

10.2.7 Samarinda

(1) Problem Areas

The Study Team identified the problem areas of Samarinda as follows:

1) Limited Expansion Potential at Samarinda

The expansion potential of the Port of Samarinda is constrained by urban land-use around the port. The existing port facilities are located on the left bank of the Mahakam River, and the central business district of Samarinda is just behind the port, therefore the port is not able to step back toward the city to expand the port capacity. In addition, the port is not able to expand alongside of the river. Because there is the base port for navigation aid vessels, next to the port, down the stream, and there are also the riverfront park and the riverside highway, next to the port, up the stream. Accordingly, a new port expansion site must be carefully found out in order to handle rapidly growing port cargoes.

2) Insufficient Use of 937m long Wharves

There is a 170 m long, wooden wharf in the midst of total 937 m long wharves at Samarinda. This wooden wharf is used for small cargo vessels, which require quite a long time to load/unload cargoes by means of human power. This is remaining a cause of inefficient cargo handling operation at Samarinda. The loading/unloading activity by small cargo vessels should be relocated, away from the midst of busy wharves at Samarinda, and this 170m long wharf must be replaced by a concrete wharf with a broad and solid yard, which is able to accommodate general and container vessels.

3) Blockage of Port Buildings in Container Handling Yards

There are an old labor pool, harbor master office and coastguard office just behind container wharves. Those old buildings were constructed before containerization began at Samarinda, and are now obstructing container cargo handling activity. The port is always crowded with increasing inbound/outbound cargoes, and there is no more expansion space surrounding the port. Therefore, those port buildings are required to be relocated to neighboring area, outside the port. Then, container cargo handling will be improved.

4) Maintenance Dredging at Mouth of the Mahakam River

In order to maintain the water depth of 5 m around the river mouth and in the river channel, maintenance dredging is required in 24km of the channel from the estuary. On average, 1.4 million cubic meters of riverbed materials is dredged annually, costing Rp. 5.6 billion.

5) Limited Use of Mangku Palas

There is a new port development site in Mangku Palas, the opposite bank of the Mahakam River. IPC 4 has already acquired some 7 ha land there for a port expansion site in the short run. However, the riverfront of Mangku Palas has already been occupied by local residents. This restrains the potential of the Port of Mangku Palas to be developed as a supplementary port to the existing Samarinda port. When a port road is constructed between the city and Mangku Palas, 7 ha land will be used for inland container depot, but a new port development in the long run must be pursued in other place than Mangku Palas.

6) Exclusive Use of a Passenger Berth in 935m long Wharves

One berth is allotted exclusively to a passenger terminal at the end of 935 m continuous wharves at Samarinda. The passenger terminal contains the paved yard behind the wharf. All these facilities are being used exclusively for passenger transport. But, the passenger terminal is busy for only a few hours in a day, because it takes a very short time to load/unload passenger. On the other hand, cargo wharves are always busy and crowded to handle increasing inbound/outbound cargoes at the port. In this connection, the passenger terminal is required to vacate from the present wharf, and to be relocated in other place which is independent from the existing 935 continuous wharves.

7) Poor Port Road behind the Port of Samarinda

Pavement of the port road behind the port is not complete to endure the heavy weight by truck. The width of the port road is also not enough to accommodate a wide and long vehicle. In addition, the Port of Samarinda is located in the city center. This causes the port road to attract a great amount of city traffic on road. Due to the above reasons, the port road is always congested, and port cargoes are obliged to be transported to/from the port hinterland by means of small trucks. The reinforcement and widening of the port road at Samarinda is a pressing issue.

(2) Development Potential

1) Prospective Industries

Oil, gas and coal production greatly contributes to the economy of East Kalimantan. Agriculture and forestry is another mainstay of the province's economy. Palm oil, coconut, cocoa and coffee are the main crops, and logs and plywood are also the main forestry production. A preliminary survey identified the following prospective industries for the East Kalimantan Province: Oil palm plantation, CPO processing factory, logs and plywood production and coal mine.

Table 10.2.13 Economic Indicators of the East Kalimantan Province

Item	Indicators	Remarks
Area (km ²)	210,985	
Population (,000)	2,314	In 1995
GRDP with oil & gas (billion Rp.)	51,505	Market price in 1998
GRDP without oil & gas (billion Rp.)	22,258	Market price in 1998
Industrial output (billion Rp.)	3,753	Non oil and gas manufacturing, market price in 1998
Area for crop (ha)	248,924	
Area for forestry production (ha)	5,192	
Crude oil production (BBLs)	70,205	In 1999
Natural gas production (MSCF)	1,561,679,000	In 1999
Coal(Ton)	33,652,982	In 1999

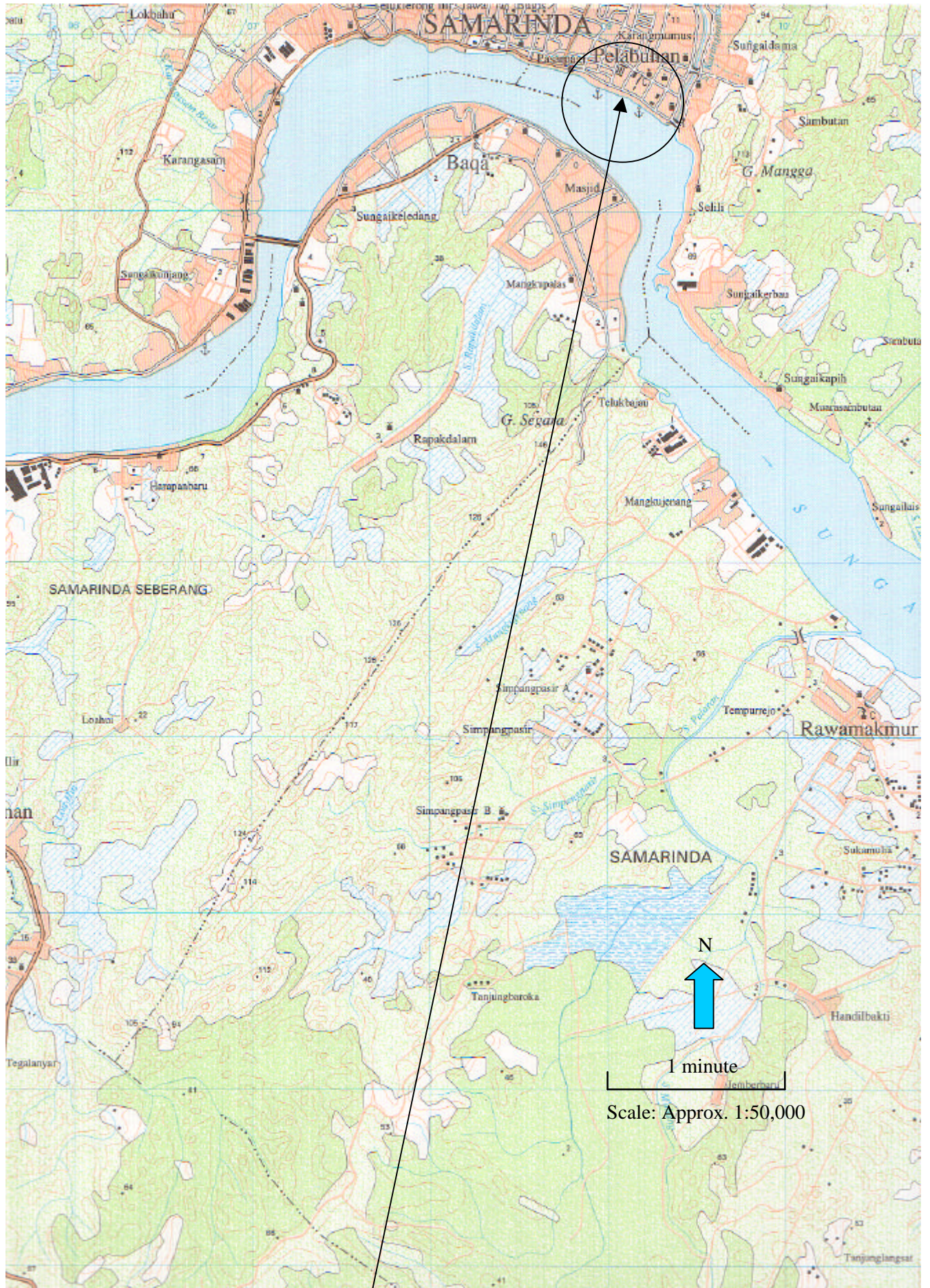
2) Demand Forecasts

Table 10.2.14 Preliminary Demand Forecast for Samarinda

(1,000 t)

Year	International	Domestic	Total	Public	Total container cargo
1988/89	2,303	1,820	4,123	495	(1996) 196
2000	5,245	3,143	8,388	1,237	687
2007	8,432	3,571	12,003	2,010	1,518
2025	13,948	5,238	19,186	4,727	3,654
Growth rates per year					
1988/9-2000	7.1%	4.7%	6.1%	7.9%	36.8%
2000-2007	7.0%	1.8%	5.3%	7.2%	12.0%
2007-2025	2.8%	2.2%	2.6%	4.9%	5.0%
2000-2025	4.0%	2.1%	3.4%	5.5%	6.9%

Figure 10.2.13 Location Map of Samarinda



Samarinda

Figure 10.2.14 Location Map of Marang Kayu



Marangkayu

10.3 Development Scenario

10.3.1 Development Targets

The development targets for the principal river ports can be summarized as follows:

- 1) To help achieve smooth and economical flow of cargo.
- 2) To act as an impetus for the development of new industries.

