The Lowland Rivers of The Netherlands - Geodiversity and Cultural Heritage on 19th and early 20th century Landscape Paintings

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One of the major Dutch landscapes is formed by lowland rivers. They divide the country in a southern and a northern part, both physically and culturally. We screened the freely available database of 19th and early 20th century paintings of Simonis & Buunk, www.simonis-buunk.com, looking for lowland river landscapes depicting geodiversity and cultural heritage relationships (See References for other landscapes).

Emperor Napoleon declared The Netherlands as naturally belonging to his empire as its lands originated from muds originating in France and transported there by the big rivers. A description that may have given rise to the idea of the Netherlands as a delta, but from a geomorphological perspective The Netherlands consists of series of river plains of terrestrial origin, of which the north-western part are subsiding and invaded by the sea.

Now, the rivers Meuse and Rhine (including its branches Waal and IJssel) meander through ever larger river plains before reaching the North Sea. They end in estuaries, something one would not expect of rivers with catchments discharging a large part of Western Europe. Apart from the geological subsidence, the estuaries might be due to human interference, the exploitation of peat and building of dikes since the 11th century, heavy storms and the strong tidal currents. Archaeological finds show Vikings and Romans already used the river Rhine system for trading and transporting goods. During the Roman Empire the Rhine was part of The Limes, the northern defence line of the empire. Romans already influenced the distribution of water over the different river branches. Since the middle of the 19th century groins and canalization drastically changed the character of the rivers.

The 19th and early 20th century landscape paintings illustrate this change as well as changes in land use. Examples of geodiversity and cultural heritage relationships shown:

- meanders and irregular banks disappear as river management increases, i.a. bends are straightened and the flow is regulated by groins;
- large-stem orchards on the river banks are replaced by low-stem orchards;
- big trees still grow on the river banks on the oldest paintings;
- 19th century dikes align the river and are low compared to modern dikes;
- transport of trade goods always has been an important river function;
- the 19th century small-scale shipyards have disappeared from the banks;
- ferry crossings remained a popular painting object, while bridges are seldom depicted - building bridges started in the mid-19th century;
- commercial fishery on migrating salmon has disappeared since;
- skating scenes indicate the rivers froze more often in this period.

References
Hanneke van den Ancker & Pieter Dirk Jungerius, 2012. Landscape paintings, a tool for research, planning and management of the coastal zone. EGU-SSS, Vienna.