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# The Hydrographic Map of the Italian Kingdom, a national scale document on ancient hydrography

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## Abstract

The Hydrographic Map of the Italian Kingdom (Italian "*Carta idrografica del Regno d'Italia*" published between 1887-1891) covers the entire Italian territory, at a 1:100.000 scale. It was published by the Italian Ministry of Agriculture, Industry and Commerce (Directorate General Agriculture, established in 1883) in order to represent the hydrographic situation immediately after the unification of Italy, and to assess areas in which to prioritize agricultural development through new irrigation systems. The Hydrographic Map illustrates rivers (not only the main river system, but also the smallest streams), irrigated or potentially irrigated areas, and watermills with numbered red dots, as well as channels to be built. Map interpretation is supported by an explanatory technical report that includes data of great value for the study of river characteristics, such as river discharge (litres/second - l/s). All these historical data, selected and interpreted on a scientific basis, were organized in a GIS and compared with data resulted from Raster analysis, using a DEM. Through the analysis and comparison of multi-temporal data it is possible to detect variations in geomorphology due to natural and human causes within the last two centuries. Evolutionary trends of channel adjustments have been qualitatively analyzed from local maps and aerial photographs dating from 1800 to 2015.

**Keywords:** Hydrography, GIS Analysis, fluvial dynamics

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