ClearWater

Water Remediation
Technology Selection DSS

The Mihailo Pupin Institute continually compiles, analyzes, and disseminates laboratory-, pilot- and full-scale case study information for a variety of mature and innovative technologies for water remediation and purification. As a result, a web-based repository of waste water treatment and water purification technologies has been established, and the complementary software for technology assessment and selection has been developed.

Our intention is to provide members of the water remediation community, especially in developing and transition economy countries with basic information on both mature and emerging water remediation technologies, and with a comprehensive software tool for the preliminary, course -grain filtering of the most suitable technologies for the further, more detailed evaluation.

The software is based on compiling readily available information from the literature or personal communications with involved parties. However, it could be easily extended in the future to reflect additional information compiled, and/or updates /revisions/additions to the existing database of best available technologies for water remediation .The software is extremely user friendly - after defining the contaminant present in the water, user is presented with only those technologies that are, at least to the certain extent, capable of eliminating those contaminants. Then, the user selects the criteria he considers the most important and their relative weights and preferences. System ranks the available remedial options according to the chosen set of criteria.

Software provides a repository of best available water remediation technologies, a set of indicators for criteria for evaluating those technologies, and default values of weighting factors, that could be easily adjusted to suit the user's specific needs and preferences. Specifically, ClearWater DSS:

- Enables its users to identify and systematically compare information about innovative and conventional technologies to meet water remediation goals,
- Establishes a structure of technology evaluation and selection process, which simplifies thedecision making and streamlines the variety of factors involved in the remediation process

- Defines consistent, measurable indicators for key technical, environmental, and economic criteria that influence selection and deployment of technologies
- Provides documented evaluation which can be updated as needed information becomes available
- Provides a flexible, multicriteria optimization approach allowing tradeoffs among criteria on the basis of contaminant type and user's specific needs
- Fastens development of a feasibility study of remedial options
- Provides site owners, environmental managers and other stakeholders with the opportunity to explore alternative remedial options quickly, etc.
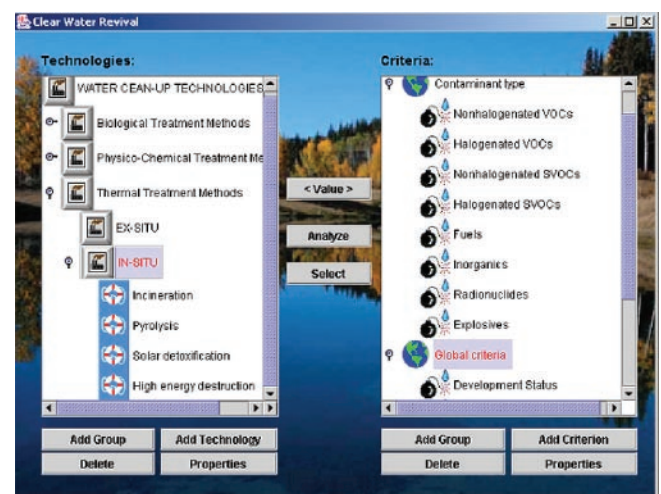
Users are also allowed to choose the preference functions and define their shapes. Besides, it is very easy to add new technology or even a category of technologies, or change the parameters of the existing ones, or introduce new preference functions, etc.

Technical information

ClearWater DSS has been developed based on three-tier architecture and using Java 2 Platform, Enterprise Edition.

www.pupin.rs

Mihailo Pupin Institute

Tel: +381 11 2772 876
Fax: +381 11 2776 583

Volgina 15, 11060 Belgrade
Serbia

e-mail:
sanja.vranes@institutepupin.com

institute **MIHAILO PUPIN**