

## How was the Tool developed?

The Tool has its origin at the *OECD/UNEP Workshop on the Use of Multimedia Models* held in Ottawa, Canada in 2001.

After the workshop, an *OECD Expert Group for the Follow-up to the OECD/UNEP Workshop* was established. Between 2002 and 2005, the Expert Group developed a consensus model based on existing predictive approaches to environmental persistence and long-range transport.

The software has been developed by Switzerland in cooperation with Germany, under the supervision of the *OECD Task Force on Environmental Exposure Assessment (TFEEA)*, and in cooperation with the participants of the *OECD/UNEP Training Workshops on Application of Multimedia Models for Identification of POPs* held in 2005 and 2006.

The software (Version 2.1) was endorsed by the TFEEA in late 2007, and published in April 2008. Version 2.2 was published in April 2009.

The software is described in the journal article by F. Wegmann et al (2009)., *Environmental Modeling & Software* 24, 228-237.

## OECD products related to Risk Assessment:

### On the use of Multimedia Models;

- ❖ Guidance Document on the Use of Multimedia Models for Estimating Overall Environmental Persistence and Long-Range Transport (2004)

### On Exposure Assessment in general;

- ❖ OECD series of Emission Scenario Documents (ESDs)
- ❖ Guidance Document on Developing ESDs (2000) and Other relevant Publications on Exposure Assessment

# The OECD Pov and LRTP Screening Tool

*Estimating overall persistence and long range transport potential of organic chemicals*

**The Pov and LRTP Screening Tool and other relevant products are freely available at:**

[www.oecd.org/env/riskassessment](http://www.oecd.org/env/riskassessment)

Contact: [ehs.contact@oecd.org](mailto:ehs.contact@oecd.org)



[www.oecd.org/env/riskassessment](http://www.oecd.org/env/riskassessment)

# What is the Tool?

The [OECD Pov and LRTP Screening Tool](#) is;

- ❖ Software in a spreadsheet format<sup>1)</sup> containing multimedia chemical fate models
- ❖ A tool for estimating **overall persistence (P<sub>ov</sub>)** and **long-range transport potential (LRTP)** of organic chemicals at a screening level
- ❖ A tool for comparative assessment of environmental hazard properties of different chemicals.
- ❖ Specifically designed to help identify potential POPs/PBTs<sup>2)</sup> according to persistence and long-range transport metrics
- ❖ freely available at the OECD website (see backside)

- 1) Requirements for the software:  
MS Excel 2002 or higher on MS Windows, or  
MS Excel 2004 for Macintosh on Mac OS X (The Tool will not work with MS Excel 2008 for Macintosh)

## 2) POPs (Persistent Organic Pollutants)

POPs are organic compounds that are observed to persist in the environment, to be capable of long-range transport, to bioaccumulate in human and animal tissue, and to have potential significant impacts on human health and the environment.

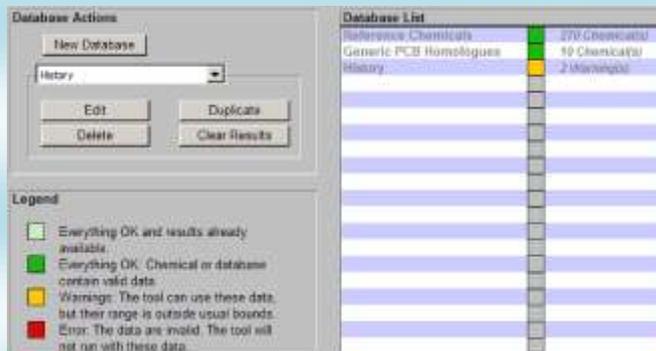
# Features

## 1. Simple and easy to use

The Tool has a “Main menu” for entering data and results are shown in easy to read graphical mode, which allows even beginners to utilise it easily.

## 2. Flexible Data Management and Model Setting

Users can chose chemicals from a database installed in the Tool, or enter data for chemicals of interest, i.e. physical-chemical properties and degradation half-lives. It is possible to transport users’ own databases, and store them within the Tool.



“Database Actions” area to manage data for users.

It is also possible to change model settings.

## 3. Representative of several models

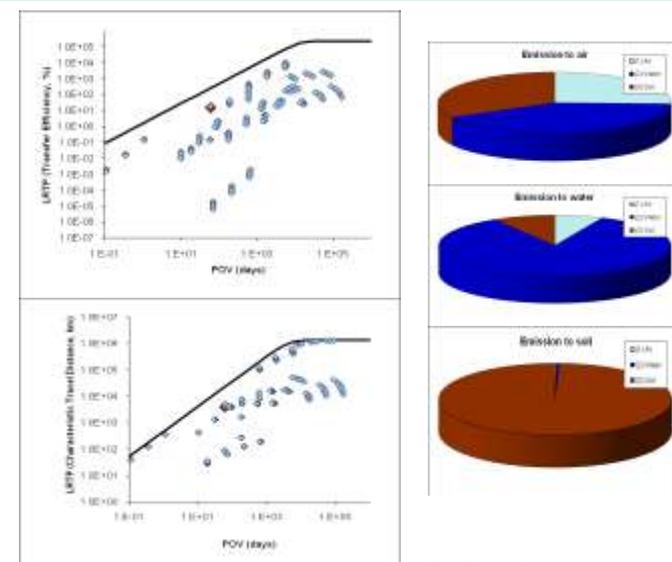
The model in the Tool was developed as a “consensus model” reflecting features of several existing multimedia fate and transport models.

## 4. Graphical and Numerical Output

The result of model calculation is shown in both numerical and graphical outputs, such as,

- Plots of LRTP metric (CTD and TE) vs. Pov. (See Example A below)
- Numerical values of Pov, CTD (Characteristic Travel Distance) and TE (Transfer Efficiency) in three emission scenarios to soil, water and air.
- Pie charts showing the fraction of chemicals that are contained in soil, water and air for each scenario. (Example B)

Examples of graphical output of the Tool



A) Plots of LRTP and Pov values

B) Pie Charts of Fractions of Chemicals in three media