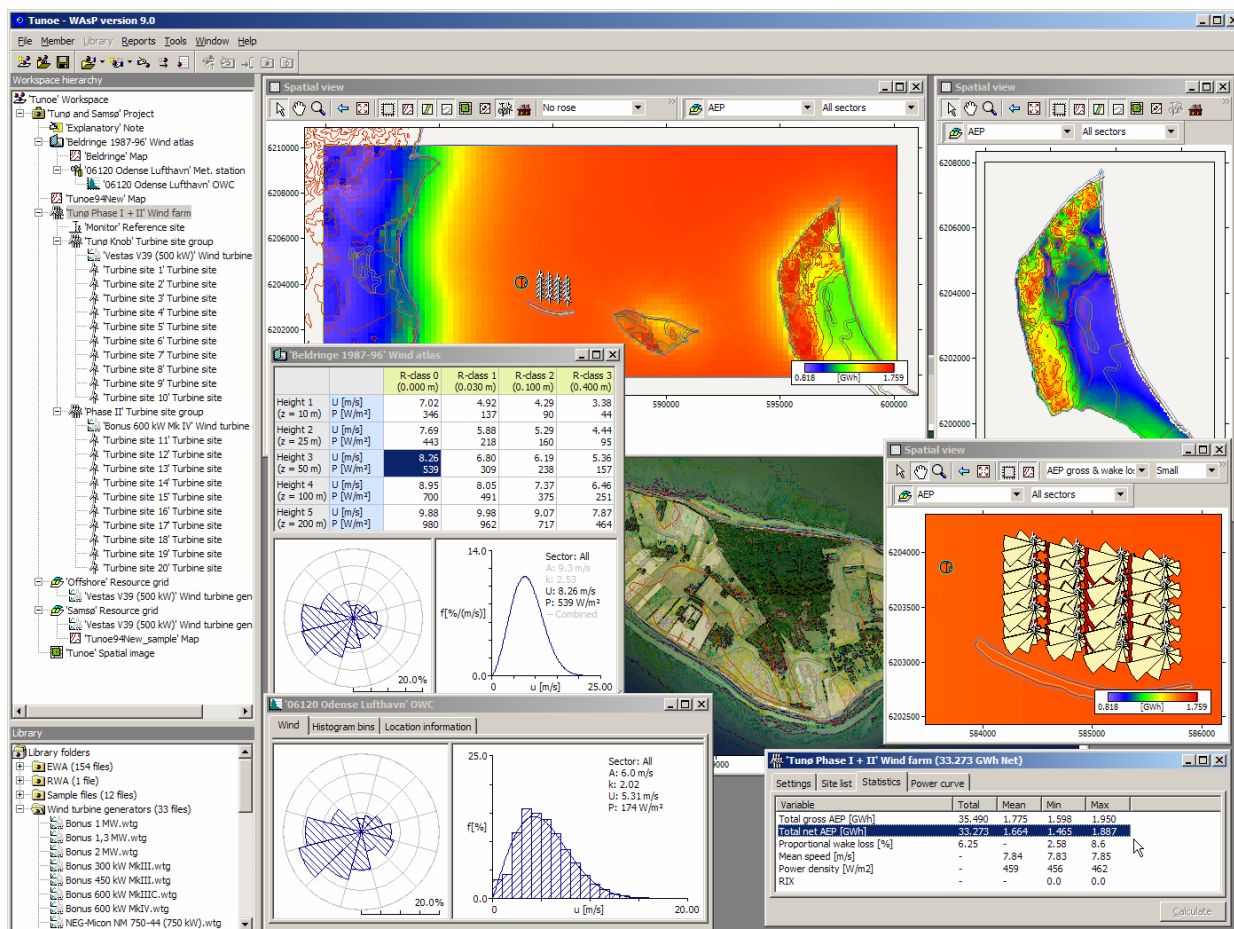


Introducing WAsP 9.0



What's new in WAsP 9?

