

# FAIRMODE management practices at Slovenian Environment Agency

## Part II: Emissions

Rahela Žabkar

Tanja Koleša

Irena Malešič

Martina Logar

Luka Matavž

# Slovenian Environment Agency (ARSO) participation

Current 100 m x 100 m emissions for year 2011 will be in the next years replaced with an improved version. In the meantime we:

1. Will prepare emissions file format for the emis-tool, presumably before the next FAIRMODE meeting.
2. Have already prepared emissions file format for the composite map and are waiting for upload instructions.
3. Take part in pilot exercise with a) whole country and b) with Ljubljana city (in the next phase).

# Emission Inventory for Slovenia

ARSO started SINICA cohesion project. One of the objectives is preparation of new national bottom-up emissions (partially combined BU and TD approach) in resolution 100mx100m:

1. Emissions from buildings because of heating and preparation of domestic hot water
2. Road traffic emissions
3. Emissions from industrial sources
4. Other anthropogenic emissions

# Most important emission topic in Slovenia/Ljubljana

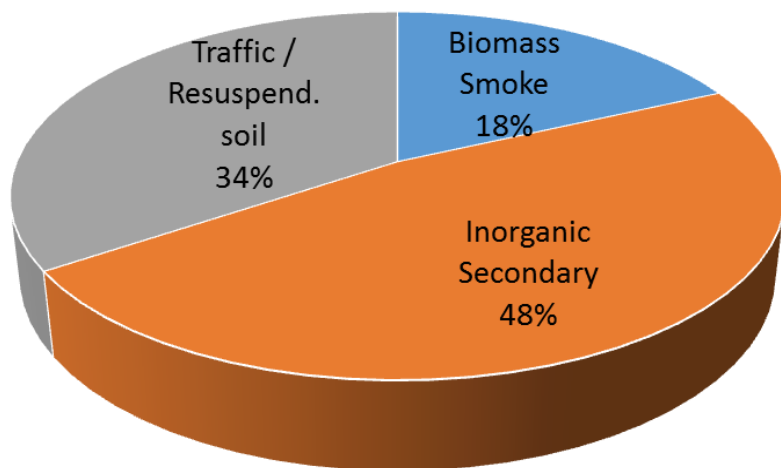
1. Wood fired small combustion installations (PM10) and road transport (NO2)
2. Ljubljana has well developed district heating system, to which more than a half of residential units are connected. In addition, there is well developed natural gas distribution system.
3. Still, there is a significant share of wood combustion, yet much smaller than in Slovenian average. Wood covers more than half of the final energy demand for residential heating in Slovenia.

## Distribution of total mass PM<sub>10</sub> among factors (receptor model EPA-PMF5)

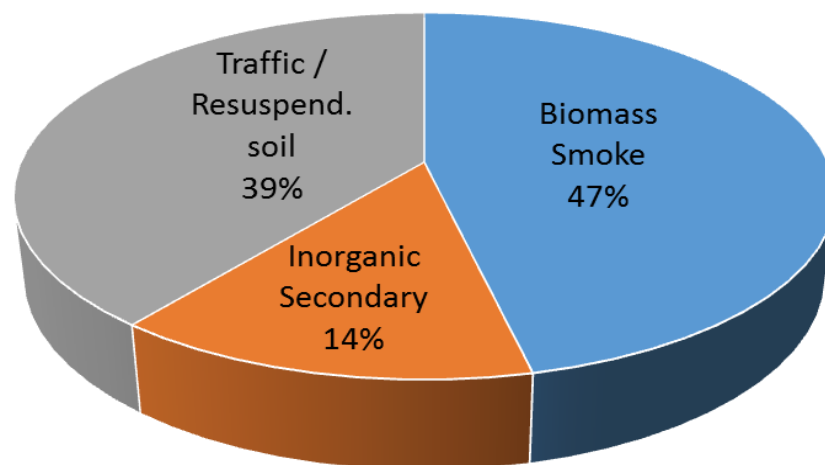
Example for Ljubljana (similar for other cities in Slovenia):

- significant impact of biomass smoke for days with exceedances
- greater share of secondary aerosol for the rest of the days

