

Alternatively, one can search through the entire list of the model catalog in alphabetic order...

### Whole model's catalogue

There are 96 model(s) available in the database.

	Model Name	Short description	Long description
<input type="checkbox"/>	ADMS-3	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	ADMS-Urban	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	ADREA	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	ADREA-HF	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	AEROPOL	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	AIPOC	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	AUTOMOD	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/>	BUO-FMI	<a href="#">Show</a>	<a href="#">Show</a>

## THEMATIC COMPARISON

*Thematic comparison* gives the user the opportunity to have a quick look at specific model characteristics.

### Comparing models

Table of Contents:

- [EURAD](#)
- [OFIS](#)

#### Model 'EURAD'

##### Model type and dimension

EURAD is a threedimensional Eulerian model.

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#### Model 'OFIS'

##### Model type and dimension

The OFIS model belongs to the EZM. It is a multilayer two-dimensional Eulerian photochemical dispersion model and is capable of simulating the ozone concentration due to transport and photochemical transformation within an urban plume as well as the exceedances of ozone threshold values based on wind statistics during the period considered.

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# MDS

MDS is a web-based database containing information on air quality models

MODEL DOCUMENTATION SYSTEM offers you:

- ✓ Database of 96 models
- ✓ Description of the models
- ✓ Contact persons
- ✓ User-friendly search facility
- ✓ Interface for intercomparison of model characteristics

Visit MODEL DOCUMENTATION SYSTEM at:

<http://air-climate.eionet.eu.int/databases/mds.html>

Information on how to submit a model to MDS can be found at:

[http://air-climate.eionet.eu.int/databases/mds\\_submit.html](http://air-climate.eionet.eu.int/databases/mds_submit.html)

For further information, please contact:

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# Model Documentation System

A comprehensive  
source of information  
on air quality models

European Environment Agency



ETC Air and Climate Change under contract  
to the European Environment Agency

## USE OF AIR QUALITY MODELS

Air quality models can be used at different scales: local, national, regional and European. The purpose of such models is to assess whether local/urban air quality limit values are exceeded, as laid down in the EU Air quality framework Directive and whether critical loads for acidification and eutrophication and air quality limits for ozone in rural areas are exceeded (as agreed under the Long Range Transboundary Air Pollution Convention). Key input data for the models include emissions estimates from different source categories, such as energy industries, transport, manufacturing industry, residential sector and meteorological data.

## WHAT IS MDS?

The [Model Documentation System](#), hosted at the European Environment Agency, is a web-based database for air quality models.

The screenshot shows the homepage of the Model Documentation System (MDS) at the European Topic Centre on Air and Climate Change. The page features a navigation menu on the left with links for ETCACC, EIONET services, and EEA services. The main content area is titled "Search the Model Documentation System" and includes a brief description of the database. It offers three search methods: "Structured search" (pre-defined terms), "Unstructured search" (free text search), and "Whole model catalogue" (browse the entire database). A search form is visible with fields for "Word(s)", "Operand" (set to "Any word"), and a "Submit query" button.

There are 3 different ways to use the MDS database

- √ Structured search
- √ Unstructured search
- √ Whole model catalogue

Using the *structured search* facility, the user is guided through the database and is assisted in selecting the most appropriate model for the specific application. The *unstructured search* enables a simple text search. Alternatively one can find the description of a specific model through the *whole model catalogue*.

## NEW FEATURES

In 2003 MDS was upgraded and now provides a user friendly search and data retrieval interface.

The screenshot shows the "Search the model database (Step 6 of 7)" interface. It contains two main sections of checkboxes. The first section asks "What type of model outputs are required?" with options for Concentrations, Deposition fluxes, Source-receptor relationships, and Exposure. The second section asks "Which are the physical/chemical properties of the pollutants which you would like the model to consider?" with options for Non-reactive primary pollutants, Chemically active, and Pollutants which take part in intermediate transfer processes. To the right, there is a list of pollutants to be simulated, including Sulphur Dioxide (SO2), Carbon monoxide (CO), Nitrogen Oxides (NOx), Volatile Organic Compounds (VOCs), Ozone (O3), Benzene, Ammonia (NH3), Lead (Pb), PM2.5 and PM10, Total Suspended Particulates (TSP), Buoyant, and Dense. At the bottom, it indicates "6 model(s) matched your selections" and provides buttons for "Previous", "View results", "Restart", and "Next".

In the structured search, by answering a number of questions the user can select the characteristics that a model must have, so that it is considered appropriate for the case study in question. At each step, help for each of the selection fields is provided.

The user requirements are used for narrowing the list of potential models that can address the specific issue.

Once the model search has yielded a reduced number of models, a list of the characteristics of each through the *Short* and *Long description* can be obtained.

The model characteristics can be compared by selecting one or more of the *Long description* fields.

The screenshot shows the "Search results" page, indicating that 4 model(s) matched the query. A table lists the results:

Model Name	Short description	Long description
<input checked="" type="checkbox"/> EURAD	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/> MUSE	<a href="#">Show</a>	<a href="#">Show</a>
<input checked="" type="checkbox"/> OFIS	<a href="#">Show</a>	<a href="#">Show</a>
<input type="checkbox"/> SPRAY	<a href="#">Show</a>	<a href="#">Show</a>

Below the table, there is a section for "Long description fields for model comparison" with a list of checkboxes for various fields such as "Basic information", "Model type and dimension", "Model limitations", "Schemes", "Input", "User interface availability", "Previous applications", "Validation and evaluation", "Portability and computer requirements", "References", "Intended field of application", "Model description summary", "Resolution", "Solution technique", "Output quantities", "User community", "Documentation status", "Frequently asked questions", and "Availability". A "Compare Models" button is located at the bottom.

Visit Model Documentation System at: <http://air-climate.eionet.eu.int/databases/mds.html>