

Studying the Sea from Space

Voice-over 1:

At sea, surface salinity and temperature are measured by thermosalinographs, either floating freely or on board ships.

Voice-over 2:

Commercial vessels have started carrying thermosalinographs on board, so commercial routes are quite well covered, but the rest of the sea is covered by about three thousand buoys right now, and what are three thousand buoys in the context of the world's seas? There are lots of gaps in the data.

Voice-over 1:

SMOS aims to fill these massive gaps. Thanks to the satellite, it will be possible to draw up a global ocean salinity map for the first time. And with this, researchers hope to get a more comprehensive understanding of the oceans' circulation. This could help to explain extreme climate phenomena like El Nino, or why, for example, hurricanes gain strength when passing over the warm and less-salty mouth of the Amazon River. And there is also the Gulf Stream to investigate...

Voice-over 3:

The main impact that people will notice is better weather forecasting. We think we'll be a day earlier with forecasts of extreme events: torrential rain, floods, droughts...and the project will help people manage water resources and reservoirs. And at sea, obviously we will have better knowledge of the oceans' currents, the movement of warm and cold water masses.

Voice-over 1:

From its orbit 760 kilometres above the Earth, the SMOS satellite will complete one global coverage every three days. Researchers worldwide will have access to its data.

Voice-over 3:

SMOS just measures; it can't provide a solution. I often tell people, look, it's like a thermometer. It'll tell us the patient's temperature, but it can't heal them. It simply tells us how ill the patient is.

Voice-over 1:

And the sea is ailing, caused not always, but often, by human beings. So knowing more about the sea could contribute to protecting it.

Voice-over 3:

Right now there's almost an island of rubbish forming in the middle of the Pacific. Fish stocks are decreasing, pollution shows that the sea suffers from mankind's actions, and

because the sea is a reservoir that stores things long term, we risk paying a high price later on.

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