Product sheet: Stranding of plastic, modelled probability

DESCRIPTION

The data set shows exposed areas, "hot spots", for stranding of plastic along the Norwegian coast. The values are modelled and represent the logarithm of the number of particles hitting land in the simulation. A higher number on the map indicates higher probability for presence of plastic in the beach zone.

PURPOSE AND USE

The dataset is meant to give an indication of where plastic in the sea will move towards land, and thus be able to make the collection of plastic waste considerably more efficient.
The data set is results from a model with room for improvement and caveats.

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DATASETTOPPLØSNING

Resolution: 160m
Accuracy (meter): 160m

EXTENT

The maps cover the coast of the whole of Norway.

METHOD AND SOURCE

Basis for the data set is a simulation with a three-dimensional, hydrodynamic current model. The numerical current model is ROMS (http://myroms.org), the Institute of Marine Research's main model for Norwegian coastal and fjord areas. The spatial resolution is 160m x 160m horizontally and 35 vertical, terrain-following calculation levels. A more thorough description can be read in Asplin et al. 2020 (https://link.springer.com/article/10.1007/s10236-020-01378-0) og Albretsen m.fl. 2011 (https://imr.brage.unit.no/imr-xmlui/bitstream/handle/11250/113865/FoH_2011_02.pdf?sequence=1&isAllowed=y)

Furthermore, fictitious plastic particles are modeled over a long period of time that represents the variations in the currents for the area, before calculating the relative number of particles that can come so close to land that they can potentially end up on land.

Only current conditions are used here to calculate the probability of stranding of plastic, and only litter

that comes from other sea areas is taken into account.

UPDATE

The oceanographic map products are continuously updated when new input data or new modeling methods that prove to be more realistic are used. Updates do not take place periodically.

Status
Last update: 01.12.2023

LEVERANSEBESKRIVELSE

Format (Version)
- Geotiff .tif, version 1.0

Projections
  UTM Zone 33 (WGS84)

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LINKS

- [Link to the numerical ocean model ROMS](#)
- [Link to technical report on costal model NorKyst800](#)
- [How to use NorKyst800](#)