Dude, where's my lobster? Perform geospatial research using a new Extended Continental Shelves data product

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Continental Shelves are of major interest due to their richness in natural resources such as hydrocarbons, minerals or commercial benthic species[1, 2]. Getting to know the exact extent of their jurisdiction over the seabed and subsoil is key for coastal countries to manage these assets. However, the official delineations defined by the United Nations Convention on the Law of the Sea (UNCLOS) United are hidden in long legal documents, which makes it difficult to assess or study these valuable areas. In contrast, Marine Regions offers free data products of maritime boundaries as files that can be loaded into any modern Geographical Information System (GIS)[3]. **In the present work, we describe the creation of the last maritime boundary that was missing from our dataset: the Extended Continental Shelves (ECS).** We outline the official process defined by United Nations for defining an ECS and explain how we went from these technical texts to a GIS-ready data product.

The Extended Continental Shelves data product is available as CC-BY at the Marine Regions website (*marineregions.org*) in three geospatial file formats: GeoPackage, Shapefile and Keyhole Markup Language, including versions centered in the Pacific Ocean and in the Greenwich meridian. These common file extensions are accepted by free open software such as QGIS or the Python programming language, but also by commercial applications like ESRI ArcGIS or Google Earth. Additionally, we developed *mregions2*, an R package that loads the ECS and other data products hosted by Marine Regions in the R programming language[4]. This client uses the OGC Web Feature Services, Web Map Services and Open Linked Data[5], services hosted and maintained by the Flanders Marine Institute (VLIZ). Software developers are welcomed to use these web services to build further applications.

References

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Keywords

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