

# EO4OG Products

EO4OG defined products to meet the challenges. Each product is defined by a product sheet which will open in a new window when clicked upon.

The products are categorised by "thematic" and "sector according to the EARSC taxonomy.

Product	Generic	Thematic	Sector	EO Service
<a href="#">Agricultural land</a>	on-shore	Land	Ecosystems	<a href="#">Assess environmental impact of human activities</a>
<a href="#">Asset Monitoring</a>	on-shore	Built environment	Infrastructure	<a href="#">Asset infrastructure monitoring</a>
<a href="#">Bathymetry</a>	off-shore	Marine	Coastal	<a href="#">Map water depth or charting</a>
<a href="#">Building inventory</a>	on-shore	Built environment	Infrastructure	<a href="#">Monitor construction and buildings</a>
<a href="#">Chlorophyll-a concentration (Qualitative)</a>	off-shore	Marine	Ecosystems	<a href="#">Monitor ocean quality and productivity</a>
<a href="#">Chlorophyll-a concentration (Quantitative)</a>	off-shore	Marine	Ecosystems	<a href="#">Monitor ocean quality and productivity</a>
<a href="#">Coastal land cover</a>	off-shore	Marine	Coastal	<a href="#">Monitor the coast line</a>
<a href="#">Coastal land cover change</a>	off-shore	Marine	Coastal	<a href="#">Monitor the coast line</a>
<a href="#">Coastline monitoring</a>	on-shore	Marine	coastal	<a href="#">Monitor the coast line</a>
<a href="#">CO2</a>	on-shore	Atmosphere & climate	Air quality	<a href="#">Monitor atmosphere composition</a>
<a href="#">Critical habitat mapping</a>	on-shore	Land	Ecosystems	<a href="#">Monitor land ecosystems and biodiversity</a>
<a href="#">Cross swell maps</a>	off-shore	Marine	Metocean	<a href="#">Forecast and monitor current movement and drift</a>
<a href="#">Detected swell maps</a>	off-shore	Marine	Metocean	<a href="#">Forecast and monitor current movement and drift</a>
<a href="#">Elevation</a>	on-shore	Land	Topography	<a href="#">Baseline mapping</a>
<a href="#">Encroachment monitoring</a>	on-shore	Built environment	Infrastructure	<a href="#">Monitor vegetation encroachment</a>
<a href="#">Engineering geology evaluation</a>	on-shore	Land	Geology	<a href="#">Map geological features</a>
<a href="#">Erosion potential mapping</a>	on-shore	Land	Topography	<a href="#">Measure detect land surface change</a>
<a href="#">Faults and discontinuities</a>	on-shore	Land	Geology	<a href="#">Map geological features</a>
<a href="#">Fault identification and reactivation</a>	on-shore	Land	Geology	<a href="#">Map geological features</a>
<a href="#">Flood extent</a>	on-shore	Geohazards	Floods	<a href="#">Map and assess flooding</a>
<a href="#">Floodplain mapping and flood risk assessment</a>	on-shore	Geohazards	Floods	<a href="#">Map and assess flooding</a>
<a href="#">Forest above-ground biomass estimations</a>	on-shore	Land	Forests	<a href="#">Monitor forest resources</a>
<a href="#">Forest fire and risk mapping</a>	on-shore	Geohazards	Fires	<a href="#">Detect and monitor wildfires</a>
<a href="#">Geomorphology map</a>	on-shore	Land	Geology	<a href="#">Map geological features</a>
<a href="#">Historical surface deformation</a>	on-shore	Land	Topography	<a href="#">Baseline mapping</a>
<a href="#">Hurricane tracks</a>	off-shore	Marine	Metocean	<a href="#">Detect and monitor hurricanes and typhoons</a>
<a href="#">Hydrocarbon seep detection</a>	on-shore	Land	Ecosystems	<a href="#">Identify hydrocarbon seeps in soil</a>
<a href="#">Hydrological network and catchment area</a>	on-shore	Land	Inland water	<a href="#">Assess ground water and run-off</a>
<a href="#">Iceberg monitoring</a>	off-shore	Marine	Sea-ice	<a href="#">Detect and monitor ice risk at sea</a>
<a href="#">Infrastructure planning and monitoring</a>	on-shore	Built environment	Infrastructure	<a href="#">Monitor buildings and construction</a>
<a href="#">Land cover and land cover change characterisation</a>	on-shore	Land	Land cover	<a href="#">Monitor land cover and detect change</a>
<a href="#">Land use and land use change</a>	on-shore	Land	Ecosystems	<a href="#">Monitor land cover and detect change</a>
<a href="#">Linear disturbance features</a>	on-shore	Land	Land use	<a href="#">Monitor vegetation encroachment</a>
<a href="#">Lithology and surface geology mapping</a>	on-shore	Land	Geology	<a href="#">Map geological features</a>
<a href="#">Mapping and prediction of near-surface features</a>	on-shore	Land	Geology	<a href="#">Map geological features</a>
<a href="#">Methane emission monitoring</a>	on-shore	Atmosphere & climate	Climate	<a href="#">Monitor atmospheric composition</a>
<a href="#">Metocean features</a>	off-shore	Marine	Metocean	<a href="#">Forecast and monitor ocean winds and waves</a>

