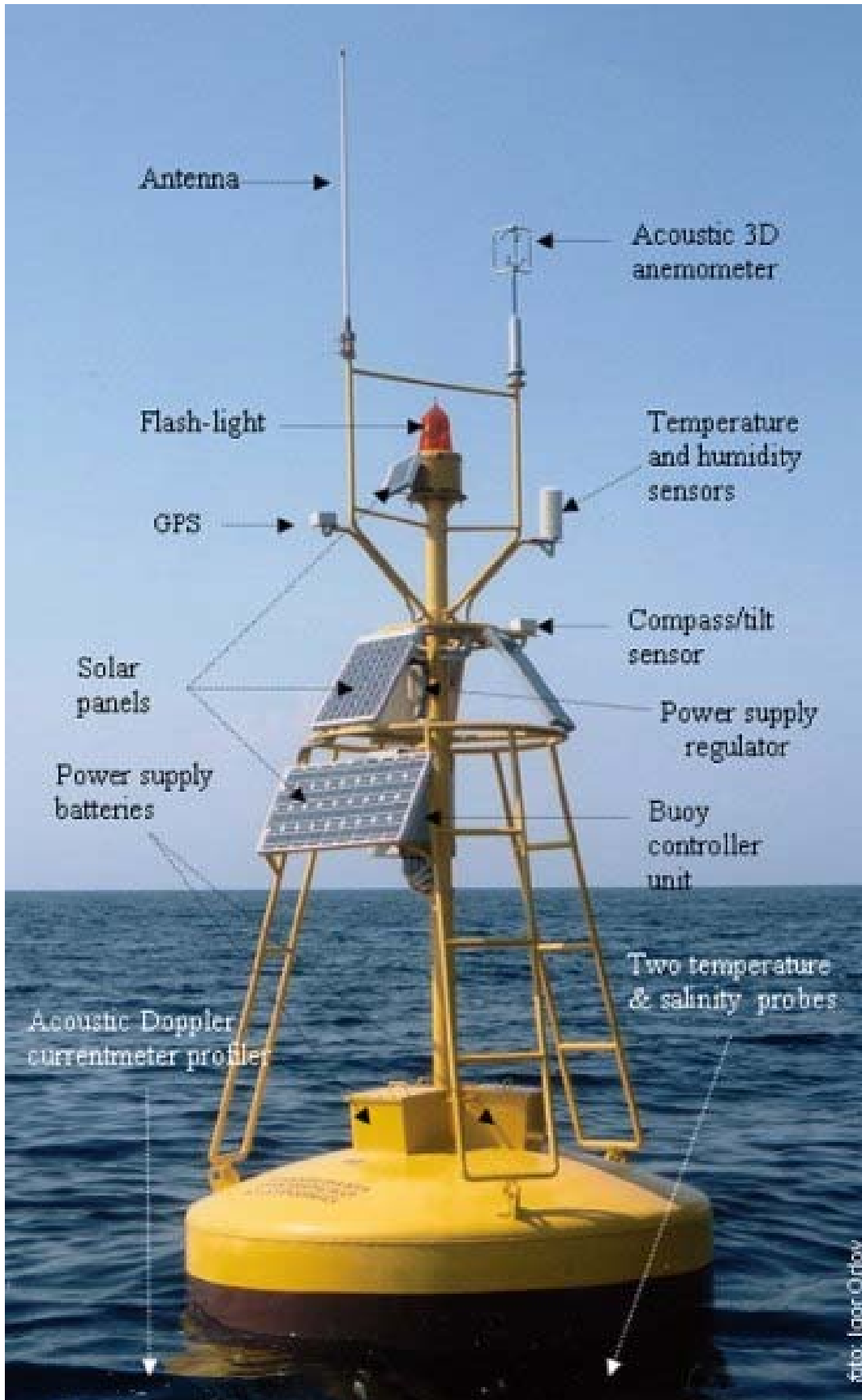MORSKA BIOLOŠKA POSTAJA PIRAN
MARINE BIOLOGY STATION PIRAN

EUROPEAN DIRECTORY OF THE INITIAL OCEAN-OBSERVING SYSTEM (EDIOS)

METADATA INPUT FORM - PART A

PLEASE NOTE MANDATORY FIELDS ARE INDICATED BY AN * AND ARE IN BOLD TYPE

(1) PLATFORM INFORMATION:

If the observations are collected at one platform then enter the details below. If there are several platforms of the same type, with the same owner, operator and instrumentation then either make a copy the table for each or provide a list of the platform names. Where a repeated cruise is undertaken by different ships, these can count as one platform. However, if possible, please list the names, owners, etc., of all ships.

