LifeWatch INBO: building a terrestrial and freshwater observatory in Flanders, Belgium

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The observatory: improving monitoring efficiency with state-of-the-art technology

Unmanned Aerial System (UAS)
High resolution imaging for habitat monitoring by UAS (Gatewing X100)
Object based image analysis with eCognition (by Trimble)

Fish tracking network
Acoustic detection of fish migration in rivers, estuaries, and along coasts
Strategically positioned receivers (by Vemco) in River Scheldt, Boekhoute, Albert Canal, and Liège, detect 100+ deployed tags
Constructing a larger telemetry network to study other species (Salmon, Atlantic cod and Pouting)

Groundwaterlevel monitoring
Remote monitoring of groundwater levels in inaccessible areas
Sensors measure 1x per hour
Data transmitted using GPRS network
Data will be integrated in our WATINA database

Bird tracking network
Lightweight, solar powered GPS tags with internal memory (by UvA-BITS)
Data read with external antennas (range 1km)
Currently tracking Herring Gull, Lesser Black-backed Gull and Western Marsh Harrier

Monitoring seabirds at sea
European Seabirds at Sea project (ESAS)
Monitoring activities since 1991
Web application for fast data entry and publication
Currently in development
Public demo accessible at https://data.inbo.be/sas-demo

Bird radar
Auralic bird detection by radar in a 5km range by Robin radar systems
Detects birds in horizontal and vertical plane

Existing systems at the INBO
The INBO is monitoring terrestrial and freshwater habitats
Data collected in 7 major systems
e.g. the Fish Information System (440,000+ fish occurrences)

Publish data as open data
Standardized
Domain Core Archives for occurrence data
Ecological Metadata Language (ESML) to describe metadata

Usable
Open, standard license

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http://data.inbo.be/ipt
Downloadable in bulk

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