



# Guidelines for Roadside Stations

## “Michinoeki”





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# Contents

Foreword  
Preface  
Acknowledgements

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## Executive Summary

### Technical Note 1. Concept

### Technical Note 2. Identification — Site and Functions

### Technical Note 3. Preparation (1) — Stakeholders

### Technical Note 4. Preparation (2) — Scale and Design

### Technical Note 5. Appraisal — Impact Analysis

### Technical Note 6. Operation — Maintenance and Management

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Technical Note A. Michinoeki pilot study in Kenya

Technical Note B. Michinoeki pilot study in China

Appendix . TOR for the pilot study in Kenya

TOR for the pilot study in China

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## Contents

<b>Foreword</b>	i
<b>Preface</b>	iii
<b>Acknowledgements</b>	v
<b>Executive Summary</b>	3
<b>Technical Note 1. Concept</b>	9
1.1 What is a michinoeki?	11
1.2 Why michinoeki ?	14
1.3 Who are the users?	20
<b>Technical Note 2. Identification—Site and Functions</b>	23
2.1 Master plan for multiple site selection	25
2.2 Site selection	26
2.3 Functions	30
2.4 Three factors derived from the functions	31
<b>Technical Note 3. Preparation (1) —Stakeholders</b>	37
3.1 Regional development led by the local community	40
3.2 Steps of consultation with stakeholders	41
3.3 Secrets of success for michinoeki	43
3.4 Methods to hear voices of vulnerable people	47
<b>Technical Note 4. Preparation (2) —Scale and Design</b>	55
4.1 Determining facility size	58
4.2 Planning the arrangement of facilities	66
4.3 Facility design	68
4.4 Construction costs and funding	72
4.5 Consideration for michinoeki expansion	74
4.6 Important considerations for multiple michinoeki projects	74
<b>Technical Note 5. Appraisal—Impact Analysis</b>	77
5.1 Impact of commercial activities	79
5.2 Impact of social activities	82
5.3 Impact to transportation	86
5.4 Safeguards	86

## Contents

Figure 7.	Decision-making process for scale and design	57
Figure 8.	Parking grid configuration and estimation of required dimensions	61
Figure 9.	Examples of typical michinoeki arrangements	66
Figure 10.	Examples of actual michinoeki arrangements in Japan	67
Figure 11.	Variations on parking area arrangement	69
Figure 12.	Access to a michinoeki along a single road	70
Figure 13.	Access to a michinoeki at a T-shaped junction	71
Figure 14.	Access to a michinoeki at a four-way intersection	72
Figure 15.	Predicting revenue	81

### Boxes

Box 1.	Kenya Salгаа	14
Box 2.	Michinoeki “Sadamitsu Yu-Yu-Kan”	15
Box 3.	Michinoeki Uchiko Fresh Park Karari	15
Box 4.	Michinoeki Galleria Kameoka	16
Box 5.	Highway service center in Lam Takong, Thailand	17
Box 6.	Harmony between roads and cities	19
Box 7.	Michinoeki near national borders to support international trade and exchange	21
Box 8.	Determining educational demands in Yemen	27
Box 9.	Michinoeki Tomiura	31
Box 10.	Michinoeki construction and operation costs in Japan	44
Box 11.	Approximate facility size specifications	64
Box 12.	Features of michinoeki facilities in Japan	65
Box 13.	Examples of design concepts reflecting local characteristics	68
Box 14.	Michinoeki registration system in Japan	75
Box 15.	Unified michinoeki design in Japan	76
Box 16.	Critical reporting in Japan on pressure from michinoeki on private businesses, and efforts for coexistence with local business operators	87
Box 17.	Michinoeki Itako	87
Box 18.	Buzen Okoshikake Michinoeki	92
Box 19.	Management costs at michinoeki in Japan	94

## Contents

<b>Technical Note 6. Operation—Maintenance and Management</b>	89
<b>6.1 Michinoeki administrative organization and management costs</b>	91
<b>6.2 Cooperation between two stakeholders: public–private partnership</b>	97
<b>6.3 Tips for maintaining service level</b>	99
<b>6.4 Monitoring</b>	105
<b>6.5 Follow-up impact assessment</b>	108

### Tables

Table 1.	Example criteria for site evaluation	29
Table 2.	Functions corresponding to demands	30
Table 3.	General examples of facilities derived from functions	33
Table 4.	General examples of stakeholders derived from functions	34
Table 5.	General examples of impacts derived from functions	35
Table 6.	Potential negative impacts	36
Table 7.	Summary of stakeholder involvement methods	50
Table 8.	Basic formula for predicting demand	58
Table 9.	Estimating the number of parking spaces and size of parking area	60
Table 10.	Estimating restroom size	61
Table 11.	Estimating the size of restaurant facilities	63
Table 12.	Michinoeki functions and recipients	80
Table 13.	Examples of indicators to measure the impact of commercial activities	82
Table 14.	Effects and recipients	83
Table 15.	Examples of indicators of the impact of social activities	85
Table 16.	Indicators for monitoring michinoeki operation	106

### Figures

Figure 1.	Flowchart for michinoeki planning/operation	8
Figure 2.	Michinoeki creating bridges between highways and local communities	12
Figure 3.	Michinoeki, providing public services as well as economic activities	13
Figure 4.	Roads and their benefits	18
Figure 5.	General compatibility of site types with main objectives	28
Figure 6.	Three factors derived from the functions	32

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## ***Foreword***

This guideline brings together more than 10 years of successful Japanese experience and selected practical work in client countries in East Asia and Africa. Today in Japan there are more than 700 michi-no-eki road stations (michinoeki), and their positive impact on local economies, job creation, provision of public services for the local community (such as health care, education and training, and cultural activities) and regional integration is evident throughout the country.

With the renewed emphasis on transport and its impact on social and integrative expectations, the knowledge base developed from experience with michinoeki is especially relevant. A michinoeki is an excellent instrument in the third generation of infrastructure interventions. The first generation, road infrastructure building, focused on expanding vehicle movement and maximizing economic impact; the second generation considered infrastructure not only for its economic growth but also for its social contribution; and today, the third generation seeks to optimize regional development and integration and enhance the multisectoral and multipurpose dimensions of infrastructure investment.

In developing countries, not everyone can attain a minimum standard of living. The poor often lack adequate employment, housing, and education, and their health is often at risk. It is therefore crucial to support strategies aiming to eliminate poverty. Developing or strengthening a poverty reduction strategy is on many low-income countries' agendas, but these countries are not in a position to immediately address each of the elements in a poverty reduction strategy paper (PRSP). We must demonstrate how transport can help countries move towards the vision of poverty reduction expressed in the Millennium Development Goals.

Michinoeki can be an effective tool for reducing poverty because they address social issues and benefit local residents directly. If a highway project includes a michinoeki component, the newly constructed or rehabilitated highway can have multiple important social and economic effects.

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**“Michinoeki”**

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## ***Preface***

Michinoeki are road-side service stations. They are also a uniquely Japanese concept. They are different from other road-side service around the world for three reasons: (i) They are designed with the help of the communities and provide much stronger links between local communities and the users of the roads; (ii) they provide business opportunities for local residents; and, (iii) they are possible venues for the provision of multiple public services such as, health care (including HIV/AIDS care), education and training activities, and cultural activities, as well as for the provision of the normal restaurant and commercial services.

Given their unique structure, they have great potential as a tool for reducing poverty in many of the countries where the World Bank is working. All too often inter-city roads effectively bypass the communities through which they pass without directly benefiting them. Michinoeki can help to link local communities with road users, thus benefiting both parties.

These guidelines discuss the michinoeki concepts and provide specific advice on the planning, design and operations of these facilities.

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**“Michinoeki”**

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## ***Acknowledgements***

This project was led through the dedicated initiative of Maryvonne Plessis-Fraissard and Richard G. Scurfield. The preparation of the Guidelines for Roadside Stations and the Pilot Studies benefited from the assistance of other dedicated people: Anil S. Bhandari, Yasuhiro Kawabata, Shigeru Morichi, Hitoshi Ieda, Kavita Sethi, Christina E. Malmberg Calvo, Judy L. Baker, Yoshimichi Kawasumi, Michel Bellier, Jerry A. Lebo, Jacques M. Tollie, and Nobuki Kasada. I have also worked on these guidelines.

The authors of the main text of the guidelines are Toshiyuki Yokota and Kunihiro Yamanaka. The pilot study in Kenya was written by Toshiyuki Yokota, Satoru Yokoyama, Kotaro Nagasawa, Kei Sugiyama, Margaret Grieco, and Silvester O. Kasuku. The pilot study in China was written by Jiro Kato, Hiroshi Ishizato, Kotaro Nagasawa, Yoichi Sakurada, and Toshiyuki Yokota.

The World Bank presided over the michinoeki seminar in Japan together with the Ministry of Land, Infrastructure, and Transport of Japan, and the Japan Bank for International Cooperation in February 2004. The seminar for 300 people included attendees from 10 developing countries and provided important feedback for this project.

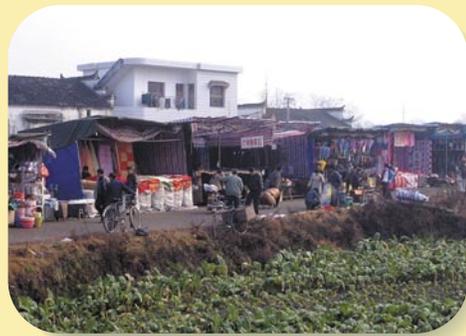
The project has become a reality thanks to the professionalism of those who worked on it and funding from the Japanese Consultant Trust Fund.

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“Michinoeki”

## Executive summary



“Michinoeki”



## Executive summary

These guidelines are intended for people engaged in social development in developing countries and are interested in michinoeki (roadside stations) as a development tool, and for those who already plan to use michinoeki. The six technical notes of the guidelines discuss concepts and policies related to regional development and provide specific advice on planning of michinoeki, design and evaluation, coordination to build agreement among stakeholders, and sustainable operations of michinoeki.

The six technical notes do not have to be read in order. As each stage of michinoeki planning, construction, and operations has its own set of issues and solutions, these guidelines have been prepared in a modular format. Readers can thus go directly to the section that corresponds to the stage of their own project. Technical Note A and B provide supplementary information about the procedures and methods used in pilot studies in Kenya and China. For those who need to carry out a feasibility study of michinoeki or who would like to learn michinoeki planning, it may be advisable to read the Technical Note A and B first and then the individual technical notes of the guidelines according to their specific interests or questions.

The guidelines do not present knowledge of general business management (such as business planning, accounting, and marketing). Users should refer to other specialized reference materials for these subjects.

### What is in the guidelines?

The following is a summary of the six technical notes. Figure 1 also shows the overall organization of the technical notes.

Technical Note 1 explains the michinoeki concept, including what is meant by michinoeki, why these roadside stations are needed, and who uses them.

Technical Note 2 describes an approach to selecting sites for michinoeki and a discussion of the methodology for determining functions of a michinoeki and identifying stakeholders, facilities and impacts of michinoeki.

Technical Note 3 details approaches for coordinating the planning and operation of michinoeki with the interests of stakeholders.

Technical Note 4 discusses the techniques for estimating the scale of an overall michinoeki and each of its facilities, along with an approach to facility design.

Technical Note 5 provides an analytical approach to determining the economic and social impacts of michinoeki on the michinoeki community.

Technical Note 6 provides a description of an organization that operates michinoeki, costs of operation of the michinoeki and the organization, the processes for planning michinoeki operation, maintenance, management, and monitoring these aspects.

Technical Note A provides a discussion of a pilot study of a michinoeki in Kenya. It provides an overview of its contribution to the resolution of social problems as well as transport related concerns. It is also describing its functions, facilities, design, operational framework.

Technical Note B presents the findings of a pilot study conducted to assess the potential for introducing michinoeki into China: this note is targeted at those considering the introduction of michinoeki in China or other countries with similar situations.

## Road map from planning to operations of michinoeki

A michinoeki combines highway rest area facilities with business services from local communities (e.g., the sale of local products) and public services aimed at road users as well as local communities (sanitation, health care including HIV/AIDS care, education and training and cultural activities). Michinoeki exhibit the following three major differences from other types of private roadside facilities, highway rest areas, and service areas located along toll highways in many countries:

- In addition to providing commercial services through market functions, michinoeki are also venues for the provision of public services such as sanitation, health care (including HIV/AIDS care), education and training, and cultural activities;
- Local residents can become michinoeki users, in addition to drivers and travelers; and
- Unlike with expressway service areas, opportunities to participate as service providers are open to local businesses and community groups. Therefore, local residents have opportunities to increase their income, entrepreneurial efforts and business expertise while concurrently benefiting from a michinoeki which is contingently supported with financial, institutional, and tax contributions from public institutions.

Because of these differences, the planning and operation of michinoeki are conducted through a different process than that used in the planning and operation of highways. In particular, michinoeki require thorough study with regard to reaching agreement with stakeholders, forming cooperative relationships, assigning responsibilities, and developing an administrative organization. The following paragraphs describe the stages of michinoeki identification, preparation, appraisal, and operation, including consideration of these differences.

**Identification.** The first stage is identification of a potential michinoeki, including site selection and a blueprint covering michinoeki functions, stakeholders, facilities, and impacts. During this stage, a “prime mover\*” who understands the michinoeki concept will initiate discussions and identify a michinoeki candidate. A prime mover is essential to coordinate and facilitate a wide variety of participants and stakeholders from both the public and private sectors. ,

The prime mover selects a site and determines a community’s specific objectives/demands that best support local economic activity and the local public services.. On the basis of these objectives/demands, the prime mover then identifies related stakeholders, facilities, and impacts of the michinoeki.

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\*

Each step (planning, construction, and operation) of “Michinoeki” requires cooperation among various related parties such as government agencies, private sectors, NGOs, and local residents. The cooperation includes solicitation of opinions and consensus building on the plan for “Michinoeki”; developing a financing plan of “Michinoeki; resolving conflicts of interest among stakeholders; and management of implementation processes. In this guideline, the word “prime mover” is used to refer to a person who takes leadership in establishing the abovementioned cooperation at all stages (i.e. planning, construction, and operation) and promotes “Michinoeki.”

**Preparation.** After a michinoeki has been identified, in the second, preparation stage, the prime mover will consult with stakeholders to design the michinoeki, discussing ideas for implementing the blueprint drawn up in the previous phase. This process is important for determining the interests of all stakeholders, coordinating planning accordingly, and establishing an organization that will operate the michinoeki.

In the identification phase, the prime mover handles planning while in the preparation phase, stakeholders join the planning process and participate in general discussions. To heed the voice of stakeholders, especially local people, and dialogue with them thoroughly, the prime mover must hold workshops in the field. This means that the initial plan will necessarily undergo many changes but this process is important for determining the interests of all stakeholders and coordinating planning accordingly. This coordination is accomplished not in a single step but in several steps.

The prime mover also needs to discuss the size and design of facilities with stakeholders. During this stage, the prime mover may need to consider the possibility of launching the project with reduced facilities, recognizing that facilities may be added or expanded later, depending on user demand.

**Appraisal.** The third stage is appraisal. A michinoeki plan is drawn up after an analysis of economic and social impacts and a financial evaluation. Michinoeki impacts can be classified into impacts on commercial activities relating to economic services, impacts on social activities relating to public services, and impacts on transportation relating to a michinoeki’s function as rest area. There are two ways to evaluate effects: for commercial activities, determine monetary value; for effects that are not easily quantifiable such as from social activities, use various indicators of the effects.

All impacts of a michinoeki on a community are not necessarily positive; it may have negative impacts as well. Therefore, it is important to include safeguards in the impact-analysis process. Michinoeki may result in an economic conflict of interest for local communities or certain groups or individuals. Because the success of michinoeki, the impact of michinoeki on existing businesses that may compete with michinoeki facilities must be carefully identified and adequately considered.

**Operation.** The last stage is the operation of michinoeki. Most michinoeki functions are not fulfilled by facilities alone; instead, ongoing activities are needed for the functions to be realized. Because michinoeki provide both public and commercial services, a third-sector organization based on a public–private partnership is recommended for running operations.

Methods for operation vary among michinoeki, even in the same country, and there is no universal rule. However, the most important elements in the operation phase are to maintain the motivation of local residents operating the michinoeki to provide better services and maintain a strong public–private partnership.

### **The importance of the prime movers and value of public-private partnership**

The prime mover has an important role to play in michinoeki identification, preparation, appraisal, and operation. In addition to performing the work of each phase, the prime mover is responsible for holding a thorough exchange of views with stakeholders, reaching agreements, forming cooperative relationships, assigning responsibilities, and developing the administrative organization of a michinoeki.

However, there is flexibility concerning the identity of the prime mover. In most cases, it is anticipated that the prime mover will be from the public sector. However, it is possible that NGOs or the private sector could also provide a prime mover.

The prime mover can change as the project moves from the identification stage to preparation, appraisal, and building, and then into operations. For the sake of consistency, and considering responsibility for construction costs, the prime mover should not change during preparation, appraisal, and building.

In the case of Seiryu-no-sato Hijikawa michinoeki in Japan, a local chamber of commerce proposed the

idea for a michinoeki and came up with a plan. In other words, the private sector was the prime mover during the identification stage. But during preparation, appraisal, and building, public funds from the national and local government were used because of the considerable cost of planning and construction, and so the prime mover’s baton was passed from the private sector (local chamber of commerce) to the municipality (local government). The municipality then formed a single company with funding from both the public and private sectors to operate the michinoeki. That is, the prime mover’s baton was passed on again, in the operation stage, to a public-private partnership.

In the case of a developing country, one possible scenario is for a development aid organization to serve as the prime mover during identification, with the central government taking over as prime mover during preparation, appraisal, and construction. The development aid organization could continue to offer support during the latter stages as well. Finally, for operations, a third-sector organization based on a public-private partnership could take over the role of the prime mover.

In a michinoeki pilot study in Kenya, a workshop involving about 150 local residents was held for discussions about the basic plan for a michinoeki. The management framework was also discussed during the workshop (see Technical Note A). A particularly noteworthy outcome of the discussion is that nearly all participants wanted the michinoeki to be administered by a public-private partnership. In Kenya, the identification stage probably will be led by the World Bank, along with the Kenyan government; the Kenyan government will manage the project during preparation, appraisal, and construction; and the local third-sector will handle operations.

Public-private partnerships operate many Japanese michinoeki, and this will likely be the case in Kenya as well. A michinoeki is not a large-scale public-private partnership like a toll road. However, it is a unique kind of facility with the potential for enabling the development of public-private partnerships in economic activities at the local level.

### **Check lists for the planning and operation of michinoeki**

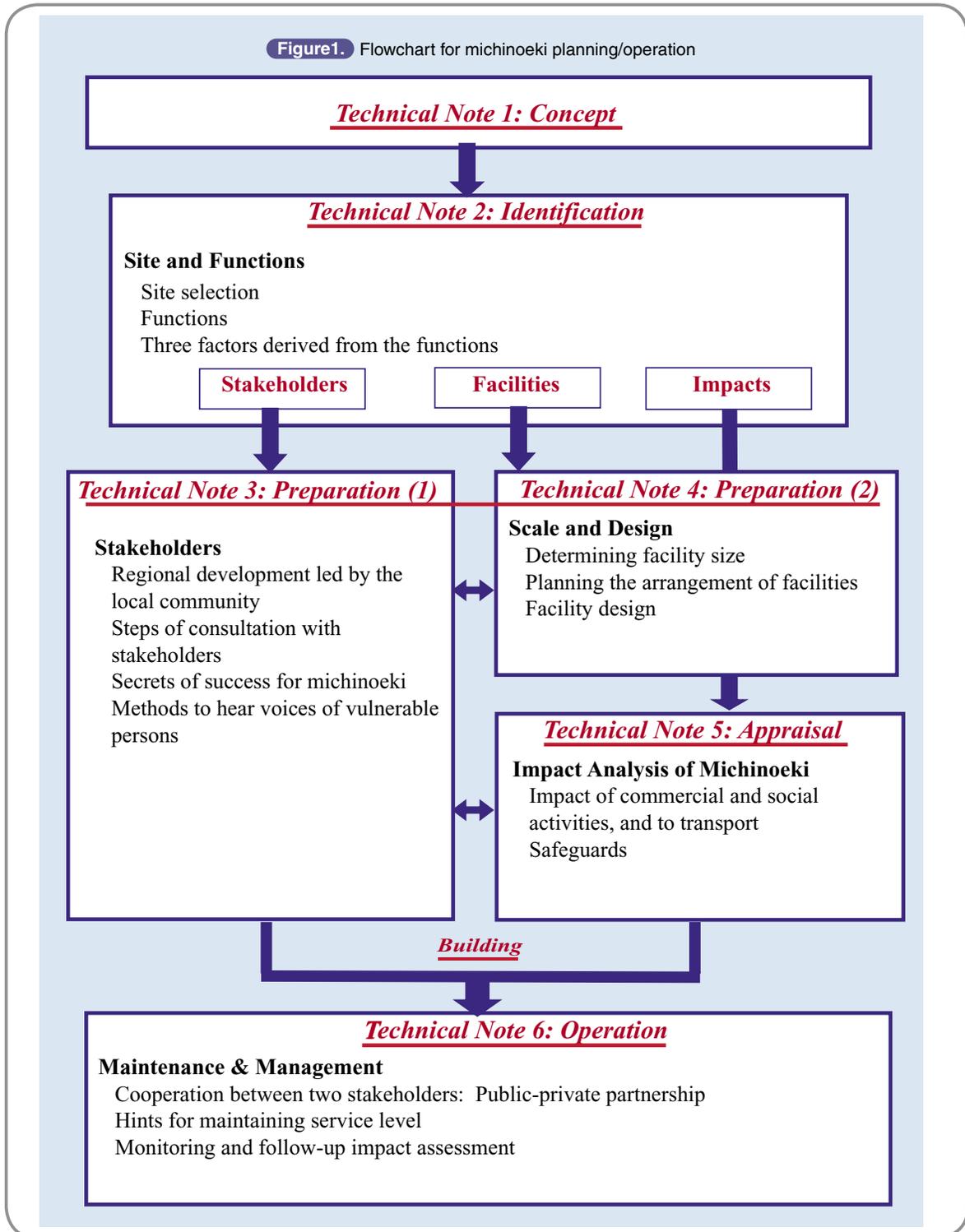
Each michinoeki has original features and a unique road map for planning and operation. The following check lists should be kept in mind in the implementation or supervision of michinoeki planning and operation:

- Throughout all phases
  - Motivated prime movers who provide strong leadership.
  
- Technical Note 1: concept
  - How is a michinoeki different from a service area along an expressway or private roadside facility?
  - How does a michinoeki help highway users, local residents, and community development?
  
- Technical Note 2: identification of site and functions
  - Who: Identify key stakeholders, including vulnerable persons
  - Where: Select a site on the basis of the real and clear voice of stakeholders
  - What: Determine demands on the basis of the real and clear voice of stakeholders
  - How: Identify functions and facilities appropriate for the site and the demands
  
- Technical Note 3: preparation—stakeholders
  - Consider local residents the main actors in the michinoeki
  - Determine how the voices of vulnerable persons will be taken into account and ensure that they are incorporated appropriately
  - Identify and resolve conflicts of interest before the appraisal stage
  - Carefully plan consultation steps with stakeholders

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Form an organization operating under a public–private partnership for michinoeki operation  
Design the michinoeki plan from the viewpoint of service supply  
Build capacity of local residents for operation of Michinoeki  
Identify sources of funding for construction (central and /or local governments generally bear costs of construction.)  
Identify sources of funding and in-kind support for operation

- Technical Note 4: preparation— scale and design
  - Collect adequate data and information for design
  - Pursue the design of facilities to be maintained by local residents in consultation with stakeholders and keep maintenance costs of the facilities affordable
- Technical Note 5: appraisal— impact analysis
  - Set up monetary and non-monetary indicators in consultation with stakeholders
  - Include negative impacts in the analysis, especially conflicts of interest
  - Share results of the impact analysis with stakeholders
- Technical Note 6: operation— maintenance and management
  - Form a sustainable operational framework using a public–private partnership
  - Operate michinoeki on the basis of appropriate responsibility sharing
  - Devise creative measures to ensure sustainable improvement of services
  - Maintain the motivation of local residents.



# Technical Note 1. Concept

- 1.1 What is a michinoeki ?
- 1.2 Why michinoeki ?
- 1.3 Who are the users ?



“Michinoeki”



## Technical Note 1. Concept

In developing countries, not everyone can attain a minimum standard of living. Poverty creates problems in that multiple elements of the necessities of life are lacking. The poor often lack adequate employment, housing, and education, and their health is often at risk. They tend to lack the basic freedoms taken for granted by the wealthy to make choices and take action on their own volition. They are extremely vulnerable to external factors and problems beyond their control, such as disease, violence, poor health, economic upheaval and collapse, adverse weather conditions, and natural disasters. They are not able even to influence decisions that affect their own lives, so they may be treated unfairly by society. Such a situation does not resolve itself naturally or spontaneously.

In response to these problems, in addition to large-scale development, development agencies are focusing their attention on community-driven development (CDD), an approach based on community involvement. Michinoeki can be an effective tool for promoting and implementing activities such as CDD. Michinoeki also can be unique infrastructure that addresses social issues and directly benefits local residents. If a highway project includes a michinoeki component, the newly constructed or rehabilitated highway can have multiple important social and economic effects.

As this technical note explains, highway infrastructure equipped with michinoeki can be one means of addressing some of the problems caused by poverty.

### 1.1 What is a michinoeki?

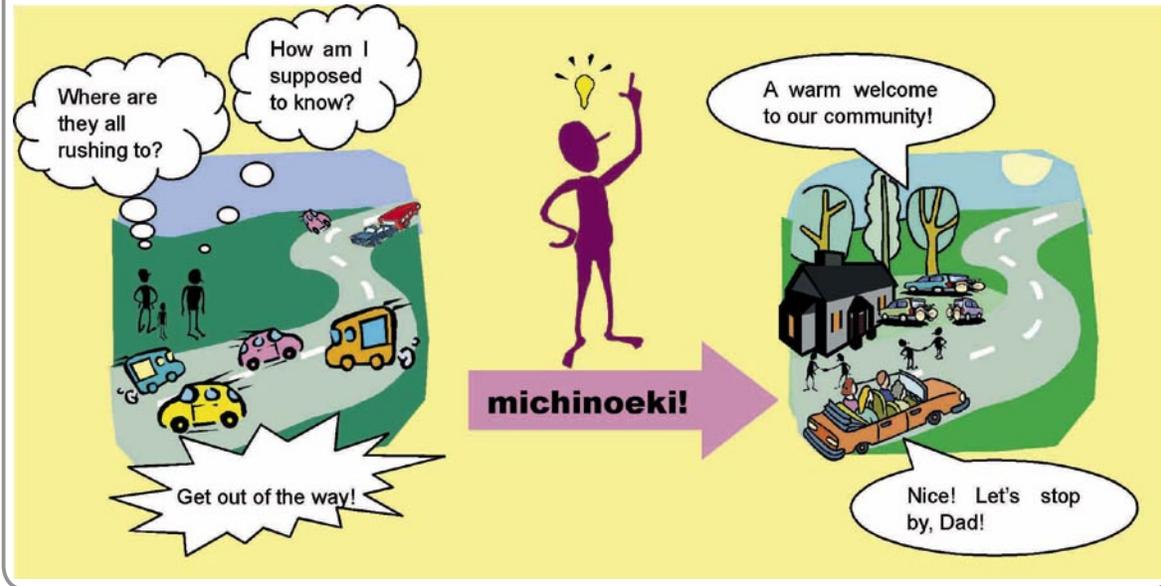
There is no need to discuss here the extent of economic and social benefits that result from the construction of highway infrastructure. Historically, the construction of highway networks has served to handle growing vehicular traffic and enable efficient, high-volume transportation of people and goods. In developing countries, highway construction has made social contributions such as improving mobility and transportation safety, enabling economic development, and combating poverty.

However, these benefits tend to be concentrated in urban areas. Smaller communities along highway routes have not always received adequate benefits from road construction. Economic, industrial, and social trends have contributed to a population influx into urban areas. Rapid urbanization widens the economic gap between urban and rural areas and leads to increasing poverty in rural villages. This trend is evidenced in every country, regardless of the country's stage of development, but in developing countries, it results in further deterioration of already challenging economic and social conditions. In developing countries, although mobility improves with the construction of road infrastructure,

increased vehicular traffic also often causes deterioration in traffic safety and the roadside environment. Moreover, in many developing countries, rest areas and other roadside facilities are often lacking, and drivers cannot obtain the services they need. Frequently, drivers simply park their vehicles haphazardly beside the highway. Areas with large numbers of stopped vehicles may have poor visibility and reduced traffic capacity, resulting in serious deterioration in traffic safety. Severe hazards in these areas endanger residents in communities along the highway.

Michinoeki are spaces for rest and exchange along highways in which problems are addressed systematically. Their functions are linked to rural roads as well as highways, and they create connections between the highway network and local communities.

**Figure 2. Michinoeki creating bridges between highways and local communities**



Models for roadside rest spaces like michinoeki can be found along the highways of many countries. The most typical examples are the stores, markets, restaurants, and other facilities that emerge spontaneously along main highways and at major junctions. For instance, rest facilities called service areas are located at regular intervals along the expressways in many countries. In Kenya, many markets are located along a main highway called the Northern Corridor, providing places where truck drivers and long-distance buses can stop for a rest break. The markets also serve as important commercial sites for local communities, including the operation of restaurants and lodging facilities and the sale of agricultural products and miscellaneous goods.

However, michinoeki differ from the private roadside facilities, highway rest areas, and service areas found along the highways of many countries in three important ways.

First, opportunities to provide services in michinoeki, unlike in expressway service areas, are open to a wide range of participants, including local businesses and community groups. Local residents participate in community development through michinoeki. Michinoeki users, including

local residents, receive a wide variety of services in line with market principles. Also, local residents have opportunities to increase their income and opportunities for entrepreneurship, thus empowering themselves.

Second, in addition to providing economic services through market functions, michinoeki are also venues for the provision of public services for the local community, such as public sanitation; health care, including HIV/AIDS care; education and training; and cultural activities.

**Figure 3. Michinoeki, providing public services as well as economic activities**



Third, while a service area targets road users, focusing on rest services, a michinoeki targets the local community as well. Local residents become michinoeki users when they use the economic services of market functions as well as public services. Michinoeki services are not available only to people arriving in vehicles, but to people arriving on foot or bicycle as well. Michinoeki can help meet the multiple needs of both local residents and travelers.

Of course, markets that emerge spontaneously along highways contribute to the local economy, but they also present many problems. Because they are unplanned, they sometimes offer a low level of rest area services. Drivers tend to stop their vehicles haphazardly near the markets and commercial facilities, creating safety problems and impeding the flow of traffic. Box 1 describes one such situation in Kenya.

### Box 1. Kenya Salgaa

The Northern Corridor is an important highway for Kenya and East Africa, stretching from Mombasa on the Kenyan coast to Nairobi, the capital, and on to neighboring Uganda. About 200 kilometers west of Nairobi along this highway, Salgaa is located at the beginning of a long uphill stretch leading toward Uganda. It is a natural place for drivers of large trucks to take a break. Many large trucks are parked haphazardly along the roadside, causing poor visibility for moving vehicles. This is the site of frequent traffic accidents. About 240 lives are lost every year in this area alone, which indicates the dangers of uncontrolled parking. Additionally, brothels catering to truck drivers are found in this area, increasing the spread of HIV/AIDS. Considering these circumstances, there is a clear need for a planned, systematically organized rest area that also provides public service functions (michinoeki).

Parked vehicles and lodging facilities at Salgaa



## 1.2 Why michinoeki ?

### 1.2.1 Benefits

The differences between michinoeki and regular roadside facilities make it possible to address not only traffic problems but the widening economic gap between urban and rural areas and poverty in rural areas where people lack basic health care, opportunities for basic education, and opportunities to increase incomes. Michinoeki benefit users such as local residents in several ways.

#### A) Empowerment

Michinoeki are projects in which the local community can participate as an independent player. Opportunities to provide economic services, such as selling goods to road users and operating restaurants

and lodging facilities, are widely available to the local community in a fair and equitable manner. This means that the facilities will give travelers a distinct sense of the local community's unique character, while directing the benefits of commercial activities back into the community. Michinoeki facilities can be built with a smaller investment than highways or rural roads, and they are open to the local community. Therefore, community members can get involved at the planning stages and play an active role. These opportunities for participation are sources of financial and intellectual empowerment for the local community.

### Box 2. Michinoeki “Sadamitsu Yu-Yu-Kan”

Sadamitsu Yu-Yu-Kan michinoeki in Tokushima Prefecture, Japan, has had a profound impact on the lives of rural women in the area through its planning and operation. To develop products using local produce, the town of Sadamitsu, which was the prime mover, made use of a life improvement group consisting mainly of local farm women. Most members of this group are housewives from their fifties to their seventies who have a thorough knowledge of the community. They participated by developing products that would make the michinoeki more attractive. These women conduct direct sales of their own agricultural products in the michinoeki. They had never paid much attention to money before, but began to take an interest in their income and expenditures as the michinoeki contributed to their empowerment. The michinoeki has employed 18 people from the community, and in addition, 125 local farmers and 50 to 60 local businesses participate in produce sales. This reflects the expanding ripple effect of a michinoeki.

#### *B) Incubator function*

Without facilities such as a michinoeki, it is not easy for local residents to start an independent business. They lack not only the necessary facilities and opportunities for entrepreneurship, but also business expertise. But at a michinoeki, entrepreneurs can use the michinoeki’s market,

restaurant, and processing center while gaining business expertise with financial, institutional, and tax support from public institutions, and thus gradually become independent. A michinoeki can also become the core of regional revitalization. Box 3 describes the experience of michinoeki merchants in Ehime Prefecture in Japan.

### Box 3. Michinoeki Uchiko Fresh Park Karari

Uchiko Fresh Park Karari michinoeki in Ehime Prefecture, Japan, has provided local farmers with business opportunities through direct sales facilities for local agricultural produce and processed goods. At this michinoeki, operation is delegated to an association consisting mainly of local farmwomen. These women gained business knowledge by packaging and pricing their own products and keeping track of sales. Before long, they began providing higher value-added products by preparing and selling their own homemade sweets, dried flowers, and other products. The chairwoman of the association stated, “In the past, our farming work was just something we had to do, but after the michinoeki was built it became our own independent work. I am convinced that women can do anything if they set their minds to it.”

*C) Social welfare/activities*

A michinoeki also provides public service functions, such as public sanitation, health care facilities, facilities for the treatment and prevention of infectious diseases such as HIV/AIDS, safe

drinking water, education and training, and child care. The michinoeki’s cultural and educational activities and other services are available to a wide range of local community members, in addition to drivers and other road users.

**Box 4. Michinoeki Galleria Kameoka**

Galleria Kameoka michinoeki in Kyoto Prefecture, Japan, is located along a main highway, but it is also near an urban center. The public services provided for local residents include educational facilities and a day care center. The michinoeki is open to the community to both provide and use private and public services. The michinoeki plays a central role in the city’s educational and welfare programs, and in addition to a training center and convention hall, includes a library and a public bath that was designed to be accessible for seniors. Of course, it also offers functions for highway users, who can use the rest facilities, purchase local products, and participate in events held in the convention hall.

The michinoeki’s public services are used heavily. Much effort has been put into the content of lifelong learning programs, and the training center is used almost every day. The convention hall is booked about a third of the time in an average month.



Children’s Education Facilities



Public library, open to all

*D) Interchange of information, knowledge and commodities*

Michinoeki not only combine the high-speed, high-volume transportation functions of highways with the community-promoting functions of rural roads, but also serve as pumps to promote exchange related to commercial activities and public services. Rather than simply emerging spontaneously at highway nodes, they are venues for the active expansion of exchange opportunities and promotion of further sales. As illustrated in Figure

2, a michinoeki makes use of promotion and diverse functions to act as a two-way pump. As it pumps the information, human resources, commodities, and other sources of vitality brought by the highway into the local community by way of rural roads, it also uses the rural roads to gather the goods and services that the community provides, raises the quality of these offerings with unique local characteristics, and pumps them out for the use of highway travelers.

### Box 5. Highway service center in Lam Takong, Thailand

In Thailand, highway service centers (HSC) were established to provide services to highway users only. However, they have a commercial side as well and include shops that carry distinctive local products. HSCs were initially developed under a government-led project for promoting roadside rest facilities. Because hscs were considered effective tools for enhancing the policy of “one local product in one sub-district,” or tambon, regional development through sales of local products was incorporated as a project goal.

At the Lam Takong HSC, one of the facilities established under this project, the center’s staff is in charge of managing the shop where local products are sold, but the local community makes all the decisions concerning the products to be displayed. Local manufacturers can freely bring their products into the shop themselves. Meanwhile, the manager of a michinoeki arranges the products brought in by local manufacturers into attractive displays and engages in sales promotion efforts.

This HSC in Thailand is an example of a roadside facility that was established in a planned manner to promote the sale of local products. It is a cleaner, more comfortable space than a mere market, and it offers multiple functions including rest facilities and information. As a result, many people and products are gathered together here, and economic activities are stimulated through sales. The center serves to pump up the vitality of the local economy.

One Tambon One Product Shop



#### *E) Road safety*

When there are too few rest facilities along a highway, drivers tend to stop and park in a disorderly manner on the roadside. A michinoeki can eliminate this problem and promote traffic safety.

#### **1.2.2 Harmonized development in the third generation**

From a macroeconomic perspective, the construction of road infrastructure provides

important benefits such as economic development and improved transportation by supporting the movement of large volumes of people and goods. However, as stated earlier with regard to the recipients of these benefits, this kind of infrastructure may also promote a widening of the economic gap between cities and the provinces. From a micro perspective, a highway such as an expressway that supports high-speed, large-volume transportation demand often tends to have a negative impact on local residents.

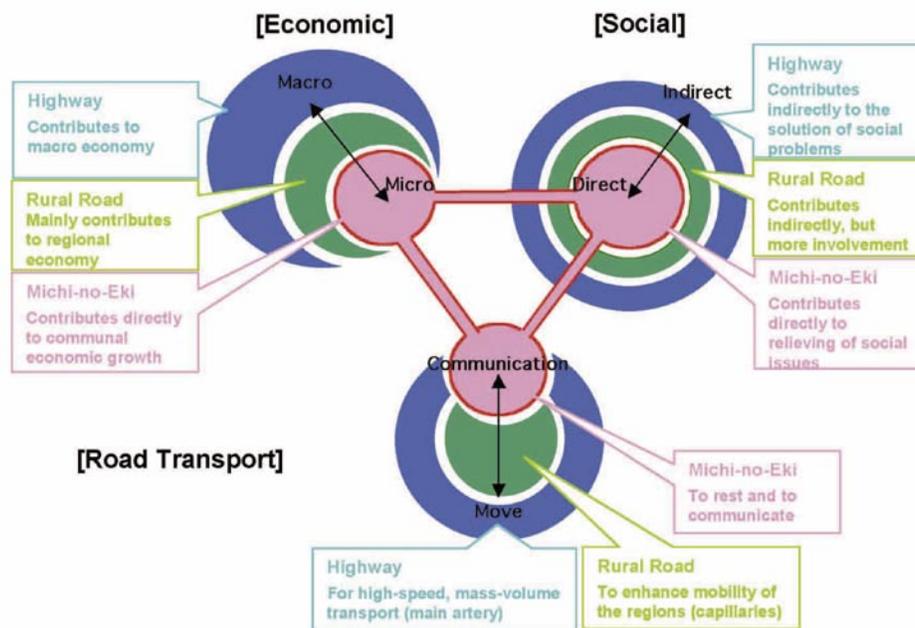
In view of these issues, in the construction of road infrastructure today, assuming that the construction of an advanced highway will eventually benefit the public in general, including local residents is no longer acceptable; indeed, it is irresponsible. Instead, facilities such as michinoeki are necessary to correct some of the shortcomings of highways that support large-scale transportation demand and build an infrastructure that will benefit local residents as well as highway users.

The complementary relationship among highways, rural roads, and michinoeki is illustrated in Figure 4. Highways, rural roads, and michinoeki each offer advantages while making up for each other's shortcomings. Michinoeki facilities provide well-balanced direct benefits in the three areas of economic, social, and road transport needs. To sustain human health, food combinations such as meat and vegetables are important, and in the same way, for a society to develop fully, the proper balance in infrastructure building must be ensured.

A proper balance includes the roads for rapid transportation, facilities for rest breaks, and facilities that offer specific solutions to social problems.

Michinoeki represent the third generation in road infrastructure construction. The first generation of road infrastructure construction was focused on expanding accessibility for automobiles and supporting their movement. The second generation of building an infrastructure which was intended not only for economic growth but also to solve social problems, organically linking roads with various social activities, educational and medical institutions, and other social functions. And in the third generation, road infrastructure building has begun to include projects such as michinoeki that directly address regional development and social demands. As an analogy, michinoeki can be pictured as the installation of miniature pumps to support local exchange at key points in the body's extensive circulatory system. Box 6 describes the evolution of michinoeki-type facilities.

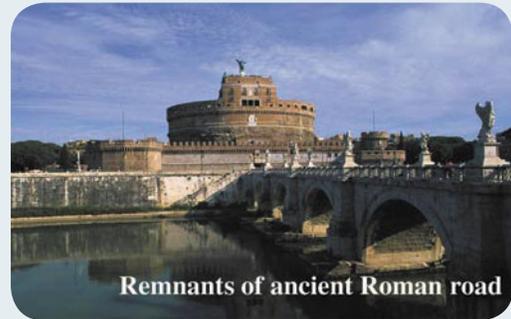
**Figure 4. Roads and their benefits**



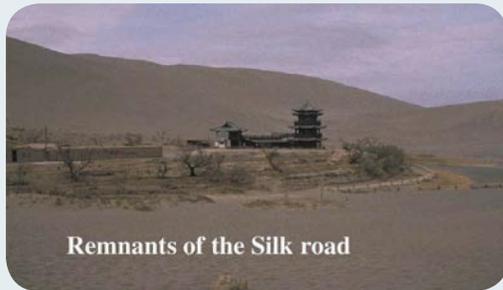
### Box 6. Harmony between roads and cities

Roads are built for the obvious purpose of travel. Their most basic function is to enable the movement of people and vehicles. However, from the standpoint of an individual traveler or vehicle, it is not possible to travel constantly. It is necessary to stop occasionally to rest. Michinoeki are spaces that enhance the stopping and resting functions of road infrastructure, combining these with a variety of other functions to create added value. These kinds of spaces have been found throughout the world since ancient times.

For example, along roads built by the ancient Roman Empire were lodging facilities called mansiones and stables called stationes for horses and carriages at intervals of 60 to 70 kilometers. The stationes gradually developed into cities, several of which survive today.



Remnants of ancient Roman road



Remnants of the Silk road

The Silk Road, which passed through Central Asia and linked Europe with East Asia, was the main transportation artery on the Eurasian continent. Important settings for exchange among travelers, and between travelers and local residents, formed along the Silk Road around natural gathering places such as oases and bazaars where travelers could stay and rest.

In Japan, five main highways called the Gokaido became busy traffic arteries about 400 years ago, during the Edo period. The central government established posting stations (towns where couriers were posted) for travelers at intervals of eight kilometers along main highways. Travelers could have their horses attended to, rest, obtain information, and use lodging facilities at these posting stations. Linked by highways, the posting stations quickly developed into cities. The stations played a central role in local economies because of the economic activities of traveling merchants.

Cities gradually formed around major gathering places along main roads such as the Silk Road. Along with existing cities, these new cities became important settings for social and economic activity in the cultural sphere of the Silk Road. Cultural development occurred along with the interrelated growth of highways and rest facilities. In addition to large cities, there was a close relationship between roads and the formation of provincial towns. But in recent years, with technological advances in transportation, it has become possible to travel from origin to destination without stopping for a break.

Although this has greatly improved economic efficiency, it has resulted in problems such as the decline of provincial towns and the concentration of population in urban areas.

Through the use of michinoeki, highway authorities today may be able to promote decentralization and take the initiative in forming an infrastructure to nurture the country’s unique culture.