Name or Identifier of Platform *	The Coastal Oceanographic Station PIRAN
Type of Platform (choose from the list in Annex 1 where possible) *	Buoy/mooring
Platform Owner *	National Institute of Biology (NIB), SLOVENIA
Platform Operator *	Marine Biology Station of the NIB Piran (SLOVENIA)
Country responsible *	SLOVENIA

(2) POSITION INFORMATION:

If the observations made from the platform were collected at a single latitude and longitude (example 1 below), use the latitude-1 and longitude-1 columns. If the observations were collected over a range of latitudes (examples 2 and 3), use both latitude and longitude columns and note in the Type column whether this range represents a track or an area. The position information could be for example a series of CTD stations collected along a section, moored buoy positions, continuous plankton recorder tows, or the area covered by a fisheries survey cruise. If this information is already held in digital form, please supply it in its current form (e.g. as ASCII files output from spreadsheets or databases). The Originator's Identifier can be used to indicate a station name, a standard ship route (e.g. SOOP track identifier), or in the case of a mooring, for example, could be the same as the platform identifier. Please also include information about the reference frames and levels. Add extra lines to the table as necessary.

Examples: 1. Point: **A** •   2. Tracks (or lines):   3. Area:
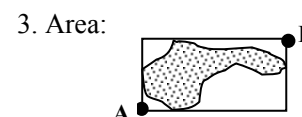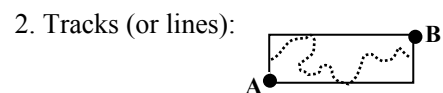
When several instruments are in use on a platform, there needs to be a link between the platform, instrument and variables or parameters measured. The 'Instrument/variable pointer' acts as this link. When completing the Metadata Input Form choose a letter or group of letters as the link, and insert it at the appropriate place in the position, instrument and variable/parameter tables.

Instrument/ variable pointer	Originator's identifier	*Latitude-1**	*Longitude-1**	Latitude-2	Longitude-2	*Type (e.g. point, track or line, area)**	Min. depth (m)	Max. depth (m)	Minimum sea floor depth (m)	Maximum sea floor depth (m)	*Start Date**
Acoustic current meter	Oceanographic Buoy Piran	45° 32.90 N	013 33.00 E			Point			21	23	January 2001

Moored CTD	Oceanographic Buoy Piran	45° 32.90 N	013 33.00 E			Point	2	2	21	23	October 2003
Meteorological data logger	Oceanographic Buoy Piran	45° 32.90 N	013 33.00 E			Point					January 2001
Meteorological measurement with instrument aid	Oceanographic Buoy Piran	45° 32.90 N	013 33.00 E			Point					January 2001

Geographic frame of reference (e.g. WGS84):	*WGS84*
Reference level for depths (e.g. relative to chart datum, mean sea level, instantaneous water surface, sea floor, etc.):	*Instantaneous water surface*

(3) INSTRUMENT INFORMATION:

Please supply information relating to the instruments used to make the measurements, or attach the information if it is available in digital or printed form. If many instruments are in use, then copy the table as necessary.

