

Air Quality and Prospective for its Management – Country Context : RUSSIAN FEDERATION.

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Policy Implementation and Best Practice addressing Air Quality

- ***3 major levels of activity:***
 - legislation and rules
 - data acquisition, monitoring and some economic measures
 - systematic control, regulations and recommendations
- ***Main area of implementation*** – mostly urban territories and areas of industrial activity
- ***Responsible and participating actors*** – governmental environmental authorities (Ministry of Natural Resources and Environment - MNRE, its federal services including Roshydromet and regional branches), regional governments, some industrial associations and environmental organizations
- ***Reporting*** – governmental reports (annually), regional reports (randomly), by industrial actors and environmental organizations (upon the completion of projects)

Legislation and Rules Level of Policy Implementation addressing Air Quality

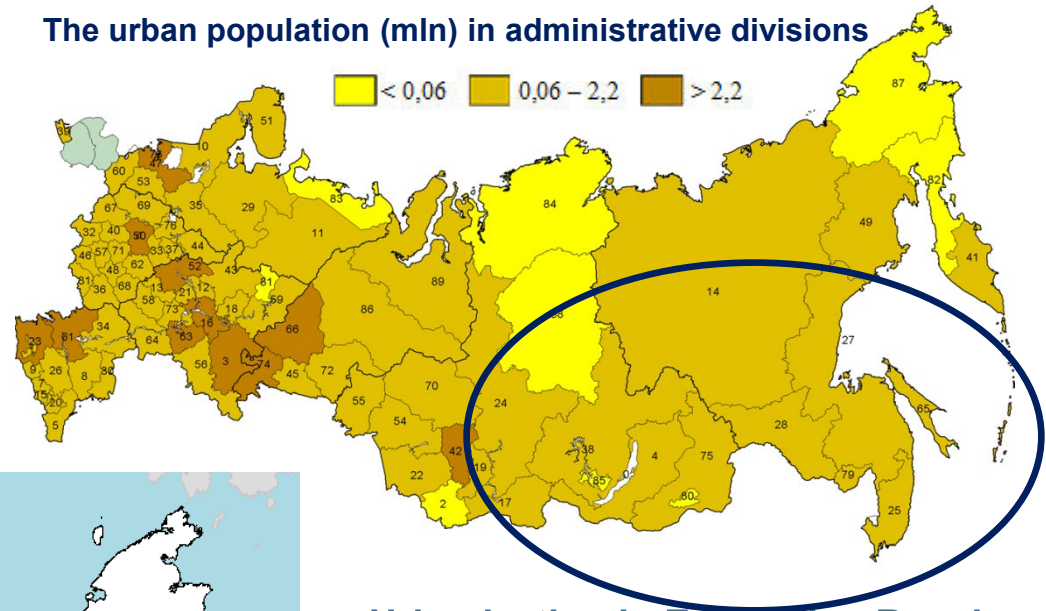
- ***Main goal area of implementation*** – Ensuring a favorable and safe environment for human life and health,
- ***Federal Laws related to air pollution and air quality:***
 - on protection of atmospheric air (*from 1999, last modified 2024*);
 - on protection of the environment (*from 2002, last modified 2020*)
 - on hydrometeorological service (*from 1998, last modified 2024*)
- ***Governmental Acts and Resolutions:***
 - establishing list of “maximum permissible concentrations» (criteria of safe levels of pollutant contents) in air, mostly for urban living areas,
 - regulations for national monitoring of air pollutants,
 - on introducing and implementation of emission source monitoring
 - on federal programs and all-national projects on integrated activities for air quality improvements or/and protection of environmental sustainability

Geographical peculiarities of population in Russia

General facts of population geography:

- Around of 70-75 % of population is in cities and urban areas (Asian part – more than 80%)
- Up to 78 % of all citizens are in European part of Russia which is around 25% of whole country territory
- The most of cities are located to south from 55–60 N (from southern taiga to steppe zone)

