

# Working Group on Environmental Monitoring and Assessment

Twenty-Fourth session, Geneva and online, 11-12 April 2022

Agenda Item 7. Progress in environmental monitoring and assessment, including institutional and regulatory mechanisms and infrastructure at the national level

## Overview of existing environmental monitoring and assessment system of Georgia and latest developments in this regard

**Presenter: Lasha Akhalaia**

*Chief Specialist*

*Ambient Air Division*

*Department of Environment and Climate Change*

*Ministry of Environmental Protection and Agriculture of Georgia*



**UNECE**



# Structure of the Presentation



**I. Regulatory Framework**

**II. State of Environment Reporting**

**III. Environmental Indicators**

**IV. Ambient Air**

**V. Water**

**VI. Soil**

**VII. Waste**

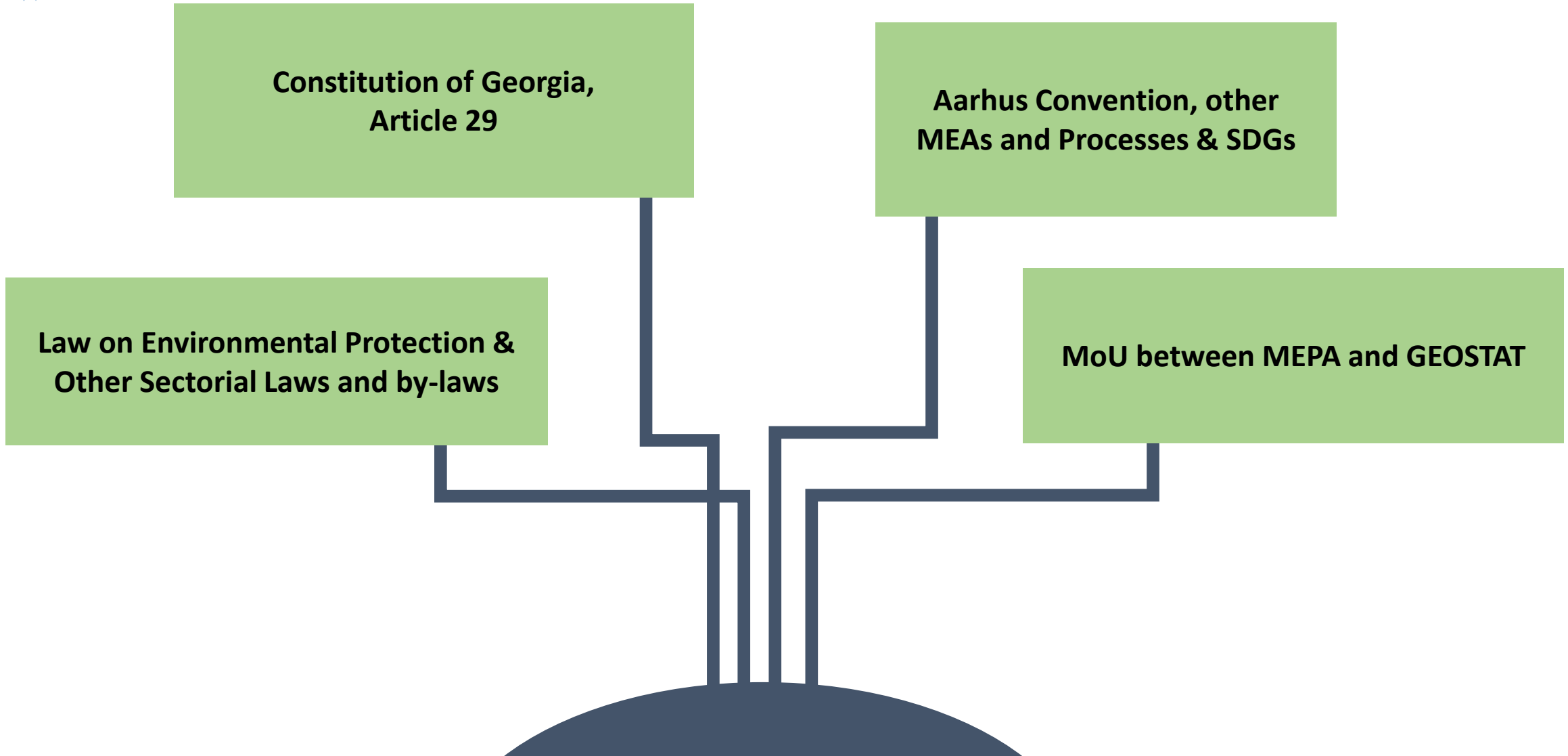
**VIII. Biodiversity**

**IX. Challenges**



- **Monitoring/data collection**
- **Data processing**
- **Data availability**
- **Data reporting**

# Regulatory Framework



# State of Environment Reporting



- SoER 2001
- SoER 2002
- SoER 2003
- SoER 2004
- SoER 2005
- SoER 2006
- SoER 2007-2009
- SoER 2010-2013
- SoER 2014-2017
- SoER 2018-2021



## I: Socioeconomic factors affecting the environment

- ### II: State of environmental components
2. Ambient air
  3. Water resources
  4. Land resources and soils
  5. Mineral Resources
  6. Biodiversity

- ### III: Other environmental issues and risks
7. Climate Change
  8. Natural Disasters
  9. Wastes
  10. Chemicals
  11. Ionizing radiation

- ### IV: Impact of economic sectors on environment
12. Fishery and Hunting
  13. Agriculture and forestry
  14. Transport
  15. Industry and Energy

- ### V: Environmental governance
16. Environmental Policy and Regulations
  17. Environmental regulation and control
  18. Environmental Education and Awareness Raising

# Environmental Indicators



## UNECE Indicators at [www.geostat.ge](http://www.geostat.ge)

NATIONAL STATISTICS OFFICE OF GEORGIA  
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STATISTICS PUBLICATIONS METHODOLOGY METADATA CALENDAR MEDIA SURVEYS LINKS PROJECTS

Home / Environment Statistics / Environmental Indicators

← Go back **Environmental Indicators**

- A-1. Emissions of Pollutants into the Atmospheric Air
- A-3. Consumption of Ozone-depleting Substances
- B-3. Greenhouse gas emissions
- C-4. Household Water Use Per Capita
- C-5. Water Supply Industry and Population Connected to Water Supply Industry
- C-7. Water Losses
- C-14. Population Connected to Wastewater Treatment
- F-2. Fertilizer Consumption
- F-4. Pesticide Consumption
- G-1. Final Energy Consumption
- G-2. Total Primary Energy Supply
- G-3. Energy Intensity
- G-4. Renewable Energy Supply
- H-1. Passenger Transport Demand
- H-2. Freight Transport Demand
- H-3. Composition of Road Motor Vehicle Fleet by Fuel Type

News Archive

8 April 2022  
 Geostat is involved in a new international project on agricultural statistics

4 April 2022  
 INFLATION RATE IN GEORGIA MARCH 2022

2022 Year April

Mon	Tue	Wed	Thu	Fri	Sat	Sun
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

## SDGs Indicators at [sdg.gov.ge](http://sdg.gov.ge)

SUSTAINABLE DEVELOPMENT GOALS

f t in ქართული

SUSTAINABLE DEVELOPMENT GOALS SDGS TRACKER REPORTS NEWS & EVENTS PROJECTS CONTACT

13.2.2: Total greenhouse gas emissions per year

Year	Total greenhouse gas emissions per year
2017	~17500
2020	~18000

გაფორმება PDF PNG

13. Climate Action [Scorecard]

13.2.2: Total greenhouse gas emissions per year

საბაზისო ინდიკატორები

- საქართველოსთვის მისადაგებული
- გლობალური
- ინდიკატორების შედარება

მიზანი

13 Climate Action

საბაზისო ინდიკატორი

13.2.2

ღისაგრეპამისის მარკინაბალი

choose

წელი

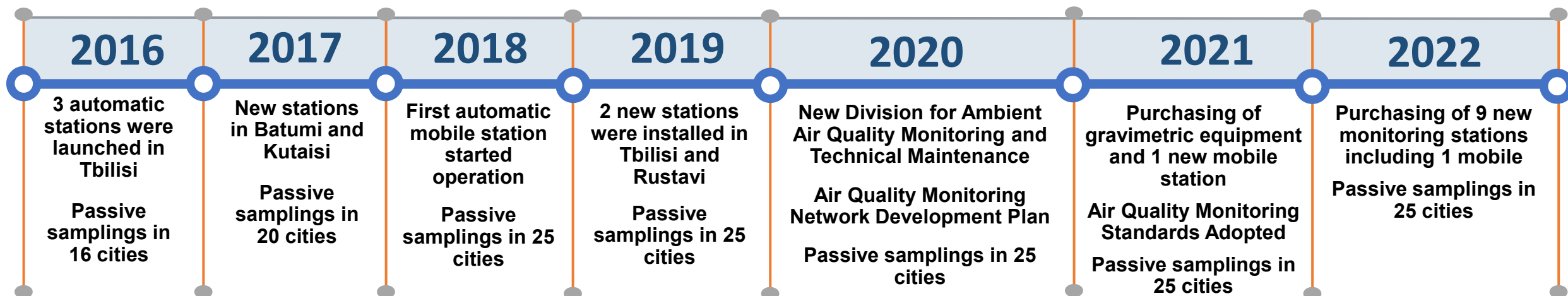
2015, 2016, 2017, 2018, 2019, 2020, 2021

