

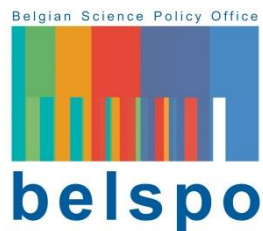
RBINS-OD Nature

Lieven Naudts

Measurement Services Ostend (MSO)



Structure



FPS Science Policy
(Belspo)



Royal Belgian Institute of Natural Sciences
(RBINS)



Brussels (40 + 40 pers.)

Ostend (23 pers.)

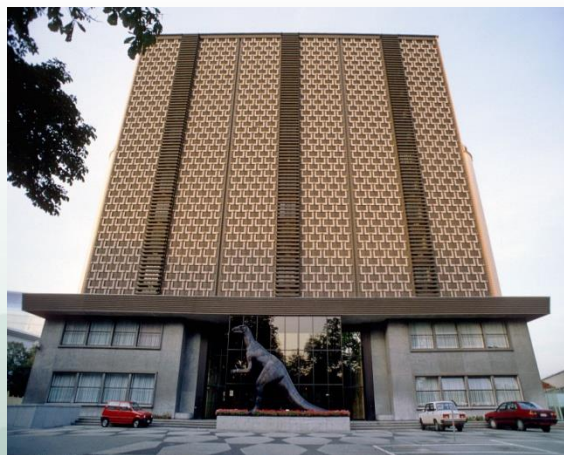
RBINS

- Directorate Support Services
- Directorate Public Services
- Directorate Taxonomy and Phylogeny
- Directorate Natural Environment
- Directorate Earth and History of Life
- Scientific Heritage Service



RBINS-OD Nature

- About 100 people
- Large and diverse expertise
- Strong reputation in the respective fields
- Spread over 3 locations



Brussels



Woluwe



Ostend

Expertise

- Ecology
- Molecular biology
- Nature conservation and protection
- Biodiversity
- Chemistry
- Hydrodynamics
- Modeling
- Databases
- Image processing
- **infrastructure**
-



Coverage

- The terrestrial environment
- The freshwater environment
- The marine environment
- Worldwide



7 research groups

- ATECO: Aquatic & Terrestrial Ecology
- BEDIC: Biodiversity & Ecosystems Data & Information Centre
- BIOPOLS: Belgian Biodiversity Policy Support Group
- ECOCHEM: Ecosystems Physico-Chemistry
- ECODAM: Ecological Ecosystems Data processing & Modelling
- **MSO – RV BELGICA: Measurement Service Ostend**
- MUMM: Management Unit Mathematical Model North Sea

RV Belgica



AUMS

Ocean Pack data acquisition system

Automatic
position-
controlled water
sampler

Physical, biological and chemical properties
Temperature, conductivity, salinity, dissolved oxygen, pH,
turbidity, chlorophyll, algae classes,
fluorescence, dissolved organic matter, pCO₂

AUMS:
Autonomous Underway
measurement system



Nutrient analyzers (Systea):
nitrate, nitric oxide, ammonia,
phosphate, silica

Waste water and sediment tank

AUMS

- Variables being measured (RV Belgica - AUMS)

Parameter	Trade	Model	Range	Time interval
Turbidity	Endress + Hauser	2 *	0 – 2000 FTU	1 s
		CUS 41	0 – 10000 FTU	1 s
Turbidity	Campbell	OBS3+	0 – 4000 FTU	1 s
Oxygen	Aanderaa	3835 optode	0 – 30 mg/l	2 s
pH	Meinsberg	AGA 140	0 – 12 pH	1 s
Chlorophyll	Trios	MicroFlu-chl	0 – 100 µg/l	1 s
Blue Algae	Trios	MicroFlu-blue	0 – 100 µg/l	1 s
CDOM	Trios	MicroFlu-CDOM	0 – 200 µg/l	1 s
Salinity	Sea-Bird	SBE45	0 – 40 PSU	1 s
pCO2	SubCtech	MK2	0 – 20000 µAtm	1 s
Fluorescence	Turner Designs	10AU	0 - 500	1 s
PAR	Li-Cor	LI-190	0 – 2000 Watt/m2	1 s
Hyperspectral irradiance	Trios	ACC-VIS	320 – 950 nm	8 s
NO3, NH3, PO4, SiO2, NO2	Systea	3 * MicroMac1000	0 – 500 ppb 0 – 8000 ppb 0 – 150 ppb	20 min. *

Thank you!

Replacement RV Belgica



Visti the RV Belgica website: odnature.naturalsciences.be/belgica