Considering the present socioeconomic conditions of Indonesia as well as its policy of decentralization and privatization, the success of the development of the principal river ports depends on whether it will answer the urgent need to decrease dependence on the government sector. The central government will play a smaller role in the development and maintenance of port infrastructure. Since most of the river ports require costly maintenance dredging, a mechanism to realize sustainable port operation needs to be established. Competition with neighboring ports should be carefully examined as well to maximize the return of the port investment.

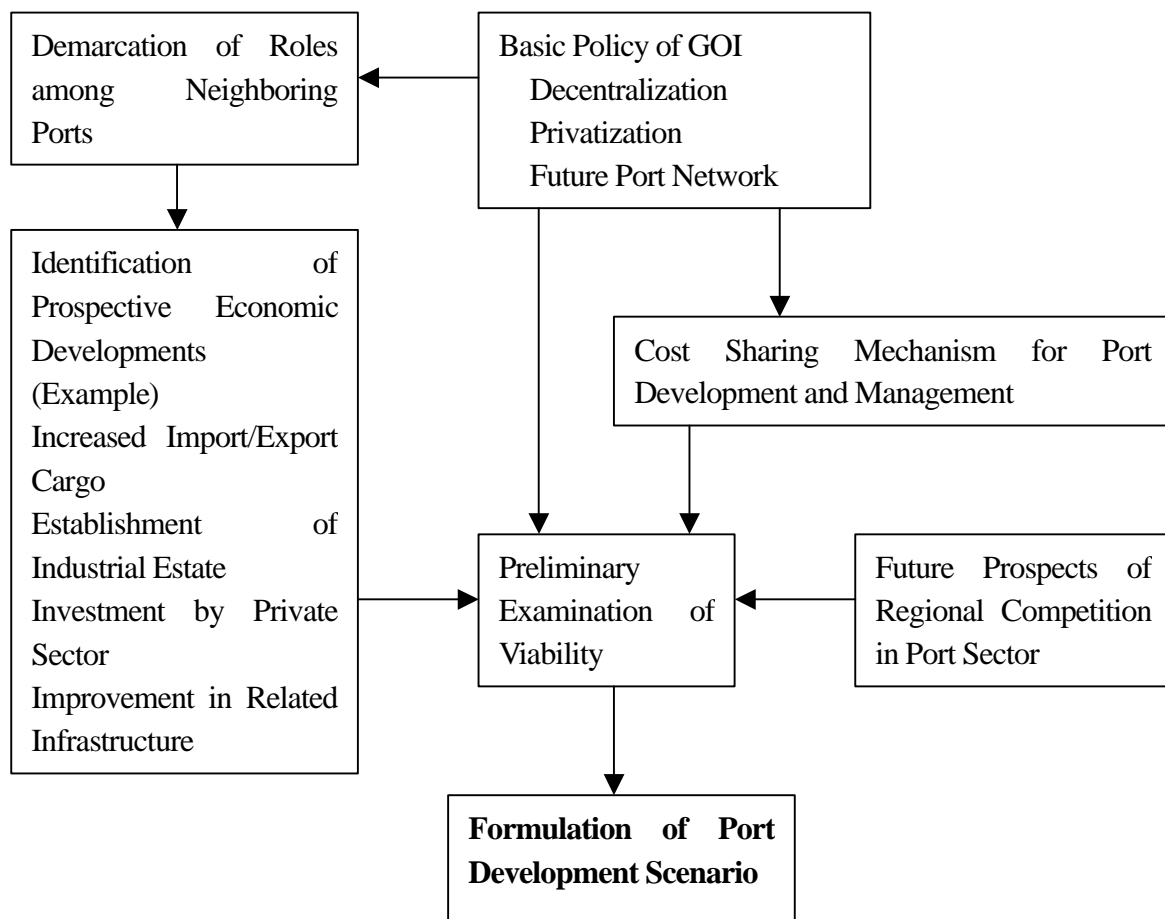


Figure 10.3.1 Formulation of Port Development Scenario

It is also important to determine an appropriate demarcation of roles among the ports in Indonesia. Since various port projects are underway around the principal river ports, careful examination is

needed to avoid duplication of investments and to materialize balanced regional development of the country. Successful port development will bring about positive economic impacts through a sequence of events (Figure 10.3.2). Preliminary development scenarios are shown in the following section, though more detailed scenarios will be prepared for the two priority ports in a later stage.

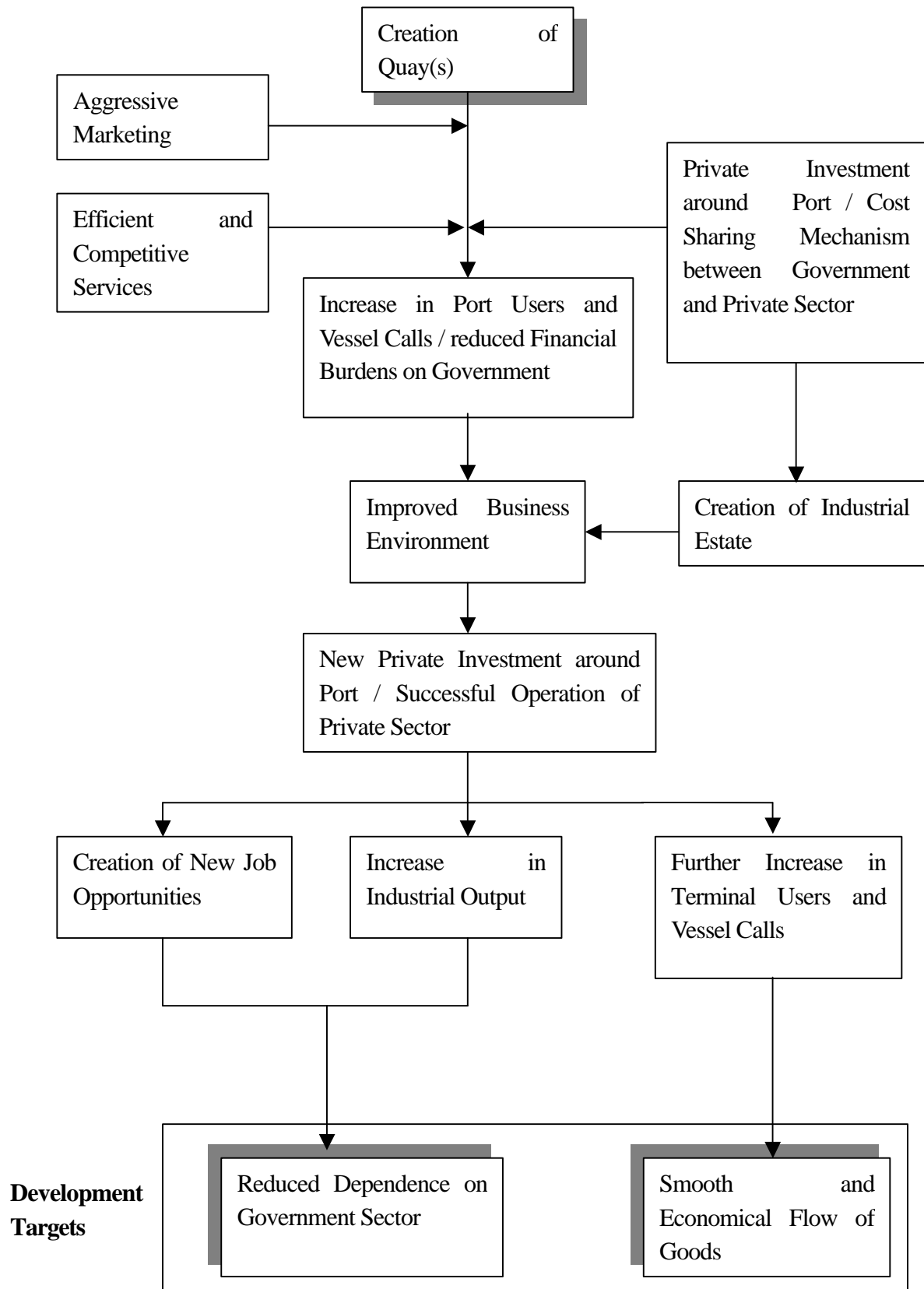


Figure 10.3.2 Expected Sequence of Events in a Successful Port Development Scenario

10.3.2 Pekanbaru

(1) Preliminary Scenario

Taking into account the present situation and future potential of Pekanbaru, the Study Team made the following assumptions:

- 1) The old port will gradually lose its importance
- 2) Perawang and Siak Haska will continue to share the public container cargo generated around the city of Pekanbaru
- 3) Perawang will attract some of the container cargo currently handled in private wharves
- 4) However, private wharves will continue to play a dominant role in the transportation along the Siak River

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures for Pekanbaru as shown below (Table 10.3.1-2). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

(2) Short-term Measures

In order to resolve the existing problems at Pekanbaru, the following short-term measures need to be taken.