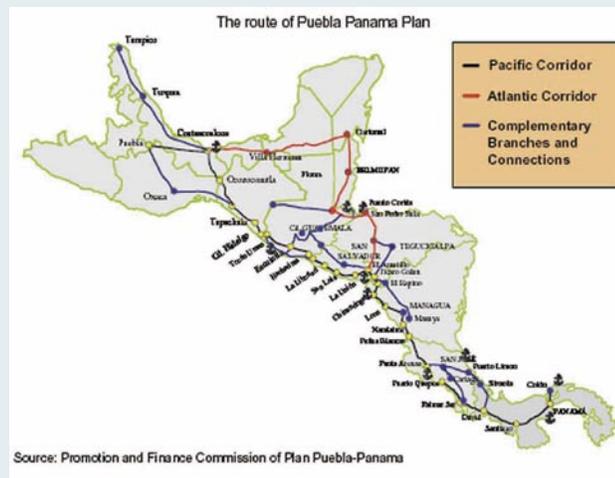
shukuba in Japan A shukuba near Edo(modern-day Tokyo)

### 1.3 Who are the users?

Public services are provided at michinoeki, as well as economic services offered by the local community. Anyone who uses these services is a michinoeki user. Users are not limited to highway travelers. Members of the local community who visit a michinoeki to use its public services or purchase goods are also important users. Also, because local community members will provide economic services, they are another type of user—merchants who use the michinoeki as a sales venue.

### Box 7. Michinoeki near national borders to support international trade and exchange

With the trend toward globalization and the World Trade Organization system, michinoeki have an important potential role in economic growth and social and environmental impact management at border areas. Regional integration aimed at regionwide economic development is being pursued around the world. Each economic grouping is trying to harmonize its transport infrastructure to facilitate intraregional trade. Representative projects are the East–West Economic Corridor of the Mekong River Basin countries (Myanmar, Thailand, Laos, and Vietnam) and the Puebla Panama Plan of Mexico and eight Central American countries. The Puebla Panama Plan is a gargantuan project to construct a 3,000 km highway from Puebla City in Mexico to Panama City in Panama, passing through nine countries. This project will bring significant benefit to those nine countries by improving the linkage between North America and South America.



One major cause for the current low level of international trade in the Central American region is the low quality of the region’s road networks. Business communities and governments await the completion of this highway with high expectations. However, the anticipated sharp increase in long-distance truck traffic could cause degradation in public safety and living conditions, especially in border areas, a possibility that concerns civil society, and not only in Central America. Areas with cross-border traffic are prone to illegal activities such as black marketing and prostitution. Michinoeki, especially those near national borders, could help solve such problems. For example, through a michinoeki, a multifunction facility offering banking and money exchange, traffic information, cultural activities, sightseeing, and rest and accommodation, communities can manage social and environmental risks while meeting commercial demands. Michinoeki can also generate beneficial economic ripple effects among the citizens of the border regions and nearby residents.

However, it is essential that michinoeki not be incorporated into actual border infrastructure, but be located a few miles away, because borders should be as transparent as possible for immigration and customs, to minimize fiscal and duty evasion and smuggling.



“Michinoeki”

## Technical Note 2. Identification — Site and Functions

- 2.1 Master plan for multiple site selection
- 2.2 Site selection
- 2.3 Functions
- 2.4 Three factors derived from the functions



“Michinoeki”



## Technical Note 2. Identification—Site and Functions

This technical note discusses the identification stage of michinoeki planning, beginning with site selection. For successful michinoeki planning, the site should be selected first. A michinoeki is not a large development project, and its influence extends only to a single community, or two to three communities at most. Location determines the community served, services provided, and functions of a michinoeki. If a site were moved just a dozen miles, every aspect of the michinoeki would change, including its functions, facilities, stakeholders, and impacts. We next discuss how to determine functions for a michinoeki according to local demand and how to identify stakeholders, facilities, and impacts of the michinoeki according to the selected functions, which form the blueprint of the michinoeki. The Technical Note 3, 4, and 5 describe michinoeki facilities, stakeholders, and impacts in detail.

Six key points must be considered in the identification phase:

- **Prime Mover and Leadership.** A michinoeki involves many people, from drivers and travelers to members of the local community and government officials. An important element in the success of a michinoeki is the presence of a prime mover who can unite all these interested parties through strong leadership. In Japanese michinoeki projects, the head of a town or village becomes the prime mover and unites interested parties.
- **Identifying Potential Stakeholders.** In the preparation phase (following the identification phase), as many local residents as possible must participate. Therefore, in the identification phase a prime mover must identify potential stakeholders. The prime mover then must talk to as many representatives of stakeholders as possible to understand their demands and assess their possible cooperation and participation in michinoeki planning, construction, and operation.
- **Real and Clear Demands.** Real and clear demands are important points for a successful michinoeki, so it is necessary to pay attention to grassroots interest from the local community, and to listen to the voices of vulnerable persons in the local community. It is necessary to enter the community to conduct dialogues and work jointly with residents and other interested parties.
- **Opportunities.** A michinoeki is intended to benefit the local community as well as travelers. Michinoeki should be viewed as a facility to provide benefits only to selected people, but rather public and private services and business opportunities to and from drivers and travelers to local community members. Therefore services and business opportunities must be distributed equally.
- **Commitment and Sustainability.** The ongoing provision of services is the key to success for a michinoeki. Most michinoeki functions are not fulfilled by the facilities alone; instead, human activities are needed for the functions to be fully realized, and local residents are the main providers of economic services. Therefore, it is mandatory that efforts be undertaken to confirm the commitment of local residents and encourage their interest and motivation.
- **Flexible Blueprint.** A variety of needs and circumstances will emerge gradually as the prime mover advances the planning work, so it is important to maintain the flexibility required to revise the plan as needed.

### 2.1 Master Plan for Multiple Site Selection

Sometimes several sites may be selected at once for multiple michinoeki projects, based on a higher-level plan. This kind of planned michinoeki establishment could make it possible to provide suitable and varied services to drivers and travelers (see Technical Note 4 for details). However, as stated, a michinoeki is a locally oriented facility, and for a michinoeki to be successful, it should not be

developed following a top-down decision set forth in a higher-level plan, but from the interest and efforts of the town or village leader and the members of the local community. The town or village head and the members of the local community often are not in a position to prepare a higher-level plan, and they do not necessarily need a higher-level plan. Therefore, these guidelines will cover only the matters essential in the establishment of an individual michinoeki. We will not discuss the formulation of higher-level plans.

Still, it is important to provide suitable and varied services to drivers and travelers through planned michinoeki establishment, and it is likely that the national or regional government provides support to individual michinoeki projects under a higher-level plan. We discuss the planned establishment of 11 michinoeki locations in Kenya. For information on formulating a higher-level plan, refer to the pilot study on Kenya.

## 2.2 Site selection

### 2.2.1 Demand—real and clear voices

Many michinoeki projects have become successful because local community members have taken an interest in the projects and expressed their demands clearly, and a plan has been established according to these factors. However, it is not a simple matter to determine the interest of local community members or their clear demands. Although the local community’s demands reflect an area’s problems, problems are often forced on local residents, especially socially vulnerable people; and they are often not given opportunities to express their own views.

To determine local demands accurately with regard to facilities such as a michinoeki, it is necessary to listen to the voices of vulnerable people in the local community. It is often not a simple matter to elicit the views of local residents, especially socially vulnerable people. Perhaps socially vulnerable people in the local community are not accustomed to speaking out, or are not usually given opportunities to speak out. In addition, they may have no idea of how or when they should

speak out in the development process to have their desires heeded. Furthermore, the traditional lack of channels of communication between the vulnerable parties and planners or decision-makers provides inadequate opportunities for the rehearsal and acquisition of these skills.

It is not possible to understand the problems of a community by simply collecting and analyzing information from external sources without spending time and effort to obtain the views of vulnerable people directly from those people. It is also impossible to propose the kinds of measures needed by the community without going through this step.

In the identification phase, a prime mover must enter the community, conduct dialogue, and work jointly with residents and other interested parties to understand their demands and obtain their cooperation with and participation in michinoeki planning, construction, and operation. Thus, the prime mover can minimize the risk of facing unknown or different demands, or any other uncertainty, in the preparation phase. The prime mover then needs to speak with various individuals among those representatives.

Box 7 describes an educational program conducted by the World Bank in Yemen, in which the conclusions obtained through a workshop organized by the government were contradicted by the findings that came out of another workshop involving the private sector and local educators.

### Box 8. Determining educational demands in Yemen

In an educational project in Yemen, during negotiations for an elementary education project that was already in the works, discussions concerning secondary and higher education were held, to determine training needs. Two workshops were held, both using a participatory approach and involving the participation of senior government officials.

A government workshop was held first; it reached the conclusion that the people of Yemen wanted more classrooms and more textbooks, but that they were not concerned about improving the quality of secondary education.

However, in the next workshop, which involved participants from the private sector and had about 40 people taking part (more than expected), the key problems pointed out were the quality of educators, physical facilities, curriculum improvement, evaluation methods, school administration, educational resources, participation of females in education, and community colleges. School directors who were well acquainted with the local educational situation participated in the other workshop, and their discussions led to a similar judgment—that the quality of education needed to be improved. As a result, a change program was selected to improve the quality of secondary education in Yemen.

Source: “Participation Sourcebook,” World Bank

#### 2.2.2 Continuity of Demands

An important aspect of determining demands is determining the continuity of demand. In a michinoeki plan, it is important for local community members to have and express clear demands. However, the quality and continuity of services provided at the michinoeki depend on the local community members themselves.

It is necessary to ascertain whether the michinoeki, if built, will actually be used according to the demands; whether the residents who wish to provide services through the michinoeki’s market and restaurant functions have the capability to continually supply those services; and whether drivers and travelers will actually use the michinoeki if it is built. These factors should be included in the identification process, and the reliability of the information obtained confirmed. Without continual demand and continual services, there is a risk that the completed facility may be underused and that its income may be insufficient to cover its operating costs. Commitments from community organization must be secured, and market participation and a supply of regional resources to be processed and

sold must be ensured.

#### 2.2.3 Classifying demands

A main objective has to be clearly identified because the main objective significantly influences the geographical location of a michinoeki between highways and town/village centers. A location close to town may offer convenience and a synergistic effect but also may generate problems—noise, garbage, and so on. Furthermore, for a michinoeki that combines market functions with transportation terminal functions, it may be desirable to select a site adjoining land that could be used for expansion if necessary.

The main objectives for michinoeki use are as follows. First, drivers and travelers need a place to rest, buy gasoline, and have their vehicles repaired. Second, market and restaurant facilities are used by drivers, travelers, and local residents. Third, the michinoeki provides public services such as water supply, public sanitation, health care including HIV/AIDS care, education and training, and cultural activities. And because many people gather at a transportation-related facility such as

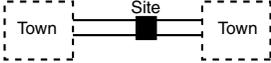
a michinoeki, it has a fourth function as well, that of a transportation terminal. Therefore, the main objectives of a michinoeki can be classified into the following four categories:

- Rest—Providing highway users with a clean, comfortable rest area
- Market—Providing a venue for direct sales of products (and possibly for processing local products to generate high added value)
- Terminal—Providing terminal functions for public transport.
- Public Service—Providing public services that are needed by local residents, as well as by highway users.

The type of site depends on the main objectives determined for the michinoeki. Figure 5 indicates three typical types. For example, for a michinoeki that will provide primarily rest functions, a site between towns in a place with few rest facilities is best, considering potential problems created by the michinoeki, such as noise, for residents of nearby towns.

If there are several candidate sites, these are subjected to comparative analysis to determine priority. If there is only one candidate site, that site is evaluated to determine if the project is feasible.

**Figure 5. General compatibility of site types with main objectives**

Site Type	Examples of main objectives			
	Rest	Market	Terminal	Public Service
<p>Between towns</p> 	<p>☀</p> <p>Rest point for travelers from town to town.</p>	<p>○</p> <p>If local products can be gathered, new concentrations may emerge. This may also lead to development in the land surrounding the michinoeki.</p>	<p>△</p> <p>Although not near a town, this type of site may be effective if it is an important transportation node or near major interchanges.</p>	<p>△</p> <p>Few users other than travelers can be expected.</p>
<p>Entrance to a town</p> 	<p>○</p> <p>Rest point just before entering an urban area.</p>	<p>☀</p> <p>Serving as the face of a town, with a market presenting the town's products.</p>	<p>☀</p> <p>Important transportation nodes are often in towns, and this type of site is effective in such cases.</p>	<p>○</p> <p>Both travelers and community residents have easy access to services.</p>
<p>Town center</p> 	<p>△</p> <p>A town center should not be used as a rest area.</p>	<p>☀</p> <p>Serving as the face of a town, with a market presenting the town's products.</p>	<p>○</p> <p>Important transportation nodes are often in towns, and this type of site is effective in such cases.</p>	<p>☀</p> <p>Both travelers and community residents have easy access to services.</p>

key

- ☀ Excellent
- Good
- △ Questionable

## 2.2.4 Site evaluation

Table 1 summarizes the matters needed for site evaluation, including those already described. (Evaluation criteria should be modified according to the conditions of the country or region.) For identification of a michinoeki, the prime mover

evaluates the sites and makes a preliminary decision based on local leadership and capabilities, the prime mover’s capabilities, the main objectives, and demands. A final decision on this site is then made through the subsequent steps, which include dialogue and coordination with stakeholders, michinoeki design, and michinoeki impact evaluation.

**Table 1. Example criteria for site evaluation**

Aspects for evaluation		Points to check
Coordination with existing development plans		◆ Can the project be coordinated with existing development plans in the region?
Local leadership and capabilities		◆ Does the local community have the enthusiasm and energy needed for the planning, construction, and operation of a michinoeki? ◆ Are there sufficient capabilities for michinoeki operation?
Prime movers		◆ Does a prime mover exist? Are the prime mover’s capabilities adequate? ◆ Is the prime mover able to coordinate the project with higher-level plans, legal requirements, and other regional development planning in the process of land acquisition and facility establishment?
Land acquisition		◆ Are there any factors making it difficult to obtain sufficient land?
Correlation with main objectives		◆ Is the site suitable for attaining the main objectives? Can the objectives be accomplished with this site?
Analysis in terms of demands	Demands of the local community	◆ Is the site easily accessible to the local community (with consideration for persons arriving on foot or by bicycle)? ◆ Is the site convenient for using the local community’s resources (farms, fisheries, processing centers, tourist resources, etc.)? ◆ Can the site be safely used by each member of the local community?
	Demands of Road users	◆ Will there be adequate usage demand from road users? ◆ Is the location suited to a rest area? (Is there demand for a place to stop and rest?)

## 2.3 Functions

In this step, the prime mover takes the abstract demands of the local community and users and translates these demands into specific terms. This is the process of identifying the particular functions to be fulfilled by michinoeki. It is an important step in michinoeki concept development from the abstract to the real.

Michinoeki functions can be classified into functions related to economic activities and functions related

to public services. The functions related to economic activities are centered on a market. This category also includes the functions of processing goods for sale in the market, sales promotion activities such as creating displays, and functions related to tourism. Functions related to public services include services for road users, such as rest area services, as well as services that benefit the local community, including the provision of books and information, public sanitation, health care including HIV/AIDS care, education and training, and cultural activities.

**Table 2. Functions corresponding to demands**

Local Demand	Functions	
Opportunities to earn income	1) Sales opportunities	Providing opportunities for the direct sale of local products to road users
Selling products and finding sales outlets		
Ways to add product value (to earn more income)	2) Processing of products	Providing a space and the necessary skills to process goods and develop products
Creating saleable products		
Knowledge about production technologies and economic activities	3) Technical education	Education concerning technology and economics
More visits by tourists and tourist information	4) Support for tourism	Promoting tourism in the area and providing tourist information
Better sanitation	5) Sanitation services	Providing sanitary toilets
		Supplying quality water
		Providing health education
Better health care, including infectious disease prevention	6) Health support	Providing clean lodging facilities with measures to prevent the spread of infectious disease
		Providing basic medical information and simple medical care
Opportunities for social participation and correction of inequality	7) Social participation	Providing education and opportunities for community activities
Receiving public services	8) Public services	Providing various public services and public information
A rest area that is safe to use	9) Rest area	Providing safe parking areas and rest facilities
A place for vehicle repairs		
A stopping point for public transportation	10) Public transportation	Providing stopping points for public transportation, such as buses

## Box 9. Michinoeki Tomiura

### Determining local demands

Tomiura-cho, the village where Tomiura michinoeki is located, is situated in the southern part of Chiba Prefecture. Although it is in the greater Tokyo area, transportation is inconvenient and the area was in decline. Agriculture began to decline in the late 1980s, coupled with depression of the fishing and tourist industries. As the area’s core industries of agriculture, fishing, and tourism suffered, problems ensued as young people moved out of the area and farmland was neglected. The village chief determined that the most important of the local residents’ demands was for employment and income-earning opportunities. It was apparent that the residents were particularly eager for attractive job opportunities for young people and for the revitalization of local agriculture and the tourist industry as sources of income.

### Selecting michinoeki functions

At Tomiura michinoeki, attention turned to substandard loquats grown locally, which were worthless on the conventional distribution market. The functions selected for the michinoeki were to independently develop, produce, and sell products including jam, canned goods, and soft-serve ice cream using these substandard loquats collected from farmers. The michinoeki has been equipped with facilities for the processing and sale of loquat products, and efforts to raise the incomes of local residents are ongoing.

Loquat products being developed and sold



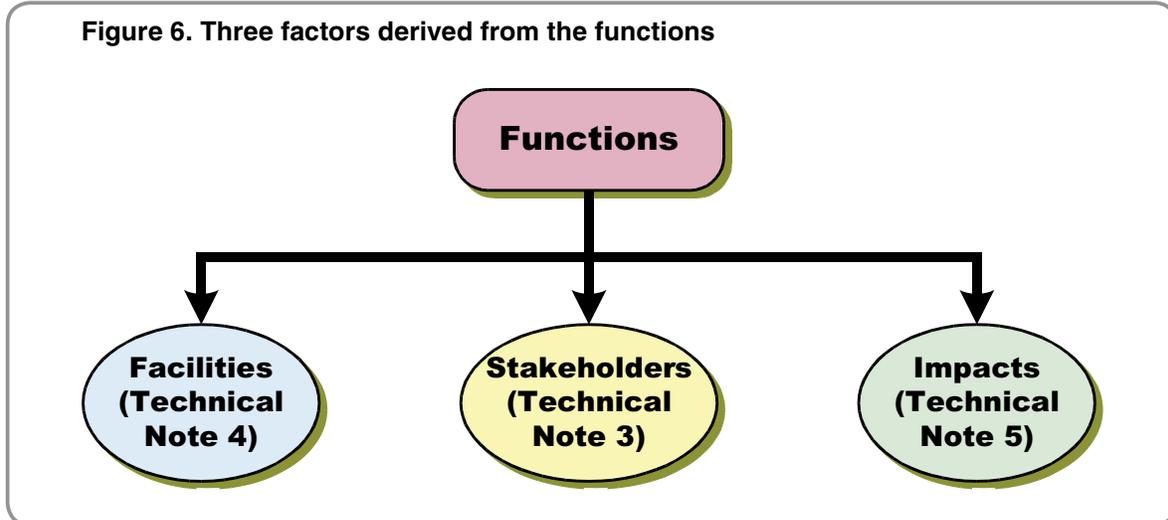
Processing facilities for product development and production



## 2.4 Three factors derived from the functions

As stated in the beginning of this technical note, demands give rise to the functions of a michinoeki. These functions then become the basis for determining three factors related to a michinoeki: its facilities, stakeholders, and impacts.

Figure 6. Three factors derived from the functions



#### 2.4.1 Facilities

Among the three factors of facilities, stakeholders, and impacts, the factor that is most easily derived from functions is facilities. The facilities are, in essence, a physical realization of the abstract functions. Table 3 gives examples of the kinds of facilities required for certain functions. Facilities related to economic activities could include markets, processing centers, display areas, tourist facilities, and tourist information areas. Facilities related to public services could include rest areas, water-drawing areas, meeting halls, facilities to supply information, medical care facilities, and training centers. Parking areas and toilets are indispensable facilities for both economic activities and public services. (Technical Note 4 gives more detailed information on the size and design of facilities).

**Table 3. General examples of facilities derived from functions**

Local Demand	Functions	Facilities
Opportunities to earn income	1) Sales opportunities	Direct sales facilities (markets)
Selling products and finding sales outlets		
Ways to add product value (to earn more income)	2) Processing of products	Processing areas (and restaurant facilities)
Creating saleable products		
Knowledge about production technologies and economic activities	3) Technical education	Training centers/meeting halls
More visits by tourists, tourist information	4) Support for tourism	Facilities to supply information
Better sanitation	5) Sanitation services	Toilets
		Water drawing areas
		Training centers/meeting halls
Better health care, including infectious disease prevention	6) Health support	Lodging facilities
		Simple medical care centers
Opportunities for social participation/correction of inequalities	7) Social participation	Training centers/meeting halls
Receiving public services	8) Public services	Branch office of local government, facilities for public services and services in the public interest
A rest area that is safe to use	9) Rest area	Parking area (rest facilities)
A place for vehicle repairs		
A stopping point for public transportation	10) Public transportation	Bus stops

### 2.4.2 Stakeholders

The selection of the site and functions of a michinoeki lead to identification of the stakeholders. At this stage, the prime mover needs to identify potential stakeholders, gather their demands, and prepare for coordination among potential stakeholders' representatives.

As services provided at a michinoeki can be classified as economic or public, the functions of a michinoeki can also be classified as functions related to economic activities or public services. In the same way, stakeholders (determined according to site and functions) can be classified as stakeholders related to economic activities or stakeholders related to public services.

Stakeholders related to economic activities conducted at a michinoeki are road users, tourists, tourism businesses, various groups from the local community, and the entities that will guide and manage the market activities.

For stakeholders related to public services, information must be gathered and analyzed to

confirm whether the relevant public organization, NGO, or other group is capable of providing.

Ongoing services (see Technical Note 3 for more detailed information about consulting with stakeholders). Table 4 gives some examples of stakeholders identified according to function.

**Table 4. General examples of stakeholders derived from functions**

Functions	Stakeholders	
	Type	Specific stakeholders
1) Sales opportunities	Stakeholders related to economic services	Road users (drivers, travelers, and tourists) Local residents Farming, fishing and handicraft groups, etc. Local entrepreneurs
2) Processing of products		Farming, fishing, and handicraft groups, etc. Local entrepreneurs Groups providing technical guidance (government, ngos, etc.)
3) Technical education		Farming, fishing, and handicraft groups, etc. Local entrepreneurs Content providers (government, ngos, etc.)
4) Support for tourism		Tourists Tourism businesses (agencies) Operators of tourist facilities (including lodging facilities)
5) Sanitation services	Stakeholders related to public services	Road users (drivers, travelers, and tourists) Local residents Administrative institutions (central and local government) Content providers (government, ngos, etc.)
6) Health support		Road users (drivers, travelers, and tourists) Local residents Administrative institutions (central and local government) Medical service providers
7) Social participation		Local residents (various groups) Content providers (government, ngos, etc.)
8) Public services		Road users (drivers, travelers, and tourists) Local residents Administrative institutions (central and local government)
9) Rest area		Road users Road managers
10) Public transportation		Road users (travelers and tourists) Local residents

### 2.4.3 Impacts

When a michinoeki’s functions have been determined, it becomes possible to anticipate the kinds of social and economic effects that will result. Because a michinoeki provides public services as well as economic activities and generally receives public funds, it is extremely important to determine its impact on the community. At this stage, the prime mover needs to forecast the impacts and their magnitude in a qualitative manner.

There are three general categories of michinoeki impacts: economic benefits brought about by economic activities, social benefits resulting from public services, and benefits to highway transportation.

Concerning the effects of economic activities, the greatest impact is the increased income of the local community resulting from the market.

Meanwhile, the social impact from public services depends on the content of services provided. For example, in the case of educational and instructional activities, the specific effects are changes in behavior or level of awareness. In the case of services to improve hygiene and the water supply, the impact is better health.

Improving safety is an important effect with regard to highway traffic. Especially at sites where the stopping and parking of vehicles along the roadside has been a cause of traffic accidents, an important outcome is the reduction of accidents and fatalities.

**Table 5. General examples of impacts derived from functions**

Functions		Impacts	Specific impact determination
1) Sales opportunities	Providing opportunities for the direct sale of local products to road users	Impact of Commercial Activities	Determining the impact on added value for the community by means of the market and other economic activities
2) Processing of products	Providing a space and the necessary skills to process goods and develop products		
3) Technical education	Education concerning technology and economics		
4) Support for tourism	Promoting tourism in the area and providing tourist information		
6) Health support	Providing clean lodging facilities with measures to prevent the spread of infectious disease		
5) Sanitation services	Providing sanitary toilets		
	Supplying clean water		
	Providing health education		
6) Health support	Providing clean lodging facilities with measures to prevent the spread of infectious disease	Impact of Social Activities	Using indicators to determine the specific impact on social development in the community
	Providing basic medical information and simple medical care		
7) Social participation	Providing education and opportunities for community activities	Impact to Transport	Determining the impact on traffic accident reduction
8) Public services	Providing various public services and public information		
9) Rest area	Providing safe parking areas and rest facilities		
10) Public transportation	Providing stopping points for public transportation, such as bus stops		

It is also necessary to consider the negative impacts. Although michinoeki facilities are not large in scale, it is still advisable for the evaluation to cover safeguards as to the possibility of environmental impact, relocation of residents, or other negative effects on the community. Depending on the cultural background of the country or

region, there may be some resistance to the entry of outsiders into their community, and this should be handled with consideration for local characteristics in terms of safeguards as well. Another element for consideration is how easily land could be procured in view of local circumstances.

Table 6 lists some potential negative impacts.

**Table 6. Potential negative impacts**

Safeguard	Points of view
Environment and landscape	◆ Would there be any negative impact on the natural environment or landscape (nature conservation district, endangered species, etc.)?
Relocation of residents	◆ If establishment of michinoeki facilities would require relocating residents, are there any problems related to this relocation?
Negative impact on road transportation	◆ Would traffic entering and leaving the michinoeki negatively affect traffic safety or disrupt the flow of traffic?
Ease of Procuring land	◆ Is it easy to procure land of sufficient area near the highway? (The minimum is about 3,000 square meters, or 5,000 square meters if the michinoeki will include facilities for a market or processing center.)
Proximity to area businesses	◆ Is the site sufficiently distant from other facilities that might be in competition, such as another michinoeki, roadside shop, or gas station (preferably one or two hours' drive)?

More detailed information on determining and analyzing the impacts can be found in Technical Note 5.

## Technical Note 3. Preparation (1) — Stakeholders

- 3.1 Regional development led by the local community**
- 3.2 Steps of consultation with stakeholders**
- 3.3 Secrets of success for michinoeki**
- 3.4 Methods to hear voices of vulnerable people**



**“Michinoeki”**



## Technical Note 3. Preparation (1)—Stakeholders

There are more than 700 michinoeki in Japan, where the michinoeki policy has linked road transport with local and regional development goals for more than a decade. Japan has many examples of successful michinoeki projects, and these guidelines describe a number of them to give a more detailed understanding of the workings of Japanese michinoeki. Michinoeki clearly work successfully in Japan, but will they work and are they appropriate for developing countries? In answering this question, the fit between location and infrastructure is important. People unfamiliar with the michinoeki concept might think that michinoeki facilities in Japan are magnificent buildings that were expensive to build, or that they are high-tech facilities fitted out with information technology, or that luxurious facilities are the reason for the success of Japanese michinoeki projects. However, a close examination of successful michinoeki projects in Japan reveals that the opposite is true. Michinoeki facilities are not luxurious in comparison to facilities around them. In fact, they are often simple and plain. Although michinoeki operation sometimes includes systems to monitor product sales in real time using the Internet and cell phones, in this day and age, the Internet and cell phones cannot be considered high-tech, and are accessible even in developing countries. In fact, there is practically no cause-effect relationship between successful michinoeki projects in Japan and expensive facilities.

Moreover, developing countries offer better business opportunities and a greater demand for facilities such as michinoeki because there is an insufficient supply of these kinds of facilities. In Japan, there is normally no need to sell products by the roadside because there are well-established distribution channels. If anything, there is an overabundant supply of gas stations (equipped with toilets), restaurants, and retail stores; so there is less of a need for michinoeki projects in Japan. In Japan, existing facilities provided a high quality of services to the public, but this business bypassed the small farmers: michinoeki enabled small farmers, and particularly women and the elderly, to share in the business generated by passing trade. This is the rationale behind michinoeki, even in a developed country, and it is more important for developing countries.

Why are michinoeki projects so successful in Japan? The following four factors seem to be the reasons behind this success:

- The head of the municipal government is the prime mover, and construction costs are paid by the public sector, which also provides support for operation. In this way, the local community is provided with a venue for activities where they will be the main actors. Consequently, a michinoeki project is founded on the long-term aim of contributing to municipal development.
- Beginning in the planning stages, as many local residents as possible are involved and participate on an equal basis. The directions and roles for michinoeki planning, construction, and operation are clarified in a thorough exchange of views and opinions.
- A michinoeki is attractive to drivers and travelers as a place to stop because it offers many needed services from both the public and private sector in a single facility. These include a rest area, toilets, meals, shopping, travel information, and tourist information. (In Japan, gas stations are not part of michinoeki because of the already plentiful supply of this facility, but conditions in developing countries may require this function.)
- To provide distinctive products that cannot be obtained elsewhere, efforts are made to encourage local residents to provide a variety of products using local resources in inventive ways. When residents earn profits from these endeavors, their motivation is heightened, and the result is better

quality in their products.

What all these factors have in common is that they require the cooperation and participation of many stakeholders. When large numbers of stakeholders participate in a michinoeki, they gain profits as well as a sense of their own identity. An improved identity and higher profits lead to greater motivation, and this has led to the success of michinoeki projects in Japan. It is no exaggeration to state that the secret of a successful michinoeki is to obtain the cooperation and participation of as many stakeholders as possible, and not only in the case of Japan.

The second of the four factors listed above describes the concept of equity. In developing countries, decision-making often follows a top-down approach because of wide gaps between the rich and poor and related historical circumstances. The process of decision-making on public projects almost never involves many local residents, and community-driven development is the exception rather than the rule.

Of course, an understanding of the michinoeki concept, site selection, and design is important. However, the successful introduction of a michinoeki in a developing country also depends on using community-driven development, centered on the local community, ensuring that local residents have equity in the project, and promoting the participation of local residents. Therefore, the step of consultation with stakeholders, described in this Technical Note, is extremely important. Consultation must be pursued in a way that is suited to the characteristics of the country and of the transport network where a michinoeki project is planned.

If Japanese michinoeki projects are a special case, it may be due to the fact that Japan’s social structure, especially at the level of small local communities, makes it easy to ensure that local residents have equity, promote the participation of local residents, and use community-driven development. However, even in Japan, the movement to the community-driven structure of the michinoeki is a recent one: the fairly recent involvement of women in governance within the michinoeki movement is remarked on as life-changing by local

Japanese women and traditional male administrators. No practical cause–effect relationship between successful michinoeki projects in Japan and expensive facilities has been found, but analysis does show a relationship between the prosperity of a michinoeki and the equity and empowerment of vulnerable local residents. The physical structure of Japanese michinoeki may not be elaborate, but the process of consulting stakeholders is comprehensive.

Considering that public involvement is often insufficient in developing countries and that community-driven development is rare, this Technical Note discusses ways to involve vulnerable people in developing countries in michinoeki planning and to take their voices into consideration. We will also discuss cooperation and coordination among stakeholders, including public–private partnerships, the prime mover, involvement, motivation, and solutions for conflicts of interest.

### 3.1 Regional development led by the local community

Michinoeki projects use a participatory model to integrate the construction of a highway rest area with regional economic and social development. The “seeds” of a michinoeki are not found in ready-made, top-down plans and technologies, but in the voices of local community members. Its functions are determined according to demands as expressed by local community members. Therefore, a michinoeki project is begun by clearly identifying the role played by local community members and by listening to their voices.

However, particularly in developing countries, it is often difficult for aid organizations, parties commissioned by aid organizations, and even government officials to hear local voices. Vulnerable people are not accustomed to speaking out and expressing or registering their views, and frequently they have no idea of how or when they should speak out in the development process to have their needs addressed. Furthermore, the traditional lack of communication channels between the vulnerable and the planner or decision maker provides inadequate opportunity for the rehearsal and acquisition of these

skills.

To hear local voices during michinoeki planning and operation, it is crucial to involve local community members and concerned parties who have interests and demands that need to be met in the planning process. These voices need to be consulted at every planning stage. In addition, a methodology for ascertaining local concerns is needed. This chapter discusses such a methodology proposed in the World Bank’s Participation Handbook. We will also describe the process of consultation with stakeholders used successfully in Japan.

In addition to taking heed of local voices, there is another important factor in the success of a michinoeki project. The community must participate intensely and actively in the entire process from design to operation. Ensuring the involvement of michinoeki stakeholders begins at the planning and construction stages. The stakeholders must be involved in the planning and construction stages to clarify the services to be provided at the michinoeki and determine roles and responsibilities for organizing the provision of these services, if these services are to be sustained as long-term projects. Local residents, who are important stakeholders, are frequently inexperienced at first, lacking expertise in successful business operation. This means that to be fully motivated they need to learn about the business opportunities offered by a michinoeki, and about the allocation of funding for ongoing michinoeki operation. Local residents also may need to learn an appreciation of the cooperative relationship between the public and private sectors. A full preparation and appreciation of the business case is necessary: inadequate scoping of funding arrangements or business opportunities can cause problems down the line.

Local residents who desire social change from a michinoeki must make preparations so that they can implement changes through michinoeki planning. Also, the prime mover needs to gather information through dialogue with residents who face problems, including poverty. In addition to a clear assignment of roles and preparation for participating in the business, it is important for the prime mover and the local community to learn from each other to ensure effective use of local resources and realize

a michinoeki with unique regional character. Uniqueness increases a michinoeki’s attractiveness to consumers—highway users—heightening its economic impact, and contributes to the formation of a shared regional consciousness and identity.

In 2001 in a certain country, plans were made to build rest areas similar to the michinoeki concept, and four pilot projects were implemented. The central government took the lead in planning and construction, and the rest areas were built in just four months. These projects are successful in terms of providing rest areas, as initially anticipated by the central government. However, the project has encountered many difficulties in stimulating local industry and raising the funds for facility maintenance and operation. The reason for these difficulties is that at the planning stage, these projects neglected to ascertain the views of local stakeholders and assign appropriate roles. Even if attempts are made to promote the participation of local stakeholders after the facilities have already been built, this will not be easily achieved without considerable support from public institutions.

### 3.2 Steps of consultation with stakeholders

The prime mover conducts a dialogue involving local government organizations, community groups, the poor, entrepreneurs, and other members of the community to learn their views on and their demands for michinoeki functions and facilities, determine how they will participate in michinoeki operation, and begin forming an administrative body. The prime mover also makes arrangements with the relevant offices of the central government, ngos, and other related organizations.

Several tools are available to implement consultation with stakeholders, ranging from field visits to workshops for all stakeholders. Workshops, or structured group meetings with a variety of key stakeholders, are useful for sharing knowledge, building consensus, prioritizing objectives, building teams (organization), and working toward development objectives. Stakeholder workshops are used to initiate, establish, and sustain collaboration from the identification to operation stages.

Below we describe some matters that require

decision-making based on discussion and exchange of information among stakeholders. Workshops and field trips should be held at each step as needed (see section 3.4). The order of these steps may be changed depending on the situation. In some cases, it may be necessary to combine the steps, or it may be preferable to break the steps into stages, according to the circumstances. Section 3.3 gives advice on successful consultation with stakeholders.

**Kick-off:** The findings obtained through the work of identification are provided to the stakeholders, information is shared, and an exchange of views is begun. Here, it is important to provide as much information as possible to the stakeholders for discussions. A more detailed presentation will allow stakeholders to contribute valuable opinions with a greater sense of immediacy. It is also necessary during this step to select the prime mover for preparation, appraisal, and construction and to reach agreement in this regard. A kick-off workshop is useful not only for exchanging views but also for capacity building among local residents. For example, workshops and other events give participants an opportunity to learn about not only michinoeki but a variety of other subjects as well, including the circumstances of their own communities, ways to express their views, and ways for them to take part in planning the economic development of their regions.

**Site selection:** After reaching a basic agreement during the kick-off step (demands, functions, facilities, and impacts), the next step is to select the site. Site selection establishes several variables and makes it possible to conduct further coordination in a precise and efficient manner. When a site has been selected, coordination with adjacent facilities can proceed to determine the facilities needed at the michinoeki, and the stakeholders who will participate in the michinoeki project can be identified. It is also possible to prepare for the examination of safeguards, such as evaluating the project's impact on the surrounding community and possible resettlement.

**Functions and facilities:** When participants are asked during the kick-off step about their demands for a michinoeki, they tend to list every demand that comes to mind. Therefore, during this step, it is necessary to distinguish between construction and operation as two separate stages and to determine which demands are really needed, whether the local community has adequate resources, whether funding can be obtained, and which parties will have responsibility. Demands are prioritized, and agreement is reached among the stakeholders with regard to michinoeki functions and facilities. The results are provided as feedback for the work carried out in the Design and Scale stage (described in Technical Note 4).

**Design and cost allocation:** Stakeholders reach an agreement on michinoeki design (see Technical Note 4). Estimates concerning the scale of the facility on the basis of demand are made (Technical Note 4 describes how to make such estimates). It is also necessary to consider the facilities from the supply side, including the attainable volume and quantity of services and the identity of the participants needed for those services. The design is then studied from the standpoint of whether the necessary funds will be available for construction costs and operating costs. It is also necessary to make decisions based on these calculations with regard to the allocation of responsibility for construction and operating costs.

**Impact analysis:** On the basis of impacts and benefits (see Technical Note 5), the methods of planning and other business aspects are considered, along with ways to provide social services. The necessary resources are procured for the provision of michinoeki services, and cooperative relationships are built with the stakeholders. Next, a study is conducted on coordinating interests with surrounding facilities, including competitive relationships; evaluating the environmental impact on surrounding facilities; and resettlement methods.

**Operation framework:** Based on methods for the operation of business and social services and the allocation of costs, a study is conducted concerning

the operation framework, including administrative organization and prime mover, after the michinoeki enters the operational phase. A michinoeki is smaller in scale than a highway project, and its construction is relatively simple. However, compared to a highway, a michinoeki has a greater need for strong organization to ensure the provision of services. Building the operation framework is a matter of great importance as the final stage of consultation with stakeholders. Because a michinoeki provides both commercial services and social services, it should have an operation framework that uses a public-private partnership.

**Final decision making:** The final decisions on michinoeki planning, construction, and operation methods are made, and a final agreement is reached at the planning stage.

### 3.3 Secrets of success for michinoeki

As stated at the beginning of this Technical Note, the secrets of success in Japanese michinoeki projects have been the initiative of the head of a municipality as prime mover, the participation of local residents beginning at the planning stage, transparency and fairness, cooperation between the public and private sectors, and ways to improve motivation. This section will discuss good practices of michinoeki in Japan following the steps described in Section 3.2 for successful consultation with stakeholders.

#### 3.3.1 Leadership

In the case of A La Datena michinoeki in Miyagi Prefecture, Japan, the town mayor was the prime mover from identification to operation. He noticed that some local residents had begun a roadside market and decided to start a michinoeki that would use the highway for the good of the local economy. The mayor selected a vacant school, the former site of a middle school, as the site for the michinoeki. He began looking for participants who would set up businesses in the facility and he himself handled coordination with businesses in the town. It was difficult to enlist enough tenants to open stores in

the facility, so the mayor encouraged housewives and farm communities to start up businesses. The residents opened a bakery and a soba restaurant. The idea of the Japanese soba restaurant was the mayor's. When the company operating the michinoeki initially showed a loss, the mayor began serving as its president to help turn the company around, and he took the lead in on-site operations. With the mayor's efforts, this michinoeki got its operations on track and is now turning a profit. The decisions and leadership of a local government leader as the prime mover have made important contributions to the success of many michinoeki projects in Japan, as in this example.

#### 3.3.2 Involvement (required at kick-off)

Seaside Takahama michinoeki in Fukui Prefecture, Japan, was initially planned by a committee consisting of the executives of influential local organizations. However, the committee members were not involved in its actual administration, so it lacked effectiveness. A group of younger members was then formed to handle the administration, and the concept became a reality.

At Sadamitsu Yu-Yu-Kan michinoeki in Tokushima Prefecture, Japan, during the startup stage of the michinoeki project, local farm housewives and other residents (from a life improvement group) were asked to develop products using local produce. Many products were developed as a result, contributing to the attractiveness of this michinoeki today.

At Yutori Park Tamagawa michinoeki in Yamaguchi Prefecture, the local government, local residents' groups, and business groups cooperated to develop a concept for building a michinoeki. This attitude of involving both the public and private sectors was carried through into administration. The important services of this michinoeki include an auction market begun by local farmers and the sale of home-cooked food by a women's group.

A michinoeki depends on determining the views of local residents and using that information to create an attractive facility. To realize this goal, stakeholders must be involved from the early planning stages.

### 3.3.3 Building costs (required at design and cost allocation)

Although michinoeki facilities are not large-scale, the local private sector (residents’ groups and businesses) is unable to shoulder the main responsibility for construction costs. Japan has more than 700 michinoeki locations, and none was constructed by local residents or businesses. In general, the central or local government pays construction costs. However, this does not mean that the allocation of responsibility for construction costs should be decided through governmental discussions only. This content should be studied in coordination with stakeholders, including the community, along with discussion of the michinoeki site, size, and facilities, which are closely related to the cost.

One way to divide the costs related to local and non-local services is for the local government to take on the costs of building facilities related to local demands and economic services to be provided by the local community, while the central government pays for the construction of facilities for public services and rest area functions. In Japan, if the local government is the administrative body of a michinoeki, it pays for the costs of michinoeki facilities that contribute to the safety and convenience of highway users, including parking areas. Because this system results in a lower initial investment, a michinoeki project can be realized even if the local government lacks abundant financial resources.

#### Box 10. Michinoeki construction and operation costs in Japan

In Japan, michinoeki projects are normally built and operated by the local government (or a company funded by the local government). However, if the local government would have trouble shouldering the entire burden of the initial investment, the central government may provide some funds related to highway transportation.

Allocation of construction investment (in the case of assistance from the central government)

In Japan, there is no assistance from the central government at the operational stage. The entity that administers the michinoeki generally pays for operating costs with rental fees, sales commissions on goods for direct sales, and other income from michinoeki operation. If this income is insufficient, the local government’s budget generally covers the difference.



Source: Ministry of Land, Infrastructure and Transport Japan

This does not mean that the private sector should not shoulder any responsibility related to construction costs. If the private sector is unable to bear direct financial responsibility, it could invest in other ways, such as by providing labor and materials. For example, tenants could be responsible for the interior decoration of the spaces they are to occupy.

### 3.3.4 Solutions for conflict of interest (required at Impact Analysis)

Because a michinoeki has the nature of a commercial facility that offers economic services, there is a high risk of conflicts of interest with private businesses and other entities.

When a michinoeki was launched in Tomiura, Chiba Prefecture, Japan, in 1993, problems arose with local private businesses concerning competition. To build a cooperative relationship, the administrative body repeatedly explained that a michinoeki would serve as a kind of showcase for the town, and it also engaged in the development of products that would not compete with those of existing shops. Many tourists were attracted from outside the region, and these customers had the positive ripple effect of increasing the number of visitors to existing shops nearby. The economic benefits from michinoeki users extended over a broader area. This michinoeki now is thriving, and it maintains a sound relationship with local residents. After business operations begin, a certain period of time is required to attain financial stability. In the early stages Tomiura had the typical problem of private businesses in the community perceiving the michinoeki as a competitor rather than a partner. This case illustrates that there are no shortcuts to the resolution of such problems. Instead, persistent efforts are needed. The case of Tomiura michinoeki also illustrates that to form a harmonious relationship with local businesses, it is important to make adjustments to the content of michinoeki business activities.

### 3.3.5 Operation framework

In coordination among stakeholders, it is particularly important to spend the time and effort needed to reach an agreement on the issue of how to operate a michinoeki. If the operation framework is not made clear at the planning stage, the resulting uncertainties may lead to disputes among stakeholders during operations, and this may threaten the success of the project. It is important to hold discussions and reach agreement about the operation framework at the planning stage.

