



INZRAK

Enhanced environmental protection inspection for efficient control of air quality monitoring and of all entities under obligation within system of greenhouse gas emission allowance trading, in order to achieve better air quality in Republic of Croatia



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE
OKOLIŠA I ENERGETIKE



 **safu** | SREDIŠNJA AGENCIJA ZA
FINANCIARANJE I UGOVARANJE



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13. Croatian regulation reporting

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13.1 DATA REQUIRED TO SUBMIT

- **Air protection information system**
 - integral part of the Environmental protection information system that is conducted under the Environmental Protection Act that forms part of the European environmental information system

http://iszo.azo.hr/Pretraga_TS.aspx
- **Air protection information system is run by the Croatian Environment and Nature Agency and supervised by the Ministry (competent authority) and includes:**

<http://www.azo.hr/BazePodataka03>

 - air quality data from the state network,
 - air quality data from measuring stations of local and local government units and measurements of special purpose provided by the polluter,
 - plans and programs for the protection and improvement of air quality,

13.1 DATA REQUIRED TO SUBMIT

- **Air protection information system contains (continued):**
 - alert thresholds and information threshold exceeding data and measures for human health and environment protection on such occasions,
 - data on legal entities carrying out the activity of air quality monitoring, emission monitoring of pollutants in air from immovable sources, accuracy verification of the measuring system for continuous measurement of pollutant emissions from the immovable sources and quality assurance of air quality measurement and data,
 - performed inspection data,
 - committed offenses information,
 - other data important for the air protection, ozone layer, climate change mitigation and adaptation to climate change
 -

13.1 DATA REQUIRED TO SUBMIT

- Air protection information system contains **(public and data connectivity...)**:
 - The central state administration bodies and local and regional government units, legal entity with public authority, are obliged to submit, in a **timely manner and without compensation**, the information from their jurisdiction required for the air protection information system management and for the preparation of the Plan, Program and Reports .
 - The air protection information system is aligned and **linked to the information systems run by other state administration bodies**, local and regional government units and legal entity with public authority.
 - <http://www.zzizpgz.hr/zrak/>
 - <http://zrak.zziziz.hr/>
 - <http://www.mzoip.hr/hr/inspekciia/izviesca-.html>

13.1 DATA REQUIRED TO SUBMIT

- Air protection information system contains **(public and data connectivity...)**:
 - link to the Air quality portal in Croatia is also available on the Central State Portal on Air quality
 - <https://www.gov.hr/moja-uprava/stanovanje/briga-o-okolisu/kvaliteta-zraka/488>

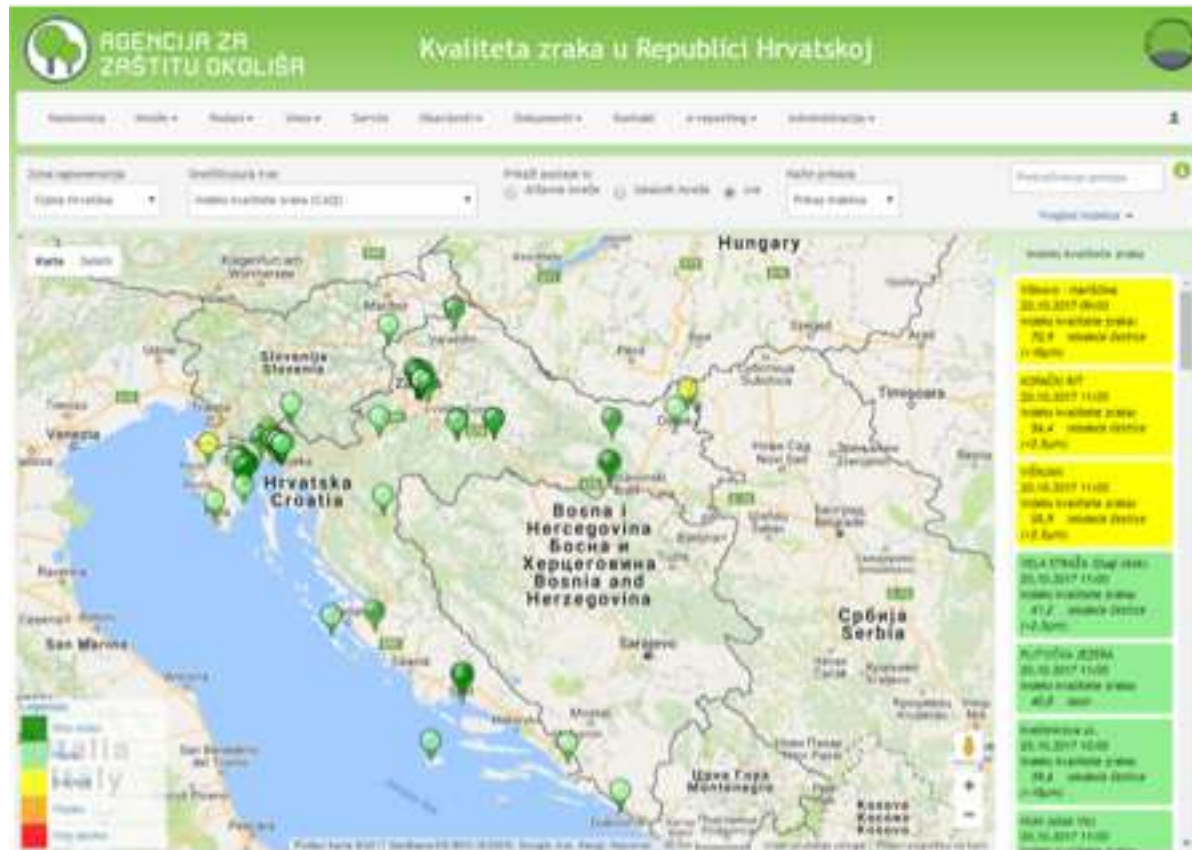
13.1 DATA REQUIRED TO SUBMIT

- **Air protection information system contains (public and data connectivity...):**
 - Government authority, local and regional government and legal entity with public authority possessing information relevant to air quality management and the management of the Air Information System shall be obliged to **submit or make available** to the Agency in electronic form at its request. **(Air Protection Act, Article 119.)**
 - The owner and/or user becomes responsible for monitoring the air quality established in the state network and in the counties, towns and cities and in accordance with the decision on the acceptability of the environmental project or the solution on the integrated environmental protection conditions, is obliged to ensure a continuous transfer of source and validated data for pollutants whose concentration in the air is determined by automatic measuring instruments for the computer network in **air quality information system** using the protocols and formats defined by the Agency. **(Ordinance on Air Quality, Article 21.)**

