



# GLOBEEMISSION

## GlobEmission (ESA DUE program)

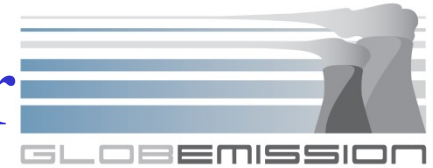
Project by KNMI, BIRA-IASB, FMI, TNO, VITO



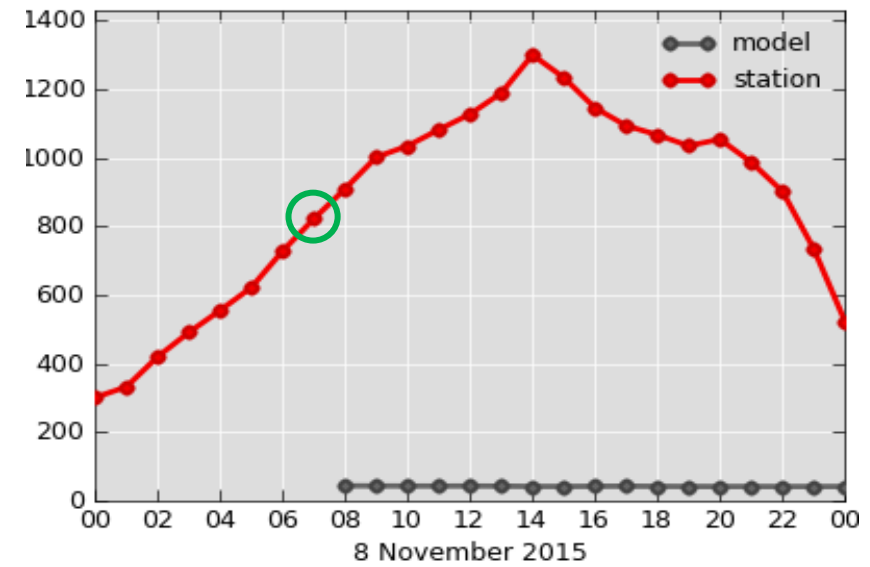
Royal Netherlands  
Meteorological Institute



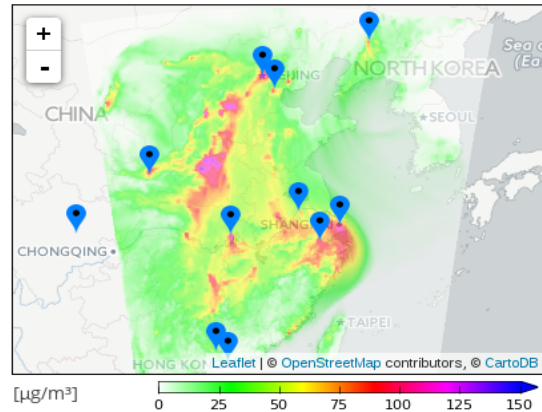
# Air quality Shenyang 8 November



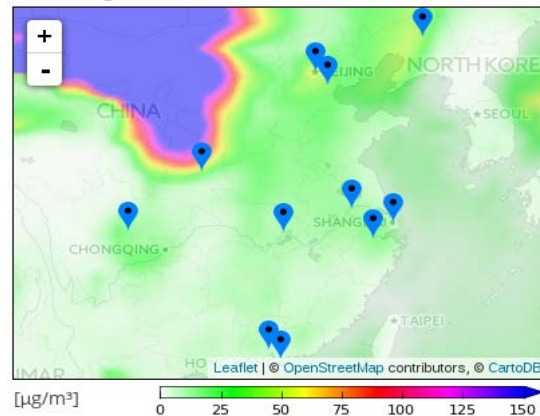
Xinhua News agency: Shenyang reported severe air pollution on 8 Nov., with the reading of PM2.5 at 7 a.m. was 864.