#### *A) Motivation*

At Uchiko Fresh Park Karari michinoeki in Ehime Prefecture, Japan, local farmers who participate in the direct sales market for farm produce and processed items are responsible for determining the quantities and prices. The profit from product sales becomes income for the producers after a commission is deducted, and the producers are informed about how well each item is selling. This lets the farmers directly experience the fulfillment of selling their own products and increases their motivation to produce more of the items that sell well at the michinoeki. According to the manager, some farmers are so enthusiastic that they bring in more of their own products four or five times a day.

At Buzen Okoshikake michinoeki in Fukuoka Prefecture, a group of local businesses provides funding for the company that manages the michinoeki, in a mechanism that lets them shoulder the business risk themselves. This is a source of motivation, and the group members are interested in promoting the prosperity of the michinoeki, which they themselves have funded. They are striving to develop attractive products and hold study meetings on product development.

Local residents and businesses consider it important that they be the ones to receive the business opportunities offered by a michinoeki. This motivates individuals to develop their own businesses and is the key to eliciting effective involvement.

#### *B) Responsibility*

For the success of a michinoeki project, it is essential to assign the various responsibilities for construction and administration in accordance with the abilities of participating entities. Itako michinoeki in Ibaraki Prefecture, Japan, is administered by a company funded by the local municipal government, but the company manager is appointed from the private sector. Although the manager is authorized to make administrative decisions, he is also held responsible for the company's income and expenditures. In administration by the public sector, a proper sense of business operation is sometimes lacking, but

this michinoeki is strictly managed. It offers only local products that have been approved by the manager, who has final responsibility. In Japan, the michinoeki's administrative entity is normally responsible for income and expenditures, and if the michinoeki records a loss, the administrative entity becomes indebted and generally has to repay the debt while improving the business. This is an example of the allocation of responsibility in a manner that is suited to the capabilities of the public and private sectors.

*C) Prime mover*

Although the prime mover needs to take a leading role in the project, it is important to ensure transparency and fairness with regard to stakeholders while promoting the project. In Asagiri Kougen michinoeki in Shizuoka Prefecture, Japan, the local city government promoted planning and construction, but decided the michinoeki should be privately operated to incorporate the expertise of the private sector in the operational stage. Instead of calling on specific entrepreneurs, the city solicited applications for the administrative entity. The opportunities for participation in michinoeki administration were fair and open. Ultimately, a business organization funded by local entrepreneurs was selected, and this organization has taken on the role of prime mover.

*D) Organization: Third-sector approach*

In Japan, the public and private sectors sometimes provide joint funding, forming a single corporation and managing it jointly, for projects in which the users of public services are charged a fee for using the services. This approach is seen often in the operation of bus and railway lines that provide public transportation. These organizations belong neither to the public nor the private sector. Instead, they form a third sector. The advantage of the third-sector approach is that private funds are used and the rational style of private operation is adopted, lessening the burden on public institutions. Meanwhile, public institutions also provide a considerable portion of the funding and are involved in administration to ensure the fairness and quality

of services.

In many cases, a third-sector joint-stock company is involved in michinoeki administration in Japan. This is a method that is well-suited to the administration of a michinoeki, which includes both economic services and public services.

Futami michinoeki in Ehime Prefecture, Japan, is a typical example of the third-sector approach. The town government became the prime mover for this michinoeki, but the prime mover held an active dialogue during the planning process with a residents' group for town improvement and a business group called Seinenkai, and this dialogue led to the establishment of a third-sector administrative entity to draw on the dynamism of the private sector. Because a third-sector company is a joint-stock company, its performance is linked to the compensation of its executives and employees. This motivating force has resulted in dynamic operation, and the company is earning profits. The government partners in third-sector projects contribute varying proportions of the funding, depending on the circumstances each case. In the case of Futami michinoeki, public investment accounts for more than half of the total. This decision was based on the need for the local government to retain control because the michinoeki was the core of its town-improvement efforts.

*E) Operating costs: Public-private partnership*

Because estimating operating costs accurately in advance is difficult, it is effective to decide which entities will be responsible for the costs related to specific facilities and activities. The basic approach should be that the costs of a particular facility are borne by the entity that will actually use it to provide services or conduct other activities. The assignment of these costs often will be arranged primarily among local entities. With regard to the relationship between public and private investment, the public sector's investment should be closely proportionate to public services, while the local private sector should bear the costs related to the economic services they will provide.

In Japan, the administrative entity of a michinoeki generally bears the costs of its operation.

However, in partnership with a local government that owns the facilities, the administrative entity may allow the local government to use those facilities free of usage fees. At Itako michinoeki, which was mentioned above, the michinoeki is administered by a joint-stock company funded by the local municipal government, but the company is commissioned by the city to provide operation services, and it performs cleaning, etc. While allowing the municipal government free use of the facilities as a form of partnership. Because its services are commissioned, the company’s manager is responsible for decision-making on facility administration, and the expertise of the private sector is applied with regard to layout and products.

### 3.4 Methods to hear voices of vulnerable people

Who are these vulnerable people whose voices need to be heard? Generally speaking, minority ethnic groups and the poor are considered vulnerable, and among the poor, women and children are particularly important from a modern development perspective. However, as stated earlier, developing countries almost invariably have insufficient public involvement in the decision-making process for public projects, for reasons that include wide gaps between the rich and poor and related historical circumstances; and community-driven development is not common. If conventional development procedures are applied, the voices of many local residents will tend to go unheard. A failure to listen to local voices has a very real consequence for the success or failure of michinoeki projects: michinoeki projects use a participatory model to integrate the construction of a highway rest area with regional economic and social development precisely because such a project cannot lead to success unless local residents participate independently and of their own initiative in its planning, construction, and operation.

Local residents play an important role, so local residents who normally are not easily included in governmental and administrative decision-making procedures must be given particular attention and be treated as vulnerable, regardless of whether or

not they are otherwise vulnerable. Here, we refer to these local residents as vulnerable people, partly as a way of calling attention to this matter and ensuring the active inclusion of local voices in the planning, operation, and maintenance of michinoeki. If the planned michinoeki is successful, these people will move beyond their vulnerable condition to become main actors. Examples of such radical transformation during michinoeki development from socially vulnerable people to active and successful economic actors are found among women, the elderly and rural youth. This social metamorphosis is not simply a matter of individual improvement but rather reflects major social capital developments, with members of michinoeki attesting to the sense of identity and well-being from these michinoeki-triggered transformations.

#### 3.4.1 Identifying and heeding the voices of vulnerable people

The World Bank Participation Source Book (WBPSB) sends the clear signal that there is no best method of participatory planning and that there is no perfect participatory approach. All communities have fracture lines and the WBPSB has reported that governments have resisted almost universally the inclusion of the vulnerable in decision making. Consequently, the participatory approach taken in any particular situation will depend on the existing power relations and allocation of resources. Participatory planning requires negotiation skills, constant review, and the building of alliances on the part of the planning agency or prime mover. Without the identification of a specific location and specific project, no precise methodology can be specified.

However, some general guidelines are useful. Here we summarize key elements in the inclusion of vulnerable people’s voices. These elements are drawn from experience with michinoeki and the WBPSB. The WBPSB gives examples of vulnerable group participation at the start of the planning process, midway through the planning process, and retrofitted after the failure of a previous attempt to deliver a project.

There is no methodology for determining the eventual policy outcome of adopting the

participatory approach but the WPSB identifies clear benefits for both the vulnerable and for the operation of welfare systems when the vulnerable gain the capacity to service their own needs as a consequence of targeted interventions.

*A) Local expert identification of vulnerable groups*

It is important to involve a local expert in the identification of vulnerable groups. It is also important to involve a local expert in capturing the voices of vulnerable groups and in using their input into the design, maintenance, and operation of the facilities. Consultation with local vulnerable groups is an ongoing requirement and requires the permanent involvement of a local expert. In Morocco, according to the WBPSB, the government required that the participatory rural appraisal (for the Enhancing Women’s Participation in Development project) be conducted by Moroccans. The local expert’s identification of groups is critical for michinoeki type projects.

*B) Early involvement of local stakeholders and the need for caution towards the expert stance*

For the local expert to identify the relevant vulnerable groups for planning purposes, it is important to determine whether the expert’s task is open or bounded. If open, the local expert’s job would be simply to identify the vulnerable groups in an area. Next, the issue is identifying what best fits their needs. If the expert’s task is bounded, he or she identifies the groups in an area who would be affected by an already identified project.

The WBPSB stresses that when participation starts early with the consideration of a broad development process, success is more likely because stakeholder conflict is often the response to the external expert’s stance when fully developed proposals are presented as a fait accompli. In a forestry project in Andhra Pradesh in India, according to the WBPSB, NGOs rejected a plan developed before their consultation and the project was restarted from scratch.

For michinoeki-type projects where the technical community of experts already has great expertise, it is important to involve stakeholders early on and remain flexible to adapting or redesigning the

proposed facilities to meet local needs.

*C) Encouraging field visits and undertaking pilot projects*

Field visits are an important tool for bringing external experts and planners together with vulnerable groups and persons. According to the WBPSB, field visits were an important tool in encouraging government to consult with and involve rural communities. The example of a health services development project in Benin is provided. Similarly field trips to other countries for purposes of demonstration helped persuade officials in India and Pakistan (Andhra Pradesh Forestry Project and Sindh Special Development Project). The Self-Employed Women’s Association of India (SEWA) organizes field trips for village women garment makers and small entrepreneurs to visit other countries as a way of exposing them to markets and knowledge. There is clearly an opportunity for bringing members of existing michinoeki to locations considering implementing the concept and organizing visits for members of communities considering michinoeki to existing developments.

The WBPSB also stresses pilot projects as a learning tool providing the opportunity for identifying issues and making adjustments as difficulties appear or benefits emerge. Practices that fail must be discarded and practices that work should be replicated.

*D) Mechanisms for merging voices and expertise*

Bringing all stakeholders together is often problematic. The WBPSB describes in particular the need for leveling when power disparities prevent vulnerable people from feeling free to speak. Solutions range from separate meetings to organizing representatives to speak for the powerless from among those visibly committed to their welfare. In Nigeria, according to the WBPSB, female extension workers served as surrogates for women farmers in an agricultural workshop.

The composition of workshop attendees will affect the tasks undertaken by a workshop. In a project in Colombia, the WBPSB reports, where participation in the project was limited to officials and contractors in the electric power sector, an

iterative problem solving process, Appreciation-Influence--Control (AIC), was adopted.

*E) Providing incentives for vulnerable people to participate*

Vulnerable people will not participate unless they believe it is in their interest to do so. The WBPSB advises “All too often participation is seen as a way of getting poor people to carry out activities or share in their costs, when the benefits are not clear to those expected to participate.” This important insight indicates the need to think about ensuring that participation does not simply become an extra cost placed on those who already have few resources. It may be necessary to pay attendees at workshops for the time they spend away from their work—production in the field, trading, or even household survival tasks.

### 3.4.2 Methods and tools

Development practitioners use a wide variety of methods to support participatory development. This section summarizes these methods, which are described in greater detail in Appendix I of the WBPSB. The main methods are workshop and community-based collaborative decision-making, stakeholder consultation, and social analysis. A brief overview is followed by a more thorough description and examples of individual methods. The final section presents a glossary of relevant tools.

*A) Overview of Methods*

- **Workshop-based methods**—Stakeholder workshops involve collaborative decision-making. These action-planning workshops bring participants together to design development projects, foster cooperation, and share knowledge. A trained facilitator helps build consensus. Methods include: AIC, Objectives-Oriented Project Planning (ZOPP), and teamup.
- **Community-based methods**—Organizers often involve local communities to tap into existing expertise. Outsiders merely facilitate discussion among participants, helping to energize participants and drawing lessons from local

knowledge. Methods include PRA and Self-esteem, Associative strength, Resourcefulness, Action planning, and Responsibility (SARAR).

- **Methods for stakeholder consultation**—Feedback informs organizers and participants of stakeholder preferences, strengthening the collaborative process. Methods include: Beneficiary Assessment (BA) and Systematic Client Consultation (SCC).
- **Methods for social analysis**—Social aspects, traditionally overlooked by planners, require thorough attention in the design process for participatory development projects. Methods include Social Assessment (SA) and Gender Analysis (GA).

**Table 7. Summary of stakeholder involvement methods**

Description	Comments
<b>Collaborative decision-making: Workshop-based methods</b>	
<p><b>Appreciation-Influence-Control (AIC)</b> Encourages stakeholders to weigh social, political, and cultural factors as well as technical and economic aspects. Activities include building appreciation through listening, influence through dialogue, and control through action.</p> <p><b>Objectives-Oriented Project Design (ZOPP)</b> Helps stakeholders produce a project-planning matrix, which sets priorities, and devises implementation and monitoring strategies. A series of workshops builds team commitment and capacity.</p> <p><b>Teamup</b> Uses software to guide stakeholders through team-oriented research, project design, planning, implementation, and evaluation.</p>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▶ Encourages “social learning”</li> <li>▶ Promotes ownership</li> <li>▶ Produces a visual matrix of project plan</li> <li>▶ Stakeholders establish rules of the game</li> <li>▶ Stakeholders establish working relationships</li> </ul> <p><b>Potential Pitfalls</b></p> <ul style="list-style-type: none"> <li>▶ Matrices should remain flexible</li> <li>▶ Workshops should involve all stakeholders</li> <li>▶ Not all stakeholders are comfortable with workshops</li> <li>▶ Measures needed to aid less-experienced public speakers</li> <li>▶ Workshop location should be accessible to all participants</li> </ul>
<b>Collaborative decision-making: community-based methods</b>	
<p><b>Participatory Rural Appraisal</b> Emphasizes local knowledge and enables community appraisal, analysis, and planning. Group animation and exercises facilitate information sharing, analysis, and cooperation.</p> <p><b>SARAR</b> Geared to training local facilitators, uses a multi-sectoral, multilevel approach to team building, emphasizes local expertise, and encourages grass-roots action.</p>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▶ Interactive, visual tools enable participation regardless of literacy</li> <li>▶ Draws on everyday experience</li> <li>▶ Provides sense of ownership</li> </ul> <p><b>Potential Pitfalls</b></p> <ul style="list-style-type: none"> <li>▶ Need for decision-making authority</li> <li>▶ Need for results to sustain forward momentum</li> <li>▶ Trained facilitators required</li> </ul>
<b>Methods for stakeholder consultation</b>	
<p><b>Beneficiary Assessment (BA)</b> Systematic investigations of perceptions of stakeholders, ensuring that concerns are included in project design.</p> <p><b>Systematic Client Consultation (SCC)</b> Improves communication among stakeholders to ensure that projects are demand-driven. Undertakes systematic survey of client’s preferences, devises process for ongoing communication, and incorporates feedback into project design.</p>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▶ Systematic consultation strengthens interaction among stakeholders</li> <li>▶ Because it is field-based it raises awareness of local issues among participants</li> </ul> <p><b>Potential Pitfalls</b></p> <ul style="list-style-type: none"> <li>▶ Consultation alone does not raise capacity or facilitate participation</li> <li>▶ Need to translate observed needs into operationally meaningful goals</li> </ul>
<b>Methods for social analysis</b>	
<p><b>Social Assessment (SA)</b> Systematic investigation of social aspects. Identifies key stakeholders and establishes framework for their interaction, ensures that beneficiaries agree with program objectives.</p> <p><b>Gender Analysis (GA)</b> Documents the differences in gender roles, needs, and opportunities. Considers variation in gender attributes across cultures, classes, ethnicity, income, education, and time.</p>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▶ Provides process to translate information into plans and plans into action</li> <li>▶ Helps identify beneficiaries’ needs</li> <li>▶ Flexible framework easily adapted to different projects</li> </ul> <p><b>Potential Pitfalls</b></p> <ul style="list-style-type: none"> <li>▶ Data collection must be focuses on project.</li> <li>▶ Need for involving in-country consultants to build capacity for social analysis</li> </ul>

## *B) Methods*

### **Appreciation-influence-control**

AIC has the following stages: identifying purpose, recognizing stakeholders, and facilitating collaboration. Through meetings, workshops, and activities, collectively known as conferences, stakeholders are encouraged to: (i) appreciate through listening (taking a step back to achieve a realistic assessment of opportunities for action); (ii) influence through dialogue (exploring logical options as well as subjective feelings that determine the selection of strategies); and (iii) control through action (enabling participants to take responsibility for their actions).

The AIC method was put to use in Colombia as part of a comprehensive strategy to address concerns in the energy sector. Key stakeholders, including ministers, heads of utilities, mayors, opposition party members, and interest groups gathered for a three-day conference. During the first day-and-a-half participants shared information, examined realities of the energy sector, and created a group rapport that carried them through the conference. The AIC process encouraged participants to envision clear outcomes, make recommendations, and make commitments that would transform their conference plan into actions. Among the outcomes of the conference were strengthened collaboration between stakeholders, the creation of an interim coordinating body, and passage of supporting legislation.

### **Objectives-oriented project planning**

ZOPP relies on two techniques to encourage stakeholder participation. First, a project-planning matrix (PPM) provides in-depth analysis of project objectives, outputs, and activities. The PPM spells out the range of stakeholders involved, problems likely to be encountered, possible alternatives to be pursued, and the conditions necessary for successful project completion. Second, stakeholder workshops scheduled throughout the life of a project encourage brainstorming, strategizing, and consensus building. In the Philippines, the task manager for the Industrial Efficiency and Pollution Control project used ZOPP to establish linkages between the government, the World Bank, industry, and NGOs.

Through the local counterpart agency, a series of stakeholder meetings was set up to refine problem formulations and define the objectives. The ZOPP approach brought together stakeholders who initially felt that their conflicting priorities would prevent them from reaching consensus. But not only did stakeholders agree on objectives and priorities, the communication linkages created in the two-day workshop also started a dialogue on community-level demands to encourage participation and ownership.

### **Team up**

Team Up, expanding on ZOPP, provides a team-based method for improving project cycle management. Dedicated software assists managers in devising task functions such as planning and decision-making, and facilitates team building, which encourages stakeholders to collaborate as an effective work group. Team Up consists of twelve integrated steps designed to build team identity and team action.

Using Team Up, the World Bank assisted the Uganda Manufacturers' Association and the Ministry of Finance and Economic Planning in organizing workshops. Their purpose was to review survey results, introduce a private sector development strategy to stakeholders, achieve consensus, and identify a private sector task force for project implementation. The workshop used public involvement methods to include large numbers of stakeholders in reaching agreement about policy, strategy, and execution. More than 70 participants joined in a series of small group discussions designed to identify issues, reveal and resolve conflicts, and build understanding and initial agreement about proposed project design.

### **Participatory rural appraisal**

PRA approaches, which are applicable in a variety of settings, enable development practitioners, government officials, and local people to work together. Locals undertake most of the data collection and analysis, with outsiders facilitating rather than controlling. PRAs, therefore, help transmit local knowledge to a broader audience

and facilitate its incorporation into project design. This approach uses a variety of data gathering techniques, ranging from semi-structured interviewing to preference ranking.

In Burkina Faso, 20 pilot operations tested the PRA approach to find out which techniques were best suited for natural resource management. The resulting project starts with awareness raising and trust building at the community level. Technicians assist locals in diagnosing problems and designing solutions. Local governments follow with implementation and participatory monitoring. Central and regional governments have also come on board, endorsing administrative decentralization and revising ambiguous land tenure laws. All these steps encourage local solutions to local problems and empower people to manage natural resources in a sustainable way.

### **SARAR**

SARAR represents a practical approach to adult re-education that seeks to improve people's ability to assess, prioritize, plan, self-organize, and shoulder management responsibilities. It casts aside hierarchical structures to provide a congenial, cooperative atmosphere. SARAR activities are designed to bring to light local perspectives, feelings, values, and socially sensitive data, which make it qualitatively different from information elicited by conventional methods.

Sixty government officials joined the World Bank in Indonesia for a two-day workshop on water and sanitation issues. Using SARAR, brief presentations were mixed with hands-on activities such as drawing up management visions on large sheets of paper. Participants then discussed decisions, procedures, and actors required to support each vision. The often heated discussions finally led to the adoption of simpler technology to offer control to community groups, and the decision to earmark substantial funds for capacity building for managing water projects at the local level.

### **Beneficiary assessment**

BA is a qualitative investigation of the perceptions of stakeholders to ensure that concerns are properly incorporated into project design and

implementation. BA complements traditional data gathering methods to provide a more accurate picture of project impact. Best used iteratively throughout the project cycle, BA focuses on the human factors that affect poverty, the incentives for and constraints to behavior change, the reactions to service delivery, and the importance of formal and informal safety nets.

BA was undertaken in Mali to find out why school attendance in rural areas, especially among girls, was low. It found that the costs of sending children to school, like transportation and loss of labor, outweighed the benefits of a poor education. These findings led to reforms aimed at reducing costs by building schools closer to communities, increasing attendance by introducing curricula designed for girls, and improving awareness among parents by training teachers.

### **Systematic client consultation**

SCCs entail systematic listening to clients' attitudes and preferences, devising a process for continuous communications, and acting on the findings by incorporating client feedback into project design. Consultation establishes the continued validity of a project's goals and its effectiveness in meeting them. Information gathered from clients leads to project revisions, which reflect perceptions in the field. Follow-ups then establish whether new objectives have been met or further adjustment is required.

In Zambia, the Social Recovery Project conducted client consultations to examine the program's impact. In three phases, local interviewers surveyed community members, service providers, and key informants, individually and in focus groups. In phase I, beneficiaries ranked local welfare institutions. In phase II, they assessed the community's role in such projects. In phase III, beneficiaries considered the project's overall impact and ranked community priorities. The SCC identified specific problems with accountability and local government and made recommendations for reform.

### Social assessment

A social assessment (SA) provides an integrated framework for incorporating participation and social analysis into project design and implementation. Gender, ethnicity, social impacts, and institutional capacity are among the factors taken into account. Because of the abundance of social variables, however, SA must be selective and focus on issues of operational relevance.

Social scientists were hired in Morocco to conduct an SA for a city rehabilitation project. The analysis included detailed recommendations based on consultations with a wide variety of stakeholders, such as religious and civic leaders, merchants, and residents. The exercise produced ideas not previously considered, including regulation of merchant activity and support for craft associations. By including residents in the decision-making process, the assessment also raised local interest in upgrading the city.

### Gender analysis

Gender analysis (GA) helps identify gender-based differences in access to resources to predict how different members of households, groups, and society will participate in and be affected by planned development interventions. It also permits planners to achieve the goals of effectiveness, efficiency, equity, and empowerment by designing policy reform and supporting program strategies. GA develops training packages to sensitize development staff to gender issues and training strategies for beneficiaries.

A comprehensive assessment of gender roles in Uganda formed the basis of recommendations issued by the World Bank. Among the problems cited are women’s lack of resources to carry out agricultural tasks, multiple household responsibilities, poor health, low levels of literacy, and laws and customs that impede access to credit, education, and medical care. In response, the government adopted gender-responsive policies aimed at raising the status and productivity of women.

### C) Glossary of Tools

The following is a brief inventory of tools used in various combinations in the methods discussed above to cultivate collaborative development.

Access to resources. A series of participatory exercises that allows practitioners to collect information and raises awareness among beneficiaries.

- Analysis of tasks. Gender analysis tool that raises awareness about the distribution of social activities according to gender.
- Focus group meetings. Low-cost, small group consultations used to explore attitudes and preferences and build consensus.
- Force field analysis. Engages people to define goals and make sustainable plans by working on various scenarios.
- Health-seeking behavior. Culturally sensitive tool for generating data about health care and health-related activities.
- Logical framework. Matrix that illustrates project design, emphasizing the results that are expected when a project is successfully completed.
- Mapping. Generic term for gathering in pictorial form baseline data on a variety of indicators.
- Needs assessment. Tool that draws out information on people’s needs, raises awareness of related issues, and provides a framework for prioritizing needs.
- Participant observation. Fieldwork technique to collect qualitative and quantitative data that lead to an understanding of peoples’ practices, motivations, and attitudes.
- Pocket charts. Tool that uses pictures as stimuli to encourage people to assess and analyze a given situation.
- Preference ranking. Exercise in which people identify what they do and do not value about a class of objects (for example, tree species or cooking oil types).
- Role-playing. Enables people to creatively remove themselves from their usual roles and perspectives to allow them to understand choices and decisions made by others
- Seasonal diagrams or calendars. Show major changes that affect a particular community during the year, such as climate or crop fluctuations.



- Secondary data review. Inexpensive, initial inquiry providing contextual background.
- Semistructured interviews. Interviews that are partially structured by a flexible interview guide with a limited number of preset questions.
- Sociocultural profiles. Descriptions of the social and cultural dimensions that in combination with technical and other aspects serve as basis of project design.
- Surveys. Sequence of focused, predetermined questions in a fixed order, often with predetermined, limited options for responses.
- Tree diagrams. Visual tools for prioritizing problems, objectives, or decisions.
- Village meeting. Meetings with many uses, including information sharing and group consultation, consensus building, prioritization of interventions, and monitoring.
- Wealth ranking. Technique for rapid collection and analysis of specific data on social stratification at the community level.
- Workshops. Structured group meetings at which a variety of key stakeholder groups, whose activities or influence affect a development issue, share knowledge and work towards a common vision.

## Technical Note 4. Preparation (2) — Scale and Design

- 4.1 Determining facility size
- 4.2 Planning the arrangement of facilities
- 4.3 Facility design
- 4.4 Construction costs and funding
- 4.5 Consideration for michinoeki expansion
- 4.6 Important considerations for multiple michinoeki projects



“Michinoeki”



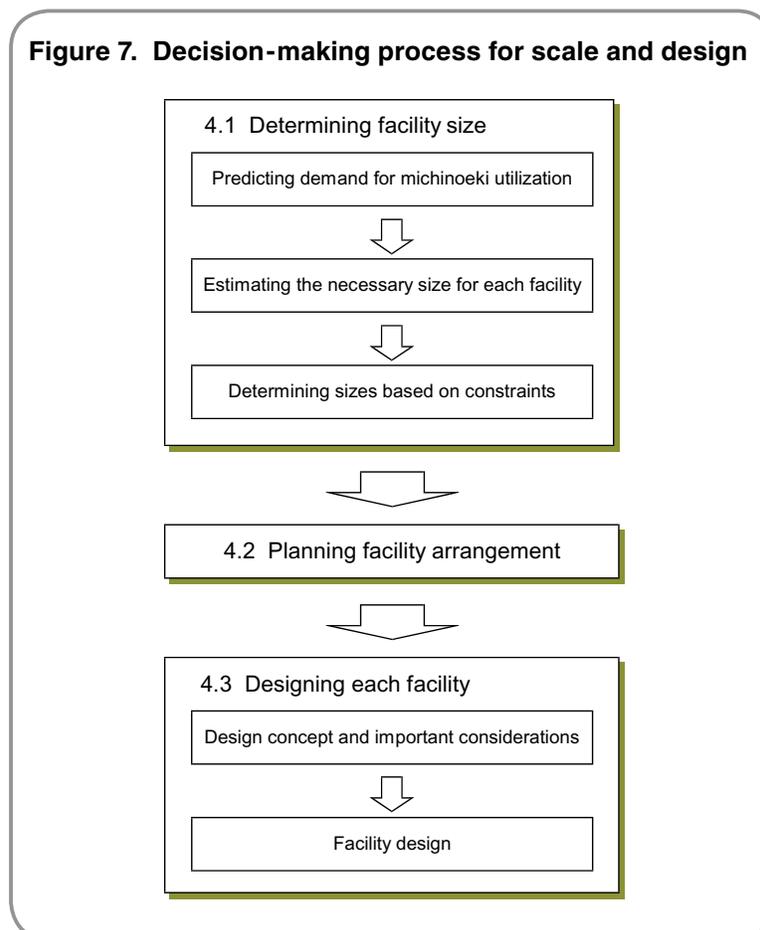
## Technical Note 4. Preparation (2)—Scale and Design

After the identification of a michinoeki, the next stage is preparation, including consultation with stakeholders and Scale and Design. Scale and Design is the important task of designing the facilities and deciding on their physical sizes. This process results in a specific picture of the kinds of facilities to be constructed.

Naturally, the sizes of the facilities must be decided on the basis of demand for michinoeki services. In this Technical Note, we present ways to estimate demand. We also present methods for planning the overall facility arrangement and designing the individual facilities on the basis of the demand estimates.

The content of the design is revised as necessary in the course of dialogue with stakeholders. Also, if site constraints place any restrictions on the design or ideal size of the facilities, it may be necessary to consider several options such as reducing facility size, reducing the number of facilities, or relocating some facilities to an adjacent site.

Figure 7. shows the flow of steps in the scale and design decision-making process.



## 4.1 Determining facility size

Here, we describe ways to determine the size of each facility of the michinoeki on the basis of demand by highway users (travelers). In addition to travelers using the roads, michinoeki users will also include residents of the local community. However, the volume of use by the former group is typically the deciding factor for the scale of michinoeki facilities; so as a general rule, demand is predicted in terms of highway users. Still, depending on the michinoeki, high volumes of use by local residents may also be expected. If so, facility sizes should be revised as appropriate in view of the local population and the needs of community residents.

### 4.1.1 Predicting usage demand

The use of michinoeki facilities depends on the inclination of each highway user, and these facilities have a commercial nature as they include economic services. Therefore, predictions of demand are subject to a margin of error due to fluctuations. When designing and estimating the scale of michinoeki facilities, based on the methodology explained here, it is important for the prime mover to consider local circumstances and to keep in mind that the actual figures may be lower than the predictions obtained.

First, demand for michinoeki use from road users is estimated by multiplying traffic volume on the road passing the site by the percentage of vehicles stopping in. The latter figure is the percentage of vehicles on the road that are expected to stop at a roadside rest area, an estimate based on experience. The percentage may vary according to the characteristics of the facilities and the location of the rest area, but experience with michinoeki indicates that about 5 percent to 10 percent of vehicles will stop in. This rate may rise to about 20 percent under especially favorable conditions, such as a location at the entrance to a famous tourist destination, or a rest area that includes truck weighing facilities.

Because some functions are more important for certain kinds of vehicles, such as truck weighing facilities, it is advisable to estimate demand separately for each type of vehicle. By estimating the average number of passengers in each type of vehicle, it is then possible to predict the number of users.

The parameters indicated in Table 8 are only general guidelines. They should be handled flexibly and revised as necessary according to the conditions in the country or region under consideration, information gained through dialogue with stakeholders, the circumstances of other roadside facilities, and other factors.

**Table 8. Basic formula for predicting demand**

Estimating the number of vehicles stopping daily																								
1) Traffic volume on the highway passing the site (vehicles per day)	× 2) Percentage of vehicles stopping (%)	= 3) Number of vehicles stopping daily																						
<table border="1"> <tr> <td>Passenger cars</td> <td>Data on each route in question</td> </tr> <tr> <td>Minibuses</td> <td>Data on each route in question</td> </tr> <tr> <td>Large buses</td> <td>Data on each route in question</td> </tr> <tr> <td>Trucks</td> <td>Data on each route in question</td> </tr> </table>	Passenger cars	Data on each route in question	Minibuses	Data on each route in question	Large buses	Data on each route in question	Trucks	Data on each route in question	<table border="1"> <tr> <td>Basic rate</td> <td>5%</td> </tr> <tr> <td>If stakeholder analysis indicates a high level of demand</td> <td>10%</td> </tr> <tr> <td>Under special circumstances such as a weighing station</td> <td>20%</td> </tr> </table>	Basic rate	5%	If stakeholder analysis indicates a high level of demand	10%	Under special circumstances such as a weighing station	20%	<table border="1"> <tr> <td>Passenger cars</td> <td>___ vehicles per day</td> </tr> <tr> <td>Minibuses</td> <td>___ vehicles per day</td> </tr> <tr> <td>Large buses</td> <td>___ vehicles per day</td> </tr> <tr> <td>Trucks</td> <td>___ vehicles per day</td> </tr> </table>	Passenger cars	___ vehicles per day	Minibuses	___ vehicles per day	Large buses	___ vehicles per day	Trucks	___ vehicles per day
Passenger cars	Data on each route in question																							
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Passenger cars	___ vehicles per day																							
Minibuses	___ vehicles per day																							
Large buses	___ vehicles per day																							
Trucks	___ vehicles per day																							
<div style="border: 1px solid black; padding: 5px;">           Perform separate calculations for weekdays and weekends and holidays if there are significant differences in traffic volume.         </div>																								

### Estimating the number of users per day

3) Number of vehicles stopping daily X 4) Average number of passengers = 5) Number of users per day  
 \_\_\_\_\_ persons per day

Passenger cars	_____ vehicles per day
Minibuses	_____ vehicles per day
Large buses	_____ vehicles per day
Trucks	_____ vehicles per day

Passenger cars	2 passengers
Minibuses	10 passengers
Large buses	30 passengers
Trucks	1 passengers

The above are general examples.

Remarks: The numerals 1), 2), etc. Are added to identify each element of an equation because the same data may be used in more than one equation.

As stated above, when a significant number of users from the local community is expected, it is effective to estimate demand from community members separately by ascertaining the level of interest in michinoeki used according to determination of demand and stakeholder analysis, taking factors such as the population of the local community into consideration.

#### 4.1.2 Estimating required facility sizes

The size of each michinoeki facility is established according to demand for use of that facility. To estimate the number of users for individual facilities, it is necessary to establish percentages for each mode of use by visitors to the michinoeki (usage rate for each facility), and then to multiply these percentages by the number of michinoeki users per day to obtain the level of daily demand for each facility. To determine the sizes needed, varying levels of use at different times of day (peak times) and average length of use must also be taken into account.

Below we discuss the approach to size determination and design for individual facilities. However, it is possible to give only numerical size guidelines for certain types of facilities. These include toilets, restaurants, and other facilities that are more or less dependent on traffic volume. For other types of facilities, no numerical guideline is possible. The size of direct sales facilities, processing centers, lodging facilities, and other

facilities is determined by local supply and demand. For these items, we will indicate an approach to size determination without numerical guidelines.

#### 4.1.3 Sizes of individual facilities

##### A) Parking area

As a general rule, practically all users arriving in vehicles will use the parking area. Therefore, the number of parking spaces needed is estimated by multiplying the number of vehicles per day by the peak ratio (rate of concentration in certain time periods). The area required for parking is estimated by figuring the amount of space for parking grids and access routes for the required number of vehicles. Table 9 breaks down the calculations for making these estimates.

**Table 9. Estimating the number of parking spaces and size of parking area**

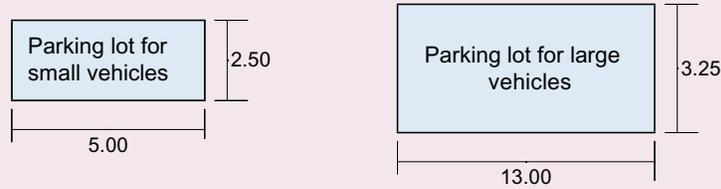
Number of parked vehicles										
3) Number of vehicles stopping daily Passenger cars and minibuses: _____ vehicles per day  Trucks and large buses: _____ vehicles per day  = 8) Number of parking spaces needed Passenger cars and minibuses : _____ parking spaces	<p>X 6) Rate of concentration at peak times (%)</p> <table border="1"> <tr> <td>Basic rate</td> <td>15%</td> </tr> <tr> <td>If there are peak times with particularly high concentrations</td> <td>Determined according to the circumstances</td> </tr> </table> <p>Trucks and large buses : _____ parking spaces</p>	Basic rate	15%	If there are peak times with particularly high concentrations	Determined according to the circumstances	<p>X 7) Average length of time parked (hours)</p> <table border="1"> <tr> <td>Basic time</td> <td>0.5(h)</td> </tr> <tr> <td>If well equipped with restaurants, markets, etc.</td> <td>1(h)</td> </tr> </table> <p>* If the michinoeki is used for overnight lodging for drivers, the number of vehicles staying overnight should be estimated so that a corresponding number of spaces can be provided.</p>	Basic time	0.5(h)	If well equipped with restaurants, markets, etc.	1(h)
Basic rate	15%									
If there are peak times with particularly high concentrations	Determined according to the circumstances									
Basic time	0.5(h)									
If well equipped with restaurants, markets, etc.	1(h)									
<p>Example:</p> <p>1) Traffic volume on the highway passing the Site ⇒ 2) Percentage of vehicles stopping ⇒ 3) Number of vehicles stopping daily</p> <p>Passenger cars and minibuses: <u>10,000</u> vehicles per day <u>10(%)</u> Passenger cars and minibuses: 1,000 vehicles per day</p> <p>Trucks and large buses: <u>5,000</u> vehicles per day Trucks and large buses: 500 vehicles per day</p> <hr/> <p>6) Rate of concentration at peak times (%) <u>15(%)</u> ⇒ 7) Average length of time parked (hours) <u>0.5(h)</u> ⇒ = 8) Number of parking spaces needed</p> <p>Passenger cars and minibuses : <u>75</u> parking spaces</p> <p>Trucks and large buses : <u>38</u> parking spaces</p>										
Size of parking area (estimate of area needed, including access routes in parking lots)										
8) Number of parking spaces needed _____ spaces	X 9) Coefficient for area estimate 50 ~ 60 square meters	= 10) Area required for parking _____ square meters								
Site area (estimate of required area including parking lot, green planted areas, and access routes)										
10) Area required for parking _____ square meters	X 11) Coefficient for site area esti-	= 12) Site area required _____ square meters								
	<table border="1"> <tr> <td>Cramped space</td> <td>2.0</td> </tr> <tr> <td>Generous space</td> <td>5.0</td> </tr> </table>	Cramped space	2.0	Generous space	5.0					
Cramped space	2.0									
Generous space	5.0									

Remarks: The numerals 1), 2), etc. Are added to identify each element of an equation because the same data may be used in more than one equation.

The figure below indicates the parking grid sizes that are generally used in Japan. The basic approach is to distinguish between spaces for passenger cars and spaces for oversized vehicles. If extra-large vehicles are used in the country or region under consideration, then appropriately sized spaces should be provided for those vehicles.

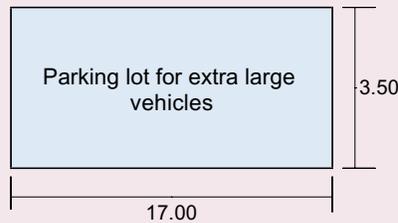
**Figure 8. Parking grid configuration and estimation of required dimensions**

The standard dimensions of parking lots should be as follows:



Dimensions of parking areas for small and large vehicles (unit:m)

If there is demand, a parking lot for extra large vehicles (e.g., trailers) should be provided according to the standard dimensions shown below:



Dimensions of parking lot for trailers (unit:m)

**B) Toilets**

Highway users stopping into the rest area are expected to account for most toilet use. Here, we will present a method for direct calculation of the number of toilet stalls needed, in which the number of parking spaces is multiplied by an experiential

coefficient. This coefficient provides only a rough estimate. It has been established according to the coefficients used in the design of rest facilities in Japan, the United States, and other countries. This coefficient reflects only demand from outside the community (highway users). If regular use by local residents is expected, it is necessary to adjust the

**Table 10. Estimating restroom size**

Number of toilet stalls										
8)Number of parking spaces needed	X	13)Coefficient for estimating toilet requirements								
		<table border="1"> <tr> <td rowspan="2">Urinals</td> <td>Urinals</td> <td>0.1</td> </tr> <tr> <td>Stalls</td> <td>0.04</td> </tr> <tr> <td colspan="2">Female</td> <td>0.14</td> </tr> </table>	Urinals	Urinals	0.1	Stalls	0.04	Female		0.14
Urinals	Urinals	0.1								
	Stalls	0.04								
Female		0.14								

Remarks: The numerals 1), 2), etc. Are added to identify each element of an equation because the same data may be used in more than one equation.

coefficient to suit the circumstances.

*C) Direct sales facilities (markets and processing centers)*

To determine the size of processing centers and direct sales facilities such as markets, it is necessary to consider the supply side in addition to demand from service users. Size depends on current demand estimates and the supply capabilities of the community (determined through dialogue with stakeholders), as well as anticipated future demand for services. If large facilities and spaces are prepared but the number of users is inadequate, michinoeki operation will be unsatisfactory. Also, on the supply side, large facilities and spaces will be wasted if the number of sellers and volume of goods for sale is inadequate. It is important for michinoeki participation to be open to all producers and sellers from the community as a general rule. However, it is wasteful to provide large spaces to accommodate many sellers who are all offering the same item, even if it is a special local product. Coordination with the local community is needed concerning this point.

On the subject of facility design, market facilities for direct sales by local residents, farmers, and handicraft groups may be located outdoors, in green planted areas and the like, as well as indoors. Indoor sales facilities generally are permanent stores, and the items sold here are expected to be high value-added items such as processed goods and handicrafts. Outdoors, facilities are usually simple stands such as open-air vendor stalls, or free markets that are open to seller participation, with a variety of items for sale including farm and fishery products, simple meals, and everyday commodities. Discussions of facility scale and design should include these kinds of options for shop formats as well.

*D) Restaurant facilities*

When determining the scale of restaurant facilities, it is possible to estimate the approximate number of users by multiplying the number of michinoeki users per day by the restaurant usage ratio and the peak ratio. Depending on lifestyles in the country or region under consideration and the prevalence of eating out as an everyday custom,

michinoeki restaurant facilities may be used by local residents as well, and this should be taken into consideration when deciding their size.

When establishing restaurant facilities, as for processing centers, it is necessary to coordinate plans with the local community, which will be the business operator, and with any organizations providing technical support. Table 11 breaks down the calculations for estimating the size of restaurant facilities.

**Table 11. Estimating the size of restaurant facilities**

Estimated number of restaurant seats required											
5)Number of users per day <u>persons per day</u>	×	14)Restaurant utilization ratio 20~30 (%)	×								
16)Average length of time 1 (hour)	=	17)Number of restaurant seats required __ seats	×								
<p>Example:</p> <p>3)Number of vehicles stopping daily ⇒ 4)Average number of passengers ⇒ 5)Number of users per day ⇒</p> <table border="1" style="display: inline-table; margin: 10px;"> <tr> <td>Passenger cars</td> <td>2 passengers</td> </tr> <tr> <td>Minibuses</td> <td>10 passengers</td> </tr> <tr> <td>Large buses</td> <td>30 passengers</td> </tr> <tr> <td>Trucks</td> <td>1 passengers</td> </tr> </table> <p> <u>950</u> vehicles per day  <u>50</u> vehicles per day  <u>20</u> vehicles per day  <u>480</u> vehicles per day </p> <p style="text-align: right;"><u>3,480</u> persons per day</p>				Passenger cars	2 passengers	Minibuses	10 passengers	Large buses	30 passengers	Trucks	1 passengers
Passenger cars	2 passengers										
Minibuses	10 passengers										
Large buses	30 passengers										
Trucks	1 passengers										
14)Restaurant utilization ratio 20 (%)	⇒	15)Rate of dining at peak times 30 (%)	⇒								
17)Number of restaurant seats required <u>209</u> (seats)		16)Average length of time 1 (hour)	⇒								

Remarks: The numerals 1), 2), etc. Are added to identify each element of an equation because the same data may be used in more than one equation.

#### E) Gas stations

Gas stations provide a function that is indispensable to automotive traffic. This function is usually performed by large corporations or, in some cases, by public institutions. In some countries, the supply of gasoline is insufficient, and this can cause problems in maintaining smooth and safe highway traffic. Therefore, michinoeki facilities will also tend to have an insufficient supply of gasoline to provide to customers, unless steps are taken to restrict private activities in this area.

Also, depending on the country's transportation situation, drivers may wish to take a break and have their vehicles repaired when they have their tanks filled with gasoline. If a michinoeki is equipped with a gas station, it can provide rest functions that are suited to drivers' needs while contributing to traffic safety by eliminating illegal parking near gas

stations.

If another gas station is located near the site, it may compete with the michinoeki from the standpoint of drivers' rest breaks; one possible response to such potential competition is to incorporate the gas station into the michinoeki. It is also possible to negotiate with the institutions that administer public gas stations and ask them to establish a new gas station in the michinoeki, as with highway service centers in Thailand.

The central government or large corporations generally operate gas stations, so they are in the best position to decide on the size of the gas station on the basis of their know-how and the country's circumstances.

#### F) Training facilities, meeting halls, simple medical care facilities, and public service facilities

These facilities are largely dependent on the

wishes of residents of the local community and highway users, who will receive the services, and on the programs of government organizations, NGOs, or other groups that will provide the services. Their sizes should be decided through coordination with

these kinds of stakeholders.