ძიება

განუყოფილება

გაფორმება მთლიანი სახე

# Ambient Air Quality Monitoring Network



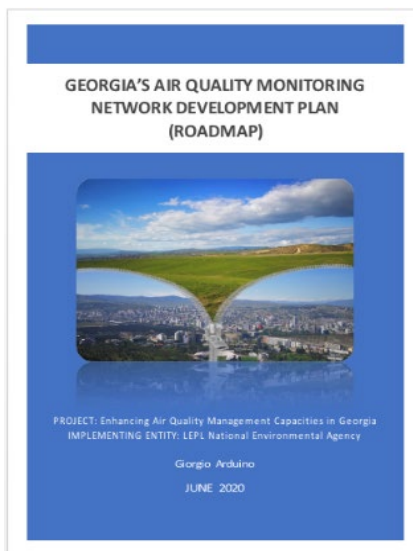
- Mobile station
- Gravimetric measurements
- Automatic station
- Non-automatic station
- Indicative measurements

Type	Quantity	Location
Mobile	1	
Automatic	7	Tbilisi, Rustavi, Kutaisi, Batumi
Non-Automatic	1	Zestaphoni
Gravimetric	1 sample per day	Tbilisi, Rustavi
Passive Sampling	More than 100 samples per quarter	25 cities

# List of Monitored Substances



Automatic Stations	Passive Samplings	Gravimetric Equipments
PM10, PM2.5 – Particulate Matters	NO <sub>2</sub> – Nitrogen Dioxide	Cd - Cadmium
NO <sub>x</sub> – Nitrogen Oxides	O <sub>3</sub> - Ozone	Ni - Nickel
SO <sub>2</sub> – Sulphur Dioxide	C <sub>6</sub> H <sub>6</sub> - Benzene	As - Arsenic
O <sub>3</sub> - Ozone		C <sub>20</sub> H <sub>12</sub> - Benzo(a)pyrene
CO – Carbon Monoxide		Pb – Lead
MnO <sub>2</sub> – Manganese Dioxide (non-automatic)		
Pb – Lead (non-automatic)		



Zones & Agglomerations	NO <sub>x</sub>	SO <sub>x</sub>	CO	O <sub>3</sub>	PM10 & PM2,5	Lead, HMet, BaP	BTX	Optim n° St.
Agglomeration of Tbilisi	5	3	4	3	5	5	2	6
Black Sea Zone	5	3	3	5	5	5	1	5
West Zone	4	1	2	3	4	3	1	4
Central Zone	5	2	2	3	5	5	1	5
East Zone	2	1	1	2	2	2	1	3
High Zone	3	1	1	3	3	3	0	5
	24	11	13	19	24	23	6	28

# Laboratory of the National Environmental Agency



სსიპ „აპრემლიტაციის მართიანი პროფესიული ორგანო – აპრემლიტაციის ცენტრი“

**აპრემლიტაციის მოწოდება**  
EA BLA-ის ხელმოწერი  
**GAC-TL-0259**  
ადასტურებს, რომ  
სსიპ გარემოს ეროვნული სააგენტოს გარემოს დაზიანებების მონიტორინგის დეპარტამენტის ატმოსფერული ჰერის, წლისა და წინადავის ანალიზის საგამოცდო ლაბორატორია  
მდებარე: ქ. თბილისი, მარშალ ველოვანის გამზ. N6  
შეუხადა და აკმაყოფილებს საქართველოს სტანდარტის  
**სსტ ისო/იეკ 17025:2017/2018-ის მოთხოვნებს**  
აერედიტაციის სფერო მიღებულია აერედიტაციის მოწოდების დანართი, რომელიც წარმოადგენს მის განყოფილ ნაწილს.

აერედიტაციის ცენტრის  
გენერალური დირექტორი

რეგისტრაციის თარიღი  
14 აპრილი 2020 წ.  
ძალაშია  
17 ივლისი 2023 წ.

სსიპ GAC

0186 თბილისი, ალ. ყაზბეგის გამზ. N42ა

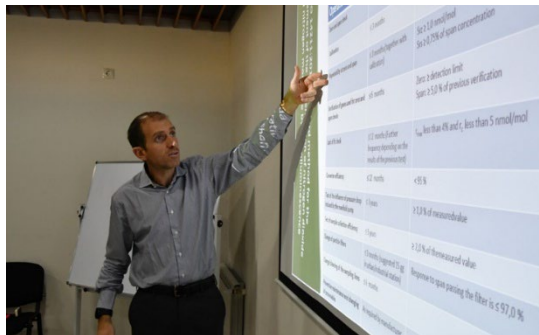


# QA/QC of Ambient Air Quality Data



## Project “Enhancing Air Quality Management Capacities in Georgia (I-II phases)”

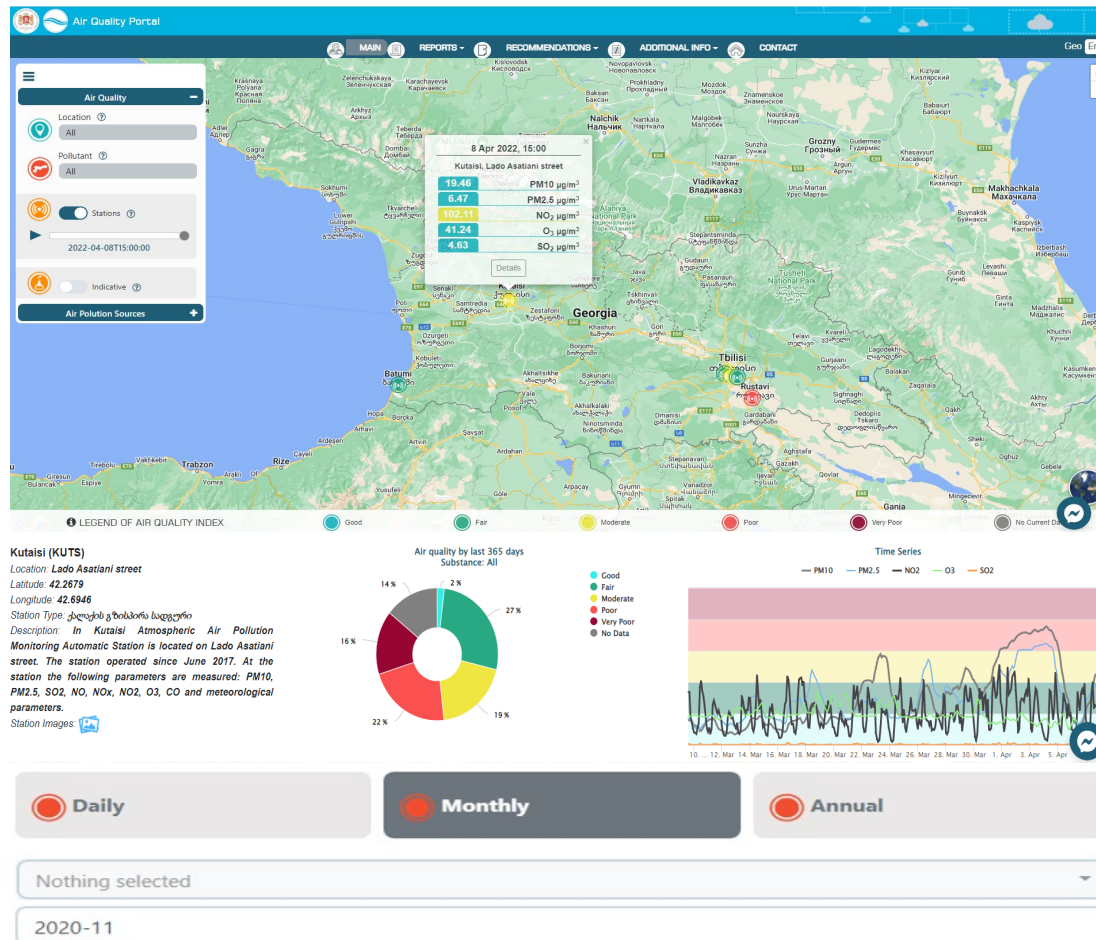
- Guidance for Maintenance of the Ambient Air Quality Monitoring Network was elaborated;
- Air quality monitoring related 21 international and EU standards were adapted;
- Air Monitoring Data Verification and Validation Procedure was prepared;
- Air quality monitoring data validation software has been introduced;
- Capacity development activities/trainings for the Department of Environmental Pollution Monitoring were conducted to strengthen data processing and modeling capacities of NEA;