Instrument/ parameter pointer	
Instrument Type (choose from list in Annex 2 where possible)	Meteorological station with 3D wind gauge, bottom mounted doppler current profiler, and CTD fixed on buoy.
Instrument Name	CTD Ocean seven probe, ADCP (NDP – Nortek Doppler Profiler), 3D Windmaster ultrasonic anemometer, air-humidity & temperature probes, compass/tilt sensor
Manufacturer and model	CTD Ocean seven 316 probe manufactured by Idronaut (Italy), ADCP Current gauge manufactured by Nortek (Norway), acoustic wind gauge manufactured by Gill's Instrument (UK), EZ-Compass-3 by Advanced Orientation Systems Inc. (USA), humidity/temperature probes HMP45A&HMP45D of Vaisala (Finland). The integration of al instruments on the buoy was designed and performed by Ditel d.o.o. company (Koper, Slovenia), software designed by Damjan Sonc (University of Ljubljana, Slovenia). Oceanographic buoy was projected and made by Sirio d.o.o, Koper (Slovenia).
Manufacture date	October 2002
Description	The oceanographic buoy is fitted with an acoustic wind gauge, installed on the oceanographic buoy at approximately five meters above sea level, is used to measure three orthogonal wind components. An electronic compass has been added to measure the minor position shifts of the buoy which is otherwise triply anchored. East, north and vertical component of wind are calculated out from the anemometer data and compass/tilt sensor data.

3

	New data logger is installed, together with the data transmission electronics and additional sensors (CTD probe) for measuring temperature and salinity at the sea-surface, temperature and humidity of the air above the sea-surface.
Technical characteristics	500 kHz transmitter of NDP with cell thickness 1 m, radio-modem data tramsission (19.2 kbit/s) of instantaneous wind, temperature, humidity and conductivity/salinity data, and 10 minute averages of ADCP data toward the receiving land station every half an hour
Further relevant information	New data logger installed since October 2002, together with the data transmission electronics and additional sensors (CTD probe) for measuring temperature and salinity at the sea-surface (2 m depth), and temperature and humidity of the air 3.5 m above the sea-surface, wind 5 m above the sea-surface.
Other attached equipment	An acoustic current gauge is situated on the sea bed beneath the buoy to monitor currents (at one meter depth intervals and sea-floor temperature.(0.3 m height above the sea-floor)

(4) VARIABLE/PARAMETER INFORMATION:

List the variables or parameters measured (e.g. temperature, salinity, chlorophyll a, phytoplankton, dissolved oxygen, pH, particulate carbon, silicate, etc), including where possible, an estimate of their accuracy. Any standard real-time or delayed-mode validation schemes should also be noted.

Add extra lines to the table as necessary.

Instrument/ parameter pointer	***Variable/Parameter*** *(select from Annex 3 where possible)*	*Accuracy*	*Real-time data validation?*	*Delayed-mode validation?*	*Sampling frequency (e.g. 10 minute, hourly, daily, annually,3 hours before high water, etc.)*
	Wind Velocity	1.5% of speed up to 35 m/s, 3% of speed up to 60 m/s%		YES	0.25 s for 10 minutes, every half an hour
	Wind Direction	2 degrees for speed below 25 m/s, 4 degees for speed above 25 m/s		YES	0.25 s for 10 minutes, every half an hour
	Azimuth	0.5 degrees		NO	0.25 s for 10 minutes, every half an hour
	Current (1 m cells)	1 cm/s		YES	0.6 s for 10 minutes (900 samples), every half an hour
	Sea-floor temperature (ADCP)	0.2 degrees		NO	0.6 s for 10 minutes (900 samples), every half an hour

	Air-temperature	0.2 degrees		YES	10 s for 10 minutes, every half an hour
	Air-humidity (relative)	33 % of RH		YES	10 s for 10 minutes, every half an hour
	Sea-surface temperature (depth 2 m)	0.01 degrees		YES	10 s for 10 minutes, every half an hour
	Sea-surface conductivity (depth 2 m)	0.003 mS/cm		YES	10 s for 10 minutes, every half an hour
	Sea-surface salinity Salinity (depth 2 m)	0.03 PSU		YES	10 s for 10 minutes, every half an hour

(5) QUALITY MANAGEMENT SYSTEM
Complete for each platform, group of platforms, instrument or group of instruments as appropriate

