Plankton-alone or together?

Presented by dr **Marta Głuchowska** IO PAN, Sopot



The most numerous animals on the world belong to plankton – tiny creatures drifting in the ocean. They sometimes form dense swarms that swim in coordinated pattern in one direction – like krill use to do. Some other use to be dispersed and are passively moved by sea currents, wind or water density gradients. Since they are so numerous, it is of outmost importance to learn their ways of moving between surface and the depths of the sea.



WOMAN VIEW OF THE SEA













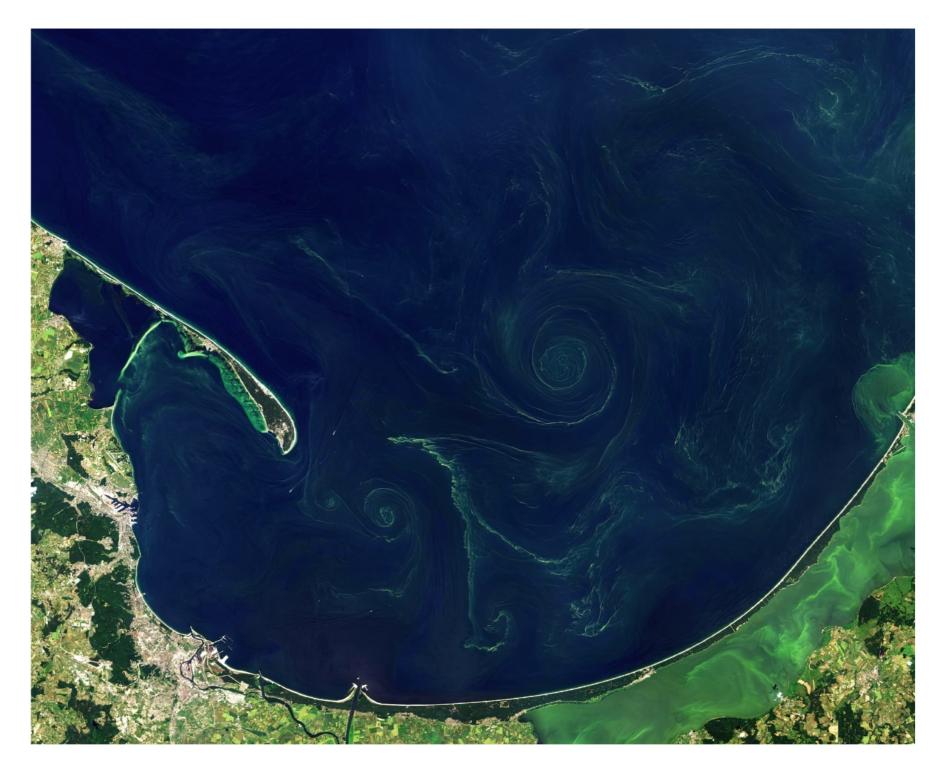


Ocean seen from the space

Presented by dr **Marta Konik** IO PAN, Sopot



The best way to assess what happens on the surface of the ocean is to use the satellite photo. In such way one can follow the formation and drift of blue-green algae blooms. The high quality image is not simple, as there is a number of disturbances that need to be considered. The ground truth verification is always needed, and this type of studies is still developed in close cooperation with space research.



WOMAN VIEW OF THE SEA















What connects fjords, carbon and climate change?

Presented by dr **Natalia Szymańska** IO PAN, Sopot



Global carbon cycle is in the center of interest among environmental scientists. One reason is the CO_2 that is one of key greenhouse gases responsible for contemporary climate change. On the seabed there live foraminifera – tiny one cellular organisms that build shells from the calcium carbonate. This means that foraminifera remove carbon them from the cycling. Present day climate warming means that foraminifera become smaller and their shells thinner. This results in the reduced carbon removal from the atmosphere. We are not aware about the scale of this process nor its influence on the environment. For sure, the forams are on this planet for over 700 millions years and always were connected with the climate, we need to understand this link, to learn about climate change consequences.