# Public Access to Ambient Air Quality Data



## Air Quality Portal - [Air.gov.ge](https://air.gov.ge)



## Monthly Bulletins - [Nea.gov.ge](https://nea.gov.ge)



გარემოს ეროვნული  
სააგენტო

ჩვენი ამბავები | სიახლეები | სახარტო ინფორმაცია | სარეკლამო | პროექტები | ბმულები

საინფორმაციო ბიულეტენები

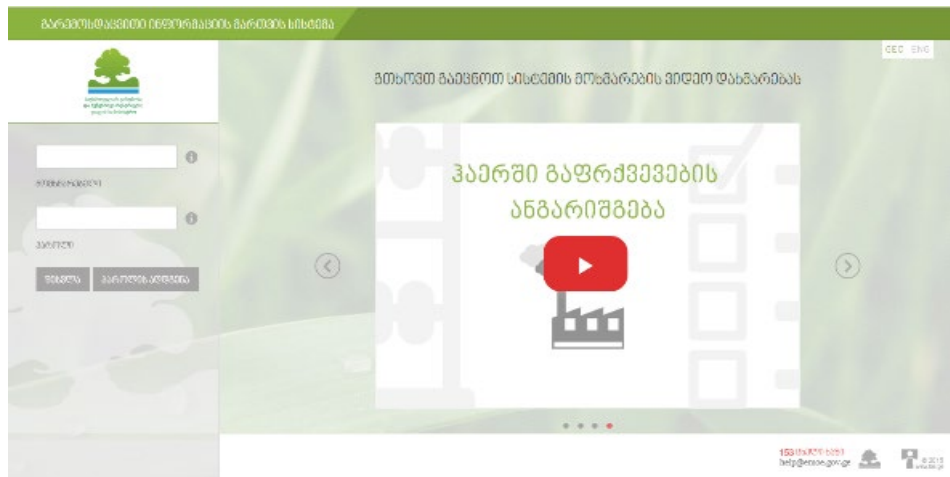
აირჩიეთ წელი  ფილტრების

- საინფორმაციო ბიულეტენი - აპრილი - 2021  
[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)
- საინფორმაციო ბიულეტენი - მარტი - 2021  
[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)
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[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)
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[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)
- საინფორმაციო ბიულეტენი - ნოემბერი - 2020  
[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)
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[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)
- საინფორმაციო ბიულეტენი - სექტემბერი - 2020  
[იხილეთ დათვალი](#) [ჩამოტვირთეთ](#)

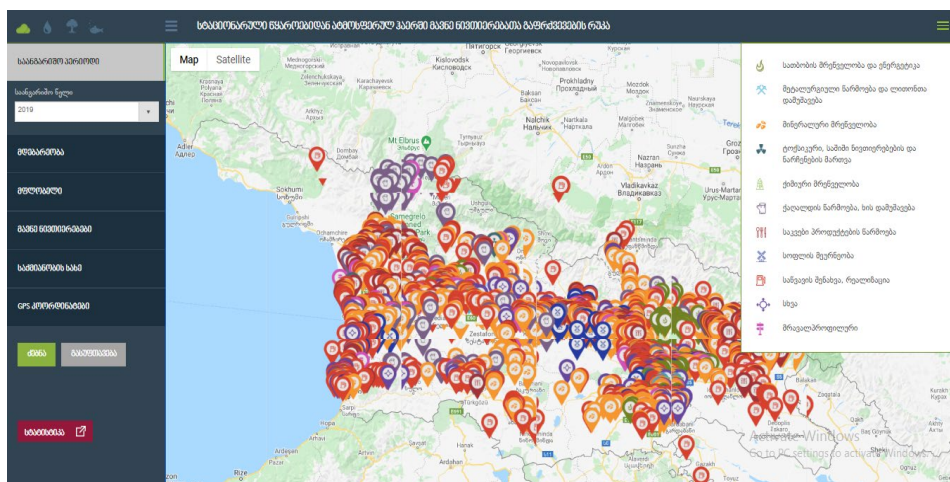
# Collection and Availability of Ambient Air Emission Data



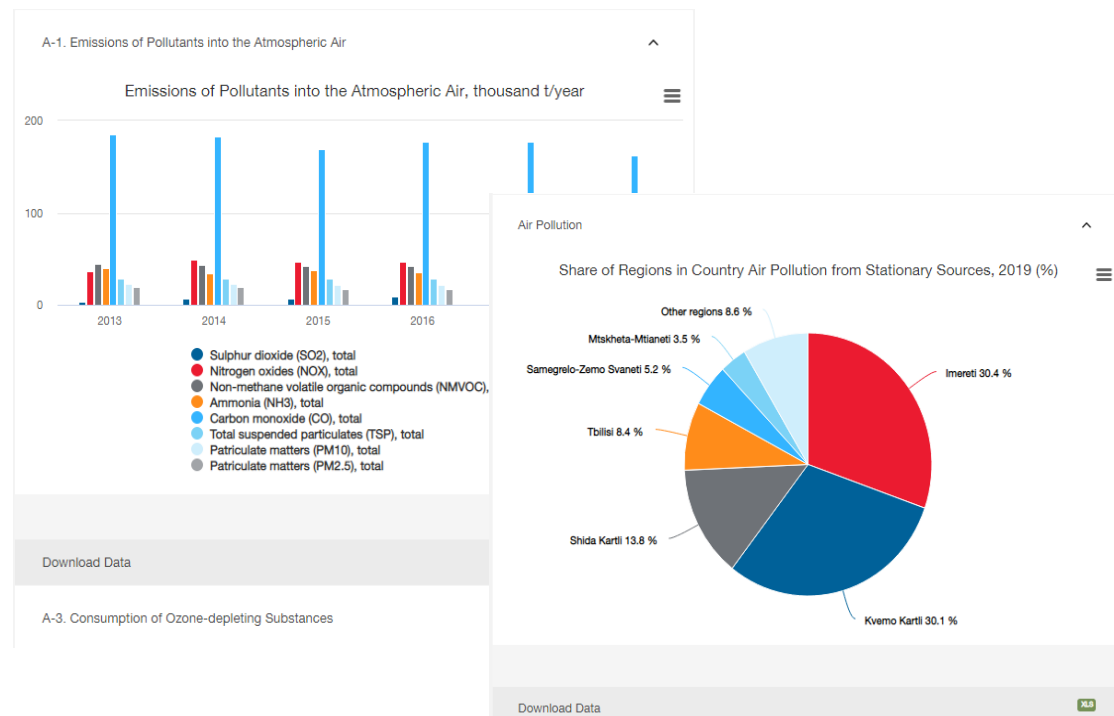
Electronic Air Pollution Reporting System from Point sources  
[emoe.gov.ge](http://emoe.gov.ge)



Map of emissions of pollutants into the ambient air from stationary sources -  
[Map.emoe.gov.ge](http://Map.emoe.gov.ge)



Aggregated data including UNECE Environmental Indicators  
[Geostat.ge](http://Geostat.ge)