Is there a Quality Management System (QMS) followed by the organisation responsible for the observations?*	*Yes*	
If yes, is the institution accredited or certified? *	*No*	
If yes, indicate *accreditation scheme (e.g. ISO9000, QUASIMEME)*		
If no, please note which of the following quality assurance procedures are applied (or attach appropriate documentation)		
How frequently are sensors calibrated?	*Conductivity and temperature once per half a year*	
Are sensors calibrated prior to and after the measurement period?	*Yes, only prior*	
Is calibration performed by the manufacturer or by the data generating institution?	*Data gernerated institution*	
To what accuracy are the sensors calibrated?	*0.03 degrees, 0.04 PSU*	
Are there sensor intercalibrations (regular or not)?	*NO*	
Are there back-up sensors?	*YES*	
For automatic recording stations: Frequency of comparative in situ measurements (for each variable).	*NONE*	
Is there an instant data validation based on neighbouring stations?	*YES, once per month*	
Are data gaps filled by derived values (e.g. after multi-linear regression)?	*NO, in source data no interpolatioon*	
Are standard procedures applied for the processing of the (raw) data (e.g. removal of spikes, comparison with existing climatologies etc.)?	*YES, according to WMO/IOC procedure*	
Are there additional quality control checks, such as consistency checks, range of validity, date, geographical position (typical NODC control procedures)?	*YES, according to WMO/IOC procedures*	
In chemistry: Are there intercalibration exercises? Proficiency testing? Internal quality assurance procedures, e.g. control charts, blank analyses? Name E(uropean)	*NO*	

N(orm,) NODC)?	
Are the high quality data and the corresponding metadata safe-guarded in a central data bank (NODC, WDC)	*YES*
Include details of any other relevant procedures in use	*NO*

(6) OBSERVING PROGRAMME INFORMATION

Observing programme name (e.g. UK tide gauge network, UK MAWS (met. Buoy) network, CTD section, Swedish coastal monitoring stations)*NO program yet,, the station was designed under the Prahe CBC EU funded project
Description of programme
National/International project name(s) (e.g. Argo, GODAE, MedGOOS) MedGOOS, MAMA

PROGRAMME STATUS: *Please note future commitment to the observing programme, adding dates where appropriate **		
An active measurement programme with no planned end	**Yes**	No
An active measurement programme with a planned end (include end date if known)	If the maintenance will not be funded, the buoy will be removed from the sea.	
An active measurement programme with a planned end and planned repeat of program (include dates if known)		
An non-active measurement programme with planned repeat of the program (include dates if known)		
Status unknown	**YES**	

ACCESS TO THE DATA: *Include information relating to the conditions and protocols for access to the measurements or attach the relevant information (e.g. unrestricted access, access for registered users, access for subscribed users, access restricted, confidential, available for scientific research only, available under EuroGOOS data policy).* **access for subscribed users and specific scientific colaboration**
• *Access to data held at the centre responsible for the observations*
Access to data products: - for last 24 hours for subscribed users   - for last 10 min data unrestricted access
• *Access to real-time observations*   **data exchange in near real time every half an hour between OGS Trieste and MBS-NIB**
• *Access to the archived data set from the observing programme*   **available for scientific research**
Web-site for access to real-time data   Access to real time data products: http://buoy.mbss.org
Web site for access to archived dat   *NONEa*

EUROPEAN DIRECTORY OF THE INITIAL OCEAN-OBSERVING SYSTEM (EDIOS)

METADATA INPUT FORM - PART B

*PLEASE NOTE MANDATORY FIELDS ARE INDICATED BY AN * AND ARE IN BOLD TYPE*

Complete the sections below to provide contact information. Section 1 (Responsible organisation) should always be completed for each platform or group of platforms.

(1) RESPONSIBLE ORGANISATION CONTACT INFORMATION

*NAME OF ORGANISATION**	National Institute of Biology, Marine Biology Station
*CONTACT TITLE (e.g. position/title of post for contact person)**	Dr. Vlado Malacic
TELEPHONE	+386 5 6746 368; +386 5 6747 121
FAX	+386 5 6734 579; +386 5 6746 367
E-MAIL	malacic@mbss.org
WEB-SITE	http://www.mbss.org
*BUILDING (building name or number)**	Marine Biology Station
*STREET**	Fornace 41
*TOWN/CITY**	Piran
*REGION (e.g. county/state/region)**	Slovenia
*ZIP/POSTCODE ***	6330
*COUNTRY**	Slovenia

BRIEF DESCRIPTION OF THE ORGANISATION
National research organisation that carries research of the environment (coastal sea and littoral) and environmenta monitoring.