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- Air quality portal

<http://iszz.azo.hr/iskzl/index.html>



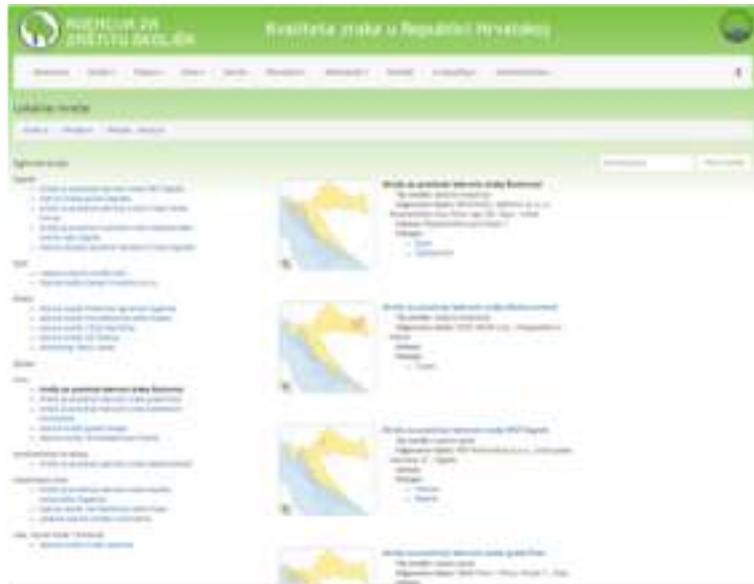
13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Data on the Air Quality Portal or the Agency database are:**
 - Current and validated values of concentrations of pollutants in the air - statistical data, exceeded limit values and target values, alert thresholds and warning thresholds
 - Network and Station informations (metadata)
 - Annual reports on air quality monitoring
 - Action Plans and Action plans data submitted to the EC
 - Users also have access to static browsers, exceeding limit and target values, and trends; data are presented in tabular and graphical terms and can be downloaded (web services)

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Air quality portal**
 - Network and Station information (metadata)
 - <http://iszz.azo.hr/iskzl/index.html>

Local Network



State Network



13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Air Quality Portal in Croatia - Annual reports on air quality monitoring**
 - Annual reports in Croatia (prepared by Agency, national and local networks)
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=0>
 - Annual State Network Reports
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=1>
 - Annual Local Area Network Reports
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=2>

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Air Quality Portal in Croatia - Annual reports on air quality monitoring**
 - Annual reports in Croatia (prepared by Agency, national and local networks)
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=0>



The screenshot shows the website of the Agency for Environmental Protection (Agencija za zaštitu okoliša) in Croatia. The page title is "Kvaliteta zraka u Republici Hrvatskoj". The main content area displays a list of annual reports on air quality monitoring for the period 1991-2008. The table below summarizes the data shown in the screenshot.

Godišnja izvješća o praćenju kvalitete zraka na području Republike Hrvatske za 2018. godinu	2018
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2014. godinu	2014
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2013. godinu	2013
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2012. godini	2012
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2011. godini	2011
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2010. godini	2010
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2009. godini	2009
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2008. godinu	2008
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2007. godinu	2007
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2006. godinu	2006
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2005. godinu	2005
Izveštaj o kvaliteti zraka 1991-2004	2004

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Air Quality Portal in Croatia - Annual reports on air quality monitoring**
 - Annual reports in Croatia (prepared by Agency, national and local networks)
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=0>



The screenshot displays the website of the Agency for Environmental Protection (Agencija za zaštitu okoliša) in Croatia, specifically the section for air quality monitoring. The page title is "Kvaliteta zraka u Republici Hrvatskoj". The main heading is "Godišnja izvješća na području RH (državna i lokalne mreže)". A search bar labeled "pretraživanje" is visible. Below the heading is a table listing annual reports from 1991 to 2016. The table has two columns: "Naziv" (Name) and "Godina" (Year). The reports include annual reports for the national network and local networks, as well as specific reports for the Zagreb region.

Naziv	Godina
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2016. godinu	2016
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2016. godinu	2016
Godišnje izvješće o praćenju kvalitete zraka na području Republike Hrvatske za 2015. godinu	2015
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2015. godini	2015
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2015. godini	2015
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2015. godini	2015
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2014. godini	2014
Godišnje izvješće o praćenju kvalitete zraka na području RH u 2014. godini	2014
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Godišnje izvješće o praćenju kvalitete zraka na području RH u 2000. godini	2000
Godišnje izvješće o praćenju kvalitete zraka na području RH u 1991-2004	2004

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- Air Quality Portal in Croatia:
 - Action Plans
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=4>



The screenshot shows the website of the Agency for Environmental Protection (Agencija za zaštitu okoliša) in Croatia. The page title is "Kvaliteta zraka u Republici Hrvatskoj". The main content area is titled "Planovi i programi" and displays a table of action plans. The table has two columns: "Naziv" (Name) and "Godina" (Year). The plans listed are:

Naziv	Godina
AKCIJSKI PLAN PODOBLJANJA KVALITETE ZRAKA ZA GRAD SLJIVOSKI BROD	2016
AKCIJSKI PLAN SHVALENJA EMISIJA NH3 U GRADU KUTINI	2016
AKCIJSKI PLAN ZA PODOBLJANJE KVALITETE ZRAKA I OZDROH NA SUDOPROVODNY (HDI)	2016
AKCIJSKI PLAN ZA SHVALENJE ONEČIŠĆENJA PRÉŽIVANJE OZONOM ZA GRAD RUDU	2016
AKCIJSKI PLAN SHVALENJA EMISIJA NH3 U GRADU KUTINI	2016
AKCIJSKI PLAN SHVALENJA ONEČIŠĆENJA ČESTICAMA (PM10) ZA GRAD OSJEK	2016
AKCIJSKI PLAN ZA PODOBLJANJE KVALITETE ZRAKA NA PODRUČJU GRADA ZAGREBA	2016
IZVJEŠĆE ZA 2015. GODINU O PROVEDBI AKCIJSKOG PLANA ZA PODOBLJANJE KVALITETE ZRAKA NA PODRUČJU GRADA ZAGREBA	2015
AKCIJSKI PLAN ZA SHVALENJE BAZNE KONCENTRACIJA LEĐEĆIH ČESTICA NH3 NA PODRUČJU GRADA SISKA	2014

