

Feasibility Study for the Improvement of the Entrance Channel to the Bassac River (Vietnam)



Financed by: Mekong River Commission (MRC), BADC (Brussels)

Client: Mekong River Commission

Date: 1996 – 1998

Budget: € 625 000

Location: Bassac River (Dinh An and Tran De river mouths), South Vietnam

Partners: HR Wallingford, Tedi Port, Sudewat

Assignment:

Survey, dredging engineering and nautical accessibility design are main components of the study tasks.

A detailed morphodynamic study of the offshore bar at Dinh An is a key factor in this study.

Scope of Services:

- Scope of existing data
- Bathymetric and hydraulic field survey
- Dredging study
- Economic and technical feasibility
- Nautical accessibility of the Bassac River

Technical Description:



Lower Mekong delta

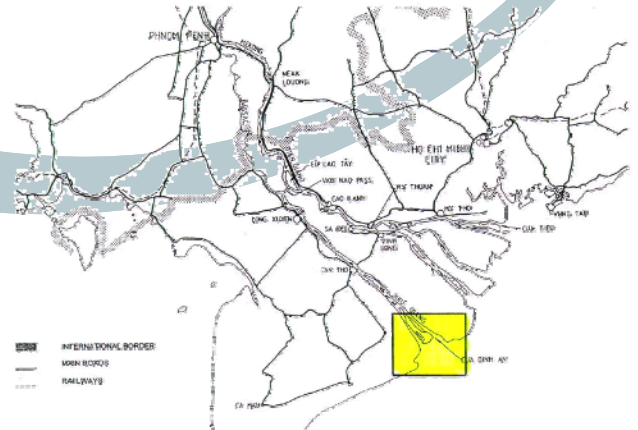
As part of the Mekong delta, the Bassac River is the main navigation channel for maritime traffic between the South China Sea and Can Tho. Moreover, the river is linked with the lower Mekong basin and the fluvial navigation routes of South Vietnam.

The maritime entrance however has a limited nautical depth due to the presence of a highly dynamic offshore bar at Dinh An (shoal). Ship's size sailing on the Bassac River is therefore limited to 3,000 DWT in optimal conditions.

To solve the problem, the water team of Soresma-haecon was selected for a feasibility study by the Mekong River Commission because of the high rank of its technical bid, its low cost price and its broad experience in similar projects in South East Asia.

The present feasibility study had to supply the project with accurate hydraulic and sedimentological data, and to design (preliminary design) an appropriate channel to allow accessibility to 5,000 DWT vessels and up to 20,000 DWT vessels with tidal navigation all year round.

The technical, environmental and economic criteria have to be met in order to allow the appropriate dredging works to be designed and tendered by MRC.



Location map – lower Mekong delta



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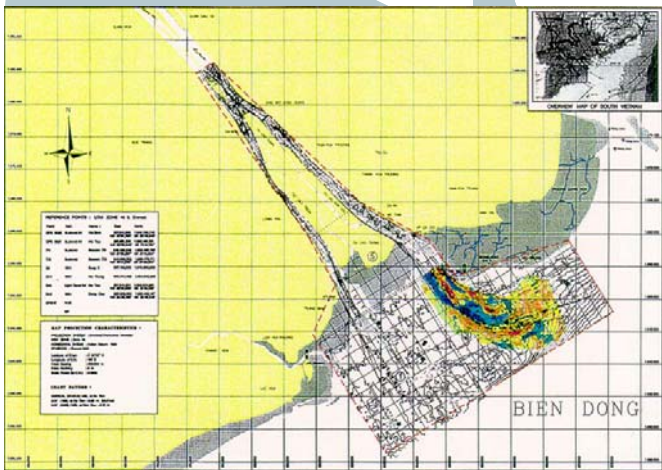
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Navigation on the Bassac River

Detailed field records of both morphological and hydrodynamic parameters in the river entrance reveal some interesting features of the morphodynamic behaviour of the Bassac mouth. Based on these assessments, a proper access design is formulated taking into account both capital and maintenance dredging works.



Differential map of the Bassac River (Vietnam)

The morphodynamic study and insight in the offshore bar with its particular interactions between fluvial and marine components in the river entrance is a crucial element in this feasibility study.

As a result, a better understanding of the morphodynamical physics of the Bassac River estuary ensures a more sustainable management development of the area in the nearby future.



Satellite picture of the Mekong River delta (including the Bassac River)