It is also possible to expand the facilities after michinoeki operation has begun. The prime mover should keep this possibility in mind and avoid constructing excessively large facilities.

### Box 11. Approximate facility size specifications

Facility		Size	Comments
Parking lot		100 spaces 50 large vehicles /50 passenger cars Area : 5,000 m <sup>2</sup>	1:1 ratio assumed. The required area includes access routes.
Buildings	Restrooms	Male (urinals) : 10 Male (stalls) : 4 Female : 14 stalls	Male to female ratio is assumed to be 1:1.
	Direct sales (market)	200 ~ 400 m <sup>2</sup>	General size
	Processing center	200 ~ 400 m <sup>2</sup>	Depending on items processed and production volume.
	Restaurants	200 ~ 300 m <sup>2</sup> (70 ~ 100 seats)	General size.
	Public service facilities	50 ~ 100 m <sup>2</sup> each	Depending on purpose of use and size of the local community.
	Meeting halls, etc. for residents		
Exhibits, etc. for travelers	300 ~ 1000 m <sup>2</sup>	Depending on content and purpose..	
Green planted areas		5,000 ~ 10,000 m <sup>2</sup>	Depending on amount of land available.

Remarks: These calculations assume a michinoeki along a major highway with traffic volume of about 25,000 vehicles per day, where the ratio of vehicles stopping is not particularly high.



### Box 12. Features of michinoeki facilities in Japan

Name of Michinoeki			Sobanosato - Rasseimisato	Dongurino sato - Inabu	Kunma - Suisyanosato	Tomiura	Meiho	Sadamitsu - Yu-Yu-Kan	Seaside Takahama
Prefecture			Gifu Pref.	Aichi Pref.	Shizuoka Pref.	Chiba Pref.	Gifu Pref.	Tokushima Pref.	Fukui Pref.
Traffic volume on highway passing the site	Weekdays	Vehicles/day	7,881	4,092	800	8,591	7,586	15,500	15,636
	Holidays	Vehicles/day	5,826	9,873	1,400	8,677	10,931	14,700	14,377
Annual number of users		Persons/year	288,960	620,000	70,000	670,000	N.A	640,000	628,000
Site area		m <sup>2</sup>	7,468	8,547	20,000	3,803	17,000	5,700	20,861
Building area		m <sup>2</sup>	504.6	1,247	135	N.A	N.A	2,104	N.A
Total floor area of buildings		m <sup>2</sup>	346.15	N.A	N.A	1,424	N.A	2,104	N.A
Parking lot(s)	Ordinary vehicles	spaces	31	106	30	65	150	72	139
	Large vehicles	spaces	6	12	3	15	5	4	19
	Handicapped	spaces	2	3	2	4	2	3	8
Area of parking lot(s)		m <sup>2</sup>	N.A	7,200	1,200	N.A	N.A	2,400	5,300
Parking availability		24H	24H	24H	24H	24H	24H	24H	24H
Restrooms (number of toilets)	Men (stalls)	units	4	3	3	5	3	N.A	N.A
	Men's (urinals)	units	9	6	8	7	8	N.A	N.A
	Men's (total)	units	13	9	11	12	11	13	15
	Women's	units	11	8	8	8	6	9	11
	Handicapped	units	6	1	1	1	1	N.A	2
Area of restrooms		m <sup>2</sup>	111.09	123	30	N.A	43	311	102
Restroom availability		24H	24H	24H	24H	24H	24H	24H	24H
Facility sizes	Sales facilities for local products	m <sup>2</sup>	25.44	926	45	160	480	N.A	N.A
	Direct sales stands for farm products	m <sup>2</sup>	52.80		-	-	-	335	-
	Information facilities	m <sup>2</sup>	15.29	198	-	N.A	50	N.A	N.A
	Experiential facilities (including tourist farms)	m <sup>2</sup>	-	-	45	-	-	-	-
	Bathing facilities	m <sup>2</sup>	-	2,691	-	-	-	-	N.A
Restaurant facilities	Restaurants or cafes	m <sup>2</sup> , seats	54.27m <sup>2</sup>	443m <sup>2</sup>	N.A	N.A	N.A	N.A	N.A
			38 seats	N.A	21 seats	50 seats	N.A	N.A	N.A

Remarks: Based on inquiries and informational materials from each michinoeki.

## 4.2 Planning the arrangement of facilities

After a decision is reached on the size of each of the individual facilities making up a michinoeki, the building lot needed for the michinoeki is identified according to the site conditions, including its size, location, and shape. For the first time, a basic design of the final michinoeki emerges.

Because a michinoeki is often a highway rest area, a long lot that adjoins the highway for the greatest distance possible will allow for greater ease of design. If multiple non-adjoining lots are procured, it is necessary to build access roads to connect them, and the resulting cost must be taken into consideration.

Several other points must also be kept in mind when determining michinoeki facility arrangement. First, as a rest area, it must provide smooth access to and from the highway. (See Section 4.3.1 on individual facility design and Section 4.3.2 on road

layout and facility arrangement.)

Michinoeki facilities can fulfill their functions only if users visit them, so it is important to ensure convenient access routes for users arriving on foot or by bicycle, in addition to those using motor vehicles. In addition, consideration must be given to safety, including the separation of vehicular and pedestrian flows.

It is also necessary to consider the smooth movement of vehicles on the premises of the michinoeki. Particular care is needed concerning the arrangement of restrooms, a gas station, parking areas, and roads within the michinoeki.

From the standpoint of administration, it is also important to consider the ease of maintenance and operation tasks such as cleaning and security.

Figure 9 shows two typical arrangements. In one, the facilities are laid out parallel to the parking area. In the other, the facilities are located around the periphery of the parking area. Figure 10 shows some examples of actual michinoeki designs in Japan.

**Figure 9. Examples of Typical michinoeki Arrangements**

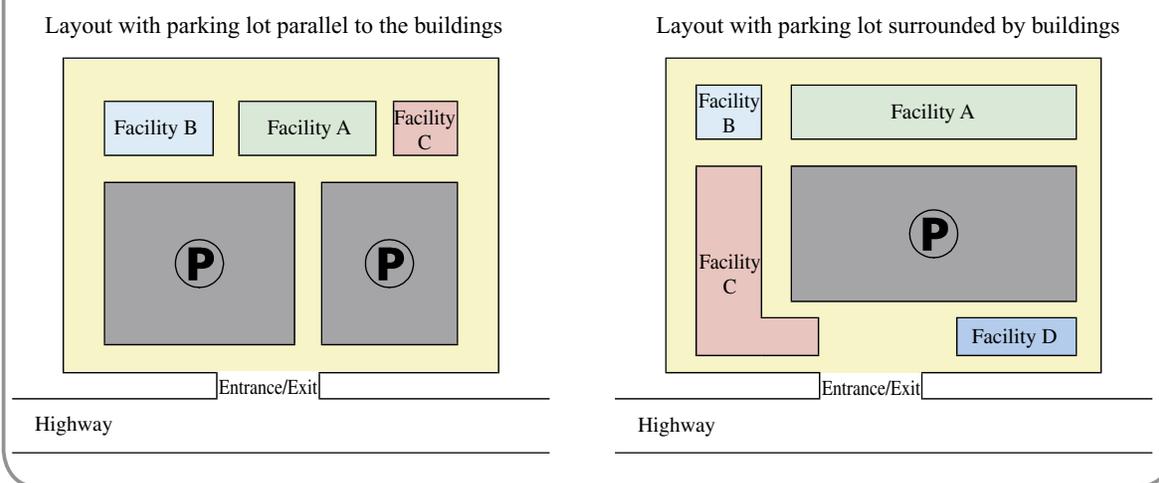
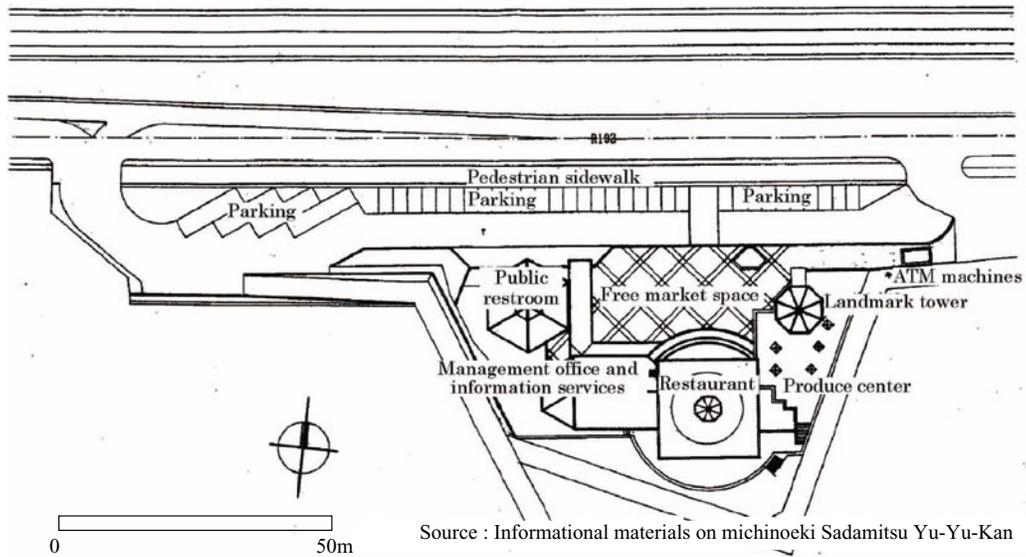
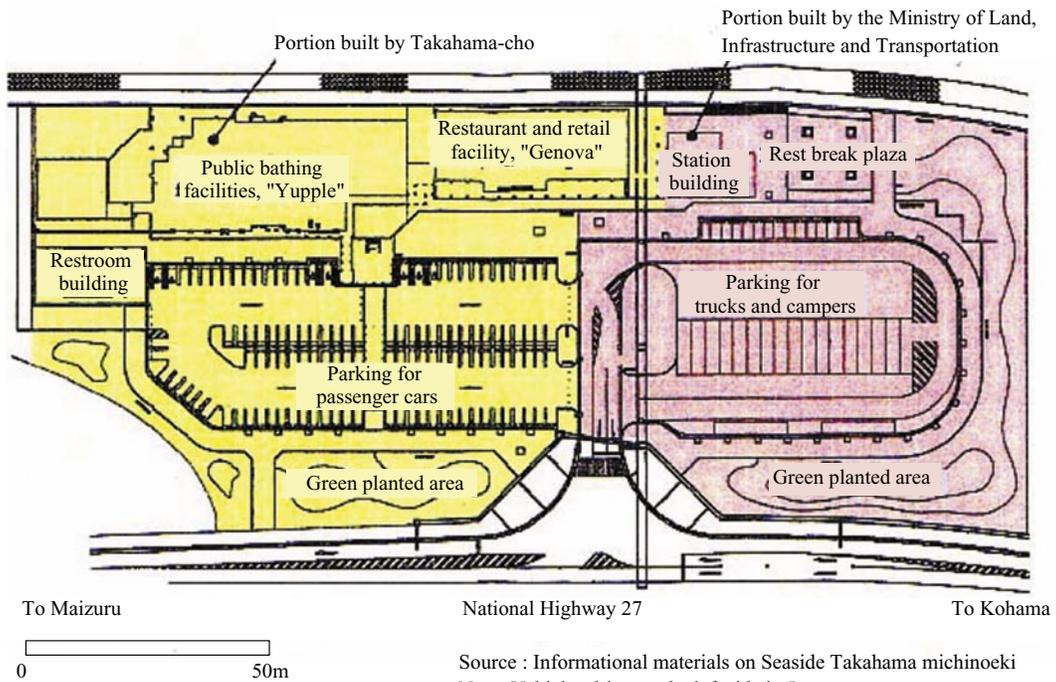


Figure 10. Examples of actual michinoeki arrangements in Japan

*Sadamitsu Yu-Yu-kan michinoeki*



*Michinoeki Seaside Takahama*



### 4.3 Facility design

To road users, a michinoeki is a rest area; but to the local community, it is the front door to the community or an advertisement for the community. It is therefore necessary to develop a design concept that uses unique local characteristics—the

community’s history, culture, or future aspirations—and that lends itself to a sense of affection and pride in the community. In Japan, the design concepts of many michinoeki projects have been based on traditional culture or the community’s historical characteristics. Box 13 gives some examples of these design concepts. It is also important to develop a design that provides for ease of use and treats the

#### Box 13. Examples of design concepts reflecting local characteristics

Ogachi michinoeki (Akita Prefecture, Japan) combines two design concepts: the theme of Ono no Komachi, a historical figure with local ties, and the theme of a forest setting. The parking area includes as many trees as possible without impeding safety, creating an atmosphere of being surrounded by trees. The central building has the architectural motif of a traditional bamboo hat worn by Ono no Komachi.

Reflecting the history of a community that developed from a posting house along a major national highway hundreds of years ago, Shinshu Tsutaki Juku michinoeki (Nagano Prefecture, Japan) uses an architectural design that suggests the kind of inn where the highest-ranking travelers would have stayed at the time. The entire michinoeki is unified with a design based on that theme.



Building with the motif of a traditional bamboo hat (Ogachi)



Building suggesting a historical inn (Shinshu Tsutaki Juku)

interests of users as the top priority.

#### 4.3.1 Individual facility design

##### A) Entrance and access road from the highway

In designing the entrance and access roads to a michinoeki, utmost care must be taken to promote safety and allow vehicles to smoothly exit and re-enter the highway. At the entrance to the michinoeki, the most basic consideration is to prevent vehicles from entering the michinoeki from any point they choose. If the entrance and exit are not clearly designated, this may lead to traffic congestion both inside and outside the michinoeki. The next section describes the approach for the entrance and exit if the michinoeki is located at an intersection.

An access road may not be needed, but it is necessary if the parking area for the facilities is a certain distance off the highway. The access road should be wide enough so that vehicles can pass each other safely, and its alignment should allow vehicles to smoothly exit and re-enter the highway. If an access road is built, structural standards for expressway service areas should be studied.

##### B) Layout of parking areas

To ensure the safety and comfort of users, it is essential to provide for orderly use of the parking area. In Section 4.1.1 we explained the approach to predicting usage demand for determining the parking area and the size of parking spaces. Figure 11 presents three design variations for allocation of the parking area.

#### 4.3.2 Road layout and facility arrangement

Aspects related to road layout and arrangement have an important impact on the overall design of a michinoeki project.

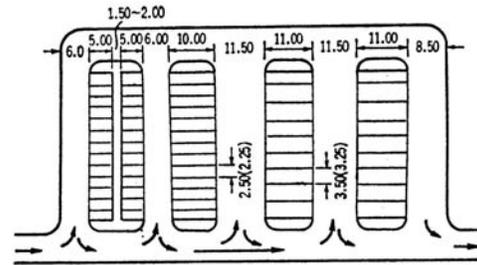
##### A) Along a single road

As illustrated by Type 1 in Figure 12, if the highway has two-way traffic and no median barrier, vehicles driving in both directions can access a michinoeki if the location would not give rise to any particular safety problems.

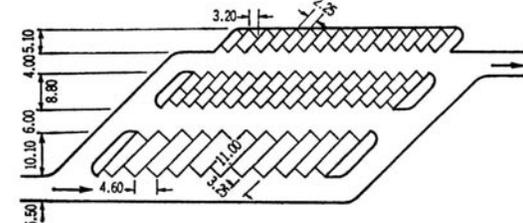
If there is a median barrier as illustrated in Type 2 or Type 3, and only one side of the road has a

**Figur 11. Variations on parking area arrangement**

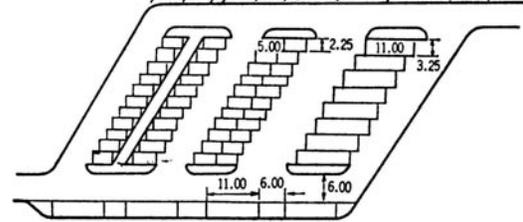
(a) Right-angled parking



(b) 45-degree angled parking

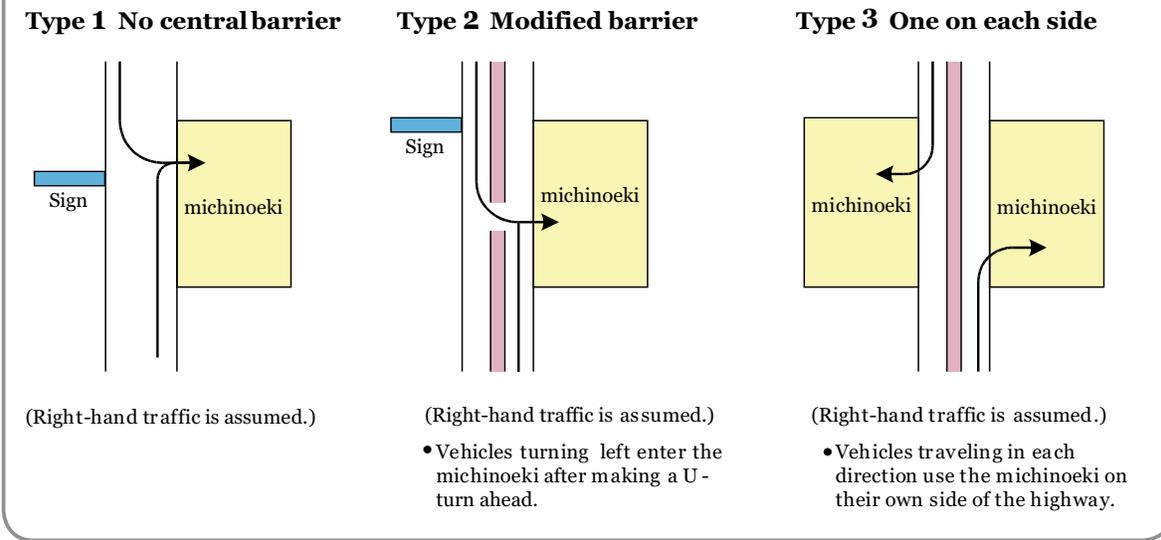


(c) 60-degree angled parking and parallel parking



Source: A Course of Road Construction, "Planning and Design of Expressways"

**Figur 12. Access to a michinoeki along a single road**



michinoeki, then vehicles on the other side of the road will not be able to access the michinoeki from that side. It is not desirable to create a situation in which a michinoeki can be reached only by traffic traveling in one direction. This could lead to traffic accidents when vehicles make U-turns. Two options are available at this kind of location.

First, it may be possible to build a separate michinoeki on each side of the road. This option is the best in terms of traffic safety. However, it results in some duplication of michinoeki functions as well as extra costs. This can be an effective solution if demand is high enough to make it feasible, land is available, and the budget allows it. Another option is to modify a portion of the median barrier to allow vehicles to enter and exit the michinoeki from the other side of the road. Although this is the simplest approach, additional measures should be taken for traffic safety, such as providing a lane for vehicles entering the michinoeki (turning right or left). Signs warning drivers to watch for turning vehicles are essential.

The general approach is to provide a wide entrance and exit, using a white painted line or other means to separate the incoming and outgoing lanes. However, if the volume of traffic is high or

a high proportion of road users stop at the facility, a separate entrance and exit may be built, with consideration for traffic flow within the site. This decision should be based on the local traffic situation and arrangement of facilities at the site.

#### *B) T-shaped junction*

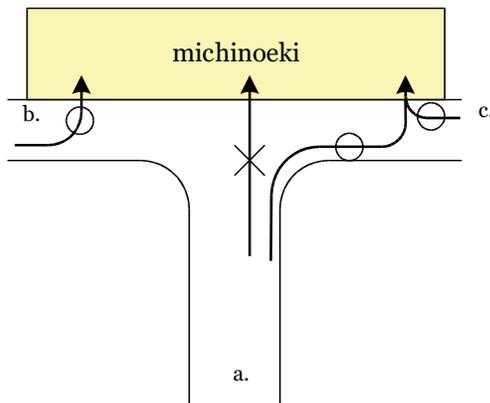
From the standpoint of safety, establishing a michinoeki in a high-traffic area at a T-shaped junction is not highly recommended. However, it may be necessary to choose a location at a T-shaped junction, for instance, at an important traffic node. Such a location should be chosen only if safety can be ensured through thorough traffic safety measures. If a michinoeki next to a T-shaped junction is necessary, but traffic safety poses problems, one solution may be to establish two separate michinoeki locations at a sufficient distance from the intersection for safety. Figure 13 illustrates two types of access design for a michinoeki at a t-shaped junction.

#### *C) Four-way intersection*

From the standpoint of safety, a location at a four-way intersection is not highly recommended either. If such a location is desirable for geopolitical reasons, as in the case of a T-shaped junction, it

**Figur 13. Access to a michinoeki at a T-shaped junction**

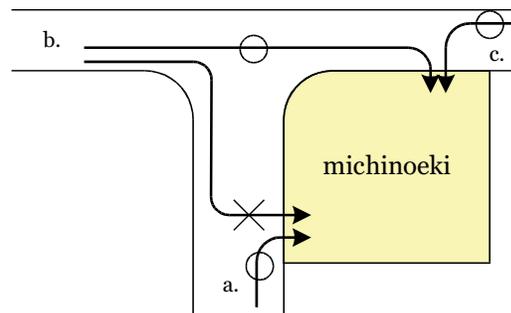
**Type 1**



(Right-hand driving is assumed.)

- Access from directions B and C is handled in the same way as a michinoeki located along a single road.
- Steps are taken to prevent direct access from direction A. Instead, vehicles are guided to turn onto B or C before entering the facilities.

**Type 2**



(Right-hand driving is assumed.)

- There are separate access routes for vehicles from directions B and C, and these are handled in the same way as a michinoeki located along a single road.
- Efforts are made to guide traffic flow in order to prevent vehicles from turning the corner before entering the Michinoeki.

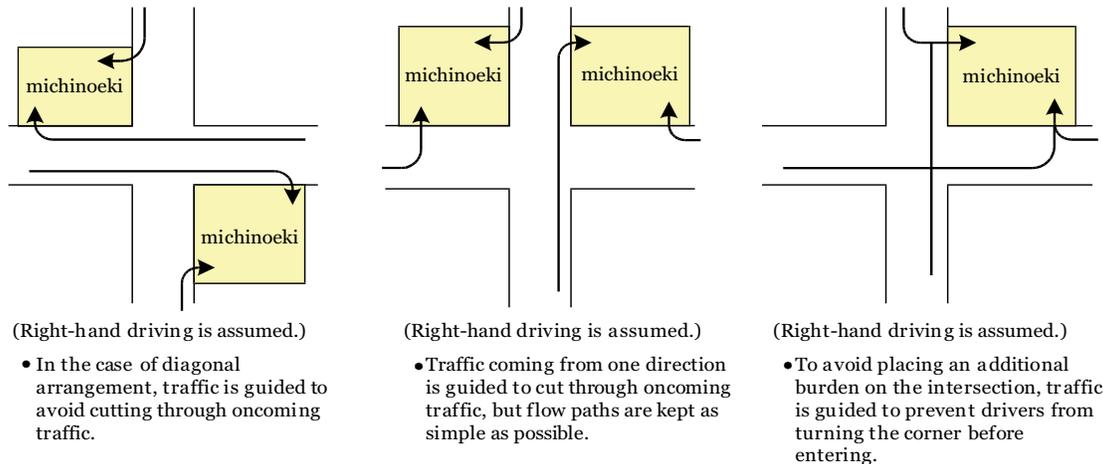
should be chosen only if it is possible to ensure safety through traffic safety measures.

Considering the characteristics of an intersection with traffic arriving from four directions, it is clearly preferable to provide separate locations. If two michinoeki locations are to be built, they can be arranged either diagonally across from each other (Type 1 in Figure 14) or on both sides of one road (Type 2). In either case, traffic flow paths should be simplified by providing separate access from each direction and guiding vehicles to those entrances. The basic approach is the same as for a single michinoeki location (Type 3). To prevent drivers from turning the corner before entering the facilities, it is important to guide vehicles in simple flow paths

while also considering the movement of vehicles within the site.

We have recommended the option of constructing two separate michinoeki locations for safer access. However, attention must be given to the issue of people moving between the two sites. With two michinoeki locations, it may not be possible to completely duplicate the facilities at both sites, so users and operation staff can naturally be expected to move between the facilities. Because they will cross the road on foot, measures must be taken to ensure their safety. Specifically, the roads should be marked to indicate pedestrian crossings, and warning signs provided to alert drivers. If many users cross the road on foot, a crossing guard may be provided.

**Figur 14. Access to a michinoeki at a four-way intersection**



#### 4.4 Construction costs and funding

In the actual construction of a michinoeki that has been designed in accordance with specific site conditions and the selected functions, it is necessary to estimate the construction costs and obtain funding. Michinoeki construction costs normally consist of the costs of civil engineering work, facility construction work, and mechanical and electrical (M&E) work.

##### 4.4.1 Costs of civil engineering work

A michinoeki is located next to a road, and civil engineering work is needed to build the connections with the road, smoothly functioning entrances and exits, and spaces such as parking areas. This civil engineering work is similar to the construction of entrances, exits, and guidance routes at any general roadside facility or parking area, and a michinoeki project does not usually generate additional costs. However, this is not true if construction in the area generally does not provide the functions expected of a michinoeki, including traffic safety. For instance,

even if parking lots in the surrounding area generally are not paved, this does not mean that the michinoeki parking lot can be left unpaved. If paving is judged desirable, considering the potential for heavy use of michinoeki facilities and ease of maintenance and management, the costs of parking lot construction should be estimated at that level.

##### 4.4.2 Costs of facility construction work

For a michinoeki to fulfill its functions, it normally needs to have rest facilities, product sales facilities, and information facilities. The basic approach for michinoeki buildings is to incorporate local designs and materials. The facilities do not need to be lavish, and they can be of the same level as ordinary buildings in the country or region. If possible, efforts should be made to relocate existing buildings or use regional resources for construction materials and so on, because these measures can help to reduce construction costs.

##### 4.4.3 Costs of mechanical and electrical work

For a michinoeki to provide economic and social

services, it needs a stable supply of electricity and clean water and a communications infrastructure. Therefore, M&E work is needed to establish electric power equipment, communications equipment, a septic tank, and so on. These costs are part of the construction costs. The costs of these fundamental types of equipment may differ according to the country or region, so the costs should be estimated by the methods ordinarily used there. It is important to determine equipment sizes, including septic tank capacity, according to the expected volume of usage.

#### 4.4.4 Estimating construction costs in Kenya

Michinoeki were designed for Kericho and Mau Summit, the two candidate sites covered by the pilot study in Kenya. They will be about 10,000 square meters and 20,000 square meters in size, respectively. Construction costs were also estimated. The michinoeki at Kericho is to include a processing plant for locally grown black tea, in addition to basic facilities such as a parking lot, restaurant, and market. Total construction costs are estimated at about ksh 78.35 million (about US\$1 million). As explained above, this includes civil engineering costs for a parking lot and walkways, facility construction costs for the buildings, and M&E costs for the septic tank, telephone equipment, and so on. Meanwhile, the michinoeki at Mau Summit will consist of orthodox types of facilities, but it will be distinguished by the large size of its parking lot and market. Therefore, the costs of parking lot construction and building construction will be higher than at Kericho, totaling about ksh 114.26 million (about \$1.45 million). Again, this total includes costs related to civil engineering, facility construction, and M&E; but construction costs will be higher because the area is larger. More details are given in Technical Note A.

#### 4.4.5 Funding for construction costs

Michinoeki facilities can be established with a much smaller investment than a highway. Still, funding is an important issue.

#### A) *Construction by public organizations and integrated highway and michinoeki construction*

It would be desirable for the profits from business at a michinoeki to pay for construction costs. However, in Japan, profits from michinoeki operation do not cover construction costs because the purpose for michinoeki facilities is not only economic, but social as well, with the goal of contributing to empowerment of the local community through the provision of social services. A michinoeki is not an efficiency- and profit-oriented business like the kinds of business conducted by large corporations. It also makes positive impacts on society such as improving traffic safety. In view of these factors, it is considered reasonable for michinoeki to receive support from public organizations. Therefore, the general approach is for a public organization to pay construction costs, after which a company established under a public-private partnership is entrusted with michinoeki operation. This company is responsible for the costs needed for michinoeki operation.

Because michinoeki facilities are built along a highway, they could be built at the same time as the highway, reducing construction costs. Therefore, if a new highway is being constructed, michinoeki construction should take place at the same time.

#### B) *Funding by the administrative organization of michinoeki*

As we have stated, there is no case in Japan in which the administrative organization has raised the funds to pay for the construction costs of a michinoeki. Although such an approach would undeniably have advantages, it is not realistic, considering the normal level of income from michinoeki operation. Still, the basic approach is for the administrative organization to pay initial costs (other than construction costs) that are incurred for operations, such as the purchase of fixtures.

#### 4.4.6 Allocation of costs

The basic approach for allocating michinoeki costs, based on experience in Japan and elsewhere,

is that a public organization pays for construction, while an administrative organization based on a public–private partnership uses income from michinoeki operations to pay for its operating costs. The allocation of costs should be decided according to the situation and the region, however. For example, if a high level of income is expected from economic services, the administrative organization could pay some of the construction costs (such as the costs of interior decoration); conversely, if social services will account for a high proportion of michinoeki services, then a public organization could pay some operating costs. Considering that both the public sector and the private sector will participate as responsible players, each side should be responsible for at least some expenses.

#### 4.5 Consideration for michinoeki expansion

A michinoeki project is not over when the facilities have been constructed. It can continue to grow as its functions expand or its size is adjusted in the course of operations. Therefore, in the initial plan, the prime mover may wish to design and build the facilities on a scale to fulfill only minimum requirements. After operations begin, facilities can be added or expanded according to demand and users’ actual needs.

Technical Notes 1 and 2 describe the importance of participation by the local community. Although some communities will begin participating at a high level during the initial planning stages, in other communities, local residents will gradually become more involved as they observe operations at the michinoeki. In the latter case, it is important to consider the possibility of expansion, designing the michinoeki as a project with growth potential from

the start.

This approach is also effective in reducing the level of business risk and lowering the initial investment. However, if an excessively cautious investment approach is taken, the opportunity to provide users with attractive facilities may be lost. A balanced perspective must be maintained with regard to investment.

#### 4.6 Important considerations for multiple michinoeki projects

We have described the design of individual michinoeki projects. However, as stated in Technical Note 1, multiple michinoeki projects sometimes may be planned along the same route or in the same region. In these cases, the initiative of the central or regional government is more important than when a single project is planned. For multiple michinoeki, plans should include mutual correlations and some common characteristics. It would not be realistic to expect a local community to take the lead in unifying multiple michinoeki. In Japan, which has more than 700 michinoeki, the central government regulates the attributes that are common to all of these sites. Although the local government and the local community plan and establish a michinoeki, the central government of Japan reviews these plans to ensure that the michinoeki provide the level of service required of all michinoeki, and the central government has authority over michinoeki registration. This registration system, a form of quality control, eliminates low-quality facilities and ensures that all michinoeki provide a certain level of services. This means that when users see a michinoeki sign, they know that it provides a certain level of services, including a rest area and toilets, so

### Box 14. Michinoeki registration system in Japan

In Japan, the regional government or a branch office of the central government handles most registration procedures, but a facility cannot be recognized as michinoeki unless the relevant authorities of the central government authorize its registration. The basic condition for authorization is that a michinoeki must provide all of the conditions set by the central government (minimum standards) required of any michinoeki. This mechanism ensures a high level of quality in michinoeki overall and the confidence of highway users.

#### Summary of conditions for a Japanese michinoeki (registration and information)

##### ■ Suitable location

##### ■ Equipped with the following facilities:

 At least 20 parking spaces

 At least 10 flush toilets

 Road maps and regional information

##### Services provided:

   24-hour access to parking, toilets and telephone

 Staffed information counter (as a general rule)

■ Established by a municipal government or public organization

■ Barrier free

■ Consideration for the landscape

they can use it with peace of mind.

Coordination among multiple michinoeki locations can produce the following benefits for an individual michinoeki:

- The use of a common symbol or logo on road signs and maps increases their appeal, builds awareness, and encourages the planned use of michinoeki facilities.
- The provision of information at each michinoeki to introduce the services and other information of the other michinoeki locations is useful in promoting the planned use of michinoeki facilities.
- A minimum quality of services leads to greater peace of mind among users and has the effect of increasing the number of users.

The use of a common sign or logo raises travelers' awareness of michinoeki as a class of facilities. This is important for promoting the use of each facility. In Japan, a single logo and the name michinoeki are used consistently, displayed on signs, maps, and so on, leading to a high level of awareness among ordinary road users. Box 14 describes the unified michinoeki design in Japan

### Box 15. Unified michinoeki design in Japan

A michinoeki should be an attractive, welcoming place of exchange both for drivers visiting the facilities and for members of the local community. Therefore, the michinoeki logo features a house with trees. On the left is a parking area with two trees, suggesting a relaxing space with greenery. On the right, a person inside a building is depicted. The person’s body is represented in the form of a lower-case letter “i,” the symbol for information. This suggests that in addition to a parking area, the michinoeki offers other services such as the provision of information, including information on the local region.

The michinoeki logo used in Japan was proposed through a public contest and adopted after adjustment for ease of recognition.



Source: Ministry of Land, Infrastructure and Transport Japan

Because information is available in each michinoeki about other michinoeki locations, users become aware of the next michinoeki on their journey, and they can make plans to use these facilities. This is the simplest and most effective way to form connections and synergy among michinoeki locations. Taking it a step further, another possibility would be to use information technology to provide mutually available information on tourism, traffic, markets, and other relevant aspects in real time.

# Technical Note 5. Appraisal — Impact Analysis

- 5.1 Impact of commercial activities
- 5.2 Impact of social activities
- 5.3 Impact to transportation
- 5.4 Safeguards



“Michinoeki”



## Technical Note 5. Appraisal—Impact Analysis

A michinoeki has various impacts, depending on its functions, including those on the local economy, society, and transportation. Impacts can be classified into those on commercial activities from the michinoeki’s economic services, impacts on social activities from its public services, and impacts on transport from its functions as a rest area. For michinoeki projects that will receive public funding, impact analysis is important both as a way to confirm the appropriateness of the michinoeki as an investment and as a way to help local entities and road users understand their value.

There are two ways to evaluate these impacts. One way, which is applicable to commercial activities, is to conduct an overall evaluation in monetary terms.

To analyze impacts that are not easily quantifiable, such as the impacts of social activities, other indicators are more effective. For example, it is not easy to assign monetary terms to the effects of services at a michinoeki related to a minimum living standard, such as the provision of sanitary toilets and safe drinking water, or health-related activities such as measures to prevent the spread of HIV/AIDS; or the provision of opportunities to obtain education or technical training. Certain services of this nature may be quantifiable, but in a wide variety of ways, according to the circumstances of the country or region. Also, although a michinoeki is a small facility, it involves many social activities, and quantifying these activities could place an excessive burden on policymakers. Furthermore, the prime mover of a michinoeki is often a local government or similar organization, which is probably not accustomed to this kind of quantification. Therefore, this approach is not recommended. Evaluation of each social activity by means of indicators is not only easier, but also facilitates subsequent evaluation and monitoring after services commence. Therefore, we recommend the use of indicators for evaluating most social activities.

With regard to the impact to transport, a michinoeki can be expected to improve traffic safety by helping drivers avoid excessive fatigue and preventing the haphazard stopping or parking of vehicles. A michinoeki can also improve the roadside environment by providing for orderly stopping and parking. Although stakeholders from the private sector are very interested in the impact of commercial activities, stakeholders from the public sector are especially interested in the social and transportation impacts. However, for the sake of coordinating the interests of all stakeholders, stakeholders should understand all types of michinoeki impacts, including those that concern other stakeholders.

Not every impact is positive, and negative impacts must also be kept in mind.

### 5.1 Impact of commercial activities

A michinoeki’s market functions, and the economic services they provide, have an impact on the local economy. The impact of commercial activities can be evaluated quantitatively by measuring revenue and added value brought to the community. However, to measure the impacts of a michinoeki on an economic minimum living standard and analyze the distribution of benefits, such as higher individual income levels, the corresponding indicators are preferred.

#### 5.1.1 Function-based impact and recipients

Technical Note 2 describes the effects of commercial activities based on functions related to a michinoeki’s economic services. The local community is the main supplier of economic services (supply side) at a michinoeki, so in general, the local community is the recipient of the economic impact. Table 12 presents the specific impact areas and recipients. It is possible to calculate the benefits obtained by each stakeholder as a result of product sales, lodging services, and restaurant services, and

other commercial activities. In the next section, we will briefly describe methods for the prediction of

revenues at each stage of planning.

**Table 12. Michinoeki functions and recipients**

Functions		Recipients			
		Local residents	Local businesses	Highway users	Government
1) Sales opportunities	Providing opportunities for the direct sale of local products to highway users	☀ Income from the sale of farm produce, handi-crafts, etc.	○ Income from product sales and business participation	○ Opportunities to purchase local products	○ Increased tax revenues
2) Processing of products	Providing technologies and places for product processing and product development	☀ Higher value added products	○ Higher value added products	----	○ Increased tax revenues
3) Technical education	Education in technologies and economics	☀ Knowledge, skills, and higher incomes as a result	☀ Knowledge and skills	----	○ Local acquisition of technologies
4) Support for tourism	Promoting local tourism and providing tourist information	○ Job creation through the promotion of tourism	☀ Business growth by attracting more tourists	○ Opportunities for tourism and leisure	○ Increased tax revenues
6) Health support	Providing clean lodging with measures to prevent the spread of infectious diseases	○ Higher incomes resulting from job creation	○ Income from operating lodging facilities	○ Staying in clean lodging facilities	○ Preventing the spread of infectious diseases

Note: The functions are as the same and are given the same numbers as those in table 3 in technical note 2.

**Key** ☀ Very effective  
○ Effective

### 5.1.2 Methods for predicting revenues

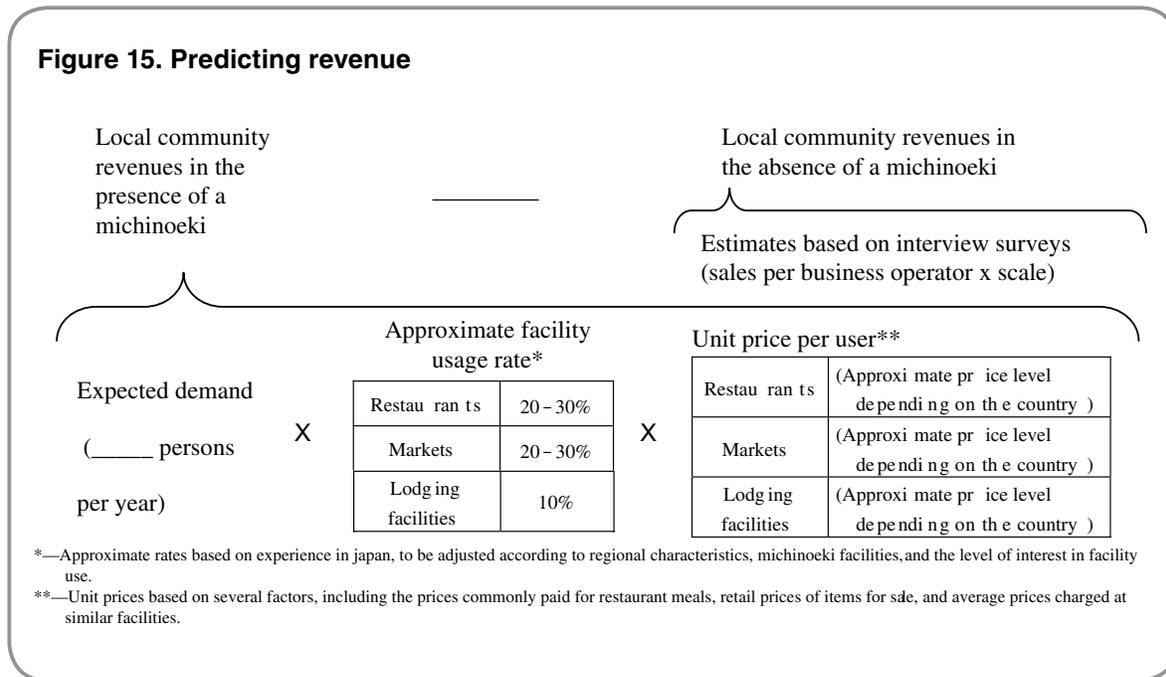
The impact of a michinoeki’s economic activities can be quantified as the overall profit obtained through all its commercial activities. Here, profit is calculated as total revenue minus costs, including personnel costs and the costs of raw materials.

Revenue from economic activities such as market sales and restaurant operation at a michinoeki can be determined by establishing users’ average

consumption (unit price per customer) based on general behavior and multiplying this figure by the number of users.

Figure 13 presents a method for predicting revenue according to the use of parameters such as expected annual demand, approximate usage rate of each facility, and unit price per user.

**Figure 15. Predicting revenue**



### 5.1.3 Evaluation indicators to supplement revenues and profits

The formula in figure 15 can be used to calculate revenue from michinoeki services. Next, costs are deducted from revenue to estimate profits. Overall revenues and profits are important evaluation indicators for michinoeki planning. It is also important to evaluate the redistribution of profits obtained through the michinoeki within the area to assess the michinoeki’s contributions to the community. For example, it is important to determine and analyze impacts using indicators such as the increase in annual incomes of local residents and the number of stable jobs created through the michinoeki.

At Tomiura michinoeki in Chiba Prefecture, Japan, the impact of commercial activities has been significant. Evaluation indicators used at this michinoeki include overall effects such as the increase in visitors, annual revenues, and profits due to the michinoeki, along with amounts paid to residents in salaries or for raw materials, and the number of households involved in the michinoeki.

Payments to town residents totaled ¥230 million, or 37 percent of the michinoeki operating company’s total revenues of ¥620 million; and 450 households, or about 30 percent of all households in the town, are directly involved in the michinoeki. At Uchiko Fresh Park Karari michinoeki in Ehime Prefecture, in addition to determination of total revenues from the direct sales market, the number of farmers at each level of sales is also counted to determine growth trends in the number of farmers with high sales.

When evaluating the impact of commercial activities, to obtain a comprehensive assessment, in addition to determining the overall monetary terms and comparing these to investments, it is important to establish indicators that correspond to the situation of each michinoeki and the interests of stakeholders. Table 13 gives examples of specific indicators of the impacts from commercial activities at a michinoeki.

**Table 13. Examples of indicators to measure the impact of commercial activities**

Functions	Indicators		
1)Sales opportunities 2)Processing of products 3)Technical education 4)Support for tourism 6)Health support (lodging facilities)	Higher incomes in the community	Annual per capita income	\$
		Percentage of the population living on less than a dollar per day	%
		Poverty ratios(percentage of poorest residents, etc.)	%
		Stable employment ratio	%
		Unemployment rate among residents aged 15 to 24	%
		Minimum labor standards (applicability of ilo minimum labor standards to jobs created through the michinoeki)	Y or N
Gender equality		Percentage of female wage earners in nonfarm sector	%

Note: The functions are as the same and are given the same numbers as those in table 3 in Technical Note 2.

## 5.2 Impact of social activities

### 5.2.1 Function-based impacts and recipients

Technical Note 2 describes the effects of social activities based on functions related to public services at a michinoeki. The specific content of these effects is determined by using relevant indicators that reflect the impact of public services, such as sanitation and medical care, or the impact on social participation and other factors as a result of the project.

Since the groups that benefit from a michinoeki’s public services include local residents and regular highway users such as drivers, the recipients of the impact of social activities are the local community and highway users.

**Table 14. Effects and recipients**

Functions		Recipients			
		Local residents	Local businesses	Highway users	Government
5) Sanitation services	Sanitary toilets	☀		☀	○
	Quality water	Improved hygiene as a result of the sanitary facilities	----	Improved hygiene as a result of the sanitary facilities	Improved level of local hygiene
	Hygiene education				
6) Medical support	Clean lodging with measures to prevent the spread of infectious diseases	☀		○	○
	Basic medical information and simple medical care	Improved health through medical services and prevention of infectious diseases	----	Obtaining medical services while traveling	Improved level of local medical care
7) Social participation	Opportunities for community activities, education, etc.	☀	○	----	○
8) Public services	Various public services and public information	☀	○	○	○
		Obtaining needed public services, information and knowledge	Obtaining public information	Obtaining needed public services, information and knowledge	Achieving goals through the provision of public services

Note: The functions are as the same and are given the same numbers as those in table 3 in Technical Note 2.

