



**The World Association for Waterborne Transport Infrastructure
Maritime Navigation Commission - MarCom**

**Association Mondiale pour des Infrastructures de Transport Maritimes et
Fluviales
Commission de la Navigation Maritime - MarCom**

ToR

Expert Group : Overview of Design Codes and Guidelines for Harbour Structures

Historical Background - Definition of the problem :

A report was made in 2005 by a Fact Finding Panel consisting of nine member countries plus two extra members from Germany. The current situation regarding international codes was that there were at least eleven national Codes of Practice or Guidelines covering maritime work and several more in the pipeline and that Eurocodes, which contain few marine content, had already started to take a grip. None of these covered *every* aspect of the many designs necessary for maritime construction, which is complex. There were no overall document of international acceptance and therefore none of the existing codes had become more important to the maritime community.

A Working Group (WG 50) was set up in 2005/2006 but could not progress despite the involvement of two successive chairmen. The initial ToR aimed at « *wherever possible, provide uniform definition of terminology, conditions and design approaches* ». This was probably too ambitious to deal with. For this reason MarCom decided to abolish the WG as such and to go on towards the creation of an Expert Group (EG) based on the present optimised ToR.

Objective and expected product of the Expert Group :

To produce a catalogue-like document facilitating the exploitation of existing Codes and Guidance documents.

The scope of those « Codes and Guidance documents » deserves to be broadened up to all aspects of the design harbour structures including civil engineering work, marine climate assessment, soil conditions, loads from the ships and from the cargoes, environmental matters...

This catalogue should be short and handy in order to let anyone get a quick understanding of the contents of the original text. It could put side by side the specific aspects of the different Codes and Guidance documents referring to the main issues that are most likely to be addressed by code users. It should allow for the addition of other documents that the EG may identify in further rounds.

The EG will stick to the material provided in the original documents and refrain from adding any comment, judgment or comparison.

Methods of approach :

Investigate existing Codes and Guidance documents, identify their main differences in terminology, conditions of application and design approaches. Collate the contents in a table along the lines of the typical items given below.

- Design philosophy ;
- Scope ;
- Functional analysis ;
- Models for actions and loads : marine and maritime actions, vessels, cargo and handling equipment, ground, dynamic loads... ;
- Models for resistances and materials properties : foundation, structural parts... ;
- Safety, risk analysis ;
- Protection of the environment ;
- Durability analysis ;
- Other considerations.

As a suggestion, the Expert Group may identify the existing Codes and Guidance documents (bibliography), summarize information and fill the boxes of the catalogue. To that purpose the Expert Group can organize presentations of Code and Guidance document by Experts being already members of the EG or coming from outside.

Earlier reports :

PIANC has not produced a report on this matter.

Desirable disciplines of the members of the Expert Group :

It is proposed this EG includes practicing engineers incl. YP engaged in or responsible for the design of maritime disciplines and with a knowledge of working with codes of practice.

Relevance for countries in transition :

In general countries in transition do not have their own codes and standards. They usually follow, mix and adapt different existing codes. This catalogue (which remains obviously under their full responsibility just as it is now) would be useful.