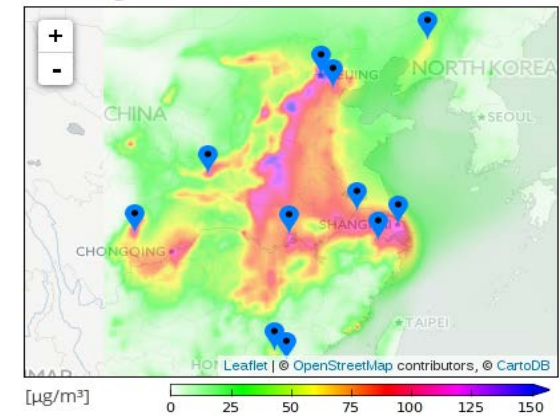
24h average of PM2.5



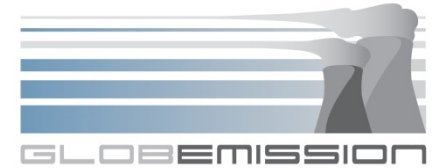
24h average of PM2.5



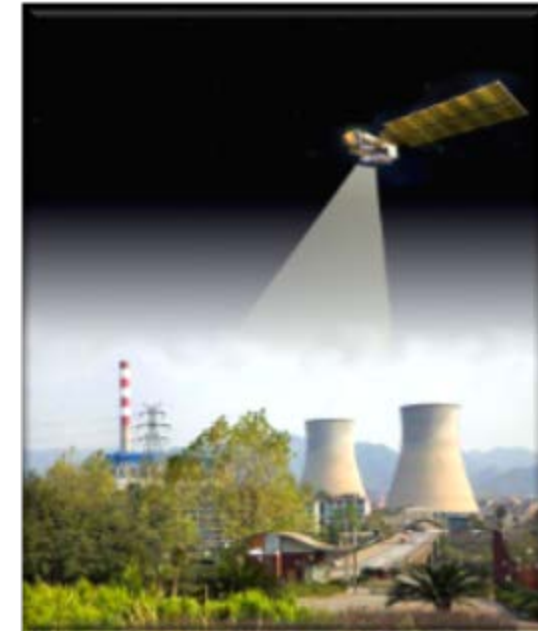
24h average of PM2.5



# Scope of GlobEmission



- Within GlobEmission emission estimates derived from satellite observations are developed.
- Main advantages:
  - spatial consistency and high temporal resolution
  - identifying flaws in existing inventories
  - monitoring of emission changes, trends & new spots
  - rapid availability to users
- They provide complimentary information to bottom-up emission inventories



DUE project in 2011-2016



# Committed end users

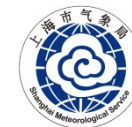
- European Environmental Agency ?
- LATMOS, France
- Satellite Environment Center of the Chinese Ministry of Environmental Protection
- Indian Institute of Tropical Meteorology
- South African National Space Agency + South African Weather Service
- National Institute for Environmental Studies, Japan
- Qatar Environmental & Energy Research Institute
- Inha University, Korea
- Shanghai Meteorological Service, China

New interest to participate as user:

- Main Geophysical Laboratory (Russia)
- Environmental Defense Fund (USA), methane emissions
- GEIA: inclusion of GlobEmission in ECCAD
- ...



