Emission reporting under the UNECE Convention on Long-Range Transboundary Air Pollution

Ketevan Kordzakhia, UNECE secretariat
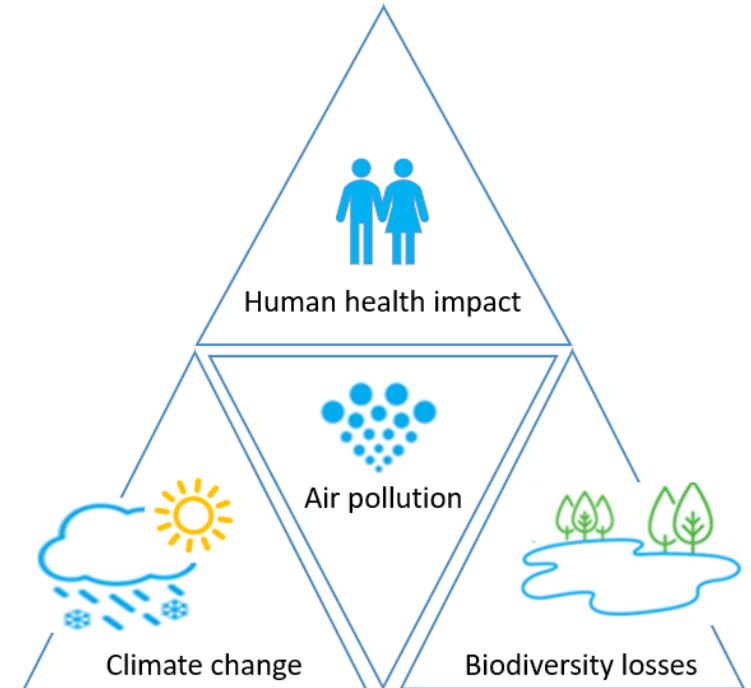
UNECE

- Key facts and actions to reduce air pollution
- Achievements under Air Convention
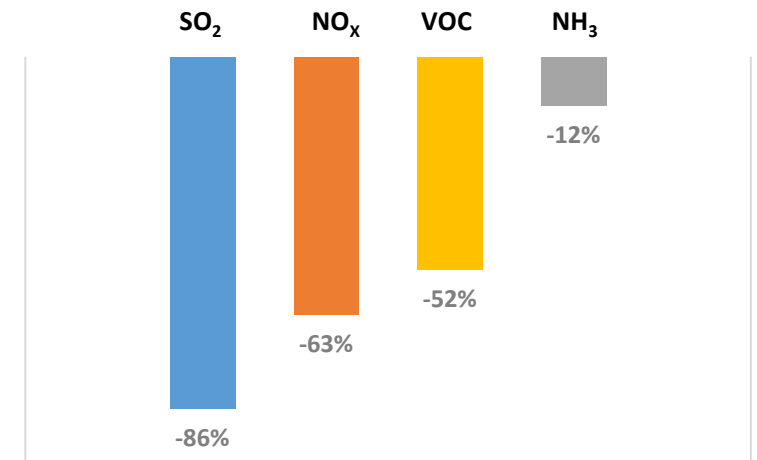- Emission reporting obligations
- eLearning course

Key facts

- 7 million premature deaths globally every year

- Air pollution is at intersection of the triple planetary crisis

- Action to reduce air pollution have been globally recognized:
  - ✓ UNEA 3/8 resolution on preventing and reducing air pollution to improve air quality globally
  - ✓ UN General Assembly resolution (A/76/L.75) on human right to a clean, healthy and sustainable environment
  - ✓ Climate and Clean Air Coalition (CCAC) Clean Air Flagship

