●	○	--
Capacity Development	Organization building of MnE	Organizing and setting stakeholders,	○	●	●	●
	Training for operation of MnE	Public services, promotion, etc	○	○	●	●
	Monitoring and evaluation	Visitor tourist guide, local guide	●	○	○	○
Local socio-economic Encouragement	Local product dev & promo	Handcraft, agro-products, arts, etc	●	○	●	●
	Local activities encouraging	Road safety, tourism, culture, etc	○	●	○	●
	Dissemination of MnE	Campaign, events, outreach	●	●	○	○

Legend: ●= key role, ○= supporting role, -- = out of responsibility

Source: JICA Study Team

Note: LG = Local Government, PE = Private Enterprise, CBO = Community Based Organization

### (3) Locations

Three Michinoeki pilot projects are located in Bac Giang, Ninh Binh and Hoa Binh provinces as follows:

**Ninh Binh Pilot Project Site:** NR-1, km 267+000 (R): The site proposed by Ninh Binh provincial government is located at the edge of Ninh Binh city, where the pilot project site will be a part of a planned bus terminal development by Bus Terminal Company as SOE of Ninh Binh Province.

**Bac Giang Pilot Project Site:** NR-1, km 120+000 (L): The site proposed by Bac Giang provincial government is located at paddy field along NH1A in the vicinity to Bac Giang city, where land use has been currently changed from environmental buffer area to commercial area for the project for commercial development by two enterprises of Bac Ha Bus Company and Minh Ha Company including the site of Michinoeki.

**Hoa Binh Pilot Project Site:** NR-6, km 102+400 (L): The site is under preparation for Michinoeki development where Hoa Binh provincial government is implementing land-fill and some compensation for land acquisition.



Figure 1.1 Location of Michinoeki Pilot Project Sites

Table 1.3 Initial Conditions of Pilot Project Sites

		Ninh Binh	Bac Giang	Hoa Binh	Reference
1. Site (sqm)	Other area	7,503	4,033	4,493	Area funded by LG/Agencies
	JICA area	2,737	2,737	2,737	Area funded by JICA
	Total	10,240	6,770	7,230	Site area prepared
2. Current Landuse		Paddy Field	Paddy Field	Paddy Field	July 2007
3. Land Acquisition		Done	Done	Done	Local Government (LG)
4. Land Filling		Done	Done	Done	LG & Private Sector
5. Retaining Wall and Utilities supply		Not yet	Not yet	Not yet	LG & Private Sector
6. Existing traffic volume of National Highway in front of site		15,400 /day (Tuesday)	17,900 /day (Tuesday)	5,800 /day (Tuesday)	Daily traffic (May 2007) including Motorcycle
7. Existing facilities surrounding site		<ul style="list-style-type: none"> <li>• Petrol Station</li> <li>• Retail shops</li> <li>• Riverside park</li> </ul>	<ul style="list-style-type: none"> <li>• No facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Tax Office</li> <li>• Other public facilities</li> </ul>	Ninh Binh has a plan to remove current facilities for Bus Terminal development in future.
8. Planned Landuse according to current town plan		Transportation (Bus Terminal)	Commercial (Recreation, others)	Not yet designated	Every land use of site has been revised currently except Ninh Binh

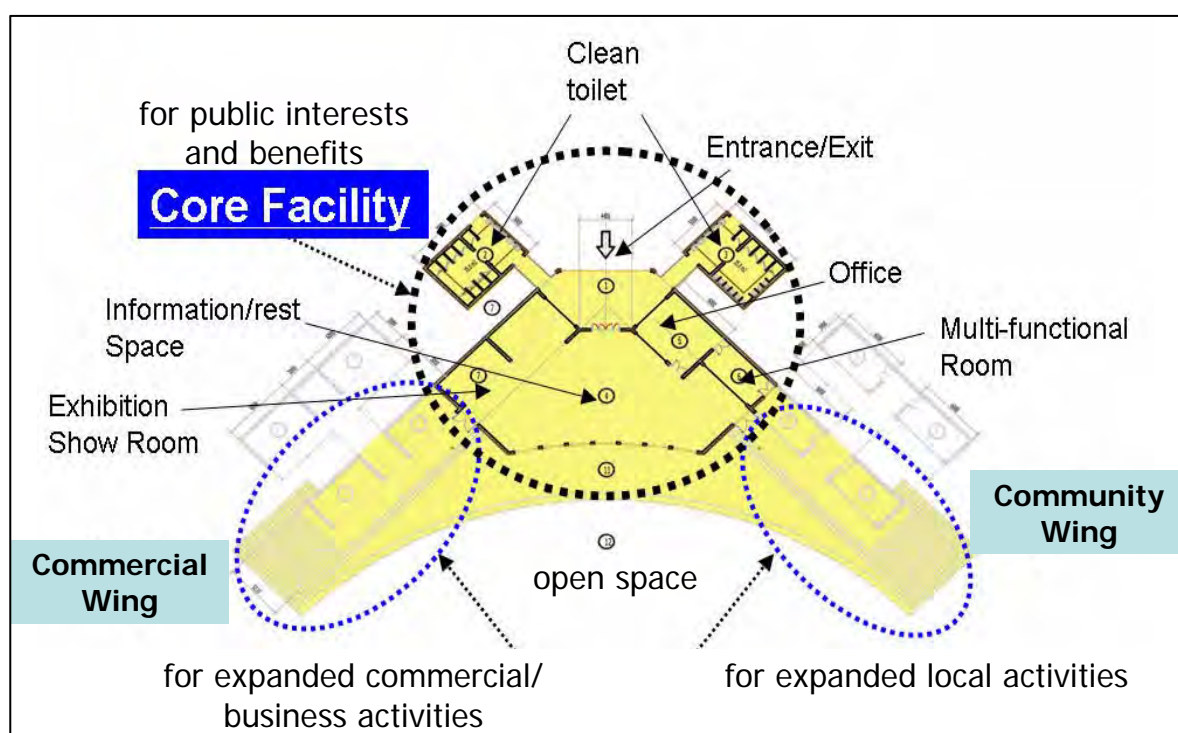
Source: JICA Study Team

## 2. Facility Design

### (a) Basic Design Principles

Planning principles adopted in the pilot projects are:

- To place focus on core facilities which are the most basic function and services to be provided by Government initiatives
- To allow expansion of pilot project facilities to meet demands of non-core facilities
- To facilitate public-private partnership in development, operation and management of the facilities and services



**Figure 2.1 Basic Planning Concept of Michinoeki**

Source: JICA Study Team

### (b) Planning of Prototype Michinoeki Building

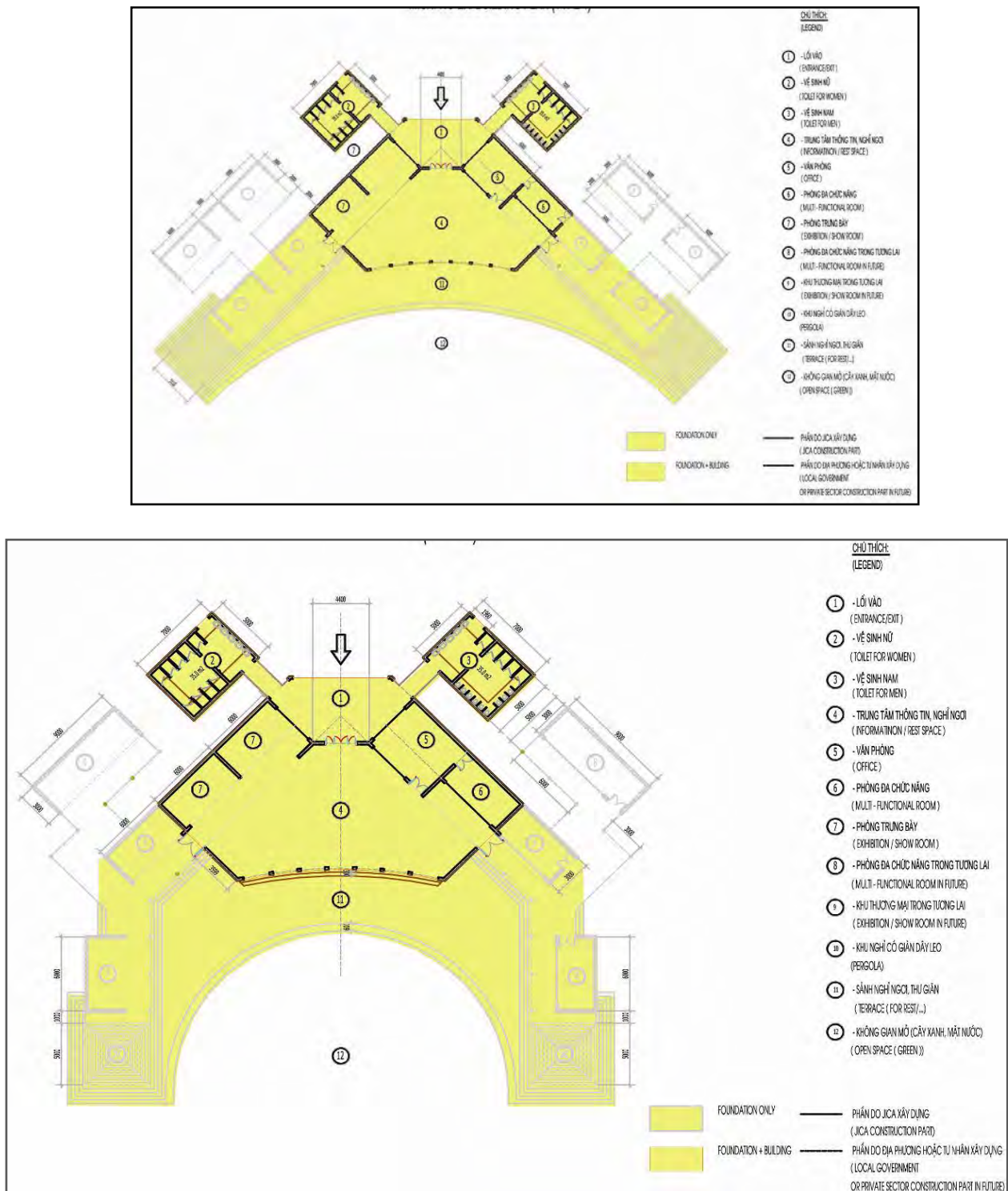
In the pilot projects planning work was made for the core building which provide a central core function of Michinoeki. The prototype plan common to three pilot projects was prepared.

**Table 2.1 Scale and Area of Pilot Project Sites and Facilities**

	Category	Ninh Binh	Bac Giang	Hoa Binh	Reference
Design Framework for Site and Building	1. JICA project area	2,737 sqm			Project site
	2. Building Area	791 sqm / site			Including terrace
	3. Floor Area	552 sqm / site			One storey building with Public Toilet
	4. Exterior Area	1,760 - 4,150 sqm / site			Including landscaping, others

Note: Area will be finalized in detailed design stage





**Figure 2.2 Floor Plan for Michinoeki Pilot Project**

Source: JICA Study Team

Source: JICA Study Team

Source: JICA Study Team



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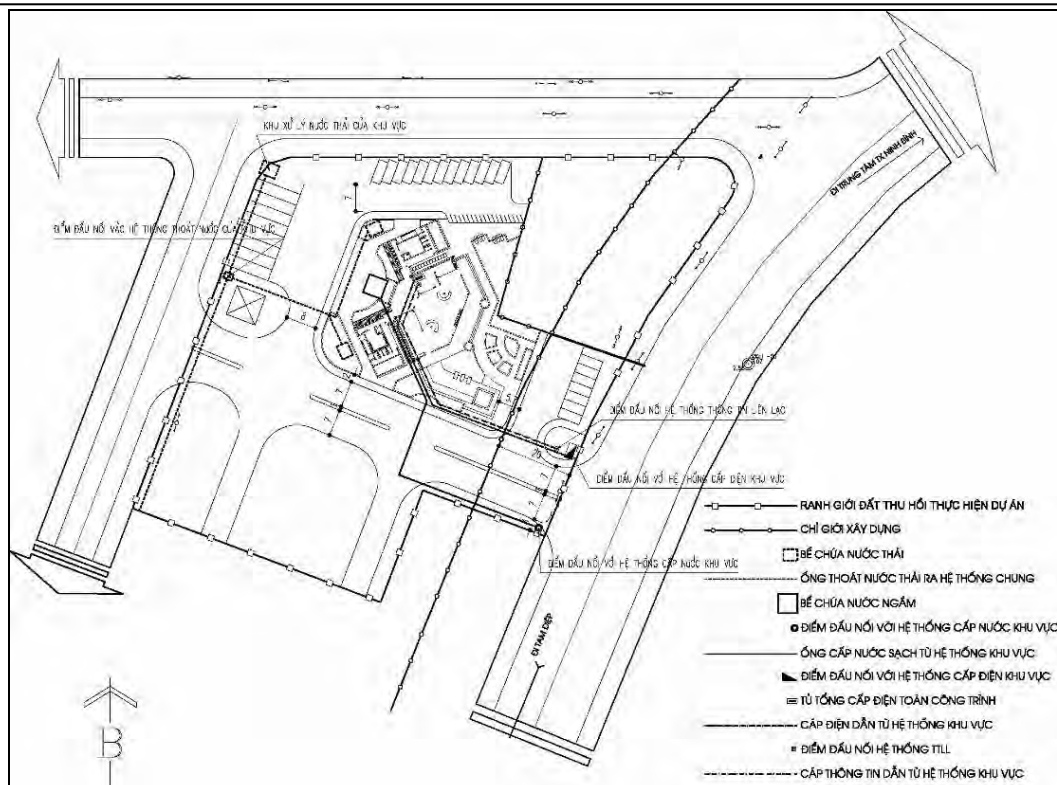
**(c) Site Layout Plan**

**Site Plan for Ninh Binh Pilot Project:** The site of Pilot Project in Ninh Binh is planned to locate at a northern part of the future Bus Terminal site by Ninh Binh Bus Terminal Enterprise. One of key measures for site planning is to secure safe access to the site from National Highway No.1A (NH 1A), where general users for Michinoeki and buses and related vehicles for future Bus terminal users in order to avoid traffic congestion in both of NH1A and the site area, and accident at access area from NH1A by signal control crossing with adequate turning lanes. Although facilities of Michinoeki should be as closer location as possible for accessibility to NH1A, it should be behind of setback line (20m) according to the current regulation. On the other hand, resettlement of existing settlement area in future will contribute to available area for Michinoeki facilities expansion and better visibility form NH1A.

**Site Plan for Bac Giang Pilot Project:** The site of Pilot Project in Bac Giang province is planned to locate in the middle of the roadside commercial facilities project site by Bac Ha and Minh ha Company, taking account of gateway function allowing free access from NH1A and two sites as public service area, and synergy effect between private commercial area activities and public services. Although buffer green zone should be kept by aesthetical landscape area, parking area can be introduced to this zone with sufficient green area to cope with parking demand.

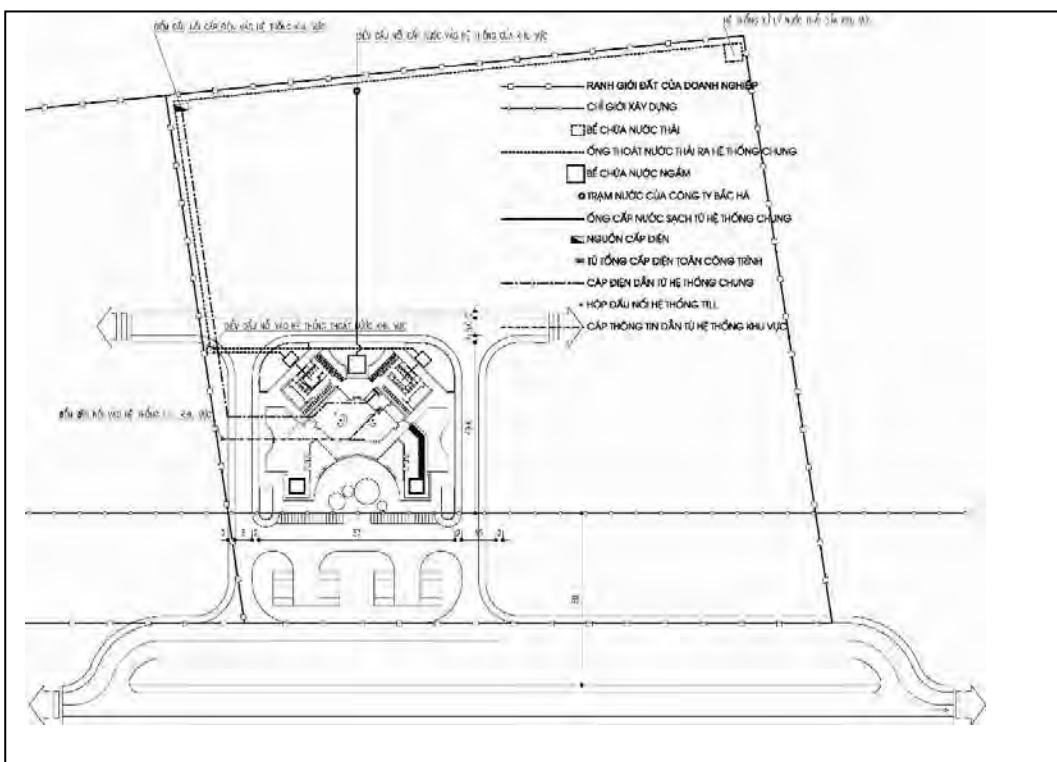
**Site Plan for Hoa Binh Project:** The site of Pilot Project in Bac Giang province is planned to locate at a northern part of the future commercial area of Mong Kien Town as the center of Tan lac District, where transportation node is formulated by NH6 anf NH12B to serve tourists to enjoy ethnic and nature tourism destination of Hoa Binh province. One of considerations for site planning is to secure convenient access to Michinoeki from surroundings locating at central area of whole area including Michinoeki and surroundings, where potential commercial area development is expected to be introduced by private sector investment besides of Michinoeki. Although facilities of Michinoeki should be closer location as possible for accessibility to NH6, it should be behind of setback line (20m) according to the current regulation, where aesthetical treatment needs to be taken in buffer area in order to create attractive streetscape in one of town center areas of Muong Kien Town.





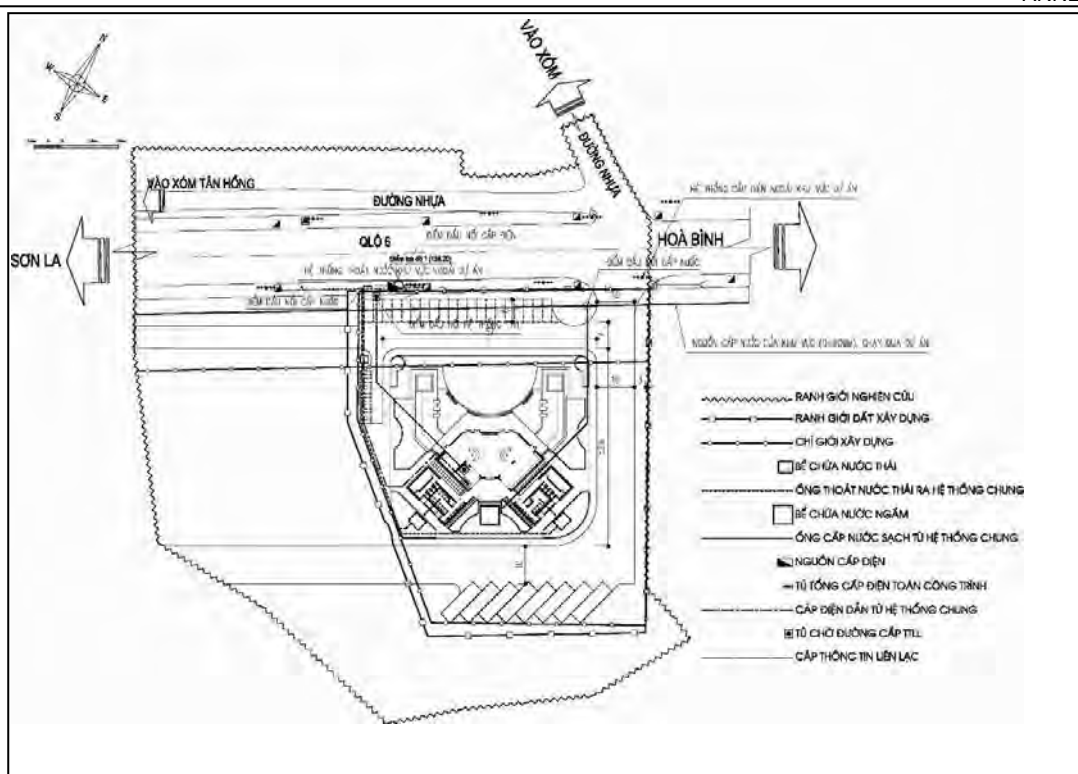
**Figure 2.7 Site Layout Plan of Michinoeki Pilot Project in Ninh Binh Province**

Source: JICA Study Team



**Figure 2.8 Site Layout Plan of Michinoeki Pilot Project in Bac Giang Province**

Source: JICA Study Team



**Figure 2.9 Site Layout Plan of Michinoeki Pilot Project in Hoa Binh Province**

Source: JICA Study Team

**(d) Sewerage**

Environment impact assessment was conducted and development of the proposed pilot projects will not generate any negative impacts on the environment. However, as to waste water from the toilets, the BOD level (mg/l) of the waste water at discharge point was estimated based on the estimate of total waste water, BOD load (g/user/use) and no of toilet users. As the result of the estimate 480 mg/l do not co ply with the environmental standard of 50 mg/l, construction of a secondary treatment facility was decided. With provision of the secondary treatment facility, the effluent level is expected to decrease to 50 mg/l.