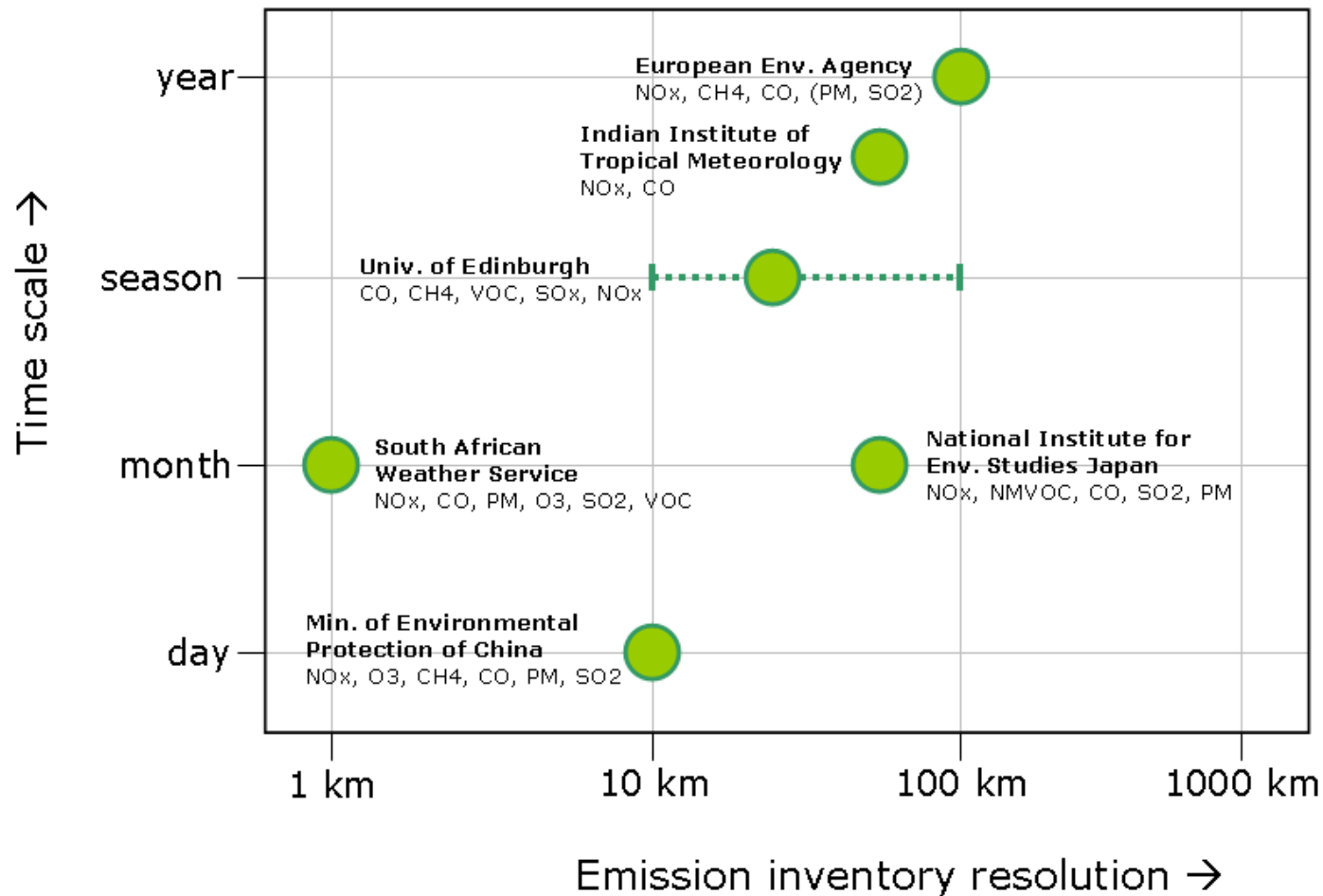
INHA UNIVERSITY



# User Requirements: Temporal/Spatial



- Species: NO<sub>x</sub>, CH<sub>4</sub>, CO, NMVOC, SO<sub>2</sub>, PM, O<sub>3</sub>
- Accuracy: better than 30% - 80 %

