Source apportionment and planning
at
Slovenian Environment Agency

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Air quality plans preparation

Which are the air quality challenges in your domain?

High **PM$_{10}$** levels due to widespread use of wood for domestic heating in technically outdated stoves and boilers, together with low wind speed conditions in basins and valleys, accompanied by pronounced long-lasting temperature inversions.

High **O$_3$** levels related to widespread Mediterranean episodes, with the highest O$_3$ levels in Slovenia measured in Primorska region with higher temperatures, more sunshine hours and under the greatest influence of trans-boundary pollution.

Air quality plans preparation

How do you identify the main sources of pollution in/to your domain?

We use Positive Matrix Factorization (PMF) receptor model.

Example: Analysis for 4.11.2010 – 8.2.2011 in Celje station, days with exceedances have much higher contribution of wood burning
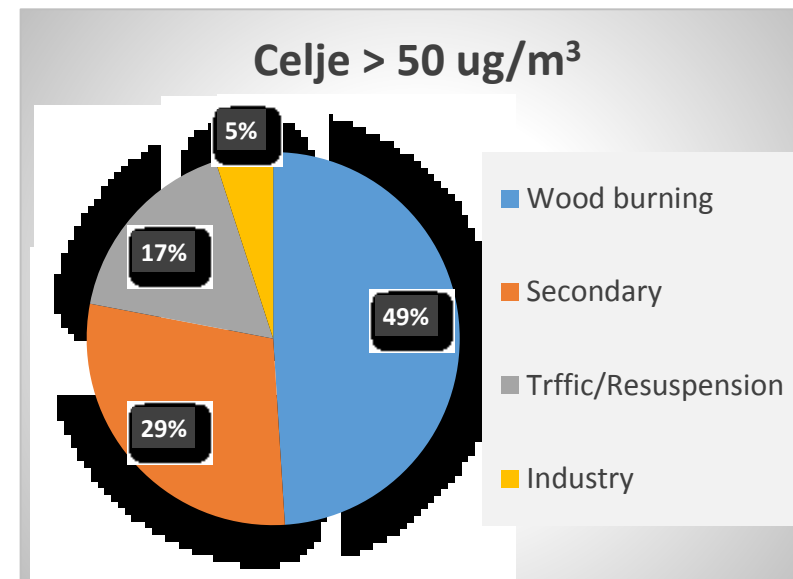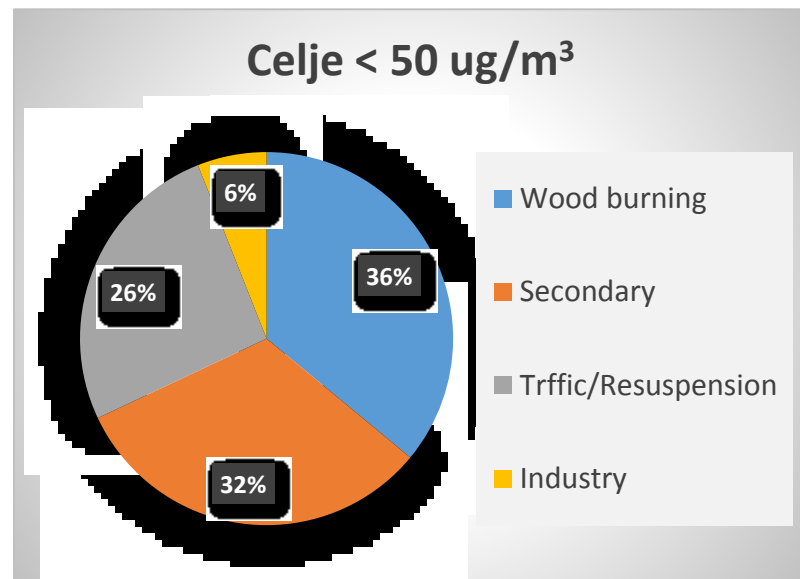
Air quality plans preparation

Which tool/approach do you use to identify sources? Are you aware of differences between "source apportionment" and "planning" approaches?

Beside PMF receptor model we will establish additions tools/approaches within SINICA and LIFE-IP PREPAIR projects:

- CMB receptor model,

- SHERPA and RIAT+ tools

Future projections and measures

How do you project in the future the current concentrations? Do you perform 'business as usual' scenarios for the future? Using which tools?

- Within SINICA project bottom up emissions are being calculated for Slovenia for years 2016 and 2018, next step will be calculation of emission projections.

- Future concentratons will then be calculated with these emission projections (including business as usual scenario) using ALADIN-SI/CAMx modelling system for Slovenia.

Uncertainty and governance

Do you evaluate uncertainties of your results? How?

Do you coordinate the air quality plan with other policies? i.e. National air pollution control programmes (NEC directive)? Covenant Of Mayors? Mobility plans?

Slovenian Environment Agency is not responsible and was not much involved in preparation of air quality plans so far. With tools that we are establishing we will be able to support authorities in future. In the near future we will using SHERPA model support authorities for NECD requirements.

FAIRMODE tools

Are you aware / are you using the source apportionment (SA) and planning FAIRMODE tools/resources?

- DeltaSA tool
- SPECIEUROPE database
- Dynamic indicators in the delta tool
- SHERPA

Using DELTA tool (ALADIN-SI/CAMx modelling system).

Aware of SPECIEUROPE tool, but did not use it yet. For modelling we would need VOC speciation in addition to PM speciation available in SPECIEUROPE.

Within LIFE-IP PREPAIR project we are establishing SHERPA (and RIAT+) model with our own input emission and concentrations fields.

SHERPA tool

- Results produced with SHERPA model not accurate enough for Slovenia.

- SHERPA suggests only 15% of PM10 is due to emissions in Slovenia.

- Establishing SHERPA to be run with our input fields (emissions and concentrations).