**(e) Fire Fighting Measures**

Based on TVCN 2262/1993, fire fighting measures were planned by providing automatic fire alarm, evacuation exit, fire-extinguishing water tank and equipment.

**(f) Emergency Power Supply**

Power supply will be ensured for operation of basic facilities such as public toilets, parking and guide way, and others which may require to attend accidents and disasters.

### 3. Construction

#### (1) Tender and Selection of Contractors

Bid announcement was made on 26 December 2007 for contractors registered with JICA Vietnam office separately for Ninh Binh (Lot A) and Hoa Binh (Lot B). Tender documents were distributed on 11st January 2008 to a total of nine (9) companies who showed interests, six (6) companies and five (5) companies submitted scaled proposals for Lot A (Ninh Binh) and Lot B (Hoa Binh), respectively. Bids were opened at JICA Vietnam office at 4 pm on 25th February 2008. Two companies for Lot A and a company for Lot B who offered the closest amount to the scheduled amount were selected for further evaluation of the documents.

**Table 3.1 Evaluation of Bid Documents**

	Documents	Check Items
Preliminary Examination of Proposal (Sub-Articles 6.4.1 of ITT)	A. Proposal submission letter	1) Is tender price in figure indicated?
		2) Is tender price in words indicated?
		3) Are authorized signature & stamp indicated?
		4) Is name of designation of signatory indicated?
		5) Is name of tender indicated?
	B. Bill of Quantity	6) Is tender price same as submission letter?
		7) Are initial signs in all pages?
		8) Are authorized signature and stamps indicated?
	C. Work Schedule	9) Are authorized signature and stamps indicated?
		10) Is name of designation of signatory indicated?
Evaluation of Proposal (Sub-Article 6.4.2 of ITT)		11) Tender price provided in the Form of Tender?
		12) Compliance with the required design & specification
		13) Completion Schedule
		14) Capacity to perform under the Contract
		15) Capacity of after-works care at local facility(ies)
		16) Others

Source: JICA Study Team

#### (2) Requirements before the construction of Michinoeki

While a contractor has been selected, it must be once again ensured that all necessary conditions are satisfied for smooth implementation of the construction work. Although most of the issues and concerns have been discussed and solved during the last months with good efforts of provincial governments, following two basic points must be made clear further:

##### (a) Connectivity with external utilities

Connection of electricity, water supply and drainage of the Michinoeki must be properly provided with the external system in terms of capacity and facilities in a way that stable supply of services will be ensured upon completion of the Michinoeki facilities and negative impacts on environment non-existent.

**(b) Establishment of a Task Force**

In parallel to the construction of the Michinoeki facilities, it is equally important to develop sufficient capacity of a group who will be responsible for operation and management of Michinoeki after the completion of the Study. For this, JICA recommended organizing a Task Force who will monitor the process of the pilot project development and play a key role in establishing capable operation and management group. Without full involvement of the Task Force in this process, it is difficult to develop necessary operation and management capacity. It is, therefore, very important and critical to organize a Task Force before the commencement of the construction work. The Task Force will not necessary be a group for actual operation and management of the Michinoeki after the completion, but a core group who understand the project and provide foundation in establishing the final Michinoeki organization. It is recommended that the Task Force is composed of representatives of the PC, relevant departments including, among others, DOT, MARD, DOC, Tourism and Districts and associations, depending on the needs.

**(3) Requirements during the construction period**

While the construction work will be undertaken by the contractor appointed by JICA with support of JICA Study Team and subcontracted Vietnamese consultants, provincial authorities are requested to ensure the following:

**(a) Protection from accidents, damage, violences caused by outsiders**

During the construction period, the provincial governments provide the contractor appointed by JICA with adequate support to protect against trespassing, damage, violence etc. which might be caused by outsiders. Provision of adequate measures must be worked out in close coordination of both sides.

**(b) Access to project sites**

While access to the construction sites will be limited, proper arrangements need to be made for those related to the pilot project activities including, among others, appointed contractors, JICA Study Team and subcontracted Vietnamese consultants. Provision of adequate measures will be worked out in close coordination of both sides.

**(c) Role of Task Force**

Prior to the completion of the pilot projects, various preparatory works will be undertaken to ensure smooth operation and management of the Michinoeki. For this it is necessary to conduct training and various pilot activities with full involvement of Task Force under a guidance of JICA Study Team and subcontracted Vietnamese consultants.

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**(4) Requirements after the construction of Michinoeki**

When the Michinoeki buildings and facilities are constructed, they will be officially turned over to provincial authorities; It must be ensured that the following requirements are to be met.

**(a) Ownership of land buildings and facilities of Michinoeki**

Michinoeki including land, building and related facilities within the designated boundary of land must be under the ownership of the provincial governments.

**(b) Responsibility of operation and management of Michinoeki**

Provincial governments are responsible for operation and management of Michinoeki. The facilities should not be closed, demonstrated nor converted for other purposes than Michinoeki. The facilities should not be sold to private company, though a part of function of Michinoeki can be contracted out of outsourced to private sector.

**(c) Organization and staffing of Michinoeki**

Organization and staffing of Michinoeki must be made clear under the ownership and management responsibilities of provincial governments.

**(d) Operation and Management Plan of Michinoeki**

Michinoeki organization must be prepare short-term (1 year) and medium-term (3 years) operation and management plan including activity and financial plans which must be monitored by an adequate form of committee, comprising representatives of stakeholders.

**(e) Support of JICA for operation and management of Michinoeki**

JICA Study Team provides provincial governments and the Michinoeki organizations with necessary inputs such as training, equipment, advice during the study period to facilitate and ensure adequate operation and management by Michinoeki organizations after the study.

**(f) General undertaking of provincial governments for smooth conduct of pilot project activities**

Provincial governments provide the Study Team and subcontracted Vietnamese consultants with necessary assistance for smooth conduct of operation and management activities during the pre-opening period.

## 4. Operation and Management

### (1) General

Principles of operation and management of Michinoeki are summarized as follows;

- To secure public functions and provide services as a public roadside facility
- To encourage local communities to participate in service provision for job creation and income generation
- To share roles and responsibilities among local governments, communities and private sectors

To satisfy these principles during operation period, operation and management of pilot projects were conducted from May 2008. These are composed of three (3) activities.

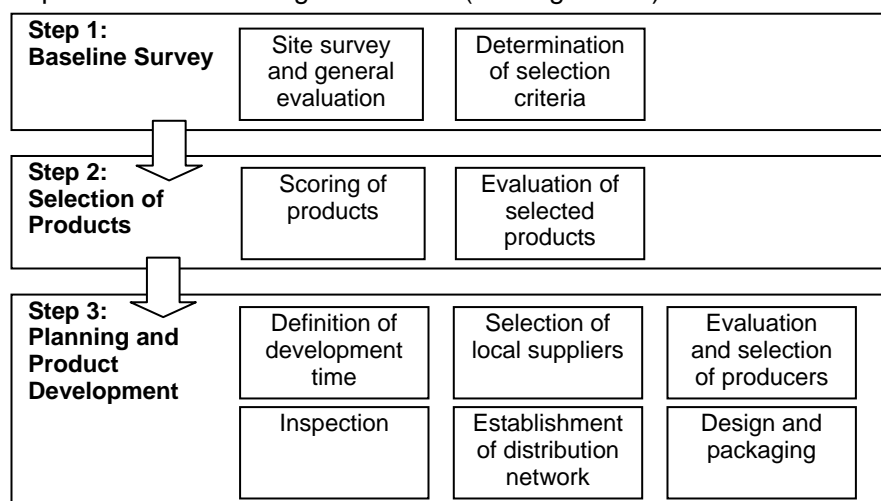
- Product development
- Training for management unit and staffs
- Promotion and preparation for opening and events

The local consultants were in charge of these activities to work with provincial governments, management units and staffs on site.

### (2) Product Development

**Background and objective:** Exhibition and sales of local products at the Station is not only for bringing only economic value, but also giving visitors a glance at the provincial geography, history and culture and create opportunities to local communities to participate in the activities of the Station. Some of the products can be considered as the symbol of the province. Therefore, how to select and develop the local products to be shown and sold at the Station is an indispensable function of the Station. The developed products can be shown and sold inside and outside of the Station, daily or seasonally.

**Methodologies:** To identify potential local products and support original product development at Michinoeki, several activities were done, which local consultants worked with local producers and local governments (see Figure 4.1).



**Figure 4.1 Process of Product Development of Pilot Project**

Source: JICA Study Team

## Step 1: Baseline Survey

At the beginning, local consultants conducted a field survey of production areas. The following general evaluations were gained after site surveys at the three pilot provinces.

**Table 4.1 General Evaluation of 3 Provinces**

Strong points	<ul style="list-style-type: none"> <li>• Available local and traditional products with famous names such as Banh da Ke, Gia Vien Shrimp paste, Cao Phong orange, etc.</li> <li>• Skillful workers with job inherited from generation to generation.</li> <li>• Craft villages exist.</li> <li>• Material supply is nearby or easy to get.</li> </ul>
Weak points	<ul style="list-style-type: none"> <li>• Overuse of chemical which leads to unclean and unsafe products.</li> <li>• Poor and ugly packing.</li> <li>• Inadequate reservation facilities.</li> <li>• The seasonal matter.</li> <li>• Poor processing technology especially for agricultural products so the economic value is still low.</li> <li>• Unattractive designs for craft items.</li> <li>• Too big products for car passengers to buy.</li> <li>• Supervision on hygienic production is not strict.</li> <li>• Famous local products have not yet been registered with their brand names.</li> <li>• Spontaneous production without plan or supervision.</li> <li>• Sales network with many inter-mediate traders.</li> </ul>

Source: JICA Study Team

## Step 2: Selection of Products

Before setting up the criteria for the selection of the products to be developed, it is necessary to determine and evaluate the existing features of the products. With the prospects of “safety”, “quality” and “value”, following criteria were set for scoring.

- (i) Chemical usage (insecticide, additive, preservative, etc.) or hygienic condition.
- (ii) Materials (main materials, sub-materials, and fuel source)
- (iii) Production technique/know-how
- (iv) Production scale and facilities
- (v) Tradition of the products (production history, usage, significance, etc.)
- (vi) Locality (provincial, delta, mountainous, semi-mountainous, coastal, etc.)
- (vii) Taste, appearance and size
- (viii) Waste treatment (for feeding, fertilizer, water/smoke treatment, etc.)
- (ix) The effect of the products
- (x) The seasonal matter together with the time table of availability.
- (xi) Preservation time/method or processing technique.
- (xii) Packing way
- (xiii) Transportation and distribution
- (xiv) Price
- (xv) Popularity
- (xvi) Registered brand name or not.
- (xvii) The production to be able to be demonstrated at the Station or not.



**<Hoa Binh Province>**

16 items were listed up in Hoa Binh Province, and field surveys were conducted based on the criteria. Result of grading of products were shown in Table 4.2.

**Table 4.2 Grading of Products in Hoa Binh Province**

Type	No.	Product Name	Score by Criteria																	
			a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	Total
Craft Item	1	Mai Chau Brocade	4.0	5.0	4.5	4.0	5.0	5.0	4.0		4.0	5.0	5.0	3.5	4.5	4.0	3.5	1.0	5.0	67.0
	2	Luong Ceramic	4.0	5.0	4.0	3.0	3.0	3.0	3.0	3.0	4.0	5.0	4.0	3.5	3.5	2.5	3.0	2.5	3.0	59.0
	3	Hand-made Paper	4.5	4.0	4.0	4.0	5.0	3.5	4.0	3.0	4.0	5.0	5.0	3.5	3.5	4.0	3.0	1.0	3.0	64.0
	4	Bamboo wares	2.0	5.0	4.0	4.0	4.0	4.0	3.5	2.5	4.0	5.0	4.0	4.0	4.0	4.0	3.5	2.0	3.0	62.5
	5	Embroidery	4.0	5.0	3.5	3.0	3.5	3.0	3.0		3.5	5.0	5.0	3.0	3.0	3.0	3.0	1.0	5.0	56.5
	6	Tree root Art products	2.5	4.0	5.0	4.0	4.0	4.0	4.5	1.0	3.0	5.0	5.0	3.0	1.0	3.0	2.5	2.0	2.0	55.5
Agricultural products	7	Cao Phong orange	4.0	4.0	5.0	5.0	5.0	5.0	4.0		5.0	2.5	2.5	2.5	4.0	5.0	5.0	3.0	1.0	62.5
	8	Honey	5.0	4.0	4.5	3.0	5.0	4.0	4.0		5.0	4.0	4.0	3.0	2.0	4.5	4.0	1.0	3.0	60.0
	9	Fresh vegetables/fruits	5.0	4.5	4.0	4.0	5.0	5.0	4.0		4.0	3.0	2.5	2.0	3.0	4.0	3.5	1.0	1.0	55.5
	10	Sugar Cane	4.0	4.5	4.5	4.5	5.0	5.0	4.5	3.0	4.0	3.5	3.0	2.5	4.0	4.0	4.0	1.0	1.0	62.0
	11	Sticky Rice	3.5		4.0	2.5	5.0	5.0	5.0		5.0	2.5	4.0	2.5	3.5	4.0	3.5	1.0	1.0	52.0
Processed Foods&Fruits	12	Com Lam sticky rice	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	3.5	5.0	4.0	5.0	5.0	1.0	5.0	77.5
	13	"Can" vodka	2.5	5.0	5.0	4.0	5.0	5.0	3.5	3.0	2.5	5.0	5.0	3.5	3.5	4.0	4.0	3.0	3.5	67.0
	14	Dry banana	5.0	5.0	4.0	3.5	3.0	3.0	3.5		3.5	2.5	3.5	4.5	3.0	4.0	3.0	3.0	1.0	55.0
	15	"Shan" Organic Tea	5.0	5.0	5.0	4.0	5.0	5.0	4.5		4.5	4.0	4.5	5.0	4.0	4.0	4.5	4.5	1.0	69.5
	16	Kim Boi Mineral Water	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	1.0	80.5

Source: JICA Study Team

Through the total points of each product, the following items from Hoa Binh province have been selected to be developed: "Mai Chau" Brocade; "Luong" Ceramic ; Hand-made paper (locally called "DZO" paper); "Cao Phong" Orange ; Com Lam Sticky rice; Organic Shan Tea. These six (6) products were further studied to identify strong and weak points as follows.

**Strong points:**

(i) They share the same strongest point, that is the "Locality", "no chemical usage", and all of them are produced by ethnic "Muong" and "Thai" people, that is the typical feature of Hoa Binh province. (ii) The products and their production facilities are good enough which need only more small investment to become the developed products. Among the selected

products, two products are quite good enough to be shown and sold at the Station. They are Com Lam sticky rice and Organic “Shan” tea. This is also a considerable point at the first stage when the investment fund for the product development is limited.

Weak points:

Mai Chau Brocade of Thuan Hoa Group: (i) To hand-over more designs on patterns and products to make brocade products more attractive and functional. (ii) To support the trial samples making. (iii) To support the label with producer’s name printed on. (iv) To support the packing materials together with the explanation on the products, and (v) To support a sewing machine to combine the manual work and machine work in a product.

“Luong” Ceramic: (i) To hand-over more designs to make new small products to be suitable for the sales at the Station. (ii) To support the trial samples making of the new designs before the mass production. (iii) To support the packing materials together with the explanation on the products and the producer.

Hand-made paper (“DZO” paper): (i) To select the available products for sales at the Station. (ii) To hand-over more designs to make new small products. (iii) To support some necessary devices. (iv) To support the trial samples making of the new designs before the mass production. (v) To support the packing materials together with the explanation on the products and the producer.

Cao Phong Orange: (i) To support the label printing. (ii) To support the packing materials.

Kim Boi mineral water; Com Lam sticky rice and organic Shan tea are really good products which need no more development at this step so they can be items of the Station.

**<Ninh Binh Province>**

9 items were listed up in Ninh Binh Province, and field surveys were conducted based on the criteria. Results of grading of products were shown in Table 4.3.

**Table 4.3 Grading of Products in Ninh Binh Province**

Type	No.	Product Name	Score by Criteria																	
			a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	Total
Craft Item	1	Embroidery, lace, hand-made items	5.0	5.0	5.0	4.5	5.0	5.0	5.0		4.0	5.0	5.0	4.0	4.0	4.0	3.5	2.5	5.0	71.5
	2	Kim Son sea-grass products	3.5	5.0	5.0	4.0	5.0	5.0	4.0	2.0	4.0	5.0	4.0	3.5	4.0	4.0	4.0	2.5	3.5	68.0
	3	Stone carving	3.0	4.0	5.0	5.0	5.0	5.0	2.0	2.0	4.0	5.0	5.0	3.0	2.0	3.5	3.0	2.5	1.0	60.0
Agricultural products	4	Flower made of Soil	3.0	4.5	4.0	3.5	5.0	5.0	4.0	2.0	2.5	5.0	5.0	3.5	4.0	4.0	2.5	2.0	5.0	64.5
	5	Pineapple	4.0	4.0	4.0	4.0	4.0	4.0	3.5		5.0	2.5	2.5	2.5	3.5	5.0	5.0	3.0	1.0	57.5
	6	Fresh vegetable & fruits	4.0	4.0	4.0	4.0	2.5	2.5	3.5		5.0	2.5	2.5	2.5	3.5	5.0	5.0	1.0	1.0	52.5
Processed Foods& Fruits	7	Kim Son vodka	4.0	4.0	4.0	5.0	5.0	4.0	2.5	2.5	5.0	5.0	4.0	4.0	4.0	3.5	3.0	3.5	1.0	64.0
	8	Fermented goat meat	5.0	5.0	5.0	3.0	3.5	5.0	3.0		3.5	5.0	2.5	4.0	3.0	3.0	3.0	1.0	5.0	59.5
	9	Gia Vien shrimp paste	5.0	5.0	5.0	2.0	5.0	5.0	4.5		4.0	4.5	4.5	2.0	3.0	5.0	4.0	1.0	1.0	60.5

Source: JICA Study Team

Through the total points of each product, the following items from Ninh Binh province have been selected to be developed: Embroidery, Lace and Hand-made items; Kim Son sea-grass items; Stone-carving items. These three (2) products were further studied to identify strong and weak points as follows.

**Strong points:**

- (i) They share the same strongest points, those are the locality, tradition with craft villages.
- (ii) The products are good enough with rather plentiful designs.

**Weak points:**

Embroidery, Lace and Hand-made items: (i) To give more designs to make suitable products for the Station. (ii) To infuse a new spirit into products by attaching with them the tags which explain about the worker's skill, long history tradition. (iii) To support the samples making.

Kim Son sea-grass items and Stone-carving items : to select the most suitable products for the Station and give the recommendations on how to pack the products.

Shrimp paste: As the management unit of the Station insisted much on developing “Gia Vien” shrimp paste which is a home-made sauce and very famous locally, the following recommendations have been given to the management unit. (i) To get the sample of the paste at least 3 times at random for testing at the related organizations. (ii) To register the quality of the paste to Department of Health. (iii) To register the brand name to Intellectual Proprietary Department. (iv) To decide the packing way in order to keep the paste in good quality and suitable for transportation. (v) To design and make new bottles, labels.

**<Bac Giang Province>**

28 items were listed up in Bac Giang Province, and field surveys were conducted based on the criteria. Result of grading of products were shown in Table 4.4.