# Air Emission Inventory and Projection Reports

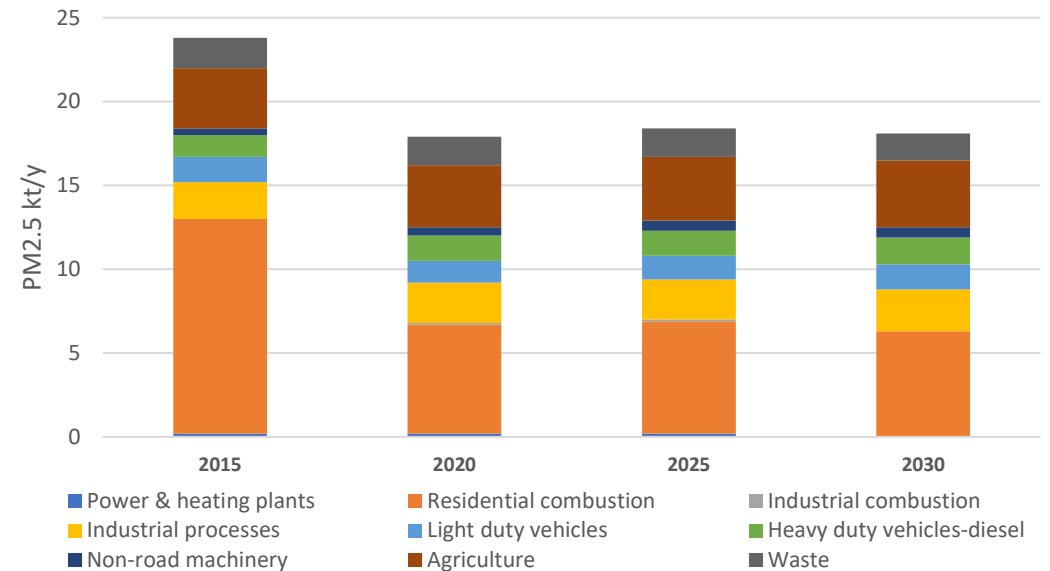
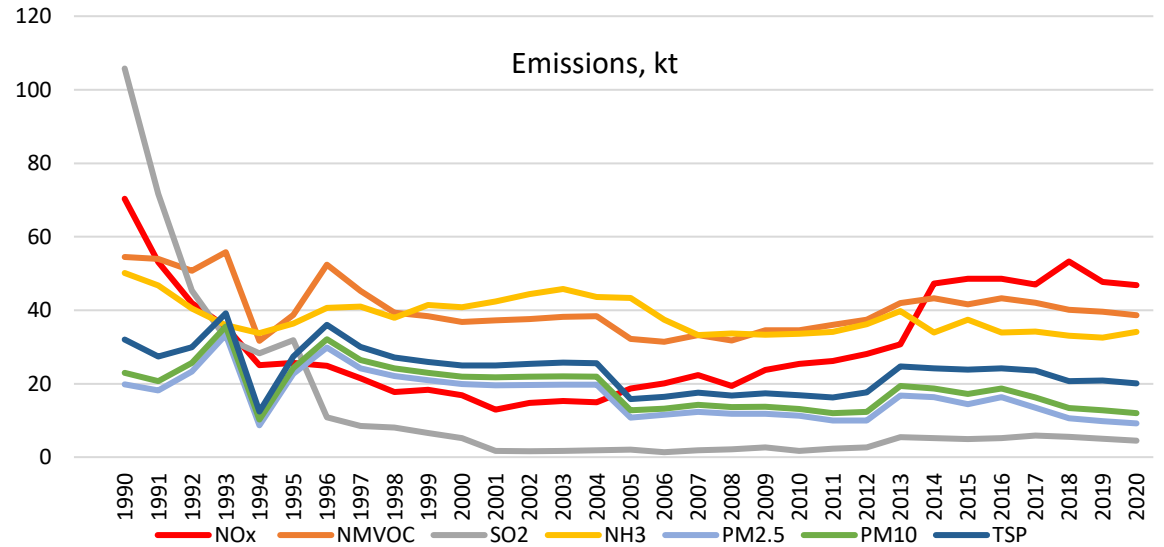


## Inventory

- Time period required by international obligations fully covered
- Methodology for inventory fully in line with EMEP/EEA Guidebook 2019
- In total inventory implemented for 62 subcategory

## Projection

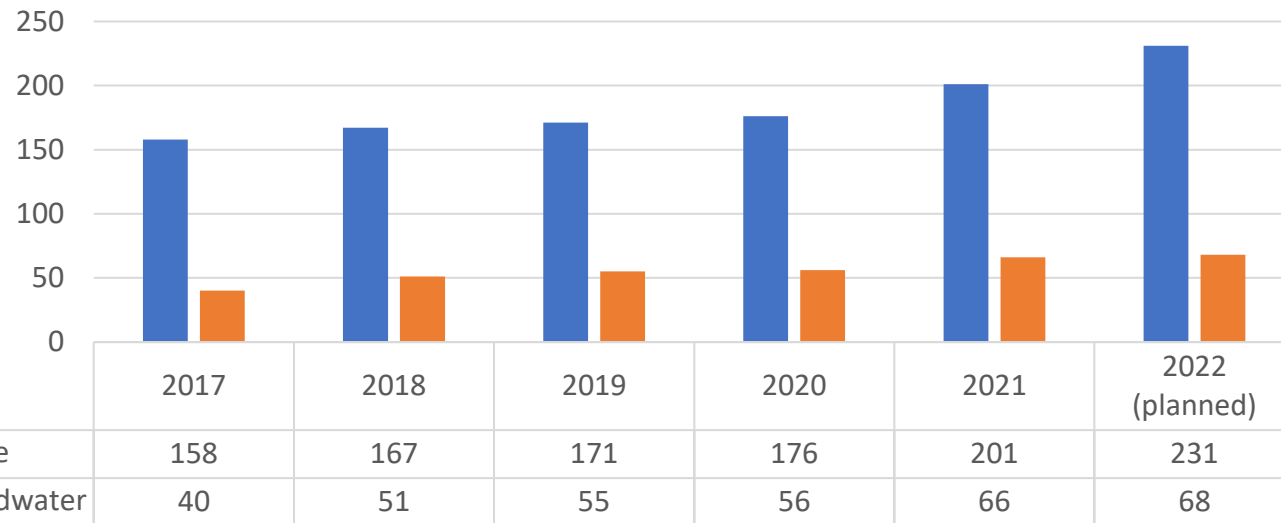
- Emission projections for 2025 and 2030
- International obligation under CLRTAP implemented
- Efficiency of emission abatement measures and its prioritization assessed



# Water Monitoring Network



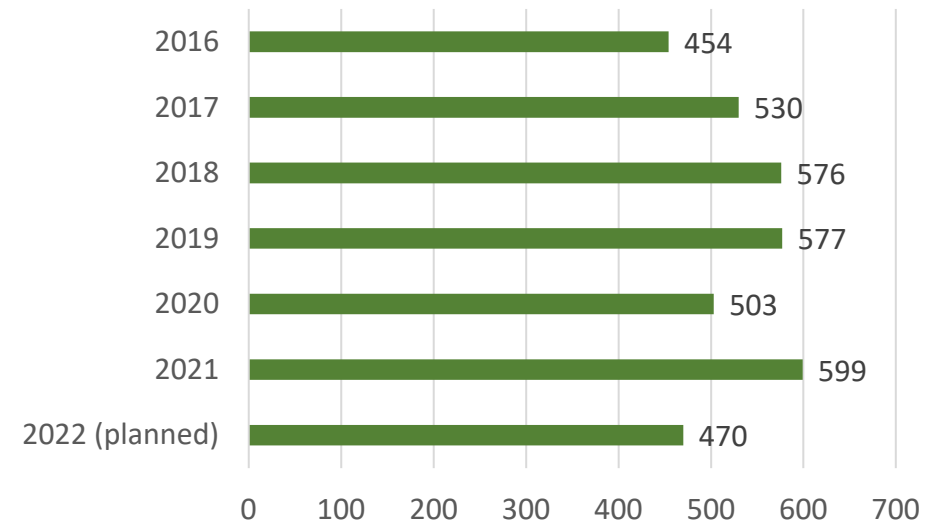
## Number of Water Monitoring Points



■ Surface  
■ Groundwater

■ Surface ■ Groundwater

## Number of Drinking Water Samples



- **Surface water monitoring programme** has been developed in accordance with the EU Water Framework Directive;
- **Black Sea monitoring programme** was developed in accordance with the EU Marine Strategy Framework Directive.

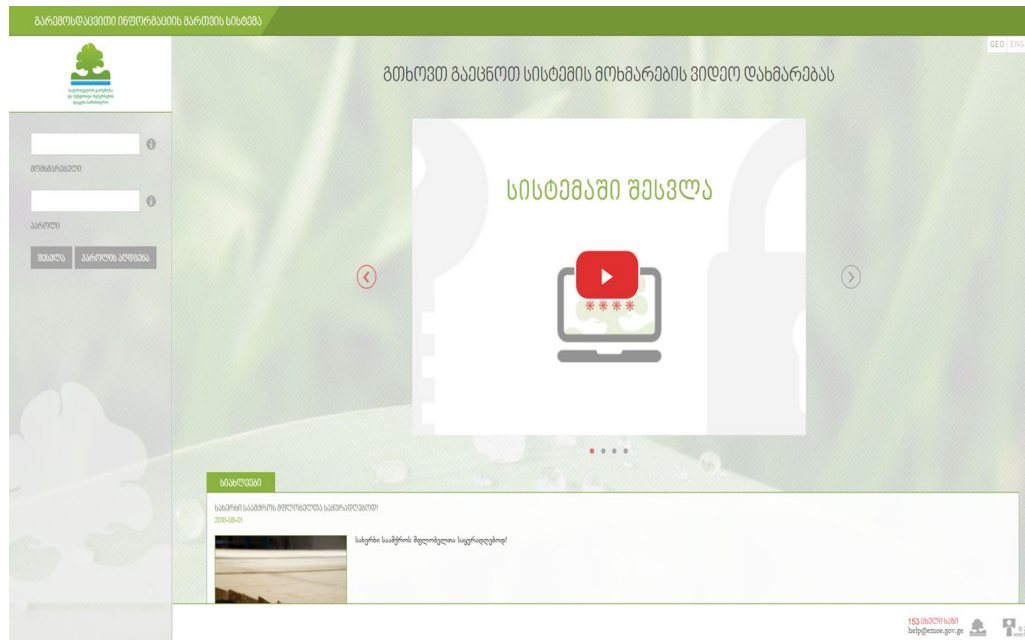
# Water Abstraction and Discharge Accounting



