

DANA Database

Public swimming ponds

In the past, the public discussion has been criticized that bio-mechanical water treatment of natural pools does not ensure hygienic demands and the good results can not be documented entirely as it would be desirable. In some European countries, the authorities often lack sufficient information about the good performing of natural bathing facilities. So if confronted with a proposal of a new project they react as if only the addition of chlorine to the pool water protects against harmful bacteria.

Confronted with the situation, IOB board has taken the decision to accept the offer to joint the project database for natural swimming pools (in short: DANA). The role of IOB is to look for international partners in public swimming pond operators to join DANA. This means to encourage public natural swimming pools outside of Germany to participate in DANA.

Created years ago, funded by the German Federal Environmental Foundation, DANA had the main goal to create data collection from about 30 natural swimming ponds in Germany. The analysis of the data should give answers to previously unanswered questions of environmental performance of public baths.

On the one hand the database DANA should also close the lack of a reliable data for the various parameters and their interactions and constitute, on the other hand, a database to understand the complex interactions between the aquatic ecology, hygiene, technical and physical size. Only by this way the enormous environmental potential would be used by natural swimming ponds and its reliability increased.

Since 2008, DANA data assesment is daily practice in 30 natural swimming ponds in Germany. In 2010, the national phase of the project was completed.

In a first step, findings from a thorough analysis of existing data have been obtained and developed the actual database.

Very important was that the first results from the DANA project have been incorporated into the recently published new regulations for planning, construction and operation of public natural swimming ponds in Germany (FLL). In addition, DANA has secured the ponds operating in the participating facilities and contributed ultimately to improve the work of the competent health authorities.

Due to the significantly improved data on the various parameters and their interactions, it is now much better known how to influence the determinants for the operation of a natural outdoor swimming pond and determine the critical factors of guideline hygienic parametres.

The complex interactions between the aquatic ecology, hygienic questions, technical and physical operating parameters are now better

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understood. Thanks to DANA this has turned out possible for individual installations as well as in the comparative-evaluative summary of several baths. Findings from these evaluations provide the basis for their selective influence and control.

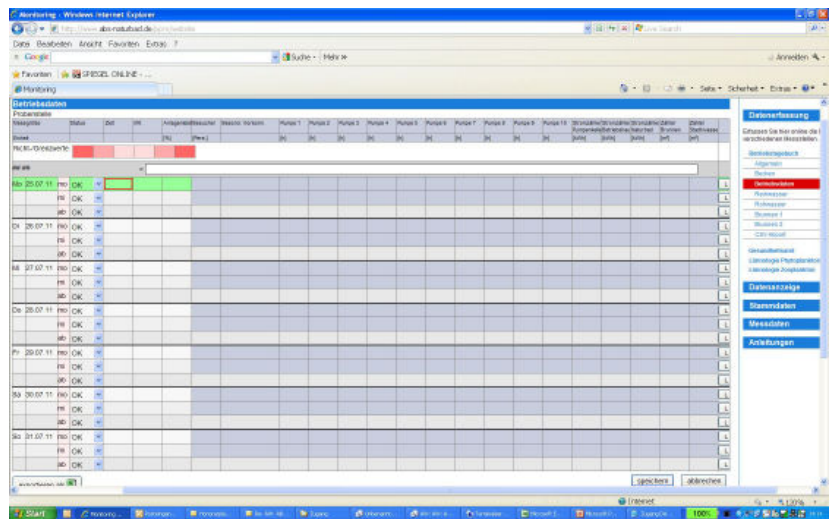
Perhaps most importantly, compared to former times, a safe operation of each individual involved public swimming pond could be achieved as well as newly building of natural swimming ponds has been reached a stability in performance from the very beginning, based on findings by DANA analysis. For the local public health agencies as supervisory authorities could also be created a significantly improved decision basis, through direct online integration.

DANA and IOB

From now on IOB provides licenses to use the DANA database. This year only for the German-speaking countries, from 2012 on also in English at least.

These licenses are available for

1. Swimming pond operators to organize the operation of baths. They will have access to all pools of database-



specific data and can make anonymous comparison of the swimming pond's performance (ranking) with other similar baths present on the database.

2. Planners of these baths. They have their license with access to the swimming pond's unlocked operator data and a license to the planner statistics module. This gives them valuable information on a variety of performance parameters of the installation and provides direct insights into the operation of the equipment and valuable advice on the planning of new facilities. The planner statistics module is helpful for statistical analysis, indicating all baths together and be constantly updated.

Examples of these include: Correlations, means, medians, maximum values, normal distribution *Pseudomonas aeruginosa*, *E. coli*, *Enterococcus*, intensity of use. Further

updates are made according to the requirements of planners.

3. IOB-members will be offered a special license. For example, an annually provided detailed national statistic of public swimming ponds. This national performance records of natural swimming pools in the country, participating in DANA, will help to enforce the construction of more public natural swimming ponds.

4. Research institutes, government agencies and organizations as the European administration. Those authorities can order licenses for individual queries at the IOB.