**Table 4.4 Grading of Products in Bac Giang Province**

Type	No.	Product Name	Score by Criteria																	
			a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	Total
Craft Item	1	Quang Minh Porcelain		5.0	4.0	4.0	4.0	1.0	5.0	2.0	4.0	5.0	5.0	5.0	5.0	3.0	2.0	1.0	4.0	59.0
	2	Tho Ha Ceramic		4.0	2.0	2.0	5.0	4.0	2.0	2.0	2.0	5.0	5.0	3.0	2.0	3.0	2.0	1.0	4.0	48.0
	3	Lang Ngoi Ceramic		4.0	3.0	3.0	3.0	3.0	3.0	2.0	4.0	5.0	5.0	3.0	3.0	3.0	2.0	1.0	4.0	51.0
	4	Bamboo wares		4.0	3.0	3.0	2.0	3.0	3.0	4.0	4.0	2.0	3.0	3.0	3.0	4.0	4.0	1.0	4.0	50.0
	5	Embroidery		4.0	2.5	2.5	4.0	2.0	3.0	5.0	2.0	5.0	4.0	4.0	3.0	3.0	2.0	1.0	4.0	51.0
	6	Leaf Hat ("Non")		4.0	3.0	3.0	4.0	2.0	2.0	4.0	4.0	5.0	3.0	3.0	3.0	4.0	4.0	1.0	4.0	53.0
Agricultural Products	7	Fresh litchi	2.5	4.0	4.0	4.0	5.0	5.0	5.0		4.0	2.0	3.0	3.5	3.5	5.0	5.0	2.5	1.0	59.0
	8	"Queen" pineapple	4.0	4.0	4.0	4.0	5.0	5.0	5.0		5.0	2.0	3.0	2.5	3.5	5.0	5.0	1.0	1.0	59.0
	9	"Dien" pomelo	2.5	4.0	4.0	3.0	2.0	2.0	5.0		5.0	3.0	3.5	2.5	3.5	3.5	5.0	1.0	1.0	50.5
	10	Red persimmon	2.0	4.0	4.0	4.0	4.0	4.0	3.0		3.5	2.0	2.0	2.0	3.5	4.5	4.0	1.0	1.0	48.5
	11	Custard Apple	4.0	4.0	4.0	4.0	5.0	5.0	5.0		5.0	2.5	2.5	2.5	2.5	4.5	5.0	1.0	1.0	57.5
	12	"GAC" fruit	1.5	5.0	5.0	5.0	5.0	3.5	3.0		5.0	2.5	3.0	2.0	4.0	4.5	4.0	1.0	1.0	55.0
	13	Sweet potato	1.5	5.0	3.0	3.0	5.0	5.0	5.0		4.0	2.0	2.0	2.0	2.0	5.0	5.0	1.0	1.0	51.5
	14	Pachyrrhizus	1.5	4.0	4.0	4.0	4.0	5.0	3.0		4.0	3.5	3.5	2.0	4.0	5.0	4.5	1.0	1.0	54.0
	15	Fragrant rice	2.0		4.0	4.0	4.0	4.0	4.0		5.0	3.5	3.5	2.0	4.0	4.5	4.0	1.0	1.0	50.5
	16	Honey	5.0	5.0	4.5	5.0	5.0	5.0	5.0		5.0	4.0	4.0	3.0	3.0	5.0	4.0	1.0	3.0	66.5
	17	Bamboo shoot	5.0		4.5	4.0	4.0	4.0	4.0		3.5	3.0	3.0	2.0	3.5	5.0	4.0	1.0	1.0	51.5
	18	Reared mushroom	5.0	5.0	4.0	3.5	3.0	3.0	4.5	4.5	5.0	3.5	3.5	3.5	3.5	3.5	3.0	1.0	1.0	60.0
	19	Canarium	5.0		1.5	1.5	4.0	5.0	4.0	4.0	3.5	2.0	3.0	2.0	3.5	3.5	3.0	1.0	1.0	47.5
	20	Water melon	2.5	4.0	4.5	4.5	3.0	3.0	3.5		5.0	3.5	3.0	2.0	3.5	4.5	4.5	1.0	1.0	53.0
Processed Foods& Fruits	21	"Chu" dry rice noodle	5.0	5.0	4.5	5.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	3.5	4.5	4.0	4.0	2.5	1.0	69.0
	22	"Tho Ha" dry rice paper	3.0	5.0	4.0	3.0	3.5	3.5	3.5	2.0	3.0	4.0	3.0	2.0	3.5	4.0	4.5	1.0	1.0	53.5
	23	"DaMai" fresh rice noodle	4.0	5.0	4.5	3.5	4.5	3.5	4.5	3.0	4.0	5.0	2.5	3.5	4.0	4.5	4.5	1.0	1.0	62.5
	24	"Ke" rice snack	5.0	5.0	5.0	3.5	5.0	5.0	3.5	2.5	4.0	4.5	3.0	2.0	3.0	5.0	4.0	1.0	1.0	62.0
	25	"Lang Van" vodka	4.0	4.0	4.0	5.0	5.0	4.0	2.5	2.5	5.0	5.0	4.0	4.0	4.0	3.5	3.0	3.5	1.0	64.0
	26	Dry litchi	5.0	3.0	2.0	3.0	3.0	5.0	2.0	2.0	2.0	2.0	2.5	2.0	2.5	4.0	2.0	1.0	1.0	44.0
	27	Dry persimmon	5.0	3.0	3.0	3.0	3.0	4.0	4.0	2.0	3.0	2.0	3.5	2.0	2.0	4.0	2.5	2.5	1.0	49.5
	28	Canned vegetable & fruits	5.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0	2.0	3.5	5.0	5.0	5.0	2.5	3.0	1.0	66.0

Source: JICA Study Team

Through the total points of each product, the following items from Bac Giang province have been selected to be developed: "Banh da Ke", "Chu" dry rice noodle" and Honey. These 3 products were further studied to identify strong and weak points as follows.

**Strong points**

(i) They share the same strongest point, that is the "Locality", "no chemical usage", non-seasonal products and one of them is produced in the mountainous area by ethnic "Dao" people, that is honey (pollen from litchi and longan flowers which are the typical fruits of Bac Giang province). (ii) The products and their production facilities are good enough which need only more small investment to become the developed products. This is also a considerable point at the first stage when the investment fund for the product development is limited.

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### Weak points

Banh Da Ke: (i) To improve the size of the products ("Ke" rice snack) as its existing size is too big to car passengers to carry and put in the car. (ii) To combine a new modern taste with the traditional taste in order to give customers more choice for selection and a new image on a very traditional and local product. (iii) To support the samples making. (iv) To support the drying work by supplying new drying nets with stands on the producer's house terrace. With this support, the production will be cleaner. (v) To improve the packing quality including a clear declaration on the producer, the ingredient, the use instruction, the manufacturing and the expiry dates. This can be considered as a preliminary step for the quality and brand name registration later on.

"Chu" dry rice noodle: As the producer have got the local certificate on quality issued by Department of Health of the Province on the quality, the development work is done only with packing bag and labels printing work. The packing bag should be thicker in order to keep the bag not easily cut by the rather sharp dry noodle. This can help to maintain registered quality during the transportation and stocking time.

Litchi and Longan Pure Honey: (i) The product need to be more filtered in order to exclude the foreign matters such as bee bodies, wax, etc. The filtering device is very simple. That is the clean mesh cloth made in domestic market and easily got. (ii) The packing should be improved as the existing one is so ugly. New bottles have been supplied with two measurable bottles in order to pour exact volume of honey into each bottle. (iii) The attractive labels including a clear declaration on the producer, the keeping way, the manufacturing and the expiry dates have been printed. This can be considered as a preliminary step for the quality and brand name registration later on. (iv) In order to export the product, water content in the honey must be reduced by 15-16%. This reduction needs a special device which requires more investment in the next step.

### **Step 3: Plan and Product Development**

**Definition of Development time:** There are many products needed to be developed and the investment for each product varies. In addition to that the institutional system is also very important which helps to bring the success to the development of the products. For instance, in order to develop litchi fruit into a real safe, well-packed and marketable product, the involvement of DARD, DOTI and other related departments and organizations is badly needed. The involvement helps to set up a clean farming progress, well-planned farming areas, a strict supervision and an in-time and proper advice during the farming, harvest and post-harvest time, a quality and brand name registration, a stable sales network, etc.

Due to the above reason, the development can be divided into three phases:

Phase 1: The products which need quite small investment in order to become good enough are selected.

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Phase 2: The products which need more investment should be developed

Phase 3: The products which need intensive investment should be developed.

**Selection of the local suppliers:** To check the ability of the suppliers from the following information sources; (i) From the related departments in the province, in the district, in the commune, from the village leaders, the inhabitants and the cross-check on the supplied information is really necessary. (ii) To have actual site surveys at their production sites and interview the owner, the workers and the neighboring inhabitants. (iii) To take the product samples for trial usage, stocking or test. (iv) To set up the evaluation criteria for producers selection.

**Evaluation and selection of producers:** Six (6) criteria were set for selection of producers; (i) good management, (ii) advanced skill or know-how, (iii) proper production capacity with stable supply, (iv) preservation of tradition and locality in combination with modern tendency, (v) willingness to cooperate with the Station with the mind of sustainable development., (iv) meaning of community should be taken into consideration such as nationality, locality (if possible, from each district or each commune, at least one producer with his own product should be selected like the case of “one village, one product”).

**Inspection Work:** In order to operate the Station in a manner of sustainability, both the products and the producers must be involved in the inspection system set and agreed by the Station and the producers. At the first step of development, the following steps were proposed; (i) the producers and the Station management unit (shortly called as SMU) observe all the articles signed in their sales-purchase contract. (ii) the SMU set up the regular inspection time-table and at random inspection towards the producers and the staffs at the Station. (iii) To send a written evaluation to the producers on their products quarterly. If any problem occurs suddenly, both sides should settle immediately. (iv) To have the yearly evaluation at the end of the year and organize the customers' meeting with prize to the best supplier(s).

**Distribution Network:** The direct distribution from the suppliers to the Station is always considered in order to cut down the inter-mediate cost.

## **ANNEX III**

### **Economic and Financial Analysis**



## 1. Summary

EIRR and FIRR in this analytical study are calculated as in the following Tables.

**Table 1.1 EIRR / FIRR of Michinoeki with Standard Benefit**

	Traffic Volume		
	High growth	Medium growth	Low growth
Case I	26% / 17%	22% / 14%	17% / 9%
Case II	25% / 18%	18% / 11%	12% / 5%
Case III	25% / -	- / -	- / -

**Table 1.2 EIRR / FIRR of Michinoeki with High Benefit**

	Traffic Volume		
	High growth	Medium growth	Low growth
Case I	77% / 23%	73% / 20%	65% / 15%
Case II	67% / 23%	58% / 17%	49% / 11%
Case III	36% / -	30% / -	26% / -

Case I, Case II, and Case III are assumed with reference to traffic volumes and facilities of the pilot projects in Ninh Binh, Bac Giang, and Hoa Binh, respectively. The case settings are not exactly same as pilot projects.

It is important to note that the benefit measured is very limited. There are a lot of benefits which are not countable in this study, such as traffic safety

## 2. Demand Forecast of Visitors of Michinoeki

### 1) Formulae

In this calculation the demand of Michinoeki is the number of drivers and passengers who drop in Michinoeki by vehicles. There will be many visitors who come to Michinoeki by motorbike or on foot. But they are not included here because the main purpose of the developing Michinoeki is for the conveniences of long-trip travelers. This demand is calculated as follows:

Demand (persons/day)

= <Number of passengers (including a driver) in one vehicle>

× <Daily number of vehicles dropping in Michinoeki>

= <Number of passengers (including a driver) in one vehicle>

× <Daily traffic Volume on the front road of Michinoeki>

× <Ratio of drop-in of vehicles>

Here, vehicles are classified into 5 types such as car, small bus, big bus, lorry, and truck.

### 2) Number of Vehicles

In this sample calculation, the volumes studied in pilot projects are used as the current volume. The future traffic volume is calculated as follows:

Future traffic volume = Current traffic volume × Average growth rate of traffic

, where

Current traffic volume is measured by JICA Study Team (24 hours survey at each project site in 2007)

Average growth rate is estimated based on future volume (2007-2033) forecast of each highway by VRA.

Three scenarios are considered for the growth rate. These scenarios are introduced from three types of regression formulae.

Three formulae are:

Linear type:  $R = at + b$

Exponential type:  $R = a * \exp(b * t)$

Multiplier type:  $R = a * t ** b$

Log type:  $R = a + b * \log t$

, where

R: Rate of the target volume against current volume, t: year, a, b: parameters

In high growth and medium growth scenarios, growth rates decrease after 2020.

**Table 2.1 Types of Regression Formulae of Growth Rate Used in Each Case**

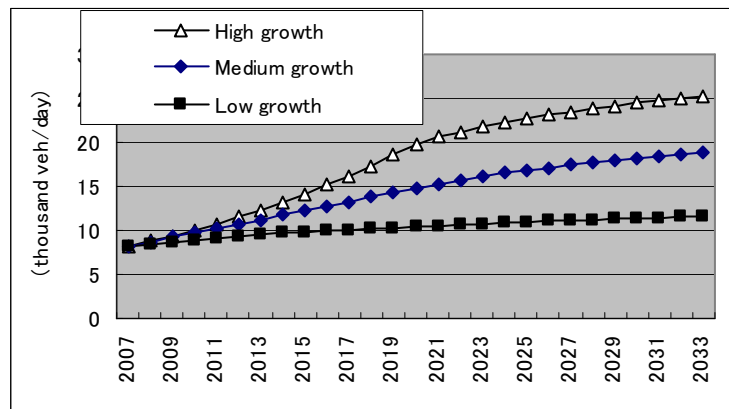
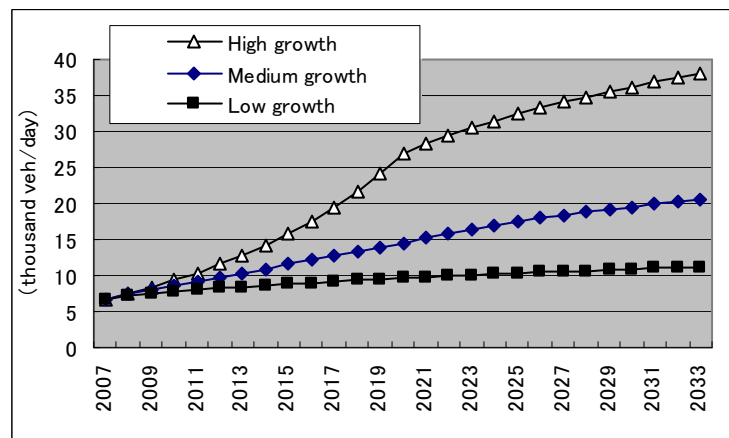
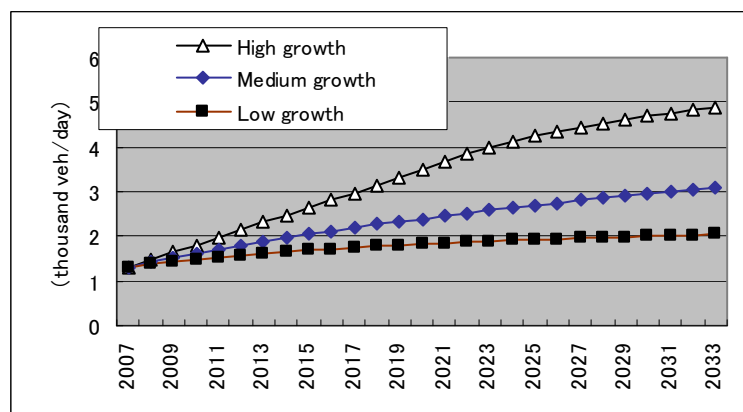
	High growth	Medium growth	Low Growth
Case I	2008~2020 (Exponential type)	2008~2020 (Linear type)	2008~2023 (Multiplier type)
Case II	2021~2033 (Multiplier type)	2021~2033 (Multiplier type)	
Case III	2008~2020 (Linear type)	2008~2023 (Multiplier type)	2008~2023 (Log type)
	2021~2033 (Log type)		

Case I refers to the pilot project in Ninh Binh.

Case II refers to the pilot project in Bac Giang.

Case III refers to the pilot project in Hoa Binh.

Estimated traffic volumes are shown in the next figures.

**Figure 2.1 Future Traffic Volume – Case I****Figure 2.2 Future Traffic Volume – Case II****Figure 2.3 Future Traffic Volume – Case III**

### 3) Number of Visitors

Visitors of Michinoeki for this appraisal are drivers and passengers. The parameter of the calculation is in the following tables.

**Table 2.2 Distribution of Vehicle Types**

Passenger car	35.0%
Small bus	10.0%
Big bus	20.0%
Lorry	17.5%
Truck	17.5%
Total	100.0%

Source: JICA Study Team (Based on the site survey at pilot projects)

**Table 2.3 Ratio of “Drop-in” by Vehicle Type**

Passenger car	2.0%
Small bus	10.0%
Big bus	15.0%
Lorry	0.5%
Truck	0.5%

Source: JICA Study Team (Based on the site survey at pilot projects)

**Table 2.4 Number of Passengers in a Vehicle**

Passenger car *)	2.5
Small bus	7.0
Big bus	22.0
Lorry	1.7
Truck	1.7

\*) a driver is included

Source: JICA Study Team (Based on the site survey at pilot projects)

The flowing table shows the traffic volume on a front road and the number of visitors to Michinoeki in 2020.

**Table 2.5 Estimated Traffic Volume and Visitors in 2020**

	Traffic Volume on a front road (Vehicle/day)			Visitors to Michinoeki (person/day)		
	High growth	Medium growth	Low growth	High growth	Medium growth	Low growth
Case I	20,000	15,000	10,000	15,000	11,000	7,000
Case II	25,000	15,000	10,000	20,000	11,000	7,000
Case III	3,500	2,500	1,800	2,600	1,800	1,400

## &lt;Reference&gt;

**Table 2.6 Traffic Volume Measured by JICA Study Team (2007)**

(Vehicle per day)

	Ninh Binh: WD	Ninh Binh: WE	Bac Giang: WD	Bac Giang: WE	Hoa Binh: WD	Hoa Binh: WE
Passenger car	2,186	3,137	2,270	2,514	375	390
Small bus(<=12 passengers)	306	305	655	777	91	95
Big bus(>12 passengers)	1,535	2,563	1,287	1,653	238	276
Lorry(2 axles)/Truck(=>3 axles)	3,742	3,156	2,349	2,399	591	621
Total	7,769	9,161	6,560	7,343	1,293	1,382
	Ninh Binh: WD	Ninh Binh: WE	Bac Giang: WD	Bac Giang: WE	Hoa Binh: WD	Hoa Binh: WE
Passenger car	28.1%	34.2%	34.6%	34.2%	29.0%	28.2%
Small bus(<=12 passengers)	3.9%	3.3%	10.0%	10.6%	7.0%	6.9%
Big bus(>12 passengers)	19.8%	28.0%	19.6%	22.5%	18.4%	20.0%
Lorry(2 axles) /Truck(=>3 axles)	48.2%	34.5%	35.8%	32.7%	45.7%	44.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

WD: working day, WE: weekend

### 3. Cost

#### 1) Construction cost

Construction costs of a Core facility and a Core+ facility are evaluated based on those of pilot projects for all cases.

Construction cost of a non-Core facility is assumed to be dependent on a scale of the demand. It is evaluated as in the following table.

**Table 3.1 Scale of Non- Core Facility Assumed for this Appraisal**

	Parking lot	Toilet	Restaurant
Case I	0.8* (Core and Core+)	The same scale of (Core and Core+)	0.8* (Core and Core+)
Case II	1.3* (Core and Core+)	The same scale of (Core and Core+)	0.8* (Core and Core+)
Case III	No	No	No

Construction costs are estimated as in the following table.

**Table 3.2 Construction Cost (MVND)**

	Case I	Case II	Case II
Core and Core+	9,370	9,370	9,370
Non-Core	7,856	9,842	0
Total	17,226	19,212	9,370

#### <Reference>

**Table 3.3 Scales of Pilot Projects**

Number of Parking Lot	Toilet
Ninh Binh Bus : 8 Car : 20	Men : 11 Urinals 4 Stalls Women : 11 Stalls
Bac Giang Car: 16	
Hoa Binh Bus : 8 Car : 20	

#### 2) Price of Land

Price of land is assumed as in the following table with reference to pilot projects.

**Table 3.4 Area and Price of Land**

	Core and Core+			Non-core	
	m <sup>2</sup>	thou.VND/m <sup>2</sup>	MVND	m <sup>2</sup>	MVND
Case I	7,000	35.0	245.0	5726	200.0
Case II	6,900	43.0	296.7	7868	338.0
Case II	6,750	42.8	288.9	0.0	0.0

### 3) Operation Cost

#### a. Staff Cost

Staff Cost is assumed with the parameters as in the following Tables.