The urban population (mln) in administrative divisions



Urbanization in East Asian Russia



Cities and urban areas (administrative towns) of Russia

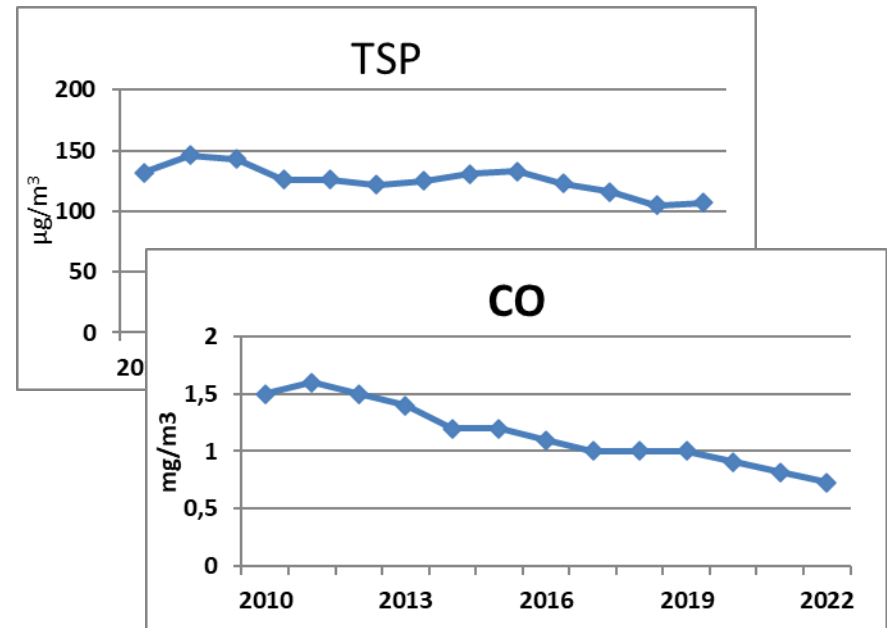
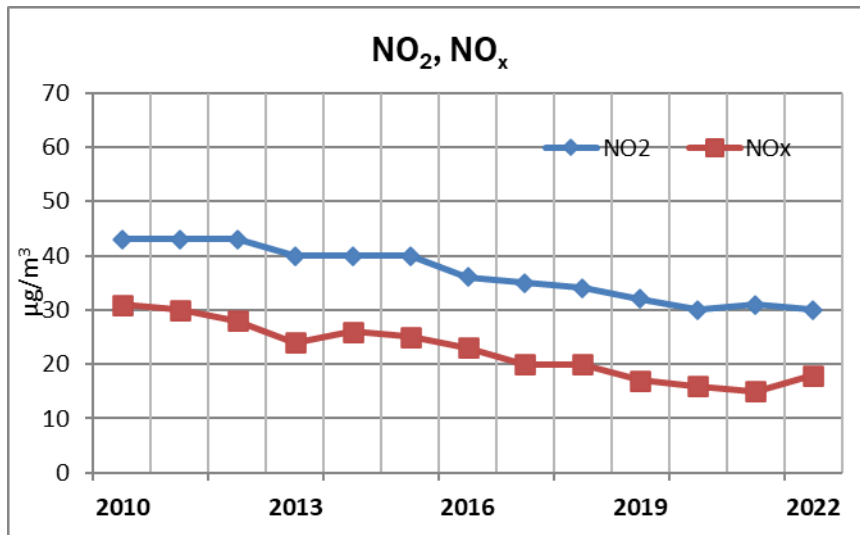
Grade of cities and urban areas	inhabitants thous. people	Number of urban units	Part (in %) of whole urban population
Cities of millions	>1000	1	27
Major cities	500-1000	3	16
Large cities	250-500	6	15
Big towns	100-250	10	15
Medium towns	50-100	16	11
Small towns	<50	>100	6

