

Country	The Netherlands
Institution	Rijkswaterstaat, Deltares, KNMI
Observations Status and new initiatives	<p><i>Status:</i></p> <ul style="list-style-type: none"> • Total reorganization of measuring network software is still in preparation; • Development of data exchange protocols RWS and Waterboards. <p><i>New initiatives:</i></p> <ul style="list-style-type: none"> • The antennas on the Wadden Sea waverider buoys have temperature and evaporation sensors to measure air temperature • Deltares works on wave run up observations based on video images in combination with A.I. (https://www.youtube.com/watch?v=5U94j1juRv4&t=84s)
Modelling Status and new initiatives	<p><i>Status:</i></p> <ul style="list-style-type: none"> • Our MetOffice KNMI uses new weather model Harmonie operationally now. We are still checking results on our water and wave models before changing from HIRLAM to this model for operational forecasting. • BMA new script operational and extended with 13 new locations and 3 percentiles (5, 25, 50, 75 and 95%). Results available in https://noos.matroos.rws.nl source name BMA2. <p><i>New initiatives:</i></p> <ul style="list-style-type: none"> • Working on 'next generation' models (DFLOW-FM) for the DCSM and ZUNO domains with unstructured grids. <div data-bbox="432 927 1426 1294" data-label="Figure"> </div> <ul style="list-style-type: none"> • Start with a 3D model of Rotterdam Approach and Harbor for navigation and salt intrusion is under negotiation. • Fine grid SWAN wave model for Dutch Coast and Wadden Sea <div data-bbox="560 1429 1342 2092" data-label="Figure"> </div>
Dissemination	<p><i>Status:</i></p> <ul style="list-style-type: none"> • NOOS-matroos now changed to httpS

Status and new initiatives

New initiatives:

- Webservices for timeseries, graphs and griddata (WMS) in development.



Relevant national projects

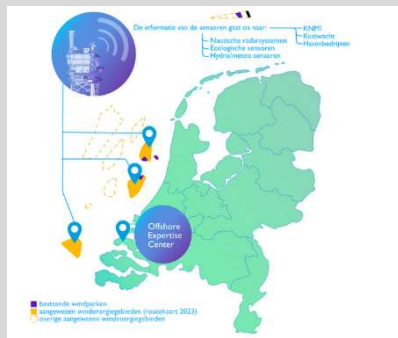
- FAST4NL - adjustments to Global Tide and Surge Model and adding fast wave estimates.
- MOSAIC - For quickly setting up small scale models for flood forecasting
- CHASM Coupled High-resolution Atmosphere Sea Modelling to improve numerical modelling of metocean conditions at offshore wind farms.

Relevant International projects

- EMODnet hrsm: Computation of LAT for Europe and other reference planes for conversion of the different bathymetry data sources to a common vertical reference plane, using the Global Tide and Surge Model.
- CODEC (Coastal Dataset for Evaluation of Climate impact)
- CMIP6 (Coupled Model Intercomparison Project)
- JERICO Next (H2020): HF radar; process phytoplankton observation data
- ODYSSEA (EU H2020) coastal water quality forecasting systems with use of remote sensing.
- HISEA (EU H2020) Coastal models and remote sensing for ports and aquaculture sectors
- CoastServe (CMEMS) CMEMS products in combination with other data sources for coasts
- UNITED (H2020) multi-Use platforms and co-location pilots boosting cost-effective Eco-friendly and sustainable production in marine environments
- FORCOAST (H2020) coastal water services for fisheries, oyster restoration and aquaculture.

Additional information

- RWS is involved in observation instrumentation on wind parks, for 3 locations. Parameters will arrive next year. Even bat-sound are available.



Werkpakket	Sensor nummer	Sensor omschrijving	Doel
Ecology	BSA-507-RWS-BDS-01	Bird Radar Detection	Identificeren van de intensiteit van zwermen vogels over het jaar
Ecology	WTG-507-RWS-BRD-01	Bird Radar Detection WTG B07	Identificeren van de intensiteit van zwermen vogels over het jaar
Ecology	WTG-507-RWS-BRD-01	Bird Radar Detection WTG 42	Identificeren van de intensiteit van zwermen vogels over het jaar
Ecology	BSA-508-RWS-BTG-01	Bat Detection Sensor	Identificeren van de intensiteit van vleermuisen over het jaar
Hydro Meteo	BSA-506-RWS-NTP-01	Netpos / AGRS	Exakte locatie positionering - Kadaster
Hydro Meteo	BSA-509-RWS-WTS-01	Water Temperature Sensor	Watertemperatuur meten onder het oppervlakte
Hydro Meteo	BSA-510-RWS-WNS-01	Water Height sensor	Radar om golf hoogte te meten
Hydro Meteo	BSA-512-RWS-WNS-01	Windrichting en snelheid	Meten van de windrichting en windsnelheid
Hydro Meteo	BSA-513-RWS-APS-01	Air Pressure Sensor	Luchtdrukmeting
Hydro Meteo	BSA-514-RWS-VBS-01	Visibility Sensor	Zicht monitoren
Hydro Meteo	BSA-515-RWS-ATH-01	Air temperature and humidity	Luchttemperatuur en luchtvochtigheid meten
Hydro Meteo	BSA-517-RWS-CHS-01	Cloud height sensor	Wolkenradar met behulp van lasertechniek
Hydro Meteo	BSA-518-RWS-LDR-01	LIDAR Zephir wind Lidar	Windsnelheden meten op 10 instelbare hoogtes tot 300 meter
Hydro Meteo	BSA-519-RWS-CMB-01	Current Measurement Buoy	Bele van de golfstroming te meten met behulp van afzettingen
Navigation	BSA-520-RWS-AIS-01	Automation Identity System	afkennung windgebied voor scheepvaart
Navigation	BSA-521-RWS-WD-01	Nautische Radar BSA	handhaving medegebruik en doorvaart windpark
Navigation	BSA-522-RWS-ATN-01	Fysische AtoN	afkennung windgebied voor scheepvaart
Navigation	BSA-529-RWS-CAM-01	Camera voor toezicht op het platform en mast	primair KW, secundair SRK
Navigation	WTG-530-RWS-NRD-01	Nautische Radar WTG F08	primair KW, secundair SRK
Navigation	WTG-521-RWS-NRD-01	Nautische Radar WTG C07	primair KW, handhaving
Netwerk	BSA-526-RWS-LRA-01	Long Range	IoT-verbinding ontwikkeld om kleine hoeveelheden informatie uit te wisselen tussen objecten en systemen

more info:

https://www.informatiehuismarien.nl/publish/pages/162283/dob-rws_mivsp_animatie-r04_compressed.mp4

Lot of our and NOOS information: <https://noos.matroos.rws.nl>