(2) REAL-TIME DATA CONTACT INFORMATION

NAME OF ORGANISATION	National Institute of Biology, Marine Biology Station
CONTACT TITLE (e.g. position/title of post for contact person)	Dr. Vlado Malacic
TELEPHONE	+386 5 6746 368; +386 5 6747 121
FAX	+386 5 6734 579; +386 5 6746 367
E-MAIL	malacic@mbss.org
WEB-SITE	http://www.mbss.org
BUILDING (building name or number)	Marine Biology Station
STREET	Fornace 41
TOWN/CITY	Piran

EDIOS Metadata Input Form

REGION (e.g. county/state/region)	Slovenia
ZIP/POSTCODE	6330
COUNTRY	Slovenia

BRIEF DESCRIPTION OF THE ORGANISATION
National research organisation that carries research of the environment (coastal sea and littoral) and environmenta monitoring.

(3) DATA ARCHIVE CENTRE CONTACT INFORMATION

NAME OF ORGANISATION	National Institute of Biology, Marine Biology Station
CONTACT TITLE (e.g. position/title of post for contact person)	Dr. Alenka Malej
TELEPHONE	386 5 6746 368
FAX	386 5 6746 367
E-MAIL	malacic@mbss.org
WEB-SITE	http://buoy.mbss.org, http://www.mbss.org
BUILDING (building name or number)	Marine Biology Station
STREET	Fornace 41
TOWN/CITY	Piran
REGION (e.g. county/state/region)	Primorska
ZIP/POSTCODE	6330
COUNTRY	Slovenia

BRIEF DESCRIPTION OF THE ORGANISATION
National research organisation that carries research of the environment (coastal sea and littoral) and environmenta monitoring.

COMPLETED BY: Dr. Vlado Malacic

DATE: 13 February 2003

EDIOS Metadata Input Form

Annex 1: Platform types

Ship/surface vessel (no further specification available)
Research ship
Ship of opportunity
Ship of opportunity on fixed route (regularly occupied route where the route itself is identified rather than the particular ship occupying it at the time)
Ship at fixed position (e.g. Light Vessel or Weathership)
Small shore based craft
Submersible (no further specification available)
Mobile manned submersible
Mobile unmanned submersible (e.g. ROV, AUV)
Towed unmanned submersible (e.g. Batfish)
Buoy/mooring (no further specification available)
Moored surface data buoy
Drifting surface data buoy
Fixed oceanographic monitoring station
Subsurface mooring (surface and/or subsurface buoyancy)
Subsurface vertical profiler (e.g. PALACE float)
Subsurface drifting (e.g. Swallow Float)
Land/sea floor (,no further specification available)
Sea floor - fixed (the sea floor itself is the platform)
Sea floor - mobile
Offshore structure (e.g. Oil Rig)
Coastal structure (e.g. Lighthouse, pier, breakwater, rock)
Beach/intertidal zone
Land/onshore - fixed
Land/onshore - mobile
Balloon (no further specification available)
Free rising balloon, vertical profiling
Free floating balloon, horizontal profiling
Tethered balloon
Aircraft/satellite/rocket (no further specification available)
Research aircraft,
Non research aircraft
Non orbiting rocket
Orbiting satellite
Geostationary orbiting satellite
Manned spacecraft
Ice island
Unspecified (platform type unknown)