## Water Use State Accounting Online System [emoe.gov.ge](http://emoe.gov.ge)

## Water Use State Accounting Online System

- Launched in January, 2022;
- Obligation on **reporting** for:
  - All water user enterprises, organizations and institutions
  - All water users discharging water in sewage system and abstract water not less than 20 m<sup>3</sup>/day
- **Annual reports** should be submitted to the MEPA before February 15



# Public Access to Water Data



## Monthly Bulletins - [Nea.gov.ge](http://Nea.gov.ge)

## Water Information System of Georgia [Wis.mepa.gov.ge](http://Wis.mepa.gov.ge)

საინფორმაციო ბიულეტენები

აირჩიეთ წელი

ფილტრები

- საინფორმაციო ბიულეტენი - აპრილი - 2021
- საინფორმაციო ბიულეტენი - მაისი - 2021
- საინფორმაციო ბიულეტენი - ივნისი - 2021
- საინფორმაციო ბიულეტენი - ივლისი - 2021
- საინფორმაციო ბიულეტენი - აგვისტო - 2021
- საინფორმაციო ბიულეტენი - სექტემბერი - 2021
- საინფორმაციო ბიულეტენი - ოქტომბერი - 2020
- საინფორმაციო ბიულეტენი - ნოემბერი - 2020

WIS GEORGIA

Welcome to Water Information System of Georgia  
A gateway to data and information on freshwater and marine resources

WIS GEORGIA FRESHWATER

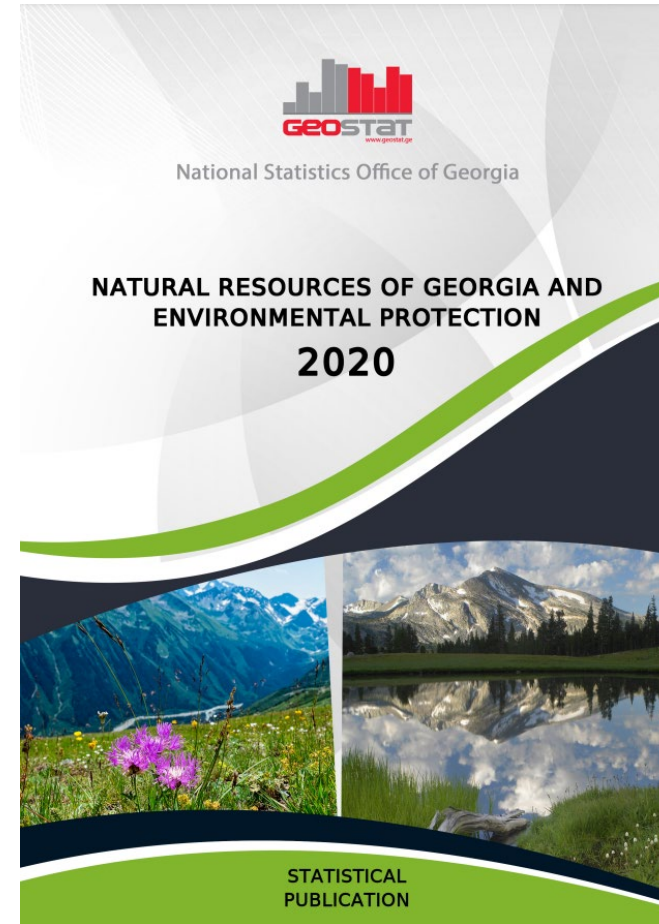
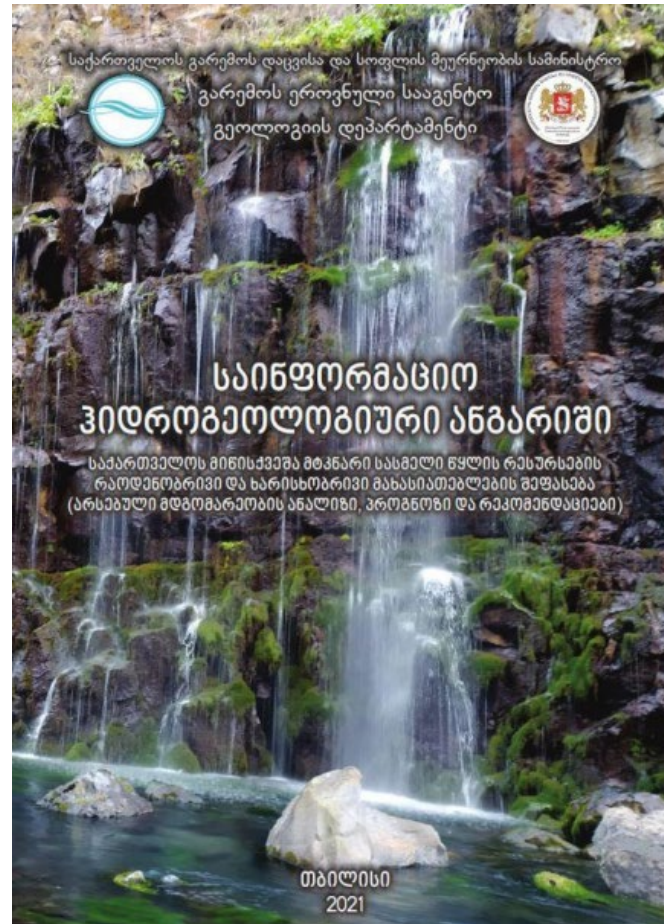
WIS GEORGIA MARINE

INDICATORS

- Indicator Catalogue
- C1 - Renewable Freshwater Resources
- C2 - Freshwater Abstraction
- C3 - Total Water Use
- C4 - Household Water Use Per Capita
- C5 - Water Supply Industry And Population Connected To Water Supply Industry
- C10 - BOD And Concentration Of Ammonium In Rivers
- C11 - Nutrients In Freshwater

Welcome to Water Information System of Georgia:  
A gateway to data and information on freshwater and marine waters