**Key** ☀ Very effective  
○ Effective

### 5.2.2 Indicators

The impact of social activities is not easily measured in monetary terms. Analysis using other indicators is generally more appropriate. For example, to determine the impact of medical and hygiene services at a michinoeki, instead of assigning monetary terms to the medical services, it is simpler and more convincing to count the number of visits by local residents for medical services. It would also be difficult to assign monetary terms that everyone could understand and accept to participation in social activities. The most effective indicator is the actual rate of participation. To

evaluate the impact of social activities, it is helpful to determine and analyze indicators related to expected changes in the community.

Indicators should be based on the objectives of each michinoeki, and the success of a michinoeki project should be evaluated by measuring the effects corresponding to its objectives. For example, at Uchiko Fresh Park Karari michinoeki, one objective was to revitalize the local rural society. Therefore, indicators included the number of farmers participating in the association operating the direct sales market and the extent of social participation through involvement in this association. In a community of about 1,000 farmers, about 350

participated in the association. Through their work with the association, ordinary farm housewives not only found fulfillment by selling their own produce and products, but also traveled throughout Japan and overseas to give talks about their experiences—a significant impact on social participation. The example of Tomiura michinoeki illustrates the evaluation of public service functions. As a public service for local residents and children who had few opportunities to see plays or other forms of entertainment and to help build a local identity, this michinoeki holds puppet plays and organizes study tours. The number of participants from the community was determined as an evaluation indicator. Every year, the puppet plays are attended by more than 5,000 viewers, which is close to the town’s population (average attendance of one play per person each year). More than 10 study tours, with more than 500 people participating, are conducted every year.

By establishing and measuring indicators that are suited to the objectives, functions, and

involvement of each michinoeki, it is possible to analyze and evaluate the impact of social activities at a michinoeki. These indicators should be clearly defined, and clear evaluation standards should be established. For example, if improving access to services is an objective, a convincing indicator could be established by deciding how far or how long the residents should have to travel to obtain services, and then counting the number of residents living in that area. It is also advisable to establish the methods for indicator measurement at the outset and then stick to those methods as closely as possible. This makes it possible to track changes over the years. This is useful for ongoing assessment of the impact of michinoeki operation.

The indicators should be established and defined in accordance with regional characteristics and the objectives of each michinoeki. Table 15 gives specific examples of indicators to reflect the general kinds of effects expected from social activities at michinoeki. The World Bank’s World Development Indicators are also useful in establishing indicators.

**Table 15. Examples of indicators of the impact of social activities**

Functions		Indicators	
Access to michinoeki services overall (including public transportation)		Daily travel time per household (time spent on travel in the daily activities of each household)	Hours %
		Access to the closest means of public transportation (average distance to a bus stop, etc.)	km or minutes
Participation in michinoeki planning and operation		Percentage of local residents involved in planning or operation (employees, association participants, etc.)	%
		Private sector participation in planning and operation	Y or N
5) Sanitation services 6) Health support	Health and hygiene	Reduction in distance or time to the nearest health center or hospital	Km or minutes
		Number of visits to a medical facility	Times
		Availability of pharmaceutical products	Grade
		HIV/AIDS infection rate of pregnant women aged 15 to	%
		Percentage of the population with accurate knowledge about HIV/AIDS	%
		Percentage of the population with continuous access to quality water	%
7) Social participation	Social participation	Participation in local activities	Grade
		Participation in cultural activities	Grade
	Gender equality	Participation of women in local activities	Grade
		Gender differences in the use of public transportation	Grade
		Gender differences in access to public services	Grade
8) Public services	Education	School attendance among children	%
		Elementary education attendance rate	%
		Literacy rate (age 15 and older)	%
	Information and communications	Internet users	Number
		Educational computer users	Number

Note: The functions are as the same and are given the same numbers as those in table 3 in Technical Note 2.

We have listed some possible indicators here, but these are merely samples. Not every michinoeki will have effects that correspond to each indicator, and this is not an exhaustive list—it does not explain

all the impacts of social activities from michinoeki. Impacts are the result of michinoeki functions, and indicators should be selected and added in accordance with local circumstances and the

characteristics of each michinoeki.

Although existing survey findings may be used in the measurement of specific indicators in some cases, it may be necessary to conduct new surveys. For example, the household budget survey (HBS) or living standard measurement survey (LSMS) may include figures that are similar to the indicator “daily travel time per household.” If not, this indicator may be measured using a questionnaire survey of local rural households or by observation. Also, the sample indicators given with regard to HIV/AIDS are not absolute; and if other indicators have already been determined through existing surveys, those indicators may be used instead. Depending on survey methods, it may be possible to use them as a way to determine michinoeki impacts.

### 5.3 Impact to transportation

A michinoeki’s impact on transportation results from its functions as a rest area. Since a michinoeki prevents haphazard parking and stopping, it can be expected to improve highway traffic safety. Also, orderly parking contributes to an improved roadside environment. If a michinoeki is expected to have a large impact on traffic safety and the environment, that impact should be calculated.

For example, at ogachi michinoeki in Japan, one objective for the rest area was to prevent drivers from idling their vehicles because of the harmful effects this practice has on the environment. The parking lot was planned so that trees could provide shade and vehicles could stay cooler without air conditioning, and the effects were determined by checking on the actual state of stopped vehicles. A certain effectiveness in the prevention of idling was reported. This example illustrates the importance of establishing and measuring an indicator suitable to the objective.

To determine a michinoeki’s impact on traffic safety, the number of traffic fatalities per capita could be a useful indicator. We also recommend the evaluation methods described in toolkit for economic evaluation of World Bank transport projects.

### 5.4 Safeguards

The effects of a michinoeki on the community are not necessarily all positive. There may be negative impacts as well. Safeguards therefore should be considered during the impact analysis process. General information on the approach and methodology with regard to safeguards can be found in “safeguard policies: framework for improving development effectiveness” and “safeguard policies: a tool for sustainable development,” both issued by the World Bank.

#### 5.4.1 Safeguards related to economic activities

Michinoeki projects may result in an economic conflict of interest for the local community or certain groups or individuals. Especially in countries and regions that lack a mature private sector, a michinoeki may have an advantage over ordinary private facilities. Because a michinoeki both is public property and provides economic services, it is placed in a position of advantage over ordinary private facilities competing under the same conditions. The project could even be criticized as obstructing private commercial activities at government expense. Because michinoeki are based on a public–private partnership, it is necessary to carefully identify their impact on existing businesses that would compete with michinoeki, and to give these businesses appropriate consideration.

**Box 16. Critical reporting in Japan on pressure from michinoeki on private businesses, and efforts for coexistence with local business operators**

In some areas of Japan, multiple michinoeki have been constructed along highways where many private businesses are also located. These projects have been criticized for driving down sales at private roadside establishments and putting pressure on private businesses. This criticism—that because michinoeki are supported by public funds, they compete unfairly with private businesses and take away their customers—has been expressed in television programs.

In response to this kind of criticism, thorough care is taken when building michinoeki in Japan, beginning at the planning stages. At Buzen-Okoshikake michinoeki in Fukuoka Prefecture, efforts have been made to promote harmonious coexistence with the community by involving a local business group (chamber of commerce and industry) in michinoeki planning. Members of the chamber of commerce and industry are responsible for the development of products sold at the michinoeki. In a system that encourages positive competition, any interested party may participate in this michinoeki as a supplier of economic services as long as space is available.

If conflicts of interest arise, then in addition to investigating these problems, it is necessary to take corrective measures. Some methods to correct unfair competition in commercial activities

include functional segregation to avoid duplication of the kinds of items offered for sale, or using the flexible nature of michinoeki operation to bring the businesses in question into the michinoeki facilities.

**Box 17. Michinoeki Itako**

At Itako michinoeki, local enterprises and stores are invited to set up test-market shops as a means of promoting harmonious coexistence and functional segregation with local private facilities, while nurturing and stimulating local industry. Test-market shops sell only a few representative products, or products planned for future sale. If all items are available at michinoeki, consumers will not visit the stores in town. By limiting the number of items, consumers will be eager to learn of other available products and visit the main stores in town. The original logo and mascot developed by the michinoeki are freely available for use by local business operators in connection with their products, and this has evoked a higher level of interest in product development.

Also, by offering information on the community, including information on events held at local stores, the michinoeki serves as a kind of general showroom for the area surrounding itako. Customers who have tried a product for the first time at the michinoeki sometimes ask where the main store is located, or whether the store will ship products for them. This has become a win-win situation for both the michinoeki and local businesses.

#### **5.4.2 Safeguards related to transport**

As a rest area, a michinoeki attracts many vehicles, and the resulting impacts on the transportation environment of the community are not necessarily all positive. First, there are likely to be negative effects near the site, primarily environmental impacts such as noise. Also, traffic entering and exiting the michinoeki may obstruct the flow of traffic and have an adverse effect on traffic safety. In some cases, the establishment of a michinoeki may result in higher fuel prices at gas stations, hindering residents' mobility.

These types of negative impacts must be anticipated and preventive measures or corrective steps taken.

## Technical Note 6. Operation — Maintenance and Management

- 6.1 Michinoeki administrative organization and management costs
- 6.2 Cooperation between two stakeholders: public–private partnership
- 6.3 Tips for maintaining service level
- 6.4 Monitoring
- 6.5 Follow-up impact assessment



“Michinoeki”



## Technical Note 6. Operation—Maintenance and Management

Good maintenance and management are of even greater importance for the functioning of a michinoeki than planning and construction. In this Technical Note, we discuss operation. This Technical Note is intended for people who are studying methods of operation at the planning stage of a michinoeki project, as well as for those who wish to revise the maintenance and operation of a michinoeki that has already entered the operating stage.

Most michinoeki functions are not fulfilled by the facilities alone; instead, ongoing activities are needed for the functions to be realized. Local residents, the main providers of economic services at michinoeki, are often inexperienced amateurs at first. There may be obstacles to stable, continuing economic services, such as interruption in the delivery of goods for sale. Also, even if the parking area has been designed according to predicted demand, if the michinoeki is poorly managed congestion from vehicles entering, exiting and parking may occur, leading to frequent accidents on michinoeki premises.

The key to success for a michinoeki is well-planned, high-quality operation. The most attractive aspect of a michinoeki is that local residents participate directly and obtain direct benefits. However, to ensure the continuing provision of services several important points must be taken into consideration.

Even if high-quality services are provided consistently, it is impossible to maintain michinoeki operation without a positive cooperative relationship between the public sector and the private sector. The nature of the public sector’s involvement could take a wide range of forms. In Japan, the public sector often pays practically all the costs of planning and construction, and the private sector pays for most costs of maintenance and operation, and the public sector budgets funds to cover losses that a michinoeki may incur. But in all cases, pursuing mutual agreement between the public and private sectors in michinoeki maintenance and operation is essential.

This Technical Note gives tips for maintaining the proper level of services and describes the basic approach for the organization that administers the michinoeki, management costs, and monitoring.

The maintenance and operation arrangements for michinoeki vary a great deal, much more than in the planning stage. It is very difficult to generalize about rules for michinoeki operation. Therefore, in addition to a discussion of the general approach, we use a question-and-answer format to present matters related to maintenance and operation that have been identified as important points by people engaged in michinoeki operation. In this way, we hope to answer some of the questions that will naturally arise among readers who will engage in michinoeki operation in the future.

### 6.1 Michinoeki administrative organization and management costs

Here we summarize possible patterns for administrative organization and discuss the characteristics of each pattern. We also describe expenses that arise as management costs and remark on important matters related to each type of expense.

#### 6.1.1 Administrative organization

The basic categories of administrative organization

are organizations operated by the public sector, those operated by the private sector, and those that involve a public–private partnership. Because a michinoeki combines economic and social services, we basically recommend michinoeki administration by a partnership of both sectors. However, there is no need to deny the potential validity of other types of administrative organization based on the circumstances of the country or region and the functions to be fulfilled by the michinoeki.

*A) Administrative organization based on public–private partnership*

Technical Note 3 explained that stakeholders can be classified as belonging to either the public sector or the private sector and that a cooperative relationship between the two sectors is essential at the planning and construction stages. Cooperation is just as indispensable in the operation stage. Our basic recommendation is that the organization that handles michinoeki operation be formed through a public–private partnership.

Because a michinoeki combines economic activities with public services, major differences will often arise between the public and private sectors in attitudes and procedures for project implementation with regard to the pursuit of profits, maintaining the level of services, setting prices, and user satisfaction. Because this relationship between two sectors with differing interests will continue over a long period of time, an organization to handle michinoeki operation is essential. A unified approach to michinoeki operation should be developed by incorporating both

sides into a single organization, pursuing a sense of shared ownership, clarifying the respective roles of the sectors, and sharing profits and losses.

One way to form a public–private partnership organization is to establish a third-sector organization to handle operation. A third-sector organization is a joint stock corporation funded by both public agencies and private business operators, combining the business sense of the private sector with the solid creditworthiness of the public sector. The example of the administrative organization of Buzen-Okoshikake michinoeki is discussed in Box 18. A volunteer group of local business operators was already engaged in regional promotion before the michinoeki was planned. The members of this group took the lead in asking for cooperation from a public agency and forming a third-sector administrative organization. They invested their own funds in the administrative company, and a third-sector company, Buzen Machizukuri Kaikei, was formed with both public and private funds.

**Box 18. Buzen-Okoshikake michinoeki**

For the construction and operation of Buzen-Okoshikake michinoeki, members of the local Chamber of Commerce and Industry took the lead in establishing a local planning organization, Buzen Machizukuri Kaikei (Buzen Community Development Company). Each member invested in the company, creating a mechanism whereby local business operators could share in the risk. This company was formed with an initial investment of 10 million yen from interested local business operators, plus a privately secured loan of 50 million yen. As the michinoeki plan progressed, it was decided that its operation be handled by a third-sector company funded by both the public and private sectors. The city of Buzen also invested in this company, but its share of the investment is 30 million yen, less than half of the total capital (66.35 million), so that administration of the company is led by the private sector. The company’s board of directors consists of six local businesspeople and one representative of the municipal government. The role of the municipal government is basically limited to auditing.

Because the members of the business group invested their own funds, they are highly motivated and have a sense of ownership in the facilities. A food-processing group consisting of members of the Chamber of Commerce and Industry took the lead in establishing Buzen Tokusanhin Kenkyukai (Council on Buzen Specialty Products) and conducted a variety of efforts in preparation for the michinoeki’s opening, with the goal of having each participating business develop one unique local product.

#### *B) Operation by the public sector*

It may not be possible to establish an administrative organization that incorporates suitable local private entities, for reasons that may include a lack of strong private businesses in the area. If a michinoeki is still needed in such an area, operation by the public sector should be considered. Of course, for efficient operation, it is desirable for private entities to participate in michinoeki operation. However, if the michinoeki involves a high proportion of social services, it may be better able to provide the services needed by road users and local residents if it is administered by the public sector. Also, considering that the public sector is better equipped than private businesses to promote the empowerment of local residents from a neutral standpoint, operation by the public sector is an option that may have better results.

#### *C) Transfer from the public sector to public–private partnership*

Initially, most local community members participating in michinoeki operation will be inexperienced, and in some cases it may not be possible to form a public–private partnership right away. In such cases, it might be advisable for the michinoeki to be operated by the public sector for the first few years, followed by the gradual launch of a public–private partnership. For example, in one possible approach, private business operators would notice the michinoeki’s capability to draw customers and then become participants in its planning. Or conversely, the public sector could seek out participation from local businesses to draw on the knowledge and skills of the private sector.

In Thailand, four roadside rest facilities called highway service centers (HSC) have been established and are in operation. All four were built by the central government, but local private business operators are participating in the administration of one HSC at Lam Takong, in an arrangement that is similar to public–private partnership. Here too, consideration was initially given to administration by the public sector, as in the case of the other facilities. But local business operators reacted positively when consulted, and with cooperation from both sides, the HSC was transferred from the public sector.

#### *D) Operation by the private sector*

A michinoeki does not function as a purely commercial facility but also provides social services, and is established with participation by local residents. Therefore, it is not generally administered by the private sector alone. In Japan, there are practically no cases of michinoeki operation being handed over completely to the private sector. However, this is not to deny that operation by the private sector may be a valid option if the public sector lacks sufficient capability to administer a michinoeki although there is a need for michinoeki in the area, and if social services could be provided and local residents could participate in planning although the michinoeki is operated by the private sector.

### **6.1.2 Facility management costs**

Costs are a very important aspect of operation. Not only must planning be based on an estimate of operating costs before the michinoeki opens, but checks must also be conducted after it is open. The funds necessary will vary according to the functions of each michinoeki and the activities conducted there. Here we discuss general kinds of expenses. The expenses described here are incurred when michinoeki operation is handled directly by the administrative organization of the michinoeki.

#### *A) Expenses arising as management costs*

Here, we summarize the main kinds of expenses incurred by the administrative organization that is entrusted with michinoeki operation. First, regardless of its functions, every michinoeki involves purchasing costs (wholesale costs), personnel costs, maintenance and repair costs, utility costs, and consumable costs. Purchasing costs are inevitable when economic services are provided. These are the costs of purchasing products to be sold, materials to be processed and sold, and materials for use in restaurant services. These costs are determined according to general price levels in the area and are based on the content of services and the kinds of goods to be sold. Personnel costs consist mostly of salaries for michinoeki employees and temporary workers, so these costs are determined according to

the staffing needed for the services. Maintenance and repair costs are incurred for cleaning and repairing physical damage to the buildings themselves, the parking lot, and so on. These costs are determined through the same kind of approach used to estimate the maintenance and repair costs of buildings in general. Consumable costs are incurred to replace furnishings and other consumable items. These costs are also expected to be about the same as for businesses in the same country or region.

Other costs may include leasing fees paid by the administrative organization to the facility owner (such as a public agency) for use of the facilities,

sales promotion costs such as advertising for economic services, and costs of training related to the provision of social services. Sales promotion costs are dependent on the level of sales promotion activities that are planned for economic services. Costs related to the implementation of social services are also dependent on the level of planned activities. Also, the administrative organization of a michinoeki is generally not a tax-exempt organization, so the expenses of public taxes and fees, including income tax, must also be considered. Box 19 gives two examples of management costs at michinoeki in Japan.

#### **Box 19. Management costs at michinoeki in Japan**

In the cases presented here, the michinoeki are operated directly by third-sector companies. These companies do not lease a portion of the facilities, but the free market is rented out on a daily basis.

Because management costs vary according to size, we compare two examples with building costs that differ in scale. Price and wage levels vary greatly according to the country or region and must be kept in mind when determining building costs and management costs. Table 1) shows the breakdown of general purchasing costs and general management costs (including personnel costs). In both cases, purchasing costs and general management costs account for most michinoeki expenditures, and the ratio is similar.

Table 2) gives more detailed information about two other cases, revealing that personnel costs account for a great deal of general management costs, and that personnel costs combined with purchasing costs account for about 80 percent of expenditures. Table 3) shows average operating costs in relation to construction costs. We see that higher construction costs (larger facilities) are associated with higher operating costs, but the operating costs at larger facilities make up a smaller percentage of construction costs, while smaller facilities also involve significant operating costs.

All the examples shown here are from Japan. The cost breakdown may vary depending on the country or region; these examples are intended as a reference. All figures in these tables are approximate.

1) Construction costs and annual management costs at michinoeki in Japan

(Unit: 1,000 yen)

Category		Administrative organization of michinoeki A	Administrative organization of michinoeki B
Michinoeki facilities	Purchasing	180,000 (19%)	34,300 (21%)
	General management	144,500 (15%)	31,200 (19%)
Other facilities	Purchasing	303,800 (32%)	22,000 (14%)
	General management	230,400 (25%)	59,200 (37%)
General management costs and nonoperating income		39,800 (4%)	14,400 (9%)
Donations		45,000 (5%)	500 (0%)
Total		944,300 (100%)	161,600 (100%)
Construction costs (reference)		1,776,000	500,000
Remarks		Figures include some expenditures for non-michinoeki activities.	

3) Annual average management costs in relation to construction costs

(Unit: 1,000 yen)

Construction costs	Number of michinoeki in category	Annual average expenditures	Average ratio of annual expenditures to construction costs
Under 500,000	95	111,200	0.7
500,000 to 1,000,000	54	112,900	0.2
Over 1,000,000	57	298,900	0.1

Source: Results of a questionnaire survey of michinoeki (conducted in 1998).

2) Construction costs and annual management costs at michinoeki in Japan

(Unit: 1,000 yen)

Category	Content	Administrative organization of michinoeki C	Administrative organization of michinoeki D
Purchasing	Cost of raw materials, etc.	34,700 (42%)	32,700 (33%)
Personnel	Salaries, allowances, temporary hiring, travel and transportation, communications, etc.	33,200 (40%)	37,500 (38%)
Consumables	Furnishings, fixtures, etc.	3,900 (5%)	7,100 (7%)
Maintenance and repairs	Costs of facility maintenance and repairs	600 (1%)	2,000 (2%)
Utilities	Fuel, electric power, and public water	3,600 (4%)	15,500 (15%)
Leasing	Real estate loan or lease	600 (1%)	1,000 (1%)
Insurance	Various types of insurance	200 (0%)	-
Sales promotion	Advertising, publicity, etc.	600 (1%)	700 (1%)
Other	Membership fees, training, health and hygiene, taxes, public fees, depreciation, interest paid, etc.	4,900 (6%)	2,500 (3%)
Total		82,300 (100%)	99,000 (100%)
Construction costs (reference)		160,000	To be determined
Note		Figures include some expenditures for non-michinoeki activities.	

Source: Reference Materials with respect to existing michinoeki in Japan

B) Leasing fees

Normally, unless the public agency or other organization that owns the facilities is itself the administrative organization of the michinoeki, the michinoeki facilities are rented from the owner by the administrative organization. This involves determination of the leasing fees that the owner will charge the administrative organization for use of the facilities. Basically, leasing fees ought to be set in accordance with general market levels in the surrounding area or at other roadside facilities. However, a michinoeki is a facility for the public

good that benefits society and promotes traffic safety, unlike a purely commercial facility. Therefore, lower leasing fees may be set, and uncompensated use of the facilities may even be offered in some cases.

If local business operators participate as independent players in the operation of a restaurant or store, subleasing space in a michinoeki, then the administrative organization acts as the party that leases space to the restaurant or store operator. In this case, the leasing fees are part of the revenue of the administrative organization. Although leasing fees are an important source of revenue for the administrative

organization, they may also become either an obstacle or an incentive to obtaining the participation of local businesses in the michinoeki. Therefore, leasing fees must be set at a balanced level to avoid creating unnecessary difficulties for the financial plan of the administrative organization, without making among local business operators and entrepreneurs

reluctant to participate. Leasing is not the only option for participation by private businesses. The administrative organization could also sell products on consignment, collecting commissions on sales, or it could purchase local products and sell them itself as a retailer. In these cases, no leasing fee is paid to the administrative organization.



**Q1:** How should the administrative organization and format of a michinoeki be developed?

**A:** There is no single predetermined organizational format; we describe several patterns seen in Japanese michinoeki. It is rare for a local public organization to handle michinoeki administration alone. A common approach is to join forces with private businesses to fund a new company (a third-sector company), which is then commissioned to handle administration. In general, the head of the local government becomes the president of this company. Usually either a local government official is put in charge of operation or a private individual is hired as manager. The proportions invested in the company differ according to the situation of each michinoeki, but the proportion of public funding tends to be higher if the michinoeki is mainly oriented to public services, while the proportion of private funding is higher if the michinoeki is more focused on economic services. At many facilities in Japan, the public sector accounts for more than 50 percent of funding. The apparent reason for this is often that if the michinoeki's administrative company were to fail, the public sector would ultimately be responsible for the community's situation. However, sometimes responsibility is borne by the private sector, as in the example of Buzen-Okoshikake. Participants in the third-sector company that operates Buzen-Okoshikake include not only the local municipality, but also a neighboring town, a local bank, an agricultural cooperative, a fishery cooperative, the chamber of commerce, and local citizens. There are also a few cases in which a nonprofit organization of local residents has been commissioned as administrative organization. The administrative organization is determined in consultation with the stakeholders, considering the circumstances of each region.

**Q2:** Who owns the land and the facilities?

**A:** There are different systems and contractual approaches for the land and buildings, depending on the country and region; a michinoeki needs to conform to the circumstances of the site's location. In about half the michinoeki projects in Japan, the land is owned jointly by the highway administration and a local public organization, while the highway administration owns the portions of buildings related to public services and the local public organization owns the portions related mainly to economic services. In the other half of Japanese michinoeki, the local public organization has nearly complete ownership of both land and buildings. In many cases, the administrative organization of a michinoeki

is commissioned by the local public organization to manage the facilities and conduct operation. Although the administrative organization rents the building from a local public agency, the leasing fees are kept low; in addition, because local public organizations would normally manage the public facilities in a michinoeki directly, a local public agency sometimes pays the administrative organization a fee for management services, thereby improving the finances of the administrative organization. This kind of support is common at Japanese michinoeki. For example, at Ishigami-no-Oka michinoeki, the municipality owns the michinoeki facilities, which are used by the administrative company. However, this company is also commissioned to provide management services for an art museum and tourist information facility owned by the municipality. The company is paid for these commissioned services, adding to its financial status.

**Q3:** Who forms the partnership between the public and private sectors, and how is this done?

**A:** At Seto Agricultural Park michinoeki in Ehime Prefecture, Japan, the idea of using a michinoeki as a tool grew out of discussions between town officials and local residents about ways to use new roads to promote the community. Further discussion led to the decision that the town would own the facilities, while an association of residents would play the central role in its operation, forming a natural partnership. In another example, at Buzen-Okoshikake, a private community development group took the lead in plan development and the local municipality then became involved as well.

## 6.2 Cooperation between two stakeholders: public–private partnership

Partnership between the public and private sectors, which is the recommended format for the administrative organization, is not limited to the operating stage; it is important throughout the stages of planning, construction and operation, as explained in Technical Note 3. Here, the concept of partnership is not limited to how to allocate the costs of construction and operation or how to assign

roles. It also includes the question of how to link public services and economic services to make the michinoeki more attractive, as well as other matters related to building a cooperative mechanism for shared use of public and private resources. For example, if a michinoeki is used for events such as gatherings sponsored by the public sector, and the market holds a sale at the same time, the result is a synergistic effect. This kind of effective alliance between the public and private sectors is a major advantage of michinoeki.



**Q4:** What is the mechanism of public–private partnerships at michinoeki in Japan?

**A:** The public and private sectors sometimes provide joint funding, forming a single corporation for joint operation of projects in which the users of public services are charged a fee for using the services. This approach is often seen in the operation of bus and railway lines that provide public transportation. In Japan, these organizations belong neither to the public nor the private sector. Instead, they form the “third sector.” From the standpoint of public institutions, the advantage of the third sector approach is that private funds are used and a rational style of operation

is adopted, lessening the burden on public institutions. Meanwhile, from the private sector's standpoint, this approach provides expanded business opportunities and allows use of the public sector's creditworthiness. In general, public institutions also provide a considerable portion of the funding, are involved in administration, and monitor the fairness and quality of services.

The third-sector approach is often used in michinoeki operation in Japan. The public sector may provide 30 percent to 50 percent of funding. Although this may vary according to the positioning of the public services and the wishes of the local government, both sides are investors, so both sides have responsibility. The third-sector approach has not always worked successfully, for reasons such as excessive dependence of the private sector on the public sector, or inadequate cost awareness and a lax attitude toward administration on the part of the public sector. For success, both sides need to have responsibility with regard to michinoeki operation and both sides need to engage in efforts for improvement.

**Q5:** How should problems and conflicts of interest in michinoeki planning and operation be resolved?

**A:** In Japan, the third-sector approach is used for cooperation between public and private entities, and the participation of local residents is maximized. This ensures motivation for everyone involved, providing momentum for coordination among the various interests. Because local residents use the facilities as well, it is important to obtain the acceptance of the community. It is important to hear local views throughout the planning and operation stages and to incorporate these views as the basis for such involvement. Technical Note 3 provides more information on this subject.

**Q6:** When the public sector gets involved in the business of the private sector, doesn't this have the effect of stealing opportunities from other private businesses?

**A:** In the case of Seiryu-no-Sato Hijikawa michinoeki in Ehime Prefecture, Japan, during the michinoeki planning stage, all households in the town and surrounding villages were invited to start businesses in the michinoeki facilities and participate in its economic services. At present, five tenants are operating businesses there. This was achieved on the basis of fair and equitable opportunities for participation. At another michinoeki, Ishigami-no-Oka, a proposal was made to all business operators in the city, but we are very community oriented.” Opportunities for business participation to provide economic services at michinoeki are open to local residents. And businesses in the town when the michinoeki opened concerning the content of business operations, and businesses were invited to deliver products for sale at the michinoeki. As a result of coordination, the interested businesses were grouped according to product category, and a sequence was assigned in a fair and equitable way so that each business operator can have a turn to sell its products. The manager explains, “We give priority to local businesses in purchasing, considering the role of a michinoeki. Of course, we could obtain products more cheaply from large businesses.

**Q7:** With regard to the kinds of businesses that need to attract customers, do conflicts arise between the private sector that operates these businesses and the public sector that emphasizes the public nature of services?

**A:** According to the manager of a hotel that is operated under a public–private partnership in Shikoku, Japan, “We can always find a solution through discussion because in our partnership, we have agreed on some basic concepts. One is to avoid any additional development because of a shared awareness of the value of our local natural resources. Another is to put more emphasis on user satisfaction and helping our users get to know our area better than on profits.”

Some disagreement is unavoidable, but it is important for the basic policies to be founded on a shared understanding between the operating entity and the government that supports it.

### 6.3 Tips for maintaining service level

The following examples illustrate several points important in maintaining the service level of any michinoeki.

#### 6.3.1 Reliable services

The users of michinoeki services include drivers and travelers who use the economic services and travel the highway frequently. If these people become repeat users of a michinoeki, the michinoeki will gain a stable base of users and income. Also, local residents who use the public services are expected to visit the michinoeki every day. The success of the michinoeki depends on this kind of repeat use, and so the michinoeki must be operated in a way that promotes an ongoing, long-term relationship with users. Michinoeki services must not be intermittent or unreliable, with users finding

that certain services are available on some occasions and unavailable at other times. The services must be provided continuously. If michinoeki users always find that the services they want are available, the result will be to build trust among users.

Because michinoeki services are provided by a variety of entities, including local community members and government organizations, adequate dialogue and coordination among these entities is essential to ensure continuity. This is not limited to the planning stage. During the operational stage as well, communication must take place whenever it is needed, depending on actual usage. Because continuity is a requirement, a michinoeki restaurant or other facility may be managed most effectively by a professional businessperson who has a great deal of experience and expertise in providing reliable services. This should be taken into consideration in the course of coordination with service providers.



**Q8:** What is the relationship of the administrative organization with businesses that offer economic services and with local residents?

**A:** The methods used in Japanese michinoeki can serve as a reference on this point.

The main approaches to the relationship with businesses that offer economic services are either for the businesses to pay rent as tenants of the facilities, or for the businesses to pay sales commissions in exchange for having their products sold there. The rental fees or sales commissions should be established in accordance with the going rates in the area near the site. In Japan, these fees are sometimes set somewhat low to encourage the development of businesses in the local community. It

is also possible for the michinoeki itself to purchase products from businesses to sell, but this involves higher risk on the part of the michinoeki, so it is not often used. At Ishigami-no-Oka michinoeki, products are generally sold on consignment in exchange for a commission, but the michinoeki also purchases goods to sell itself if a local business operator has a strong preference for this format. The approach is to maintain a balance between business decisions for the michinoeki and consideration for the local community. In many cases, local farmers and other community members are permitted to sell their goods freely, and a sales commission of 10–15 percent is collected in exchange. This is lower than the usual level of sales commissions in Japan. In other words, steps are being taken to extend the effects of economic services at a michinoeki to the local community as much as possible.

**Q9:** What is the relationship between the administrative organization and michinoeki employees?

**A:** At a michinoeki, a facility that is deeply rooted in the local community, most employees are hired from the local area. The administrative organization enters into an employment contract with employees, but not necessarily for regular, full-time employment. Part-time workers are often hired as well. However, personnel who handle the administration and operation of the overall organization are hired as regular, full-time employees so that they identify with the michinoeki and conduct their work with responsibility. These decisions with regard to personnel and organizational matters are normally made by the administrative organization. However, because the administrative organization of a michinoeki is often funded by a government organization, it has to obtain approval during audits, general shareholders meetings, and the like. At Japanese michinoeki, retired elderly persons are sometimes hired as part-time workers. This provides the michinoeki with the advantage of a pool of workers who can be hired at a relatively low cost, while the elderly workers gain the advantage of a second place of employment. Priority should be given to hiring local community members as michinoeki employees. However, when hiring for a position that demands special skills, such as a chef for a restaurant, it may be necessary to give priority to skill level, even if this means that the person hired is not local. Because employees often lack experience in facility management and services, many michinoeki have spent a great deal of effort on employee education.

**Q10:** How is a system formed for facility maintenance and management?

**A:** According to the manager of Seiryu-no-Sato Hijikawa michinoeki, “We anticipated the costs of maintenance and management from the outset and included those costs in the plan. At this michinoeki, the operating company’s revenues are used to pay those costs. For specialized aspects of maintenance, we contract with a local business.”

The maintenance and management systems will differ according to characteristics of the country or region and the members participating in michinoeki operation. However, it is important to define the allocation of financial responsibility for maintenance and management costs, and to clarify the division

of roles and responsibilities in the initial stages.

**Q11:** Isn't it prohibitively expensive to conduct high-quality maintenance and provide continuous services?

**A:** Not necessarily. This can be handled creatively. At Sadamitsu Yu-Yu-Kan michinoeki in Tokushima Prefecture, Japan, local residents have volunteered to clean the area including the michinoeki periodically. At Takinomiya michinoeki in Kagawa Prefecture, a local celebrity was asked to give classes on handmade udon noodles, a local specialty, as a volunteer. These classes are popular with users. And at Rasten Horado michinoeki in Gifu Prefecture, local housewives in charge of cleaning began to decorate the restrooms with wildflowers that they picked themselves, earning praise from users. A donation box is provided for users to contribute money for restroom maintenance and management, and the collected donations are used to help pay for maintenance and management. In each case, local residents got involved at the planning stage and came up with these ideas because they felt a sense of ownership in the facilities. As these examples show, it may be possible to ensure continuous services at no cost.

### 6.3.2 Commercial appeal

The administrative organization of any michinoeki that provides economic services must emphasize commercial appeal. Itako michinoeki in Japan has hired a professional manager for

its commercial facilities. The manager at this michinoeki checks the products for sale with a professional eye, ensuring that the economic services maintain their appeal. This is one method that has helped create appeal for users, although it is not necessary applicable at every michinoeki.



**Q12:** How can the economic services of a michinoeki be made more attractive?

**A:** At Meiho michinoeki in Gifu Prefecture, Japan, locally produced tomatoes are used in ketchup made by local farm housewives, which has become a popular product. At Kunma Suisha-no-sato michinoeki, local housewives sell Japanese soba noodles that they make by hand. They also talk about their region in the local dialect, which users find very appealing. The locality is an important point in the appeal of a michinoeki. Of course, the demands of users must be kept in mind. However, one point that is mentioned by all operators of michinoeki is the importance of making the greatest possible use of local resources.

**Q13:** Is it effective to promote local products and hold special events?

**A:** Promotional events are one way to promote usage, and many such events have been held at Japan's michinoeki. At michinoeki in Ehime Prefecture, Japan, various types of events have been held to attract customers by appealing to local residents and travelers. These have included sports events in cooperation with local sports teams and events to promote local products in cooperation with the

Chamber of Commerce and Industry.

**Q14:** Is there any drop in product quality when the local community provides economic services?

**A:** At Uchiko Fresh Park Karari michinoeki in Japan, each product sold is identified with the name of the producer. Complaints and other feedback are conveyed to the producer. This provides for personal responsibility, and each producer is motivated to improve quality. At Ishigami-no-Oka michinoeki, products are purchased from local business operators by turns. Although priority is given to local suppliers, quality checks are thorough, and complaints are issued if any problems are found. This encourages local business operators to improve quality. Because many members of the local community are amateurs when it comes to providing economic services, it is necessary to take active measures for quality control in products and services. One way to do this is to hire experts to provide training. However, the most important thing is to raise awareness of quality control.

**Q15:** How are unsold products handled?

**A:** Farm products and similar items are the primary products sold at direct sales markets of michinoeki. Because these products spoil rapidly, proper disposal of unsold products is important. At Uchiko Fresh Park Karari michinoeki, local farmers bring in items to sell at the market, and there is widespread acceptance of the rule that each seller must take his or her own unsold products back home, a principle of personal responsibility.

**Q16:** If a commission is charged, wouldn't other sellers set up shops just outside the michinoeki as free riders who do not participate in the michinoeki?

**A:** It is true that shops are sometimes set up next to a michinoeki, and these shops may take away some michinoeki users. However, with the principle of competition, people are attracted to a facility such as a michinoeki. Efforts can be made to increase the advantage of selling within a michinoeki facility as a participant there. As a result, the michinoeki can attract many users.

### 6.3.3 Security

In taking measures to ensure security at a michinoeki, two aspects must be taken into consideration: traffic safety and public order. In the basic approach to traffic safety, certain considerations are incorporated at the design stage; traffic safety is monitored during the operation stage; and corrective steps are taken if problems are found. Traffic safety is one of the michinoeki's functions, and great care must be taken to ensure the safety of users entering

and exiting the premises. Meanwhile, public order is not a service that is easily handled by the michinoeki and the local community alone. An alliance with the police authorities is useful, and the police should be asked to include michinoeki sites in their patrols.



**Q17:** What are some specific ideas for maintaining public order at a michinoeki?

**A:** One effective approach is for a police station to be located next to a michinoeki, as in the case of a highway service center in Khun Tan, Thailand. If agreement can be reached, another possible approach is for a local police station (police booth) to be located in the michinoeki facility. Some Japanese michinoeki have asked the local police force to include the michinoeki in their regular patrols, and in some cases, to increase the frequency of patrols. Michinoeki design and other factors will affect the areas of traffic safety that can be handled. However, an alliance with the police authorities is indispensable for public order. Circumstances differ according to country or region, but it is important to hold discussions with the authorities at the planning stage to determine what kind of cooperation can be expected.

**Q18:** Is it possible to make greater use of michinoeki to improve regional safety?

**A:** In addition to traffic safety and public order, michinoeki have been used for disaster preparedness. In the case of Matsuyama michinoeki in Kagoshima Prefecture, Japan, an adjacent gymnasium has been designated as an emergency shelter in the event of a disaster. A passageway was included in their michinoeki design to link the michinoeki with the gymnasium so that these facilities could be used as a general safety facility in the event of a disaster. The town and the michinoeki have drawn up an agreement on the provision of food supplies in the event of a disaster. Fortunately, there has not yet been any disaster necessitating evacuation. However, thorough preparations, including evacuation drills, are made. At Ishigami-no-Oka michinoeki, the staff gives attention to disabled vehicles. If the problem is as simple as a battery that needs to be recharged, they provide on-the-spot assistance. For more complicated problems, they immediately introduce local repair shops. This kind of effort can also contribute to better traffic safety.

#### 6.3.4 Cleanliness

A michinoeki is both a rest area and the front door of the local community. Its facilities are used not only for economic activities but also for public services. Therefore, the administrative organization must provide users with clean facilities.

To maintain clean facilities, it is most effective to ensure that local community members have a sense of ownership concerning the michinoeki. To achieve this, it may be effective to obtain even small investments from community members, as in the case of Buzen-Okoshikake michinoeki. This can be expected to result in more courteous use

and voluntary cleaning on the part of local users. The effects of commercial services that bring an economic benefit to the community are heightened if community members understand that higher revenues can be obtained from maintaining a clean, comfortable facility. Of course, thorough training for employees who will be assigned to cleaning tasks is also important.



**Q19:** What specifically should be done to maintain cleanliness?

**A:** As one example, Adachi michinoeki in Japan has prepared its own maintenance manual, and the cleaning and maintenance staff receive training to maintain a high level of services. This is an effective way to raise the awareness of staff members. The manager of Buzen Okoshikake michinoeki says, “When the restrooms are always clean, it actually makes people less willing to get them dirty or vandalize them.” There is no magic bullet for maintaining cleanliness. Instead, it is important to consistently implement the everyday work of maintenance and cleaning.

**Q20:** Is it possible to use local residents for tasks such as cleaning?

**A:** We have already described a case in which local residents volunteered to clean a michinoeki and its surrounding area. In another approach, Tazawa michinoeki in Yamagata Prefecture and Oumi Hahanosato michinoeki in Shiga Prefecture, Japan, contract with organizations of local senior citizens for cleaning, maintenance, and management services. This arrangement has been praised for strengthening connections with the local community, creating jobs for the elderly, and helping them to find fulfilling activities.

### 6.3.5 Training for human resources

Most people employed for michinoeki administration, as well as local residents who provide economic services, are inexperienced in these services and business. However, they are the main actors in a michinoeki, and it is necessary to improve their knowledge and capabilities to raise the level of services at the michinoeki. Therefore,

the training of human resources through michinoeki administration is an important theme. This training does not refer to specialized education or training. Instead, people learn through their everyday experiences. The prime mover and the manager of the administrative organization need to engage in dialogue to evoke the enthusiasm and motivation of people involved in the project.



**Q21:** What steps should be taken to train human resources?

**A:** According to the chairwoman of a direct market association at Uchiko Fresh Park Karari michinoeki in Ehime Prefecture, “As farmers, in the past we only produced products to be sent out for distribution elsewhere. But now we are participating in society as individuals through direct sales of our products at the michinoeki. We have gained confidence in our own abilities by bundling and pricing our own products and receiving the profits ourselves.” At Minami-Alps-Mura Hase michinoeki, many local residents hired as employees had formerly worked at a local factory, so their training began with a thorough grounding in polite greetings as the basis for good service. Training may be necessary for some specific purposes involving specialized knowledge or technologies. But most importantly, useful experience is obtained through serious engagement in the work of operating the michinoeki itself.

**Q22:** Have local NGOs or nonprofit organizations ever been used to provide human resources?

**A:** The operation of Kitaharima Eco-Museum michinoeki in Hyogo Prefecture, Japan is contracted out to a nonprofit organization formed by residents of the surrounding municipalities. This nonprofit organization had already been engaged in efforts to rediscover local cultural and tourism resources and promote tourism using those resources. Therefore, it was able to provide human resources who were well qualified to operate the michinoeki in an appealing manner and promote the region effectively.

## 6.4 Monitoring

### 6.4.1 Monitoring of operation

In maintenance and operation, in addition to preparing a plan in advance, it is important to conduct regular monitoring of operations and to make improvements as necessary. Table 16 lists indicators that provide general standards for monitoring. Appropriate indicators should be chosen

in accordance with the functions of each michinoeki, and these should be used in monitoring, along with other factors depending on the characteristics of the country or region in question. Mutual checks among stakeholders are an effective means to ensure that monitoring remains objective. If there are multiple michinoeki locations, another option is to introduce third-party monitoring by the national or regional government or an NGO.