Data acquisition, monitoring and some economic measures addressing Air Quality

- ***Emission inventory (EI, by MNRE)***
 - approval methodologies and procedures for emission calculations for all sectors over the whole countries,
 - rules for EI assessment in industrial projects and existed enterprises,
 - decisions on application of new or updated methodologies at the regional assessment levels (e.g. transport emission),
- ***Monitoring of air pollution (APM, by Roshydromet) :***
 - regular continuous measurements of air pollution in urban areas (more than 650 stations in more 220 cities; generally, for 54 pollutants);
 - supervision of regional (municipal, local) networks with 90 sites and 30 cities;
 - on hydrometeorological service (from 1998, last modified 2024)
- ***“Economic” stimulation :***
 - application the payment price for air emission by enterprises annually

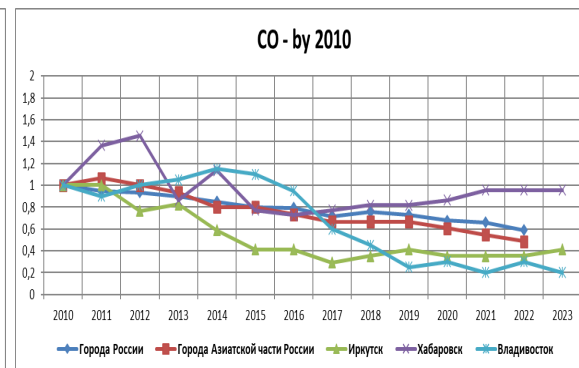
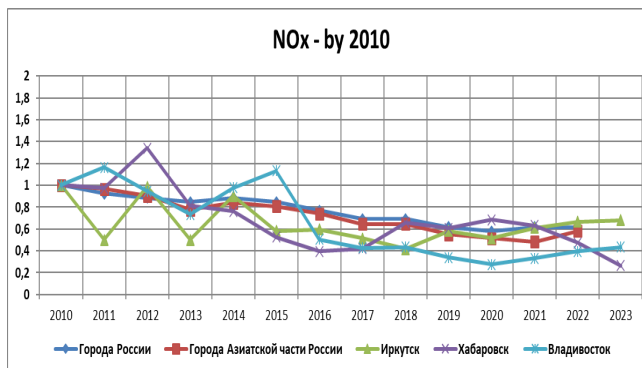
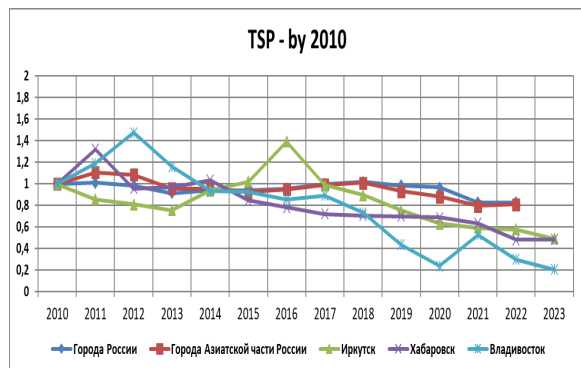
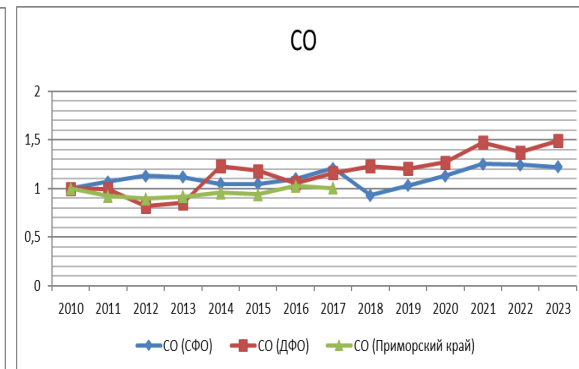
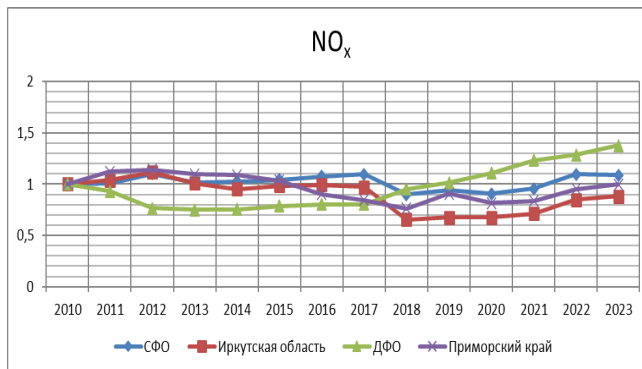
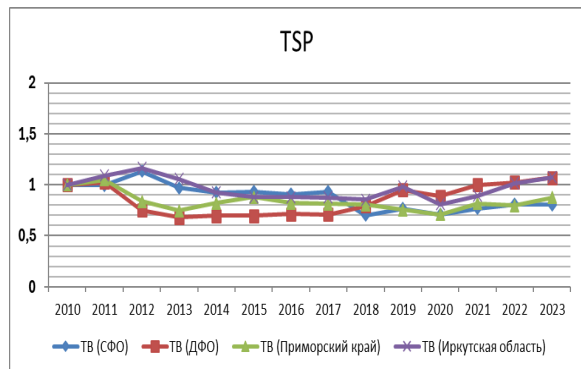
Results of Air Pollution monitoring addressing Air Quality (in cities)