NO2 and SO2	on-shore	Atmosphere & climate	Climate	Monitor atmosphere composition
Ocean colour composite	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Ocean colour swath	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Ocean circulation - global currents	off-shore	Marine	Metocean	Forecast and monitor ocean movement and drift
Oil slicks and spills	off-shore	Marine	Ecosystems	Detect and monitor oil slicks
Oil spill threats	off-shore	Marine	Ecosystems	Detect and monitor oil slicks
Oil spill sensitivity mapping	on-shore	Marine	Coastal	Monitor coastal ecosystem
Particulate matter	on-shore	Atmosphere & climate	Climate	Monitor air quality & Emissions
Permafrost zone stability / frost heaving /discontinuous permafrost	on-shore	Land	Topography	Detect and monitor ground movement
Pipeline corridor status	on-shore	Land	Land use	Monitor vegetation encroachment
Plumes	off-shore	Marine	Ecosystems	Monitor marine habitats
Reservoir compartmentalisation	on-shore	Land	Topography	Detect and monitor ground movement
Reservoir management and optimisation	on-shore	Land	Topography	Detect and monitor ground movement
River / lake ice	on-shore	Land	Inland water	Monitor ice on rivers and lakes
Sea ice classification - habitat indicators	off-shore	Marine	Sea-ice	Detect and monitor ice-risk at sea
Sea surface salinity composite	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Sea surface salinity model	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Sea surface salinity - swath	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Sea surface temperature model	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Sea surface temperature swath - microwave	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Sea surface temperature swath - radiometer	off-shore	Marine	Ecosystems	Monitor ocean quality and productivity
Sediment concentration (qualitative)	off-shore	Marine	Ecosystems	Monitor marine habitats
Sediment concentration (quantitative)	off-shore	Marine	Ecosystems	Monitor marine habitats
Seismic coupling risk map	on-shore	Land	Geology	Map seismic survey operations
Seismic logistics operation map and base-camp mapping	on-shore	Land	Ecosystems	Monitor land cover and detect change
Shoreline	off-shore	Marine	Coastal	Monitor the coast line
Shoreline change	off-shore	Marine	Coastal	Monitor the coast line
Slope. curvature, aspect	on-shore	Land	Topography	Baseline mapping
Slope stability	on-shore	Land	Topography	Baseline mapping
Soft ground	on-shore	Land	Ecosystems	Monitor land cover and detect change
Soil sealing	on-shore	Land	Ecosystems	Monitor land cover and detect change
Solar radiation	off-shore	Atmosphere & climate	Atmosphere	Forecasting sunlight exposure
Structural geology	on-shore	Land	Geology	Map geological features
Sub-tidal habitat	off-shore	Marine	Ecosystems	Monitor marine habitats
Surface currents - delayed	off-shore	Marine	Metocean	Forecast and monitor ocean currents and drift
Surface current model	off-shore	Marine	Metocean	Forecast and monitor ocean currents and drift
Surface currents - near real time	off-shore	Marine	Metocean	Forecast and monitor ocean currents and drift
Surface currents - radial	off-shore	Marine	Metocean	Forecast and monitor ocean currents and drift
Surface currents - regional level	off-shore	Marine	Metocean	Forecast and monitor ocean currents and drift
Surface deformation monitoring (Environment and production related)	on-shore	Land	Typography	Detect and monitor ground movement
Surface soil moisture (SSM) and soil water index (SWI)	on-shore	Land	Ecosystems	Monitor land cover and detect change
Swell	off-shore	Marine	Metocean	Forecast and monitor ocean winds and waves
Terrain roughness	on-shore	Land	Topography	Baseline mapping
Transport network and road status	on-shore	Built environment	Infrastructure	Map and monitor transport networks
Tree cover density	on-shore	Land	Forests	Monitor forest resources

Tree height	on-shore	Land	Forests	Monitor forest resources
Turbidity (qualitative)	off-shore	Marine	Ecosystems	Monitor pollution at sea
Turbidity (quantitative)	off-shore	Marine	Ecosystems	Monitor pollution at sea
Urban and settlement map	on-shore	Built environment	Urban areas	Monitor urban areas
UXO hazard and risk mapping	on-shore	Security	Security	Monitor sensitive risk areas
Vegetation / forest type	on-shore	Land	Forests	Monitor forest resources
Vegetation stress and degradation	on-shore	Land	Ecosystems	Monitor land ecosystems and biodiversity
Visibility	off-shore	Atmosphere & climate	Meteorology	Forecast weather
Water body extent	on-shore	Land	Inland water	Assess and monitor water bodies
Water body nutrients / productivity	on-shore	Land	Inland water	Assess and monitor water bodies
Water body temperature	on-shore	Land	Inland water	Assess and monitor water bodies
Water body volume / bathymetry	on-shore	Land	Inland water	Assess and monitor water bodies
Wet areas	on-shore	Land	Land cover	Monitor land cover and detect change
Wind fields - SAR derived	off-shore	Marine	Metocean	Forecast and monitor ocean winds and waves
Winds - open ocean model	off-shore	Marine	Metocean	Forecast and monitor ocean winds and waves
Winds - open ocean swath	off-shore	Marine	Metocean	Forecast and monitor ocean winds and waves
Wind roses	off-shore	Marine	Metocean	Forecast and monitor ocean winds and waves
Wind speed distribution	off-shore	Marine	Metocean	Forecast and monitor ocean winds and waves