



The thematic session on barriers towards ratification and implementation of the amended Gothenburg Protocol 42nd Session of the Executive Body

*Canan Esin KÖKSAL, Expert, MSc., Environmental Engineer
Republic of Türkiye; MOEUCC DG for Environmental Management*

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Content

- Current Situation on air quality management
- Inventory studies in Türkiye
- Developments in the modeling topic
- Further steps



Türkiye AQ Management current situation

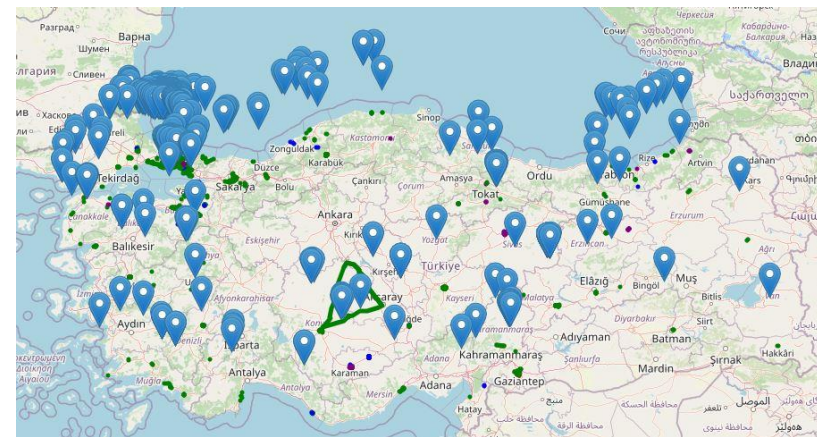
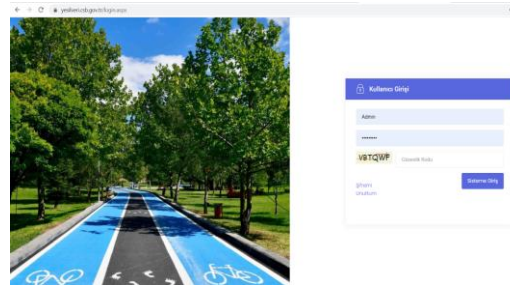
- EU IPA Funds and the transposition related studies; Chapter No.27 for Türkiye
 - **Project collaboration**
 - Related with all of the directives under Air Quality Topic
 - Ongoing; DIES, industrial emissions, connected with EU Green Deal and IPPC framework, BATs' implementation process to be scheduled
 - Completed projects related with NEC Directive, CAFE Directive, VOC emissions, Environmental Noise
 - **Improving Emissions Control Project**; TW and TA components
 - **Related with NEC Directive**
 - Technical detailed work on inventory, scenario and projections
 - **First IIR and emission inventory reporting; 2012**
 - Relations of administrative perspective and decision making
 - **Gothenburg Protocol and NEC Directive requirements discussed**
 - Legislative tools and drafted by-law studied
 - **Regarding Reporting on Air Pollutants**
 - Improving Emissions Control Project; Technical detailed work on inventory, scenario and projections
 - **3 in-depth reviews of LRTAP inventory + PM condensables review**





Türkiye AQ Management current situation

- **Transition period** in all main sources of air pollution
 - Main sources; industry, residential heating, road transport
 - **Presidential Action Plan** on noise barriers, green streets and walking pathways
 - **EU Green Deal Working Groups' Coordination**
 - Strategy Paper on **Residential Heating**
 - National Strategy for **Industrial Emissions**





Türkiye AQ Management current situation

- **Mobility prioritization in urban areas** and cities
- Online monitoring and inspection of exhaust emissions from vehicles
- **Alternative fuel transformations**; National incentives directly from MOEUCC; **Urban AQ Improvements in cities**; **Konya, Düzce; Malatya; Gaziantep; Kayseri**
- **Funding research and proposals on the way with World Bank and where applicable**
- Close cooperation and desk studies with related institutions monthly
- Contact with local authorities
- Clean Air Action Plans; 2nd Period(2019-2024)

81 Provincial Directorates



Area- Population: 783.562 km² , 84 million



8 Geographical Regions;
Mediterranean, Black Sea, Aegean, Marmara,
South and North Inner Anatolian, East Anatolian,
South East Anatolian