Table 10.3.1 Short-term Measures at Pekanbaru

Measures to be taken	Responsible Party(s)	Time to start
To increase Navigational Safety Enhancing Safety Awareness Installing Navigation Aids	ADPEL, IPC	Immediate
To increase Handling Capacity of Perawang Container Terminal Procuring Yard Equipment Installing Lights	IPC, Private Sector	Depending on Demand Growth
To improve Access Road to Perawang	Central/Local Government	Immediate
To provide CPO Handling Capacity	IPC	(Ongoing)

(3) Long-term Measures

After the short-term measures are taken, the following long-term measures will be needed at Pekanbaru.

Table 10.3.2 Long-term Needs at Pekanbaru

Measures to be taken	Responsible party(s)	Time to start
To further increase Handling Capacity of Perawang Container Terminal Expanding Terminal Procuring Additional Equipment	Central/Local Government, IPC, Private Sector	Depending on Demand Growth and Container Handling Capability of Dumai
To increase Handling Capacity of Siak Haska Container Terminal Expanding Terminal Procuring Additional Equipment	Private Sector	Depending on Demand Growth and Container Handling Capability of Dumai
To relocate Activity of Old Port Converting Old Port into Urban Use Constructing New Bridge	Central/Local Government, IPC	Depending on Financial State of Local Government

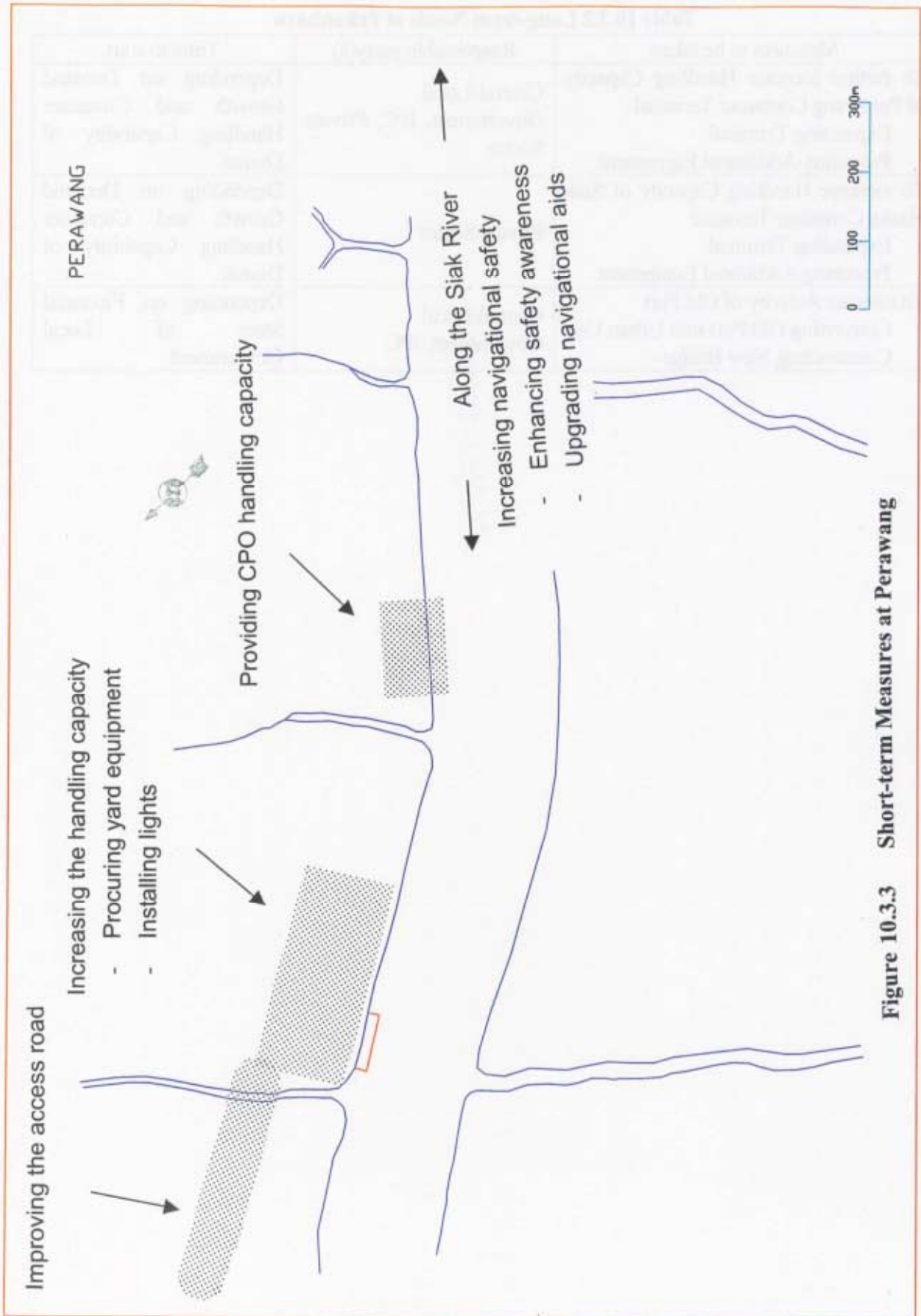


Figure 10.3.3 Short-term Measures at Perawang

10.3.3 Jambi

(1) Preliminary Scenario

Taking into account the present situation and future potential of Jambi, the Study Team made the following assumptions:

- 1) Talang Duku will continue to cater for a large part of the public cargo generated around the city of Jambi due to its proximity to users
- 2) Muara Sabak will serve as an industrial base for CPO processing and thus attract some of the bulk cargo currently handled in private wharves
- 3) Muara Sabak will also attract some of the container cargo currently handled in private wharves
- 4) Kuala Tungkal's role in cargo transportation will continue to be limited due to its shallow draft

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures for Jambi as shown below (Table 10.3.3-4). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

(2) Short-term Measures

In order to resolve the existing problems at Jambi, the following short-term measures need to be taken.

Table 10.3.3 Short-term Measures at Jambi

Measures to be taken	Responsible Party(s)	Time to start
To increase Handling Capacity of Talang Duku Container Terminal Repairing Yard Equipment	IPC, Private Sector	Immediate
To repair Bulk Head at Talang Duku	IPC	Immediate
To improve Access Road to Muara Sabak	Central/Local Government	(Ongoing)
To provide Yard-side Capacity at Muara Sabak Procuring Yard Equipment Paving Yard Area Constructing Shed	IPC	Immediate (with a phasing plan and keeping pace with Access Road Improvement)
To create Industrial Base behind Muara Sabak Preparing Infrastructure Providing Utility Inviting Private Investment	Local Government, Private Sector	Depending on Financial State of Local Government

(3) Long-term Measures

After the short-term measures are taken, the following long-term measures will be needed at Jambi.