**Table 3.5 Annual Unit Cost of Staff**

items of expenditure		parameter	
annual cost	staffing	station manager	48.0 MVND
		general manager	38.4 MVND
		support staff	28.8 MVND
		part-time worker	19.2 MVND

**Table 3.6 Number of Staff**

	Core and Core+				Non-core		
	Master	Manager	Staff	Temporary Staff(*)	Manager	Staff	Temporary Staff(*)
Case I	1	3	7	6	2	5	10
Case II	1	3	7	6	2	5	10
Case III	1	3	7	6	0	0	0

(\*) only in a busy season (February, March, April)

#### b. Maintenance Cost

**Table 3.7 Annual Maintenance Cost (the first year)**

Unit: MVND

		Maintenance cost						
		General Electricity Consumption				Water	Cleaning	Others (*)
		waste water system	air conditioner	heater	water supply and light			
Dependent on the Demand(visitors)		Yes			Yes	Yes		
Case I	Core and Core-plus	24.2	6.8	6.8	65.1	61.5	23.0	18.7
	Non-Core	19.8	5.5	5.5	53.3	50.3	18.8	15.3
Case II	Core and Core-plus	24.2	6.8	6.8	65.1	61.5	23.0	18.7
	Non-Core	27.2	7.6	7.6	73.2	69.2	25.9	21.1
Case III	Core and Core-plus	24.2	6.8	6.8	65.1	61.5	23.0	18.7
	Non-Core	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(\*) 10% of total maintenance cost

#### c. Other Cost

**Table 3.8 Other Annual Costs (the first year)**

items of expenditure	parameter	estimation
general administration	50% of Staff Cost	
Publicity and Others	66.60 MVND	Printing 4500VND/set × 1000set × 2/year Staff: :2 staff × 2.40MVND/month
advisor fee	156.00 MVND	

## 4. Economic Analysis

### 1) Benefit

The following table lists the prospective benefits that the Michinoeki yield. However, considering the circumstance and the difficulty in obtaining the data, the measurement objects selected for this analysis this time are “improvement in comfort” and “growth in local economy (an increase in average customer spends brought about by the sales of, for instance, local specialty products of high quality, which the development of Michinoeki makes possible)”.

**Table 4.1 List of the Function and Prospective Benefit of Michinoeki in Vietnam**

Function of Michinoeki	Prospective Benefit	Measurement Object in the analysis this time
1. Providing the resting service for road users	① Improvement in comfort of visitors (bus drivers, passengers)	Yes
	② Improvement in safety in driving, attained through the enjoyment of sufficient rest (a decrease in traffic accidents)	-
2. Providing information	③ Improvement in convenience for visitors (bus drivers, passengers)	-
	④ Optimization of route selection attained through the obtainment of road information	-
3. Supporting road traffic management	⑤ Improvement in efficiency in road management	-
4. Promoting the development of a region (Expansion of the sales of local specialty products, Improvement in the sales in tourism industry, Expansion of job opportunities)	⑥ Induction of traveling demand by the Michinoeki development	Yes
	⑦ Increase in average customer spend brought about by the sales of, for instance, local specialty products of high quality, which the development of Michinoeki makes possible	Yes
5. A symbol of the region	⑧ Building a community	-

### 2) Unit Measurable Benefit

#### a. Comfort of visitors

The measurement object is the improvement of comfort taken as indicating the efficacy of the services of Michinoeki, such as resting and information provisions.

For willingness to pay for comfort improvement, two patterns are presumed by making a reference to the below.

**Table 4.2 Presumption of the Willingness to Pay  
for the Effect of Comfort Improvement**

Case 1 Willingness to pay for comfortable toilet service (CVM questionnaire survey in last fiscal year)	2,000VND/person
Case 2 Amount of charge for pay toilet in urban area	1,000VND/person



Benefit of comfort improvement =

Number of visitors × Utilization ratio of toilet

× Willing to pay for the improvement of comfort

For the utilization ratio of toilet, 70% is presumed based on the presumption at the stage of P/P detailed facility design (referred to a Japanese case [Design Scheme for the Resting Facilities on Expressway]).

#### b. Growth of local economy

Growth of local Economy means the increase in average customer spend brought about by the sales of, for instance, local specialty products of high quality, which the development of Michinoeki makes possible

Amount of increase in average customer spend =

Willingness to pay at Michinoeki – Willingness to pay at existing facilities along the road

**Table 4.3 Presumption of the Amount of Increase in Average Customer Spend**

Facility	Activity	Payment in Michinoeki	Payment in Existing facilities	Increase in a customer spend
Core+	Purchase of local specialty product	50,000VND	30,000VND ~ 45,000VND	5,000VND ~20,000VND
Non-Core	Taking a meal at restaurant, etc.	35,000VND	25,000VND ~ 30,000VND	5,000VND ~10,000VND

In addition, it is presumed that in producing the local specialty products, all input of primary materials, etc. is from within the region and that the increase in the amount of consumption by visitors is counted as directly representing economic ripples in region.

Growth effect in local economy

= Number of visitors × Visit ratio during business hours

× Purchase ratio of local specialty product

× Amount of increase in average customer spend

As for the visit ratio during business hours and the purchase ratio of local specialty product, the result of questionnaire survey in P/P and the previous study is referenced.

**Table 4.4 Assumption of Visit Ratio during Business Hours  
and Purchase Ratio of Local Specialty Product**

Facility	Activity	Visit Ratio during Business Hours	Purchase Ratio
Core+	Purchase of local specialty product	70%	17%
Non-Core	Taking a meal at restaurant, etc.	40%	25%

Source: Determined based on the measurement by JICA Study Team and World Bank Guideline for Michinoeki.

### c. New demand

Growth of local economy is produced by sales in Michinoeki. There will be other growth along the target roads. The most possible case for this growth is Case 3, i.e Hoa Binh. Current traffic volume along Route 6 is not large, but this route has the potential road in that it connects Hanoi to tourism area and current services for travelers are at a low level. After traveling becomes safe and comfortable, the more tourists will visit the sites. The importance for tourists is the possibility of dropping to get safety and comfortability. They may not really drop in Michinoeki.

In this EIRR calculation, the increase of passenger cars is used to evaluate the benefit by tourism. Current ratio of passenger car along Route 6 is about 30%, while that of Routes 1 is near 35% for weekend trips. It is assumed that that of Route 6 will reach that of Route1, i.e. 35% due to comfortable access to tourist sites. Most of this increase is expected to be tourists, but it is also true that all increase is not tourists. In this EIRR calculation it is assumed that half of the increase is tourists. The tourists will buy or eat products in tourist area. This consumption is the source of economic benefit to society. The unit consumption in the calculation is 50,000VND/person which is the same value as consumption of Michinoeki.

This benefit which is produced by new demand is applied only to Case3 because few increases of tourists are expected in Cases 1 and Case 2.

## 3) Calculation

### a. Project Life

As for project life, 25 years is presumed after the construction of Core facility.

- Standard amortization period of building is 25 ~ 50 years according to the depreciation rule in Vietnam:
- Assumption of durable years of P/P facilities: approximately 30 years

### b. Baseline Year

Baseline year is 2008. The construction (initial investment) is performed in 2008 and the service begins in 2009.

### c. Cases

Core and Core+ facilities are built and fully equipped in 2008 and begin services in 2009. Non-Core facility is built and fully equipped in 2009 in commensurate scale with the demand in the year of around 2020, and begins service in 2010.

**Table 4.5 Cases for Calculating EIRR**

Case	Type of Michinoeki	Willing to pay for the comfort service (VND/person)	Willing to pay in core+ Facility (e.g. souvenir) (VND/person)	Willing to pay in Non-Core Facility (e.g. restaurant) (VND/person)	Current daily traffic	Traffic Forecast
A	With Non-core Facility	1,000	5,000	5,000	8,200 (Case I)	Upper
						Middle
						Lower
					6,800 (Case II)	Upper
						Middle
						Lower
	Without Non-Core Facility			1,300 (Case III)	Upper	
					Middle	
					Lower	
B	With Non-core Facility	2,000	20,000	10,000	8,200 (Case I)	Upper
						Middle
						Lower
					6,800 (Case II)	Upper
						Middle
						Lower
	Without Non-Core Facility			1,300 (Case III)	Upper	
					Middle	
					Lower	

#### 4) Result

##### Case A(Standard Benefit)

Comfort: 1000VND/person

Increase in the sales of local specialty product: 5000VND/person

Increase in the sales of restaurant, etc.: 5000VND/person (Case I and Case II)

**Table 4.6 EIRR(Standard Benefit)**

	High growth	Medium growth	Low growth
Case I	26.06%	22.73%	17.48%
Case II	25.51%	18.60%	12.59%
Case III	15.04%	19.71%	15.61%

It is important to note that the benefit measured in this study is not exhaustive. There are a lot of benefits which are not quantifiably measured in the study, such as traffic safety. EIRR is not calculated in Case III, but it is not necessarily infeasible.

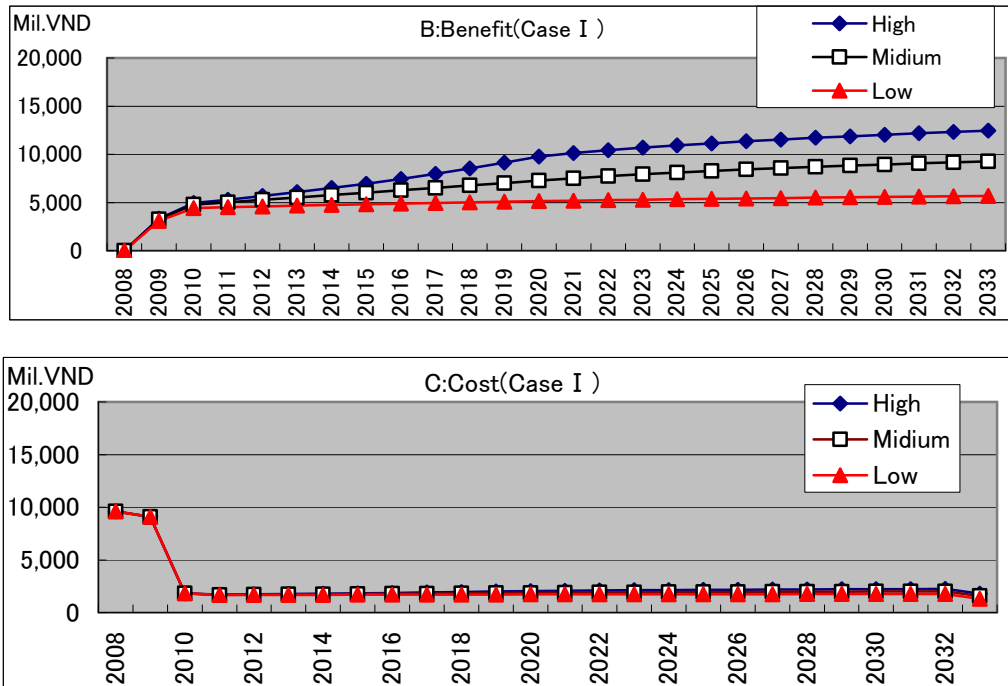


Figure 4.1 Benefit and Cost of Case I

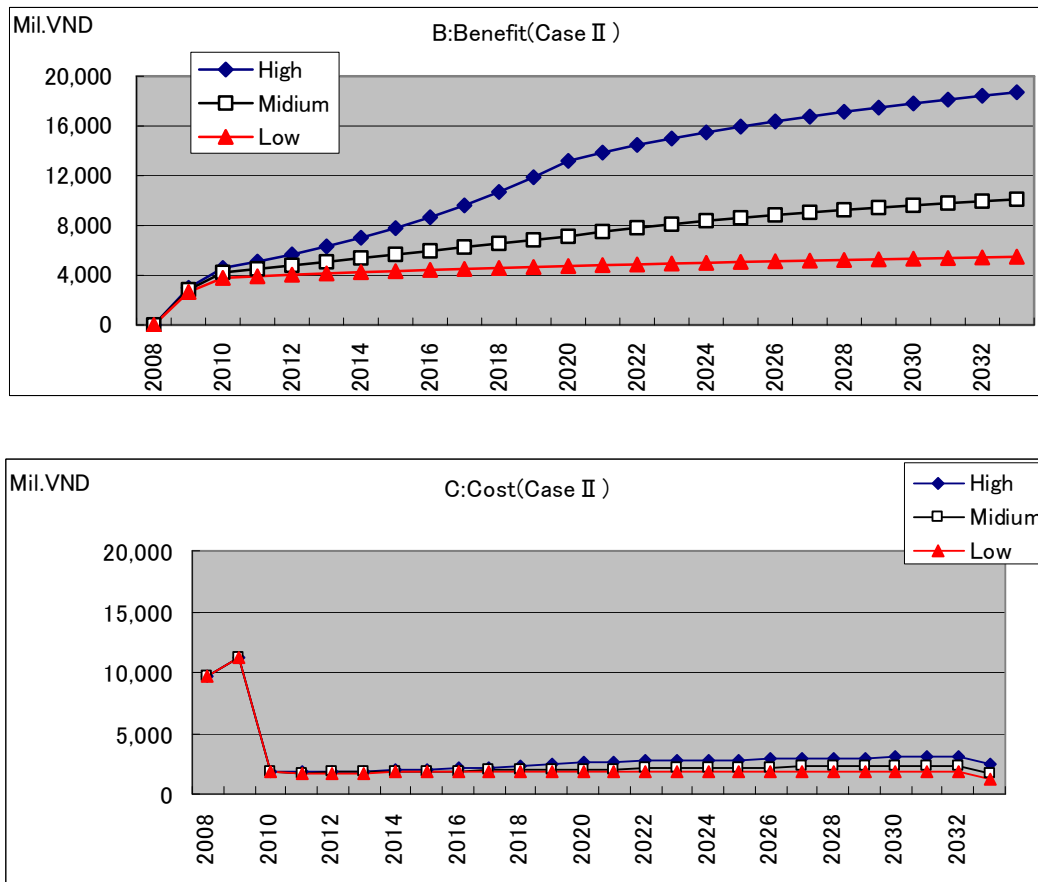


Figure 4.2 Benefit and Cost of Case II

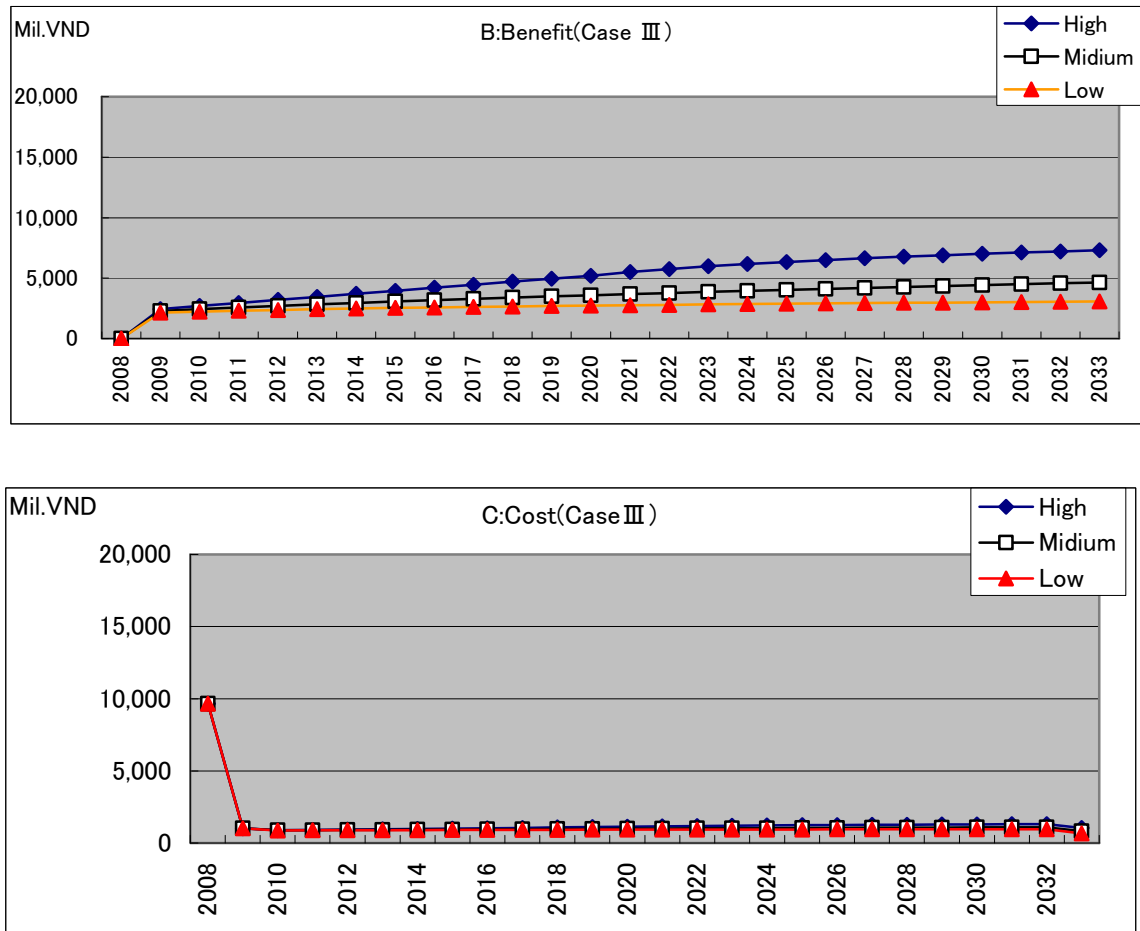


Figure 4.3 Benefit and Cost of Case III

**Case B(High Benefit)**

Comfort: 2000VND/person

Increase in the sales of local specialty product: 20000VND/person

Increase in the sales of restaurant, etc.: 10000VND/person (Case I and Case II)

**Table 4.7 EIRR(High Benefit)**

	High growth	Medium growth	Low growth
Case I	77.47%	73.29%	65.16%
Case II	67.87%	58.63%	49.62%
Case III	36.96%	30.85%	26.22%