Version 9 contains new functionality, an improved user interface, an updated help facility and several new or updated auxiliary software packages. The most profound changes can be listed under the following headings:

- Nested wind farms
- Wind farm power curve
- Reference site in wind farm
- Spatial image underlays
- Resource grid masking
- Resource grid performance improvements
- Grids of Δ RIX values
- Obstacles in resource grid calculations
- Enhanced Map Editor with comprehensive roughness map consistency checks
- New WAsP Climate Analyst tool

System requirement changes

Windows XP or later is recommended. It is no longer possible to install and use this software on Windows 98, ME and NT4. Various updates and patches from Microsoft may be required for WAsP to be installed and run on Windows 2000.

Nested wind farms

- A new hierarchy member, called 'Turbine site group' is introduced.
- Wind farms can now have sub-groups into which turbine sites can be organised.
- Different sub-groups can have different associated WTGs, obstacle groups, etc.
- A turbine site group automatically becomes a wind farm if it's not a sub-group of another wind farm.
- Wake effects are calculated among all of the turbine sites in a nested wind farm.
- An organiser tool helps to sort and order the children of a wind farm.

Reference sites

- A new hierarchy member, called 'Reference site' is introduced.
- The main purpose is to support the calculation of wind farm power curves.
- Reference sites are similar to turbine sites, but cannot calculate production using a power curve.
- Reference sites can be inserted in various places in the hierarchy, but only one can be at any given level.

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Wind farm power curve

- The wind farm power curve is now calculated for a given reference site location.

Spatial images

- A new hierarchy member, called 'Spatial image' is introduced.
- These are bitmap image files which can be used as map underlays.
- They may be inserted in various places in the hierarchy.
- More than one image can be associated with the same vector map.
- Add them to the hierarchy by opening a JPG or BMP from file.
- The spatial location of the image is read from an SCL file with a matching file name.
- The WASP Map Editor can be used to establish the SCL files.

Resource grid calculation masks

- Grids are still defined as rectangles, but a 'mask' can now be defined for the calculation. Masked areas won't be calculated.
- Masks are defined by selecting map polygons, or by using a Surfer grid map.
- Access this feature via an 'Edit mask' button in the resource grid window.

New resource grid results

- Obstacle effects can now be included in the resource grid calculations.
- Grids of ΔRIX values can be calculated.
- Sector-wise results can now be displayed.
- A detailed statistical panel provides more insight into the grid data.
- The colour palette used to display the grid results can now be pivoted (centred) around a given value.
- New and improved colour palettes.

Resource grid performance improvement

- The site effects, wind climate and AEP are now handled as separate calculations, so you can make site assessment grids without an atlas.
- If a grid is re-configured, existing valid results are preserved as far as possible, to minimise the re-calculation task.
- If only the associated atlas (regional wind climate) is changed, then the site effects are not recalculated.
- If only the associated WTG is changed, then only the AEP results are recalculated.
- The grid calculation routines have been changed to make them generally faster.

Annotations in hierarchy

- A new hierarchy member, called 'Note' is introduced.
- A note is just a snippet of text which may be added anywhere in the hierarchy.

Project level calculation

- The project-level calculation command 'Do all feasible calculations for all project members' now forcefully recalculates all the members of the project, regardless of whether their results are due for recalculation or not.

Miscellaneous

- It's now possible to open Surfer BNA and BLN files.
- Vector maps can include boundary lines which are shown on the map.
- Height contour labels can be shown on vector maps.
- A bunch of new scripts...

Enhanced Map Editor

- Full roughness map consistency check: "dead ends", "cross points" (roughness lines crossing each other) as well as line-face-roughness errors are automatically identified.
- New editing operations and short-cuts.
- New and updated map projections.
- Updated and extended help file.

New WASP Climate Analyst tool

- Powerful companion to the WASP Observed Wind Climate Wizard.
- Data analyses and inspection.
- Observed Mean Wind Climates.
- Observed Extreme Wind Climates.
- Export to WASP and WASP Engineering.

More information

The software described in this document is continually being developed. There may be differences between the description given here and the actual software when a new version is released. If you are particularly interested in some feature of the software, please contact the WASP team for advice.

More information about upcoming releases of WASP will be made available at www.wasp.dk.