Table 10.3.4 Long-term Needs at Jambi

Measures to be taken	Responsible Party(s)	Time to start
To further increase Handling Capacity of Talang Duku Container Terminal Expanding Terminal Procuring Additional Equipment	IPC, Private Sector	Depending on Demand Growth
To increase Capacity of Muara Sabak Expanding Terminal Procuring Additional Equipment	Central/Local Government, IPC, Private Sector	Depending on Demand Growth
To strengthen Linkage between Both Sides of River at Muara Sabak Providing Ferry Service Building New Wharf on Right Bank of River	Central/Local Government, IPC, Private Sector	Keeping Pace with Industrial Development at Muara Sabak

TALANGDUKU

S. Jambi

Repairing a bulkhead

Repairing yard equipment

Forest

Swamp

Forest

To Jambi City



0 100 200 300m

-5m

Figure 10.3.4 Short-term Measures at Talang Duku

MUARA SABAK

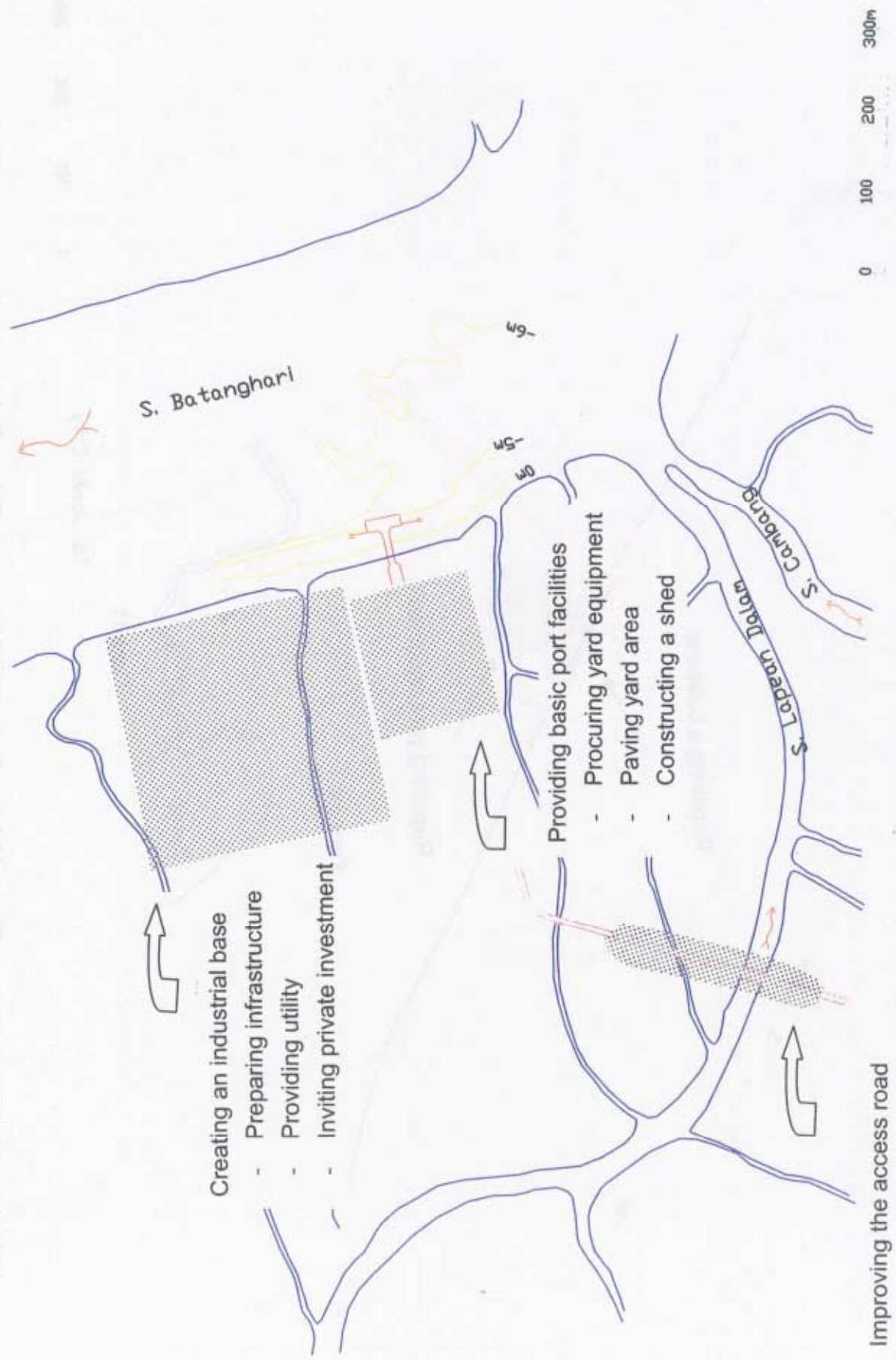


Figure 10.3.5 Short-term Measures at Muara Sabak

10.3.4 Palembang

(1) Preliminary Scenario

Taking into account the present situation and future potential of Palembang, the Study Team made the following assumptions:

- 1) Boom Baru will continue to serve as a main port of Palembang both as a public port and a private port due to the strong economic activity behind the port
- 2) Accordingly, optimization of maintenance dredging in the Musi River will remain an important issue
- 3) Sungai Lais will serve as a CPO terminal in the near future
- 4) Sungai Lais will start catering for public cargo after Boom Baru becomes saturated
- 5) Tanjung Api-Api will start to serve as a coal terminal if either of the following events take place:
 - The coal mining company decides to transfer its cargo from Panjang
 - The coal mining company greatly increases its production and needs a new outlet other than Panjang

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures for Palembang as shown below (Table 10.3.5-6). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

(2) Short-term Measures

In order to resolve the existing problems at Palembang, the following short-term measures will need to be taken.

Table 10.3.5 Short-term Measures at Palembang

Measures to be taken	Responsible Party(s)	Time to start
To increase Navigational Safety Repairing Navigation Aids	ADPEL, IPC	Immediate
To increase Handling Capacity of Boom Baru Container Terminal Extending Crane Rails Replacing Dilapidated Equipment	IPC	Depending on Demand Growth
To provide CPO Handling Capacity at Sungai Lais	Private Sector	(Ongoing)
To optimize Maintenance Dredging in Musi River Establishing Cost Sharing Mechanism Understanding Siltation Mechanism	Central Government, IPC, Private Sector	Immediate

(3) Long-term Measures

After the short-term measures are taken, the following long-term measures will be needed at Palembang.

Table 10.3.6 Long-term Needs at Palembang

Measures to be taken	Responsible Party(s)	Time to start
To further increase Handling Capacity of Existing Port Creating Public Terminals at Sungai Lais Procuring Additional Equipment at Boom Baru	Central Government, IPC, Private Sector	Depending on Demand Growth
To explore Siltation Prevention Measures Testing Pilot Measures	Central Government, IPC	Depending on Understanding of Siltation Mechanism
To create a Deep-sea Port and Industrial Base at Tanjung Api-Api Preparing Infrastructure Providing Utility Inviting Private Investment	Central/Local Government, IPC, Private Sector	(Partially Ongoing)