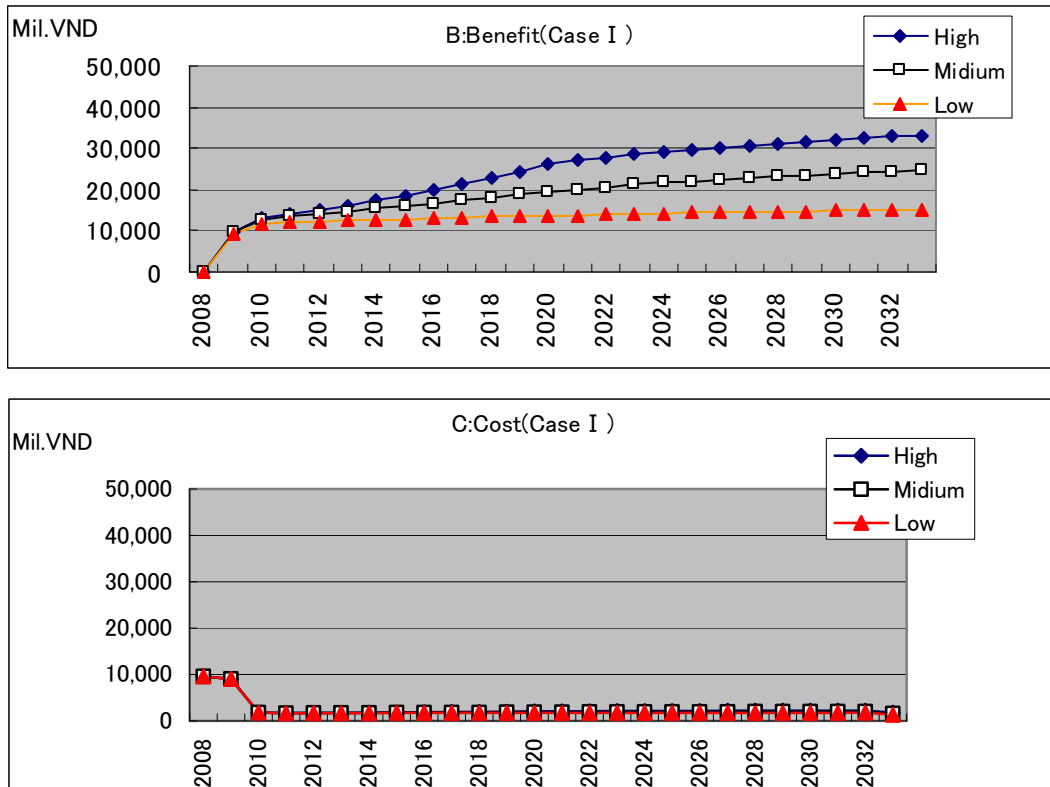


Figure 4.4 Benefit and Cost of Case I

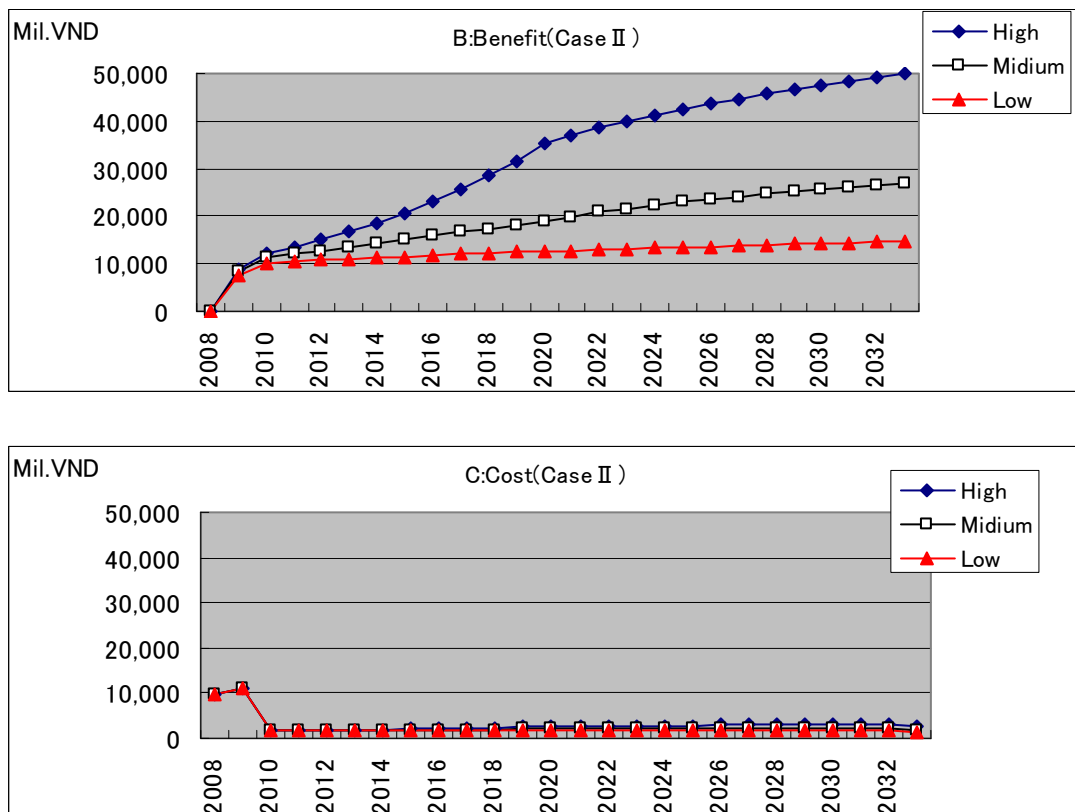


Figure 4.5 Benefit and Cost of Case II

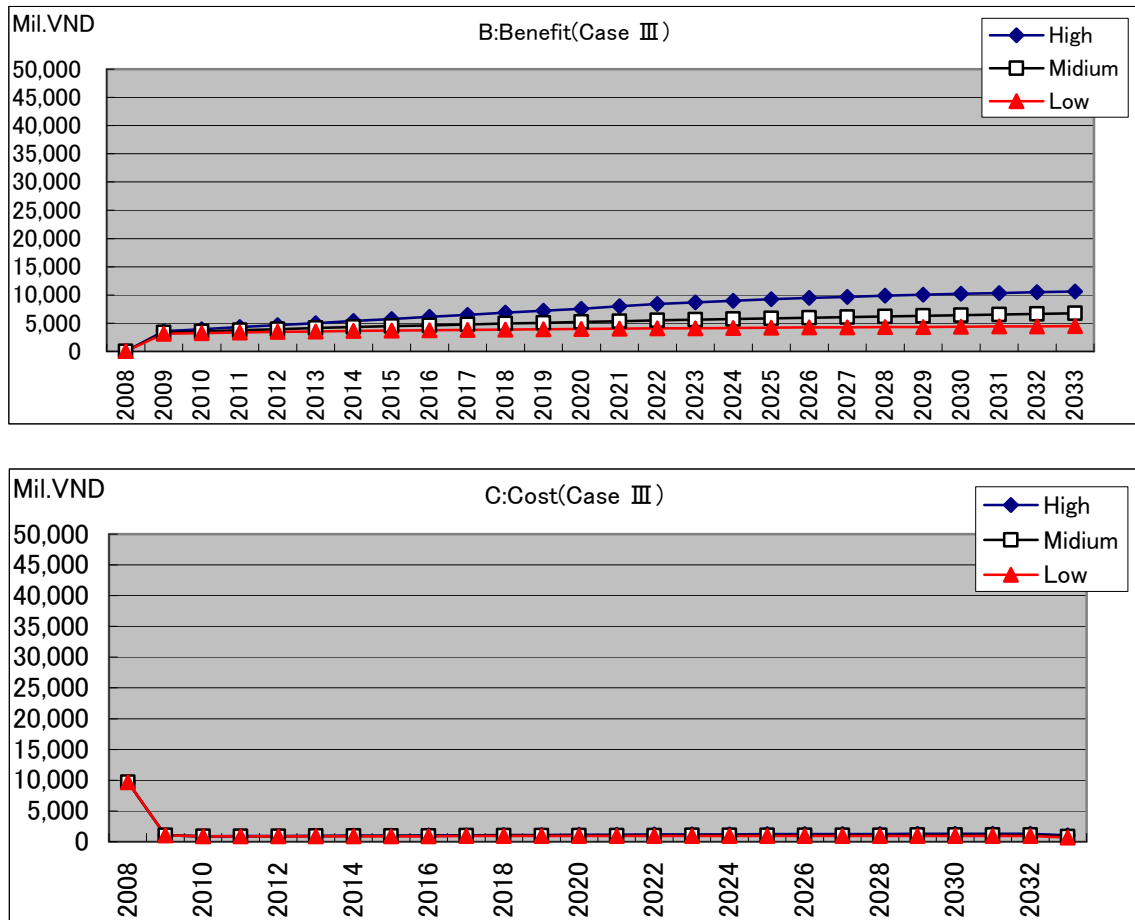


Figure 4.6 Benefit and Cost of Case III

## 5. Financial Analysis

### 1) Revenue

#### a. Sales at Core-Plus facility (Sales of local specialty product, etc.)

50,000VND is presumed for average customer spend based on the survey of P/P.

5% for profit margin is presumed. For the visit ratio during business hours and the ratio of the number of purchasing customers to the number of visitors, the same conditions assumed in the calculation of EIRR are applied.

#### b. Sales at Non-Core facility (Sales of restaurant, etc.)

35,000 ~ 50,000VND is presumed for average customer spend based on P/P.

30% for profit margin is presumed. For the visit ratio during business hours and the ratio of the number of purchasing customers to the number of visitors, the same conditions assumed in the calculation of EIRR are applied.

### 2) Subsidy

As for the construction of equipped facilities and the operating cost, two cases are considered; a case where the operating body bears all costs, and a case (Case III) where the government bears the costs of building and equipping facilities, maintaining and managing facilities, and 60% of employment cost.

### 3) Calculation

#### a. Project Life

As for project life, 25 years is presumed after the construction of Core facility. This presumption is the same as the calculation of EIRR.

#### b. Baseline Year

Baseline year is 2008. The construction (initial investment) is performed in 2008 and the service begins in 2009. This presumption is the same as the calculation of EIRR.



## c. Cases

Table 5.1 Cases for Calculating FIRR

Case	Expenditure on construction and O&M	Type of Michinoeki	Payment for Core plus Facility Service(e.g. souvenir)) (VND/person)	Payment for Non-Core Facility (e.g. restaurant) Service(VND/ person)	Current daily traffic	Traffic Forecast
A	All expenditure by Michinoeki operator	With Non-core Facility	50,000	35,000	8,200 (Case I)	Upper
						Middle
						Lower
					6,800 (Case II)	Upper
						Middle
						Lower
		Without Non-Core Facility		/	1,300 (Case III)	Upper
						Middle
						Lower
B		With Non-core Facility	50,000	50,000	8,200 (Case I)	Upper
						Middle
						Lower
					6,800 (Case II)	Upper
						Middle
						Lower
C	Most expenditure by Public※	Without Non-Core Facility	50,000	/	1,300 (Case III)	Upper
						Middle
						Lower

※This case assumes that the public expenditure covers the cost of construction and O&M and 60% of staff cost.

## 4) Results

### Case A(Standard payment)

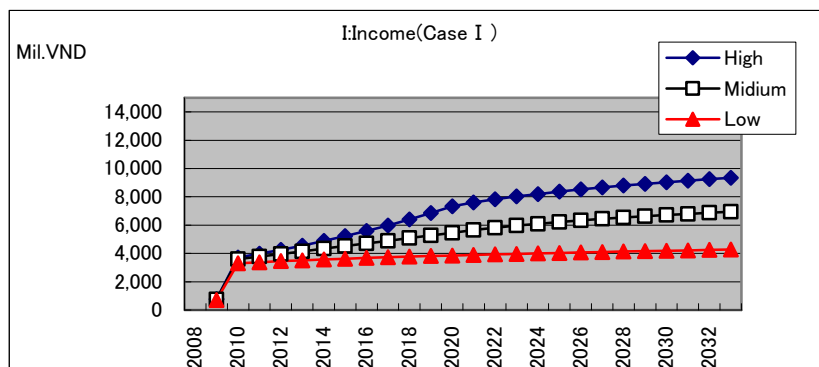
Sales of local specialty product: 50000VND/person

Sales of restaurant: 35000VND/person (Case I and Case II)

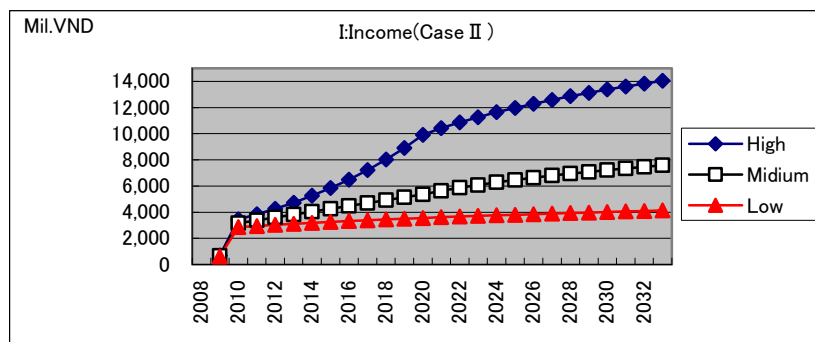
The operating body of facilities bears all costs.

**Table 5.2 EIRR (standard payment)**

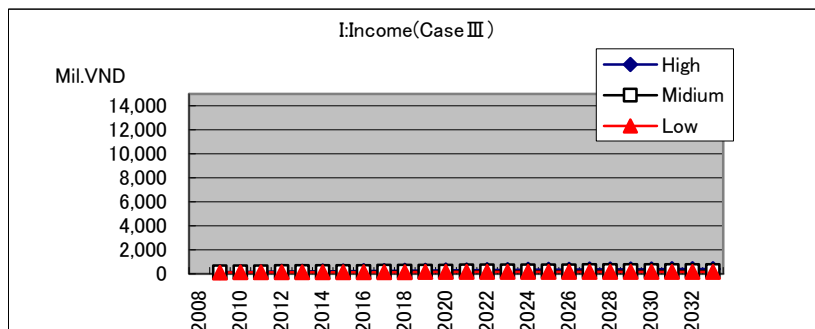
	High growth	Medium growth	Low growth
Case I	17.38%	14.23%	9.32%
Case II	18.10%	11.65%	5.83%
Case III	infeasible	Infeasible	infeasible



**Figure 5.1 Income of Case I**



**Figure 5.2 Income of Case II**



**Figure 5.3 Income of Case III**

**Case B (High Payment)**

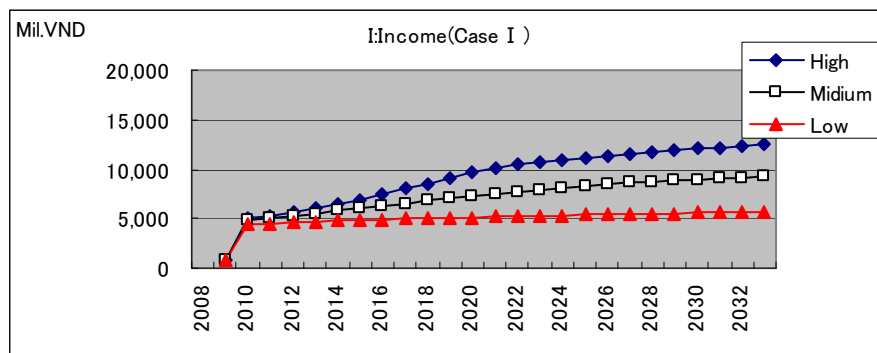
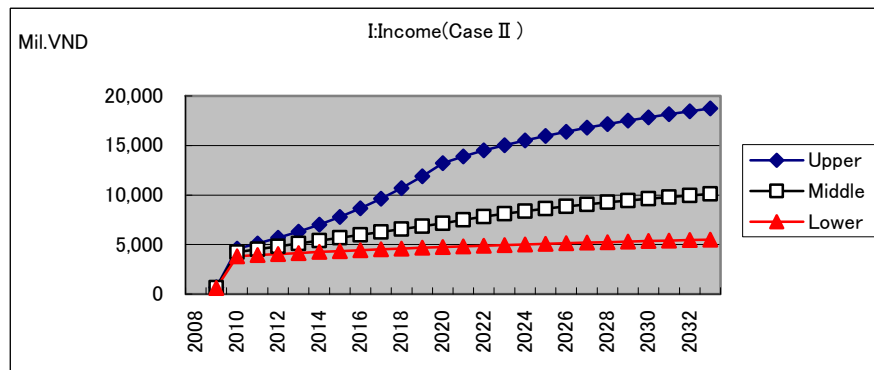
Sales of local specialty product: 50000VND/person

Sales of restaurant: 50000VND/person (Case I and Case II)

The operating body of facilities bears all costs.

**Table 5.3 FIRR (High Payment)**

	High growth	Medium growth	Low growth
Case I	23.68%	20.48%	15.52%
Case II	23.83%	17.16%	11.40%
Case III	infeasible	infeasible	infeasible

**Figure 5.4 Income of Case I****Figure 5.5 Income of Case II**

**Case C (only Case III)**

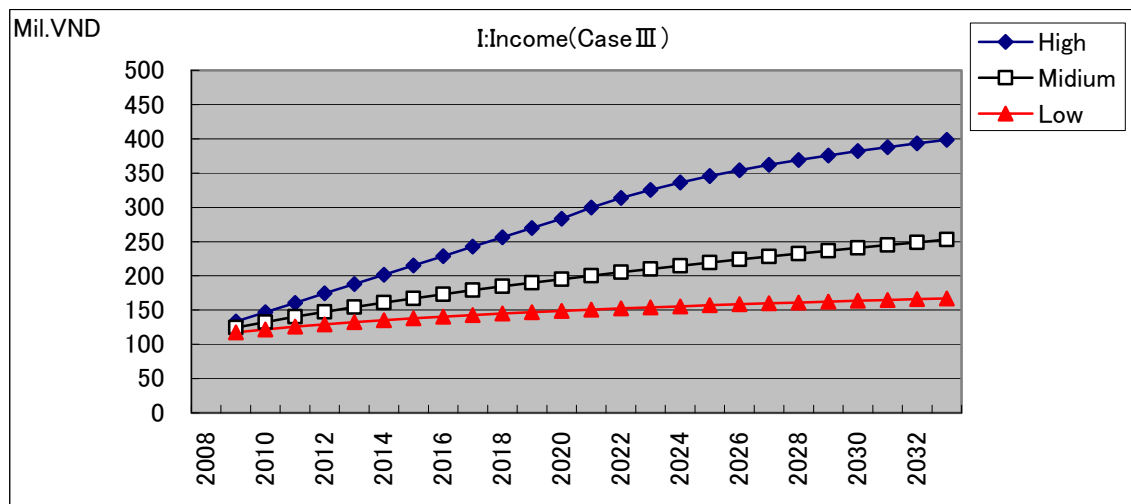
Sales of local specialty product: 50000VND/person

No sales of restaurant.

The government bears the costs of building and equipping facilities, maintaining and managing facilities, and 60% of employment cost.

**Table 5.4 FIRR (without non-core Facility)**

	High growth	Medium growth	Low growth
Case III	56.53%	19.02%	infeasible

**Figure 5.6 Income of Case III**

## **ANNEX IV**

# **Michinoeki Registration Procedure in Japan and List of Relevant Vietnamese Legal Documents**

## Outline of Registration of *Michi-no-Eki* and Guidance

Source: Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan, 2008

### (Objective)

1. This outline is designed to improve user-friendliness for road users and promote the use of Michinoeki, and to contribute to creating a safe and comfortable road traffic environment and regional development, by registering resting facilities that guarantee a certain level of services as Michinoeki, and providing guidance on them.

### (Basic concepts of Michinoeki)

2. In this outline, Michinoeki refers to facilities that provide road users with a comfortable rest and various high-quality services through local ingenuity. They offer the following basic services.

#### <Location>

- a. The location is appropriate with respect to the user-friendliness of rest facilities and the sharing of functions of Michinoeki.

#### <Composition of facilities>

- b. Have ample parking space and restrooms that are available to users who come to take a rest free of charge. Facilities and main passages between them are improved to be barrier-free.
- c. Provide users with various services. Have an information office or counter that provides road and local information (hereinafter referred to as “information and service facilities”).

#### <Services>

- d. Parking lot, restrooms, and telephones are available 24 hours a day.
- e. In principle, information and service facilities are staffed by guides who offer friendly information services.

#### <Founder>

- f. The founder should be a local municipality or a public organization that can be substituted by a local municipality (hereinafter referred to as “local municipality or equivalent organization.”)

Note that if information and service facilities are managed by an organization other than a local municipality or an equivalent organization, its contract must guarantee the necessary services of Michinoeki.

#### <Considerations>

- g. The facilities must be user-friendly to a wide range of users including women, children, seniors,

and disabled persons.

- h. Facilities planning should be compatible with the landscape. Especially in a scenic area, the facilities must not destroy the beautiful landscape of the region.

(Application for registration)

- 3. A founder of information and service facilities that meet the basic concepts of Michinoeki mentioned above (hereinafter referred to as “applicant”) may apply for registration as a Michinoeki. In this case, the applicant shall submit a registration application form (Appended Form No. 1) with the following documents to the Director-General of Road Bureau by way of a road administrator of the national or prefectural highway near such facilities.

- a. A location map and a layout plan of the applicant facilities.
- b. In case the applicant is not a local municipality, materials that prove that the applicant is a public organization that can be substituted by a local municipality are required.
- c. Materials that prove that the road administrator of the prefecture where the facilities are located recognize the applicant is worthy of providing guidance as a Michinoeki, and recommend it as Michinoeki.

Note that if such facilities include a parking lot set up by a road administrator for a rest area, materials that show that the applicant and the road administrator have established cooperative structures are required.

- d. Project plans or other materials that show when to start services. If the facilities are already in service, materials that show such are required.

(Issuance of registration certificate)

- 4. Based on the application, the Director-General of Road Bureau shall enter the applicant in the register and issue a registration certificate to the applicant.

(Notification of start of services)

- 5. A person/organization that obtains registration as Michinoeki (hereinafter referred to as Michinoeki registrant) shall notify the Director-General of Road Bureau at least one month before starting services.

(Notification of change in the registered status)

- 6. A Michinoeki registrant must notify the Director-General of Road Bureau immediately of any change in registered status (except for small change).

(Guidance about Michinoeki)

- 7.(1) A founder of a Michinoeki shall give guidance on facilities using the pictograms shown in the attached chart, and post the registration certificate at a prominent place inside the facilities.

(2) The Director-General of Road Bureau shall make efforts to inform road users and a related road administrator of registration situation and services of Michinoeki, and ask for the administrator's cooperation in giving guidance on Michinoeki using the pictograms shown in the attached chart.

(Obligations)

8. A founder of Michinoeki must comply with the following obligations, and make efforts to ensure good services for users.
  - a. Carry out proper maintenance of all facilities, especially restrooms, so that users can always use them safely and comfortably.
  - b. Cooperate with the road administrator on road information gathering and provision.
  - c. Provide guides with training and improve the quality of information provision.
  - d. Work with and cooperate with each other to make all facilities more functional and attractive.

(Cancellation of registration)

9. If a Michinoeki registrant does not comply with any of the provisions of Article 2. Due to change of registered status or if proved inappropriate to provide guidance on the registrant as a Michinoeki because it does not comply with the obligations of Article 8., the Director-General of Road Bureau may cancel the registration of such facilities.



**Appended Form No.1**

Registration Application Form  
Notification of Start of Services  
Notification of Change of the Registered Status

Date: year/ month/ day

By way of ( )

To: Director-General of Road Bureau

Full name (Corporate name and full name  
of the representative, in the case  
of a corporation)

Seal

I will [apply for registration/notify start of services/notify change] with related materials attached based on the outline of registration and guidance of Michinoeki as follows.

Registration Number *	Registration No.	Registered date	year/ month/ day
Name of Michinoeki			
Address of Michinoeki			
Name of route before Michinoeki		Road administrator	
Outlines of the facilities and services			
Phone number of Michinoeki		Full name of manager	
Number of parking spaces for cars	( cars ) cars	Number of toilets	( toilets) toilets
Service start date	Scheduled on year/month/ day		

Note 1) If you use this form for registration application, do not fill in the boxes at the top marked with \*.