**Table 16. Indicators for monitoring michinoeki operation**

<b>Role assignment</b>	<ul style="list-style-type: none"> <li>● Is the original assignment of roles being maintained in operation?</li> <li>● Have any necessary roles not been assigned as anyone’s responsibility?</li> <li>● Is the assignment of roles appropriate in operation?</li> </ul>
<b>Continuity of services</b>	<ul style="list-style-type: none"> <li>● Are all michinoeki services continually available, as initially expected?</li> <li>● Do the users of each service have positive reactions? (Are the services being used to an adequate extent? Are there any complaints? What are the specific complaints?)</li> <li>● Are appropriate corrective steps taken in response to requests from users?</li> <li>● Are there any problems or complaints concerning the service providers?</li> </ul>
<b>Commercial appeal</b>	<ul style="list-style-type: none"> <li>● Are the products sold and services used at as high a level as anticipated?</li> <li>● Are sales trends reflected in the products and services offered for sale?</li> <li>● Is information being gathered on the wishes and complaints of users (customers)?</li> <li>● Are the wishes and complaints of users reflected in the products and services?</li> <li>● Are any efforts being made to develop new products and services?</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>● Is there adequate security in the michinoeki facilities and the surrounding area? (Is parking permitted at night? Have there been any losses due to crime?)</li> <li>● Are there means of contacting the security authorities in case of emergency?</li> <li>● Have any other specific steps been taken to ensure security?</li> </ul>
<b>Cleanliness</b>	<ul style="list-style-type: none"> <li>● Is there a functioning system to handle everyday cleaning and to monitor cleanliness?</li> <li>● Have users complained about aspects of hygiene?</li> <li>● Do local residents and service providers pitch in voluntarily to help clean the facilities?</li> <li>● Are procedures in place to check for needed repairs? Is there a system to handle any repairs that may be needed?</li> </ul>
<b>Training human resources</b>	<ul style="list-style-type: none"> <li>● Does the michinoeki have the human resources needed for its operation?</li> <li>● Are local residents participating in its operation and the provision of services?</li> <li>● Is there a system in place to provide education for people participating in michinoeki operation and services? (Are the necessary manuals available? Is there a system in place for workers to pass on knowledge and expertise to their successors?)</li> </ul>

#### 6.4.2 Monitoring the budget plan

Among the areas to be monitored, those with the greatest tendency to deviate from expectations are revenues from economic activities and costs of operation. It is very important to monitor performance at the operational stage. If revenues are much lower than expected, michinoeki operation may become difficult. This risk is shared by community members participating in the market and users of public services, as well as the administrative organization of the michinoeki. It is important to

monitor revenues at least once every quarter to verify if the budget situation is appropriate, and then to take prompt action if corrective steps are needed.



**Q23:** Are revenues and expenditures monitored?

**A:** At most michinoeki sites in Japan, preparations for monitoring are made before actual michinoeki operation begins, and there is ongoing monitoring after operation has commenced. The accounts are balanced every year, every six months or every quarter, depending on the michinoeki. The accounts of the administrative company or organization need to be balanced at least once a year. If this is to be done more frequently, of course, it is best to take a meticulously detailed approach, but the time period can be selected according to general business methods, tax systems, etc. In the country or region in question. Quite a few michinoeki conduct daily checks on product sales or revenues. At Uchiko Fresh Park Karari michinoeki, a data system (point-of-sale) is used at the direct sales facility for farmers. This system is capable of monitoring not only daily sales, but the sales of each farmer’s products in any one-hour period. According to the manager of the sales facility at Rasten Horado michinoeki, “It’s clearer if there is information on product sales every day. It’s important to check on the products that are selling well and to consider possible improvements in products that are selling poorly.”

**Q24:** What should be done if there is an operating loss?

**A:** First, a decision needs to be made in advance as to whether some losses can be tolerated because the facilities are public service oriented, or whether the facility will be expected to be profitable. The manager of Seiryu-no-Sato michinoeki stressed that every effort is made to keep operation profitable, but explained that “If the michinoeki had a loss, it might be possible to obtain public assistance. However, we would also need to consider other corrective steps such as reducing operating costs or cutting down on functions or scale.” The manager needs to take all kinds of possible situations into consideration.

**Q25:** What is the best way to expand the scale of michinoeki business?

**A:** Tomiura michinoeki in Chiba Prefecture, Japan has succeeded in attracting tour buses by teaming up with local tourist farms and restaurants and promoting itself to travel agencies as a destination. The michinoeki has become a contact point for local tourism, arranging tours and even handling complaints. As a result, it has attracted many tourists, and this has been profitable not only for the michinoeki but also for local businesses. Although a michinoeki is limited in the business activities it can develop on its own, there is much greater potential if it teams up with local businesses.

### 6.4.3 Feedback

The findings obtained through monitoring of maintenance, operation, and the budget plan must be

used as feedback for operation, and any necessary corrective measures must be implemented. The initial investment is not the final determining factor with regard to the functions and scale of michinoeki

facilities. It is important for the facilities to evolve in accordance with operational issues, demands, and needs. Therefore, feedback must be gathered to improve the level of services and make the michinoeki more appealing.

We have discussed monitoring and feedback on the part of an administrative organization or prime mover of a michinoeki. However, the users, participating businesses, and relevant government organizations can be expected to have their own opinions concerning the michinoeki as well. It is desirable to obtain feedback from these parties and to apply the lessons learned in michinoeki administration. For example, an organization of michinoeki users called a users’ club has been formed for michinoeki in Japan’s Tohoku and Kiso regions. Users submit their opinions and complaints about michinoeki through a website. This information is shared with each michinoeki in a system that provides information on users’ opinions and complaints and encourages improvement in the operation of each michinoeki. If it is feasible to incorporate information technology, placing online terminals at each michinoeki can be an effective way to gather feedback from users.

If the financial situation of a michinoeki is found

to be unsound, then steps must be studied and implemented to improve the project’s finances. These steps will consist mainly of ways to reduce expenses. Increasing revenue is not a simple matter, so cost-cutting measures must be the basic approach in improving the budget plan. The main tactics are either to reduce costs by changing the facility design or to obtain additional financial support. A michinoeki is based on partnership between the public and private sectors, so in the area of financial improvement as well, it is important to apply this partnership by having the private sector examine possible cost reductions while the public sector studies possible means of support.

### 6.5 Follow-up impact assessment

After michinoeki operation has begun, it is important to evaluate its impacts and check whether they correspond adequately with the investment, using the impact indicators and quantitative methods explained in Technical Note 5. If the initially anticipated effects have not occurred, it is necessary to analyze the reasons for this failure, and to study and implement the necessary corrective measures and actions.



Question  
&  
Answer

**Q26:** What specifically is involved in follow-up impact assessment for a michinoeki?

**A:** Michinoeki projects include a variety of functions and facilities, and the impact will vary accordingly. Therefore, follow-up evaluation should focus on the impact areas that were anticipated at the planning stage of the michinoeki in question. For example, at Ogachi michinoeki in Japan, analysis was based on original indicators such as the prevention of idling by stopped cars to measure its effectiveness in making a positive contribution to the environment, which was an initial goal. Meanwhile, at Seiryu-no-Sato Hijikawa michinoeki, the number of vehicles using the rest area and the number of people using the commercial services were counted in follow-up surveys to determine the michinoeki’s impact on transportation and the local economy. Evaluation should be based on selected impact areas corresponding to the objectives and functions of each respective michinoeki.

## Technical Note A. Michinoeki pilot study in Kenya



“Michinoeki”



## Table of Contents

<b>1. Overall Plan</b>	112
<b>1.1 Introduction</b>	112
<b>1.2 Issues of the Northern Corridor and areas along the highway</b>	113
<b>1.3 Overall michinoeki Plan for the Northern Corridor</b>	116
<b>1.4 Selection of two sites for individual planning</b>	119
<b>2. Kericho</b>	121
<b>2.1 Identification</b>	121
2.1.1 Site selection	121
2.1.2 Facilities	122
2.1.3 Stakeholders	123
2.1.4 Impacts	123
<b>2.2 Preparation</b>	124
2.2.1 Scale and design	124
2.2.2 Consultation with stakeholders	127
<b>2.3 Next steps/recommendations</b>	129
2.3.1 Site selection	129
2.3.2 Design and cost Allocation	129
2.3.3 Operation framework	129
<b>3. Mau Summit</b>	132
<b>3.1 Identification</b>	132
3.1.1 Site Selection	132
3.1.2 Facilities	133
3.1.3 Stakeholders	134
3.1.4 Impacts	134
<b>3.2 Preparation</b>	135
3.2.1 Scale and design	135
3.3.2 Consultation with stakeholders	138
<b>3.3 Next steps/recommendations</b>	139
3.3.1 Site selection	139
3.3.2 Functions and facilities	139
3.3.3 Design and cost Allocation	139
3.3.4 Operation framework	140

## 1. Overall Plan

### 1.1 Introduction

The improvement of transportation conditions will be important to economic revitalization in Kenya. The GDP growth rate of the Republic of Kenya has declined significantly since the mid-1990s, falling to -0.3% in 2000, its lowest level since independence (1963). To correct this situation, the government of Kenya issued the 2001 Poverty Reduction Strategy Paper. This plan calls for improving the country's infrastructure, maintaining public order, and increasing public investment to achieve economic revitalization.

To enhance transportation conditions in Kenya, it is particularly important to improve the roads. The country is about 800 kilometers wide from east to west and about 1,000 kilometers long from north to south, but it has only one railroad line. Roads are the major form of long-distance transportation, and the country has devoted its energies to the construction of major roads. However, traffic volume has increased in recent years and the roads have been poorly maintained, resulting in serious deterioration in the condition of road pavement, which hinders the safe and smooth flow of traffic.

For the time being, improvements will be focused on major roads forming a vital national network. A highway known as the Northern Corridor extends from Mombasa, a major city on the Indian Ocean, through the capital, Nairobi, and to Uganda. This road plays a particularly important role in Kenya's highway network. The government of Kenya is promoting road rehabilitation work for the Northern Corridor as a national project.

However, the road network in Kenya suffers from more problems than just deteriorating pavement. Even the Northern Corridor, the country's most important highway, is only a two-lane highway over most of its length, and its transportation capacity is far from adequate. Therefore, travel speeds are extremely low. Even major roads have few rest facilities and inadequate numbers of restaurants and gas stations. Markets spring up in a disorderly fashion along the roadside, causing many traffic accidents. An additional problem is that HIV/AIDS and other infectious diseases are pandemic among truck drivers.

The current road rehabilitation project will not be sufficient to resolve all of these social and economic problems related to roads. Clearly, additional measures are needed. Michinoeki facilities are considered to be an option with a great deal of potential. Michinoeki provide the function of business incubation to stimulate economic activities in a region, as well as the function of public service to contribute to improved public hygiene.

In the pilot study, we considered michinoeki introduction in view of this situation, focusing on resolution of the regional problems in Kenya. This report will discuss the michinoeki functions and facilities that contribute to the resolution of social problems such as the lack of proper markets and the spread of HIV/AIDS, in addition to transportation problems. It will also identify directions for the study such as ways to reflect local voices, including the results of on-site investigation.

The HIV/AIDS epidemic is a serious problem in Africa. Michinoeki are seen as suitable infrastructure within which the problems of HIV/AIDS transmission along highway routes in Africa could be addressed. Screening, information, and treatment centers (VCT) built in michinoeki are seen as one function that michinoeki could provide to address HIV/AIDS. The provision of employment opportunities for young women to attract them away from prostitution is seen as another. Similarly, the development of recreational facilities around michinoeki is seen as a solution to the current problems experienced by rural youth who also contribute to the spread of HIV/AIDS. The development of michinoeki for local development provides opportunities for the correction of existing gender imbalances. Women's participation in michinoeki also can contribute to the alleviation of poverty in contexts where there are no existing all-weather markets.

Michinoeki are included as a component in the Northern Corridor Transport Improvement Project of the World Bank in Kenya. Five michinoeki locations are to be built in Kenya. This pilot study has covered the phases of michinoeki identification and preparation, assuming the adoption of a michinoeki component under that project. (See the Executive Summary for more information on the phases of

michinoeki establishment.)

There are seven steps of consultation with stakeholders (kickoff, site selection, functions and facilities, design and cost allocation, impact analysis, operation framework, and final decision-making) during michinoeki preparation. This study covers only the first step, the kickoff. The subsequent steps, beginning with site selection, are processes that involve actual decision-making by stakeholders, based on specific data concerning the stakeholders' capital and other resources, estimated impacts, and estimates concerning impact recipients, operating costs, and other factors. These areas cannot be addressed by a pilot study whose purpose is to consider feasibility.

In the kickoff step, workshops are held locally to identify local demands and provide feedback concerning michinoeki facilities and design. Procedures for subsequent processes, beginning with site selection, are described under the Next Step section.

## 1.2 Issues of the Northern Corridor and areas along the highway

### 1.2.1 Background of the Road Rehabilitation Project

The Northern Corridor includes transportation nodes with roads leading to Ethiopia, Tanzania, and Uganda, as well as transportation nodes with roads leading to cities within Kenya, including Eldoret. This is an important highway not only for Kenya but for all of East Africa. Because of the extremely poor travel conditions on this road, the government of Kenya is pursuing a rehabilitation project for the Northern Corridor. As a major artery for East Africa, the Northern Corridor is functioning at an extremely low and inadequate level.

First, it lacks sufficient terminal functions. The total traffic volume along the Northern Corridor averages 2,500 vehicles per day, rising to 5,000 to 9,000 vehicles per day near urban areas. Many trucks travel the road, and the ratio of passenger cars to trucks is about four to six. Uganda, an inland country, depends on roads for 90% of its trade with regions outside Africa, and this road

is used for the majority of transportation between Kenya and Uganda; so there are many long-distance trips. However, there is an almost complete lack of terminal functions for the smooth handling of these transportation demands.

Second, travel speed is low. Outside urban areas, travel speeds average about 70 to 80 kilometers per hour for passenger vehicles and 30 to 50 kilometers per hour for trucks. However, on uphill stretches where the pavement is in poor condition, large vehicles such as trucks slow to very low speeds of only 10 to 20 kilometers per hour. Because the Northern Corridor is only a two-lane highway over most of its length, it is impossible to pass slow-moving vehicles. This frequently results in long lines of vehicles.

Third, there is a great deal of traffic congestion. In hilly areas, many long-distance drivers stop their vehicles by the side of the road near the top or bottom of a long hill to perform maintenance, let their engines cool, or take a break, resulting in traffic congestion. Long lines also form near weigh stations where trucks must stop to be weighed, and this impedes the flow of traffic.

Fourth, there are many traffic accidents. Long-distance trucks carrying international cargo from Mombasa to Uganda, long-distance express buses carrying tourists, and other long-distance transport vehicles are involved in increasingly frequent traffic accidents. For example, a passenger car will attempt to pass a slow-moving truck by crossing over into oncoming traffic, resulting in a collision; or a large vehicle will reach excessive speeds on a downhill stretch, colliding with other vehicles ahead. In the vicinity of Salgaal in the north, there are 240 traffic fatalities every year. Warning signs have been erected at locations with frequent traffic accidents in an attempt to alert drivers and prevent accidents, but this has not been effective.

**Figure 1. Vehicles traveling on a two-lane road pulling out to the right lane in order to pass a slow-moving truck**



### 1.2.2 Scarcity of rest facilities

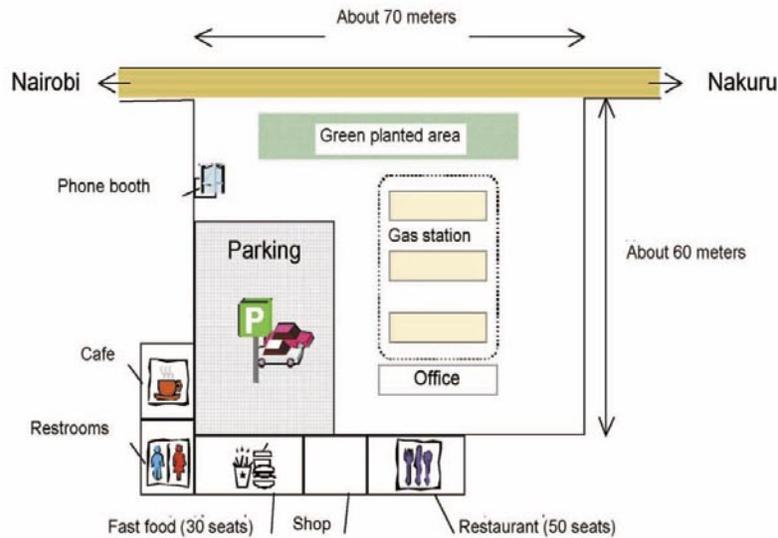
Although the Northern Corridor is used by many long-distance trucks, there are very few rest facilities with parking spaces that can accommodate trucks and other large vehicles. For example, the stretch from Nairobi to Nakuru has only one modern

rest area, providing parking space for large vehicles, a gas station, toilets, restaurants, a shop, and other functions on a site of about one hectare (Figure 2). There are few gas stations, located at intervals of about 20 kilometers near Nairobi and intervals of 70 to 80 kilometers in suburban and rural areas.

**Figure 2. Gas station complex located between Nairobi and Nakuru**



**Figure 3. Reference diagram of gas station complex**



### 1.2.3 Adverse effects from spontaneous markets

Many markets and lodging facilities have emerged spontaneously because of the lack of modern rest facilities along the Northern Corridor. Local residents sell vegetables and other goods in baskets along the roadside. Children often approach

moving vehicles to sell farm produce and the like, a significant traffic safety problem. There are a number of small-scale lodging facilities, but most of them are unsanitary and lack hygienic toilets. Prostitution occurs at some lodging facilities, and truck drivers reportedly become carriers of HIV/AIDS and spread the infection over wide areas.

**Figure 4. Children sell carrots along the roadside**



**Figure 5. Local residents sell fruit and vegetable along the roadside**  
**The daily average is 10 customers and US\$7 in total sales**



#### **1.2.4 HIV/AIDS and other social problems**

The HIV/AIDS infection rate is reported to be 15% in Kenya. Countermeasures are urgently needed. It is necessary to educate truck drivers, as stated above; but study is also needed on the most important fundamental measure of improving the regional income level.

### **1.3 Overall michinoeki Plan for the Northern Corridor**

#### **1.3.1 Support for resolution of regional problems through michinoeki introduction**

It is clear that simply improving transportation conditions by such means as increasing traffic capacity will not be sufficient to resolve the various problems that affect the area along the Northern Corridor. Michinoeki are very effective in helping resolve regional problems based on road improvement. All the social problems of the Northern Corridor, including the lack of rest facilities, lack of suitable markets, and prevalence of HIV/AIDS among truck drivers, affect a wide area, so a single michinoeki would have only a limited effect. It is necessary to consider a plan that will contribute to resolving the problems of the entire Northern Corridor by allocating suitable functions to each of several michinoeki locations and coordinating them.

The planned arrangement of multiple michinoeki

along the Northern Corridor can be expected to have three main effects. First, drivers will be able to take breaks at suitable intervals, contributing to traffic safety. Second, individual michinoeki will be better coordinated with each other, improving convenience for users. In addition to sharing design concepts, multiple michinoeki locations can win the trust of users more easily by maintaining a certain level of quality with regard to sales facilities, goods for sale, restroom facilities, lodging facilities, and other services. And third, this can be useful in forging an identity for the Northern Corridor as a thoroughfare, improving name recognition, and contributing to the creation of new cultural elements. These goals can be achieved by taking steps such as the adoption of a uniform symbol for all michinoeki locations built along the route.

#### **1.3.2 Proposal for michinoeki development in the Northern Corridor**

##### *A) Selection of Candidate Sites*

Intervals of about 100 kilometers are suitable for the arrangement of multiple michinoeki along the Northern Corridor. This calculation was based on the fact that it is desirable for long-distance drivers to stop for a break about once every two hours, and the fact that the average travel speed of trucks on the Northern Corridor is 30 to 50 kilometers per hour. The michinoeki locations should be places where long-distance buses stop for a break, including large bus terminals, and places where truck drivers stop

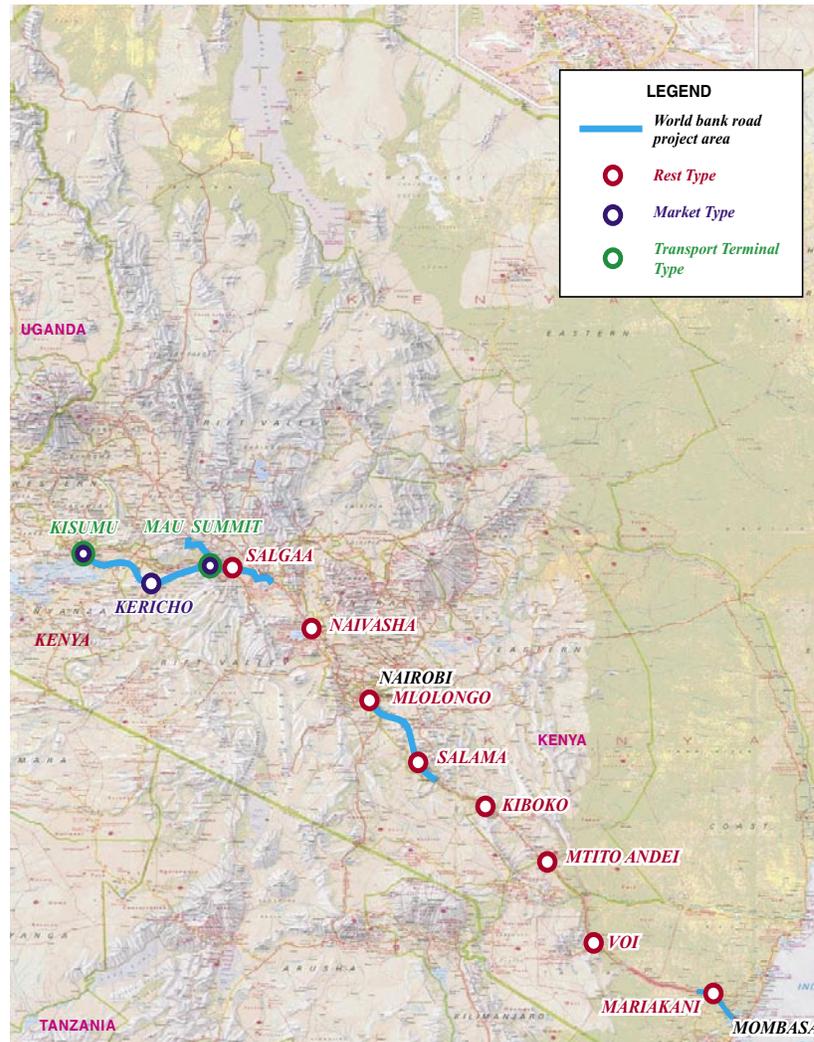
to take a break or stay overnight. However, places where there would be competition with existing similar facilities or other rest facilities should be avoided. Also, from the standpoint of traffic safety, it is desirable for michinoeki to be located near a weigh station or at the top or bottom of a long hill.

In areas where there are special local products, a michinoeki that emphasizes market functions

could be established to expand sales routes and stimulate the local economy. And at important transportation nodes, consideration should be given to the establishment of a michinoeki that emphasizes terminal functions.

Based on the above considerations, 11 michinoeki candidate sites have been selected along the Northern Corridor, as illustrated below.

**Figure 6. Map of Northern Corridor and Roadside station sites in KENYA**



*B) Allocation of functions among sites*

Three types of michinoeki are considered to be effective for resolving the problems affecting areas along the Northern Corridor. The rest area type contributes to traffic safety by providing a suitable rest environment. The market type helps to promote the region by expanding opportunities for the sale of local products. And the terminal type facilitates the handling of long-distance transportation demand. The following is a discussion of the suitability of each of the 11 selected candidate sites for establishment of these three types of michinoeki.

For michinoeki facilities of the rest area type, the primary goal is to reduce traffic accidents along the Northern Corridor. Their locations depend largely on drivers’ needs and the situation of vehicle operation. For example, Salgaa is at a location where many long-distance drivers stop to rest. Because there are no suitable rest facilities, many drivers stop along the side of the road, resulting in traffic congestion and many traffic accidents. The rest area type is effective for these kinds of locations.

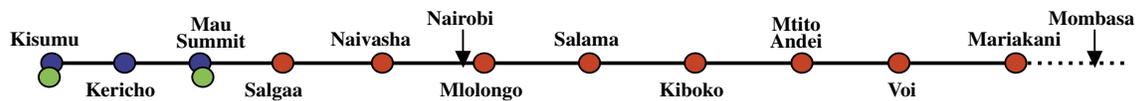
To establish successful michinoeki facilities of the market type, it is important for there to be

attractive resources in the surrounding area, as well as market demand. Therefore, the scope of suitable locations is somewhat limited. For example, Kericho is known as an area of black tea production, and local residents approach passing vehicles to sell them tea. To improve traffic safety and further expand sales routes, a market-type michinoeki would be effective at this kind of site.

Michinoeki facilities of the terminal type should be established at important transportation nodes. Appropriate locations along the Northern Corridor are Kisumu and Mau Summit. Kisumu is a terminal for wide-area transportation to and from Uganda, while Mau Summit is an important point where the Northern Corridor branches off into a road leading to Eldoret and another road leading to Kericho. However, at present, neither of these locations is equipped with terminal functions.

On the diagram below, the candidate sites are color coded according to suitable michinoeki types as discussed above. The table on the next page shows our findings with regard to the characteristics of each candidate site.

**Figure 7. Main objectives for michinoeki candidate sites along the Northern Corridor (red=rest type, blue=market type, green=terminal type)**



**Table 1. Major characteristics of candidate sites along the Northern Corridor**

	Kisumu	Kericho	Mau Summit	Salгаа	Naivasha	Mlolongo	Salama	Kiboko	Mtito Andei	Voi	Mariakani
<b>Primary type</b>	Market type Terminal type	Market type	Market type Terminal type	Rest type	Rest type	Rest type	Rest type	Rest type	Rest type	Rest type	Rest type
<b>Locational features</b>	- Junction	- 100 km from Kisumu	- 180 km from Kisumu Junction	- About 200 km from Nairobi and 200 km from Kisumu - Just before a steep hill heading for Kisumu	- 300 km from Nairobi - Junction	- 460 km from Mombasa - 20 km from Nairobi	- 380 km from Mombasa Junction	- 300 km from Mombasa	- 220 km from Mombasa	- 120 km from Mombasa Junction	- 50 km from Mombasa Junction
<b>Local resources</b>	- Fish - Vegetables	- Tea - Dairy products - Other vegetables	- Special agricultural products	- Special agricultural products	- Vegetables - Fruits	- Vegetables - Fruits - Flowers - Crafts	- Vegetables	- Vegetables - Fruits	- Vegetables - Fruits	- Vegetables - Fruits	- Vegetables - Fruits
<b>Functions</b>	- Rest area - Sales opportunity	- Sales opportunity - Support for tourism - Tea processing - Sanitation services - Rest area	- Sales opportunity - Rest area - Sanitation services - Public services (security)	- Rest area - Processing of products - Sales opportunity - Sanitation services - Public services (security)	- Rest area (especially for trucks) - Public transportation - Rest area	- Rest area - Sales opportunity - Sanitation services - Support for tourism	- Sales opportunity - Rest area - Sanitation services	- Rest area - Sales opportunity	- Rest area (buses and trucks) - Sales opportunity	- Rest area - Sales opportunity	- Rest area (especially for trucks)

#### 1.4 Selection of two sites for individual planning

We selected two sites that represent different objectives from among the 11 candidate sites mentioned in the preceding section. Kericho, which has a distinctive local product of black tea, was selected as a representative site of the market type. Mau Summit, which has heavy traffic volumes and social problems including HIV/AIDS infection, was selected as a representative site of the terminal type. Planning was performed on the assumption that michinoeki will be built at these two sites under the Northern Corridor Transport Improvement Project of the World Bank.

##### 1.4.1 Objectives of Kericho michinoeki

The michinoeki at Kericho was planned as a market-type facility that has local economic revitalization as its main objective.

In addition to the agricultural sector, including the cultivation of black tea (primary industry), Kericho also has developed a manufacturing sector

that processes the harvested tea into consumer products (secondary industry). However, sales functions (tertiary industry) are underdeveloped. Along the overall Northern Corridor are many places where local residents sell unprocessed agricultural products in the same state as they are harvested. There is inadequate coordination between the primary and secondary industrial sectors. By providing sales routes, the michinoeki could provide improved potential for the sale of high value-added products to travelers, combining the primary, secondary, and tertiary industrial sectors into a single cycle.

Traffic volume averages 2,200 vehicles per day at Kericho, with considerable volumes of both transit and local transportation. There is a particularly high proportion of long-distance public buses, so considerable demand for michinoeki facilities is expected. Since Kericho is located at a junction of roads leading to the borders with Uganda and Tanzania, travelers from Nairobi will perceive it as an intermediate point for travel to these two countries, making this a suitable location for a rest facility.

#### **1.4.2 Objectives of Mau Summit michinoeki**

The michinoeki at Mau Summit is to be of the market type as well as the terminal type. Mau Summit is an important junction with roads leading to Mombasa and Nairobi, to Kisumu and Uganda, and to Eldoret. Traffic volumes are high, and there is heavy demand for rest facilities.

The goals of the Mau Summit Michinoeki are to improve traffic safety and social problems including HIV/AIDS, which is a serious issue in this area and the neighboring Salgaa district, and to improve the situation of local markets that spring up spontaneously and are operated in a disorderly fashion by providing a well-planned, orderly market.

## 2. Kericho

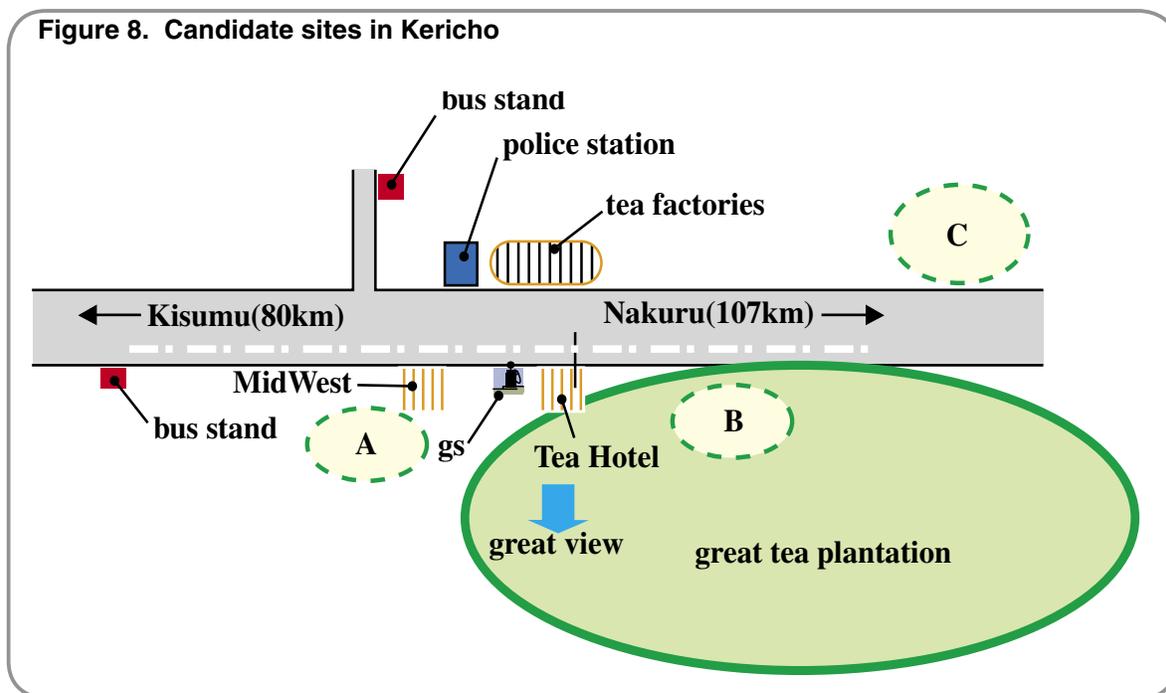
### 2.1 Identification

#### 2.1.1 Site selection

##### A) Selection of Candidate Sites

The Kericho michinoeki should not be too distant from the city, because it will be of the market type. There are three locations (A, B, and C in the

figure below) where about one hectare of flat land could be procured within a radius of approximately three kilometers from central Kericho. The Northern Corridor runs from east to west near Kericho. Tea plantations cultivated by small-scale farmers are located to the north, while a large tea plantation owned by a multinational food manufacturing corporation is located to the south.



##### B) Characteristics of candidate sites

Candidate Site A is closest to the central part of the city. The local authorities of Kericho have procured this land to build a cultural center. It is located behind the Midwest Hotel, which is situated along the main road. Therefore, land procurement would be easy. Its location near the center of the city is a major advantage for a michinoeki of the market type because the local community could also use the facilities with ease. However, the land surrounding this site is already in use as urban land, so it would be difficult to expand the site. Also, this site does not have as attractive a scenic view as Candidate Site B.

Candidate Site B is about two kilometers from central Kericho. It is currently a tea plantation. The site slopes gently downward away from the road, and a majestic view of tea fields stretching off into the distance is the highlight of this site. Tea leaves are harvested all year long in this area, so this location offers the opportunity to see tea being picked, enhancing visitors' appreciation of the region.

Candidate Site C is about three kilometers from central Kericho. It is less convenient for use by the local community than the other two candidate sites. However, there is a great deal of available land in the vicinity, and it would be easy to procure land. Even now, it would be possible to establish rest facilities

for long-distance buses, and this site offers a good location as a terminal. The land is practically level with the road, and it is currently being cultivated on a small scale. There is a view of tea fields to the south of the road, but the view is not as attractive as that of Candidate Site B.

### *C) Site evaluation*

For a market-type michinoeki intended to stimulate the local economy, an adequate level of predicted demand by road users is an important point. This type of michinoeki should be located at the entrance to an urban area or centrally located within an urban area. So the comparison is between Candidate Sites A and B, and the team that carried out the pilot study is recommending Candidate Site B, which offers a better scenic view and greater potential for site expansion. Here, long-distance travelers could sip a cup of tea and take a break while enjoying a sweeping view of tea fields. This is an attractive prospect that would reflect the distinctive characteristics of Kericho. However, to procure the land, it would be necessary to obtain the cooperation of the international corporation that owns the land.

## **2.1.2 Facilities**

### *A) Determining local demands and michinoeki functions*

The greatest demand in the Kericho area is poverty reduction. Kericho has local resources including black tea, and because of the activities of the tea industry here, this region has more employment opportunities than most other parts of Kenya. Still, 60% of local residents are forced to live at or below the poverty line. Residents lack the skills to process their farm produce into distinctive value-added products, and there are no sales opportunities for distinctive local products in the area.

On the subject of culture, the traditions of the Kipsigis tribe are maintained in Kericho, and local residents are proud of their cultural traditions. One of the important demands of local residents is to pass on Kipsigis culture and introduce it to others, including travelers. On the subject of transportation, Kericho is used as a resting point for long-distance

buses, but has no rest areas where buses can park. This situation needs to be corrected. Other demands are found not only in Kericho but in the rest of Kenya as well, including water resources (61.5% of local residents use public water supplies), medical services, firefighting services, police booths, and other basic elements of social infrastructure.

The following functions are expected of a michinoeki in Kericho to meet these local demands.

First, a michinoeki of the market type, which is aimed at raising income levels in the community, must provide sales opportunities for distinctive local products. In addition to the sale of tea leaves as a distinctive local product, the michinoeki should provide display space for community-led processing of products and a space for exchange (meeting place), with the goals of raising interest among visitors and providing technical education in the region.

Next, from the standpoint of the overall plan, it is important to provide support for tourists, including information on the region, in addition to rest facilities equipped with toilets and a water supply. The outcome of promoting exchange between the community and road users, an effect that is unique to michinoeki projects, can be obtained by including the theme of passing on the culture; that is, by introducing the local cultural traditions. HIV/AIDS countermeasures, which are needed over a wide area along the highway, should also be implemented as part of the michinoeki function of providing information.

To meet expectations for improved public services in the region, it is worthwhile to consider introducing sanitation services and medical support functions, depending on conditions in the area around the site.

### *B) Identification of facilities*

The michinoeki at Kericho should have the following facilities in its initial stage, on the basis of issues discussed in part A):

- Parking
- Market facilities (including a free market)
- Tea processing center to introduce local industry
- Restaurant facilities
- Medical clinic, primarily for HIV/AIDS

- Meeting place (training facility)
- Information facilities (on topics such as Kipsigis culture, HIV/AIDS, and road transportation)
- Toilet facilities
- Water supply area.

In a developing country, the basic approach for michinoeki establishment is to keep the initial investment low. The facilities for providing cultural information need not be large in scale, but they could include several displays, panels, books and so on, with the possibility for expansion. The gathering place (training facility) should be based on effective use of other facilities, such as use of the restaurant space before and after meal times. The approach should be realistic, recognizing for example that tables and chairs could be removed to provide space for dance performances and other events.

### 2.1.3 Stakeholders

In stakeholder analysis during the identification phase, one of the most important points is to identify the prime mover who will promote the project during the preparation phase. The prime mover may change at three major junctures to handle the stage of identification, the stage of preparation, appraisal and building, and the stage of operation. The government of Kenya could build michinoeki as incidental facilities for the national highway under the World Bank’s Northern Corridor Transport Improvement Project. In this case, the government of Kenya would implement the stage of preparation, appraisal and building, with technical assistance from the World Bank.

In the framework of local government in Kenya, the county council and district commissioner are important stakeholders who are in charge of wide-ranging industrial promotion and social capital building. It is realistic to assume that the local government (in this case, the municipal government of Kericho) would play a central role during the stage of operation.

The candidate site that we recommend in this paper is owned by a private multinational food manufacturing corporation. This company is a stakeholder with regard to site acquisition, and in addition, this company could participate alongside

the local residents and government in establishing the Kericho michinoeki, which will have “tea” as a major theme.

The establishment of a rest area will be welcomed by drivers, tourists, and other road users. However, roadside restaurants that are now used as rest areas may oppose a michinoeki because of concerns that it could take away their customers. (There are several roadside restaurants within a radius of three kilometers from the candidate site, not including hotels.) Thorough coordination will be needed in this regard.

It is reasonable to assume that the local residents who will provide local products and other services at the michinoeki live within a five-kilometer radius of the site. Very few of them own automobiles, and not all of them even have access to bicycles, so it is assumed that most of them will come to the site on foot.

### 2.1.4 Impacts

To build agreement among a wide range of stakeholders, it is necessary to identify the social and economic impacts that the michinoeki will have on the community. As explained above with regard to functions, the establishment of a michinoeki in Kericho will expand the opportunities available to local residents for the sale of black tea and other local products. In addition to providing a rest area for long-distance buses, it is also expected to contribute to improving the basic social infrastructure, including water resources (61.5% of local residents use public water supplies), medical services, firefighting services, and police booths.

Meanwhile, the michinoeki can be expected to have the following negative impacts, which would not affect the community to any great extent. First, the candidate site and the assumed location of the entrance/exit can be seen easily from every direction, so this would not affect highway traffic. The site is about 100 kilometers from nature conservancies near Kericho, so there would be no impact from noise, vibration, or exhaust gases. The closest similar facility (farm/rest area at Naivasha) is more than 200 kilometers farther along the Northern Corridor, so it would not be in competition. The

nearby gas stations do not offer high-quality rest facilities, and in any case, because the michinoeki is not being planned to include any fueling functions, it is unlikely that it would compete with gas stations.

However, there is undeniably a risk that the michinoeki could contribute to the spread of HIV/AIDS and other problems by attracting large numbers of truck drivers. The michinoeki at Kericho is to include functions for the provision of information, and it will be necessary to provide ongoing information and raise awareness concerning infectious diseases.

## 2.2 Preparation

Workshops were held for consultation with stakeholders concerning michinoeki scale and design (not including the detailed design). Through these workshops, local demands were identified to provide feedback for designing the michinoeki and its facilities. Subsequent procedures are described under the “Next Step” section.

### 2.2.1 Scale and design

#### A) Determining facility scale

At Kericho, traffic volume on the Northern Corridor is 2,200 vehicles per day. On the basis of this figure and assuming that 10% of the vehicles will stop in for an average stay of one hour, we calculated the necessary parking area. The Northern Corridor is traveled by many large trucks. Based on peak usage, according to the ratio of cars to trucks in passing traffic (7:3 by on-site visual observation), we calculated that parking will be needed for 35 passenger cars and 15 trucks. We multiplied these quantities by coefficients used for estimating area (2.5 x 5 meters for passenger cars, and 3.5 x 17 meters for trucks) to determine the necessary size of the parking area.

The whole site can be estimated at 10,000 square meters and the remaining area (minus space for the parking) is allocated to the main building and the rest space such as toilets and green area.

**Table 2. Area needed for each construction item**

Item		Area (m <sup>2</sup> )	Breakdown
Area of site	Parking area	4,350	Small vehicles: 35 veh.
			Large vehicles: 15 veh.
			Staff parking: 3 veh.
	Pedestrian area	1,480	
	Green area	2,550	
Area of buildings		1,320	Restaurant 280 m <sup>2</sup>
			Tea factory: 220 m <sup>2</sup>
			Information, Clinic: 110 m <sup>2</sup>
			Market: 220 m <sup>2</sup>
			Other facilities: 250 m <sup>2</sup>
			Corridors: 240 m <sup>2</sup>
Other areas		300	
Total		10,000	

### *B) Planning facility arrangement*

For users of the michinoeki at Kericho, it will be important to enjoy sweeping views of tea fields. Therefore, the buildings are to be located on the south side of the site, with parking areas on the north side. The parking space for large cars is designed for the convenience of truck drivers on the premise that vehicles can come in and go out of the parking area without going into reverse. For the effective use of the space, the vehicles are parked at a 60-degree angle from the road.

At an elevation of 1,500 meters, Kericho has a comfortable climate all year round. Natural ventilation will be used instead of air conditioning, resulting in electricity savings. Natural ventilation will also be used for the toilets, and these will be located at the farthest point away from the restaurant facilities. The restaurant and information spaces are located next to each other, making it possible to use both of these spaces in combination as a gathering place. In addition, our plan assumes that medical services will be provided in a traveling clinic vehicle

in the space for parking or information service center two to three days per week.

A small factory is to be placed next to the information space, considering that the factory will serve to introduce tea manufacturing methods and supply information and experiential learning. Instead of installing fixed walls between the facilities (rooms), the partitions will allow flexible, open use. Although well water from the water supply area will be used in the restaurant and toilets, this area will be placed near the road to facilitate use by local residents.

Other facilities that will be needed include an electric power generator to deal with Kenya's frequent power outages, a security guard booth to ensure security, and a septic tank.

Figure 9. Floor plan of michinoeki in Kericho



Figure 10. Perspective image of michinoeki in Kericho



### C) Estimating construction costs

Under the conditions described in A) and B), construction costs were estimated at KSh 78,348,000 (equivalent to US\$1 million).

**Table 3. Estimate of michinoeki construction costs**

	Area(m <sup>2</sup> )	Unit (Ksh)	Amount(Ksh)
Parking	4,350	3,700	16,095,000
Pedestrian	1,480	1,100	1,628,000
Gardening	2,550	500	1,275,000
Building	1,320	33,000	43,560,000
Other	300	600	180,000
Gate, Hedge, etc...	landscape		560,000
Deep Well Work	landscape		4,750,000
Septic tank	landscape		2,200,000
Water tank & Water tower	landscape		1,800,000
Generator (100KVA)	landscape		4,800,000
Telephone	landscape		1,500,000
Total			78,348,000

### 2.2.2 Consultation with stakeholders

Fundamentally, michinoeki projects are community-driven development (CDD). Therefore, the prime mover who initiates and promotes the plan must build agreement among the various stakeholders, in addition to developing the plan. It is particularly important to conduct capacity building for stakeholders during the kickoff stage, so it is effective to adopt a participatory approach.

#### A) Participatory approach

We adopted a participatory approach for gathering the views of stakeholders (See Technical Note 3). Under this method, having obtained the cooperation of the government, the stakeholders are defined and the steps from participation planning to decision making are implemented. The basic concept is to take plenty of time to build a strong agreement. Working from assumptions made during the identification phase concerning stakeholders, local

consultants defined the stakeholders, and workshops were held. The workshop format is widely used in development planning and is particularly relevant in a context where there is a planned intention of using CDD. Early involvement of the community in michinoeki development is essential to the successful development of michinoeki at Kericho and Mau Summit.

Stakeholders were identified as chairs of Kericho Municipal Council (KMC) departments, including finance, transportation, and the environment, members of the Kipsigis County Council, employees of black tea manufacturing companies, the mayor, local community representatives, the manager of Kenyan Farmers Association (KFA) Kericho, teachers, local businessmen, priests, representatives of the government’s Ministry of Labor, Ministry of Agriculture, and Ministry of Trade and Industry, and mass media reporters (newspaper and radio).

### *B) Memo on methodology*

The team that carried out this pilot study held workshops to gather the views of stakeholders using the two-stage format, which is suitable for determining the views of both the local community and the administration. Specifically, after views were gathered in a workshop involving local stakeholders and several representatives of the local authorities (Workshop A), these findings were verified in a workshop involving representatives of the central government as well as local authorities (Workshop B).