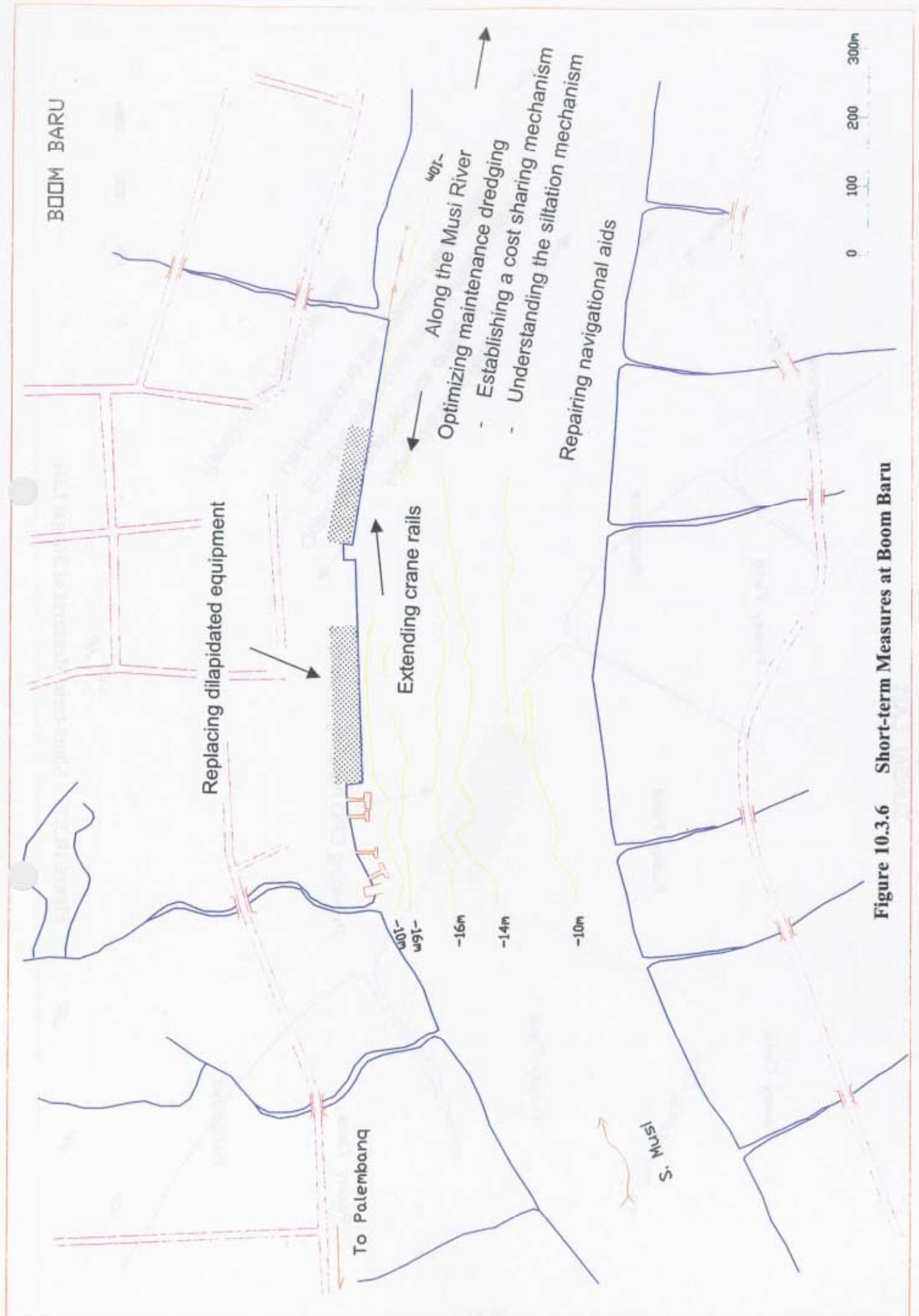


Figure 10.3.6 Short-term Measures at Boom Baru

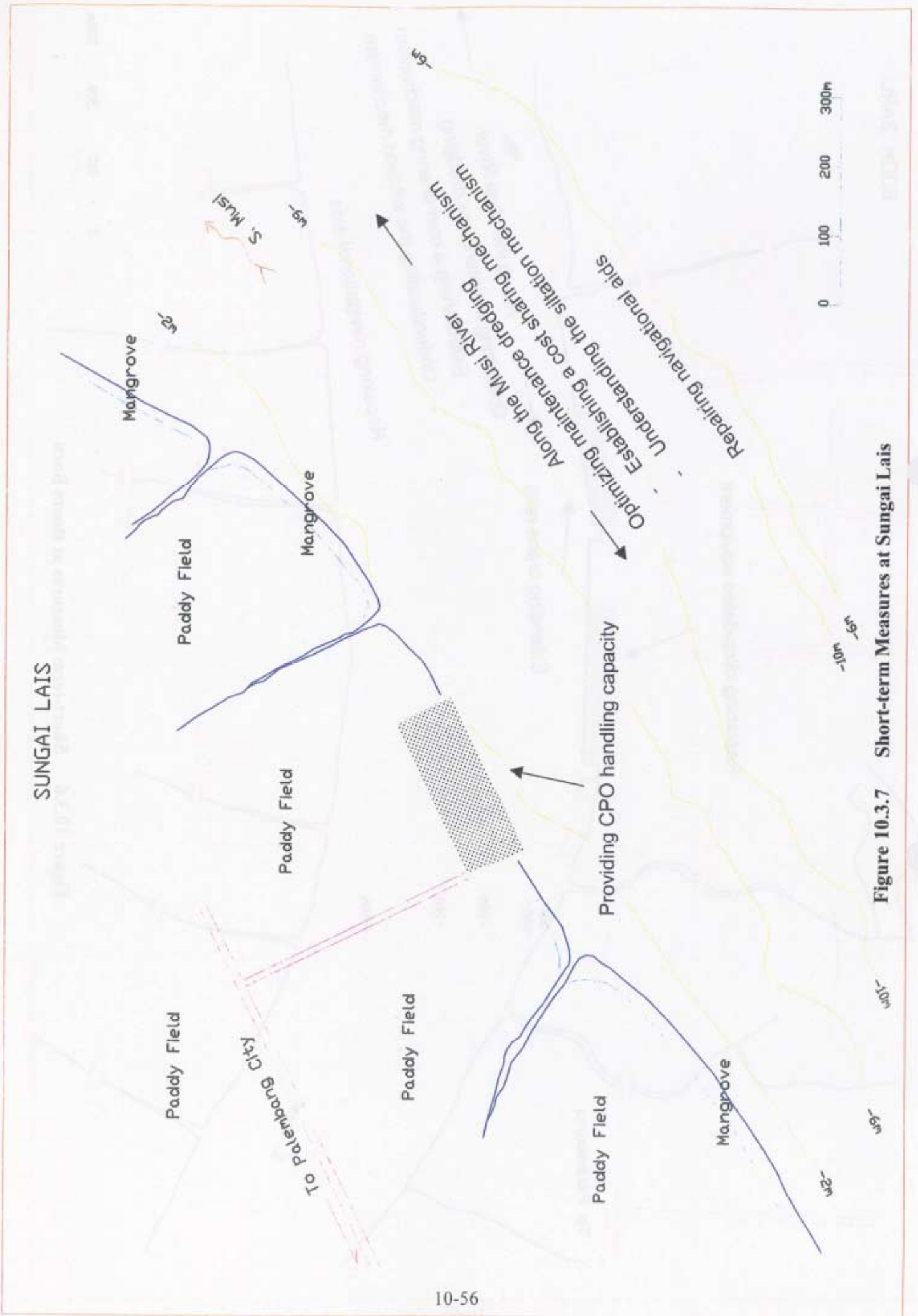


Figure 10.3.7 Short-term Measures at Sungai Lais

10.3.5 Pontianak

(1) Preliminary Scenario

Taking into account the present situation and future potential of Pontianak, the Study Team made the following assumptions:

The existing Pontianak port will continue to serve as a main public port of West Kalimantan, at which the growing container/non-container cargo and passenger will be handled.

Accordingly, optimization of maintenance dredging in the Kapuas Kecil River in the short run and siltation prevention measures there in the long run, will remain an important issue.

Nipah Kuning will play an important role to serve as a base port of traditional and small vessel cargoes, and will continue to be fit for use and expanded without delay, depending on growing demand of port cargoes.

A new port serving as both a CPO terminal with oil-processing facilities and a non-container cargo terminal, will be created on the riverside such as Jungkat at the mouth of the river, in accordance with CPO plantation development which is accelerated in West Kalimantan. Thus, it will attract some of bulk, bag and general cargo currently handled in private wharves.

The passenger terminal will be relocated to an appropriate place along the river such as in front of the riverside park of Pontianak, soon after the fulfillment of the short-term project, in order not only to catch up with the growing demand of passenger traffic but also to actualize the efficient loading/unloading system at Pontianak.

The port will adapt itself to the necessary change of both loading/unloading system and yard operation in the long run, for the purpose of accommodating large-size and shallow-draft cargo vessels which are supposed to be introduced at a river port in future.

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures for Pontianak as shown below (Table 10.3.7-8). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

PONTIANAK

Optimizing maintenance dredging

S. Kapuas Kecil



Increasing yard-side capacity

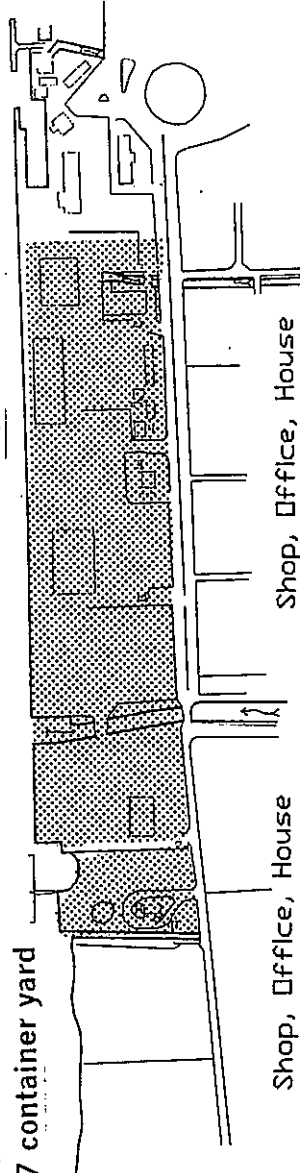
- Relocating warehouses
- Covering the creek
- Reforming and paving yard
- Extending NO.7 container yard

Increasing loading/unloading capacity

- Procuring a container crane
- Replacing dilapidated equipment

-10m

-5m



Scale 1:15,000

Figure 10.3.8 Short-term Measures at Pontianak

(2) Short-term Measures

In order to resolve the existing problem areas at Pontianak, the following short-term measures need to be taken.