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Air Quality Portal in Croatia:**
 - data on action plans submitted to EC
 - <http://iszz.azo.hr/iskzl/hPlan.htm>

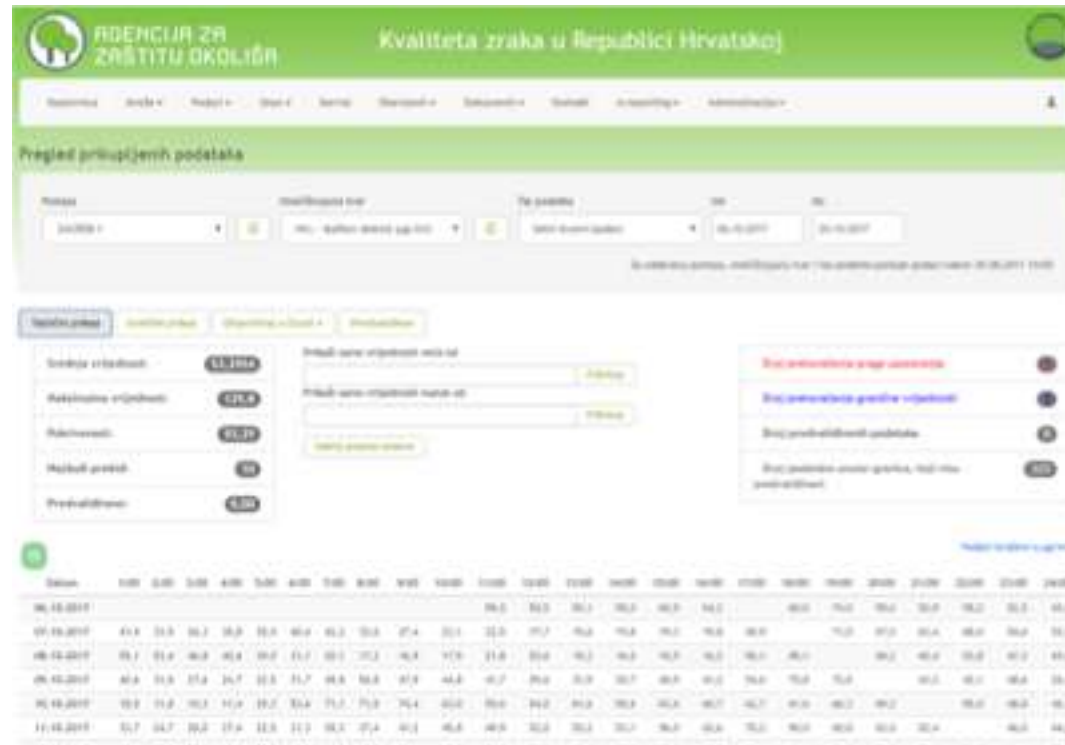


The screenshot displays the 'Plan kvaliteta zraka (PQ)' form on the website 'RODICIJI ZA ZASTITU OKOLIŠA' (Parents for Environmental Protection). The page title is 'Kvaliteta zraka u Republici Hrvatskoj'. The form includes several sections:

- H.1.3 Opis promjena**: A text area for describing changes.
- H.1.4 Period izvješćivanja**: Fields for 'od kada se izvješćuje?' (from when reporting?) and 'koliko često se izvješćuje?' (how often reporting?).
- H.2.2 Šifra plana**: A text field for the plan code.
- H.2.3 Naziv plana**: A text field for the plan name.
- H.2.4 Nadležno tijelo**: A text field for the responsible authority.

13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- Air Quality Portal in Croatia:
 - Data (surce and validated)
 - <http://iszz.azo.hr/iskzl/podatak.htm>

