INTEGRATED WATERBORNE TRANSPORT PLANNING ON THE MEKONG RIVER SYSTEM IN CAMBODIA

The International Forum on Integrated Water Resources Management of the Mekong River Basin

28th-29th November 2005

Chiang Rai
CONTENTS

1. Introduction: Rationale of the Project within the context of this Forum

2. Integrated Planning of Waterborne Transport in Cambodia

3. Conclusions
Rationale of this Forum:

Obtaining ideas for how IWRM principles can be applied at basin scale through …

- Meeting the development needs
- Strengthening Cooperation
- Maintaining the ecological balance
- Building capacity
Project: Design of the Master Plan for Waterborne Transportation on the Mekong River System in Cambodia

Introduction: Rationale of the Project within the context of this Forum
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The project is to (Design a Master Plan that will) rehabilitate and improve the rural, domestic and international transport network using the Mekong River system in Cambodia.
The Integrated Plan will be designed, containing an efficient development programme with a short, medium and long term action plan in order to plan, monitor and implement inland waterway transport and maritime navigation.
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Important questions the project team needs to answer during the design:

- *Do we need Mekong Navigation in Cambodia?*

- *What may happen if there is no navigation development or coordination?*

- *And how do we ensure all aspects are taken into consideration, in a balanced way, and in close cooperation with the other Mekong countries?*
• Do we need Mekong Navigation in Cambodia?
Cambodia has no alternative but to reduce the transport costs, especially for garment exports … in particular in their overseas trade – this is where the regional aspects come in
Container throughput in Phnom Penh Port

Imports

Exports

Only between January and May 2005
Container throughput in Phnom Penh Port

Forecast until December 2005

2002 2003 2004 2005

Imports
Exports
SIHANOUKVILLE

PHNOM PENH

HONG KONG

HCMC

PNH – SHV – HKG:
by truck + ship: 460 $ per TEU

PNH – HCMC – HKG:
by barge + ship: 405 $ per TEU
by 1 ship: 280 $ per TEU

Δ 180 $

REDUCED TRANSPORT COSTS OF UP TO 42 MIO $/YEAR BY 2020

IN CASE PNH TAKES 15% THROUGHPUT FROM SHV REDUCED TRANSPORT COSTS OF UP TO 42 MIO $/YEAR BY 2020
and the potential of the Tourism industry
Domestic Waterborne Transport and Poverty Alleviation
It is not only about rural navigation for commercial purposes*

* Reference is made to Session 1 question: what are the main target groups – priority areas
It is also about accessibility to schools and hospitals.
Maintaining 1 km of road is 12 times more expensive than maintaining 1 km of waterway.
Accessibility during floods
• What may happen if there is no navigation development or coordination?
Currently there are:
no “rules of the road”
no regulations for carriage of dangerous goods – no proper facilities
no contingency plans
no means to combat oil pollution
no insurance requirements
…
The Ministry of Public Works and Transport in Cambodia asked the team to study the feasibility and impacts of dredging a navigation channel in the Tonle Sap Lake.
Dredging of Snok Tru will not empty the Tonle Sap Lake

- Water level of Tonle Sap Lake is controlled by the Water Level in Mekong
- During the dry season, WL in Phnom Penh is controlled by upstream discharge and sea level

→ Dredging of Snoc Trou will not have an impact on the TSL water levels
Tonle Sap is NOT silting up with sediment.

- Latest studies show that sedimentation in lake is 0.1 mm/year (Tsukawaki et al., 1997 & Penny et al., 2005).
- Supported by modelling → sediment trapped by floodplain vegetation (WUP-FIN, 2003).
• And how do we ensure all aspects are taken into consideration, in a balanced way, and in close cooperation with the other Mekong countries?
FLOWCHART FOR DESIGN OF THE MEKONG NAVIGATION MASTER PLAN

**Inputs:**
- surveys
- questionnaires
- interviews
- consultations
- workshops

**Additional data and information**

**National strategies and regional transport strategies**

**Existing data, projects & reports**

**Baseline conditions**

**Socio-Economic Assessment**

**Scenarios Type A**
Cross-border IWT + Maritime traffic based on supply/demand

**Scenarios Type B**
Domestic + rural IWT

**Zero "0" scenario**
Do nothing

**Technical - Operational - Legal - Environmental - and Organisational Assessment**

| Scenarios Type A | Scenarios Type B | Sc"0"
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Identified potential obstacles + Possible interventions and options that are necessary to materialize the scenarios
inputs:
Legal Experts
Port Mgmt/Eng.
Waterway Design
Waterway Safety
Institut. Reform
Training/Education
Environment Experts

Technical – Operational – Legal – Environmental – and Organisational Assessment

additional data and information

inputs:
- surveys
- questionnaires
- interviews
- consultations
- workshops

by All Experts

identified potential/obstacles + possible interventions and options that are necessary to materialize the scenarios

SWOT for each scenario + making

- Long term vision
- Concrete scenarios/objectives
- projects, activities and interventions

Carry out Pre-Feasibility

screened projects, activities and Interventions

Multi-criteria Assessment

Master Plan
(A comprehensive Action Plan and short to long term investment program (+ possible partnerships))
FLOWCHART FOR DESIGN OF THE MEKONG NAVIGATION MASTER PLAN

**Inputs:**
- Surveys
- Questionnaires
- Interviews
- Consultations
- Workshops

**Additional data and information**
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- Existing data, projects & reports

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**Socio-Economic Assessment**

**Scenarios Type A**
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**Scenarios Type B**
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- Do nothing

**Technical - Operational - Legal - Environmental and Organizational Assessment**

**Scenarios Type A**

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**SWOT for each scenario**

- Long term vision
- Concrete scenarios/objectives
- Projects, activities and interventions

**Carry out Pre-Feasibility**

- Screened projects, activities and interventions

**Multi-criteria Assessment**

**Master Plan**

(A comprehensive Action Plan and short to long term investment program + possible partnerships)

**Workshop**
Cooperation with MRC Programmes: Analysis and Planning

Economic viability: Multimodal transport model

Technical viability of the channel and port improvements?

Social Improvements: country craft, bank erosion issues

Technical Results

Investment opportunities

Legal Framework

Required Water Depth?
LINKED TO WUP

Safety, Environment
LINKED TO EP: Assessments

LINKED TO BDP
CROSS-BORDER NAVIGATION:

- The project prepares ingredients for a bilateral Navigation Agreement (CA-VN)
- A road map for assisted negotiations (through MRC)
- Schemes to enforce common rules
1. Description of the Mekong environment

2. Environmental guidelines and criteria for Master Plan activities

3. Comprehensive environmental safeguarding methodology

4. Institutional, legal and operational framework

5. Educational training and skills/capacity building needs assessment and plan

6. SWOT of Master Plan scenarios

7. Initial environmental examination of Action Plan and Action Plan activities

8. Specific guidelines, plans and procedures

Environmental Safeguarding Mechanism of the Master Plan
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Inland waterway transport is a historical feature in the Mekong Basin, with proven diverse and far-reaching social and economic benefits.

Coordination is essential to control the navigation system and make it a safe and regulated mode of transport.

Public/private participation is much more than just a “cosmetic” chapter in the project design process.

Regional cooperation between the Mekong member states through MRC, ASEAN, WB, ADB and international NGOs – but efficient coordination is still very difficult – who is actually the coordinator?

Office: Design of the Master Plan for Waterborne Transportation on the Mekong River System in Cambodia

Lieven Geerinck, Co-Director
#3, Street 570, Boeung Kok II, Tuol Kork
Phnom Penh, Cambodia
Tel. 855 12 812360
Fax 855 23 880507
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