Table 10.3.7 Short-term Measures at Pontianak

Measures to be taken	Responsible Party(s)	Time to start
To increase the loading/unloading capacity at the existing Pontianak port - Procuring one more container crane at NO.7 wharf. - Replacing dilapidated equipment - Procuring additional loading/unloading equipment	IPC	Immediate
To increase yard-side capacity at the existing Pontianak port - Relocating dilapidated warehouses - Covering the creek between NO.6 and NO.7 wharf. - Reforming the damaged container yard behind NO.6 container wharf. - Paving yard area completely	IPC	Immediate
To fulfill the construction project at Nipah Kuning, serving as a base port of traditional and small vessel cargoes.	IPC	Immediate
To improve the port access road to Nipah Kuning	Central/Local Government	Immediate
To extend the present NO.7 container yard, up to 75m down the stream to accommodate more container boxes on the ground.	IPC	Be in time for this project completion in 2008.
To optimize maintenance dredging in the Kapuas Kecil River Establishing a cost sharing mechanism Understanding the siltation mechanism	Central Government, IPC, Private Sector	Immediate

(3) Long-term Measures

The following long-term measures will be needed at Pontianak

Table 10.3.8 Long-term Needs at Pontianak

Measures to be taken	Responsible party(s)	Time to start
<p>To further increase the port capacity at the existing Pontianak port</p> <ul style="list-style-type: none"> - Creating a new container wharf(NO.8 berth) - Expanding the NO.8 container yard up to 320m down the stream to accommodate more container boxes on the ground - Altering NO.3 and NO.5 general cargo wharves into container wharves to accommodate rapidly increasing container vessels. 	IPC	Be in time for this project completion in 2018.
<p>To further increase the loading/unloading capacity of the existing Pontianak port</p> <ul style="list-style-type: none"> - Procuring additional loading/unloading equipment, including container cranes. - Preparing for accommodating large-size and shallow-draft cargo vessels. 	IPC	Be in time for the completion of NO.8 new container wharf in 2018.
<p>To further increase yard-side capacity at the existing Pontianak port</p> <ul style="list-style-type: none"> - Improving the yard pavement behind NO.3 and NO.5 wharves - Strengthening the container yard behind the expanded NO.8 wharf 		Depending on the demand growth.
<p>To create a CPO and non-container cargo terminal on the riverside</p> <ul style="list-style-type: none"> - Creating CPO loading jetties and related port facilities - Creating CPO storage tanks, oil-processing facilities and utilities. - Creating non-container wharves - Procuring loading/unloading equipment - Paving the cargo handling yard 	Central/Local Government, IPC, Private Sector	Depending on the demand growth.
<p>To relocate the passenger terminal, up the stream to actualize the efficient loading/unloading system at the existing Pontianak port</p>	IPC	Soon after the fulfillment of the short-term project
<p>To strengthen the linkage between a new port and the existing Pontianak port</p> <ul style="list-style-type: none"> - Providing a trunk road from 	Central/Local Government	In accordance with new port's construction

- Pontianak to a new port		
To explore siltation prevention measures - Testing pilot measures	Central Government, IPC	Depending on the understanding of the siltation mechanism

Note: The container terminal expansion project at Pontianak described in the “short-term measures” and the “long-term needs” above, is based on and conforms to the port master plan formulated by IPC2.

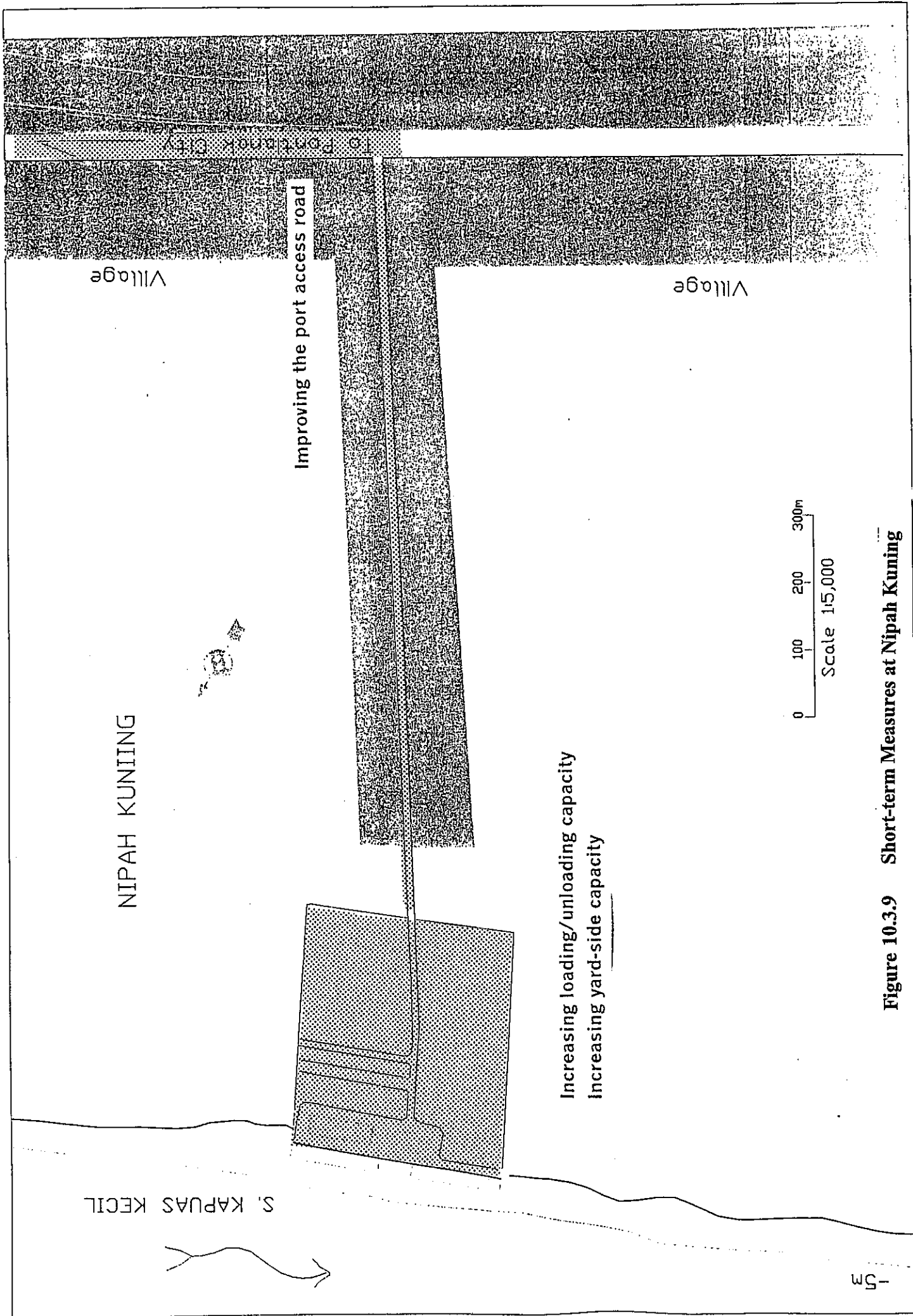


Figure 10.3.9 Short-term Measures at Nipah Kuning

10.3.6 Kumai

(1) Preliminary Scenario

Taking into account the present situation and future potential of Kumai, the Study Team made the following assumptions:

The existing Kumai port will perform the key role as a cargo and passenger terminal in the region until a new container/general cargo terminal at Bumiharjo (11km up the stream) is open in the year 2010, and thus the existing port will be provided with a necessary number of loading/unloading equipment's during that time.

A new port at Bumiharjo will be open as a CPO terminal with oil-processing facilities by the year 2005, in accordance with CPO plantation development which is accelerated in Central Kalimantan.

The new port at Bagendang will serve as both a CPO terminal with oil-processing facilities and a container/general cargo terminal by the year 2010, and thus it will attract some of bulk, bag and general cargo currently handled in private wharves.

Accordingly, optimization of maintenance dredging in the Kumai River in the short run and siltation prevention measures there in the long run, will remain an important issue.

The role of the existing Kumai port will be reduced to a passenger terminal, after the opening of the new container/general cargo terminal in the year 2010.

The port will adapt itself to the necessary change of both loading/unloading system and yard operation in the long run, for the purpose of accommodating large-size and shallow-draft cargo vessels which are supposed to be introduced at a river port in future.

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures Kumai as shown below (Table 10.3.9-10). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

(2) Short-term Measures

In order to resolve the existing problem areas at Kumai, the following short-term measures will need to be taken.

Table 10.3.9 Short-term Measures at Kumai

Measures to be taken	Responsible Party(s)	Time to start
To increase the loading/unloading capacity at the existing Kumai port - Procuring loading/unloading equipment	IPC	Immediate. When a new container/general cargo terminal created at Bumiharjo, procured equipment has to be moved to a new site.
To fulfill the first stage of a CPO and container/general cargo terminal project at Bumiharjo. - Creating one CPO loading jetties and related port facilities. - Creating CPO storage tanks and utilities. - Providing loading/unloading equipment	IPC	(Ongoing)
To improve the port access road to a CPO terminal at Bumiharjo.	Central/Local Government	In accordance with a new port construction.
To optimize maintenance dredging in the Kumai River - Establishing a cost sharing mechanism - Understanding the siltation mechanism	Central Government, IPC, Private Sector	Immediate

(2) Long-term Measures

The following long-term measures will be needed at Kumai.

