



**COPERNICUS LAND
MONITORING SERVICE**

**Thematic hotspot monitoring
in coastal zones**

New Product Update 2019-20

Implemented by



European
Environment
Agency



Copernicus
Europe's eyes on Earth

Thematic hotspot mapping in coastal zones

New Product Update

Background

Coastal regions are of high value for Europe's economy. Approximately 40% of the European Union's population lives within 50 km of the sea. Almost 40% of the EU GDP is generated in these coastal regions and 75% of the volume of the EU foreign trade is transported by sea.*

However, the important social and economic activities taking place in our coastal areas have a strong impact on the environment. Human activities put significant pressure on the marine and coastal areas of Europe, causing habitat loss, pollution and accelerated erosion of the coasts. Climate change is likely to make these regions — and the societies that live in them — more vulnerable.

The challenge for the European Union is to balance the competing interests of human development with the need to preserve healthy and resilient coastal ecosystems.

The Directive 2014/89/EU of the European Parliament and of the Council establishes a framework for maritime spatial planning. It highlights the need to integrate in a coherent scheme all of the EU policies that touch upon maritime and coastal issues and establishes a legal frame that provides guidance on how to balance the competing interests of coastal stakeholders on space and resources in these areas.



Artist's impression of product output

Involvement of the user community

Due to border complexities between land and water mass, the natural dynamics in coastal zones are particularly complex and sensitive to changes. In addition, the high relevance of coastal zones for human activities leads to a vast number of different and often competing interests on the very limited space. The EU has established a number of directives to govern these particular areas, and a sound, evidence-based information system is considered as an essential tool for managing and monitoring these areas.

Therefore, the active involvement of the coastal community is key in ensuring that the widest possible range of requirements are gathered for the development of this product. Ensuring the relevance of the product is maximised and consequently also the uptake of the products.

Extensive user consultations activities are planned from the very beginning of the project, allowing participants to express their needs on both the currently planned and the future coastal zones monitoring products. The aim of this is to ensure national and local dimensions are taken as much as possible into account.

* Balancing the future of Europe's coasts— knowledge base for integrated management
<https://www.eea.europa.eu/publications/balancing-the-future-of-europe>

Copernicus Land and Marine Services

The Copernicus Land Monitoring Service (CLMS) and the Copernicus Marine Environment Monitoring Service (CMEMS) are two complementary baseline information providers that support the implementation and monitoring of EU policy effectiveness by providing products addressing user needs in the coastal domain. Since 2017, the two services have been actively cooperating on the implementation of a harmonised and comprehensive coastal monitoring strategy.

The product portfolio of these two services must be upgraded regularly in their respective domains to allow the provision of consistent information regarding the highly dynamic processes characterising coastal zones. Through the development of a dedicated Land Cover Land Use (LC/LU) monitoring system, capable of tracking trends and dynamics in coastal landscapes, CLMS is preparing to deliver its first monitoring product specific to coastal zones.

Project description

As part of the planned short-term evolutions of CLMS, the European Environment Agency has launched the development of this new thematic hotspot product to monitor in a spatially explicit manner landscape dynamics in coastal zones. Thematic hotspot products are a set of very high spatial and thematic resolution LC/LU maps targeted at areas faced with specific environmental challenges and issues.

This new Coastal Zones product will cover all European coastal territory to a landward distance of 10 km with a total area of approximately 730,000 km². The initial products will consist of a LC/LU status layer for 2012, a LC/LU change layer between 2012 and 2018, and a LC/LU status layer for 2018. As with the other thematic hotspot products, the Coastal Zones product will provide change and status every six years.

The first delivery of these Coastal Zones products is expected by the end of 2020.

Consortium

This new Coastal Zones products are being developed by an industrial consortium of European EO service providers led by Planetek Italia (Italy) in partnership with GeoVille (Austria), Telespazio Ibérica (Spain) and Planetek Hellas (Greece), working under contract to the EEA.



**For the latest updates and to provide input into these new products visit
land.copernicus.eu/local/coastal-zones**