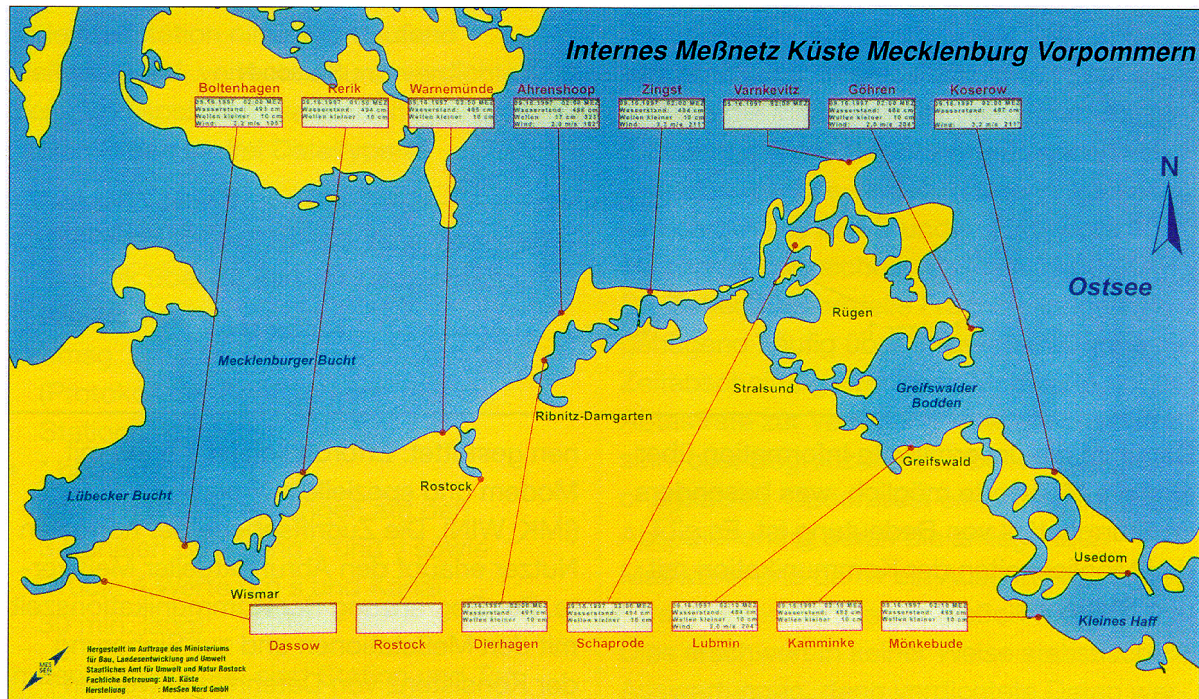


# Environmental Monitoring Coastal Measurement Network of the State of Mecklenburg West Pomerania



## Description

The measurement network currently consists of 14 hydro-meteorological measuring stations. Each of these stations consists of a part on land - the station box and optional a wind mast with probes - as well as a robust underwater multi-parameter probe ISM-2000M, connected by a submarine cable.

The stations are supplied with power from the 230V mains (with storage-battery buffering); communication is effected over the telephone lines. As an alternative, self contained operation using solar/wind energy and radio telephone is possible.

In their continuous operation, the stations gather relevant information for the coastal protection services. The transfer of the measured data is by modem, fax or plain text announcement. The decentralised structure and the plain text announcement make it possible, especially in the case of storm floods, to access current measured data over the phone in an easy way.

Moreover, data from all stations are collected and distributed by one central.

The hardware and software used in the measuring stations is designed for automatic continuous operation and remote maintenance.

## Technical Data

### Measured Quantities:

Current (X / Y-Components)	- 3 .. 0 .. + 3 m/s
Hydrostatic Pressure	1 .. 2 bar
Water Temperature	-2 .. 28 °C
Atmospheric Pressure	0.96 .. 1.06 bar
<i>optional:</i>	
Wind Speed	0 .. 40 m/s
Wind Direction	0 .. 360 °
Air Temperature (outside)	-30 .. + 50 °C

### Calculated Quantities:

Mean values and maximum measured values  
Water Level  
Sea State Statistics  
significant and maximum wave height  
wave period  
wave direction

### Communication

by dial up line (ISDN or analogue)  
Telephone (plain text announcement)  
Fax (various addresses and groups)  
Data communication (Modem)  
Remote access for servicing (Modem)

### Operational parameters

230V power supply with storage-battery buffering;  
protection against deep discharge, cyclic battery testing; Watchdog to monitor the program flow  
Cyclic hardware tests  
Automatic error message (Fax)