

THE NATURA 2000 HABITAT MONITORING SERVICE OF NORTH RHINE-WESTPHALIA (GERMANY): A NEW TOOL FOR MONITORING AUTHORITIES

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ABSTRACT:

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) is the legislative core of Europe's nature conservation policy. It defines that member states shall keep under surveillance important natural habitats. As a consequence, the member states have designed monitoring schemes to fulfil their reporting duty. Currently, most of these monitoring schemes do not systematically include the use of Remote Sensing (RS) data.

The North Rhine Westphalian State Agency for Nature, Environment and Consumer Protection (LANUV NRW) and EFTAS are developing the pilot service “Natura 2000 habitat monitoring North Rhine-Westphalia” which will be able to analyse RS data provided by the Copernicus Space component and from in situ sources and combine the resulting information with available geodata (e.g. Digital Surface Model, Digital Terrain Model, Soil Type) to provide useful information for subsequent terrestrial habitat mapping.

The pilot service addresses three use cases: 1) detection of habitat change, 2) identification of habitat search areas, 3) quality control. The methodological focus lies on the creation of information layers, a concept developed within the EU-project MS.MONINA, and the definition of expert class models. Information indicators, which may be f. ex. the portion of an area covered by woody species, the height of vegetation or the variability of biomass throughout the year, are extracted from RS or ancillary data and stored as raster data layers.

The prototype of the service will be developed by January 2015. It will then be tested and validated in several German Federal states and the qualitative and quantitative performance results will be available for April 2015. Upon completion in May 2015, the pilot service will be made available to all other German Federal States. User requirements of the States are currently being identified to set up the service as a tool which can be adapted to habitat type and quality definitions differing from the ones in North-Rhine Westphalia.

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