# Reporting on Water

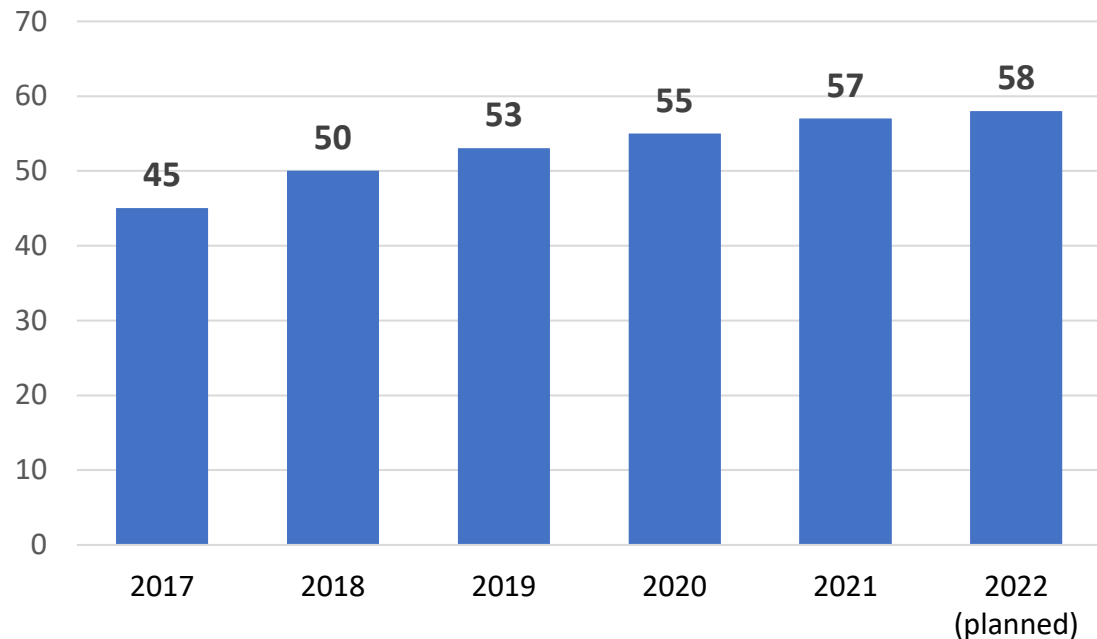




# Soil Monitoring Network



**Number of Monitored Cities**



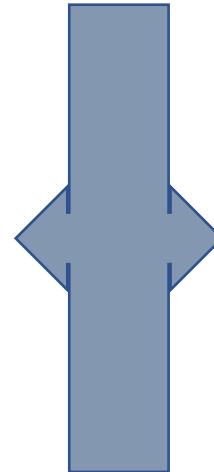
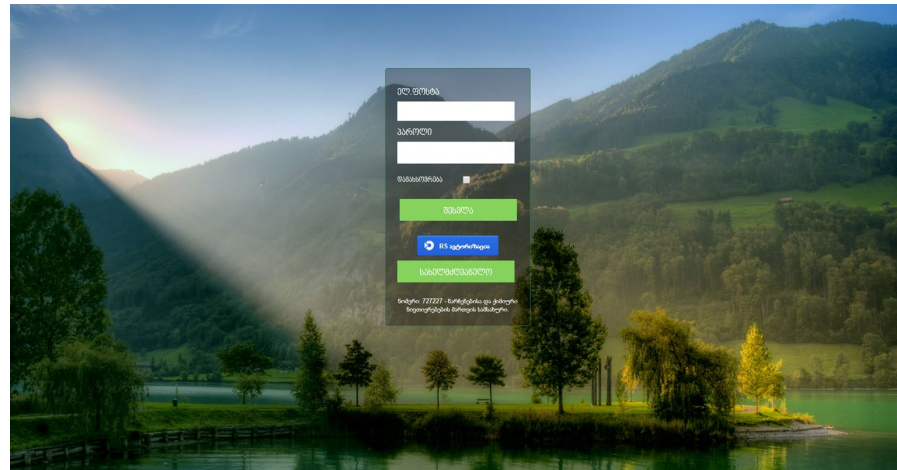
- A draft resolution of the Government of Georgia “On Approval of the Technical Regulation on Soil Pollution Quality” was prepared.
  - update the maximum permissible concentrations of heavy metal
  - determine the hygienic requirements of soil protection against adverse impacts of various activities
  - set out the rules for soil quality control;
- LEPL National Sustainable Land Management and Land Use Monitoring Agency were established in 2020 responsible for:
  - inventory of land resources
  - the creation of a land information system
  - setting up an annual land balance.

# Waste Management Data Collection



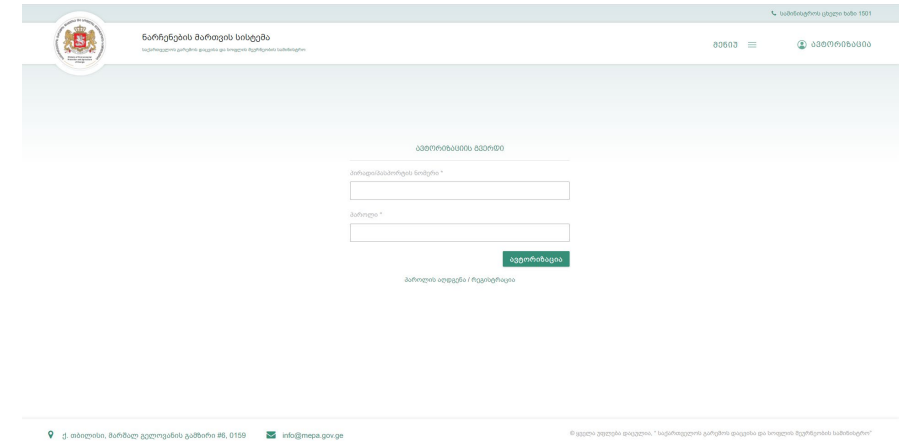
## Waste Electronic Reporting System

[waste.moe.gov.ge](http://waste.moe.gov.ge)



## Waste Management System for EPR

[waste.mepa.gov.ge](http://waste.mepa.gov.ge)



Operators, whose waste management activities are subject to registration submit the annual waste accounting/reporting reports on:

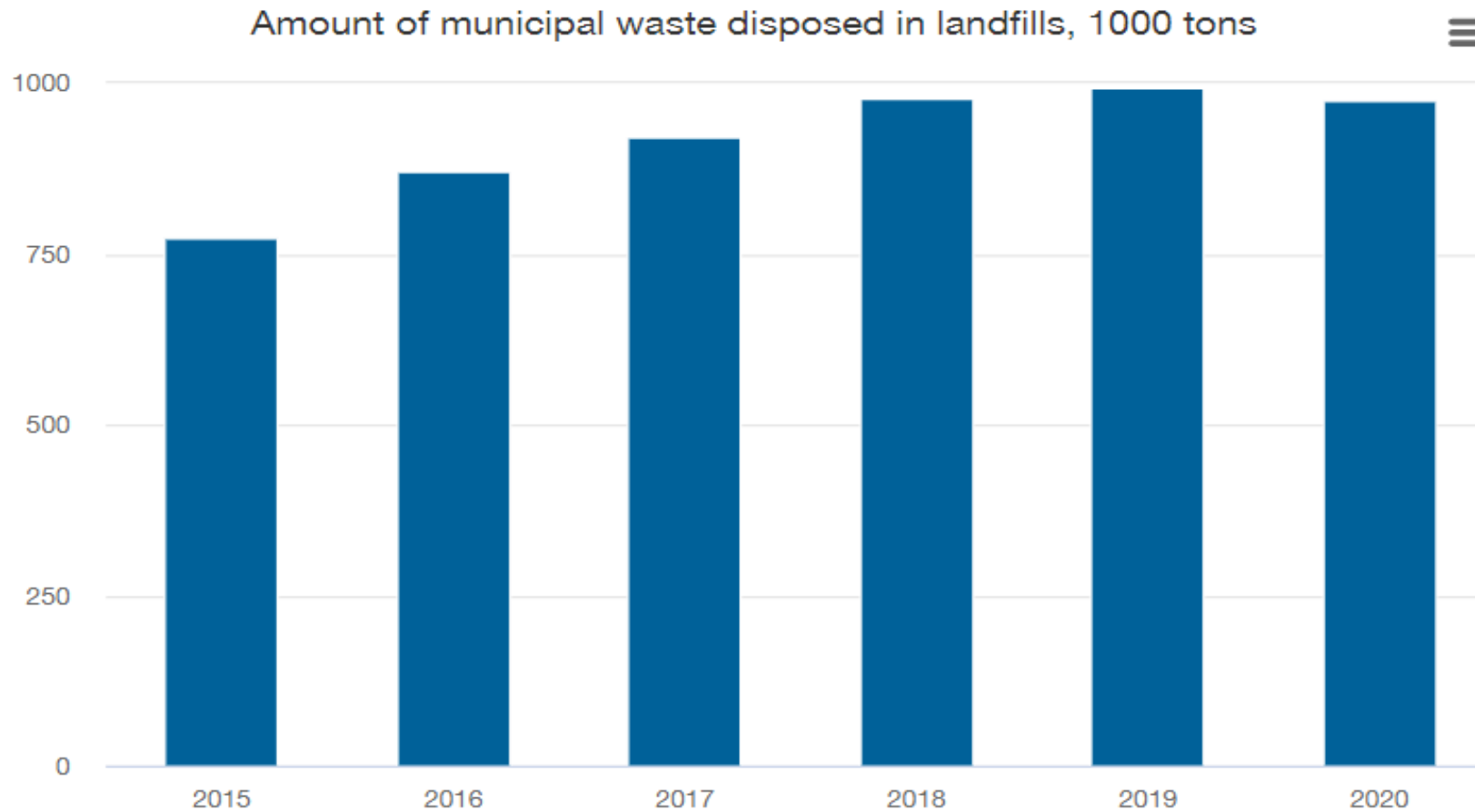
- waste generation;
- waste disposal on landfills;
- waste collection;
- waste treatment.

- The system was launched in 2021
- **Goal** - to gather data on specific waste generation and management which fall under the Extended Producer's Responsibility (EPR) umbrella
- **Target** - Companies, responsible for the production/import of products that will become specific waste and EPR Organization
- **Reporting** – amount of the production and import of specific products plus data on the collection and management of relevant waste in the future

# Access to Waste Management Data



## Information on waste disposed in landfills [Geostat.ge](https://www.geostat.ge)



# Reporting on Waste



Page 2

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### Electronic Reporting System of the Basel Convention (Year: 2020)

Name of Party: Georgia

#### Competent Authority and Focal Point, Measures to Implement and Enforce the provisions of the Convention

##### Competent Authority information

##### 1a - Designated Competent Authority to the Basel Convention (Articles 13.2(a), 13.3(a))

In accordance with Article 5 of the Convention, Parties shall designate or establish one or more competent authorities. According to the Secretariat's records the Designated Competent Authority(ies) in your country is(are):