EDIOS Metadata Input Form

Annex 2: Instrument types

Accelerometer-shipborne wave recorder	Side scan sonar
Accelerometer-waverider buoy	Sound Velocity Probe
Acoustic current meter	Stilling well tide gauge
Acoustic tide gauge (sensor above surface)	Surface water sample (pumped)
Air bottle sample	Surface water sample (unspecified)
Benthic Incubation Chamber	Thermistor chain
Bottle station	Tide gauge (unspecified)
Bottom Lander (miscellaneous instruments)	Tide gauge with current meter
Bottom pressure sensor tide gauge	Towed STD/CTD (e.g. Sea Soar)
Bottom pressure sensor wave recorder	Transmissometer
Bubble measurements (acoustic)	Turbulence energy dissipation probe
Camera	Unspecified Instrumentation
Continuous Plankton Recorder	Waves estimated with instrument aid
Corer	Wind estimated with instrument aid
Current meter (unspecified)	Zooplankton net
Drifting Buoy	
Drifting metocean buoy	
Electromagnetic current meter	
Epibenthic Sledge	
Filtered air sample	
Fixed anemometer	
Fluorescence measurements	
Fog sampler	
Grab	
Hand held anemometer	
Ice corer and ice/snow samples	
Impeller current meter	
In-situ nutrient analyser	
Inverted echo sounder wave recorder	
Light meter	
Meteorological data logger	
Meteorological measurements with instrument aid	
Moored CTD	
Moored acoustic doppler current meter	
Multi-Parameter Environmental Monitoring Probe	
Multi-corer	
Multiple instrument types	
Nephelometer	
Paddle wheel current meter	
Particle Size Profiler	
Phytoplankton incubation (deck)	
Phytoplankton incubation (in-situ)	
Pneumatic tide gauge	
Pumped air sample	
Pumped water sample	
Radiosonde	
Rain collector	
STD/CTD cast	
Satellite altimetry tide measurements	
Savonius rotor current meter	
Sediment trap	
Sediment water sample	
Settling tubes	
Shipborne acoustic doppler current profiler	

EDIOS Metadata Input Form

Annex 3: Variables/Parameters

PHYSICAL
Sea surface temperature
Sea temperature
Practical Salinity
Conductivity
Total pressure (atmosphere + sea pressure)
Relative total pressure (total pressure relative to an arbitrary reference)
Sea pressure (sea surface = zero)
Sea level
Horizontal current speed
Direction to which the current is flowing (deg True)
East (true) component of current
North (true) component of current
Sea surface current speed
Direction to which sea surface current is flowing (deg True)
Secchi disk depth
Depth
Direction of movement of waves
Direction from which the swell is coming
Average height of highest one third waves
Height of waves
Maximum zero crossing wave height
Period of waves
Average zero crossing wave period
Suspended sediment concentration (suspended solids)
Light penetration
Turbidity
Attenuance/Transmittance
Downwelling photosynthetically active radiation (PAR)
Fluorescence (volts)
CHEMICAL
pH
Total alkalinity
Total Chlorophyll-a content
Dissolved oxygen
Phosphate (PO4-P) content
Total phosphorus (P) content
Nitrate (NO3-N) content
Nitrite (NO2-N) content
Nitrate + nitrite content
Total nitrogen (N) content
Ammonia (NH4-N) content
Silicate (SIO4-SI) content
Particulate organic carbon (POC)
Particulate organic nitrogen (PON)
Hydrogen Sulphide (H2S)
Total particulate nitrogen (PON) flux
pCO2
Total dissolved inorganic carbon (TCO2)

Dissolved carbon dioxide
Dissolved CFC11
Dissolved CFC12
Dissolved CFC113
BIOLOGICAL
Phaeophytin-a
Phytoplankton species composition
Phytoplankton species abundance
Zooplankton species abundance
Total phytoplankton biomass
Total phaeopigments
Primary production
Planktonic larval fish
Demersal fish
Inter-tidal organisms
Infaunal benthos
Epifaunal benthos
Benthic macrofauna abundance
Benthic macrofauna wet weight biomass
FISHERIES
Age
Length (biological specimen length)
Weight
Abundance
Fish stock density from acoustic integration
Sex
Maturity
METEOROLOGY
Total cloud amount (WMO code 2700)
Height of cloud base (WMO code 1600)
Type of cloud (WMO code 0500)
Present weather (WMO code 4677)
Past weather (WMO code 4561)
Horizontal visibility
Precipitation rate
Atmospheric pressure at sea level
Atmospheric pressure tendancy
Characteristics of pressure tendency
Absolute Humidity
Relative Humidity
Horizontal wind speed
Direction from which the wind is blowing
Gust wind speed
Dry bulb temperature
Sea Ice