2) In ( ) in the boxes of “number of parking spaces for cars” and “number of toilets,” fill in the number of parking spaces and toilets set up by the road administrator respectively.

Immediate policy on outline of registration and guidance of Michinoeki

< Composition of facilities >

1. Ample parking space means a parking lot that can meet user demands in accordance with traffic density, location conditions, and contents of facilities with spaces for approximately 20

cars or more (a space for a large car is equal to two spaces for a standard-sized car).

2. Ample clean restrooms mean flush restrooms that can meet user demands in accordance with the size of the parking lot with approximately 10 or more toilets.
3. Barrier-free improvement of main passages between parking lot and restrooms (hereinafter referred to as “passages”) should also be promoted immediately in Michinoeki that have already been registered. Also, barrier-free improvement should be applied to areas other than passages as much as possible.
4. The information and service facilities are within two or three minutes' walk from the parking lot, and both are available in a unified manner.

#### < Services >

5. If there are very few users and it is difficult to allocate guides to information and service facilities, they must have an effective system by which they can respond to inquiries about roads and region by telephone.
6. They should secure a place for providing information to willingly give users information including the following.
  - (1) Road information and information on nearby Michinoeki Information on tourism including nearby sightseeing spots
  - (2) Emergency medical information
  - (3) Other user-friendly information

#### < Founder >

7. A public organization that can be substituted by a local municipality should be one of the following.
  - a. A prefecture
  - b. A corporation that is one-third funded by a local public entity
  - c. A public-interest corporation that a local municipality recommends as a proper founder of Michinoeki for the region

Note that in the case the applicant is a prefecture, materials in Article 3. b. are not required.

#### < Guidance on Michinoeki >

8. At the time of setting, a sign of Michinoeki with its pictogram must include information on the functions of the Michinoeki with their pictograms as shown in the attached chart.

If a sign does not include pictograms of the functions, they should be added, at the time of renewal.

## List of Relevant Vietnamese Legal Documents

No	Title	Source	Content
1	Land-road Traffic Law No. 26/2001/QH10 dated 29 June 2001	National Assem-bly	<ul style="list-style-type: none"> <li>The Law prescribes land-road traffic (LRT) rules and LRT conditions of infrastructure, means and people in LRT, sets up orientation for policies on developing land-road traffic.</li> <li>The Law also prescribes planning and infrastructure of LRT as well as land-road transport activities, and the state management on LRT.</li> <li>By the Law, LRT infrastructure includes road works, car parks, and land-road safety corridors.</li> </ul>
2	Land-road Traffic Law No. 23/2008/QH12, (adopted by the National Assembly Session XII on 13 November 2008 and is effective on July 01, 2009, in place of the former Law on Land-Road Traffic dated 29 June 2001)	National Assem-bly	<ul style="list-style-type: none"> <li>The revised Law on Land-road Traffic prescribes LRT rules, LRT conditions of infrastructure, means and people involved in LRT activities; land-road transport and the state management on LRT, in which, LRT infrastructure includes road works, car parks, car terminals, roadside stations and other auxiliary facilities on the roads in service of traffic and land-road safe corridor.</li> <li>The land fund as reserved for land-road infrastructure is specified in the plan for land-road infrastructure. The provincial People Committee defines and carries out management of the land fund reserved for the projects on construction of land-road infrastructure in compliance with the plan as approved. The investment in construction of LRT infrastructure shall be complied with land-road transport planning. Article 51 stipulates that construction of Roadside Station shall follow planning that has been approved by competent governmental agency. Roadside Station is classified as one among other types of services for land-road transport support.</li> </ul>
3	Decision No. 162/2002/QĐ-TTg of 15 November 2002. Approving the planning on development of Vietnam's Land-road Transport Sector till 2010 and orientations up to 2020.	Prime Minister	<ul style="list-style-type: none"> <li>The plan sets up objectives for the planning and development of the Transport Sector from now till 2010 and orientation to 2020.</li> <li>The main contents include planning for development of land-road transport infrastructure, transportation services and means. For the period till 2010 and from 2011-2020. The target roads include: (i) National highway system locating along North-South axis roads, in North Vietnam region, in the Central and in the South; a network of high grade and high-speed roads... and (ii) Provincial road system, (iii) urban and rural land-roads. In transportation services and vehicles development planning, freight volume targets and estimated demands for transport means till 2010 and 2020 have been set up together with the recommended measures and policies for budget resources generating. Total estimated investment plan in the period 2001 -2010 is approx. 339,573 billion VND</li> </ul>

No	Title	Source	Content
4	Decision No. 206/2004/QĐ-TTg dated of 10 December 2004. On the approval of the Strategy of Transport in Vietnam till the year 2020.	Prime Minister	<ul style="list-style-type: none"> <li>The Strategy has set up objectives and strategies for the development of Transport in Vietnam till the year 2020 with regard to transportation; transport infrastructure of land-road, railways, sea route, waterway..., urban and rural transport, transport industry, and transport safety and environmental protection.</li> <li>The policies and measures associated with the strategies for the achievement of the Strategy objectives have been introduced like those on generating capital resources to develop transport infrastructure; on facilitating favorable conditions to attract investment capital from economy sectors.</li> </ul>
5	Decision No. 1734/2008/QĐ-TTg dated of 01 December 2008 on the approval of Planning for Expressway network development in Vietnam till 2020 and vision towards after 2020.	Prime Minister	<ul style="list-style-type: none"> <li>The objective of the Plan is to rapidly formulate national Expressway network, focusing on construction of North-South expressway route, putting priority to those connecting to large cities (Hanoi, Ho Chi Minh, Da Nang) and to large sea ports thus contributing to cover traffic jam first and foremost in large cities like Hanoi, Ho Chi Minh cities.</li> <li>Estimated land fund and total investment cost as reserved for the Plan is approx. 41.104 ha, and over VND766 thousand billion, respectively.</li> </ul>
6	Resolution of the Government No.13/2002/NQ-CP dated 19 November 2002 on Solutions to check the increase of, and proceed to reduce Traffic accidents and congestion.	Government	<ul style="list-style-type: none"> <li>The Government puts forward immediate and basic solutions aiming to restrain and to overcome the increase of traffic accidents and congestion. The MOT and other related Ministries and Agencies shall supplement, finalize the strategies and plans for the development of transport infrastructure and appropriate land-road traffic means, especially in Hanoi and Ho Chi Minh Cities, other Cities and towns, towards rapid development of mass transit....; making investment in developing urban traffic infrastructure, traffic junctions, belt roads cross-roads...together with related measures.</li> </ul>
7	Resolution of the Government No.32/2007/NQ-CP dated 29 June 2007. Urgent Solutions to check traffic accidents and congestion.	Government	<ul style="list-style-type: none"> <li>The Resolution requests participation of the entire society, relevant governmental agencies, organizations, from the central to local levels to implement urgent solutions aiming to check increasing traffic accidents. Road safety land corridors shall be protected in traffic infrastructure ; 50% of illegally-constructed crossing roads and 50% of illegally-constructed connecting roads shall be removed by 2009; improvement of the black spots where traffic accidents often occur shall be completed; and, enhancing the technical safety inspection quality of mechanical means...</li> </ul>

No	Title	Source	Content
8	Decision of the Prime Minister No. 259/2008/QĐ-TTg dated 04 March 2008. On the approval of the Project to enhance assurance of traffic order and safety	Prime Minister	<ul style="list-style-type: none"> <li>The Project aims to facilitate implementing effectively the previous Resolutions to enhance the assurance of order in traffic safety till 2010. One of the objectives is to strive for reducing annual rate of deaths due to traffic accidents to 5-7%, deaths over 10,000 road mechanical facilities from 6.5% down to 4.5% by 2010. The Project includes 30 Sub-Projects and the National Committee of Traffic Safety is key supervising agency and together with other 8 Ministries, Provincial and Cities People Committees, social organizations, etc. which covers such issues as: (i) propaganda on traffic safety, (ii) dissemination of law in Transport Sector, (iii) increase quality of technical safety of transport vehicles, (iv) setting up regulation of dressing stations system for traffic accidents on National Highways, (v) first-aid training for medical staffs...The total budget allocated to the Project reaches up VND 6,952 billions being derived from the state budgets and other resources.</li> </ul>
9	Decree No. 168/2003/ND-CP dated 24 December 2003, prescribing the financial source for Road Management and Maintenance as well as the Management and Use thereof.	Govern-ment	<ul style="list-style-type: none"> <li>The Decree prescribes the financial source for road management and maintenance (M&amp;M) as well as the management and use thereof. Central budget and other capital sources – according to law provisions – are to be allocated for M&amp;M of NHs system; local budgets and other capital sources, for local road system; special-use roads and roads invested with capital sources other than State budget, covered by investors....</li> <li>The capital for road M&amp;M shall be used for: (i) state management and service activities for LRT (monitoring technical conditions and management of road works; organization of road traffic; inspection and examination of the protection of road traffic infrastructures, etc); (ii) Road maintenance and repair. MOT shall assume prime responsibility, in coordination with MOF, Provincial PC, to guide the implementation of the Decree.</li> </ul>
10	Decision No. 2048/QĐ-BGTVT of 02 July 2002 of the Ministry of Transport	MOT	<ul style="list-style-type: none"> <li>On the Planning Formulation of the Rest and Service Spots along main National Highways.</li> </ul>
11	Law on Construcion No. 16/2003/QH11 dated 26 Novmver 2003	National Assem-bly	<ul style="list-style-type: none"> <li>Prescribing construction activities; rights and obligations of organizations and individuals in volved in construction of works and in conducting construction activities. The Law stipulates issues on planning, formulating work construction investment projects, survey and designing, construction of works, selection of contractors and contracts, state management over construction, etc, in construction areas.</li> </ul>

No	Title	Source	Content
12	Decree No. 16/2005/ND-CP of 7 February 2005 on management of investment Projects on Construction of works	Govern-ment	<ul style="list-style-type: none"> <li>Guiding the formulation and execution of investment projects on the construction of works; contracts in construction activities; capacity conditions of those involved in formulating investment projects of construction; designing, surveying of the work construction. The Decree also prescribes the classification and State management of investment projects on the work construction by size and nature, capital source, etc.</li> <li>The investments in the construction of works shall have to conform to the overall and branch socio-economic development plannings and legislation.</li> </ul>
13	Decree No. 181/2004/ND-CP dated 29 October 2004. On the implementation of Land Law.	Govern-ment	<ul style="list-style-type: none"> <li>The Decree prescribes the implementation of the Land Law, which was passed on November 26, 2003 by the XIth National Assembly.</li> <li>The relevant contents of the Decree include the followings: <ul style="list-style-type: none"> <li>(i) General provisions (land categorization, land use purposes etc.); (ii) System of land management organizations (land management agencies, land fund development organizations); (iii) Land use plannings, plans; (iv) Land assignment, land lease, land use purpose change, land recovery, land requisition...; (v) Land use right registration, land use right certificate granting... (vi) Land use right in real estate market...; (vii) Agricultural land use regime etc.</li> </ul> </li> </ul>
14	Decree No. 43/2006/CD-CP dated 25 April 2006. Providing for the right to autonomy, self-responsibility for task performance, apparatus organization, payroll and finance of public non-business units.	Govern-ment	<ul style="list-style-type: none"> <li>The objectives of the Decree are to give the right to autonomy and self-responsibility to public non-business units (non-business units in brief) aiming to accomplish the assigned tasks, mobilize social community's contributions to the development of non-business operations, gradually reduce the state budget subsidy.</li> <li>By the Decree, non-business units can be classified into 3 categories: fully self-financing type, partially self-financing type, and units being wholly-funded by the state budget.</li> </ul>
15	Decree No. 83/2006/ND-CP dated 17 May 2005.	Govern-ment	<ul style="list-style-type: none"> <li>Prescribing order and procedures of establishment, reorganization and dissolution of administrative organizations and state non-business organizations.</li> <li>In addition to governmental, ministerial-attached agencies, administrative organizations and state non-business organizations under Provincial and District levels People Committees are also the subjects of application of this Decree</li> </ul>

No	Title	Source	Content
16	Decree No. 80/2006/NĐ-CP dated 09 August 2006. Detailing and guiding the implementation of a number of articles of the Law on Environmental Protection.	Chính phủ	<ul style="list-style-type: none"> <li>Stipulating in details and guiding the implementation of a number of articles of the Law on Environmental Protection regarding: environmental standards, strategic environmental assessment; environmental impact assessment and environmental protection in production, business and services; hazardous waste management, and disclosure of environmental information and data.</li> </ul>
17	Decree No. 140/2006/NĐ-CP dated 22 November 2006. Providing for the environmental protection at stages of elaboration, evaluation, approval and implementation of development strategies, plans, programs and projects.	Govern-ment	<ul style="list-style-type: none"> <li>Theo nghị định, ngoài các công trình, dự án đã nêu, các Dự án By the Decree, in addition to the strategies, plans, programs, the projects on construction of infrastructures of economic zones, industrial parks, hi-tech parks, industrial complexes, craft villages, etc, shall have to consider the provisions for environment protection during the stages of elaboration, evaluation, approval and implementing organization of: the development strategies, plans, programs and projects. The Decree indicates the responsibilities of the agencies at the central and provincial levels in the collaboration, management, supervision, and implementation of the environment protection at stages as prescribed.</li> </ul>
18	Decree No. 56/2005/ND-CP of April 26, 2005 on Agricultural Promotion and Fishery Promotion.	Govern-ment	<ul style="list-style-type: none"> <li>Prescribing contents, organizations and the policies to promote those involved in agricultural and fishery promotion, production with the aims to contribute to accelerating economic restructuring of agriculture and rural areas, to raise effectiveness in production, create job opportunities, generate incomes and reduce poverty... The Decree also puts forwards necessary policies aiming to assist those involved in agricultural and fishery production and promotion.</li> </ul>
19	Decision No. 134/2004/QĐ-TTg dated 20 July 2004. On a number of policies to provide support in terms of production land, residential land, dwelling-houses and daily-life water to poor ethnic minority households facing difficulties.	Govern-ment	<ul style="list-style-type: none"> <li>Together with other socio-economic programs implementation, the policies as prescribed in the Decision are to support production land, residential land, dwelling houses and daily-life water to poor households of ethnic minority peoples who permanently residing in localities that live on agriculture-forestry sources, having no or insufficient production land or that are facing with difficulties in terms of dwelling houses and daily-life water. This will facilitate them to develop production, and improve living condition.</li> </ul>

No	Title	Source	Content
20	Decision No. 81/2005/QĐ-TTg dated 18 April 2005. On policies in support of short-term job training for rural laborers	Govern-ment	<ul style="list-style-type: none"> <li>Prescribing policies on funding support for short-term job training for rural laborers in working age groups who have not yet received job trainings and wish to learn jobs. Give priority to laborers whose production land was recovered by the State or whose land use purposes have changed; laborers being social policy beneficiaries and minority people; female and unemployed laborers.</li> </ul>
21	Decisions No. 24, 25, 26 and 27/2008/QĐ-TTg dated 5 February 2008. A number of mechanism and policies to support socio-economic development till 2010 to the following provinves from: a. North Central Coast and Central Coast (from Thanh Hoa to Binh Thuan provinces) b. Central Highlands c. Mekong River delta d. Northern Midlands and Mountains provinces	Govern-ment	<ul style="list-style-type: none"> <li>The following contents have been raised in regional Decisions:</li> <li>Key objectives to be achieved till 2010 of individual regions on average GDP growth; rate of poor households till 2010 (according to new poverty line); rate of trained laborers; rate of clean water users in urban and in rural areas.</li> <li>Key tasks on development of some major branches like: industries and trade, agriculture, forestry and fishery, services, human resources development, construction of infrastructure (transport, irrigation), etc.</li> <li>Amendment of mechanisms, policies and solutions for socio-economic development covering those on agriculture, forestry, fishery production and rural development, policies for landless or insufficient production land laborers, on regions of ethnic minority peoples and on mobilizing resources for development as well as mechanisms for the state budget support.</li> </ul>



## **ANNEX V**

### **Minutes of the Steering Committee Meetings**

**Minutes of Meeting**  
**on**  
**The 1st Steering Committee Meeting**  
**for**  
**The Study for Roadside Station master Plan**  
**in**  
**The Socialist Republic of Vietnam**

Hanoi, 12<sup>th</sup> March 2007



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**Mr. Nguyen Van Thanh**  
Deputy Director  
Vietnam Road Administration (VRA)  
Ministry of Transport (MOT)  
The Socialist Republic of Vietnam



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**Mr. Yasuhiro TOJO**  
Senior Deputy Resident Representative  
Japan International Cooperation Agency  
(JICA), Vietnam Office



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**Mr. Kunio HATANAKA**  
Team Leader  
Study Team  
Japan International Cooperation Agency (JICA)

1. The 1<sup>st</sup> Steering Committee was chaired by Mr. Nguyen Van Thanh, Deputy Director of Vietnam Road Administration (VRA) by welcoming the Study Team and introducing the members of the Steering Committee. He also informed that the Inception Reports have been distributed to respective agencies.
2. Mr. Kunio Hatanaka, Leader of the JICA Study Team expressed sincere thanks for receiving the Study Team and introduced the members of the Study Team. He explained the Inception Report, which was already submitted to VRA last week.
3. The Inception Report was discussed and accepted by the Steering Committee. Main points of the discussion were as follows:
  - (1) Overall framework of the Study including objectives, approaches, work plan, pilot project implementation, etc. were agreed by the Steering Committee members.
  - (2) The concept and basic functions of “Michinoeki”, including rural development, relaxation and information, was understood and accepted by the S/C members. It was emphasized that local characteristics must be promoted through Michinoeki designing as well as operation. Since the concept of “Michinoeki” is new for Vietnamese side, especially local authorities as well as stakeholders, it was proposed to promote further understanding of the concept of “Michinoeki”, in collaboration with mass media.
  - (3) To enhance the function of Michinoeki, the chairman proposed to have provincial authorities the initiative of the pilot project implementation. He also proposed to expand the members of the S/C and clarify each member’s role including Ministry of Trade, Ministry of Natural Resource and Environment, Ministry of Construction and to strengthen the role of the Provincial Steering Committee including Department of Trade, Department of Natural Resource and Environment, Department of Agriculture and Rural Development.
  - (4) It was proposed to take into consideration that participation and mobilization of private sectors and local communities from the early stage of planning and through the whole process including construction, operation and management of Michinoeki.
  - (5) As the output of this Study, it was expected that the Master Plan should be a

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comprehensive and scientific system of Michinoeki, including planning, operation and management, policy and administrative mechanism, etc. After the initial run of 3 pilot projects implementation, VRA has a willingness to expand Michinoeki development nationwide.

- (6) It is necessary to clarify responsibility and role sharing among JICA, JICA Study Team, Central Governments of Vietnam, VRA and Provincial People's Committee in terms of technical and financial demarcation, especially for land preparation and public utility installment. Local financial resources should be mobilized to provide additional support in order to make sure that the new roadside stations will not only be modern but also be rich of local identities.
  - (7) JICA Vietnam Office explained that tasks of provincial government for land preparation and infrastructure development had been already committed between JICA and provincial authorities and would be completed until the end of May 2007.
4. For the smooth conduct of the Study, the JICA Study Team proposed to the Steering Committee and basically agreed:
- (1) Expansion of the Provincial Working Group members, including DARD, DOI, DoTrade, etc.. It was agreed by the S/C.
  - (2) Target road of NR-6 in north might be extended to Dien Bien Phu, and target roads in central and south need to be further discussed with Vietnamese side.
5. Mr. Thanh, the chairman of the Steering Committee, confirmed that further discussion and cooperation among related agencies of central, provincial and local stakeholders as well as JICA and JICA Study Team were necessary. He concluded the 1<sup>st</sup> Steering Committee Meeting by noon.