- **Monitoring of air pollution (APM, by Roshydromet) :**
 - long term regular measurements of air pollution in urban areas (in East Asian part – up to 125 stations in 58 cities and towns, generally more 25 pollutants);
 - averaged concentration of many pollutants – decreasing trends;
 - evident annual variations for some cities



Results of Air Pollution monitoring addressing Air Quality (in cities)

- **Tendencies: Emissions (upper) vs Monitoring (lower) :**
 - long term regular measurements of air pollution in urban areas (in East Asian part – up to 125 stations in 58 cities and towns, generally more 25 pollutants);
 - non-decreasing trends in emissions vs evident annual variations of AP in some cities



Systematic control, regulations and recommendations addressing Air Quality

- ***Atmospheric Emission*** (services under ***MNRE***)
 - control of annual emission reporting (by regional branches);
 - program of AP control in the surrounds of works with higher influence on AQ by their emissions;
 - request to temporary reduce industrial emissions during severe unfavorable meteorological condition affecting dispersion in atmosphere
- ***Integrated actions for improving AQ (by Government)*** :
 - implementation of multi-action Federal project “Clean Air” (from 2019, expanded in 2023) for 12+29 cities with highest pollution to provide: reduction of atmospheric emission (by implementation technics and modification of technologies), expansion of AP monitoring (new equipment, new pollutants) and installation of automatic emission control system at enterprises;
 - introducing an aggregated AQ modelling in cities to define emission quotes and recommendation sets for enterprises addressing improving overall AQ in city

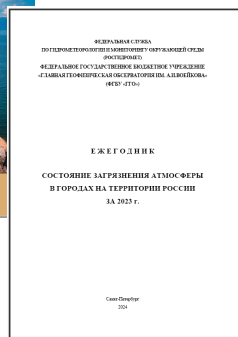
Governmental information with information on Air Quality in Russian Federation

Ministry of Natural Resources and Environment (MNRE) - annually the general yearbook

- “The Governmental Report. On the State and Protection of Environment in Russian Federation”
(presenting all issues related air pollution and air quality, including some health effects)



Roshydromet publishes 2 Reports annually:
“Review of status and pollution of the environment in Russian Federation”



“Yearbook. State of air pollution in cities in Russia”
(with detail information on monitoring results)