



## Terms of reference Working Group WG201

### Joint WG of PIANC/InCom & ECLAC (\*)

# Development of a Proposal of Inland Waterway Classification for South America

(\*) This TOR is the result of the workshop organised in Rio, Brasil, by ANTAQ, ECLAC and InCom, during Copedec Conf., in Oct 2016

## 1 Background

South America has to take full advantage of its extensive system of naturally navigable waterways or integrate them into the region's transport network to cater for the ever-increasing demand for cargo and human mobility. The modal shares of inland shipping in the region's international transport are less than one percent in terms of value and volume (Wilmsmeier and Spengler, 2015). Nevertheless, the evolution of international transport in inland navigation has been positive over the last decade.

Inland waterways are not only used for transport between the countries of the region, located along the river basins, but also are the first leg of international transport flows with other regions of the world. Examples of the latter are the natural resource exports (soybean products, aluminium, and oil related products) from the Paraguay-Paraná, Orinoco and Magdalena river basins that are destined for the Europe, the US or Asia. In these cases, seagoing vessels are directly deployed from the ports along these river systems. While the values of these exports have more than tripled since 2002, in some waterways the volumes have shown a decreasing tendency over the last years but hopefully not everywhere as in Paraguay-Paraná IW.

In South America, there are several independent inland waterway systems, which have different levels of development. For some of these systems and from a macro perspective view, the uses of the inland waterway systems in the region are challenged by various factors. These factors include:

- Incomplete, outdated or absent national and regional norms and regulatory frameworks;
- Lack of common inland waterways classifications in South America to standardise the inland navigation at national and 'supra-national' levels;
- Lack of standardization of fleets, vessel, and control procedures.
- Lack or absence of investment in the construction and maintenance of waterway infrastructure and inland ports;
- Delay and lack of administrative structures and building of institutional capacity (capacity in this case refers to human and financial capital);
- Lack or absence of navigation aids, including updated maps, electronic charts, signals, and other navigational services as RIS;
- Lack of qualified labour and institutions for capacity building and formation of

quality labour

These challenges limit the past, current, and future potential of inland navigation and the current situation affects not only the wider use of this mode of transport, but also its integration with other modes, generates inefficiencies, such as cargo losses, and results in relatively high costs of transport at local, regional, and national level.

A common inland waterway classification for south America can be one milestone in developing inland shipping prospects, especially as past experiences (CEMT'92, 1992) have shown that such classifications are far from being a formality or a purely academic exercise, but an essential, powerful and dynamic tool for supporting and implementing inland waterways policies and projects as they allow to identify the limitations and the economic potential of navigable waterways in the region and to encourage and monitor the development of their capacity for transport of goods and people (Jaimurzina et al., 2016).

On October 19 2016, at the occasion of the ECLAC/PIANC/ANTAQ Seminar on Inland navigation and a more sustainable use of natural resources: networks, challenges, and opportunities for South America (Rio de Janeiro, Brazil), the representatives of the South American countries with interest in inland navigation and the PIANC experts from Europe, Northern America and Asia supported the idea of elaborating a regional classification for inland waterways in South America and recommended a creation of a dedicated working group on the issue.

## **2 Objective**

The main objective of this Working Group is to develop a proposal and implementation strategy for a common supra-national inland waterway classification for South America, combining the knowledge of ECLAC and PIANC and drawing on the experience of other regions of the world.

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

The following documents establish the baseline for the work of the Working Group:

- CEMT'92 (1992) Resolution 92/2 on new classification of inland waterways.
- ECLAC, PIANC (2016), Position Paper, Inland waterways classification for South America: core concepts and initial proposals, December.
- PIANC (1990), "Standardization of Inland Waterways", Dimensions: Report of the Working Group n. 9 of the Permanent Technical Committee I.
- PIANC (1996), "Standardization of Ships and Inland Waterways for Rivers/Sea Navigation": Report of the Working Group nr. 16 of the Permanent Technical Committee I.
- PIANC (1999), "Factors involved in standardising the Dimensions of Vb Waterways (canals)": Report of the Working Group nr. 20 of the Permanent Technical Committee I.
- PIANC (2009), Working Document 'Calibrating the navigable waterways of the Mekong river system into a classification standard'.
- Jaimurzina, A. and Wilmsmeier, G. (2016), "Inland navigation and a more sustainable use of natural resources: networks, challenges, and opportunities for South America", November, Bulletin FAL 351, ECLAC.
- Wilmsmeier, Gordon y Thomas Spengler (2015), «La evolución de la distribución modal del transporte de mercancías en América del Sur entre 2000 y 2013», No. 343, Santiago, CEPAL.