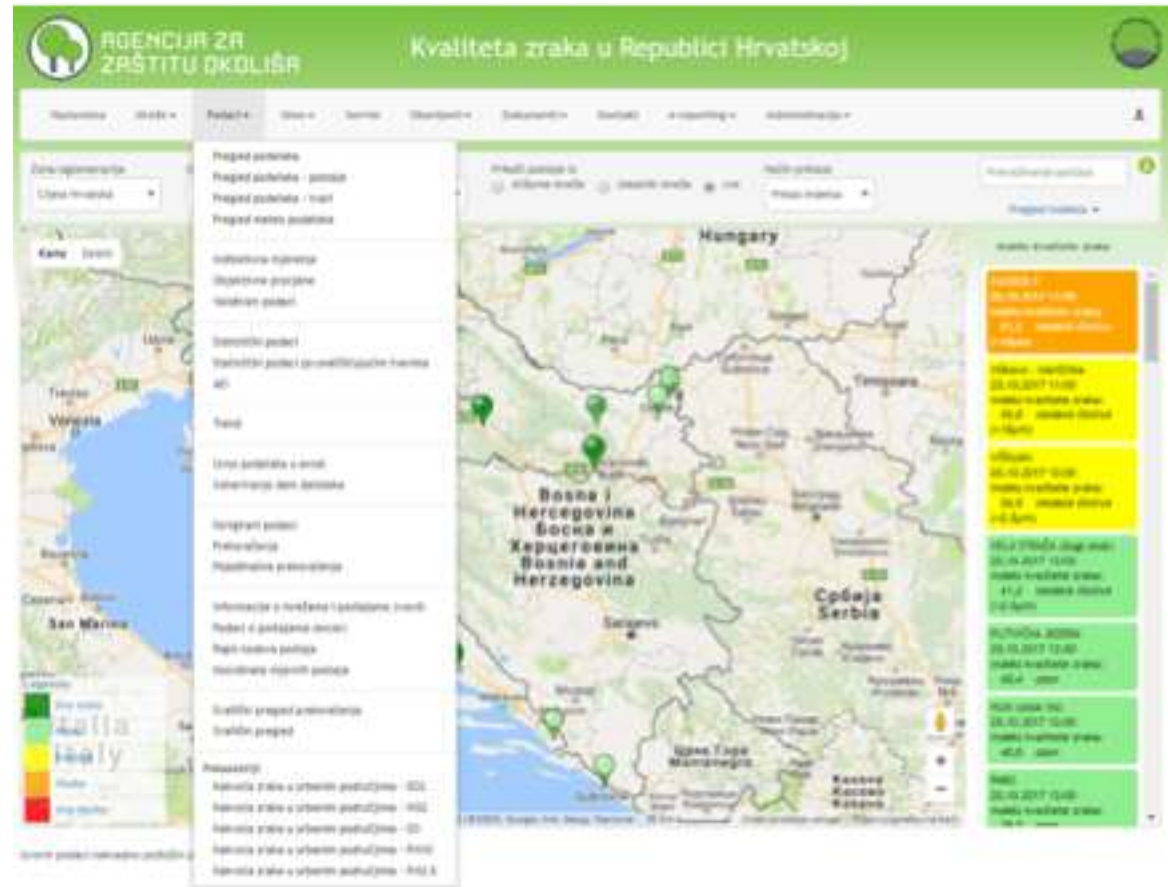


13.2 DATA SUBMITTED TO THE AGENCY DATABASE

- **Air Quality Portal in Croatia:**

- Data (source and validated), statistical data, data on limit values and target values, notification thresholds and warning thresholds

- <http://iszz.azo.hr/iskzl/index.html>



13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

- **The alert threshold for SO₂ and NO₂ and the information threshold for ozone** are set out in Annex 5 to the Regulation on levels of pollutants in the air (NN 117/12).
- **If the alert threshold for SO₂ and NO₂ and the information threshold and alert threshold for ozone have been exceeded in an area** - the public is notified according to the Regulation on levels of pollutants in the air.
- If the alert threshold for SO₂ and NO₂ and the information threshold or alert threshold for ozone have been exceeded in the state border area, the Croatian competent authority will notify the competent authority of the neighboring state.

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

- Alert threshold for pollutants other than ozone:

Pollutant	Alert threshold
Sulphur dioxide SO ₂	500 µg/m ³
Nitrogen dioxide NO ₂	400 µg/m ³

- To exceed the alert threshold, it shall be measured for three consecutive hours at locations representative places of air quality over at least 100 km², or in entire zone or agglomeration, whichever is the smaller.

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

- Information and alert thresholds for ozone:

Purpose	Averaging period	Threshold
Information	1 hour	180 $\mu\text{g}/\text{m}^3$
Alert	1 hour	240 $\mu\text{g}/\text{m}^3$

- For the application of Article 47. (short-term action plans) of the Air Protection Act, threshold exceedance is to be measured or predicted for three consecutive hours.

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

- **Specific measures for human health and environment protection in case of exceeding the alert and information threshold:**
 - In the event of information threshold being exceeded for SO₂ and NO₂ and of alert and information threshold being exceeded for ozone, the executive body of the local government in whose territory thresholds being exceeded is required to take specific measures for the human health and environment protection prescribed in Annex 6 to the Regulation on levels of pollutants in the air (NN 117/12) and to determine the manner of their implementation according to a special act regulating the prevention of major accidents involving hazardous substances.
 - **The executive body of the local government is obliged to report an alert and information threshold to ensure media coverage through the media several times throughout the day.**
 - The executive body of the local government through the media announces the end of the exceeding an alert and information threshold

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

- **SO₂ and NO₂ alert threshold exceedance and information and alert threshold for ozone in the air**
 - the executive body of the local government in whose territory thresholds being exceeded shall be obliged to inform the public in a timely manner of detailed information on all current or predicted exceedances of alert and information threshold

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

Detailed data includes the following:

- **data on recorded overdraft**
 - place or area of exceeding
 - the type of threshold being exceeded
 - start time and duration of exceeding
 - the highest one-hour concentration and, in the case of ground-level ozone, the highest ozone average concentration;
- **forecast for the following afternoon / day (days):**
 - geographic area where the alert and information threshold is exceeded,
 - expected changes in pollution (improvement, stabilization or deterioration), together with the reasons for such changes;

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

Detailed data (continued):

- **population data that is exposed, possible effects on health and recommended behavior:**
 - data on affected population groups,
 - description of possible symptoms,
 - the recommended precautionary measures that the exposed population should undertake,
 - where to find further information;
- **data on preventive procedures for pollution reduction and / or exposure to pollutants: guidance of the sector with major sources of pollution; recommendations for emission reduction procedures.**

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

- **Specific measures for human health and environment protection in case of exceeding the alert and information threshold:**

Warnings and advices to the population:

- invite the population to take care that their behavior and activities would not contribute to air pollution further and endanger the affected populations groups
- recommend that fossil fuels are not used for heating rooms, especially those without efficient exhaust fumes,
- for cooking use wherever possible electric cookers and ovens instead of gas stoves and solid fuel stoves,
- do not smoke in the living and working areas

13.3 REPORT ON THE BASIS OF THE INFORMATION AND ALERT THRESHOLD

Warnings and advices to the population (continued):

- postpone cleaning with agents containing corrosive chemicals and solvents, repairs using adhesives, paints, varnishes, insecticide use and all other activities and activities that are not urgent and necessary and which pollute the air in the rooms as the rooms can not to open the window,
- recommend that mechanical ventilation is not used to inject air into the room and not open the windows,
- recommend that small children, pregnant women, elderly people, chronic patients, people with poor health, and vulnerable persons at critical times do not go out into the street

13.4 ANNUAL REPORTS

- **For each permanent measurement site** established in the counties, the City of Zagreb and cities and in accordance with the decision on the acceptability of the environmental project or the solution on the integrated environmental protection conditions, **legal entity - test laboratory**,
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=2>
- For each measurement site from the State Air Quality Monitoring Network, the reference laboratories **must produce an Air quality monitoring report for each calendar year**.
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=1>

13.4 ANNUAL REPORTS

- **The annual reports on air quality monitoring must include information on:**
 - legal entity - a test laboratory or a reference laboratory performing air quality monitoring
 - measurement site for sampling and measurement range
 - time and sampling
 - used measurement methods and the used measuring equipment
 - ensuring the quality of data according to the requirements of the harmonized standards for test and calibration laboratories
 - other quality assurance data, such as ensuring continuity, participation in comparative measurements, deviations from the prescribed methodology and the reasons for this.