- Several regional cooperation agreements and networks

Human health impact

Air pollution

Climate change

Biodiversity losses

CLRTAP Achievements
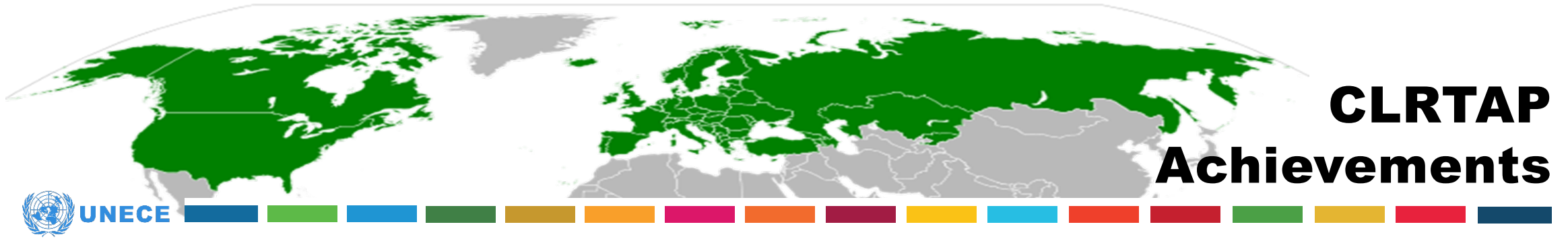
UNECE

- Signed in 1979, entry into force in 1983

- First international treaty to deal with air pollution on a broad regional basis

- 51 Parties in the UNECE region

- Setting emission reduction targets through its protocols

- Science-policy interface: monitoring, modeling and effect-oriented programmes

- Monitoring compliance of Parties

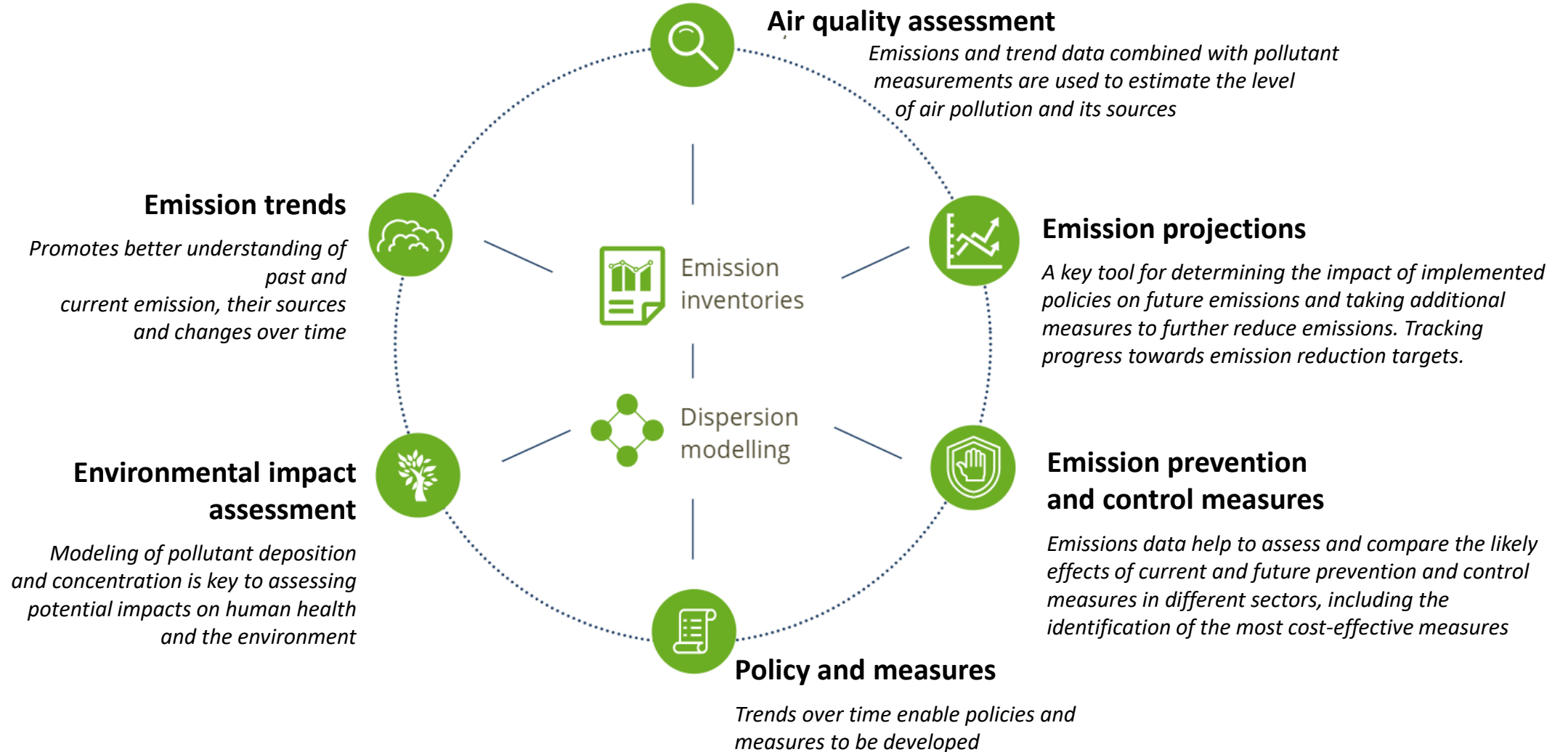- Capacity-building and awareness-raising