1390 Municipalities
30 Metropolitan M.

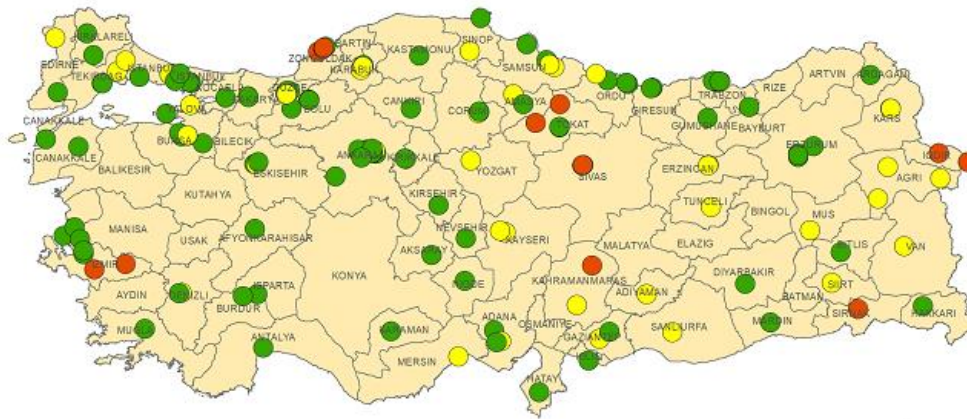


922 Districts



AQ Measurement in Türkiye - I

2021; PM₁₀ DAILY EXCEEDANCES



365 fixed measurement stations

Most of these stations are equipped to measure SO₂ (305) and PM₁₀ (340)

CO(190), Nox(302), O₃(206), PM_{2,5} and meteorological parameters.

173 stations for PM_{2,5}

PM₁₀ Daily Exceedances

- 1 - 35
- 36 - 70
- 71 - 107

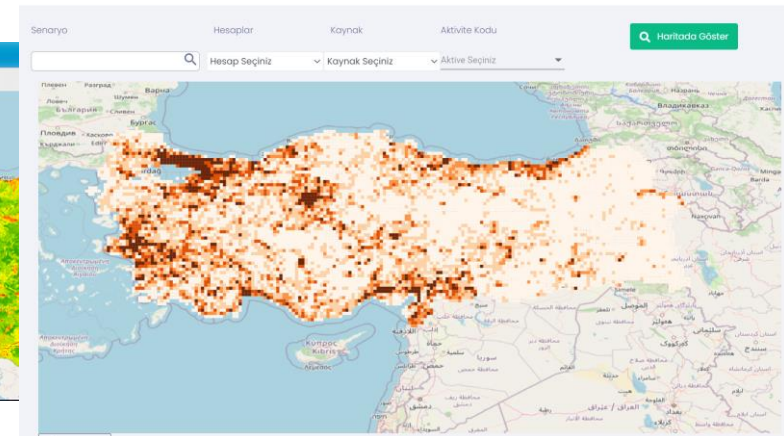
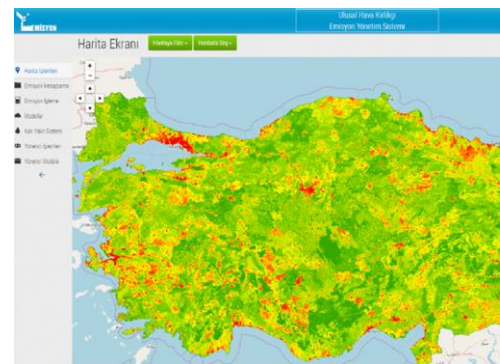
PM₁₀ Annual Limit Value Exceedances





