

Chapter 11

River Transportation Master Plan Study for Environmental Enhancement

Ab Saman Ab Kader

Universiti Teknologi Malaysia, Malaysia

Oladokun Sulaiamn Olanrewaju

University Malaysia Terengganu, Malaysia

ABSTRACT

Inland waterways have long been utilized for various purposes including transportation. Since the development of road and rail took place, the use of inland waterways through rivers or canals has been neglected to give way for other modes of transport resulting in environmental degradation. In most developed countries, a revived plan has been formulated in implementing the optimum use of the inland waterways system for transportation purposes including USA, UK, European countries, etc. Malaysia too, owing to a substantial growth in population as well as economy, is experiencing something similar to what developed nations have gone through. With vast river network system in the country, Malaysia would surely wish to put the experiences into practice. A comprehensive master plan study should be undertaken to determine the potential rivers for development as well as to determine the level of development. The chapter highlights some considerations in ensuring the successful implementation of the environmental protection programme by developing and utilizing an environmentally friendly mode of inland water transport in Malaysia.

INTRODUCTION

Inland Waterways Transport System (IWTS) is one of the four major modes of transport provided for social and economics activities. In most of the world, inland water transport via river or canal navigation are used on limited scale due

to a number of reasons. However, with problems arising from the excessive development and use of road transport and their impact such as pollution, congestion, fatality accidents, degradation of ecosystem, etc has resulted in many countries to develop and use the alternative mode of transport system by exploiting their inland waterways networks.

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In a city like Kuala Lumpur for instant, the level of congestion, pollution, flooding and environmental problems have been catastrophic. The need to up-grade or develop their river system is a matter of urgency and necessity. It will not be economic to develop rivers to just address one problem at a time for e.g. flooding, while other problems are neglected. Based on developed country experience such as Europe and USA, the development of the river for transport system will generate multiple benefits whilst addressing some of the problems simultaneously. Moreover, navigable rivers would allow enforcement authorities to enforce rules and regulation preventing the indiscriminate treatment of the river system.

The planned study would require urgent attention not only because the states of the rivers are degrading, but also to address transportation issues and other related problems mentioned earlier. There was no group or body in the past that have carried out a comprehensive study on the potential of the river system for transportation purposes in Malaysia. Probably an integrated “National Master Plan Study” for the development of inland water transport system in Malaysia would be highly and timely required. The proposed national level project team would comprise a number of experts from around the country with sufficient qualification and expertise. Various relevant authorities have expressed the willingness to engage in the proposed study while others are expected to participate respectively.

The project covers a multidisciplinary aspect of the study such as marine transport system and technology (including shipping), civil engineering, land and quantity survey, environment, statistical, leisure and tourism, drainage and flooding, irrigation and water supply, economics and management and the most desired IT application. A research of this nature will require various types of infrastructure requirement, hardware and software alike. This covers the administrative as well as experimental and testing facilities for the laboratory works.

Industrial and international entities would inevitably be included. Industry as an end user to most of the research output such as boat owners or companies for leisure and tourism, boat or ship for cargo, boat or ship for passengers, etc, are vital components of the study. Government agency such as Marine Department, Local Authorities, Jabatan Pengairan dan Saliran (JPS), etc would definitely be an integral part of the project team.

The proposed master plan study would undoubtedly form a backbone project for the Malaysia’s development programme. With a long list of highly qualified and dedicated researchers involved in the project, Malaysia is expected to engage in one of the most promising and comprehensive development programme ever as far as rivers and their related issues are comprehensively addressed.

ENVIRONMENTAL ADVANTAGES OF RIVER TRANSPORT

The environmental impacts of water transportation vary from river to river and project to project, but in many cases, the environmental impact is not noticeably affected by waterway freight transport. Where it does have a negative impact, the effect is usually minimal.

Because of the concern over the impact that the different transportation modes have on the environment, a number of studies have been carried out in the past¹. The studies compared the same cargo shipped by different modes, and concluded that inland water transport recorded fewer accidents, consume less energy, produce less harmful emissions, and are less disruption to society in general. These findings show that transporting certain type of cargoes by water is environmentally compatible, and provide a means of sustainable development. One specific benefit of waterways is that they can interact with nature in a very environmentally friendly atmosphere. Transport is a major source of gaseous and par-

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