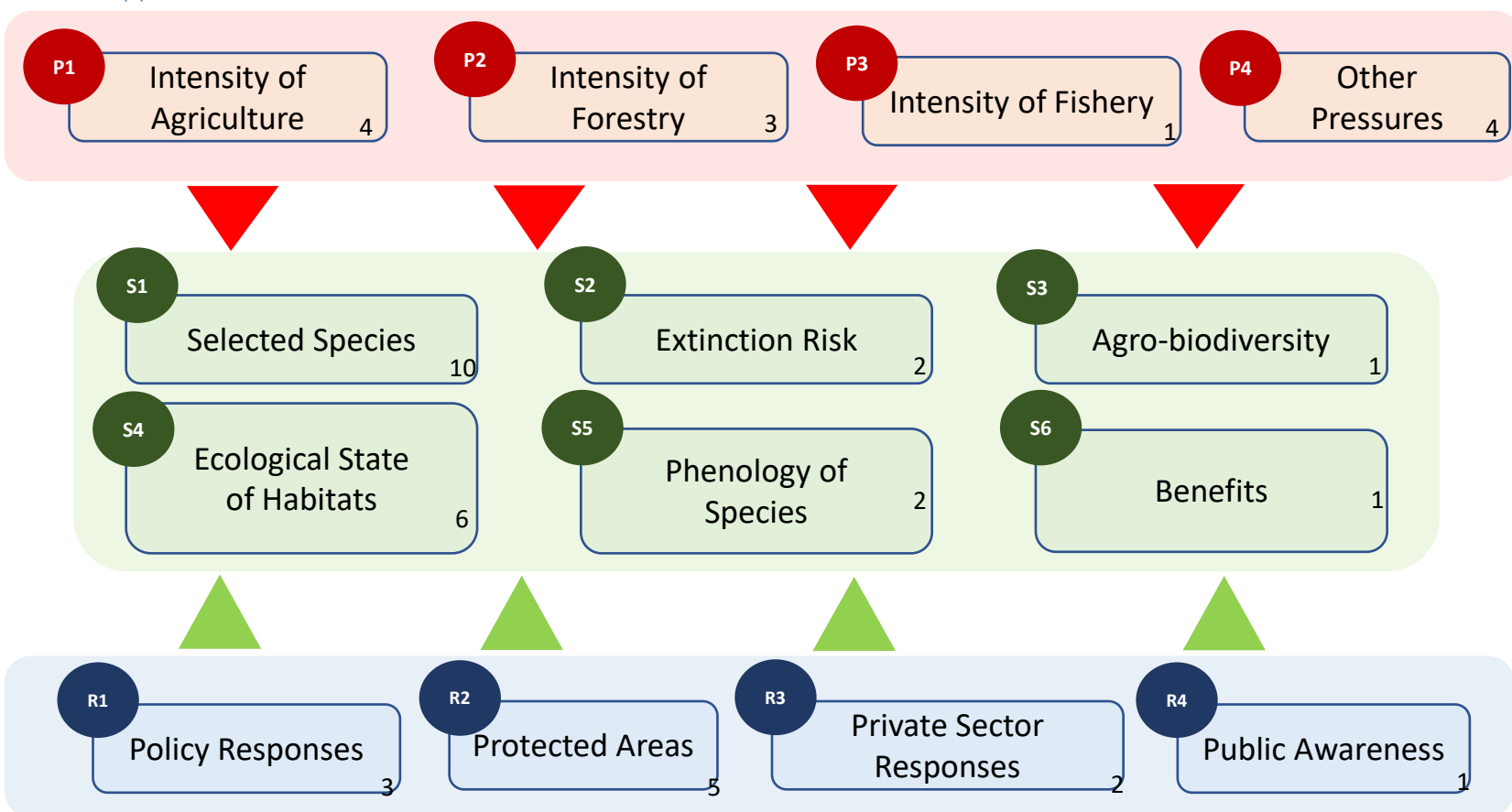
Organization:	Department:	Job Position:	Full Name:	Tel:	Fax:	Address:	e-Mail:	Web site:	Area of responsibility
Ministry of Environmental Protection and Agriculture	Waste and Chemicals Management Department	Deputy Head	Irma Gurguliani			6 Marshal Gelovani Avenue Tbilisi 0159 Georgia	igurguliani@gmail.com, irma.gurguliani@mepa.gov.ge		

\*  
Total Records: 1  
[Export to Excel](#)

##### 1a.1 - Do you want to update the above-mentioned information pertaining to the existing Competent Authority/ies or notify the Secretariat of the designation of one or more new Competent Authority/ies? (Articles 13.2(a), 13.3(a))

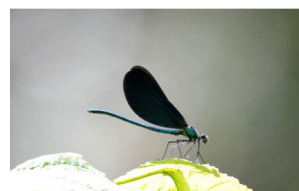
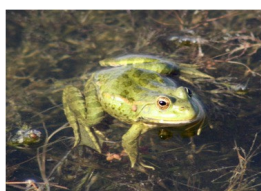
Yes  
 No

# National Biodiversity Monitoring System



## Current Steps

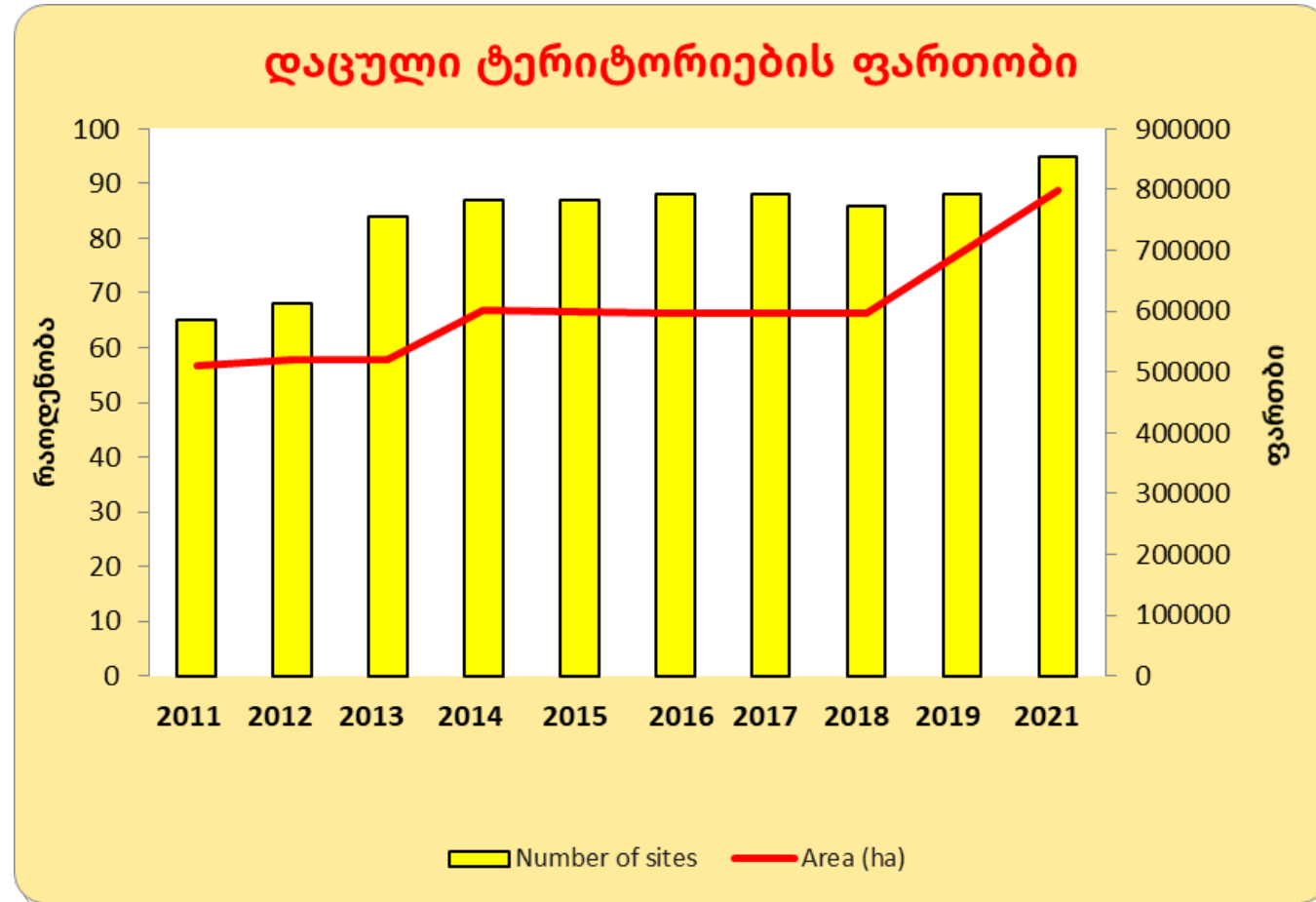
- Establishment of the technical facility for the raw data flow among data producers and users
- Creation of legislation and institutional basis, including clear distribution of responsibilities among the responsible agencies and other organizations
- Possible shortening of list of NBMS indicators as a result of prioritizing