EMISSIONS REDUCTION IN ECE REGION (1990-2021)

SO_2	NO_X	VOC	NH_3
-86%	-63%	-52%	-12%

Emission inventory's role in AQM

Air quality assessment

Emissions and trend data combined with pollutant measurements are used to estimate the level of air pollution and its sources

Emission trends

Promotes better understanding of past and current emission, their sources and changes over time

Emission inventories

Dispersion modelling

Emission projections

A key tool for determining the impact of implemented policies on future emissions and taking additional measures to further reduce emissions. Tracking progress towards emission reduction targets.

Environmental impact assessment

Modeling of pollutant deposition and concentration is key to assessing potential impacts on human health and the environment

Emission prevention and control measures

Emissions data help to assess and compare the likely effects of current and future prevention and control measures in different sectors, including the identification of the most cost-effective measures

Policy and measures

Trends over time enable policies and measures to be developed

Emission reporting, templates and periods

	Report	Deadline	Description	Annex
Annual reporting	Nomenclature for Reporting (NFR)	15 Feb	National totals, NFR sector emissions and activity data	Annex I
	Informative Inventory Report (IIR)	15 March	Description of the data sources and methodologies applied	Annex II
	Notification form	15 Feb	To inform the UNECE Secretariat of the contents of the data submission	Annex III
Four-yearly reporting	Gridded Nomenclature for Reporting (GNFR)	from 2017 by 1 May	Gridded aggregated NFR sector emissions data	Annex V
	Large Point Sources (LPS)	from 2017 by 1 May	Large point sources data for each relevant aggregated NFR sector	Annex VI
	Projections	from 2015 by 15 March	Projected national sectoral, total emissions and activity parameters	Annex IV

E-learning course on how to report emissions under the Air Convention
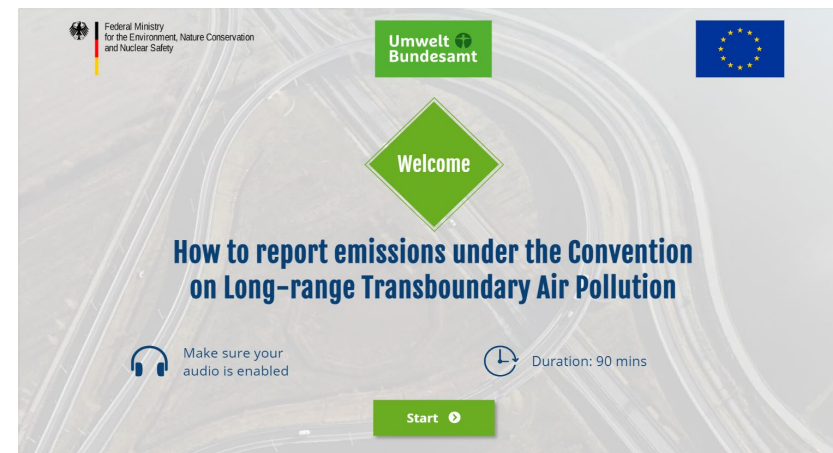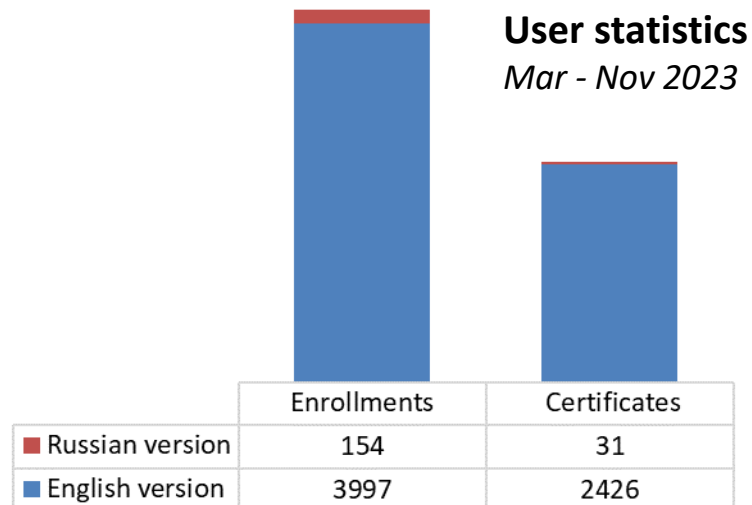
Self-paced course