Table 10.3.10 Long-term Needs at Kumai

Measures to be taken	Responsible Party(s)	Time to start
To expand the CPO terminal at Bumiharjo - Creating two CPO loading jetties and related port facilities. - Creating CPO storage tanks, oil-processing facilities and utilities. - Procuring loading/unloading equipment	Central government, IPC, Private sector	Be in time for this project completion in 2010.
To create a container/general cargo terminal at Bumiharjo - Creating 400m multi-purpose terminal. - Creating 500m general cargo terminal - Providing loading/unloading equipment - Providing yard-side capacity - Preparing for accommodating large-size and shallow-draft cargo vessels.	Central/Local Government, IPC	Be in time for this project completion in 2010.
To strengthen the linkage between a new port and Kumai.	Central/local Government	In accordance with a new port construction
To explore siltation prevention measures - Testing pilot measures	Central government, IPC	Depending on the understanding of the siltation mechanism

Note: The CPO and container/general cargo terminal project at Bumiharjo described in the “short-term measures” and the “long-term needs” above, is based on and conforms to the master plan of Kumai port, year 2001-2018 formulated by IPC3.

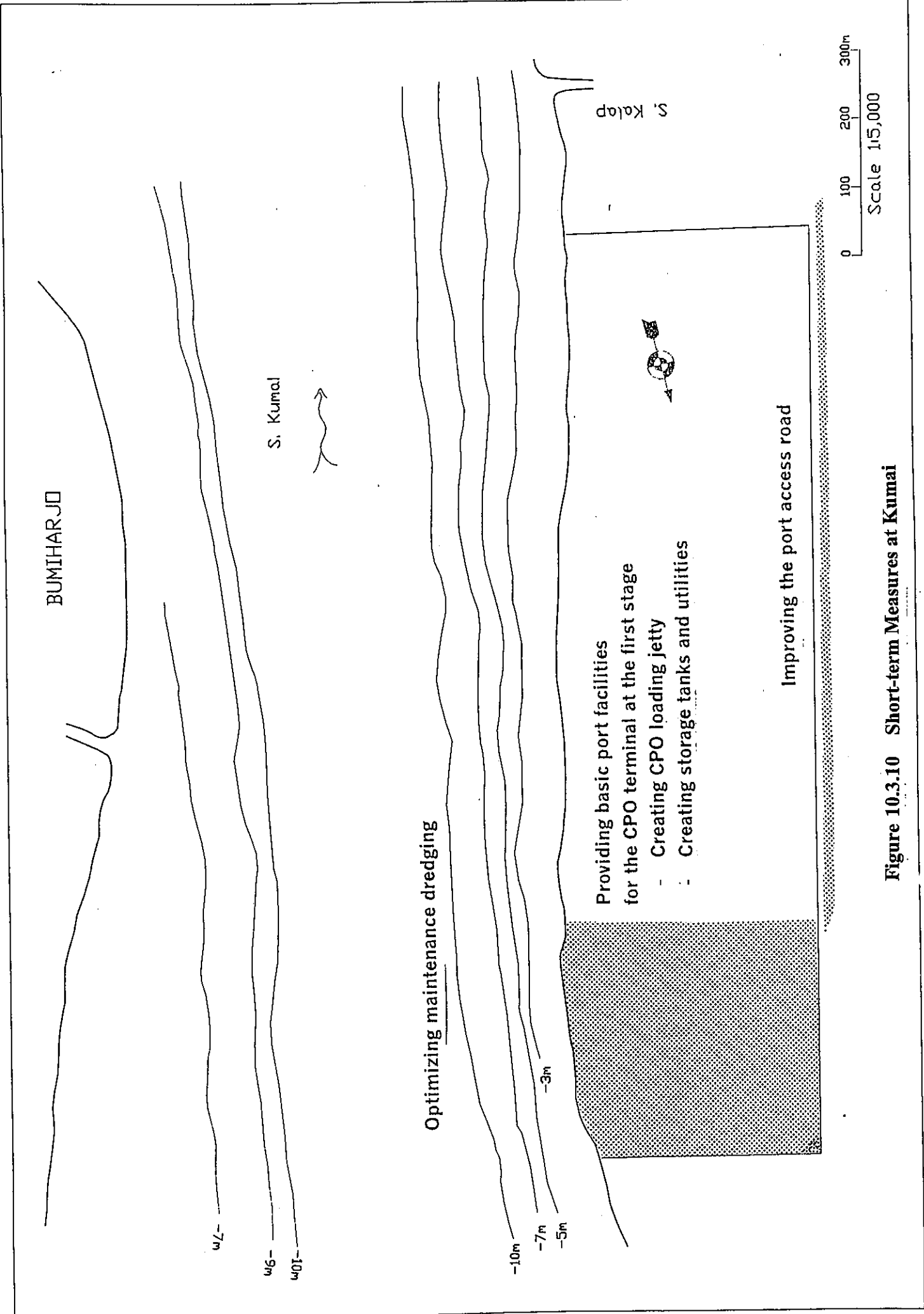


Figure 10.3.10 Short-term Measures at Kumai

10.3.7 Sampit

(1) Preliminary Scenario

Taking into account the present situation and future potential of Sampit, the Study Team made the following assumptions:

The existing Sampit port will perform the key role as a cargo and passenger terminal in the region until a new container/general cargo terminal at Bagendang is open in the year 2010, and thus the existing port will be provided with a necessary number of loading/unloading equipment during that time.

A new port at Bagendang (22km down the stream) will be open as a CPO terminal with oil-processing facilities by the year 2005, in accordance with CPO plantation development which is accelerated in Central Kalimantan.

The new port at Bagendang will serve as both a CPO terminal with oil-processing facilities and a container/general cargo terminal by the year 2010, and thus it will attract some of bulk, bag and general cargo currently handled in private wharves.

Accordingly, optimization of maintenance dredging in the Mentaya River in the short-run and siltation prevention measures there in the long run, will remain an important issue.

The role of the existing Sampit port will be reduced to a passenger terminal, after the opening of the new container/general cargo terminal in the year 2010.

The port will adapt itself to the necessary change of both loading/unloading system and yard operation in the long run, for the purpose of accommodating large-size and shallow-draft cargo vessels which are supposed to be introduced at a river port in future.

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures for Sampit as shown below (Table 10.3.11-12). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

(2) Short-term Measures

In order to resolve the existing problem areas at Sampit, the following short-term measures will need to be taken.

Table 10.3.11 Short-term Measures at Sampit

Measures to be taken	Responsible Party(s)	Time to start
To increase the loading/unloading capacity at the existing Sampit port - Procuring loading/unloading equipment - Replacing dilapidated equipment	IPC	Immediate. When a new container/general cargo terminal created, procured equipment has to be moved to a new site.
To fulfill the first stage of a CPO and container/general cargo terminal project at Bagendang.	IPC	(Ongoing)
To improve the port access road to a CPO terminal at Bagendang	Central/Local Government	In accordance with a new port construction
To optimize maintenance dredging in the Mentaya River - Establishing a cost sharing mechanism - Understanding the siltation mechanism	Central Government, IPC, Private sector	Immediate

(2) Long-term Measures

The following long-term measures will be needed at Sampit.

Table 10.3.12 Long-term Needs at Sampit

Measures to be taken	Responsible Party(s)	Time to start
To expand the CPO terminal at Bagendang - Creating two CPO loading jetties and related port facilities. - Creating CPO storage tanks, oil-processing facilities and utilities - Procuring loading/unloading equipment	Central Government, IPC, Private Sector	Be in time for this project completion in 2010.
To create a container/general cargo terminal at Bagendang Creating an inter-island container terminal and a multi-purpose terminal. - Providing loading/unloading equipment - Providing yard-side capacity - Preparing for accommodating large-size and shallow-draft vessels.	Central/Local Government, IPC	Be in time for this project completion in 2010.
To strengthen the linkage between a new port and Sampit.	Central/Local Government	In accordance with a new port construction
To explore siltation prevention measures - Testing pilot measures	Central Government, IPC	Depending on the understanding of the siltation mechanism

Note: The CPO and container/general cargo terminal project at Bagendang described in the “short-term measures” and the “long-term needs” above, is based on and conforms to the master plan of Sampit port, year 2001-2018 formulated by IPC3.

