



# Joint paper on inland waterways classification for South America

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## Summary

South America, as of yet, has not been able to take full advantage of its extensive system of naturally navigable waterways and in making them an integrated part of the region's transport network to cater for the ever increasing demand for cargo and human mobility.

Infrastructure limitations are one of the major obstacles for the development of inland navigation in the region and, to a certain extent, they are being addressed in most national and regional transport plans and projects. However, this effort, in most cases, remain isolated, and the potential and role of inland shipping as a “natural resource” in itself, but also for transporting the region's natural resources is, in general, absent as an integral part of the countries transport, mobility and or logistics policies. In this sense the economic and social value of the region's inland waterway system is still underestimated.

Many natural resources are located around or close to river basins, thus promoting inland waterways in many cases is a more sustainable way not only for exploiting these, but also to bring connectivity and social services for the local communities. Policy changes and their coordination at the sub regional and regional level will enable the countries to proactively use their natural resources more dynamically, which can facilitate the creation of valued added logistics chains in support of inclusive development and structural change in South America.

A common classification of the inland waterways (rivers, canals and lakes), which currently does not exist in the region, could be instrumental for achieving greater, better and more sustainable use and governance of inland navigation. The experiences of other regions in the world demonstrate that inland waterway classifications, far from being public sector formality or a purely academic exercise, are an essential, powerful and dynamic tool for supporting and implementing inland waterways policies and projects inasmuch 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.

South America has yet to take full advantage of its extensive system of naturally navigable waterways or integrate them into the region's transport network, given that the modal shares of inland navigation in the region's international transport are less than one percent in terms of value and volume. Nevertheless, the evolution of international transport in inland navigation has been positive over the last decade and, currently, 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 and aluminium) from the Paraguay-Paraná and Orinoco river basins that are destined for the Europe, the United States of America or Asia. Inland waterways, thus, play a significant role in the export chains for the region's natural resources.

A common inland waterways classification would provide a tool for assessing the current status of the existing waterways and their current and potential capacity to integrate into the national and regional logistics chains, helping *inter alia* the region to transition to a more sustainable use of its national resource by implementing a more sustainable logistics system for the exploitation of these resources.

Against this backdrop and in order to encourage reflection on a potential inland waterways classification for the South American region, the ECLAC/PIANC Position Document uses the example of the European system of classification to demonstrate the role of classifications in the inland navigation development and formulates an initial proposal for the classification. An previous version of this document has been published as the ECLAC FAL Bulletin 346: Inland waterways classification as a tool for public policy and planning: core concepts and proposals for South America and discussed during the This FAL was presented and discussed during the expert meeting on inland navigation and its role in a more sustainable use of natural resources, which was held in Rio de Janeiro, Brazil on October 19th 2016<sup>1</sup>, back-to-back with the 9th edition of quadrennial Conference on Coastal and Port Engineering in Developing Countries (COPEDEC). This position document incorporates substantives comments received from the PIANC experts and includes additional data on inland waterway fleet in the region, analyzed for the classification.

The document is structured as follows. Section I describes the main elements of the European classification system of navigable waterways and Section II presents existing mechanisms for the monitoring and use of the established network of inland waterways. Section III analyses the role of the classification in the development of inland water transport in Europe). Whereas Section IV discusses the lessons learned and presents a preliminary proposal for the establishment of a regional classification for South America (Section IV). The concluding section addresses the institutional processes and next steps needed to develop a classification of this kind.

Bearing in mind that the process for the elaboration of the South American classification is still at an early stage and several open question still remain, the overall goal of the document is to highlight and illustrate relevant issues, which have to be discussed at national level and among the experts of the South American countries to identify and implement a harmonized scheme of classification on a regional basis.

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<sup>1</sup> The details of the event, as well as the presentations are available at: <http://incomnews.org/index.php/events/12-pianc-eclac-antaq-workshop-copedec-2016>.

## I. European classification of navigable inland waterways: origins and principles

Inland waterway classification can be defined as the ordering and organization of the components of river infrastructure according to a set of given criteria. These criteria as well as the extent of divisions or categories within the classification vary depending on the main objective of the classification. In the classification based on the aforementioned AGN Agreement, the main parameter of the classification has been the capacity of a navigable waterway (e.g. stretch of inland waterway or a port) to accommodate a certain volume of cargo ship traffic. There exist other classifications of navigable waterways in Europe whose objective is to guarantee the safety of navigation. For example, in the technical prescriptions for inland vessels, waterways are divided in zones I, II, III and IV based on the size of their waves.<sup>2</sup> However, the classification of navigable waterways based on their economic capacity—the ECMT/UNECE classification—is the most widely known and is the one that is analyzed in depth in this document.

The ECMT/UNECE classification was the product of a joint effort by several organizations active in the development of inland water transport sector in Europe, including the European Conference of Ministers of Transport (ECMT), the World Association for Waterborne Transport Infrastructure (PIANC) and the United Nations Economic Commission for Europe (UNECE). The

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