1.5 hours

English and Russian

Certificate of Completion
Download
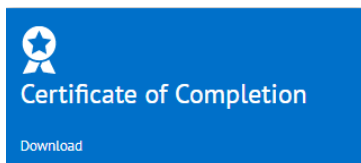
Module 1: Purpose and scope of emission inventories

Module 2: Reporting process and templates
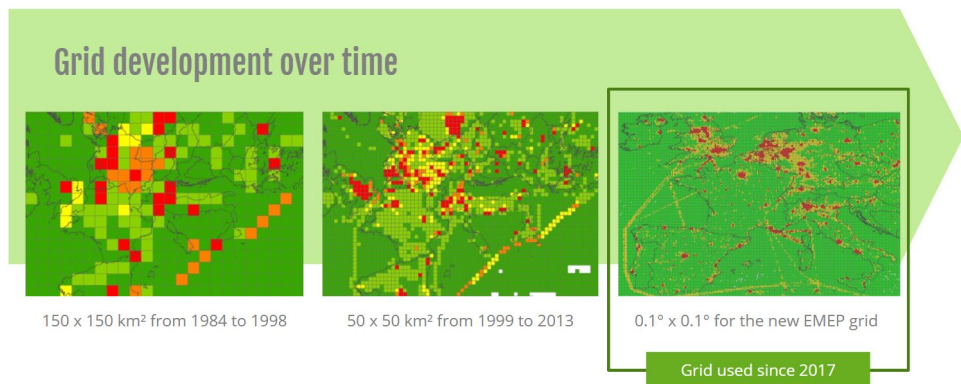
Module 3: Emission estimation methods

Aim of the course

- Assist countries in addressing air pollution and develop emission inventories
- Explain the importance of emission inventories for clean air policy development
- Explain the reporting process and requirements
- Explain methods for emission estimation

User statistics
Mar - Nov 2023

	Enrollments	Certificates
Russian version	154	31
English version	3997	2426

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Umwelt Bundesamt

Welcome

How to report emissions under the Convention on Long-range Transboundary Air Pollution

Make sure your audio is enabled

Duration: 90 mins

Start ▶

Spatial emission mapping and GNFR

☐ **Module 2: lesson 2.6 and 2.7**

Grid development over time

150 x 150 km² from 1984 to 1998
50 x 50 km² from 1999 to 2013
0.1° x 0.1° for the new EMEP grid

Grid used since 2017

☐ **Module 3: lesson 3.6**

SPATIAL EMISSION MAPPING

- Use of GIS software
- Management of spatial proxies
- Good understanding of air pollutant sources
- Selection of relevant geographic datasets
- Need for quality and accuracy checks
- Mastery of a specific vocabulary

Access GIS files consistent with grid definition for each Party to the Convention

Click on each source type to learn more.

National air pollutant emission inventories

Air pollutant emission inventory **consistent** with gridded emissions inventory

ANNEX V: Template file for gridded sector data for each of the relevant aggregated Gridding NFR sectors (GNFR)

Obligations for all Parties to the Convention:

Update and report GNFR data every 4 years from 2017 onward.

Download the GNFR template

POINT SOURCES
(e.g. industrial plants, power stations)

LINE SOURCES
(e.g. road, railway, pipeline, shipping lane)

AREA SOURCES
(e.g. forests, residential areas, administrative/commercial activities within urban areas)

The UNECE Convention on Long-Range Transboundary Air Pollution is a ...

| Global Convention | Regional agreement | Bilateral agreement |

True or false? Emission inventories are key in developing clean air policies at national and international levels

True   False

Gridded emissions&large point sources data for each relevant aggregated NFR sector, projected emissions&activity data shall be submitted every 4years

True   False

Thank you!

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http://www.unece.org/env/lrtap/welcome.html

https://unece.org/environmental-policy/air/e-learning