Inventory Studies in Türkiye

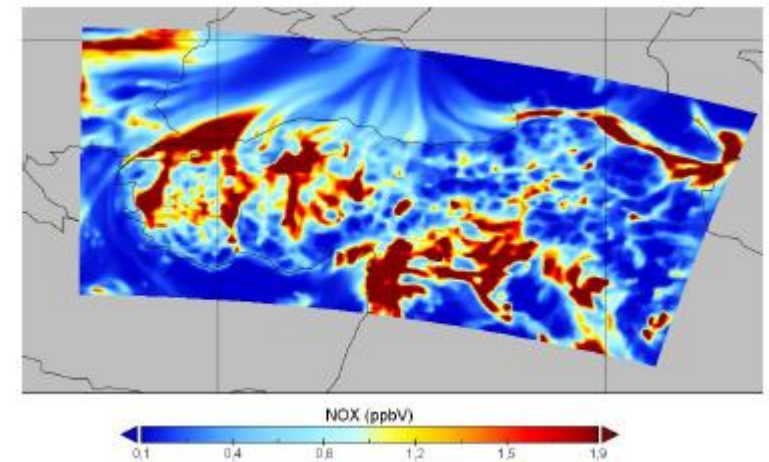
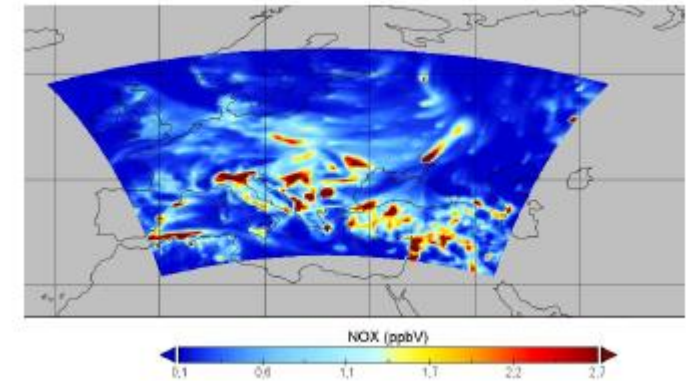
- HEY Air Emission Management Portal
 - 2013-2017; 2018-2021; 2022- ongoing
 - National air quality maps
 - Electronical inventory database for pollutants and the activity data
 - 22.000 stacks and 9.000 facilities' data saved
 - Solid fuel distribution cycle is maintained
 - More than 3.000 users related with solid fuel sales and distribution
 - Official letters integrated for firms
 - Main sources; industry, residential heating, road transport;
 - agriculture; on the way
 - CLRTAP Reporting Template executed by HEY Portal





Developments in the modeling topic- I

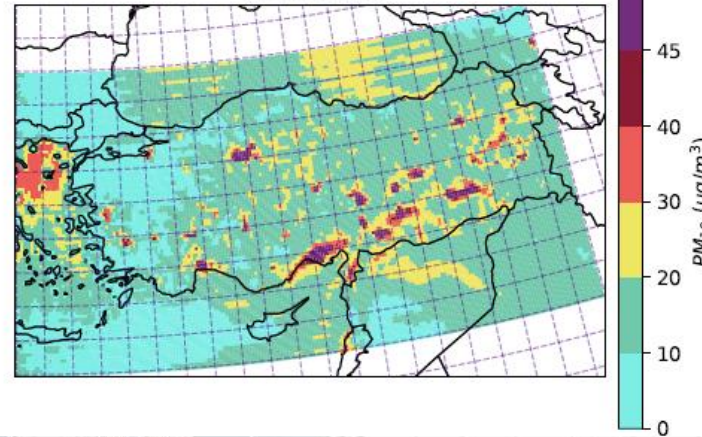
- 2018-2021; 2022 ongoing studies
- Air quality maps at regional and national level
- CMAQ; atmospheric chemistry dimensions
- Domain; 36-12-4 km
- Proxies learnt and increased
 - from EDGAR workshops