# Use of NBMS indicators in 2021



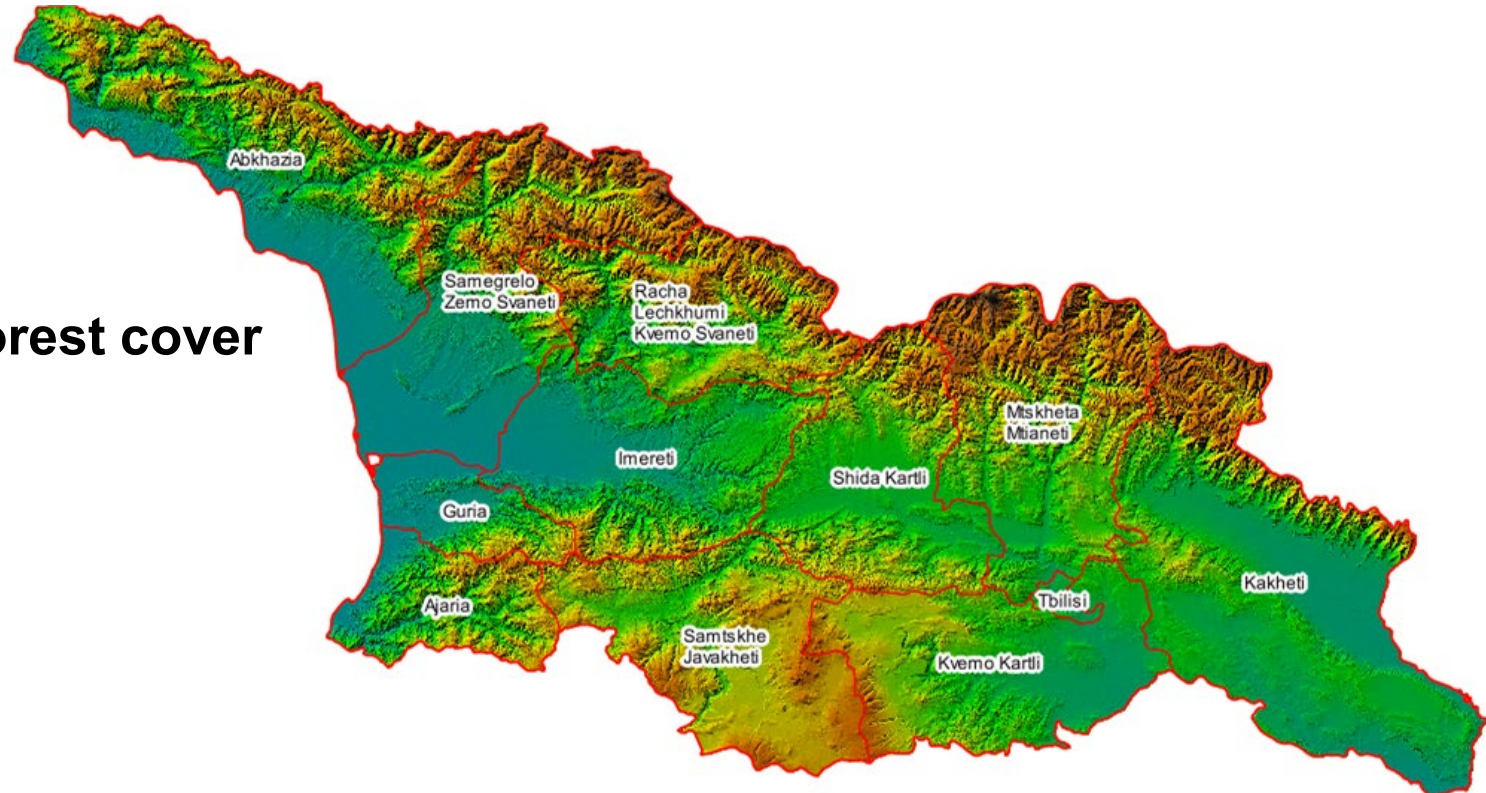
- World Database on Protected Areas (WDPA)
- SDG indicators: 15.1.1; 15.1.2; 15.2.1
- UNECE \_ SEBI indicator reporting
- Annual progress reporting on national level
- List of international agreements: CBD, Bern Convention, CMS, AEWA, Ramsar Convention
- Everyday decision making processes
- Defining priorities of surveys and research work
- Defining Policy of Protected area Network development



# National Forest Inventory in Georgia 2019-2021



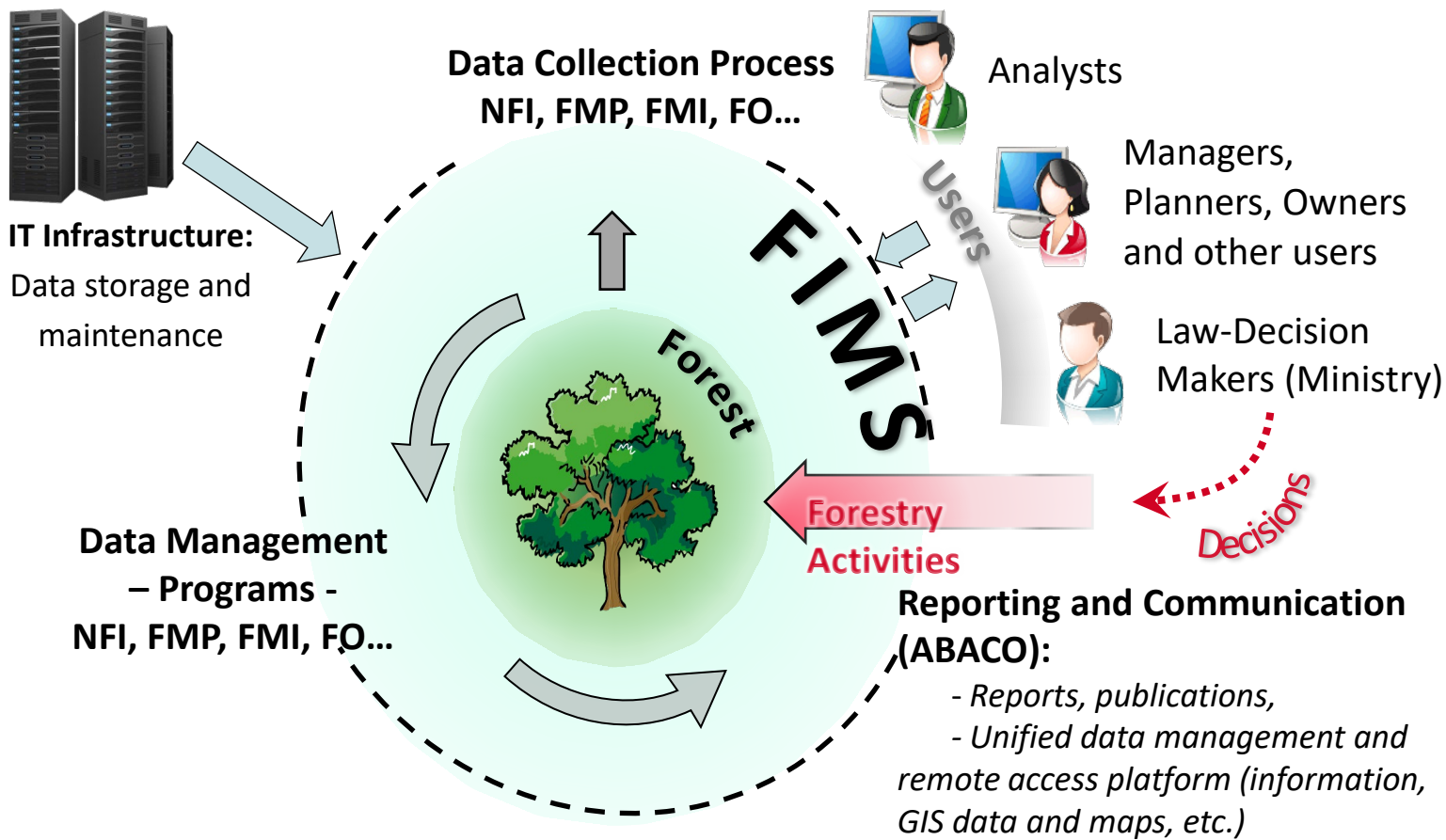
43% of forest cover



Partners **giz** = Austrian Development Agency



# Forest Information and Monitoring System (FIMS)



## Modules of FIMS

1. Control of Sawmills
2. Control of movement of timber resources
3. National Forest Inventory
4. Management Level Forest Inventory
5. Forest Use
6. Forest Maintenance-Restoration
7. Monitoring, Reporting and Verification (MRV)
8. NBMS
9. **Public Access Platform**



# Public Access to Information on Biodiversity/Forest



## Forest and Land-Use Atlas of Georgia

[atlas.mepa.gov.ge](http://atlas.mepa.gov.ge)



# Challenges



- **Air** - Insufficient air quality monitoring stations; Lack of qualified staff and financial resources to properly maintain air quality monitoring stations all over the country; Absence of air quality modeling and forecasting system; Lack of established procedures for air quality data verification and validation.
- **Water** - Lack of qualified staff and administrative resources for surface water quality monitoring. Incomplete legal framework. Absence of a water classification system in accordance with the EU Water Framework Directive.
- **Soil** - Outdated quality standards for soil; Absence of modern methodology for soil pollution monitoring and assessment; Lack of qualified staff and administrative resources.
- **Biodiversity** - Absence of legal framework for biodiversity monitoring; Lack of human and financial resources to conduct monitoring.
- **Forest** - Forest Information and Monitoring System (FIMS) is still under development; The regulatory framework is not fully in place.
- **Waste** - Incomplete waste management electronic system that complicates aggregation of reported data on waste (including hazardous) generation, transportation, recycling, and disposal.

**Thank you!**

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