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WOMAN VIEW OF THE SEA













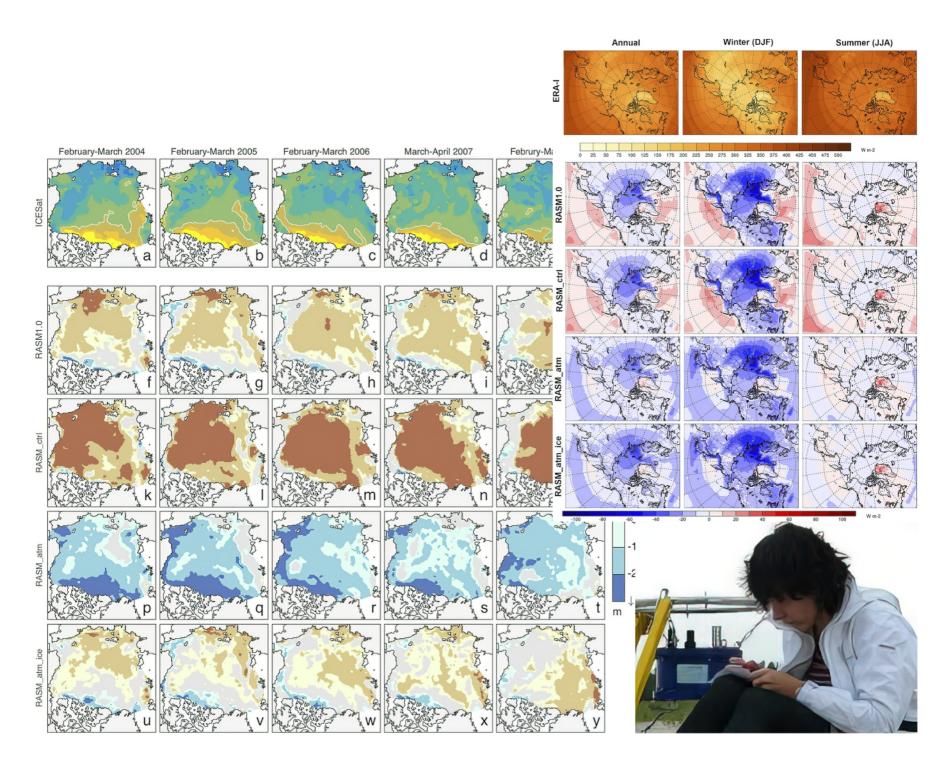


Theme 16 With the computer to the seaside

Presented by dr inż. **Anna Przyborska** IO PAN, Sopot



Computer technology allows superfast computers to be used for the numerical modelling, that brings better info to the local and global changes in the ocean environment. The proper description of marine processes with the law of physics and mathematical formulas will bring us important retrospective and prognostic information about global ocean. Such modelling can save time and funds needed for field campaigns in the sea. Models can also bring the information that can't be obtained in direct measurements.



WOMAN VIEW OF THE SEA















Oasis of green in the Arctic

Presented by dr **Katarzyna Zmudczyńska-Skarbek** Uniwersytet Gdański



Seabirds feed on the upper part of the ocean and nest on land, often in huge colonies. During the nesting season its excrements fertilize the poor soil around colony. This creates unique lush vegetation, not seen in other Arctic sites. Those oasis are attractive for number of other species. We are getting closer to answer the question, how those nearshore oasis influence the coastal sea and how they modify marine ecosystems.



WOMAN VIEW OF THE SEA













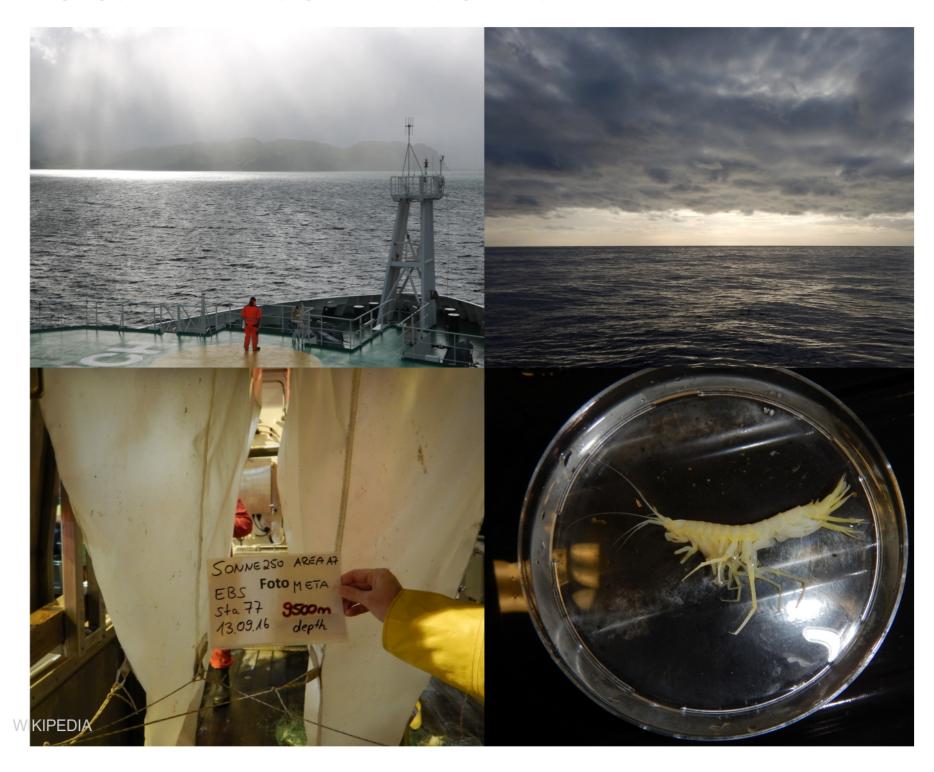


Discovering the secrets of ocean depths

Presented by dr hab. **Anna Jażdżewska** Uniwersytet Łódzki



Ocean depths are hidden from us with number of secrets. One of those are geographic ranges of deep sea species. Are they widespread, since the deep seabed is almost uniform? Or may be we have to deal with number of similar species, that occur only locally? May be the key is their life trait? Those are few of the many intriguing questions that I am trying to answer studying the deep water crustaceans.



