

#### **United Nations Economic Commission for Europe**

## Working Group on Environmental Monitoring and Assessment

Reporting on the progress made in Environmental Monitoring and Assessment at the national level

This questionnaire has been designed to collect information on the **results of major** actions taken by the countries in environmental monitoring and assessment since the previous meeting of the Working Group (27 October 2020). The objective is to evaluate to which extent and how your country has progressed in environmental monitoring and assessment, including through using the Shared Environmental Information System (SEIS), the regular production of quality environmental indicators and digitalization efforts related to environmental information at the national level.

The Working Group could then identify the needs of your country to be addressed in the future to underpin regular reporting and assessments, in accordance with international monitoring and assessment requirements and obligations.

The main aims of the questionnaire are to:

- Determine if the countries regularly produce environmental reports, analyses and assessments, including through using environmental indicators and SEIS
- Ensure that monitoring networks are upgraded or modernized, and that data quality assurance and control mechanisms and data management are in place or improved where needed, in particular for water, air and soil monitoring and data management
- Assess steps taken at country level to enhance digitalization and digital transformation related to environmental information including through the use of new technologies, big data, artificial intelligence and Earth observation for environmental monitoring.
- Follow improvements in national environmental policy reflecting all three SEIS pillars (content, infrastructure and cooperation)
- Capture the implementation status of relevant recommendations made in national environmental performance reviews (EPRs)
- Foresee the challenges to be addressed by the Working Group in the years to come regarding institutional, regulatory mechanisms and infrastructure at the national level

If you wish to receive further information, or if you have any questions, please do not hesitate to contact us on WGEMASec@un.org.

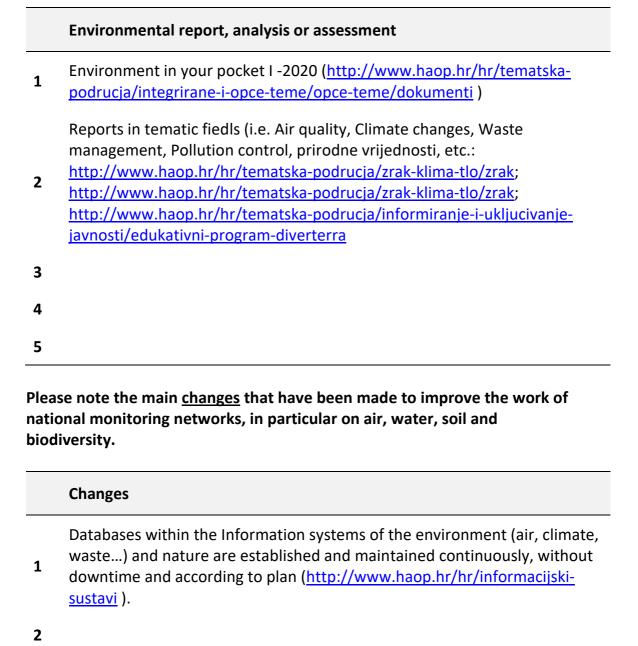
## Information on the person filling in the form

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Has your country produced any <u>environmental report</u>, <u>analysis</u> or <u>assessment</u> on environmental information and indicators, including via the use of SEIS, since October 2020?

Yes	No

Please specify which environmental report, analysis or assessment has been produced and provide the link to the website if available.



Please note the steps taken in your country to <u>enhance digitalization related</u> to environmental information including through the use of new

# technologies, big data, artificial intelligence and Earth observation for environmental monitoring.

#### Steps taken on digitalization

- In accordance with SEIS principles and through cooperation with national,
  EU and international bodies, Croatia has established Information systems
  of the environment and nature, accompanied by other IS's (i.e.water; under
  the jurisdiction of the public institution Hrvatske vode).
- The continuation of the development of digital databases and the upgrade of the CEIS is taking place in cooperation with the EEA and other national, European and international institutions.
- **3** Several years ago, Sentinel data has been in use.
- Some of the data are processed by machine learning methods (for the impact of air pollution on human health).

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# What types of <u>improvements</u> have been made in your country to enhance data quality assurance, control and data management?

#### **Improvements**

- Improvements are continuous and based on standards (i.e. UNFCCC, LRTAP, etc.), as well as according to EU-27 standards.
- National, European and international norms are inevitably used (National list of indicators, EMAS, ISO etc.).
- QA/QC is also improved by creating database catalogues and metadata catalogues (i.e. <a href="http://www.haop.hr/hr/baze-i-portali/envi-katalog-metapodataka">http://www.haop.hr/hr/baze-i-portali/envi-katalog-metapodataka</a>)

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Which improvements in data policy, <u>institutional</u> and <u>regulatory mechanisms</u> and <u>technical solutions</u> have been applied in your country to facilitate and improve data exchange between the parties concerned (ministries of environment, environment agencies and ministries of agriculture, energy, health, industry, transport and water) and with other users, including the public?

	Mechanisms and solutions
1	Data circulation is provided through the web services, so other institutions and the public can access the data in wms and wfs format (at the national level and INSPIRE harmonized services).
2	
3	
4	
5	
Yes	your country made <u>any changes</u> in data policy within the last year?  S No  S No  S, please specify which changes.
	Changes
1	
2	
3	
4	
5	

Please provide <u>a list of activities</u> undertaken by your country to implement the recommendations on environmental monitoring and assessment made in previous national environmental performance reviews (EPRs).

### Recommendations

- A new databases and portals has been established in the Croatian environmental information system needed for more detailed and/or obligatory environmental monitoring and reporting.
- 2 Reporting has been improved with a new mechanisms, data processing methods, data verification
- The introduction of new topics in integrated environmental assessment and nature analyses was conducted.

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What do you think are the main challenges for your country with regard to institutional, regulatory mechanisms and infrastructure at the national level?

### **Challenges**

- The institutional challenge is to strengthen existing and recruit new staff, especially in terms of new technologies in data collection and processing (to stride digitalization, to perform machine learning /AI).
- The infrastructural challenge is in the shared competence over environmental and issues among different state administration bodies.
- Regulatory mechanisms are well established within the country and within the EU-27.

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Please indicate any other information you think may be relevant. Please also indicate how the Working Group could assist in facilitating environmental monitoring and assessment in your country and region.

Perhaps smaller working groups could be formed within the WGEMA group, depending on the narrower specialization of its individual members.
By sharing information within the WGEMA group on the progress and managing the monitoring and reporting processes, it is possible to improve performance in both areas.