## **4 Scope**

The Working Group will:

- Provide a forum for initial technical meetings between South American experts, including also international experts, on the future inland waterways classification for South America;
- Collect and analyse information and data on inland waterways characteristics, fleet (for inland, recreational and seagoing vessels), intensity of traffic and other relevant factors for the elaboration of technical and operation parameters, harmonized at the regional level;
- Formulate an advanced draft of the technical and operation parameters for the classification and present the preliminary results of such classification for the (selected) countries of the region.

In doing so, the Working Group shall collect recent development and case studies from different regions and countries on classification standards. The standards, and best practices in this field shall be reviewed critically and recommended if and when appropriate as part of the final report.

## **5 Intended product**

The Work Group will develop a proposal of national/regional inland waterways classification for South America, which will include:

1. A proposal on the scope, goals and general structure of the inland waterways classification
2. Analysis of the relevant background information for technical and operational criteria of the classification, included, but not limited to:
  - a. An analysis of the fleet situation in South America and a proposal of a vessel typology for the purpose of the inland waterways classification
  - b. An analysis of the waterway data in South America for the purpose of the classification
3. Proposed structure and parameters for the classification for inland waterways, including:
  - a. Main categories and types of inland waterways;
  - b. Operational parameters;
  - c. Technical parameters.
4. Proposal for a strategy of implementing, maintaining and updating a common waterway classification in South America, including :
  - The criteria fitting with the requirements to adapt waterways to the parameters,
  - The criteria fitting with maintaining and further developing the system of classification,
  - A general agreement/policy to define mutual rights and obligations, in particular for multi-national waterways or transport relations.

## 6 Recommended members

The desirable expertise of Working Group members includes the following profiles:

- Experts in inland navigation and transport issues,
- Experts having participated in establishing CEMT'92, or having similar expertise's,
- Members of the current INCOM WG179,
- Governmental experts from the South American countries (ideally, 1 technical and 1 policy expert per country)

We need a good balance between South America members and the other members (EU, US, ..), which will support the WG with their experience. The WG has to be led by the South American members from ECLAC and PIANC.

## 7 Relevance for Countries in South America

The benefits of the proposed work responds to the interest and recognition by the South American countries that the development of inland navigation should receive greater attention at national and regional level as inland waterways in the region are of economic and social importance.

From the policy and planning perspective, having standardized parameters for waterways, including their structures (locks, bridges etc.) should result in:

- A better knowledge of the current status of the existing waterways allowing to integrate them into the overall logistics chains at the national and regional levels;
- A basis for estimating the impact of the new infrastructure investment in the infrastructure's capacity;
- Systems for monitoring and assessing the infrastructure state and the river natural hydrologic, hydraulic and navigation conditions;
- A facilitated access to financing;
- A more sustainable use of inland waterways, if the classification incorporates the relevant environmental and social criteria from the outset;
- A common basis for bilateral and regional agreements on inland waterway's infrastructure and its use.

From the users and industry perspective, such a classification would offer: a) more reliable information regarding the navigation conditions, b) facilitated and safer inland navigation, c) more favourable conditions for industry development (i.e. naval construction) and, d) clear parameters to consider for constructing new waterways and infrastructures, but also for maintaining and replacing of existing ones.

This work also contributes to exploring and creating possibilities to close existing development gaps. Further this work is necessary to harmonize the functioning of services, information exchange and infrastructure. This includes updated and new (where non-are existing) national and regionally harmonized regulatory frameworks, harmonized methodologies and data management of inland shipping data, statistics, and indicators.