13.4 ANNUAL REPORTS

- **The annual reports for each pollutant include the following data:**
 - about the level of air pollution and the dates and times of air pollution exceeding the limit values, target values and long-term goals for ground-level ozone
 - exceeding alert and information thresholds, as well as dates and times
 - calculated statistical air pollution parameters for pollutants according to the standards set out in Appendix 8. Air Quality Monitoring Ordinance - arithmetic center, cedium, relevant percentage and maximum value, include data - percentage of total possible number of data and number of data for relevant averaging times

13.4 ANNUAL REPORTS

- **The annual reports for each pollutant include the following data (continued):**
 - average annual value of ozone precursors, polycyclic aromatic hydrocarbons and chemical composition in leachate PM2.5 particles
 - level of air pollution in relation to the upper and lower estimate thresholds
 - criteria used for assessing air pollution (LV, CV, DC, DPP, GPP, PU, PO ...)
 - causes of exceeding limit value, target value and long-term goal for ozone

13.4 ANNUAL REPORTS

- **According to the levels of pollution**, given the required limit values (LV), the target values and the target values for ozone **are determined by the following air quality categories:**
 - **the first category of air quality** - clean or slightly polluted air: not exceeding the limit value (GV), target values and target values for ozone,
 - **the second category of air quality** - polluted air: limit values (LV), target values and target values for ozone have been exceeded.

13.4 ANNUAL REPORTS

- **The air quality categories** in the paragraph are determined for each pollutant separately and refer to **the protection of human health, the quality of life, the protection of vegetation and the ecosystem.**
- The air quality categories are determined once a year for **the previous calendar year.**
- **The annual air quality monitoring report on the territory of the Republic of Croatia** with the list of air quality categories **is made by the Agency and published on the web site.**
 - <http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=0>

13.4 ANNUAL REPORTS

- Air quality categories - examples from the Agency's report

Zona / Aglomeracija	Zapovijest	Mjerna mreža	Mjerna Postaja	Osnovni/izv. tvar	Kategorija kvalitete zraka		
HR 20	Grad Zagreb	Dielarna mreža	Zapovijest-1	SO ₂	I kategorija		
				NO ₂	II kategorija		
				CO	I kategorija		
				benzen	I kategorija		
				PM ₁₀ (izv.)	II kategorija		
				PM ₁₀ (ogr.)	II kategorija		
				Pb u PM ₁₀	I kategorija		
				Cd u PM ₁₀	I kategorija		
				As u PM ₁₀	I kategorija		
				Ni u PM ₁₀	I kategorija		
				BaP u PM ₁₀	II kategorija		
				Hg (uk. plin.)	I kategorija		
			Zapovijest-2	SO ₂	I kategorija		
				NO ₂	I kategorija		
				CO	I kategorija		
				PM ₁₀ (izv.)	II kategorija		
				Zapovijest-3	SO ₂	I kategorija	
					NO ₂	I kategorija	
			CO		I kategorija		
			PM ₁₀ (izv.)		II kategorija		
			PM ₁₀ (ogr.)		II kategorija		
			Pb u PM ₁₀		I kategorija		
			Cd u PM ₁₀	I kategorija			
			As u PM ₁₀	I kategorija			
		Ni u PM ₁₀	I kategorija				
		BaP u PM ₁₀	II kategorija				
		O ₃	I kategorija				
		Mjerna mreža grada Zagreba	Dielarna mreža	Dielarna mreža	Zapovijest-3	PM ₁₀ (ogr.)	I kategorija
						SO ₂	I kategorija
						NO ₂	II kategorija
PM ₁₀ (ogr.)	II kategorija						
				Pb u PM ₁₀	I kategorija		

Zona / Aglomeracija	Zapovijest	Mjerna mreža	Mjerna Postaja	Osnovni/izv. tvar	Kategorija kvalitete zraka
HR 1	Brodsko-posavska županija	Dielarna mreža	Stavoviti Brod-1	SO ₂	I kategorija
				NO ₂	I kategorija
				H ₂ S	II kategorija
				O ₃	I kategorija
				PM ₁₀ (izv.)	II kategorija
				PM ₁₀ (ogr.)	II kategorija
				PM ₁₀ (ogr.)	II kategorija
				Pb u PM ₁₀	I kategorija
				Cd u PM ₁₀	I kategorija
				Ni u PM ₁₀	I kategorija
				As u PM ₁₀	I kategorija
				BaP u PM ₁₀	II kategorija
		benzen	I kategorija		
		Dielarna mreža	Stavoviti Brod-2	SO ₂	I kategorija
				*CO	I kategorija
				PM ₁₀ (ogr.)	II kategorija
				PM ₁₀ (ogr.)	II kategorija
				H ₂ S	II kategorija
				Dielarna mreža	Stak-1
		NO ₂	I kategorija		
		H ₂ S	II kategorija		
		CO	I kategorija		
		benzen	II kategorija		
		PM ₁₀ (izv.)	II kategorija		
		PM ₁₀ (ogr.)	II kategorija		
		Pb u PM ₁₀	I kategorija		
		Cd u PM ₁₀	I kategorija		
		Ni u PM ₁₀	I kategorija		
		As u PM ₁₀	I kategorija		
		BaP u PM ₁₀	II kategorija		
Dielarna mreža	Stak-2 Galžovo	Dielarna mreža	Stak-2	NO ₂	I kategorija
				*SO ₂	I kategorija

13.4 ANNUAL REPORTS

- Air quality categories - examples from the Agency's report

Županija	Mjerna mreža	Mjerna Postaja	Onečišćujuća tvar	Kategorija kvalitete zraka	
Istarska županija	Državna mreža	Viljan	*PM ₁₀ (auto.)	I kategorija	
			*PM _{2.5} (auto.)	I kategorija	
	Grad Pula	Veli vrb	SO ₂	I kategorija	
		Pula Jibela	NO ₂	I kategorija	
			O ₃	II kategorija	
		Ul. J. Eskićeva	SO ₂	I kategorija	
	Općina Rala	AP Karomatno-Bortnje	CO	I kategorija	
			O ₃	II kategorija	
			NO ₂	I kategorija	
			PM ₁₀	I kategorija	
		Karomatno	SO ₂	I kategorija	
		Moet Rala	SO ₂	I kategorija	
		TE Plovan	Epernja	*NO ₂	I kategorija
	*PM ₁₀			I kategorija	
	*O ₃			II kategorija	
	St. Katarina		SO ₂	I kategorija	
			*NO ₂	I kategorija	
			*O ₃	II kategorija	
	Rockenol Adriatic d.o.o.		Zejt	CO	I kategorija
				H ₂ S	I kategorija
		*PM ₁₀ (auto.)		I kategorija	
		Cambardici	SO ₂	I kategorija	
			PM ₁₀ (auto.)	I kategorija	