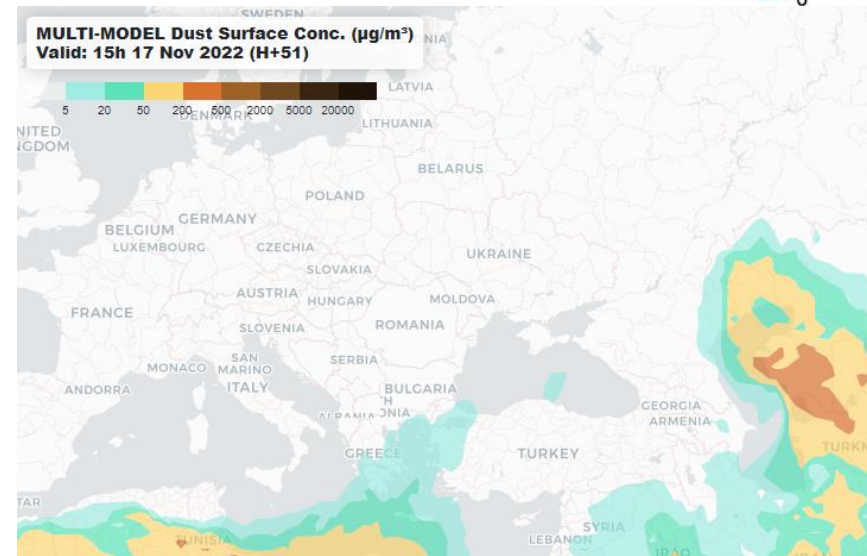
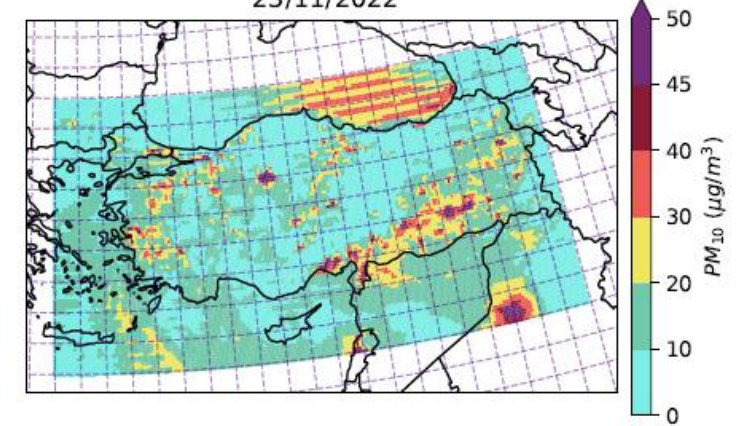


Developments in the modeling topic- II

PM10 ($\mu\text{g}/\text{m}^3$)
Ulusal Hava Kalitesi Modeli
17/11/2022



PM10 ($\mu\text{g}/\text{m}^3$)
Ulusal Hava Kalitesi Modeli
23/11/2022



- Air quality forecast
- Project collaboration under IPA II Programme; CITYAIR
 - INERIS , CITEPA experience and knowledge sharing, very effective tasks completed
 - Emission management and modeling/forecast
 - Clean Air Action Plans' revision
- TNO database
 - national inventory integration is under process



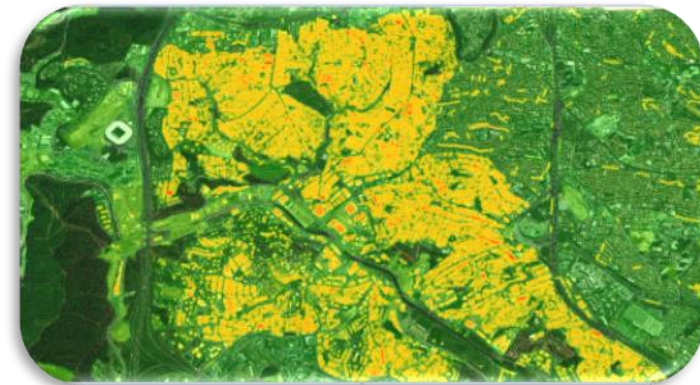


Developments in the modeling topic- III



- Street level mapping; AQ measures' implementation rate to be increased
- Decision making tool
- 25 cities completed, remaining under process
- GIS and 3D available info is searched and integrated
- Downscaling from the HEY maps

- National brand software NEFES;
- New Emission Forecast and Evaluation System



- Türkiye's data and key results are followed from related meetings
 - EC
 - UN Convention
 - CEIP
 - TFEIP

