



PERMANENT FLOATING HOUSES ALONG THE INLAND WATERWAY BANKS AND INFRASTRUCTURE

TERMS OF REFERENCE

1. Historical Background Definition of the problem

In many large cities (Paris, London, Amsterdam, ..) a significant ratio (%) of the inland waterway banks (and sometime also the infrastructure) are used by moored ships and floating houses as fixed and permanent residences or accommodations (for private and commercial uses). These (*often old*) former cargo ships often are not able to navigate anymore and have been fully refurbished for a comfortable live (with a garden/terrace on the upper deck, large living room in the cargo holds, ..).

The floating houses are for a large part the result of a societal problem, namely the shortage of (affordable) houses, and/or a trend to live close to the nature.

The floating houses for residential or hospitality uses are connected to land with permanent gangways and water and electricity supply and sewage treatment systems.

These floating houses are not always legal and well maintained.

The port and/or waterway authorities have nowadays many difficulties to manage and control these floating houses. For instance, on the main Dutch waterways, the vessels are obliged to slow down when passing moored vessels to avoid damage on the moored vessels because of water movement (waves and suction); the passing vessels are responsible for any damage on the moored vessels. Therefore, in general vessels are forbidden to moor along those main waterways. The same goes for the river Rhine in Germany, France and Switzerland. So, from a navigational and economic point of view, in general waterway authorities are not keen on mooring floating houses along main waterways.

There are obviously questions about:

- The structural integrity of the vessels, lack of insurance, lack of inspection and maintenance validated by a ship classification (BV, DNV, RLR, ..);
- The lack of access to quays for the existing commercial navigation but also for to the tourism fluvial activities;
- The identification of the owner/user to remove the ship in case of the ship sunk;
- The consequence and responsibility due to the reduction of transversal section of the river available for the flow;
- What are the consequence of high discharge (river flow control);
- Legal aspects of the citizens living there (taxes,...).
- The impact on planning (urban, waterway or spatial in general), decommissioning and disposal of such floating homes.



2. Objectives of the Working Group

The aim of the working group concerns the use of river banks by floating houses and more specifically:

- 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 along riverbanks. What about public acceptance?
- To outline the ways these permanent floating houses can be introduced along river banks, including the demand of the customers (i.e. floating home owners/users);
- To evaluate the potential conflicts of the floating houses along the river banks with the commercial navigation and for the river flow control ;
- To evaluate the potential conflicts with long term development (debris at bottom of the rivers which obstruct the flow)
- To describe the best administrative practices to review applications to authorise, develop, and manage this kind of permanent housing along the river banks

3. Earlier reports to be reviewed

No earlier PIANC reports address this issue.

Rules and regulations governing installation of floating homes and installation along river banks 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 along river banks;
- Collect and analyse policies towards mooring of vessels along banks, making distinction between main waterways (\geq Class IV) and smaller waterways;
- Assess the Public Acceptance (as citizens may not feel happy to see all banks used and therefore waterfront is not more accessible);
- Communicate with urban planners, river spatial planners, marina representatives, port industry associations and floating home designers to gain insights to address the fundamental questions;
- While use of water spaces along river banks for non-navigation uses is also of interest to PIANC, this WG will focus specifically on the potential impacts on the navigation for tourism and commercial purposes;
- A definition to differentiate between floating structures and houseboats is desirable;
- Compile these analyses to extract conclusions regarding synergies and conflicts that these permanent floating accommodations may bring to the use of the waterway and the river flow control (discharge);
- Develop recommendations for sustainable development and use of the river banks in large cities, in the context of the existing trends and motivations.



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5. Intended product

The Working Group report should provide guidance for the implementation of policies that respond to market trends and long-term sustainability on river and inland port commercial activities and flow control.

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 project, based on the above policy recommendations.

6. Working Group Membership

- River/waterways authorities
- Port authorities
- Floating home users (associations)
- Urban planners
- Regulatory body representatives, ...

7. Target Audience

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- Port authorities
- Floating home users (associations)
- Urban planners
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8. Relevance

8.1. Relevance to countries in transition

Many floating structures for private or commercial use can be found in countries in transition. Therefore, there could be many lessons learnt from those countries.

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

8.2. Climate Change and Adaptation Implications

This topic can be useful for climate change adaptation, considering that reduction of transvers river section might have a significant impact in case of higher flow discharge (climate change) as it happens in summer 2021 in central Europe (Belgium, France, Germany, Holland, ..)



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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 directly contribute to some SDG's.