

<b>Infrastructure (short name)</b>	Coastal Research Station in Lubiatowo (CRS Lubiatowo)	
<b>Installation (short name)</b>	Coastal Research Station (CRS)	
<b>Location</b>	Lubiatowo, Poland, south Baltic Sea	
<b>Coordinates</b>	54° 48' 42" N, 17° 50' 25.6" E (station building)	
<b>Bottom depth</b>	nearshore zone (0-5 m)	
<b>Legal name of organization</b>	Institute of Hydro-Engineering of the Polish Academy of Sciences (IBW PAN)	
<b>Location of organization</b>	Gdańsk, Poland	
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<b>Web site address</b>	<a href="http://mlb.ibwpan.gda.pl/index.php/en">http://mlb.ibwpan.gda.pl/index.php/en</a>	

## Description

The IBW PAN Coastal Research Station (CRS) is located at Lubiatowo (Poland), approximately 75 km NW from Gdańsk, at the open sea shore between Łeba and Władysławowo (about 20 km eastwards of Łeba). The laboratory was established in 1970 in an old building of the former coastal rescue station. Situated in a coastal forest, about 100 m from the beach, the building was adapted for the needs of scientific research. At present, it houses office and laboratory rooms, a garage, an electro-mechanic shop and a few residential rooms.

The Station is prepared for activities related to observations of meteorological, hydrological, hydrodynamic and litho-dynamic phenomena occurring in the Baltic coastal zone. It used to encompass measuring towers arranged in a row, perpendicular to the shoreline. Their role was to accommodate sensors and measuring devices. Last winter all the towers were seriously damaged due to impact of storm waves and ice phenomena. Until their reconstruction, the measurements are carried out by use of smaller structures built in the sea near the towers. These structures ensure installation of measuring equipment at desired locations, as required by specific investigation programmes. The control of devices, power supply and the data registration can be provided by the permanent cable system stretching from the station building to piles located on the dune. Besides, autonomous battery-powered sensors with built-in memory are used, as well as gauges with radio data transmission systems.

Within routine measurements, winds parameters at the laboratory are registered continually, as well as some other hydro-meteorological parameters, e.g. air humidity, air and water temperature, etc. State of the sea can be observed by the camera installed on the beach. Wave measurements at Lubiatowo are carried out by use of the Directional Waverider Mk. III buoy (DWR-7), moored about 2 km offshore, at the depth of about 15 m. Results of all the above measurements are available on the CRS Lubiatowo web page.

Long-term variability of dune and beach is monitored regularly every month since 1983. Sea bottom topography in the near-shore zone has been measured in the area 2.6 km along shore and about 1 km offshore.

## Service offered

The measuring devices available at CRS Lubiatowo will be offered to be used by users and will be installed on the temporary structures. Selection of the equipment will depend on the user's preferences. The core part of equipment will comprise the IBW PAN instrumentation for measurements of hydro-, litho- and morphodynamic processes. The infrastructure is also offered for installation of the sensors and probes provided by the users. Scientific support will be provided by the IBW PAN research staff while the installation will be done by the IBW PAN technical staff.

Unit of access: 24 hour day

Modality of access: remote or partially remote. Both measuring systems provided by the host and by the users can be installed.

## Instruments/Sensors

The following instrumentation is already installed or available for deployment

Instrument	Measured Parameter(s)	Elevation/Depth	Sampling frequency	Frequency of data recovery
Wind meter	Wind velocity & direction	22 m above land	1 Hz	10 minutes
Meteorological station	Air temperature & humidity	5 m above land	1 Hz	10 minutes
Wave buoy Directional Waverider Mk. III	Wave heights, periods & directions, water temperature	2 km offshore ( $h=16$ m)	3 Hz	30 minutes
ADCP Workhorse Monitor 1200 kHz	Current velocity & direction (profile)	available	2 Hz	to be defined
Electromagnetic current meters	Current velocity & direction (point)	available	10 Hz	30 minutes
String (electric) shallow-water wave gauges	Wave height & period	available	10 Hz	30 minutes
LISST-100	Concentration and size of suspended sediments	available	2 Hz	to be defined
GPS-positioned drifters	Current velocity & direction (trace)	available	1 Hz	to be defined
Echo-sounders	Water depth	available	7 Hz	7 Hz

## Additional services/data

The following parameters are obtained from routine measurements and will be available to the JERICO users on specific request:

- topography of dunes and emerged part of the beach since 1983 (measured a few times per year);
- nearshore bathymetry (to the depth of about 7-8 m) since 1987 (measured at least once per year);
- archival hydrodynamic (wave/current) data.

## Special owner rules

The CRS Lubiatowo is partly sponsored by the Polish Academy of Sciences which is a governmental non-profit organisation. The data provided by CRS Lubiatowo may not be used for commercial purposes. The use of data is restricted to studies related to the IBW PAN statutory research programme, as well as domestic and international scientific projects, including ventures carried out within EU, e.g. under auspices of the Framework Programmes.