Zona / Aglomeracija	Županija	Mjerna mreža	Mjerna Postaja	Onečišćujuća tvar	Kategorija kvalitete zraka
	Šibensko-krninska	Grad Šibenik	Središte grada	SO ₂	I kategorija
				NO ₂	I kategorija
	Dubrovačko-neretvanska	Državna mreža	Hum (Vla)	*PM ₁₀ (auto.)	I kategorija
				*PM _{2.5} (auto.)	I kategorija
				O ₃	II kategorija
				Polča (Ravni kotari)	*PM ₁₀ (auto.)
			Žarševica (Dubrovnik)	**PM ₁₀ (auto.)	I kategorija
				**PM _{2.5} (auto.)	I kategorija
				**NO ₂	I kategorija
				*O ₃	II kategorija

13.4 ANNUAL REPORTS

- **Total number of categorized measuring point** in the year 2014. and 2015. with number **I and II category** for each pollutant - **Agency's report**

Onečišćujuća tvar	I kategorija		II kategorija		Ukupan broj kategoriziranih mjerenja	
	2014.	2015.	2014.	2015.	2014.	2015.
Zaštita zdravlja ljudi						
PM ₁₀	21	27	11	15	32	45
PM _{2.5}	9	18	1	3	10	20
O ₃	15	6	7	14	22	20
NO ₂	40	36	3	4	43	40
SO ₂	50	52			50	52
CO	17	16			17	16
Benzen	9	9		1	9	10
B(a)P u PM ₁₀	1		3	6	4	6
Pb u PM ₁₀	12	16			12	16
Cd u PM ₁₀	14	16			14	16
As u PM ₁₀	12	14			12	14
Ni u PM ₁₀	14	16			14	16
Ukupna plinovita živa	1	1			1	1
Kvaliteta življenja						
H ₂ S	11	9	4	6	15	15
NH ₃	15	18	1		16	18
Merkaptani	2	3			2	3
UKUPNO	243	257	30	49	273	306

13.4 ANNUAL REPORTS

- Measurement sites by zones and agglomerations where air was the **2nd category** for all pollutants in a year 2015.

Zona/Aglomeracija	Osnovna jedinica	Mjerna postaja	Tip postojnja	Tip postojnje u odnosu na izvor emisije	Broj mjernih mjesta	
HR 20	Zbihr	Zagreb-1 (auto i grav.)	Gradsko	Proizvodna	7	
		Zagreb-2 (auto)	Gradsko	Proizvodna		
		Zagreb-3 (auto i grav.)	Prigradsko	Proizvodna		
		Šušunjska ulica (grav.)	Gradsko	Proizvodna		
		Šiget (grav.)	Gradsko	Proizvodna		
		Susnjski put (grav.)	Gradsko	Industrijska		
	Šušunjska	Zagreb-1	Gradsko	Proizvodna	4	
		Zagreb-3	Prigradsko	Proizvodna		
		Karlovacka cesta	Gradsko	Proizvodna		
	Zbihr	Šiget (grav.)	Gradsko	Proizvodna	1	
		Zbihr	Zagreb-1	Gradsko	Proizvodna	4
	Šušunjska ulica		Gradsko	Proizvodna		
	Putnik Karlova Filipovica		Gradsko	Proizvodna		
	Zbihr	Šiget	Gradsko	Proizvodna	1	
		Zagreb-3	Prigradsko	Proizvodna		
HR 05	Zbihr	Šušunjska	Prigradsko	Industrijska	1	
		Čičak-1	Gradsko	Proizvodna	1	
HR 21	Zbihr	Šušunjska-2	Prigradsko	Proizvodna	5	
		Čičak	Gradsko	Proizvodna		
		Opuzlo-Šušunjska	Gradsko	Proizvodna		
		Pavleli	Prigradsko	Industrijska		
		Karlovacka ulica	Prigradsko	Industrijska		
HR 01	Zbihr	Uvac	Prigradsko	Industrijska	1	
		Vilovar	Prigradsko	Industrijska	1	
HR 1	Zbihr	Šušunjska	Prigradsko	Proizvodna	4	
		Šušunjska-1	Gradsko	Industrijska		
		Šušunjska-2	Gradsko	Industrijska		
		Šušunjska-3	Gradsko	Industrijska		
	Zbihr	Šušunjska-1	Prigradsko	Proizvodna	2	
		Šušunjska-2	Gradsko	Proizvodna		
	Zbihr	Zbihr	Šušunjska-1	Prigradsko	Proizvodna	5
			Šušunjska-2	Gradsko	Proizvodna	
			Šušunjska-3	Gradsko	Industrijska	
			Šušunjska-4	Gradsko	Industrijska	
Šušunjska-5			Prigradsko	Proizvodna		
Zbihr	Zbihr	Šušunjska-1	Prigradsko	Proizvodna	2	
		Šušunjska-2	Gradsko	Industrijska		
HR 3	Zbihr	Šušunjska	Prigradsko	Industrijska	1	
		Šušunjska-1	Gradsko	Industrijska		
HR 4	Zbihr	Šušunjska	Prigradsko	Proizvodna	4	
		AF Komunalno-Šušunjska	Prigradsko	Industrijska		
		Šušunjska	Prigradsko	Industrijska		
		Šušunjska	Prigradsko	Industrijska		
HR 5	Zbihr	Šušunjska-1	Prigradsko	Proizvodna	2	
		Šušunjska-2	Prigradsko	Proizvodna		
UKUPNO					49	

13.4 ANNUAL REPORTS

- Measurement sites - agglomerations on which air was the **2nd category** for all pollutants in a year 2015.

