TRACE ELEMENT AVAILABILITY AT A MEGA-NOURISHMENT IRIS R. PIT* - I.R.PIT@UU.NL, LIEKE DOODEMAN, SYTZE VAN HETEREN, MARK VAN BRUGGEN, JASPER GRIFFIOEN COPERNICUS INSTITUTE OF SUSTAINABLE DEVELOPMENT, UTRECHT UNIVERSITY, TNO - GEOLOGICAL SURVEY OF THE NETHERLANDS, RIVM, DELTARES



fully incorporated in beaches and dunes.







- High **pH** values are correlated with freshening. Freshening occurs at the higher part of the Sand Motor. Variability in pH is seen at the inner part of the hook where microbial activity is present (see pictures).
- With depth trace element concentrations seem to be influenced by oxidation and reduction processes involving sulphur. At the surface the variability of trace elements is high.
- Bog iron ore fragments are increasingly present at the surface of the Sand Motor because of erosion caused by wind and water. The fragments contain high contents of arsenic and are expected to be present at a higher density at the Sand Motor in time.

WHAT'S NEXT?

- Comparison between a meganourishment, traditional nourishments and a non-nourishment site along the Dutch coast
- Study in more detail the influence of the river Rhine on the Sand Motor by looking at organic contaminants and nutrients.



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RESEARCH PROGRESS

DISCUSSION



First couple of centimeters at the inner part of the hook where biological activity is high



microbial activity is high









