

The State Agency for
Nature, Environment and
Consumer Protection
(LANUV)



Technical information system for soil pollution in NRW (FIS StoBo)

The Customer

The State Agency for Nature, Environment and Consumer Protection, North Rhine-Westphalia (LANUV) is a higher state authority answerable to the Ministry for the Environment, Agriculture, Nature and Consumer Protection of the State of North Rhine-Westphalia.

The duties of the 1200 employees of this technical-scientific authority include nature conservation, the technical-environmental protection of water, soil and air, plant safety, questions relating to climate change and animal health and food safety in relation to consumer protection.

www.lanuv.nrw.de

The Challenge

In order to be able to effectively protect and preserve the soil in North Rhine-Westphalia, comprehensive information on soil properties, the levels of substances and the causes of contamination is required. In order to achieve the soil protection goals laid down by the federal state of NRW, the information collected on soil properties must be made available in a suitable manner to enable the evaluation, planning and implementation of soil protection measures.

A special challenge was to allow users to gain access to the vast array of information in a manner that was as technically sound, simple and comprehensible as possible.

The Solution

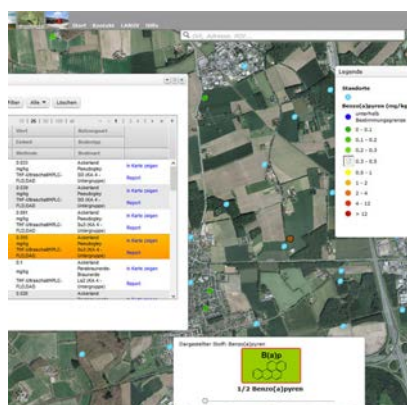
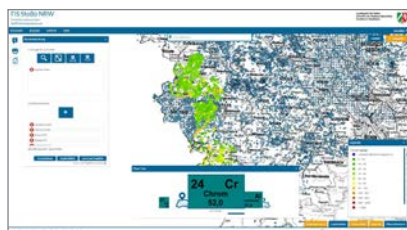
The web application FIS StoBo (Fachinformationssystem Stoffliche Bodenbelastung) implemented in 2011 was technologically revised and migrated to a new map.apps product version. The data management concept has been changed from a PostgreSQL database to the Esri file geodatabase. In addition, the existing ETL process, which imports data from an MS Access database using FME software, was optimized.

Apart from adjustments to the current corporate design of the LANUV, some necessary functional enhancements were also incorporated. This was done with particular care to make as few changes as possible from the user's point of view to the operating logic.

The Solution is based on:

- map.apps
- ArcGIS for Server
- FME

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Customer Feedback

The use of map.apps has made it possible to render complex information accessible to users with differing levels of expertise in a simple but technically sound manner without the need for in-depth knowledge about GIS or databases.

Jörg Leisner, LANUV

The Benefit

The FIS StoBo provides well-founded and simple answers to questions concerning the pollution of soil in North Rhine-Westphalia. Priority is given to providing data on toxicologically relevant heavy metals and persistent organic compounds. With currently approx. 85,000 individual data records and the associated meta-information, it contains comprehensive, point-related information on substance contents in the soils of NRW.

Based on the approx. 65,000 sampling locations, spatial and technical search and analysis functions are available, enabling topic-specific visualization in accordance with selected parameters, thus yielding the desired information.

Using the specified data, the FIS StoBo provides important fundamental information for the comparative assessment of soil pollution. This information is primarily used to plan and implement soil protection measures. In this way, polluted areas can be identified and conclusions drawn about the causes of pollution and the influence of land use.

At the same time, the FIS StoBo data pool also provides interested citizens with information on the levels of substances in the soil in NRW at www.stobo.nrw.de.

Summary

- Seamless integration of the FIS StoBo application based on map.apps into the ArcGIS platform used by LANUV and IT.NRW for the administration and provision of specialist data.
- Interpretation tools precisely tailored to the data for easy and intuitive operation.
- Encapsulation of technical complexity in order to achieve the desired result quickly and in a targeted manner.
- Modern user interface adapted to the LANUV corporate design.
- Automated import processes for easy updating of databases.

LANUV

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