BAGENDANG

S. Mentaya



Optimizing maintenance dredging



- Providing basic port facilities for the CPO terminal at the first stage
- Creating CPO loading jetty
 - Creating storage tanks and utilities

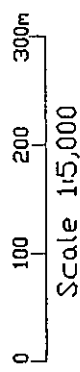
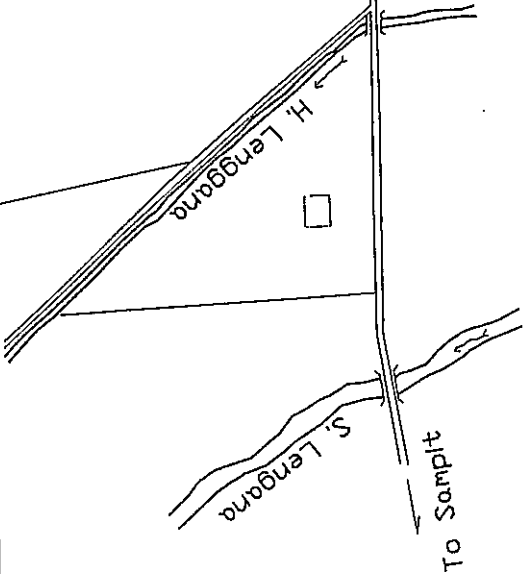


Figure 10.3.11 Short-term Measures at Sampit

10.3.8 Samarinda

(1) Preliminary Scenario

Taking into account the present situation and future potential of Samarinda, the Study Team made the following assumptions:

The existing Samarinda port will continue to serve as a non-container cargo and passenger terminal in East Kalimantan, at which the growing passenger and non-container cargo such as CPO, rubber, logs, plywood and wooden products will be handled. Thus, it will attract some of bulk, bag and general cargo currently handled in private wharves.

Accordingly, optimization of maintenance dredging in the Mahakam River in the short run and siltation prevention measures there in the long run, will remain an important issue.

Mangku Palas will start to be operational as soon as possible, and the role of the Mangku Palas port will be limited to an inland container depot due to less possibility of waterfront development.

A new port serving as a container/general cargo terminal will be created either in the oceanfront or on the riverside, in order to catch up with growing cargo demand generated by strong industrial activity within the port hinterland. Thus, it will attract some of bulk, bag and general cargo currently handled in private wharves.

The passenger terminal will be relocated to an appropriate place along the river such as in front of the riverside park of Samarinda, soon after the fulfillment of the short-term project, in order not only to catch up with growing demand of passenger traffic but also to actualize the efficient loading/unloading system at the existing Samarinda port.

The port will adapt itself to the necessary change of both loading/unloading system and yard operation in the long run, for the purpose of accommodating large-size and shallow-draft cargo vessels which are supposed to be introduced at a river port in future.

Bearing the above assumptions in mind, the Study Team prepared short-term and long-term measures for Samarinda as shown below (Table 10.3.13-14). They are proposed based on limited data and thus need to be reviewed in detail before implementation.

(2) Short-term Measures

In order to resolve the existing problem areas at Samarinda, the following measures will need to be taken in a relatively short-term.

Table 10.3.13 Short-term Measures at Samarinda

Measures to be taken	Responsible Party(s)	Time to start
To reconstruct a new container wharf (170m wooden wharf now) next to the present container wharves.	IPC	Immediate
To increase the loading/unloading capacity of the existing Samarinda port - Procuring additional loading/unloading equipment - Replacing dilapidated equipment	IPC	Immediate
To increase yard-side capacity at the existing Samarinda port - Demolishing and relocating harbor master office, labor pool building and coast guard office. - Relocating dilapidated warehouses behind the conventional vessel wharves. - Reforming the damaged cargo handling yard behind the container wharf - Paving yard area completely	IPC	Immediate
To improve the port road behind the existing Samarinda port.	Local Government	Immediate
To fulfill the construction project at Mangku Palas, serving as an inland container depot. - Providing loading/unloading equipment - Providing yard-side capacity	IPC	Immediate
To improve the port access road to Mangku Palas	Central/Local Government	Immediate
To optimize maintenance dredging in the Mahakam River - Establishing a cost sharing mechanism - Understanding the siltation mechanism	Central Government, IPC, Private Sector	Immediate

(3) Long-term Measures

The following long-term measures will be needed in a long run at Samarinda

Table 10.3.14 Long-term Needs at Samarinda

Measures to be taken	Responsible Party(s)	Time to start
To further increase the loading/unloading capacity at the existing Samarinda port - Procuring additional loading/unloading equipment - Preparing large-size and shallow-draft cargo vessels.	Central Government, IPC	Depending on the demand growth
To create a new container/general cargo terminal either oceanfront or riverside. - Creating 3 container wharves - Creating 2 general cargo wharves - Providing loading/unloading equipment - Providing yard-side capacity - Preparing for accommodating large-size and shallow-draft cargo vessels.	Central/Local Government, IPC, Private sector	Before the completion of the short-term project. Be in time for the early start of a new port's operation.
To strengthen the linkage between a new port and the existing Samarinda port Providing a trunk road from Samarinda to a new port	Central/Local Government	In accordance with a new port's construction
To relocate a passenger terminal up the stream in order to actualize the efficient loading/unloading system at the existing port	IPC	Soon after the completion of the short-term project
To explore siltation prevention measures - Testing pilot measures	Central Government, IPC	Depending on the understanding of the siltation mechanism

SAMARINDA

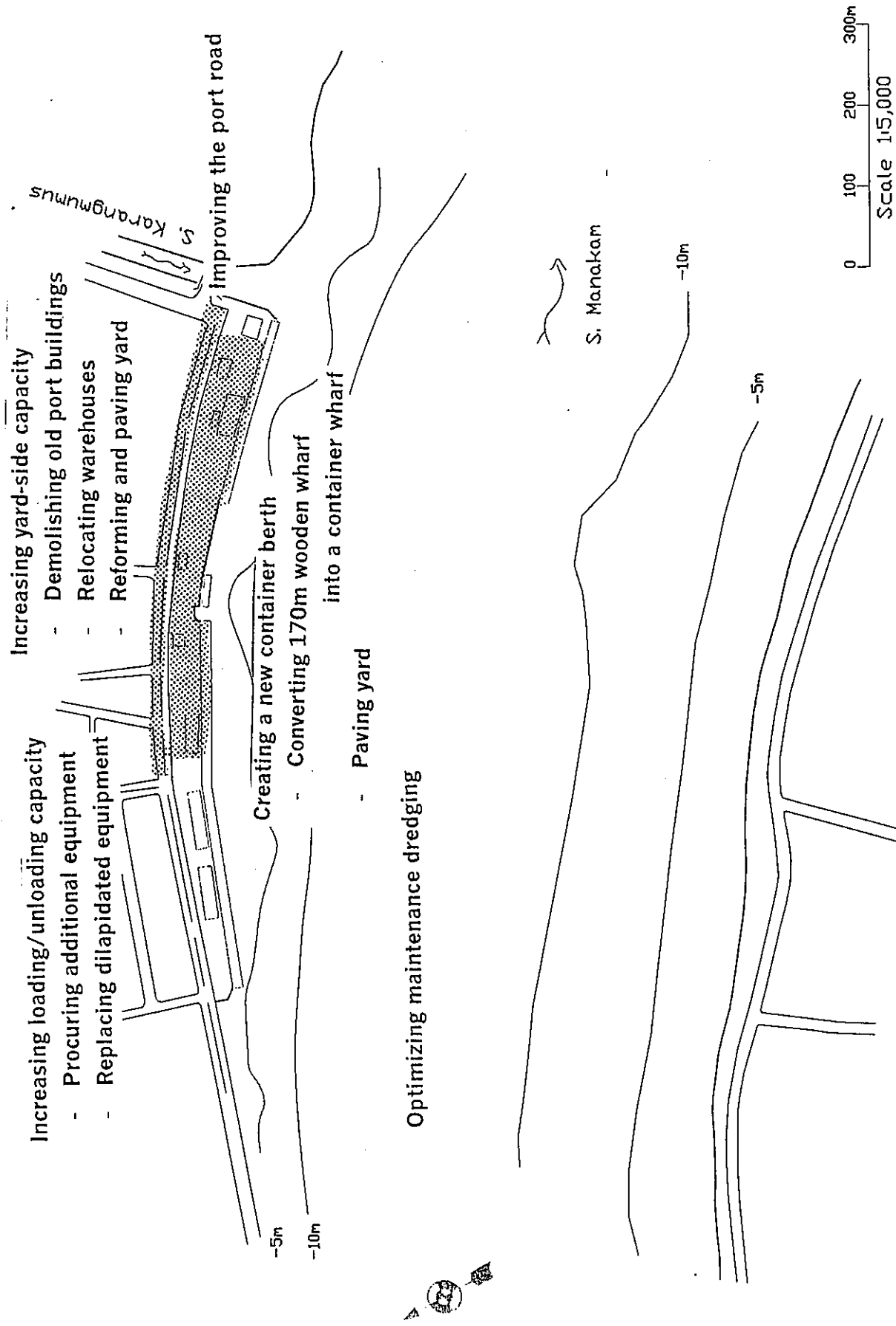


Figure 10.3.12 Short-term Measures at Samarinda