WOMAN VIEW OF THE SEA















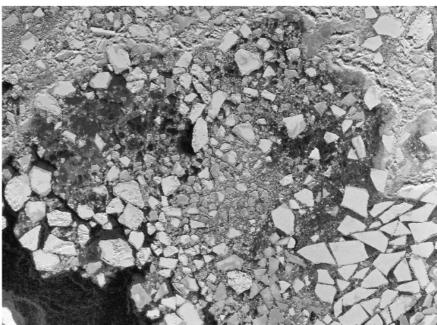
Theme 26 Impermanence

Presented by dr hab. **Agnieszka Herman** IO PAN, Sopot



The sea ice i san embodiment of impermanence. It undergoes constant change, regardless the scale we observe it. The ice crystals in the microscale are growing, shrinking, change shape of fuse together, while the sea salt in the space between crystals is encapsulated or released to to ocean in the form of brine trickles. In the mezoscale the ice floes are broken, stacked, dispersed with wind waves and sea currents. In the macroscale the ice cover expands and shrinks in the annual cycle, and undergoes the multiyear changes following the climate change. This last phenomenon is in the center of current research, and the real challange is in the understanding the linkages between local and global processes.









WOMAN VIEW OF THE SEA













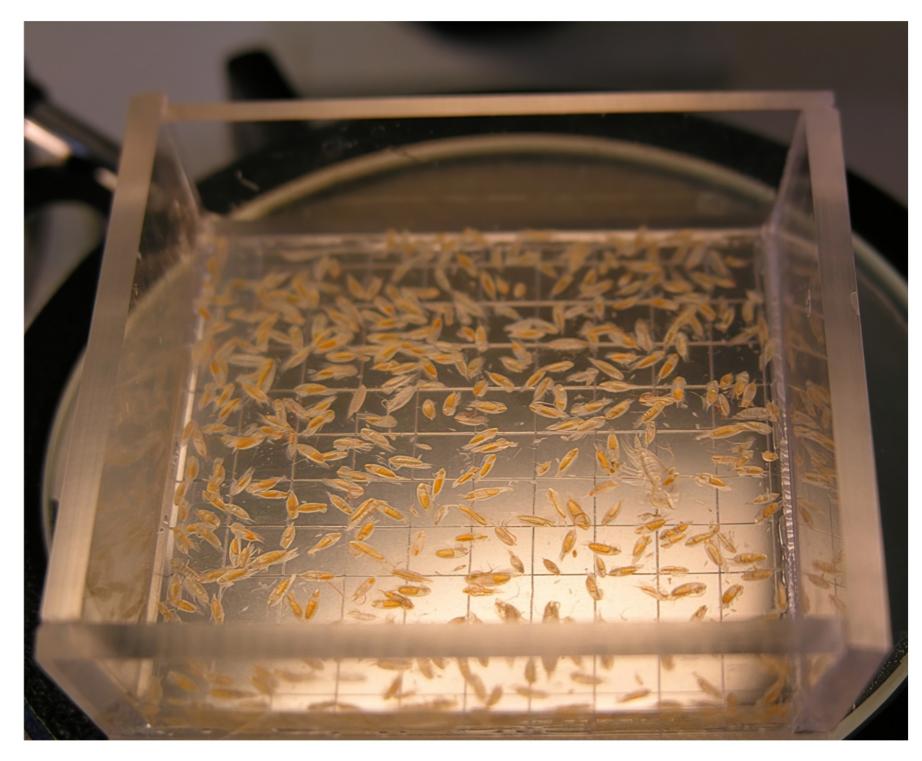


Theme 27 **Small but of outmost importance, zooplankton**

Presented by dr hab. **Agata Weydmann-Zwolicka** Uniwersytet Gdański



Zooplankton are small and often difficult to notice with the naked eye, but due to their mass occurrence and large biomass, they play extremely important roles in marine ecosystems. They feed on marine microorganisms and are food for, among others, fish, birds and whales. Due to limited mobility, zooplankton are transported by sea currents, being therefore their indicator. Research on the fascinating world of zooplankton brings us closer to understanding broader phenomena, such as the impact of climate change on the Arctic ecosystems.



WOMAN VIEW OF THE SEA













