



## **FLOATING HOMES IN MARINAS**

### **PROPOSED TECHNICAL WORKING GROUP**

#### **TERMS OF REFERENCE**

##### **1. Historical Background Definition of the problem**

In many western countries pleasure boating has been booming since the sixties, generating the development of thousands of marinas. In some European countries, there has also been a trend of net reduction in number of boaters. The number of boats in some areas is decreasing and there is an oversupply of berths.

Many marina owners and operators have tried to compensate for this oversupply by using their water space in new ways. There is a clear trend for some marinas to try to improve their appeal by harbouring floating houses, which are moored in quiet corners of the harbour or have replaced underutilised yacht berths.

Floating units for residential or hospitality uses are connected to land with permanent gangways and water and electricity supply and sewage treatment systems. They are available in many locations outside of marinas and are presently being promoted by various specialized companies. In some cases, they are proposed as an adaptation solution to sea level rise.

In some cases, floating residential units in marinas are owned by the customers, who subscribe a long-term mooring contract with the marina management, in other cases the floating houses are owned by the marina, which rents them out to clients. They offer the marina operator fixed rental income when the floating residential units are owned by the customers.

Floating houses may be a relevant part of the marina infrastructure and service, adding to the revenue making portfolio of the marina business. Furthermore, most of these systems can be used all year round, which may increase the utilization of the onshore service facilities. Floating accommodations may be an attraction for non-water sports enthusiasts. This in turn may lead to a revitalization of the water sports industry and open the possibility of attracting new groups to boating.

Floating homes do not need such water depths as sailing yachts or larger motor yachts. They can therefore also be installed very well in shallow areas and thus utilize any unused areas of a marina very well.

On the other hand, replacing yacht berths by floating houses may conflict with the sustainability of the recreational boating industry. The potential growth of this type of uses

may increase the demand for protected waters, which are also needed for the sustainable development of boating and its numerous industrial and services businesses.

Marinas can be difficult to build in areas with extensive coastal development and environmental protections, as there is a competition for the use of coastal space utilization. It can be argued that protected water areas with navigable water depth is a finite resource, and once its use is transferred to residential purposes it may not become available for recreational navigation again. Similar negative impacts occurred in some developed countries when real estate development rapidly converted waterfront land used for yards and repair facilities into expensive waterfront residential units. For example, the marine industry in Florida argued for legal protections against repurposing of “working waterfronts”.

The potential synergies and conflicts are fundamental questions that need to be explored to provide objective guidance for water space use planning and marina sustainable development. There is an economic benefit for the highest and best use of water space for an individual marina, which under certain circumstances can have negative cumulative effects in the boating industry.

## **2. Objectives**

The aim of the working group on this subject is the following:

- To provide a broad context of floating structures for residential and hospitality uses, state of the industry and basic engineering considerations.
- To analyse experience of floating houses available in marinas.
- To outline the ways these facilities can be introduced in marinas, including the demand of the marina customers and non-marina customers (i.e. floating home owners/users);
- To evaluate the potential conflicts with other kind of activities in a marina.
- To evaluate the potential conflicts with long term development of marinas.
- To understand the implications of the applicable regulatory framework and legal jurisdiction, based on available international experience.
- To describe the best administrative practices to review applications to authorise, develop, and manage this kind of facilities in a marina.

## **3. Earlier reports to be reviewed**

No other PIANC reports address this issue, but ongoing InCom WG 242 was established with synergistic goals, so coordination between both WGs is required.

Rules and regulations governing installation of floating homes and installation in marinas should be reviewed. While legal requirement may vary among countries, types of regulatory frameworks and their consequences may be evaluated.

## 4. Scope

The proposed approach for this working group is to:

- Collect and analyse planning and engineering information on floating units for residential and hospitality uses, including case studies.
- Collect and analyse case studies of floating homes in marinas.
- For the case studies, consider evaluating:
  - type of land ownership, development and use rights for water space and the land beneath it (title, lease, concession, etc),
  - technical approvals and regulatory authorities (building code, floating stability verifications, environmental management),
  - utility connection systems, responsibilities.
- Communicate with urban planners, marine spatial planners, marina representatives, marine industry associations and floating home designers to gain insights to address the fundamental questions.
- While use of water spaces outside of marinas for non-navigation uses is also of interest to PIANC, this WG will focus specifically on marinas and the potential impact on navigation infrastructure for recreational boating and nautical tourism.
- A definition to differentiate between floating structures and houseboats is desirable.
- Compile these analyses to extract conclusions regarding synergies and conflicts that these units may bring to individual marinas and the marina industry as a regional system.
- Develop recommendations for sustainable development of marinas and boating, in the context of the existing trends and motivations.

## 5. Intended product

The Working Group report should provide guidance for the implementation of policies that respond to market trends and long-term sustainability of recreational boating and marina businesses.

The working group report should provide basic technical guidance on the planning for the inclusion of floating homes in marinas, both for new and redevelopment projects, compatible with the above policy recommendations.

Product of this WG should be compatible and synergistic with InCom WG 242, so both WGS should collaborate towards this goal.

## 6. Working Group Membership

- Engineering and marina design consultants
- Marina owners and operators
- Floating home manufacturers
- Boating industry association representatives
- Regulatory body representatives, coastal planning authorities, and regulators that have jurisdiction on this issue.

## 7. Target Audience

- Marina developers, owners, and operators
- Engineering and marina design consultants
- Marine Spatial Planners and Urban planners
- Real estate developers
- Regulators

## 8. Relevance

### 8.1. Relevance to countries in transition

The report could be useful in countries in transition, providing suggestions on how to combine the growth of boating with facilities that can help in supporting the marina investment in its initial stage. It should also provide guidance for sustainable boating development and marine spatial planning.

The report can be useful to designers and investors who are investigating internationally the most successful floating structures and how to better connect them to the land and to the marina urbanization.

### 8.2. Climate Change and Adaptation Implications

This topic can be useful for climate change adaptation, considering that large coastal areas might be flooded in a near future by rising ocean levels.

### 8.3. Relevance to Implementation of WwN Philosophy

The tactical use of floating homes in protected waters that do not require dredging may be used as a tool to create revenue sources in marinas.

Guidance on the recommended approach to consider floating homes as part of balanced sustainable development solutions should be one of the goals of this WG. However, the primary goal is to address this in the context of marinas.

### 8.4. Relevance to UN Sustainable Development Goals

This report is intended to contribute primarily to Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, and additionally support for following SDGs:

- Goal 13: Take urgent action to combat climate change and its impacts
- Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

### 8.5. Relevance to UN Small Island Development States (SIDS)

SIDS may implement these types of solutions as part of a wider toolbox of sustainable nautical tourism and recreational boating development, coastal zone management and marine spatial planning, and climate change adaptation.