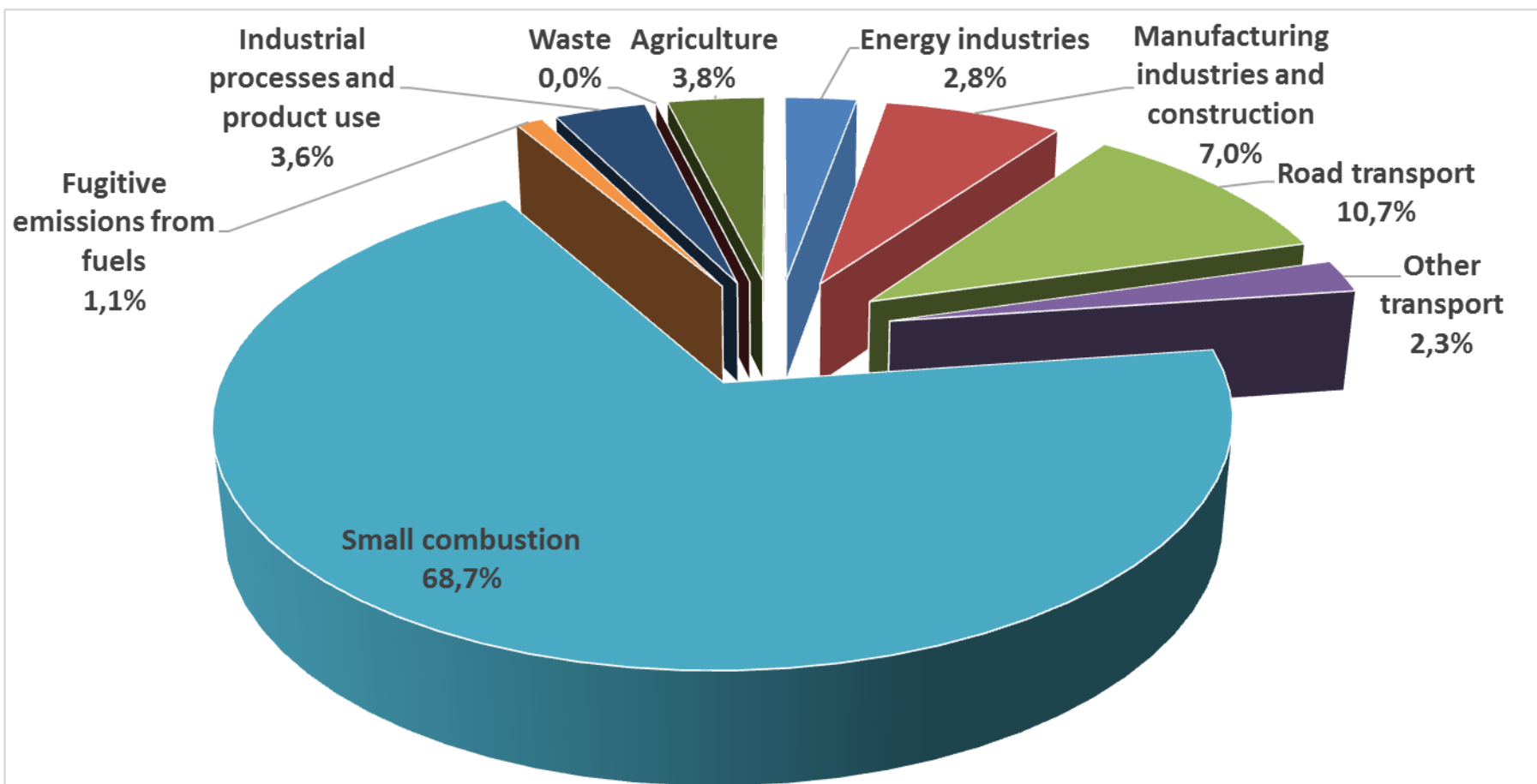
LJUBLJANA cPM<sub>10</sub> < 50µg/m<sup>3</sup> in Winter



LJUBLJANA cPM<sub>10</sub> > 50µg/m<sup>3</sup> in Winter



# National PM<sub>10</sub> emissions in 2015 (EMEP)



# National NOx emissions in 2015 (EMEP)