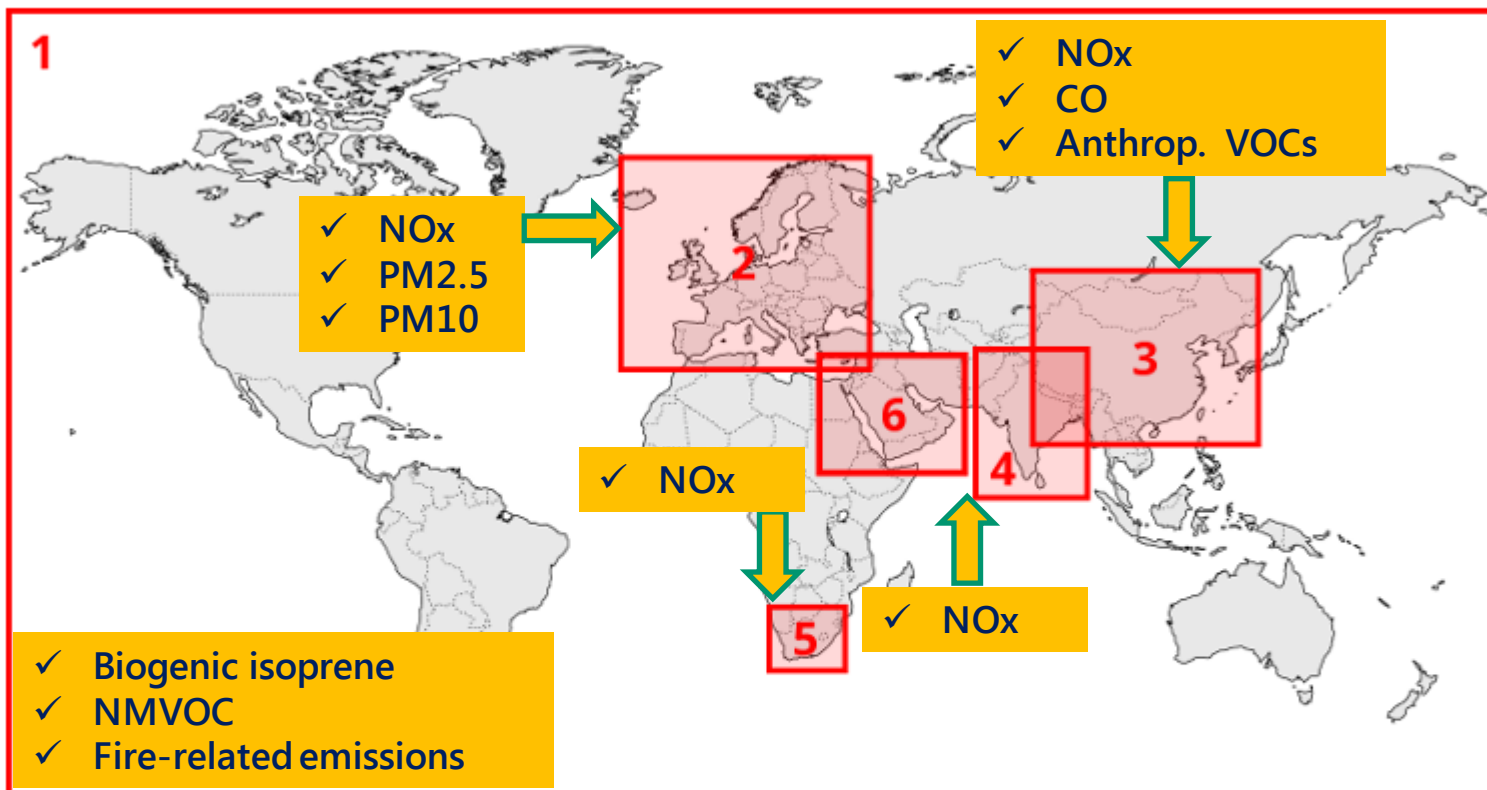


# Data portal: [www.globemission.eu](http://www.globemission.eu)



Select emission data area:

[View all datasets](#)



**World**  
[fire-related emissions](#),  
[NMVOC](#), [biogenic isoprene](#)



**Europe**  
[NO<sub>x</sub>](#), [PM<sub>2.5</sub>](#), [PM<sub>10</sub>](#)



**East Asia**  
[NO<sub>x</sub>](#), [VOC](#), [agricultural CO](#)



**India**  
[NO<sub>x</sub>](#)

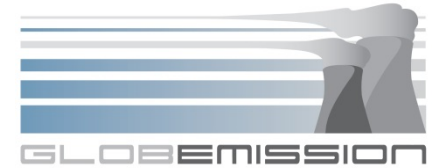


**South Africa**  
[NO<sub>x</sub> \(hires\)](#)



**Middle East**  
[NO<sub>x</sub>](#)

# Themes



- Global emissions
  - Fires and Biogenic
  - Aerosols
- Regional emissions
  - Europe
  - East Asia
  - South Africa
  - Middle East (day 2)