Few stakeholders knew anything about michinoeki. To hold discussions, it was necessary to develop a shared understanding of michinoeki at an early stage. To begin the workshops, a local consultant who had visited michinoeki in Japan gave an explanation so the participants would understand the michinoeki concept. Three types of materials were used in the workshops: a summary of michinoeki (with mostly Japanese examples), a plan draft for the michinoeki at Kericho, and a proposal of group work topics. These were projected onto a screen and explained, and participants were also given hard copies.

For the gathering of views, group discussions were held with seven or eight participants per group. In Workshop A, each group first discussed the proposal for facility establishment that had been prepared on the basis of the data from the identification phase, and then discussed the desirable management format. This was followed by presentations. Participants were asked to consider the michinoeki administrative entity paying for the land. Workshop B involved government officials, so discussions focused on determining a desirable administrative format with reference to the results of Workshop A.

### *C) Consensus building and feedback*

The workshop was successful and maintained its membership for the full event. The presentations performed their function of facilitating informed discussion and consultation. The interaction between presentations, materials, group work, group report-backs, and presentation of summary statements of understanding reached was of a high quality.

In addition to market functions to provide agricultural producers with sales opportunities, showcase-type agricultural product processing functions, and restaurant services including tea service, as indicated in the plan proposal, the stakeholders indicated that they felt a need for functions to maintain local public security, health promotion functions for local residents and drivers, firefighting functions, and support functions for local medical services. The new proposals for facilities included a security booth run by the Kenya Police, a gymnasium, and a health center with an accessible ambulance.

Concerning the site, the stakeholders generally supported the plan proposal. They all agreed that the beautiful background of tea fields would be one of the top attractions for a michinoeki at Kericho, and that a site that maximizes this background would be suitable for the michinoeki.

Michinoeki management was also discussed at the workshop. Workshop participants were fully aware that management is the key to sustaining and developing a michinoeki, and that the work is not over when the michinoeki facilities have been constructed. Stakeholders agreed that the michinoeki at Kericho should be operated by an organization that is based on a public–private partnership. Their reasons were that many stakeholders would be involved in michinoeki operation; this approach would promote democratic decision-making; and there would be a function of checks and balances with regard to management. They were concerned that if the michinoeki were to be operated by the public sector, management could be indifferent to the determination of users’ needs; there would be problems of bureaucracy; and rapid decision-making would be impossible. Conversely, if the michinoeki were to be operated by the private sector, stakeholders were concerned that only a small number of stakeholders would be involved; the benefits would not reach the local community; and a burden might be placed on users in relation to the provision of services.

The workshop can also be considered a “capacity building” activity. While the stakeholders were already experienced in organizing, discussing, and amending development planning projects and plans

(these stakeholder meetings included councilors, local authority officials, the mayor, and chairpersons of self-help associations), this was their first exposure to the michinoeki concept. The interactions between presentations, group work, report-backs, and plenary discussions provided the framework within which local capacity for michinoeki planning and organization began its development.

### 2.3 Next steps/recommendations

The matters requiring further study will be described.

#### 2.3.1 Site selection

From the three candidate sites for a michinoeki of the market type, which is intended to stimulate the local economy, we recommended Candidate Site B, where it would be easy to establish a market of the necessary size, and where future expansion of terminal functions for long-distance buses, etc. would be possible. The outstanding view is also expected to be a major attraction of the michinoeki, because long-distance travelers will be able to take a break and sip a cup of tea while enjoying a sweeping view of tea fields.

#### 2.3.2 Design and cost Allocation

Discussion with stakeholders is needed about the following specific design points.

Kericho has a great deal of rainfall during the rainy season. Considering the rain, all of the facilities should be under roofs, including free market facilities. Local residents also expressed this view.

In the workshop, stakeholders expressed concern that problems such as HIV/AIDS could spread when large numbers of truck drivers stop at the michinoeki. This possibility is undeniable. Therefore, information should be provided on HIV/AIDS, and a fence should be erected to improve security and restrict entry to and exit from the michinoeki, preventing prostitution.

On the subject of culture, the traditions of the Kipsigis tribe are maintained in Kericho, and local

residents are proud of their cultural traditions. The design should express elements of Kipsigis culture.

Kericho will be one of the 11 michinoeki locations along the Northern Corridor discussed in Section 1.3. The design should be unified with the design of all the michinoeki locations along the Northern Corridor, including a unified sign and logo. Also, each of the 11 michinoeki locations should provide information about the others, making it easier for drivers to use these facilities. This will also improve the effectiveness of wide-area efforts for HIV/AIDS and other problems.

#### 2.3.3 Operation framework

Selecting an operating entity is extremely important. Because the Kenyan government has no intention of getting involved directly in michinoeki management, the local community should participate in the decision-making process for choosing the operating entity.

The majority of the participants supported the idea of involving the third sector as stakeholders in the michinoeki project. Nevertheless, there are no private companies as a prime mover to run the third sector that can take a leadership role in the project and address social problems such as HIV/AIDS and road safety. In this context, michinoeki operation should be left in the hands of the municipal government. Unless the local government has these capabilities, the central government should take an initiative or private companies should be recruited to move to kericho from the outside to become a prime mover. In this case, it is essential to reach an agreement in advance on the service standard that the michinoeki should provide.

The third sector is composed of:

- Community-based groups
- Self-help groups
- Cooperatives
- Local authority
- Chamber of commerce
- Tea company.

The third sector should be headed by the mayor or someone elected by the newly established organizations. Separately, a station manager to

supervise michinoeki operation needs to be hired.

The capital ratio between public and private sectors should be 1:1 because michinoeki functions are designed to contribute to improvement in both sectors. Public and private funds are expected to come from the Kericho government and from the entities that will participate in the michinoeki project. The approximate amount of investment will be US\$9,000.

There are two methods for michinoeki management. One is for the third sector to be in charge of operating permanent facilities such as the market and restaurant. Another is the system under which permanent facilities such as the market and restaurant are leased. In the former case, investors serve as cooking and sales staff to keep costs low. In either case, the services that investors cannot provide, such as medical services, will be leased on an annual basis and an all-weather free market for the local community will be leased on a daily basis. The utility rate for the free-market should be set well below US\$1 for one day, considering the fact that Kenya’s per capita GDP is US\$350 and average daily sales at individual roadside markets is US\$5–US\$10.

In case of Kericho, administrative and maintenance expenses per annum for both direct management and lease-based management can be estimated as in the table below.

In case of direct management by the third sector, these operating costs need to be covered by revenue from utility charges for the market, restaurant, community space (training facility), clinic, and free market.

In case of sublease by the third sector, the unit price for sublease will be set on the basis of total costs divided by total square meters. Specifically, when the leased area is 580 m<sup>2</sup> (excluding 30 m<sup>2</sup> for the rental space for the market on a daily basis), the price per square meter becomes Ksh 3,801 per year. It is also necessary to consider a reduction in the rental charge from the second year onwards, depending on the operating rate of the free market in the first year.

In the meantime, the michinoeki is constructed by the Kenyan government under the World Bank project; thus ownership lies in the hands of the government. For this reason, if the third sector is established, they need to sign a lease contract with the Kenyan government. If that is the case, rent

**Table 4. Administrative and maintenance expense with direct management**

Item	Estimated amount (Ksh)	Notes
1. Personnel	540,000	Secretariat for market and restaurant (one each persons)
2. Security guard /parking attendant	540,000	TSR (three persons)
3. Repairs	132,000	Estimated unit price: Ksh 100/m <sup>2</sup> per annum
4. Public utilities	1,122,000	Including the costs of electricity, telephone, fuel for generator, water supply, butane
5. Others (10% of the total of 1- 4)	233,000	10% of the above total
6. Rent receipts (charge for the use of the free market)	-33,000	Estimated rental unit price: Ksh 3, number of visitors: 30 persons/day
7. Total	2.534 million	US\$32,000

**Table 5. Administrative and maintenance expense with lease-based management**

Item	Estimated amount (Ksh)	Notes
1. Personnel	240,000	Secretariat for market (one person)
2. Security guard /parking attendant	540,000	TSR (three persons)
3. Repairs	132,000	Estimated unit price: Ksh 100/ m <sup>2</sup> per annum
4. Public utilities	1,122,000	Including the costs of electricity, telephone, fuel for generator, water supply, butane
5. Others (10% of the total of 1-4)	203,000	10% of the above total
6. Rent receipts	-33,000	Estimated rental unit price: Ksh 3, number of visitors: 30 persons/day
7. Total	2.204 million	US\$28,000

should be free or less than 2–3% of total profits. Phased payment terms, such as rent-free for the first five years, with payable afterwards, also may be possible.

During the preparation period, especially immediately after the administrative entity is established, such details should be reexamined by that entity if desired.

## 3. Mau Summit

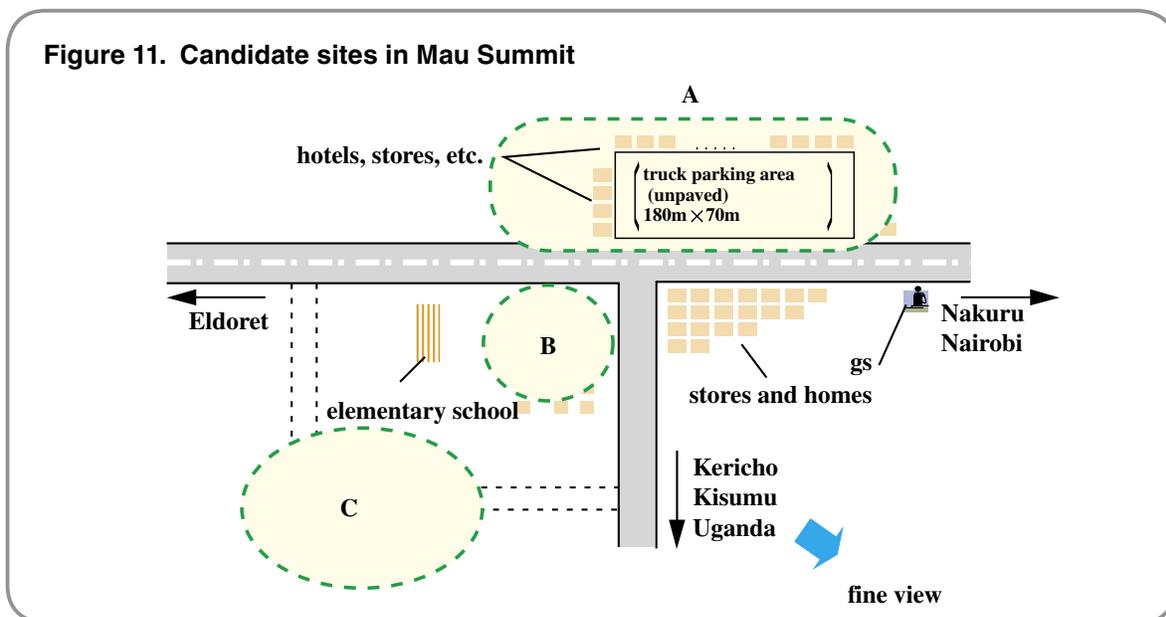
### 3.1 Identification

#### 3.1.1 Site selection

##### A) Selection of candidate sites

The michinoeki at Mau Summit should be of the terminal type, located near the junction. There is an existing concentration near the junction, so it is also advantageous for a michinoeki of the market type to be located near the junction. There are three candidate sites where about one hectare of level land could be procured near the junction. A site at the

top of the T-shaped junction (Candidate Site A) is an unpaved truck parking area (180 meters wide and 70 meters deep). Toward the end of the pilot study, it was learned that there are plans to pave this truck parking area. There is a concentration of shops and homes around the parking area and on the right side of the T-shaped junction. The truck parking area is level with the road, but the land on the left and right sides of the junction is two or three meters lower than the road.



##### B) Characteristics of candidate sites

Candidate Site A is level with the road. Because it is occupied by a truck parking area, stores, hotels, and so on, the construction of a michinoeki here would not involve major changes in land use. There is equal access from the roads in all three directions, and there is expected to be a great deal of demand from drivers for rest facilities. There is a gentle downward slope to the south, offering a fine view. However, if the michinoeki is built close to the junction, it could cause traffic congestion which could create traffic safety problems.

Candidate Site B has fewer existing buildings, so

it would be relatively easy to obtain land. It is near the center of the town, offering advantages for use as a market type michinoeki. Traffic congestion could be avoided by building two entrances at a distance from the junction. However, this site is located next to an elementary school, raising the issue of traffic safety for the children. Also, the land is two or three meters lower than the road, so there is no scenic view.

Candidate Site C is 200 to 300 meters back from the junction, so access roads would need to be built. There are no existing buildings, so of the three candidate sites it would be easiest to obtain

land here, and future expansion would also be easy. This site is practically level with the road heading for Kericho, so there is a view across the highway. However, because it is so far back from the road, drivers passing the site would not be able to see it as clearly. Also, it would compete with existing commercial facilities near the junction, and this could mean a lower rate of vehicles stopping at the michinoeki.

#### *C) Site evaluation*

There is a plan to pave an existing truck parking area at Mau Summit. Coordination with this development plan must be kept in mind for the michinoeki. The team that carried out the pilot study recommends Candidate Site A, expanding the existing truck parking area, for establishment of a michinoeki. At this site enough land can be obtained to provide a sufficient number of parking spaces, and it is close to existing market-related facilities, making it a suitable location for a michinoeki of the market type. For several reasons, building a michinoeki as a separate but similar facility next to the existing parking area to be paved is not desirable. This would disperse demand, reducing profits for both the michinoeki and existing stores. It would confuse drivers and impair the safety of pedestrians walking between the facilities. In addition, this duplication of investment would reduce cost effectiveness. We recommend integrating the michinoeki with existing facilities and coordinating it with plans for the truck parking area.

Candidate Site B also offers a large area, and because it is near existing market-related facilities, it could be used for a michinoeki of the market type. However, this site is not suitable because it is next to an elementary school, and could make it dangerous for children to get to school or could impair their educational environment. At Candidate Site C, it is possible to procure a great deal of land and future expansion would be easy, but demand would be dispersed because it is located at a distance from existing market-related facilities. The michinoeki could draw customers away from existing facilities, reducing the economic vitality of the area. Therefore, Site C is not the most suitable.

### **3.1.2 Facilities**

#### *A) Determining local demands and michinoeki functions*

About 64% of the population in the area around Mau Summit lives at or below the poverty line, and poverty reduction is the greatest demand. Various kinds of vegetables are grown at Mau Summit, but since the same kinds of vegetables are produced in other areas along the Northern Corridor as well, this is not highly competitive. The market lacks security, and travelers cannot shop with peace of mind. Although this location has high traffic volume and great sales potential, it is not being used to the fullest extent.

Transportation safety should be improved. Mau Summit is near the top of a long hill leading down into the Rift Valley, an ideal spot for drivers to stop for vehicle repairs or to let their engines cool down. However, because of a lack of suitable facilities, many drivers stop their vehicles by the roadside. This leads to many traffic accidents, especially at night when visibility is poor. There are few facilities for the sale of farm produce and the like, and many children approach moving vehicles to sell vegetables or other goods. There is a need for a safe environment where residents can sell their products.

With regard to social problems, information about HIV/AIDS prevention is needed. Prostitution is practiced because of extreme poverty, and along with a lack of knowledge concerning prevention, has caused many people to become infected with HIV/AIDS. The situation is serious, including the spread of infection over wide areas by truck drivers. Michinoeki offer suitable infrastructure within which the problems of HIV/AIDS transmission along highway routes in Africa can be addressed. There is also a great need for better hygiene services, especially the supply of clean water, in the Mau Summit area.

To fulfill these demands, the michinoeki at Mau Summit should have the following functions.

First, it will need to offer rest functions and sufficient parking for a michinoeki of the terminal type, where a high level of use by truck drivers is expected because of its location at the junction of highways leading in three directions. With security

measures, including proper lighting, drivers will be able to use the michinoeki with peace of mind even at night. Next, it will need to provide sales opportunities as a michinoeki of the market type. However, there is already a concentration of stores in this area, and coordination will be needed to avoid putting pressure on existing businesses.

HIV/AIDS countermeasures are needed in the entire area along the highway, not only at Mau Summit. Screening, information, and treatment centers (VCT) built in michinoeki could be provided to address HIV/AIDS. Employment for young women to attract them away from prostitution is seen as another. Similarly, the development of recreational facilities near a michinoeki is a possible solution to the current problems experienced by rural youth who also contribute to the spread of HIV/AIDS. By providing hygiene services, including a supply of clean water and support for medical care, the michinoeki could help improve the overall level of hygiene and medical care in addition to helping to prevent HIV/AIDS infection. Specifically, the michinoeki would provide a meeting space for use in medical care activities when the area is visited by mobile medical teams (providing health check-ups and simple medical treatment).

#### *B) Identification of facilities*

The michinoeki at Mau Summit should have the following facilities in its initial stage, as discussed in part A):

- Parking
- Vehicle maintenance services
- Market facilities (including a free market)
- Restaurant facilities
- Facilities needed for HIV/AIDS countermeasures, including information and treatment centers (VCT)
- Meeting place (education and training facility)
- Information facilities (including information on road transportation)
- Toilet facilities
- Water supply area.

Because of the heavy rainfall during the rainy season, all these facilities should be covered. As in the case of Kericho, to keep the initial investment

low, the facilities should be designed as integrated spaces, including restaurant facilities as a meeting place.

#### **3.1.3 Stakeholders**

The matters related to general stakeholders (promoters, drivers, nearby facilities, and local residents) are the same as described in the chapter on Kericho, and will not be repeated here.

In Workshop A, the participants were asked about their overall views on the plan proposal, and they discussed site location and management format. Many participants indicated the need for various public services. In Workshop B, which was limited to members of the administration, the discussions covered important social services and public facilities that can be addressed only through a michinoeki.

The entity that will improve the truck parking area, mentioned as a stakeholder of Mau Summit, needs to be taken into consideration. The rest area functions of a michinoeki overlap with those of the truck parking area. The entity that is planning to improve the truck parking area has not been identified yet, but in promoting the michinoeki plan, it will be important for stakeholders on both sides to discuss the plan together, pursuing discussions for this project as an integrated plan.

#### **3.1.4 Impacts**

The positive impacts that can be expected from a michinoeki at Mau Summit include higher incomes for local residents as a result of sales opportunities for farm produce, improved traffic safety through the control of roadside parking and roadside sales, and prevention of infectious diseases by means of improved hygiene services and increased public information.

Meanwhile, two kinds of negative impacts could be caused by a michinoeki at Mau Summit: conflicts of interest necessitating coordination with nearby commercial facilities, and the need to modify traffic flow to ensure safety.

The michinoeki is likely to change the market environment for existing stores, restaurants, and

lodging facilities. Although existing businesses that move into the michinoeki and neighboring stores will see an increase in customers, other entrepreneurs who continue to engage in commerce at a distance from the michinoeki could lose customers, reducing their incomes. Steps must be taken to minimize this kind of negative impact by operating the michinoeki under a system that provides sales opportunities to all local residents; for example, by establishing a joint sales area where merchants could take turns selling their products on different days of the week.

The site presents potential problems of pedestrian safety and traffic congestion. Because of its concentration of market facilities for local residents, there are many pedestrians, who could be hit by trucks entering or exiting the michinoeki. It is important during the planning stages to discuss ways to ensure safety for pedestrians and to take specific measures such as establishing pedestrian crossings and providing thorough education on their use. To minimize the problem of traffic congestion related to its location at a junction, the entrances and exits should be located as far away as possible from the intersection, as stated in Technical Note 4.

## 3.2 Preparation

As in the case of Kericho, workshops were held for consultation with stakeholders concerning michinoeki scale and design (not including the detailed design). Through these workshops, local demands were identified to provide feedback for designing the michinoeki and its facilities. Subsequent procedures are described under the “Next Step” section.

### 3.2.1 Scale and design

#### A) Determining facility scale

At Mau Summit, traffic volume on the Northern Corridor is 4,450 vehicles per day. Using this figure and assuming that 10% of the vehicles will stop, we calculated the necessary parking area. Based on peak usage, assuming that vehicles will stay for an average of one hour, and using the ratio of cars to trucks in the area of Mau Summit (1:1 by on-site

visual observation), we calculated that parking will be needed for 40 passenger cars. Trucks sometimes park overnight and set off early in the morning. Based on local interviews, we determined that 40 trucks are parked there at peak times. We multiplied these quantities by coefficients used for estimating area (2.5 x 5 meters for passenger cars, and 3.5 x 17 meters for trucks) to determine the necessary size of the parking area.

In the identification phase, site selection was based on an estimated site area of 10,000 square meters. However, a great deal of space will be needed for truck parking, and it is desirable to provide as much market space as possible; so this pilot study has determined that the site should be large, on the premise of expanding the existing parking space, with an area of 20,000 square meters. The remaining area minus the parking space is allocated to the building space and rest areas, including toilets and green planted areas.

**Table 6. Area needed for michinoeki construction in Mau Summit**

Item		Area (m <sup>2</sup> )	Breakdown
Area of site	Parking area	12,060	Small vehicles: 40 veh.
			Large vehicles: 40 veh.
			Staff parking: 3 veh.
	Pedestrian area	2,920	
	Green area	2,650	
Area of buildings		1,520	Market 430 m <sup>2</sup>
			Information 140 m <sup>2</sup>
			Rest area 290 m <sup>2</sup>
			Other facilities 290 m <sup>2</sup>
			Corridors 370 m <sup>2</sup>
Other areas		650	
Total		19,800	

*B) Planning facility arrangement*

Although the michinoeki at Mau Summit has a limited site area, it will need a great deal of space for truck parking; so we have aimed for an efficient arrangement. Considering the current situation, in which there is a high demand for vehicle maintenance, a rather large portion of the parking area has been set aside for maintenance purposes. The proposal does not include a gas station. But if it is possible to relocate the gas station currently situated across the road from the site, it would be suitable to position the gas station next to the maintenance space, which also would require reallocating the parking space.

Mau Summit has a climate that is comfortable all year round, like Kericho. To save on electricity and other costs, natural ventilation will be used. The toilets will also use natural ventilation, and these will be located at a distance from the restaurant facilities and so on because of the odor.

At Mau Summit, an area where markets have developed in a disorderly fashion, the michinoeki should provide generous sales opportunities for local residents and become a model market along the Northern Corridor. Therefore, the market has been given a larger area than the other facilities. The

facilities are placed amid green planted areas and connected by corridors to allow for open and flexible use.

The facilities have been arranged so that the restaurant can also be used as a meeting place, with the possibility of using the corridors and green planted areas as well for a large, continuous space. This information service center is located near the parking lot to promote smooth coordination with the traveling clinic vehicle, in addition to education and training for the prevention of infectious diseases. An information board about preventing infectious diseases is to be put at the edge of the facilities and parking lot to ensure good visibility. Well water from the water supply area will be used in the restaurant and toilets. However, because it will be used by local residents as well, it does not need to be located adjacent to those facilities. Therefore it will be placed near the entrance/exit for the convenience of local pedestrians.

Other facilities that will be needed include an electric power generator to deal with Kenya's frequent power outages, a security guard booth to ensure security, lamp posts in the parking space for nighttime security, and a septic tank.

Figure 12. Perspective image of the michinoeki at Mau Summit



Figure 13. Artist's conception of the michinoeki at Mau Summit



C) *Estimating Construction Costs*

Under the conditions described in A) and

B), construction costs were estimated at Ksh 114,263,000 (equivalent to US\$1.14 million).

**Table 7. Estimate of michinoeki construction costs**

	Area(m <sup>2</sup> )	Unit (Ksh)	Amount(Ksh)
Parking	12,060	3,600	43,416,000
Pedestrian	2,920	1,100	3,212,000
Gardening	2,650	500	1,325,000
Building	1,520	33,000	50,160,000
Other	650	600	390,000
Gate, Hedge, etc...	landscape		710,000
Deep Well Work	landscape		4,750,000
Septic tank	landscape		2,200,000
Water tank & Water tower	landscape		1,800,000
Generator (100 KVA)	landscape		4,800,000
Telephone	landscape		1,500,000
Total	19,800		114,263,000

### 3.3.2 Consultation with stakeholders

As in the case of Kericho, based on the principles of CDD, the prime mover who initiates and promotes the plan must build agreement among the various stakeholders, in addition to developing the plan. It is particularly important to conduct capacity building for stakeholders during the kickoff stage, so it is effective to adopt a participatory approach.

#### A) Participatory Approach

A participatory approach was used. For details, please refer to the description of this approach in the chapter on Kericho.

Stakeholders for the michinoeki at Mau Summit are CACC members, the chairpersons of Sirikwa and Molo, government representatives, consultants, farmers, teachers, and business persons.

#### B) Memo on methodology

To gather the views of stakeholders, workshops were held using the same methods as in the case

of Kericho. Please refer to the description in that chapter.

#### C) Consensus building and feedback

In addition to market functions to provide agricultural producers with sales opportunities, agricultural product processing functions, and restaurant services, including tea service, as indicated in the plan proposal, the stakeholders voiced a need for functions to maintain public security, health promotion for local residents and drivers, firefighting, and support for local medical services. New proposals for facilities included electricity, a security booth run by the Kenya Police, a gymnasium, a fire station, and a health center with an accessible ambulance.

There was great interest in site selection, and many views were expressed. From the three candidate sites described, Candidate Site B was initially proposed at the beginning of the workshop, but participants indicated that this would be a problem because of its proximity to the elementary

school.

Many participants thought that it would be desirable to have the michinoeki managed by an organization based on public–private partnership. However, there was not complete agreement on this point. Some groups thought that the michinoeki should be under public management by the central or local government, emphasizing its social functions such as public services.

The workshop can also be considered a capacity building activity. Although the stakeholders were experienced in organizing, discussing, and amending development planning projects and plans, this was their first exposure to the michinoeki concept. The interactions between presentations, group work, report-backs, and plenary discussions provided the framework within which local capacity for michinoeki planning and organization began its development.

### 3.3 Next steps/recommendations

The matters requiring further study will be described.

A wide range of matters require consultation with stakeholders, including coordination with plans to improve a truck parking area and an existing concentration of commercial facilities, formulation of an operating plan in the absence of influential private companies, unlike in Kericho, and specific countermeasures for HIV/AIDS, which is a serious issue in the Salgaa district as well.

#### 3.3.1 Site selection

Mau Summit is an important transportation node with roads leading to Nairobi, Kisumu, and Eldoret. These roads form a T-shaped junction, and lodging facilities, restaurants, gas stations, offices, private homes, and other facilities are concentrated around this intersection. The proposed expansion of a truck parking area, the selected site, is at the center of this T-shaped junction. This would require the resettlement of a considerable number of local residents and relocation of existing facilities. There is a need for thorough study with related stakeholders concerning relocation and resettlement.

Because Mau Summit is an important transportation node, it should be a michinoeki of the terminal type, and it is important to ensure the possibility for expansion to handle increases in demand. As truck performance improves, bus transportation grows, and travel between regions increases, there may be increasing traffic concentration at terminals such as Mau Summit, with growing demand for the use of such terminals to change buses or transfer cargo. Because demand has not yet emerged for these kinds of terminal functions, they have not been included in the current design. However, the potential for expansion should be maintained to handle changes in the flow of people and goods, including the construction of a bus terminal or distribution facilities for the transport of goods to the surrounding region.

#### 3.3.2 Functions and facilities

The michinoeki at Mau Summit is expected to be an example of how to address wide-area social problems such as HIV/AIDS infection, and thorough steps must be taken in this regard. When more michinoeki are built, Mau Summit will need to serve as a good model for HIV/AIDS countermeasures at michinoeki. Although a single michinoeki cannot resolve the issue of preventing HIV/AIDS infection, efforts that cover the entire length of the highway could be expected to have an important effect. It is no exaggeration to state that the level of countermeasures taken here, at one of the first michinoeki locations, will decide the level of countermeasures to be taken at other michinoeki locations throughout Kenya. Of course, measures can be taken to solve other wide-area social problems, including improving hygiene and medical care and preventing traffic accidents.

#### 3.3.3 Design and Cost Allocation

Because the michinoeki site is located at a T-shaped junction, a thorough study of traffic safety is needed. Steps must be taken to prevent traffic congestion by locating the entrances and exits as far as possible from the T-shaped junction and installing guardrails, guidance markers, and information signs. Thorough study is needed from a technical standpoint

for the detailed design, including consultation with traffic safety experts as well as local residents.

Discussion with stakeholders is also needed with regard to the following specific design points.

Many trucks use Mau Summit, and Candidate Site A has a long rectangular shape, making it difficult to design the site for truck parking. In this case study, on the basis of on-site observation, we have proposed a ground plan that uses 45-degree angled parking for large vehicles, based on the premise of not requiring drivers of large vehicles to back into parking spaces. This kind of arrangement results in a great deal of dead space. It has the advantage of providing a relaxing place for resting, but considering the efficiency of land use and the need to allow for future site expansion, more study is needed concerning this point. Study of the design needs to involve a thorough exchange of views with stakeholders (especially landowners and lease holders).

Mau Summit also has a great deal of rainfall during the rainy season. Local residents have expressed the view that all facilities should be covered, including the free market facilities, because of the level of rainfall. Proper rainwater drainage would also contribute to a hygienic environment in the region. It will be necessary to hold an exchange of views with stakeholders as to the type of design to use, including these kinds of details.

### 3.3.4 Operation framework

Selecting the operating entity is extremely important. Because the Kenyan government has no intention of getting involved directly in management, the local community should participate in the decision-making process for choosing the operating entity.

Like in Kericho, the majority of participants supported the idea of involving the third sector as stakeholders in the michinoeki project. However, there are no private companies capable of taking a leadership role as project prime mover to address social problems such as HIV/AIDS and road safety. In this context, michinoeki operation should be left in the hands of municipal government. Unless the local government has these capabilities, the central

government should take the initiative or private companies should be recruited to move to Mau Summit from the outside to become prime mover. In this case, it is essential to reach an agreement in advance on the service standard that michinoeki should provide.

The third sector is composed of:

- Community-based groups
- Self-help groups
- Cooperatives
- Local authority
- Chamber of commerce
- Private company.

The third sector should be headed by the mayor or someone elected by the newly established organizations. Separately, a station manager to supervise michinoeki operation needs to be hired.

The capital ratio between public and private sectors should be 1:1 because michinoeki functions are designed to contribute to improvement in both sectors. Public and private funds are expected to come from the Mau Summit government and from the entities that will participate in the michinoeki project. The approximate amount of investment will be US\$9,000.

There are two methods for michinoeki management. One is for the third sector to be in charge of operating permanent facilities such as the market and restaurant. Another is the system under which permanent facilities such as the market and restaurant are leased. In the former case, investors serve as cooking and sales staff to keep costs low. In either case, the services that investors cannot provide, such as medical services, will be leased on an annual basis and an all-weather free market for the local community will be leased on a daily basis. The utility rate for the free-market should be set well below US\$1 for one day, considering the fact that Kenya’s per capita GDP is US\$350 and average daily sales at individual roadside markets is US\$5–US\$10.

In case of Mau Summit, administrative and maintenance expenses per annum for both direct management and lease-based management can be estimated as in the table below.

In case of direct management by the third sector, these operating costs need to be covered by revenue such as utility charges for the market, restaurant, community space (training facility), and clinic.

In case of subleased by the third sector, the unit price for sublease will be set on the basis of total costs divided by total square meters. When

the leased area is 800 m<sup>2</sup> (excluding 60m<sup>2</sup> for the rental space for the market on a daily basis), the price per square meter is Ksh 3,144 per year. It is also necessary to consider a reduction in the rental charge from the second year onwards, depending on the operating rate of the free market in the first year.

**Table 8. Administrative and maintenance expense with direct management**

Item	Estimated amount (Ksh)	Notes
1. Personnel	540,000	Secretariat for market and restaurant (one each persons)
2. Security guard /parking attendant	720,000	TSR (four persons)
3. Repairs	152,000	Estimated unit price: 100kshs/m <sup>2</sup> per annum
4. Public utilities	1,234,000	Including the costs of electricity, telephone, fuel for generator, water supply, butane
5. Others (10% of the total of 1- 4)	265,000	10% of the above total
6. Rent receipts (charge for the use of the free market)	-66,000	Estimated rental unit price: Ksh 3, number of visitors: 60 persons/day
7. Total	2.845 million	US\$36,000

**Table 9. Administrative and maintenance expense with lease-based management**

Item	Estimated amount (Ksh)	Notes
1. Personnel expense	240,000	Secretariat for market (one person)
2. Security guard /parking attendant	720,000	TSR (four persons)
3. Repairs	152,000	Estimated unit price: Ksh 100/m <sup>2</sup> per annum
4. Public utilities	1,234,000	Including the costs of electricity, telephone, fuel for generator, water supply, butane
5. Others (10% of the total of 1-4)	235,000	10% of the above total
6. Rent receipts	-66,000	Estimated rental unit price: Ksh 3, number of visitors: 60 persons/day
7. Total	2.515 million	US\$32,000

Whichever the case, in Mau Summit, with few major private companies, the michinoeki's raison d'être is to help solve serious social problems such as HIV/AIDS and traffic accidents, which is different than Kericho's main purpose. Because a michinoeki is intended to contribute to the improvement of well-being, either the central government or the local government should consider providing assistance directly to the michinoeki project. If there is no private hospital to provide medical services at the michinoeki, a public organization can send doctors to the michinoeki. Furthermore, if security at the entrance/exit and parking area is provided by the central or local government, operating costs will be cut by approximately Ksh 720,000 (equivalent to the personnel cost paid to the security guards and parking attendants).

In the meantime, the michinoeki is constructed by the Kenyan government under the World Bank project; thus ownership lies in the hands of the government. For this reason, if the third sector is established, they need to sign a lease contract with the Kenyan government. If that is the case, rent should be free or less than 2–3% of total profits. Phased payment terms, such as rent-free for the first

five years, with payable afterwards, also may be possible.

During the preparation period, especially immediately after the administrative entity is established, such details should be reexamined by that entity if desired.

## Technical Note B. Michinoeki pilot study in China



“Michinoeki”



## Table of Contents

<b>1. Introduction</b>	146
<b>1.1 China as the world’s factory</b>	146
<b>1.2 Problems of the chinese economy</b>	146
<b>1.3 Impact of rapidly expanding expressway construction</b>	147
<b>1.4 Michinoeki for local economic self-sufficiency</b>	147
<b>2. Pilot study</b>	148
<b>2.1 Selection of target region</b>	148
<b>2.2 Overview of Hongcun Zhen</b>	148
<b>2.3 Proposal for a michinoeki in Hongcun zhen</b>	149
<b>2.3.1 Local demands</b>	149
<b>2.3.2 Functions and Facilities</b>	151
<b>2.4 On-site Survey of Hongcun zhen: examination of michinoeki feasibility</b>	153
<b>2.4.1 Site selection</b>	153
<b>2.4.2 Stakeholders</b>	153
<b>2.5 Obstacles to introducing the michinoeki</b>	155
<b>2.5.1 Procuring funding</b>	155
<b>2.5.2 Systems of government and private cooperation</b>	156
<b>2.5.3 Empowerment of the residents</b>	156
<b>3. Next Step: The state of michinoeki preparations in China</b>	158
<b>3.1 How to procure funding?</b>	158
<b>3.1.1 Procuring funds for the construction phase</b>	158
<b>3.1.2 System of administration and administration costs</b>	159
<b>3.2 What sort of government-private cooperation is possible in the facility’s establishment and operation?</b>	159
<b>3.3 Empowerment of local residents</b>	160
<b>3.3.1 Improving residents’ ability to participate in planning</b>	160
<b>3.3.2 Methods for reflecting residents’ demands</b>	161

## 1. Introduction

Michinoeki are facilities that offer drivers rest and food and a place to perform vehicle maintenance. Motorists can buy what they need at a michinoeki market. The rest function that a michinoeki offers plays an important role in the promotion of traffic safety.

Users of the market are not limited to car drivers; local residents also use a michinoeki. Local residents also are the key service providers in a michinoeki and have the chance to pursue business opportunities at the facility. This empowers local residents.

Michinoeki can offer public services as well as those offered by the private sector by providing facilities that help improve the welfare, education, and medical care of community people. When a michinoeki is newly constructed on a road along and provides public services on the premises, the impact of the road infrastructure improvement will be doubled for the community.

A michinoeki empowers local residents and provides public services; the public sector therefore should join the private sector operating businesses at a michinoeki to assist in planning, construction, and operation of michinoeki. The public–private partnership works well in successful michinoeki facilities.

China has been experiencing remarkable economic growth. However, industry is concentrated in urban coastal areas, and the economic gap between these areas and the inland regions of China is growing. The construction of a high-speed railway network serving mainly coastal areas and the rapid development of a nationwide expressway network are likely to contribute to the growing economic disparity between urban and rural areas unless countermeasures are implemented. Facilities such as michinoeki that empower local residents, thereby contributing to the vitality of local economies, can be an effective means of resolving these kinds of problems.

However, although the capitalist economy is spreading, China is a one-party state governed by the Chinese Communist Party. To implement michinoeki, it will have to answer several questions: To what extent is the implementation of empowering policies possible? Is it possible to establish a cooperative public–private system? Do local residents have the know-how to conduct business? Raising funds to construct and manage facilities is another issue that local governments, with only limited financial resources, must address.

This report presents the findings of a pilot study conducted to assess the potential for introducing michinoeki into China, targeted at those considering the introduction of michinoeki in China or other countries with similar situations.

### 1.1 China as the world’s factory

Economic growth accelerated when China joined the World Trade Organization (WTO) in 2001; GDP grew by 8% in 2002 and 9% in 2003. Growth rates of 8–9% are predicted for the next few years. The transition from a planned economy to a market economy has been linked with a privatization process for state-run companies. As a result, large coastal cities have received large inflows

of foreign capital, promoting further development and prosperity for private entrepreneurs. China’s transition to a market economy has achieved a certain level of success.

### 1.2 Problems of the chinese economy

Inequality is growing in the Chinese economy. Most economic development is concentrated in the coastal cities, benefiting businesses and residents

1.Chinese population census: National survey on population and residence.

2.Transient population: People who leave their registered address for at least six months to live and seek employment elsewhere.

in urban areas but leaving rural inland regions with the same poverty and low standard of living as they had before economic reforms. Unemployment is also rising. The Chinese Institute of Social Sciences has estimated that 160 million rural workers out of 500 million are unemployed. According to the Chinese population census of 2000, the transient population now includes 120 million. There is an especially high rate of movement from inland provinces including Anhui, Hunan, Jiangxi, Henan, and Hubei to coastal areas such as Guangdong, Zhejiang and Shanghai.

Development of a market economy results in greater economic disparities among individuals. Successful entrepreneurs and their families monopolize capital and information and use additional business opportunities to further expand their incomes. These phenomena are sometimes seen in rural inland areas as well as in large coastal cities. It is easily imaginable that these economic disparities among individuals, or the gap between the rich and the poor, could lead to serious problems in the near future.

### 1.3 Impact of rapidly expanding expressway construction

China is building a network of major expressways to cover the entire country. This plan is called “Five Vertical, Seven Horizontal,” referring to five expressways running from north to south and seven expressways running from east to west, with a planned total length of 35,000 kilometers. Construction was begun in 1988, and by the end of 2002, about 25,120 kilometers had been completed (Zhongguo Jiaotong Bao [China Transport Report], November 13, 2003). The pace of construction work is being stepped up, and in the future this expressway network will cover all of China.

As transportation becomes more convenient and large cities are linked by expressways, rural areas between the cities may undergo further economic decline as traffic merely passes through.

### 1.4 Michinoeki for local economic self-sufficiency

As travelers pass through a region, facilities offering functions that will attract some of this traffic into the region are needed. Exchange between automotive traffic and the region will prevent economic decline and promote local self-sufficiency. Michinoeki can serve as a tool that meets these needs.

The Chinese constitution was revised in 1982 following a policy of reform and openness. China is said to be pursuing a policy of promoting democratization on the local level under the new constitution.

For example, rural communes were abolished, separating government from the rest of society. The government is responsible for the administrative organization of towns and townships, and village committees make decisions on social matters. Village committees include the village head and committee members directly elected by village residents. They are self-government organizations that decide matters closely related to the lives of village residents, such as the construction of infrastructure or maintenance of public facilities within the scope of village administration. Villagers have a high level of interest in their village committees, and voter turnout is higher in these elections than in any other type of elections.

Considering these facts, democratization appears to be advancing along with the transition to a market economy in China.

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3. In addition to subsidies from higher-level agencies, the sources of funding for the governments of towns and townships include income from tourist facilities and an agricultural tax on farmers' incomes. These funds are used for purposes such as mandatory education, health and sanitation services, and infrastructure.

## 2. Pilot study

### 2.1 Selection of target region

On this highway network, about 500 km from Shanghai in the interior, is Huangshan Shi, in Anhui province. The income levels of Huangshan Shi’s farming households are about on average for China’s agricultural areas, but because the city has no specialized industry, in recent years it has been suffering an outflow of population as people move to the city to work.

Huangshan Shi does have strong tourism resources, however, in particular the Huangshan Scenic Area, a UNESCO Natural/Cultural World Heritage Site, which has 1 million visitors who come to see the sites (see below photo). With the highway to Shanghai scheduled for completion in 2010, it is predicted that the number of tourists will increase further as a wide range of transportation

conditions improve. However, there are no concrete plans locally for taking advantage of this change in circumstances to create new business opportunities. Not knowing how to close the economic gap with the expanding cities, this Chinese region is representative in its experience.

Therefore, a pilot study in Huangshan Shi, Anhui province, was conducted to examine the effectiveness of michinoeki as a tool for supporting local economic independence, keeping in mind at all times the three functions that can be expected of michinoeki. The target area included the ancient village of Hongcun in Yixian County. Hongcun zhen is designated as a UNESCO World Cultural Heritage Site (Yixian is an administrative unit of Huangshan Shi, and Hongcun zhen is an administrative unit of Yixian).

**Mountains in the Huangshan scenic area**



### 2.2 Overview of Hongcun Zhen

Hongcun zhen is in the western part of Huangshan Shi. It has a population of about 8,800, an area of 85 km<sup>2</sup>, and 11 administrative hamlets under it. The ancient village of Hongcun, which is registered as the 28th of China’s 29 UNESCO World Cultural Heritage Sites, is separated by about 20 km from the ancient village of Xidi, also a World Cultural Heritage Site. Many tourists visit

the ancient village of Hongcun, with an average of 100 buses a day, 300 during the peak, in the April-to-October tourist season. The annual number of tourists reaches 400,000 (2003), making this a well-known domestic tourism spot in China.

Hongcun zhen is also famous for its edible moso (a variety of bamboo) and green tea harvested in the spring; edible wild plants and dried bamboo shoots, harvested in the fall; and craft products made of bamboo and stone. The moso, dried mushrooms and

tea, a high-quality variety called Huang Shan Mao Feng, are rated highly by tourists.

**Ancient village of Hongcun**



**Souvenir market in the ancient village**



**Bamboo ware, one example of a specialty product.**



**Individual residents also sell items**



### 2.3 Proposal for a michinoeki in Hongcun zhen

The economy of Hongcun zhen relies on tourism. We propose, therefore, that Hongcun zhen capitalize on its ability to attract tourists to promote the sale of merchandise produced and processed by the village community, with the aim of empowering local residents.

#### 2.3.1 Local demands

##### A) Context of local demands

Stated plainly, neither the government nor the people had a clear direction for developing

the region. Although both the government and businesses had a vague idea that something needs to be done to prepare for the business opportunities that the completion of the expressway will bring, no concrete plan has been developed.

The context of this is probably related to China’s pricing system, which is said to have three price levels. The first is the international price, for foreign travelers. The second has been set in accordance with the urban, middle-class lifestyle that has become prominent recently. The third price level is adapted to the lifestyles of ordinary people. In other words, even if there are high numbers of unemployed or poor people in a region, it is possible for them to adopt a low-cost lifestyle. Hongcun zhen is this sort of region, and its citizens

do not demonstrate a strong desire to increase income levels. Therefore, there is little effort to implement recent agricultural technology or obtain market information. Furthermore, those who are trying to start new projects do not know how to go about it.

This is the nature of the locality, but with the construction of the expressway network, the Hongcun government, its enterprises, and its citizens understand the potential for an increase in tourists from the city using the expressway, and the potential of these tourists purchasing goods and lodging in the Hongcun area. They understand that these factors will be critical to the development of the Hongcun-area economy, which is based on tourism. It is probably accurate to assume that the demands on the local community will be for the expansion of sales opportunities for local products and the development and sale of new products.