**ANNEX****List of Participants****Vietnamese side:****Vietnam Road Administration (VRA)**

Mr. Nguyen Van Thanh	Deputy Director General (the Chair Person of the Meeting)
Mr. Tran Van Mau	Deputy Chief, Transportation Division
Ms. Pham Thi Khu	Expert, Transportation Division
Mr. Nguyen Van Kinh	Deputy Chief, Planning & Investment Division
Mr. Nguyen Trong Hien	Deputy Chief, Foreign Capital Management Division
Mr. Quach Van Khoa	Deputy Chief, Traffic Division

**Ministry of Transport (MOT)****(1) Planning and Investment Department**

Ms. Nguyen Thanh Hang	Chief of ODA Management Division
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**Ministry of Agriculture and Rural Development (MARD)****(1) Department of Cooperatives and Rural Development**

Ms. Chu Thi Hao	Deputy Director General
Mr. Ta Huu Nghia	Deputy Chief, Cooperatives, Household Economics and Agricultural Farms Division

**Hoa Binh Province****(1) Hoa Binh Provincial People's Committee**

Mr. Quach The Hung	Vice Chairman
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**(2) Department of Transport**

Mr. Nguyen Ngọc Viet	Deputy Director
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**Bac Giang Province****(1) Department of Transport**

Mr. Lại Thanh Sơn	Director
Mr. Nguyen Viet Oanh	Expert

**Ninh Binh Province****(1) Department of Transport**

Mr. Nguyen Xuan Hue	Director
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**Japanese side:****JICA Vietnam Office**

Mr. Yasuhiro TOJO	Senior Deputy Resident Representative
Dr. Phan Le Binh	Program Officer

**The Study Team**

Mr. Kunio HATANAKA	Team Leader
Dr. Yoichi SAKURADA	Michinoeki Planning
Mr. Fumio SHIMIZU	Business Development Planning (1)
Ms. Tomoko ABE	Regional Development
Mr. Makine KUSANO	Facility Planning
Mr. Yasunori NAGASE	Facilities Design/Cost Estimate/Tender Document
Mr. Naoya FURUTA	Environmental and Social Consideration

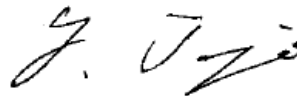
**Minutes of Meeting**  
**on**  
**The 2nd Steering Committee Meeting**  
**for**  
**The Study for Roadside Station master Plan**  
**in**  
**The Socialist Republic of Vietnam**

Hanoi, 15<sup>th</sup> June 2007



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**Mr. Nguyen Van Thanh**  
Deputy Director  
Vietnam Road Administration (VRA)  
Ministry of Transport (MOT)  
The Socialist Republic of Vietnam



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**Mr. Yasuhiro TOJO**  
Senior Deputy Resident Representative  
Japan International Cooperation Agency  
(JICA), Vietnam Office



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**Dr. Shizuo IWATA**  
Deputy Team Leader  
Study Team  
Japan International Cooperation Agency (JICA)

1. Mr. Tran Van Mau, Deputy Chief of Transport Division, Vietnam Road Administration- a member of the Steering Committee opened the meeting by introducing the Chairman and members of the Steering Committee, and representatives of JICA Vietnam Office, the Study Team and other participants. He also explained briefly the results of the first Steering Committee held on March 12, 2007.
2. Mr. Nguyen Van Thanh, Deputy Director of Vietnam Road Administration (VRA) and the Head of the Central Steering Committee chaired the meeting and welcomed all the participants.
3. Mr. Tojo Yasuhiro, Senior Deputy Resident Representative of JICA Vietnam Office expressed his gratitude to all the participants for their attendance and explained briefly the objectives of the Study and scope for the second year. He also expressed his expectation on the success of the Study through a close coordination among relevant organizations and that Michi-no-eki will become popular in Vietnam.
4. Dr. Shizuo Iwata, Deputy Leader of the JICA Study Team explained the progress of the Study, rationale of Michi-no-eki in Vietnam, Pilot Projects, approach to Master Plan Study, summary of issues and next steps.
5. Three chairmen of the Provincial Steering Committees, represented by Mr. Lai Thanh Son, Director of Transport Department of Bac giang Province, Mr. Nguyen Xuan Hue, Director of transport Department of Ninh Binh Province, and Mr. Nguyen Van Viet, Vice Director of Transport Department of Hoa Binh Province explained the status and progress of the Pilot Project preparation as follows:
  - (1) Preparatory work for Bac Giang Pilot Project site is being done smoothly. The process of land clearance and compensation received good support from local people without any complaints. Conflicts among private companies caused by lack of awareness have also been settled. Earth work has been implemented for about 20.000 square meters of lands including originally requested 5.000-7.000 square meter for Michi-no-eki. Now a good layout plan is necessary for Bac Giang Province to move to the next step.
  - (2) Preparatory work for Hoa Binh Pilot Project site is ongoing. Site survey was conducted and compensation has been almost done. Since the Pilot Project site is relatively small, it is expected that good coordination will be made with the development of bus station being planned in adjoining site. Layout plan is



also necessary to proceed to the next step.

- (3) Preparatory work for Ninh Binh Pilot Project Site is going on smoothly. The site has been fixed in official investment decision. Land compensation has been completed and land clearance will be made by the end of June 2007. It is expected that the preparatory work to be completed by the end of July. The project obtains good support from all provincial agencies and the people who expect the project is implemented soon. Current concern is to have a layout plan for an effective use and operation of land and facilities soon.
6. Opinions of other Steering Committee members and participants were expressed and discussions were actively held. Main points are summarized as follows:
- (a) Other main comments on the Pilot Projects include following:
- ① VRA is requested to consider opening of access from National Roads to Michi-no-eki more flexibly for Hoa Binh and Ninh Binh site.
  - ② Coordinated planning and operation between the Pilot Projects and adjoining developments by private enterprises must be duly considered.
  - ③ Role sharing between public and private sectors as well as Central Government and local governments need to be made clear at planning, construction and operation stages, respectively.
  - ④ Expected function of the Pilot Project must be carefully studied in consideration of the size of lands, and the needs both from short-term and long-term viewpoints.
- (b) With regard to selection of Action Roads in the Central and Southern regions, approach of the Study is basically acceptable. Mr. Mau of VRA, a member of the Steering Committee will coordinate with the Study Team to develop selection criteria for target roads. It is not necessary to organize Provincial Steering Committees for the Central and Southern regions. Instead, the Central Steering Committee requests relevant provinces for necessary assistance to the Study Team.
- (c) With regards to the approach to Master Plan Study, following main comments were made:
- ① Planning criteria in determining numbers of Michi-no-eki in the country must be carefully set out in consideration of roads network, distance between the facilities, local demand, traveling time, tourism and other factors.

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- ② Lessons from Pilot Projects must be fully assessed for due considerations in formulating the Master Plan.
7. Dr. Binh of JICA Vietnam Office advised that the counterpart fund which is expected to be approved and acquired at earliest possible time of the year 2008 seems too late for implementing this JICA Study. Notwithstanding this, he still proposed each of the three provinces to prepare a Project Report for submission to MPI in line with current regulation of the Vietnam Government on ODA projects by the end of July. Only if with approval of the said-report, the project is to be exempted 10% VAT tax which deems to be quite a considerable amount for the Pilot Projects.
8. The Study Team will undertake following tasks in the next steps:
- ① Based on the discussion, the concept, function, stile planning and facility designs for the Pilot Projects will be prepared by middle to end of July for approval by the Steering Committee.
  - ② Stakeholder meetings will be held in each province before the facilities and operation plans of the Pilot Projects are finalized. The meetings will be held in July with a close coordination with the Provincial Steering Committee.
  - ③ Land preparation of the Pilot Projects sites will be completed in about a month after layout plans are submitted by the Study Team.
9. Mr. Nguyen Van Thanh appreciated the efforts made by the Provinces and the progress report presented by the Study Team. Although there are some problems, it is expected that they can be solved through collaboration of related organizations through the Steering Committee.

The 2<sup>nd</sup> Steering Committee Meeting was adjourned at noon.

**LIST OF PARTICIPANTS****Vietnamese Side:****Vietnam Road Administration (VRA)**

Mr. Nguyen Van Thanh	Deputy Director General (the Chair Person of the Meeting)
Mr. Tran Van Mau	Deputy Chief, Transportation Division
Ms. Pham Thi Khu	Expert, Transportation Division
Mr. Nguyen Van Kinh	Deputy Chief, Planning & Investment Division
Mr. Nguyen Trong Hien	Deputy Chief, Foreign Capital Management Division
Mr. Quach Van Khoa	Deputy Chief, Traffic Division

**Ministry of Planning and Investment (MPI)****(1) International Economic Cooperation Department**

Mr. Pham Hoang Mai	Chief, Japanese Division
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**Ministry of Transport (MOT)****(1) Planning and Investment Department**

Ms. Nguyen Thanh Hang	Senior Expert
Mr. Tran Minh Phuong	Expert

**Ministry of Agriculture and Rural Development (MARD)****(1) Department of Cooperatives and Rural Development**

Mr. Nguyen Van Nghiem	Chief, Cooperatives-Household Economics -Agricultural Farms Division
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**Hoa Binh Province****(1) Department of Transport**

Mr. Nguyen Ngoc Viet	Deputy Director
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**Bac Giang Province****(1) Department of Transport**

Mr. Lai Thanh Son	Director
Mr. Ngo Van Phong	Chief, Planning Division

**Ninh Binh Province****(1) Department of Transport**

Mr. Nguyen Xuan Hue    Director

**Japanese Side:****JICA Vietnam Office**

Mr. Yasuhiro TOJO        Senior Deputy Resident Representative

Dr. Phan Le Binh         Senior Program Officer

**The Study Team**

Dr. Shizuo IWATA        Deputy Leader

Dr. Yoichi SAKURADA    Michinoeki Planning

Ms. Tomoko ABE         Regional Development

Mr. Makine KUSANO     Facility Planning

Mr. Naoya FURUTA       Environmental and Social Consideration

**Minutes of Meeting**  
**on**  
**The 3rd Steering Committee Meeting**  
**for**  
**The Study for Roadside Station Master Plan**  
**in**  
**The Socialist Republic of Vietnam**

Hanoi, 12<sup>th</sup> March 2008



KT. CHỦ TỊCH  
PHÓ CHỦ TỊCH  
*Nguyễn Văn Thanh*

**Mr. Nguyen Van Thanh**  
Vice Chairman  
Vietnam Road Administration (VRA)  
Ministry of Transport (MOT)  
The Socialist Republic of Vietnam



**Mr. Yasuhiro TOJO**  
Senior Deputy Resident Representative  
Japan International Cooperation Agency (JICA),  
JICA Vietnam Office

1. The 3<sup>rd</sup> Steering Committee was held on March 12, 2008 in Hanoi to discuss about the contents of Interim Report as well as the progress of Pilot Projects.
2. Mr. Nguyen Van Thanh, Vice Chairman of Vietnam Road Administration (VRA) and the Head of the Central Steering Committee, chaired the meeting and welcomed all the participants. He introduced the Chairman and members of the Steering Committee, and representatives of JICA Vietnam Office, the Study Team and other participants. He also explained briefly the results of the first Northern Seminar on March 12, 2008.
3. Mr. Yasuhiro Tojo, Senior Deputy Resident Representative of JICA Vietnam Office expressed his gratitude to all the participants for their attendance.
4. Mr. Thanh introduced the progress of the Pilot Projects. They might be slower than the initial schedule, but construction preparation had been accomplished and construction would start from the beginning of April in Ninh Binh and Hoa Binh. VRA received the commitment from Hoa Binh and expected to receive from Ninh Binh and Bac Giang soon. For preparation of operation and management stage, Task Force would be established in 3 provinces. Necessary technical support to train human resources would be provided by JICA Study Team. Mr. Thanh expected close coordination among JICA, JICA Study Team and VRA for the success of the Study.
5. Mr. Kunio Hatanaka, Leader of the JICA Study Team, explained the progress of the Study, basic principle for planning and development of Michinoeki in Vietnam and Action Plan Study. Dr. Shizuo Iwata, Deputy Leader of the JICA Study Team followed to explain the progress of the Pilot Project.
6. Opinions of other Steering Committee members and participants were expressed and discussions were actively held. Main points are summarized as follows:
  - (a) Mr. Tran Van Mau, Deputy Chief of Transport Division, VRA
    - ① The structure of final report should be divided into two (2) parts;  
Part I: Master Plan of Roadside Station in Vietnam  
Part II: Pilot Project Report of Construction, Operation and Management including Guidelines
    - ② In addition to the selected Action Roads, it is necessary to consider some

sections in the central region such as Phu Yen – Song Cau, Khanh Hoa – Nha Trang, and Ninh Thuan and Binh Thuan provinces, where traffic accidents happen frequently and drivers feel fatigue.

- ③ Planning of National Highways needs to be developed to propose a National Roadside Station Network covering 160,000km of total length.
- ④ Criteria of four (4) hour driving should be further elaborated. Since the average speed could not reach to 50km/h, 200km-interval between 2 stations seems relatively far. At present, Traffic Law in Vietnam shall not allow to drive vehicles more than four (4) hours.
- ⑤ Classification of roadside stations should be included the specific scale and management bodies, so local authorities could designate location and acquire land properly. Specific locations should be clearly proposed in the report.
- ⑥ The investment methods as well as policy mechanism should be proposed in the pilot project report to facilitate construction procedures effectively.

(b) Mr. Nguyen Ngoc Viet, Vice Director of Transport Department of Hoa Binh Province

- ① Participation of stakeholders especially local community is indispensable. To receive support from local community, governmental authorities need to develop policy and legal framework of operation and management.
- ② Operation and management is a challenge for roadside stations in Vietnam. As a pilot implementation, governments need to be in charge of general management of core facilities. Commercial facilities should be invested and managed by private sectors. After several years operation, the O&M model in Hoa Binh would be established.
- ③ Master Plan, especially policy and legal framework should be proposed to the central government, which local governments would comply with.
- ④ Involvement and support of the government and JICA is necessary at the initial stage, especially a) information and consultation, and b) financial support for operation and maintenance
- ⑤ Construction of facilities would not be completed in August, since it is a rainy season. Duration of three (3) months trial operation is too short to

learn lessons. At least one (1) year trial period is necessary in Hoa Binh.

- (c) Mr. Nguyen Xuan Hue, Director of transport Department of Ninh Binh Province
- ① Latest road network plan as well as express way network should be integrated into the planning of roadside station network in province. In addition, to combine and upgrade existing roadside station should be considered.
  - ② Land acquisition is a major issue to be considered. There might be three (3) types of lands: a) granted land, b) leasing land and c) purchased land. Clarification of land type to apply roadside station would be considered.
  - ③ Though private sectors would invest profitable facilities of roadside stations, there must be free-of-charge functions, where governments should invest. For that purpose, it is proposed to amend Traffic Law to include an article such as “The roadside station is a road infrastructure”. If traffic law allows, VRA could allocate budget to DOTs to construct and operate roadside stations even without private investors.
  - ④ The Steering Committee should examine important issues related to construction such as construction planning, construction scale and construction period.
  - ⑤ Readjustment of construction price should be made based on current price, since price of construction materials had doubled during past five (5) months.
7. Mr. Kunio Hatanaka, Leader of the JICA Study Team, made some observations on comments expressed by Steering Committee Members.
- (i) Since it took more than 15 years to construct current number of roadside stations in Japan, we should adopt step-by-step planning in Vietnam. In that sense, one station for each province is only a first step.
  - (ii) Regarding the future roadside stations’ location, it is under the final responsibility of Vietnamese side to select exact location, because there are various complicated land issues which our foreign team can hardly know.
8. Dr. Phan Le Binh, Senior Program Officer of JICA Vietnam Office, replied to comments from Steering Committee Members as follows;



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- ⑥ Construction period of 135days in principle is agreed upon and fixed between JICA Vietnam Office and the contractor. If any difficulties would arise, extension of period might be discussed.
  - ⑦ Preparation of trial operation could be conducted during construction period for four (4) months. It is necessary to discuss about operation and management with local authorities continuously.
  - ⑧ Contract prices among bidders were not much different, so the final contract price for construction is considered to be reasonable and adjustment would not be necessary.
  - ⑨ Kick-off meetings for construction would be held on 26<sup>th</sup> March in Ninh Binh and 27<sup>th</sup> March in Hoa Binh.
9. Mr. Nguyen Van Thanh appreciated the efforts made by the Provinces and the interim report presented by the Study Team. As conclusion of the 3<sup>rd</sup> Steering Committee, some issues were summarized:
- ⑩ Structure of final report should be considered as requested by the Steering Committee members. Since Master Plan is important which Vietnamese Government would take into consideration, it should include a) general issues, b) institutional and policy issues related to investment, c) guidelines for operation and management. The Pilot Project Report should be more specific for each province, and issues and difficulties as well as lessons learned should be clearly mentioned concretely.
  - ⑪ Construction work in Ninh Binh and Hoa Binh would start from the beginning of April and expected to be completed in August. Bac Giang would follow later. From now, further cooperation among local authorities, JICA Vietnam Office and the JICA Study Team would be indispensable.
  - ⑫ The specific locations of roadside stations are not necessarily identified. However, criteria to identify locations of roadside stations and the development trend of the their network shall be necessarily defined, so that Vietnam Road Administration could coordinate with local authorities to make specific roadside station location plans.
  - ⑬ For future roadside network planning, it is necessary to take advantages of existing facilities as well as to take into consideration of expressway plans.

10. Mr. Yasuhiro Tojo, Senior Deputy Resident Representative of JICA Vietnam Office, expressed his gratitude to all the participants for their attendance and discussions. It is welcomed to send any comments and opinions to JICA Vietnam Office related to the Study and pilot project implementation.

The 3<sup>rd</sup> Steering Committee Meeting was adjourned at 16:00 in the afternoon.

**LIST OF PARTICIPANTS****Vietnamese Side:****Vietnam Road Administration (VRA)**

Mr. Nguyen Van Thanh	Vice Chairman (the Chair Person of the Meeting)
Mr. Tran Van Mau	Deputy Chief, Transportation Division
Ms. Pham Thi Khu	Officer, Transportation Division

**Ministry of Transport (MOT)****(1) Planning and Investment Bureau**

Ms. Nguyen Thanh Hang	Officer, Planning and Investment Bureau, MOT
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**(2) Transportation Bureau**

Mr. Nguyen Ngoc Dung	Officer, Transportation Bureau, MOT
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**Hoa Binh Province****(1) Department of Transport**

Mr. Nguyen Ngoc Viet	Deputy Director
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**Bac Giang Province****(1) Department of Transport**

Mr. Nguyen Van Tan	Deputy Director
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**Ninh Binh Province****(1) Department of Transport**

Mr. Nguyen Xuan Hue	Director
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**Japanese Side:****JICA Vietnam Office**

Mr. Yasuhiro TOJO	Senior Deputy Resident Representative
Dr. Phan Le Binh	Senior Program Officer

**The Study Team**

Mr. Kunio HATANAKA	Leader
Dr. Shizuo IWATA	Deputy Leader
Ms. Tomoko ABE	Regional Development
Mr. Naoya FURUTA	Environmental and Social Consideration
Mr. Masayoshi IWASAKI	Business Development Planning (2)
Mr. Yoshiaki NISHIKATSU	Construction Supervision

**Minutes of Meeting**  
**on**  
**The 4th Steering Committee Meeting**  
**for**  
**The Study for Roadside Station Master Plan**  
**in**  
**The Socialist Republic of Vietnam**

Hanoi, 26<sup>th</sup> December 2008



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**Mr. Nguyen Van Thanh**  
Vice Chairman  
Vietnam Road Administration (VRA)  
Ministry of Transport (MOT)  
The Socialist Republic of Vietnam



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**Dr. Phan Le Binh**  
Senior Program Officer  
Japan International Cooperation Agency (JICA),  
Vietnam Office



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**Mr. Kunio HATANAKA**  
Team Leader  
Study Team  
Japan International Cooperation Agency (JICA)

1. Ms. Pham Thi Khu, Officer, Transport Division, Vietnam Road Administration, opens the meeting by introducing the Chairman and members of the Steering Committee, representatives of JICA Vietnam Office and the Study Team. She also explains briefly the purposes and contents of the 4<sup>th</sup> Steering Committee held at JICA Vietnam Office at the year end of 2008.
2. Dr. Phan Le Binh, Senior Program Officer of JICA Vietnam Office welcomes and expresses gratitude to all Steering Committee members and participants for their attendance at the year end. He explains briefly the progress as obtained after almost 2 years of the Master Plan Study. He hopes that in this 4<sup>th</sup> Steering Committee Meeting, the participants will share ideas to the Draft Master Plan Study Report as prepared by the Study Team for the meeting to be successful.
3. Mr. Nguyen Van Thanh, Vice Chairman of Vietnam Road Administration (VRA), Head of the Central Steering Committee chairs the meeting and welcomes all Steering Committee members and participants. He introduces Mr. Hatanaka to present briefly the final Draft Master Plan Study Report.
4. Mr. Hatanaka, Leader of the JICA Study Team expresses his most gratitude to the Vietnamese cooperation to the Study during past two years. He emphasizes that with the effort made by MOT and VRA, the revised Land-Road Traffic Law has been approved last November in which Michinoeki has been defined as one of road traffic infrastructure facilities. Mr. Hatanaka presents the final Draft Master Plan Report and indicates that this is not a map with suggested locations but an institutional framework and a kind of Vietnamese philosophy of Michinoeki.
5. Mr. Nguyen Van Thanh emphasizes that VRA has paid much concern and discussed with the Team about proposals and recommendations for the Final Report. He proposes the SC members to actively share ideas and comments to the Report.