Zona / Aglomeracija	Omeđujuća tvar	Mjerna postaja	Tip područja	Tip postaje u odnosu na izvor emisija	Broj mjernih mjesta
HR ZG	PM ₁₀	Zagreb-1 (auto i grav.)	Gradsko	Prometna	7
		Zagreb-2 (auto)	Gradsko	Prometna	
		Zagreb-3 (auto i grav.)	Prigradsko	Pozadinska	
		Dorđićeva ulica (grav.)	Gradsko	Prometna	
		Šiget (grav.)	Gradsko	Prometna	
		Suselgrad (grav.)	Gradsko	Industrijska	
		Iakuševac (grav.)	Prigradsko	Industrijska	
	Slož u PM ₁₀	Zagreb-1	Gradsko	Prometna	4
		Zagreb-3	Prigradsko	Pozadinska	
		Kavarska cesta	Gradsko	Pozadinska	
		Šiget	Gradsko	Prometna	
	PM _{2.5}	Šiget (grav.)	Gradsko	Prometna	1
		Zagreb-1	Gradsko	Prometna	4
	NO ₂	Dorđićeva ulica	Gradsko	Prometna	
		Prilaz baruna Filipovića	Gradsko	Prometna	
Šiget		Gradsko	Prometna		
O ₃	Zagreb-3	Prigradsko	Pozadinska	1	
	H ₂ S	Iakuševac	Prigradsko	Industrijska	1
HR OS	PM ₁₀	Opatjevo-1	Gradsko	Prometna	1
HR RI	O ₃	Rijeka-2	Prigradsko	Pozadinska	5
		Miška	Gradsko	Pozadinska	
		Opatija-Gosovo	Gradsko	Pozadinska	
		Pavski	Prigradsko	Industrijska	
	H ₂ S	Urinj	Prigradsko	Industrijska	1
		PM ₁₀	Viševac	Prigradsko	Industrijska

13.4 ANNUAL REPORTS

- Measurement sites - the zones where the air was **2nd category** for all pollutants in a year 2015.

Zona / Aglomeracija	Onečišćujuća tvar	Mjerna postaja	Tip područja	Tip postaje u odnosu na izvor emisija	Broj mjernih mjesta
HR 1	O ₃	Desinić	Ruralno	Pozadinska	1
HR 2	H ₂ S	Slavonski Brod-1	Prigradsko	Pozadinska	4
		Slavonski Brod-2	Gradsko	Pozadinska	
		Sisak-1	Gradsko	Industrijska	
		Sisak 3	Gradsko	Industrijska	
	PM _{2.5}	Slavonski Brod-1	Prigradsko	Pozadinska	2
		Slavonski Brod-2	Gradsko	Pozadinska	
	PM ₁₀	Slavonski Brod-1	Prigradsko	Pozadinska	6
		Slavonski Brod-2	Gradsko	Pozadinska	
		Sisak-1	Gradsko	Industrijska	
		Sisak 2 Galdovo	Gradsko	Industrijska	
Sisak 3		Gradsko	Industrijska		
Kutina-1		Prigradsko	Pozadinska		
B(a)P u PM ₁₀	Slavonski Brod-1	Prigradsko	Pozadinska	2	
	Sisak-1	Gradsko	Industrijska		
	benzen	Sisak-1	Gradsko	Industrijska	1
HR 3	O ₃	Parg	Ruralno	Pozadinska	1
HR 4	O ₃	Pula Ribela	Prigradsko	Pozadinska	4
		AP Koromačno-Brovinje	Ruralno	Industrijska	
		Ripenda	Ruralno	Industrijska	
		Sr. Katarina	Ruralno	Industrijska	
HR 5	O ₃	Hum (Vls)	Ruralna-udaljena	Pozadinska	2
		Žarkovica	Prigradsko	Pozadinska	
UKUPNO					49

13.4 ANNUAL REPORTS

- **Based on the reports, the Agency produces an annual report on air quality in the Republic of Croatia**
 - for at least measurement sites for the monitoring of sulfur dioxide, nitrogen oxides, particulate matter (PM₁₀ and PM_{2,5}), lead, benzene, carbon monoxide, ozone and ozone precursors, arsenic, cadmium, mercury, nickel, benzopyrene and other polycyclic aromatic hydrocarbons in air used for the mutual exchange of information and reporting on air quality between the Agency and the European Commission,
 - can be made as needed for other measurement site and contain other data as needed

<http://iszz.azo.hr/iskzl/godizvrpt.htm?pid=0&t=0>

13.4 ANNUAL REPORTS

- **The Agency's report contains:**
 - air pollution assessment by pollutants for each zone and agglomeration
 - summary levels that exceed the limit values, target values, long-term goals, information thresholds and alert thresholds for relevant times. This data is combined with a summary assessment of the exceeding effects
 - additional data and estimates of forest protection when available, as well as data on other pollutants for which the monitoring provisions set out in this Regulation, such as, inter alia, some ozone precursors that are not regulated by regulations and which are listed in the Regulation on Levels.

13.4 ANNUAL REPORTS

- **The Agency's report** - air pollution assessment by pollutants for each zone and agglomeration (examples)



Slika 4. Ocjena onečišćenosti (sukladnosti) zona i aglomeracija sumporovim dioksidom u 2015. godini



Slika 5. Ocjena onečišćenosti (sukladnosti) zona i aglomeracija žulfovima dioksidom u 2015. godini

13.4 ANNUAL REPORTS

- **The Agency's report** - air pollution assessment by pollutants for each zone and agglomeration (examples)



Slika 4. Ocjena onečišćenosti (uključivši) zona i aglomeracija izračunata izmjerama PM10 u 2013. godini



Slika 5. Ocjena onečišćenosti (uključivši) zona i aglomeracija izračunata izmjerama O3 u 2013. godini

13.4 ANNUAL REPORTS

The Agency's report - summary levels exceeding threshold values, target values, long-term goals, information thresholds and warning thresholds, for relevant mediation times (examples)

NO ₂ (µg/m ³)								
Zona / Aglomeracija	Mjerna postaja / Modeliranje	1-satne koncentracije						Ocjena onečišćenosti (sukladnosti)
		OP %	C _{godina}	C _{max} *	C _{99.99} ** max. 19 sat	broj sati > GV	broj sati > PU	
HR ZG	Zagreb-1	93	42	199	163	0	0	
	Zagreb-3	95	26	137	112	0	0	
HR OS	Osijek-1	91	23	166	113	0	0	
HR RI	Rijeka-2	95	13	115	77	0	0	
HR ST	Kaštel Sućurac	87	18	111	80	0	0	
	Split-1	96	24	134	114	0	0	
HR 1	Desinić	69	7	49	36	0	0	
HR 2	Slavonski Brod-1	96	16	127	93	0	0	
HR 4	Pula Fižela	95	11	82	63	0	0	
HR 5	Žarkovica (Dub.)	60	3	81	23	0	0	

13.4 ANNUAL REPORTS

The Agency's report - summary levels exceeding threshold values, target values, long-term goals, information thresholds and warning thresholds, for relevant mediation times (examples)