#### *B) Potential local demands*

Local demand to stimulate the regional economy under the opportunity afforded by preparations for the expressway can be summarized in three categories: sales, product processing, and tourism support.

#### *a) Sales Opportunity*

Private suppliers (lodging providers and product sellers) have a strong interest in using Hongcun zhen products (moso bamboo, dried bamboo shoots, Huang Shan Mao Feng green tea, and edible wild plants and crafts such as bamboo ware and stone working) to expand their businesses. One manager who engages in sales was interested in original product sales and restaurant management but does not have the funds or opportunity to pursue this idea.

Hongcun zhen does not have any organizations to lead farming households in agricultural communities (such as the agricultural cooperatives of other developed nations), and so individual producers usually sell agricultural products wholesale (see below photograph). Furthermore, they often must transport their goods themselves in carts to open markets or towns and attend to the sales. If a michinoeki concept were implemented, the market function would create sales opportunities, and because it would allow for high-frequency low-volume transportation, it would be possible to increase the number of outlets.

**Farmer selling green tea to a processor on the road**



#### *b) Product Processing*

Processing and packaging of the various special seasonal products, such as bamboo shoots, green tea, and wild plants, are performed not in Hongcun zhen, but 20 km away in Yixian, and thus do not contribute to local employment. However, enterprises in Hongcun zhen would like to process and package agricultural products themselves; if a michinoeki provided a processing facility, it is likely that it would be used, allowing even more profit to be gained through the sales of products with high added value in the michinoeki.

#### *c) Tourism Support*

About 30 km distant is the Huangshan Scenic Area, which is designated a UNESCO Natural/Cultural World Heritage Site. Throughout the year, about 1 million tourists visit the Huangshan Scenic Area, and about 400,000 seek lodging there. About 400,000 tourists visit the ancient village of Hongcun each year, but about one-fourth of these tourists (about 100,000) lodge there. Most tourists do not spend the night after sightseeing in the village, but return home. So the tourism potential of the ancient village is not being fully realized.

A michinoeki could provide information about the ancient village and lodging in the area, traditional entertainment, and handicrafts, thus supporting expansion of the tourism industry. This could lead to revitalization in a wider range of tourism businesses in Hongcun focused on the ancient village.

### **2.3.2 Functions and Facilities**

The functions that the Hongcun zhen michinoeki should provide were considered, in the context of the goal of revitalizing the local tourism industry as a whole.

#### *A) Increase of opportunities - preparation of a direct sales establishment*

By providing direct sales establishments in the michinoeki as outlets for local specialties, an increase in local sales will be achieved. The direct sales establishment could carry the following products:

- Agricultural goods, such as bamboo shoots, green tea, and processed products made from these.
- Bamboo ware and stoneware, craft products of the Hongcun region.
- Other souvenirs.

However, the overall management of the market facility is a matter requiring separate consideration. Similarly, the matters of selecting shops and the operation support system require separate consideration.

#### *B) Product processing - providing a processing area*

A facility for processing, packaging, canning, and packing Hongcun delicacies, such as bamboo shoots, green tea, and edible wild plants, is needed. Making the processing process open to the public may help draw additional customers. The processing area should have facilities for the following:

- Green tea washing, production, packing, and packaging
- Bamboo shoot and dried bamboo shoot washing, packing, and packaging
- Edible plant washing, processing, packing, and packaging

#### *C) Support for the tourism industry-preparation of facilities for providing information*

Local information (sightseeing, access, weather) should be provided to highway users who visit the ancient city. An example informational “menu” follows:

- Lodging establishments, especially in the ancient village
- Sightseeing facilities other than the ancient village
- Roads in the surrounding area
- How to reach the Huangshan Scenic Area and central Huangshan Shi (Tunxi-qu, Wanan)
- Weather (in Huangshan mountains and surrounding area)
- Parking, seating in Huangshan cable car

#### *D) Michinoeki layout plan*

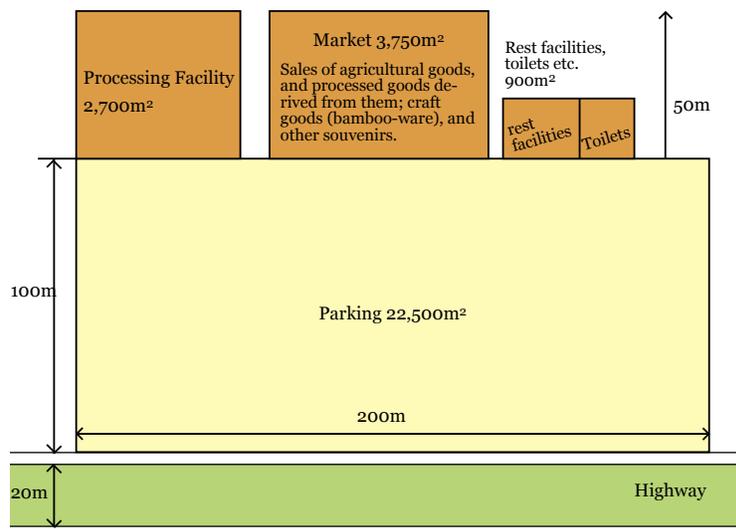
The product sales area should be central, with toilets, information booths, and processing facilities on either side. A tour could be provided for highway users who visit the processing facilities.

[Estimated Construction Cost]

- Construction costs of residences in Hongcun zhen were used as reference
  - Engineering / construction work alone—Yuan 500 per m<sup>2</sup>
- Facility scale considerations based on on-site surveys
  - Parking: 150 vehicles = 22,500 m<sup>2</sup>,
  - Market: Per shop, 5 m \* 5 m = 25 m<sup>2</sup>,
  - Number of shops = 200 (there are about 100 shops in the ancient village currently)
    - Total: 3,750 m<sup>2</sup>
  - Processing facilities: 2,700 m<sup>2</sup>
  - Toilets and other rest facilities (including information booths): 900 m<sup>2</sup>
    - Total: 29,850 m<sup>2</sup>
- Michinoeki construction costs, according to the above:
  - Engineering and construction work: 29,850 m<sup>2</sup> \* 500
    - = CNY 14.9 million
    - = US\$ 1.79 million
    - (Calculated at the rate of Yuan 1 = US\$0.12)

[Estimated Facility Operating Costs]

- Operating costs of nearby hotels were used as reference.
  - Employee salaries
    - Number of employees: 30 (This figure was based on number of employees at michinoeki of similar scale in Japan.)
    - Average salary: CNY 450 per month per person-----Hotel wages
  - Subtotal: CNY 162,000 per year
    - (= 30 employees \* Yuan 450 per month per person \* 12 months per year)
- Facility maintenance and repair costs: CNY 200,000 per year (based on hotel maintenance and repair costs)
- Total: CNY 360,000 per year
  - = US\$43,200 per year

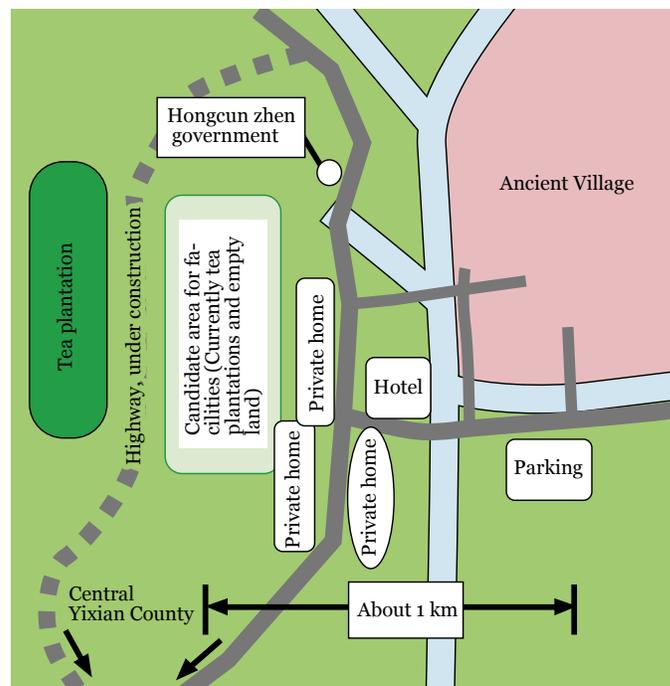


## 2.4 On-site survey of Hongcun zhen: examination of michinoeki feasibility

After creating the plan outlined in 2.3 for the Hongcun zhen michinoeki, we visited Hongcun zhen to assess the feasibility of the michinoeki and issues related to construction. We held discussions on site with the Hongcun zhen government (district head and vice district head) along with higher institutions such as the Huangshan Shi government and Yixian County government. Similarly, we held discussions with private sector stakeholders—hotel managers and a representative of the residents (the Hongcun village mayor).

### 2.4.1 Site selection

Considering that the ancient Hongcun village area is a protected World Cultural Heritage Site, it would be difficult to secure a large-scale site there. However, there is a plot of level ground of roughly 18.7 ha about 1 km from the ancient village. This pilot study assumed that this land would be the michinoeki site.



### 2.4.2 Stakeholders

The presumed stakeholders in the planning, establishment, and operation of the Hongcun zhen michinoeki are as follows:

- Government organizations (Anhui, Huangshan Shi, Yixian, Hongcun zhen)
- Lodging providers
- Restaurant operators

- Stores (souvenir stores)
- Residents
- Entities involved in technical support (government)

During the on-site survey, after giving an overview of the michinoeki’s purpose and features for stakeholders and explaining our assumptions about the michinoeki’s functions within Hongcun zhen, we listened to the stakeholders’ opinions and requests. An outline of these follows.

#### A) *Government*

We obtained approval for the idea of encouraging tourism in Hongcun zhen by establishing a michinoeki from each level of the administrative structure—Anhui, Huangshan Shi, Yixian, and Hongcun zhen. One particularly highly valued facet of the michinoeki was that, unlike a highway service area, a michinoeki is not just for highway users and would improve everyday convenience for residents.

Funding is a large problem. The Hongcun zhen government, which would probably be in charge of facilities planning, already must contend with the preservation of the ancient village. People currently sell bamboo- and stoneware and operate restaurants for tourists in the village, but the Hongcun zhen government, fearing that an increase in tourists will lead to the destruction of the ancient village, is planning to move the shops and restaurants about 1 km to the 18.7 ha plot of land we identified as the logical site for a michinoeki. The Hongcun zhen government is considering having tourist buses and passenger cars park at this site. However, the Hongcun zhen government lacks adequate funds to establish this sort of facility, and so it assumes that private capital will be required to establish and operate the facility.

The Chinese central government has policies promoting the stimulation of rural communities, so by working together, Anhui province, Huangshan Shi, and Yixian county might be able to procure some funding through various national aid policies. However, according to the Hongcun zhen government, this would not provide enough funding to establish the michinoeki (total aid from 2002 to the present is Yuan 30 million, primarily for preserving the ancient village and supporting agriculture). Consequently, the Hongcun zhen government believes it inevitable that they consider using private capital, including financing from large coastal enterprises and local private businesses, and establish and administer the facility as a partnership.

#### B) *Lodging providers, restaurant operators, and shops*

Hongcun zhen’s private businesses have determined that the michinoeki would be profitable because of expanded sales opportunities and the potential for the michinoeki to attract tourists with local sightseeing information. If the michinoeki is established, they expressed the hope that the structure would be built in the traditional Anhui architectural style (black fireproofed roofs with white brick walls) out of consideration for the ancient village and surrounding environment.

One proprietor stated that if the michinoeki had processing facilities, he definitely would want to participate. He has wanted to become involved in processing the tea and edible plants produced in Hongcun zhen for a while but does not have the facilities or know-how. Furthermore, he does not have the funds for the needed facilities, nor the know-how, and therefore cannot expand his business independently. A michinoeki would be effective in giving this sort of entrepreneur the opportunity to develop.

#### C) *Residents*

We also had the chance to listen to the Hongcun village mayor (a village committee representative) as a representative of the residents. The village mayor lives in the ancient village and raises tea, rice, and mulberries on her farm a few kilometers from the ancient village. The village mayor and village committee members are chosen by direct elections by residents. The village committee is experienced in deciding matters that affect everyday life (such as maintenance of village infrastructure and the fish farm administered by the village), and has a high interest in townspeople.

According to the mayor, residents who desire village revitalization are numerous. However, because of the area’s isolation, little information is available, and so even if the villagers want to try new things, they have no idea how to go about doing so. Also, even if an entrepreneur tried to start a new business, he or she would be stymied by difficulties in obtaining funding.

## 2.5 Obstacles to introducing the michinoeki

The on-site survey clarified the obstacles to establishing and operating the michinoeki in Hongcun zhen.

### 2.5.1 Procuring funding

#### A) Construction funds

All administrative organizations (Huangshan Shi, Yixian, Hongcun zhen) indicated that funding the michinoeki would be a problem. In 2003, Hongcun zhen’s annual expenditures amounted to 5 million yuan, less than one-third the estimated construction cost for the project (Yuan 14.9 million [US\$1.79 million]). It probably would be difficult for the Hongcun zhen government alone to bear the cost of establishing the michinoeki.

The possibilities offered by aid systems to provide construction funds must be examined, such as Yixian and Huangshan Shi and the various aid systems offered by the central government (for example the three agricultural policies for a michinoeki as a facility for the promotion of rural communities and improvement of farmers’ incomes). If sufficient construction funds cannot be procured from the government, the introduction of private capital must be considered. However, the introduction of private capital raises two issues.

The first is whether private capital in fact could be secured. Among businesses in Hongcun zhen, lodging and restaurant businesses are the majority. These business operators do not have enough reserve funds to expand their businesses and probably could not bear any of the costs of establishing or operating the michinoeki. However, looking beyond Hongcun zhen, large businesses in coastal urban areas are aware of the business opportunities that will be created in the interior tourist areas by the expressway network, and they are beginning to show interest in these new investment possibilities. But large enterprises may emphasize profit and economic principles that are not necessarily compatible with the michinoeki goal of regional promotion. This

leads to the second issue.

The second issue is if private funding would enable the three michinoeki functions—an incubator, a means of local community empowerment, and promoter of exchange between the highway users and local community—to be fully realized. By accepting capital from large, urban coastal enterprises, the facility could be operated with a profit-first mentality and commercialism, ending up just another roadside facility. Not only would it be difficult for this sort of facility to take into account the opinions of local people, it would not lend itself to revitalizing the local community. If capital from private enterprises is used, a framework must be created to ensure the michinoeki’s primary functions.

What is more, there is no precedent in Hongcun zhen for using private capital to establish an institution.

#### B) Operating costs

Sufficient operating funds must be secured so that the michinoeki in Hongcun zhen will continually develop. The existence of sightseeing resources in Hongcun zhen (the ancient village) means that each year a minimum number of tourists will visit. To encourage these tourists to visit the michinoeki, the michinoeki facility must be attractive as well as offer goods for sale. Securing stable operating funds to increase the physical attractiveness of the michinoeki will be an issue.

In the Chinese legal system, the government cannot directly perform economic activities, and so for Hongcun zhen to administer the michinoeki independently, a system by which rent is collected from storeowners would have to be implemented. Besides setting lease prices and securing enough stores to provide sufficient funds to cover facility maintenance and operating costs, the structure of defraying costs from the government’s revenue source would have to be considered.

If private capital is used, however, besides taking measures to ensure the michinoeki’s primary functions are not lost, and in addition to creating a framework allowing operation of the facility by

4. The three agricultural policies are related to agriculture, rural communities, and farmers, laid out in December 2003 in Central Committee State Affairs Administration Opinions on a Number of Policies for the Promotion of Increasing Rural Income.

private capital, a plan must be established to prevent profits from concentrating in a few enterprises, and a structure that allows operating funds to be secured efficiently must be considered.

### **2.5.2 Systems of government and private cooperation**

The fact that the michinoeki will be established and administered by both the government and the local community, and not the government alone, is distinctive. Because the small private enterprises of Hongcun zhen conduct activities, and the residents live their lives, under the strong guidance of the Hongcun zhen government, the question of what sort of cooperative system can be established is critical. So that grass-roots voices are reflected in the planning and operation of the michinoeki, the village committee must first collect requests and opinions from the residents regarding the planning and operation of the michinoeki. Then the village committee must work towards gaining the understanding of the higher levels of government, such as Hongcun zhen, rather than the residents directly taking on the role as the establishing entity.

### **2.5.3 Empowerment of the residents**

#### *A) Uneven Distribution of Information*

In any country, there are differences in the levels of information literacy among residents. In Huangshan Shi, these differences are particularly large. One young man in the area worked at a cellular phone company after graduating from college, then used the know-how he gained there to go independent; now he sells cellular phones in addition to operating a travel agency for tourism to the Huangshan scenic area. Yet, as the Hongcun village mayor stated, many residents do not know how to go about starting new undertakings.

Currently, there is a large gap between people who have acquired information and know-how and those who have not. This is probably true of modern China in general. Further, the percentage of people in Hongcun zhen with information and know-how is tiny. As mentioned earlier, the region has no policies in place related to the opportunities for regional

economic stimulation presented by the establishment of the expressway.

For michinoeki to succeed in China, besides solving the funding problem, local residents must understand the significance of the expressway construction and share this understanding.

#### *B) Reflecting residents' demands*

Since the revision of China's constitution in 1982, China has moved forward with democratizing policies. One of these was the establishment of village committees, which is expanding democratization at the local level. However, China is still under single-party rule. The zhenchang (zhen government) of Hongcun zhen is also the secretary-general of the Hongcun chapter of the Communist Party. Furthermore, the village committee, which is elected directly by the residents, is obliged to act under the guidance of the zhenchang, or in other words, the Communist Party. Consequently, most government activities are carried out according to Communist Party policy, and not all activities are based on the principle of decision by majority, as in other developed nations.

Because projects in China tend to proceed in a top-down fashion, a critical issue will be how to reflect residents' demands in establishing the michinoeki facility with respect to the deep-rooted local infrastructure. How will the village committee, which addresses and solves problems related to residents' everyday lives, take note of the vague demands of the residents living in the vicinity of the World Cultural Heritage Site, and, together with the zhenchang and zhen government, work to fulfill them?

Fortunately, the Hongcun zhenchang once worked in a private enterprise, is well informed of trends inside and outside the region, both domestically and abroad, and is a person with excellent business sense. Private citizens also would benefit from taking the demands of residents for a michinoeki into consideration and incorporating them into preparations and plans.

*C) Residents' ability to participate in planning*

Unlike a service area, a michinoeki is established by the local community, and the active participation of the local community is expected. However, in modern Hongcun zhen, sales of agricultural and crafts products are conducted in flea markets, and the local community, experienced only in operating simple stalls offering food and drink, does not have experience in planning the operation of a permanent store, product processing facility, or information center. There are three reasons for this.

One is insufficient funding. Even if someone wanted to try something new, there would be insufficient seed money. Recently, the Chinese central government has offered financial support (the three agricultural policies), and although there is a good possibility that the funding obstacle will be overcome in the future as the rural people's ability to participate in planning improves, the appropriate systems do not currently function. Consequently, the funding issue makes it difficult for rural people to launch independent undertakings. Public support is therefore crucial.

The second is lack of information. As some of the residents themselves remarked, many of Hongcun zhen's residents live in an isolated society. There are few opportunities for them to hear of or observe new ways of doing things. In particular, on ancestral farmlands, at the most specialized produce will be cultivated and sold to nearby traders. In other words, there are almost no opportunities to make direct contact with the needs and trends of the markets, and very little chance of making direct contact with or learning about the currency economy. At the same time, there are few means to obtain such information. Thus, if residents are to be the chief administrators, a large problem remains regarding the rapid acquisition of information and prompt response to changing market needs and user demands.

Third, residents' cumulative knowledge about planning and operating a facility such as a michinoeki is very limited. For many years local people have focused on production activities in agricultural fields and have little know-how of marketing, facility design, or technology related

to facility planning and operation needed for the market and communication support features of the michinoeki. This makes it vital that in the initial planning stages technical support be provided, such as government funding for engineers well versed in facility design and planning.

### 3. Next step: The state of michinoeki preparations in China

In China, a country that has achieved rapid economic growth, construction of the expressway is proceeding at an unprecedented rate. Seeing this, one has the impression that if only funding could be secured, this energy would solve all the other problems and the michinoeki would be completed almost instantly. This is probably because China has its own distinctive system that is different from those in other developed nations. China is a communist country under the single-party rule of the Chinese Communist Party. In rural regions, the government still operates under the strong guidance of the Communist Party. In a place such as this, an establishment like the michinoeki, which uses the community-driven development method, may not make immediate progress. It could easily become a facility that is established and administered from the top down.

Yet in the movement towards a global economy, such as the development of international specialization, the Chinese government carried out reforms and opening policies for economic development and international competitiveness, and it was this current that led to the revision of the Chinese constitution in 1982 that abolished the People's Communes and established the village-zhen system. As a result of policies that encourage democratization at the local level, the separation of politics and society is proceeding in rural areas, and democratization is making headway. The direct election by the residents of the village committee and village/zhen public representatives is a positive sign of citizens' empowerment.

In other words, the groundwork is in place in rural China for a michinoeki that is operated with respect for the residents, stimulates the local economy and community, and contributes to the development of China's rural areas. However, the Hongcun zhen pilot study shows that establishing a michinoeki in present-day China will not be easy. Steps necessary to find solutions are discussed in the following sections.

#### 3.1 How to procure funding?

Finding funding, one of the largest issues in establishing the michinoeki is considered here with regard to the construction and administration phases.

##### 3.1.1 Procuring funds for the construction phase

Construction costs are estimated at Yuan 14.9 million (US\$1.79 million). The annual expenditures of Hongcun zhen are about Yuan 5 million (US\$0.6 million), and annual aid from top-level organizations totals about Yuan 15 million (the majority of which is earmarked for the maintenance and repair of the ancient village). Thus, it would be difficult for the Hongcun zhen government to bear the entire cost of construction. It is necessary to again consider the possibility of procuring government funds, including the possibility of the using aid systems of higher-level organizations. However, if it proves difficult to procure funds from within the government, the following two methods can be considered.

One possibility is taking a loan from an international financial institution, such as the

World Bank or JBIC, or from the Industrial and Commercial Bank of China, under the leadership of the Hongcun zhen government. If financing came from an international financial institution, the financial point of contact would be Anhui province, and Anhui province therefore would conduct the construction, and either Hongcun zhen or an administrative corporation of the michinoeki would be given a free or compensated lease.

The second possibility is using private capital. Among the large coastal enterprises are some who have launched operations along the interior expressway, and many enterprises are turning their attention to the interior for new investment opportunities. With the establishment of the expressway network, interest in the michinoeki in Hongcun zhen, a promising tourist destination, will probably be high. However, although an inflow of big business capital would create employment in Hongcun zhen, most profits probably would flow back to the big businesses and not lead to a revitalization of the local economy or help foster local businesses.

In this case, the problem would be how to guard against an outflow of profits; one way would be to form a limited partnership with the Hongcun zhen government, an investment coalition of local enterprises with a fixed ratio, and investments attracted from businesses outside the region. Managing the facility’s establishment and operation through this limited partnership would allow the local area, not just the large outside enterprises, to prosper. There is an enormous gap between small local enterprises and large coastal enterprises not just in terms of funds but also in terms of accumulated know-how and information. Therefore, it will be critical to foster new local enterprises while encouraging the further development of existing local enterprises. Providing the michinoeki site from the public side probably also would be an effective way to ensure residents’ involvement in michinoeki planning and public services.

### 3.1.2 System of administration and administration costs

The method of procuring funds during the operation phase will probably vary depending on the michinoeki’s system of administration. Three entities could act as the administration entity.

The first candidate is the Hongcun zhen government. If funding is procured in the form of bank loans during construction, the Hongcun zhen government will be the administration entity. The second possibility would be for the village committee to handle administration. In this case, the facilities would be established with bank loans, and the village committee would lease the facilities from the government (Hongcun zhen, or in the case of loans from international financial organizations, Anhui province).

In these situations, it would be desirable for the Hongcun zhen government, which would be the administering entity, to contract storeowners individually and collect yearly rent from them to secure a stable source of operating funds. Under this system, fixed rent would enable operation of the facility and also work as an incentive for the storeowners.

A third option would be for an administrative

corporation to be established to administer the facility. In this case, a limited partnership established with investments from the Hongcun zhen government, local enterprises, and businesses from outside the region would administer the facility. If private capital is used for the construction phase, it would be desirable for the limited partnership to continue participating in the administration of the facility. Furthermore, if the facility is established with bank loans, the administrative company would lease the facilities from the government (Hongcun zhen, or in the case of loans from international financial organizations, Anhui province).

In this situation, storeowners would be contracted individually, and yearly rent collected from them, and the administrative company would handle operation of the overall facility. In this case, if the overall facility made large profits, these profits could accrue to the administrative company, but the risk of a large loss must also be anticipated, so it would be necessary to maintain a separate fund for such an eventuality.

Compared to large, urban coastal enterprises, the people and local enterprises of Hongcun zhen have an insufficient knowledge base, and the guidance and support of the Hongcun zhen government would be needed in various areas. For this reason, the first option, the operation of the facility chiefly by the Hongcun zhen government, would be desirable for the michinoeki in Hongcun zhen.

## 3.2 What sort of government-private cooperation is possible in the facility’s establishment and operation?

Unlike other developed countries, China is under single-party rule. All government activities are carried out under the guidance of the Chinese Communist Party, and in the rural sector too, the influence of the Communist Party is still great. However, as mentioned earlier, active democratization policies are being executed, particularly in local areas. With the foundations thus gradually put in place, the facility’s establishment and administration will not be decided in a top-down fashion, but rather as a consolidated public-private effort.

However, it cannot be said that the capability of the residents of interior rural regions, such as Hongcun zhen, are sufficient. Most residents cultivate their farmland as their forebears did. Therefore, residents' capabilities must be raised to a sufficient level that they can emerge from the isolation and participate in planning for the michinoeki's establishment and operation. Thus, the government, namely Hongcun zhen, must guide residents in acquiring knowledge. We next discuss ways of strengthening residents' capability.

After residents' capabilities increase, the original goals for establishing a michinoeki in China can be achieved, and the following cooperative systems will be possible, based on management systems for avoiding creating a “drive-in” roadside station.

First, if the Hongcun zhen government is the administrating entity, it will be necessary to create an environment (rules) that will enable free, evolutionary economic activities, and put limits on unrestrained commercialism of non-local enterprises. To protect residents and local enterprises, ongoing guidance, in addition to economic support such as preferential rent pricing and partial tax reductions, is also possible. Because the Hongcun zhen government does not have tax collection authority, it would be necessary to work with higher authorities, such as Yixian county, Huangshan Shi, or Anhui province to establish preferential tax measures.

Second, if the village committee is the administrating entity, Hongcun would provide support, make rules to allow smooth operation by the village committee, and provide guidance on methods of coordinating with non-local private enterprises, in addition to providing economic support (preferential rent pricing, partial tax reductions). The village committee, under the guidance of Hongcun zhen, would have to deal with the residents and local businesses and non-local enterprise shops. However, the village committee currently does not have the know-how to administer the michinoeki, and the village committee and the villagers will have to improve their abilities under the guidance of the Hongcun zhen government.

Third, if a newly established administrative corporation is the administrating entity, the various

investor entities would have monitor each another and promote the healthy operation and growth of the michinoeki in addition to participating in the michinoeki's establishment and operation as investors.

In any case, if the three entities concerned, the Hongcun zhen government, the village committee, and local enterprises, work together, the first michinoeki's establishment and operation should go smoothly.

### 3.3 Empowerment of local residents

A michinoeki is not a simple highway rest area; the concept also includes incubator and an empowerment functions for the local community. During the on-site survey, local enterprises expressed interest in processing new products using local agricultural products. By establishing processing facilities in the michinoeki and leasing these facilities at low rates, enterprises dealing in processed foods made from green tea and bamboo shoots can be incubated. And by providing a space in the michinoeki from which farmers can sell agricultural products directly to michinoeki users, the farmers will be able to learn highway users' needs first-hand, enabling agriculture to expand. In addition to empowering local residents, it will be necessary to improve the residents' ability to participate in planning, appropriately reflect their demands, and ensure transparency and fairness.

#### 3.3.1 Improving residents' ability to participate in planning

In interior agricultural localities such as Hongcun zhen, the environment is such that the people can live on annual per capita incomes of less than US\$100; in other words, their lifestyles are based on self-sufficiency and bartering. The current situation prevents people from becoming destitute quickly. However, with economic expansion throughout China and the advance of the currency economy, primarily in the coastal, urban areas, the economic gap between the urban and rural regions will grow. To prevent the economic gap from widening, residents of rural regions should be empowered

through the michinoeki and assisted in entering the currency economy.

In China’s rural villages, for residents to realize independent operation of the michinoeki, education of the farmers by the zhen governments will be indispensable. As was clear in the on-site survey of Hongcun zhen, because traditionally isolated lifestyles continue in China’s rural villages, farmers continue to practice agriculture just as their forebears did and have few opportunities to learn about social trends.

How to educate the farmers? In China, as in Japan, there is a strong sense of town community in rural areas, and mutual assistance is a way of life. Perhaps Japan’s Sadamitsu Yu-Yu-Kan and Meiho could provide an example: With the establishment of these michinoeki, residents’ groups, called “lifestyle improvement groups” received guidance on planning products to be sold in the michinoeki. In turning ideas into products, government guidance and advice from specialized consultants were taken into account. In many cases, the products created thus became the flagship products for the michinoeki. In China’s rural areas too, it would probably be good to form residents’ groups around the village committees under the guidance of the zhenchang, and interest residents in the michinoeki’s establishment and product sales.

### **3.3.2 Methods for reflecting residents’ demands**

The village committee will have a critical role in how the demands of the residents are reflected in the michinoeki on the establishment and administration levels. As the representative system for democratization policies in rural China, the village committees are composed of committee members selected by the people in direct elections. In the establishment and administration of the michinoeki, the village committee must play the role of pipeline between the zhenchang, which will be responsible for overall regional balance and adjustment and coordination of top-level plans, and residents.

However, it would be difficult to reflect the opinion of each and every resident in the establishment and administration of the michinoeki. As we have suggested, residents’ groups could be

used to this end. The requests, gathered by the residents’ groups would be organized by the village committee, which would then discuss them with the zhenchang, enabling their efficient implementation.



“Michinoeki”

# Appendix

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TOR for the pilot study in Kenya

TOR for the pilot study in China



“Michinoeki”



## TOR for the pilot study in Kenya

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### 1. Purpose and background for the study

Most of benefits are enjoyed only by those living in urban areas. The difference in the benefits that rural and urban areas receive is widening economic gap between them and causing a variety of poverty-related problems, especially in rural areas.

Numerous past surveys of the traffic problems in developing countries reveals that road safety and roadside environment are deteriorating in many regions as the number of automobiles increases, even though construction of road infrastructure has certainly improved traffic standards in terms of mobility. Drivers in many developing countries do not have access to many necessary services due to a lack of both road infrastructure and roadside rest facilities.

Illegal parking is another problem. Highways with lots of parked cars have poor visibility and reduced traffic capacity, which can seriously impair road safety.

Michinoeki are designed to provide drivers with a place to rest and communicate. Michinoeki link road networks and local communities. Prototype michinoeki can be found in many countries, although they are not necessarily part of a comprehensive development plan. Examples include shops, stores, and restaurants situated along road or at big junctions.

The michinoeki project is a comprehensive plan to provide roadside rest areas, financial services, and public services. Michinoeki also incorporate local needs into the process of planning, construction, and operation, acting as a bridge between local community and users of the road.

This research paper describes a pre-feasibility study for a project to plan and build highways in Kenya. The project is still in the planning stage, which includes examining specific methods of constructing michinoeki. Meanwhile, the consultant is strongly recommended to continue research according to the procedure described in the World Bank’s “Guideline for Introducing Michinoeki in Developing Countries” (hereinafter referred to as “Michinoeki Guideline”).

### 2. TOR

#### 2.1 Topics of research

According to the World Bank’s “Michinoeki Guideline,” the overall process of introducing michinoeki includes planning, construction, and operation. These stages can be divided into four phases: Identification, Preparation, Appraisal, and Operation. The first phase, Identification, starts with selection of a construction site. A blueprint for a michinoeki that is appropriate to target region is drawn up, taking into account the prerequisites for michinoeki construction. These prerequisites derive from the following basic questions. What are local demands and available local resources? What functions and facilities are required for the michinoeki? Who are stakeholders that will be involved in the planning process? Who is the most appropriate prime mover?

The next phase, Preparation, involves making the basic plan as specific as possible. This is done by listening to opinions of the stakeholders at the planning stage and drawing detailed layouts of specifications and design. This is followed by the third phase, Appraisal, in which the positive/

negative impacts of the michinoeki on the social, economic, and transportation aspects are assessed. In the final step, Operation, concrete points of concern relating to michinoeki operation and management are addressed.

This research paper covers the first two phases: Identification and Preparation. Below are detailed research items that correspond to each phase.

- Topics of research for Identification phase
  - i) Site selection for planning michinoeki project
  - ii) Site selection for constructing michinoeki
  - iii) Identifying functions, facilities, and stakeholders of michinoeki
- Topics of research for Preparation phase
  - i) Stakeholder analysis
  - ii) Layout and design

## 2.2 Specifics of research topics

### *(1) Topics of research in Identification phase*

#### *i) Site selection for planning michinoeki project*

Targeting Highways in Kenya, a few candidate regions for michinoeki planning should be selected. Site selection should consider following points. Moreover, the candidate sites should come from a variety of regions and not a single region.

- Transit traffic volume
- Local specialties (agricultural products, craftworks, etc.)
- Historic and cultural resources in the region
- Economic problems (low income standards, economic disparity, employment opportunities, etc.)
- Social problems (disease, education, and gender-related issues, etc.)
- Traffic problems (number of traffic accidents, traffic fatalities, etc.)

#### *ii) Site selection*

##### **a. Understanding the needs of local residents and road users in the vicinity of the candidate sites**

For site selection, it is necessary to understand the needs of residents living near the candidate sites.

- Economic needs: guaranteed sales opportunities for local specialties
- Social needs: hygienic toilets, sanitary drinking water, income growth, medical services, social participation, alleviation of social discrimination, etc.
- Transportation needs: secure rest areas and parking areas for public transport

### **b. Determining type of michinoeki that meets local needs**

The needs described above will determine the type of michinoeki that is required. The World Bank’s “Michinoeki Guideline” proposes four types of michinoeki.

- Rest stop type: provides road users with comfortable and hygienic places to rest
- Market type: provides local producers with opportunities to sell local specialties such as agricultural products and craftwork
- Terminal type: functions as a public transport terminal for local residents and road users
- Public service type: provides public services to local residents and road users

### **iii) Identifying functions, facilities, and stakeholders of michinoeki**

#### **a. Identifying functions**

In order to satisfy the needs described above, certain functions must be identified. The World Bank’s “Michinoeki Guideline” describes how to identify these functions. The consultant is expected to refer to this guideline when identifying necessary functions.

#### **b. Selecting suitable facilities to fulfill the necessary functions**

In order to satisfy the functions identified above, certain types of facilities are required. The World Bank’s “Michinoeki Guideline” describes how to select these facilities. The consultant is expected to refer to this guideline when selecting facilities. Some examples are given below.

- Facilities with economic functions: markets, processing plants for agricultural products, eating areas for visitors, etc.
- Facilities with social functions: clinics, hygienic toilets, sanitary water supplies, assembly halls, etc.
- Facilities with transport functions: rest space, parking space, etc.

#### **c. Identifying stakeholders**

A prime mover with leadership ability is required for all facets of a michinoeki project, from planning and construction, to operation and management. The prime mover should come from the local community and have good knowledge of the region. After the prime mover is chosen, the stakeholders must be identified. They can be local authorities, community members engaged in agriculture, forestry, fishing, crafts, etc., influential figures in local economic organizations, or representatives of the local residents, etc., organizations that own commercial vehicles, local enterprises, etc.

### **(2) Topics of research in preparation phase**

#### **i) Stakeholder analysis**

In order to understand opinions of the stakeholders identified above, the consultant should organize workshops to be held at least twice in the target region. A workshop outline is included in the annex of the World Bank’s “Michinoeki Guideline” and the participation sourcebook. The consultant should refer to both of these publications when organizing workshops. Organizers should aim to enhance the effectiveness of the workshop.

## **ii) Layout and design**

### **a. Determining scale of the project**

The scale of the project is determined by size of the candidate site, floor area of michinoeki, and parking capacity of the site.

### **b. Designing the layout of the facilities**

A blueprint of layout of the facilities should be developed.

### **c. Calculating the cost**

With the scale determined, a detailed breakdown of construction costs should be drawn up.

## **2.3 Methodology**

Below are specific topics of research that will be carried out in each target region.

- Literature survey of related documents
- Field studies
- Locally conducted interviews
- Workshops

### **a. Literature survey of related documents concerning the target region**

The socioeconomic framework of the target region, including geographical situation, road traffic, and economic standards in the target region can be understood by examining academic theses, survey reports, and other related documents. In addition, information regarding the needs of the people and firms in the target area, the socioeconomic challenges, the main stakeholders, and the political and administrative organizations can be obtained through the literature survey of local documents. Other information that can contribute to the success of the field study, interview survey, and workshop should also be also gathered in advance.

### **b. Field survey**

The target region/country should be visited in order to consult with the key person. This is a potential contact person for collecting local information. The key person should be given (in advance) information and a schedule concerning the michinoeki survey. At the same time, a field study is conducted and data collected regarding the target region.

### **c. Locally conducted interviews**

Based on questions prepared beforehand concerning the major stakeholders in the target region, general information focusing on local needs, challenges, regional exploitable resources, etc., should be gathered. This can be done by conducting interviews with local inhabitants, entrepreneurs, and local/central administrative officers, and by organizing group discussions.

### **d. Workshops**

Workshops targeting the major stakeholders in the region should be organized. At the workshops, a draft of the michinoeki plan, based on the information gathered through the surveys described above, should be revealed and various views and opinions exchanged about the likelihood of success, the feasibility of the implementation, and the need for additional functions and facilities.

## TOR for the pilot study in China

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### 1. Purpose and background for the study

Most of benefits are enjoyed only by those living in urban areas. The difference in the benefits that rural and urban areas receive is widening economic gap between them and causing a variety of poverty-related problems, especially in rural areas.

Numerous past surveys of the traffic problems in developing countries reveals that road safety and roadside environment are deteriorating in many regions as the number of automobiles increases, even though construction of road infrastructure has certainly improved traffic standards in terms of mobility. Drivers in many developing countries do not have access to many necessary services due to a lack of both road infrastructure and roadside rest facilities.

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The michinoeki project is a comprehensive plan to provide roadside rest areas, financial services, and public services. Michinoeki also incorporate local needs into the process of planning, construction, and operation, acting as a bridge between local community and users of the road.

This research paper describes a pre-feasibility study for a project to plan and build highways in China. The project is still in the planning stage, which includes examining specific methods of constructing michinoeki. Meanwhile, the consultant is strongly recommended to continue research according to the procedure described in the World Bank’s “Guideline for Introducing Michinoeki in Developing Countries” (hereinafter referred to as “Michinoeki Guideline”).

### 2. TOR

#### 2.1 Topics of research

According to the World Bank’s “Michinoeki Guideline,” the overall process of introducing michinoeki includes planning, construction, and operation. These stages can be divided into four phases: Identification, Preparation, Appraisal, and Operation. The first phase, Identification, starts with selection of a construction site. A blueprint for a michinoeki that is appropriate to target region is drawn up, taking into account the prerequisites for michinoeki construction. These prerequisites derive from the following basic questions. What are local demands and available local resources? What functions and facilities are required for the michinoeki? Who are stakeholders that will be involved in the planning process? Who is the most appropriate prime mover?

The next phase, Preparation, involves making the basic plan as specific as possible. This is done by listening to opinions of the stakeholders at the planning stage and drawing detailed layouts of specifications and design. This is followed by the third phase, Appraisal, in which the positive/

negative impacts of the michinoeki on the social, economic, and transportation aspects are assessed. In the final step, Operation, concrete points of concern relating to michinoeki operation and management are addressed.

This research paper covers the first phase: Identification.  
Below are detailed research items that correspond to the phase.

- Topics of research for Identification phase
  - i) Site selection for planning michinoeki project
  - ii) Site selection for constructing michinoeki
  - iii) Identifying functions, facilities, and stakeholders of michinoeki
- Extraction of further study items toward Preparation phase

## 2.2 Specifics of research topics

### *(1) Topics of research in identification phase*

#### *i) Site selection for planning michinoeki project*

Targeting the Highways in China, a few candidate regions for michinoeki planning should be selected. Site selection should consider following points. Moreover, the candidate sites should come from a variety of regions and not a single region.

- Transit traffic volume
- Local specialties (agricultural products, craftworks, etc.)
- Historic and cultural resources in the region
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##### **a. Understanding the needs of local residents and road users in the vicinity of the candidate sites**

For site selection, it is necessary to understand the needs of residents living near the candidate sites.

- Economic needs: guaranteed sales opportunities for local specialties
- Social needs: hygienic toilets, sanitary drinking water, income growth, medical services, social participation, alleviation of social discrimination, etc.
- Transportation needs: secure rest areas and parking areas for public transport

##### **b. Determining type of michinoeki that meets local needs**

The needs described above will determine the type of michinoeki that is required. The World Bank's "Michinoeki Guideline" proposes four types of michinoeki.

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- Terminal type: functions as a public transport terminal for local residents and road users
- Public service type: provides public services to local residents and road users

### ***iii) Identifying functions, facilities, and stakeholders of michinoeki***

#### **a. Identifying functions**

In order to satisfy the needs described above, certain functions must be identified. The World Bank’s “Michinoeki Guideline” describes how to identify these functions. The consultant is expected to refer to this guideline when identifying necessary functions.

#### **b. Selecting suitable facilities to fulfill the necessary functions**

In order to satisfy the functions identified above, certain types of facilities are required. The World Bank’s “Michinoeki Guideline” describes how to select these facilities. The consultant is expected to refer to this guideline when selecting facilities. Some examples are given below.

- Facilities with economic functions: markets, processing plants for agricultural products, eating areas for visitors, etc.
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#### **c. Identifying stakeholders**

A prime mover with leadership ability is required for all facets of a michinoeki project, from planning and construction, to operation and management. The prime mover should come from the local community and have good knowledge of the region. After the prime mover is chosen, the stakeholders must be identified. They can be local authorities, community members engaged in agriculture, forestry, fishing, crafts, etc., influential figures in local economic organizations, or representatives of the local residents, etc., organizations that own commercial vehicles, local enterprises, etc.

### ***(2) Topics of research toward preparation phase***

Based on study outputs of former Identification phase, the consultant should extract some study items toward the next step of the preparation phase. In conducting the study here, the consultant should follow detailed study items shown in the “michinoeki Guideline”.

#### ***i) Stakeholder analysis***

In order to hear voices regarding the possibility of success of michinoeki, reality of the plan, necessity of addition of further functions and facilities from stakeholders identified in above identification phase., the consultant , for instances, should investigate the overall plan of workshops and the discussion items in the workshops.

## *ii) Layout and designing*

- a. Study on facility scale**
- b. Study of the facility layout**
- c. Study of the estimate for construction cost**

### **2.3 Methodology**

Below are specific topics of research that will be carried out in each target region.

- Literature survey of related documents
- Field studies
- Locally conducted interviews

#### **a. Literature survey of related documents concerning the target region**

The socioeconomic framework of the target region, including geographical situation, road traffic, and economic standards in the target region can be understood by examining academic theses, survey reports, and other related documents. In addition, information regarding the needs of the people and firms in the target area, the socioeconomic challenges, the main stakeholders, and the political and administrative organizations can be obtained through the literature survey of local documents. Other information that can contribute to the success of the field study and interview survey should also be gathered in advance.

#### **b. Field Studies**

The target region/country should be visited in order to consult with the key person. This is a potential contact person for collecting local information. The key person should be given (in advance) information and a schedule concerning the michinoeki survey. At the same time, a field study is conducted and data collected regarding the target region.

#### **c. Locally conducted interviews**

Based on questions prepared beforehand concerning the major stakeholders in the target region, general information focusing on local needs, challenges, regional exploitable resources, etc., should be gathered. This can be done by conducting interviews with local inhabitants, entrepreneurs, and local/central administrative officers, and by organizing group discussions.