Followings are the main ideas and comments from the participants:

6. Mr. Nguyen Xuan Hue, Director of Ninh Binh DOT:
  - (i) He entirely agrees with the Final Draft Report and highly appreciates the results as obtained
  - (ii) The structure of the Final Report shall be rearranged into 2 main parts: one is about general issues (importance, planning idea, impact...) and another,

about the planning of Michinoeki. Then the Report will be shortened and clear.

(iii) To facilitate the flexible utilization of different funding resources, Michinoeki structure shall be divided into 2 parts: those of non-profitable one could be classified as a public traffic infrastructure facility and those of profitable one, could be developed in such a way as proposed in the Report.

(iv) Public facility also needs to be classified into 2 types: “Supplemented Michinoeki” or those roadside stations that have been established but they need to be supplemented with some facilities for public functions. Stimulation of investment fund from different resources can be applied for those facilities. “New Michinoeki” are those referred to items of a new Project for investment preparation.

7 Mr. Nguyen Trong Hien, Deputy Head, Division for foreign Fund Management of VRA shows his agreement with the Draft Final Report. He considers that:

(i) It is necessary to combine the project being done by JICA for Roadside Station Master Plan and those developed by MOT to obtain a unified Master Plan.

(ii) JICA project results should be reported to MOT for approval and for the Government's consideration for this Master Plan to be introduced soon.

8 Mr. Thanh explains about the difference between the previous Roadside Stations Planning conducted by TEDI and JICA Michinoeki Master Plan Study. JICA Study is an open Master Plan; it does not show individual concrete locations for Michinoeki construction but the way how to select the appropriate locations in different local conditions. The provincial authority will be the right agency to work out concrete planning of Michinoeki within the provincial area as well as the investors, both from public and private sectors. Since Michinoeki has been considered as one of traffic infrastructure facilities, it should be subjected to authorities' management and shall have to maintain its public functions as prescribed. The main question is how to reflect the ideas from the revised Law into under-Law Decrees or Resolutions.

9 Mr. Quach Van Khoa, Head, Division of Traffic of VRA, also shows that Michinoeki now has been one component of the Law, so this Master Plan shall have to be closely connected to the national planning of transport till 2020 with vision up to 2030. He proposes that:

(i) MOT will be responsible to issue a document on prescribing the standards for

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roadside station establishment that need to be added in the Final Report.

- (ii) To achieve the target of 80 Michinoeki to be constructed till 2015 as expected, it is requested that JICA Consultants to support VRA to complete such kind of document.

10 To promote Roadside Station management, Ms. Pham Thi Khu, Officer, Division of Transport of VRA, proposes the Study Team on the followings:

- (i) To support VRA for completing document on “Regulation for Establishment of Roadside Stations in Vietnam” and to formulate “General Procedures for Michinoeki Accreditation” document for VRA applies as a tool in accrediting the roadside stations in Vietnam.
- (ii) To establish a supervising group in the accreditation system for the supervision of those roadside stations which claim to satisfy the requirements of a Michinoeki for VRA to approve their accreditation registration.

11 Mr. Hatanaka explains that the target of construction of 80 Michinoeki by 2015 can be achieved taking into account of the existing ones with some additional modifications, we may also expect that half of targeted Michinoekis could be constructed by private sector; another half will be expected from the contribution of the Government side including international donors.

12 Mr. Tran Minh Phuong, Officer of Division of Planning and Investment, MOT, highly appreciates the general orientation as set up in the Master Plan. The Final Report needs to raise good experiences about typical models of Michinoeki being developed in Japan as well as in the world, the plan layout of Michinoeki, appropriate size of Michinoeki since this will relate to the land fund reservation to ensure the safety in operation of Michinoeki and environment protection in its future exploitation. The following issues need to be clarified and emphasized in the Report:

- (i) The role of MOT and VRA in the development of Michinoeki in Vietnam.

- (ii) The local authority will be assigned in the planning of provincial Michinoeki development in terms of provincial budgets and size in accordance with national Michinoeki plan.

- (iii) To establish an Inspection Council to consider the cases where there is

some disputes between two provinces in the construction of Michinoeki.

(iv) To establish some specific mechanisms which may differ than those being applied for the bus terminals or cars parks so as to maintain the public function of Michinoeki.

- 13 Mr. Hatanaka added the Team will provide soon the Manuals which indicate in details criteria for Michinoeki construction for the Vietnamese side's reference in the development of appropriate standards for Michinoeki development in Vietnam.
- 14 Mr. Ta Huu Nghia, Deputy Head, Division of Cooperatives, Households Economic and Agriculture Farms, Department of Cooperative Economy and Rural Development, highly agrees and appreciates the idea of roadside station construction, especially when they locate in rural areas. Through such Michinoeki network, the farmers could promote their production and sales of their local products. An appropriate mechanism (e.g. hiring space, tax reduction) needs to be established to encourage involvement of the enterprises, cooperatives in Michinoeki activities. He emphasizes that the coordination mechanism among the Ministries like MOT, MARD, MoCST, MOF in Michinoeki development is important and needs to be clarified. He proposes that a collaboration between Michinoeki Project and the National Program 135 could be developed for mutual benefits of road users, passengers and poor local ethnic households.
- 15 Dr. Phan Le Binh, Senior Program Officer, JICA Vietnam Office shows that, on the technical assistance as well as on the proposal for ODA fund lending as raised by the Team for the construction of Michinoekis in the next stage, JICA Vietnam will support proposals as recommended by the Vietnamese side for promoting Michinoeki development in Vietnam depending on the Vietnamese Government' scheme.
- 16 Ms. Nguyen Thanh Hang, Chief of ODA Management Division, Department of Planning and Investment, MOT, expresses her concern about the detailed outputs from the Master Plan Report for the next planning work. She proposes VRA, in the next step, shall work to apply and turn JICA Master Plan outputs into the Vietnamese plan through conducting some further studies to assure the sustainability of the Planning and the requirement of the international donor's evaluation on the Project extension later on. Based upon the Master Plan Study



Report, the work for the next phase could be carried by the Vietnamese side itself, or, if possible, based on JICA's support for the next phase of the Study.

17 Mr. Thanh expresses his thanks to participants' contribution to the Final Report. Followings are some proposals and recommendations from the meeting:

(1) The Study Team will complete and provide soon the Manuals as related to the Michinoeki Development Master Plan Study together with the Final Master Plan Report.

(2) The coordination mechanism among the Ministries and agencies is very important. JICA Study Team is proposed to introduce experiences how this issue has been done in Japan or in some relevant countries so as VRA can make directly proposals to the Government.

- a. The Ministries as mentioned-below will be of prior importance: Ministry of Planning & Investment (MPI), especially, Ministries of Natural Resources & Environment (MONRE), Finance (MOF), Industry and Trade (MOIT) that are in charge of related issues as land, taxes, management of Michinoeki. The most related Ministries to Michinoeki development are MOT (promotion of transport), MARD (promotion of local production), and MOCST (promotion of Tourism) - the subjects from their sectors are the beneficiaries from Michinoeki - shall have their important role in the joint-contribution to this Project. JICA Study Team is required to indicate these important issues, the role and the sectoral benefits in the Report so as to facilitate the elaboration of an official recommendation on the coordination mechanism for approval by the Government.
- b. The recommendations as raised in Chapter 7 of this Report is a very important part that needs to be presented in such a way that can contribute to coming up with feasible mechanisms, policies which are, presently, still not favorable to investors for their investment initiatives in Michinoeki development.
- c. The outputs from this Study can provide ideas for the Vietnamese Government and other concerned Ministries for consideration. MOT and other Ministries shall establish proper collaboration so as to reflect the task-sharing among concerned Ministries in some under-law Decrees or Resolutions.
- d. MOT is strongly requested to coordinate with and introduce this issue to other Ministries so as to receive common awareness from the Ministries and to get

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their consensus to a joint document for the Government consideration and approval.

18. It is proposed the Government to provide support to Michinoeki development in Vietnam through some funding channel in view of the immediate and long-term benefits from the Project. This will be key factor to the control and guidance of the Roadside Stations to follow the target of Michinoeki as desired and avoid uncontrolled problems of roadside services as previously encountered. The Study Team is highly requested to include this issue in the Report to request the Government consideration for the investment approval.

The 4<sup>th</sup> Steering Committee Meeting is closed at 4:00 PM at the same day.

**ANNEX****LIST OF PARTICIPANTS****Vietnamese Side:****Vietnam Road Administration (VRA)**

Mr. Nguyen Van Thanh	Vice Chairman (the Chair Person of the Meeting)
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Ms. Pham Thi Khu	Officer, Transport Division, VRA
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Mr. Quach Van Khoa	Chief, Traffic Management Division
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Mr. Nguyen Trong Hien	Deputy Chief, Traffic Management Div.
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**Ministry of Transport (MOT)****Department of Planning and Investment (DPI)**

Ms. Nguyen Thanh Hang	Chief of ODA Management Division, DPI
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Mr. Tran Minh Phuong	Officer, DPI
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**Transportation Department**

Mr. Nguyen Ngoc Dung	Officer, Department of Transportation
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**Ministry of Agriculture and Rural Development (MARD)****Department of Cooperative Economy and Rural Development**

Mr. Ta Huu Nghia	Deputy Chief, Cooperatives - Household
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Economics and

Agricultural Farms Division

**Hoa Binh Province****Department of Transport**

Ms. Nguyen Thi Chung	Chief, Transportation Management Division
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**Bac Giang Province****Department of Transport**

Mr. Ngo Van Phong	Head, Division of Planning
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**Ninh Binh Province****Department of Transport**

Mr. Nguyen Xuan Hue	Director
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Mr. Tran Duc Hoa	Department of Transport
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**Japanese Side:****JICA Vietnam Office**

Dr. Phan Le Binh	Senior Program Officer
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**The Study Team**

Mr. Kunio HATANAKA

JICA Study Team Leader

Mr. Arata AIKAWA

Construction Supervision

**Local Consultant and Project Assistant**

Mr. Trinh Ngoc Vinh

Local Consultant

Mr. Nguyen Van Dat

Project Assistant

**Minutes of Meeting**  
**on**  
**The 5th Steering Committee Meeting**  
**for**  
**The Study for Roadside Station Master Plan**  
**in**  
**The Socialist Republic of Vietnam**

Hoa Binh, 11<sup>th</sup> February 2009



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**Mr. Nguyen Van Thanh**  
Vice Chairman  
Vietnam Road Administration (VRA)  
Ministry of Transport (MOT)  
The Socialist Republic of Vietnam



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**Mr. Yasuhiro TOJO**  
Senior Deputy Resident Representative  
Japan International Cooperation Agency  
(JICA), Vietnam Office



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**Mr. Kunio HATANAKA**  
Team Leader  
Study Team  
Japan International Cooperation Agency (JICA)

1. The 5<sup>th</sup> Steering Committee was held on February 11, 2009 at Pilot Michi-no-eki Project site in Hoa Binh province. It was chaired by Mr. Nguyen Van Thanh, Vice Chairman of Vietnam Road Administration (VRA) and co-chaired by Mr. Yasuhiro TOJO, Senior Deputy Resident Representative of Japan International Cooperation Agency (JICA), Vietnam Office.
2. The opening speech was given by Mr. Thanh. He gave sincere thanks to the attendants coming here after a long trip.
3. On behalf of JICA, Mr. Tojo also gave great thanks to all attendants. He stressed that during the study period the Study Team received huge active supports and helps from various Vietnamese offices and people. The study's coming to its ending stage, he was glad to present the outcomes of the study on Michi-no-eki Master Plan. JICA hopes that the Vietnamese policy and planning makers, the related authorities and people could take advantage of the useful information and suggestions presented in the Final Study Report, and that without further active contributions of these entities, the study outcome may not be fully completed or realized. The development of transport infrastructure helps to promote the socio-economic development of the country and since the Michi-no-eki is now defined as one of land-road transport infrastructure, he hopes that the outcomes of study will contribute to the development of transport sector of Vietnam.
4. Mr. Hatanaka expressed thanks to Mr. Thanh's idea to hold the 5<sup>th</sup> SCM at Tan Lac Michi-no-eki because at Michi-no-eki site, the necessity of Michi-no-eki in road transport sector is really recognized. After presenting the improvements of the Draft Final Report upon valuable comments made on 4th SCM in last December, he briefly explained the outline of the Master Plan, stressing that the Master Plan is not a Location Map of Michi-no-eki network but a General Institutional Framework for Michi-no-eki network development in Vietnam and that by newly amended Law on land-road transport, Vietnam has stronger legal framework for Michi-no-eki development than Japan.
5. Mr. Duc, Deputy Director of Hoa Binh DOT, presented a brief report on the Tan Lac Michi-no-eki and pointed out the strong decision made by the People Committee of Hoa Binh province in authorizing a non-transport sector JC Company to be the management and operation entity with trial of one-year services contract. With JICA fund for construction and local government fund for the land acquisition and clearance, Tan Lac Michi-no-eki has been completed nearly in due time. There are

still some unsatisfied issues, for example, the car park space is small, the connection permit to national highway system is not yet approved. Mr. Duc has following proposals:

- to VRA: to issue the connection permit at its earliest convenience
- to JICA Study Team: to continue support for management and operation
- to the MOT and other concerned authorities: to elaborate and issue more detailed legal regulations and guidelines, which should be suitable to specific topographical, socio-economic and cultural characteristics of each location.

6. Mr. Nguyen Ngoc Thach, Deputy Director of Ninh Binh DOT, briefly presented basic information of Pilot Michi-no-eki Project in Ninh Binh province. Main structures of the Michino-eki have been completed except for in-house interior decoration, access road and car park. He asked JICA to instruct the contractor to finish remaining works as soon as possible. After the full completion of Michi-no-eki, another infrastructure - i.e. bus terminal - will be constructed in order to fully cope with Michi-no-eki in operation. He also proposes VRA to approve the opening of median on NH 1A so as entrance of cars from both directions to Michi-no-eki are available.
7. Mr. Lai Thanh Son, Director of Bac Giang DOT, explained about Michi-no-eki in Bac Giang province. Even though the implementation progress of Bac Giang Michi-no-eki is rather delayed due to some procedures (changing of location, formulation of private investment under local government control, which took 18 months) until now Bac Giang has achieved a clear mechanism on investment and management of the Pilot Michi-no-eki Project. The Head of Michi-no-eki will be a DOT staff and Deputy Head and other staff will be assigned from a private company ltd. Regarding the necessary fund not prepared by JICA, the Bac Giang Province didn't not arrange any fund from its budget but asked the assigned Bus Company Ltd. to invest it. It is planned to hold the opening ceremony in March 2009. He asked JICA to instruct the contractor to speed up the remaining works for full completion and stated that the investment assets by JICA will be owned and controlled by the PC and will serve for the public benefits. He also said that the Michi-no-eki landmark is very necessary but it is not available in Bac Giang. He finds that it is still difficult to fully interpret the meaning of Michino-eki terminology into Vietnamese language. He proposed more training of management and operation staff because it is quite vital.
8. Mr. Thanh fully agreed that until now in-depth understanding about Michino-eki in

Vietnam is still poor. So far detailed appropriate mechanism, regulations, guidelines of Michino-eki development are not available. He expresses great thanks to 3 pilot provinces for their kind and active effort in collaborating the formulation and implementation of 3 Pilot Michi-no-eki Projects. The Pilot Michi-no-eki are really trial ones which are located in different areas with specific characteristics. Hoa Binh is a mountainous province so it needs investment by public fund, Ninh Binh invests government fund through a state-owned enterprise and Bac Giang fully authorizes a private investment fund. Mr. Thanh also gave thanks to JICA Study Team for their flexibility in proposing the different management forms of Michi-no-eki.

9. Mr. Quach The Hung, Vice Chairman of Hoa Binh PC stated that he has been involved in this project from the very beginning, even though he had no chance to visit Michi-no-eki in Japan. He considers that all three Pilot Michino-eki Projects are successful and said that the instruction of the government is very important. According to him, there are 3 important selection criteria of Michi-no-eki location as follows:

- the length of road section
- the start point of driving
- local customs, traditional habits

He also said that Hoa Binh shall learn experiences from the models of Bac Giang and Ninh Binh provinces for future development of Michi-no-eki.

Finally he expressed sincere thanks to JICA support to Michi-no-eki formulation and development in Vietnam.

10. Mr. Tran Ngoc Thanh, Vice Director of Transport Dept., MOT, said that although lots of efforts have been paid to realize Michino-eki as one of land-road transport structure in the newly amended Law, many issues need to be resolved such as developing the investment mechanism, management mechanism. Physical construction is valuable in terms of investment but how to maintain the sustainable operation is also quite important. In the Master Plan it is proposed to build one Michi-no-eki at every 200km for the first phase, and for the second phase at every 100km, however he agrees with Mr. Hung that the start point of driving should be considered in location position. As for the state control, it also needs to identify the scope and the framework of control. He indicates that the function of prior concerns of Michino-eki should depend on its location, for example, for Michi-no-eki along highway, drop-in function is more important.



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11. Mr. Thanh, VRA, agrees that there are still difficulties on how to explain to concerned agencies and offices to let them understand the functions of Michino-eki. How to realize it thoroughly is still a long way to go with huge efforts. He expressed thanks to MARD for its participation in the Project. Presently, he has recognized the important role of MARD in this transport project about local economy and community development since most of the roads are running across the agricultural land.
12. Mr. Ta Huu Nghia, MARD, agreed with Mr. Thanh about this issue. According to Mr. Nghia, the construction of Michino-eki plays 50% of importance and implementation mechanism plays 50%. This is MARD experience from building new whole sale market, He also recommends that specific tax policy and support mechanism to promote local products are issues of concerns. Duty fee is one example policy.
13. Mr. Thanh, VRA, agreed with Mr. Nghia that, once Michino-eki is built at local site, that Michino-eki should serve for transport but also should contribute to local benefits.
14. Ms. Le Minh Chau, Vice Director of Transport Safety Dept., MOT, considers that Michino-eki is an important and necessary project. She wishes JICA to continue their support to Michino-eki development in the future programs. In Vietnam, especially in festivals period, i.e. after Tet Holidays, many traffic accidents happen. So, in planning, that local cultural characteristic should be considered. She shows her full support to the Michino-eki development and said that the traffic safety program should bring into play Michino-eki models. She wishes for the successful and expanded Michino-eki system in Vietnam.
15. Mr. Thanh, VRA, gave closing remarks and summary of the SCM by his commitment that,
- together with concerned agencies and offices, VRA will try its best to support this Project. He wishes to meet again the attendants at Final Seminar which will be held in Hanoi on February 13, 2009.

The 5<sup>th</sup> Steering Committee was closed on 12:am at the same day.

**List of Participants****Vietnamese side:****Vietnam Road Administration (VRA)**

Mr. Nguyen Van Thanh	Vice Chairman (the Chair Person of the Meeting)
Mr. Do Xuan Hoa	Chief, Transportation Division
Ms. Pham Thi Khu	Officer, Transportation Division
Mr. Thieu Duc Long	Deputy Chief, Science-Technology and International Cooperation Division, VRA
Mr. Nguyen Trong Hien	Deputy Chief, Foreign Capital Management Div., VRA
Mr. Quach Van Khoa	Chief, Traffic Division

**Ministry of Transport (MOT)****Department of Transportation, MOT**

<u>Mr. Tran Ngoc Thanh</u>	Vice Director
Mr. Nguyen Ngoc Dung	Officer

**Department of Planning and Investment, MOT**

Mr. Tran Minh Phuong	Officer
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**Department of Traffic Safety**

Ms. Le Minh Chau	Vice Director
Mr. Le Quang Huy	Dept. Of Traffic Safety

**Ministry of Agriculture and Rural Development (MARD)****Department of Cooperative Economy and Rural Development**

Mr. Ta Huu Nghia	Deputy Chief, Division of Cooperatives, Household Economy and Agricultural Farms
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**Hoa Binh Province****Hoa Binh Provincial People's Committee**

Mr. Quach The Hung	Vice Chairman
Mr. Hoang Son	Officer, Provincial PC Office

**Department of Transport**

Mr. Ngo Ngoc Duc	Vice Director
Ms. Nguyen Thi Chung	Head, Transportation Division

**Bac Giang Province****Department of Transport**

Mr. Lai Thanh Son	Director
Mr. Ngo Van Phong	Head, Division of Planning

**Ninh Binh Province****Department of Transport**

Mr. Nguyen Ngoc Thach Vice Director

Mr. Pham Huu Khanh Head, Division of Organization & Administration

**Bus Terminal Enterprise**

Mr. Luong Duy Phong Director, Bus Terminal Enterprise

**Japanese side:****JICA Vietnam Office**

Mr. Yasuhiro TOJO Senior Deputy Resident Representative, JICA Vietnam

Ms. Luong Thi Tuat Program Officer

**The Study Team**

Mr. Kunio HATANAKA Team Leader

Dr. Yoichi SAKURADA Michinoeki Planning

Mr. Naoya FURUTA Environmental and Social Consideration

Mr. Arata AIKAWA Construction Supervision