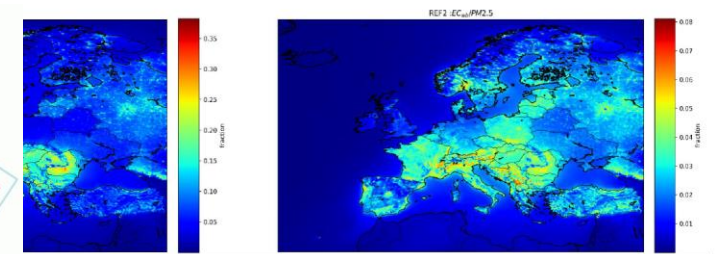


2. Eurodelta-Carb

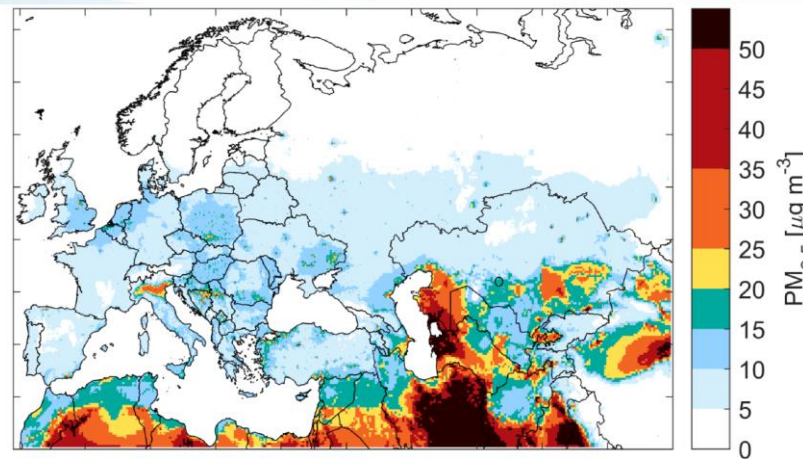
Modelled EC from wood burning

Average share of EC tagged as wood burning (ECwb) within total PM_{2.5} in the multi-model ENSEMBLE for REF1 (left) and REF2 (right) inventories (courtesy J. Tokaya, TNO)

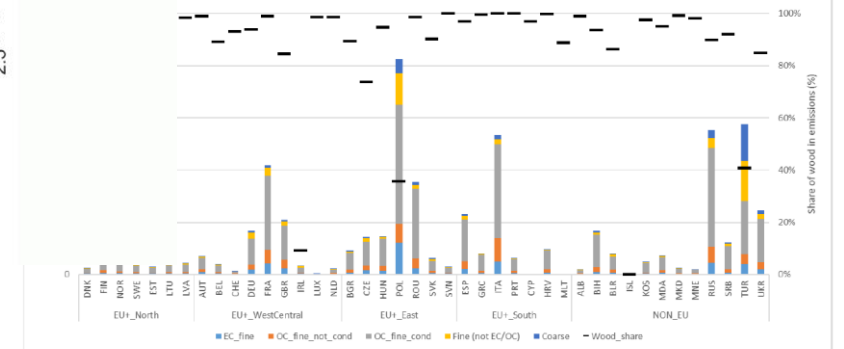
Sharp country gradients disappear (e.g. Norway/Sweden, Belgium/Netherlands)



Ambient PM_{2.5} concentrations – GAINS calculation for 2015



Preliminary



- More non-carbonaceous material with higher non-biomass share (mostly coal)
- Organic carbon split in filterable & condensable component

TNO innovation for life

Further steps



Further steps

- Latest Strategical Chapters;
- NEC D. and Gothenburg Protocol requirements to be evaluated within national perspective
- Minamata Convention Ratification, October 2022; new process will be on the way
- EU Green Deal; UNFCCC and UNECE related connected analysis, NDC projections
- Net Zero Emission Target for Türkiye-2053
- Possible tasks or Projects to be discussed to search the available alternative ways of cooperation
- Close follow-up to be continued under the Convention and the related Bodies, TFs





Requests

- It is kindly noted here as well together with the answers of the thematic session;
- *Türkiye is not a party to the GP and the AGP. Regarding the capacity building and awareness raising activities, **Türkiye gives importance and would like to mention here to be involved in the activities planned for EECCA Countries and Western Balkans.***
- *Regarding the studies planned under capacity building and awareness rising, it is kindly noted here that the proposal to ensure **the participance to be increased also from Türkiye;** the situation for reimbursement of the expenditures for the meetings to be covered by the LRTAP Convention could be evaluated for further schedules.*
- *For the Main Body Meetings of the LRTAP Convention, Türkiye would like to kindly ask and propose to be involved in the reimbursement procedures as **for EECCA Countries and Western Balkans.***
- *Giving integrated importance for the sessions of LRTAP Convention Bodies' meetings, **high-level session planning** could be considered for the better reflections to be available for public, institutions and the related network in a broader aspect.*
- *In order to increase the evolvment of Turkish National Experts to be nominated and employed/appointed within the scientific centers/platforms under the LRTAP Convention, it is also expected to raise the situation for further studies related with the technical aspects of the Convention and Protocols. This will serve the basis in increase of rate of application.*



GLOBAL
INTERNATIONAL
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REGIONAL
LOCAL

SOLUTIONs consist of;

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Thank you for your attention

cesin.koksal@csb.gov.tr

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cesin.koksal@csb.gov.tr

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