

# OPASNET BASE – Mediawiki as database UI

## Introduction

**Opasnet** is a Mediawiki-based website and workspace for an open mass collaboration project that aims to improve societal decision-making. Original idea was to focus on environmental health related decision-making but as the method evolved the scope has been widened to cover policy-making in any field. Opasnet aims to collect, synthesize, and communicate people's values and scientific information by using Open Assessment method.

**Opasnet Base** is a part of Opasnet and a storage and retrieval system for results of variables and data from studies. It is designed to be flexible enough to store information in almost any format: probability distributions or deterministic point estimates; spatially or temporally distributed data; or data with multiple dimensions. It can be used as a direct source of model input data, thus making it possible to use shared input information sources such as population data, climate scenarios, or dose-responses of pollutants.

**Open Assessment (OA)** is an ontology-based approach to assessing real-world phenomena and communicating the assessment results to those who need or wish to use them. In OA method assessments are divided into smaller elements (variables) which describe some certain piece of reality.

## Basic operations

Opasnet Base UI is usually accessed via link in variable pages. Link is automatically generated to metadata box in every variable page which has data in Opasnet Base.

Opasnet Base UI displays all the basic information about selected variable to user (name, sample size, unit, dimensions, results). Typically user is mostly interested in results of the variable. The results in Opasnet Base are typically not single numbers but tables with several dimensions. For example variable net health effects of salmon can have year and type of salmon as dimensions. Because many variables may have a lot of dimensions, also the results may be large multi-dimensional tables. It is possible to select only those rows of each index that are of interest. It is also possible to limit the sample size, i.e. how many iterations are shown for each value. User can also choose to view only mean and standard deviation of the results.

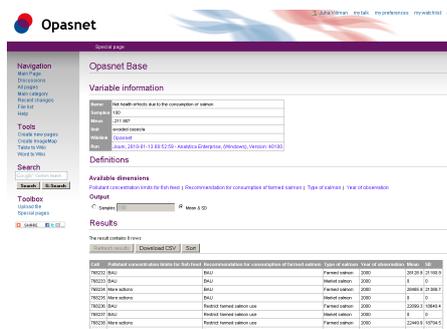


Figure 1. Opasnet Base UI

## Technical details

Opasnet Base UI has been developed as an extension to Mediawiki. It creates special page which functions as a user interface. Extension also creates parser function hook which is used to generate links to UI.

Opasnet Base database is running on separate MySQL –server. Current version has 19 tables which contain 200 MB of result data.

## Future challenges

Currently it is quite easy to get data out of Opasnet Base using the UI. However getting data into Opasnet Base is not that easy. Data structure of the database is quite complex which makes developing suitable UI very challenging. Currently we are using Analytica to upload data into Opasnet Base. Analytica is a commercial, windows-based client software for creating decision models and it also has nice database features.

Due to Analytica's commercial nature we are also looking forward to offering read/write connections to Opasnet Base for R (open source statistical software). This could make data more usable and also upload process could be improved.

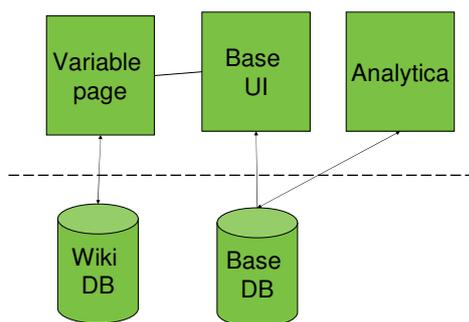


Figure 2. Technical structure of Opasnet

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**Opasnet**

<http://en.opasnet.org>