O ₃ (µg/m ³)												
Zona / Aglomeracija	Mjerna postaja / Modeliranje	CP%		1-satne koncentracije				5-satne koncentracije				Ocjena međiñočnosti
		ljetno	zimna	C _{95%}	C _{90%}	broj sati > PO	broj sati > PU	C _{95%}	C _{90%} = max. 26 dan	broj dana > CV	broj dana > CV prosjek 2013-2015	
HR ZG	Zagreb-3	100	94	51	197	8	0	176	137	49	25	
HR OS	Osijek-1	81	90	47	168	0	0	147	117	17	-	
HR RI	Rijeka-2	100	92	77	181	1	0	152	134	55	33	
HR 1	Đestrić	99	85	75	158	3	0	165	136	69	39	
	Kopački rit	91	92	38	141	0	0	118	101	0	0	
HR 2	Kutina-1	86	80	42	225	2	0	173	117	20	20	
	Slavonski Brod-1	97	92	44	160	0	0	138	110	8	13	
HR 3	Parg	68	89	80	163	0	0	155	126	36	33	
HR 4	Pula Fljela	96	83	74	195	5	0	176	140	87	87	
HR 5	Hum (otok Vis)	95	75	96	165	0	0	161	135	91	75	
	Zarškovica (Dubrovnik)	73	79	92	242	7	1	170	134	51	36	

13.4 ANNUAL REPORTS

The Agency's report - summary levels exceeding threshold values, target values, long-term goals, information thresholds and warning thresholds, for relevant mediation times (examples)

PM ₁₀ PM _{2.5} (µg/m ³)										
Zona / Aglomeracija	Mjerna postaja / Mjesto izmjerenja	Osnovajuća tvar	Tip mjerne	CP %	1-satna konc.		24-satne koncentracije			Ocjena medijacijski (maks. dan)
					C _{1sat}	C _{24sat}	C _{lim}	C _{24sat} max. 30 dan	broj dana	
HR ZG	Zagreb-1	PM ₁₀	gav.	100	NP	33	167	62	47	
	Zagreb-1	PM _{2.5}	aut.	87	38	107	211	71	77	
	Zagreb-3	PM ₁₀	aut.	92	45	107	233	88	84	
	Zagreb-3	PM _{2.5}	gav.	100	NP	35	156	70	70	
	Zagreb PPI/PM ₁₀	PM ₁₀	gav.	100	NP	21	NP	NP	NP	
HR OS	Valda Costa	PM ₁₀	gav.	62	NP	27	NP	NP	NP	
HR RI	Ostjaci-1	PM ₁₀	aut.	85	39	NP	121	63	60	
	Rijeka-2	PM _{2.5}	gav.	62	NP	13	NP	NP	NP	
HR ST	Split-1	PM ₁₀	gav.	100	NP	19	133	32	4	
	Split-1	PM _{2.5}	gav.	99	NP	11	NP	NP	NP	
HR I	Desinić	PM ₁₀	aut.	88	16	NP	89	27	5	
	Desinić	PM _{2.5}	aut.	88	14	NP	NP	NP	NP	
	Kopačkarit	PM ₁₀	aut.	99	23	NP	94	39	17	
	Kopačkarit	PM _{2.5}	aut.	99	17	NP	NP	NP	NP	
HR L	Karina-1	PM ₁₀	aut.	86	45	NP	165	79	100	
	Šibenik-1	PM ₁₀	aut.	88	37	37	165	74	71	
	Šibenik-1	PM _{2.5}	gav.	95	NP	37	135	73	67	
	Šibenik-1	PM _{2.5}	aut.	99	37	NP	NP	NP	NP	
HR B	Slavonski Brod-1	PM ₁₀	gav.	100	NP	36	NP	NP	NP	
	Pitvička jezera	PM ₁₀	aut.	78	14	NP	51	24	1	
	Pitvička jezera	PM _{2.5}	aut.	78	9	NP	NP	NP	NP	
HR 4	Viljan	PM ₁₀	aut.	88	17	NP	75	30	4	
	Viljan	PM _{2.5}	aut.	88	9	NP	NP	NP	NP	
HR 5	Žarkovica (Dub.)	PM ₁₀	aut.	76	15	NP	51	22	1	
	Žarkovica (Dub.)	PM _{2.5}	aut.	76	8	NP	NP	NP	NP	

13.4 ANNUAL REPORTS

The Agency submits to the Ministry (competent authority) an annual report on the territory of the Republic of Croatia by September 30th of the current year for the previous calendar year and publishes it on its web site.



13.4 DATA SUBMISSION DYNAMICS

- **State Network** - The National Hydrometeorological Institute submits to the Ministry and Agency original and validated data and air pollution reports on levels and quality assessment by April 30th of the current year for the previous calendar year.



13.4 DATA SUBMISSION DYNAMICS

- **Local Networks (JRS and JLS)**
 - **The legal entity - the testing laboratory** shall carry out the source and validated air quality monitoring data and air pollution report and air quality assessment to the competent administrative body of the County, City of Zagreb and the city by 31th March of the current year for the previous calendar year.
 - The competent authority of the counties, the City of Zagreb and the cities shall submit the Agency with original and validated data and air pollution reports and air quality assessment **by 30th April** of the current year for the previous calendar year.

13.4 DATA SUBMISSION DYNAMICS

- Local Networks (JRS and JLS) – reports examples



13.4 DATA SUBMISSION DYNAMICS

- **Local Networks (JRS i JLS)**
 - **The legal entity** - the testing laboratory carrying out the measurements for the pollutant shall submit original and validated air quality monitoring data and air pollution report and air quality assessment to the competent administrative body of the County, City of Zagreb and **by March 31th of the current year for the previous calendar year.**
 - The competent authority of the counties, the City of Zagreb and the cities shall **submit to the Agency** with source and validated data and air pollution reports and air quality assessment **by April 30th of the current calendar year for the previous calendar year.**

13.4 DATA SUBMISSION DYNAMICS

- Local Networks (Polluter) – reports examples



13.4 DATA SUBMISSION DYNAMICS

- **Local Networks - measurements of special purpose Article 33. Air Protection Act**
 - Art. 34. Air Protection Act and Art. 23. Ordinance define reporting only for measurements in accordance with Art. 31 and 32 and omits measurements of special purpose according to Art. 33.
 - Even in Part XIII, INSPECTION SURVEILLANCE is not explicitly described as to who controls the measurement or reporting of these measurements.
 - There are no such reports on Agency's pages



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