

<b>Project Name</b>	Satellite Data and Digital Twin Models to support Management of Transboundary River Basins in Kenya
<b>Start–End</b>	July 2023–December 2025
<b>Project Value</b>	603.375 EUR
<b>Slovenian Funding</b>	603.375 EUR
<b>Recipient Country/ Donation Recipient</b>	Kenya / Jomo Kenyatta University of Agriculture and Technology as Recipient
<b>Project Contractor</b>	SPACE-SI (Center odličnosti Vesolje-SI), Ljubljana
<b>CRS Code</b>	CRS CODE 14040
<b>Project Description</b>	<p>With a population of 48 million, Kenya faces enormous challenges in managing its water resources. 85 per cent of the country is classified as arid or semi-arid. Water sources are very unevenly distributed. A third of water resources are located outside the country, and their management is a source of inter-state conflict. Climate change is causing floods and droughts. This is reflected in lower agricultural production, which accounts for a relatively high 22% of GDP and employs up to 75% of the labour force.</p> <p>As part of the project, digital twins of the Sentinel and Nemo-HD satellite images were created for critical areas of the ecosystem. Digital twin models are advanced computer tools that allow numerical analysis of the physical interactions between water, soil, vegetation and human infrastructure in terrestrial, riverine and marine ecosystems. The digital twins form the basis for monitoring and multi-sectoral watershed management in Kenya's major river basins, including the Omo, Mara, Lumi and Dawa rivers, and around Lake Victoria and Lake Turkana. The project developed three pilot technology demonstrations for three basic ecosystem types in mountainous areas at the headwaters of rivers, in floodplains and in degraded areas of catchments. The aim of the project was to provide appropriate satellite technologies and digital models that enable decision-makers to access the most objective data on the environment and produce integrated analyses of ecosystems.</p>
<b>Project Phase</b>	The project is concluded.