

## RAČUNI EMISIJA U ZRAK U 2019. – privremeni podaci

### AIR EMISSIONS ACCOUNTS, 2019 – Provisional Data

Prikazane su emisije stakleničkih plinova i onečišćujućih tvari za Republiku Hrvatsku od 2015. do 2019.

*The emissions of greenhouse gases and air pollutants are presented for the period from 2015 to 2019 for the Republic of Croatia.*

Neznatno su se povećale ukupno ispuštene emisije stakleničkih plinova u zrak u 2019. u odnosu na 2018. Većina onečišćujućih tvari neznatno je pala u 2019. u usporedbi s 2018., osim NO<sub>x</sub> i NMHOS, koji su neznatno porasli.

*A slight increase was recorded in total greenhouse gas emissions into the air in 2019 compared to 2018. Most air pollutants recorded a slight decrease in 2019 compared to 2018, except for NO<sub>x</sub> and NMVOC, which recorded a slight increase.*

U 2019. najveće količine ispuštenih stakleničkih plinova bile su emisije CO<sub>2</sub> (bez emisija iz biomase kao goriva), 17 778,84 tisuće t (Gg), CH<sub>4</sub> 142 285,10 t (Mg) i HFC 552 601,90 t (Mg) u CO<sub>2</sub>-ekvivalentu. Od svih onečišćujućih tvari u 2019., CO je imao najveću emisiju, 216 460,58 t (Mg).

*In 2019, the highest greenhouse gas emissions were CO<sub>2</sub> emissions (excluding biomass emissions as fuel), 17 778.84 thousand t (Gg), CH<sub>4</sub>, 142 285.10 t (Mg), and HFC, 552 601.90 t (Mg) in CO<sub>2</sub> equivalent. Out of all pollutants in 2019, CO recorded the highest emissions, 216 460.58 t (Mg).*

Fluktuacije emisija u zrak proizlaze iz uključivanja novih izvora podataka te detaljnijih podataka za već postojeće proračune koji rezultiraju većom točnošću izračuna.

*Air emission fluctuations stem from the inclusion of new data sources and more detailed data for the existing budgets, resulting in better accuracy of calculations.*

Konačni podaci biti će dostupni 23. prosinca 2021. u Bazi podataka.

*Final data will be available in the database on 23 December 2021.*

#### 1. EMISIJE U ZRAK<sup>1)</sup>

##### AIR EMISSIONS<sup>1)</sup>

|  | 2015.      | 2016.      | 2017.      | 2018.      | 2019.      |   |
|--|------------|------------|------------|------------|------------|---|
| CO <sub>2</sub> (bez emisija iz biomase kao goriva),<br>1 000 t (Gg) | 17 817,23  | 18 083,06  | 18 718,06  | 17 698,22  | 17 778,84  | CO <sub>2</sub> (without emissions from biomass used<br>as fuel), 1000 t (Gg) |
| CO <sub>2</sub> iz biomase, 1 000 t (Gg)                             | 6 006,75   | 5 970,35   | 5 906,57   | 6 057,52   | 6 228,14   | Biomass CO <sub>2</sub> , 1 000 t (Gg)  |
| N <sub>2</sub> O, t (Mg)   | 6 100,91   | 5 300,07   | 5 753,70   | 5 609,92   | 5 741,87   | N <sub>2</sub> O, t (Mg)  |
| CH <sub>4</sub> , t (Mg)   | 149 510,50 | 151 852,65 | 150 314,86 | 144 549,30 | 142 285,10 | CH <sub>4</sub> , t (Mg)  |
| HFC, t (Mg) CO <sub>2</sub> -ekvivalent                              | 533 636,13 | 534 733,60 | 541 272,39 | 547 015,69 | 552 601,90 | HFC, t (Mg) CO <sub>2</sub> equivalents                                       |
| PFC, t (Mg) CO <sub>2</sub> -ekvivalent                              | 0          | 0          | 0          | 0          | 0          | PFC, t (Mg) CO <sub>2</sub> equivalents                                       |
| SF <sub>6</sub> NF <sub>3</sub> , t (Mg) CO <sub>2</sub> -ekvivalent | 5 215,82   | 6 391,16   | 5 750,13   | 5 563,19   | 5 376,25   | SF <sub>6</sub> NF <sub>3</sub> , t (Mg) CO <sub>2</sub> equivalents          |
| NO <sub>x</sub> , t (Mg) NO <sub>2</sub> -ekvivalent                 | 58 437,82  | 57 650,88  | 58 038,98  | 53 925,63  | 53 926,87  | NO <sub>x</sub> , t (Mg) NO <sub>2</sub> equivalents                          |
| SO <sub>x</sub> , t (Mg)   | 15 782,59  | 14 818,12  | 12 667,01  | 10 151,82  | 8 154,59   | SO <sub>x</sub> , t (Mg)  |
| NH <sub>3</sub> , t (Mg)   | 37 527,71  | 35 704,97  | 38 824,42  | 38 825,78  | 36 761,64  | NH <sub>3</sub> , t (Mg)  |
| NMHOS, t (Mg)  | 71 279,06  | 72 977,56  | 70 213,74  | 71 080,91  | 75 220,39  | NMVOC, t (Mg)   |
| CO, t (Mg)   | 266 221,77 | 256 997,01 | 251 331,40 | 230 754,45 | 216 460,58 | CO, t (Mg)  |
| PM <sub>10</sub> , t (Mg)  | 43 991,72  | 42 695,42  | 41 470,48  | 41 168,54  | 40 829,34  | PM <sub>10</sub> , t (Mg)   |
| PM <sub>2,5</sub> , t (Mg)   | 32 901,63  | 31 602,17  | 30 431,00  | 29 279,39  | 28 600,89  | PM <sub>2,5</sub> , t (Mg)  |

1) Kod proračuna emisija svake se godine koriste novi ažurirani nacionalni i međunarodni emisijski faktori prema preporučenoj metodologiji. Stoga podaci nisu usporedivi s podacima iz Priopćenja br. 6.1.5./2020.

1) New, updated national and international emission factors, according to the recommended methodology for the calculation of emissions, are used each year for calculation, which makes the data incomparable with the data from the First Release No. 6. 1. 5./2020.

## METODOLOŠKA OBJAŠNJENJA

### Izvori i metode prikupljanja podataka

Izvor podataka za račune emisija u zrak jest kompilacija podataka Državnog zavoda za statistiku i Ministarstva gospodarstva i održivog razvoja.

Računi emisija u zrak jedan su od nekoliko fizičkih modula Eurostatova programa europskih ekonomskih računa okoliša. Obuhvaćeni su Uredbom (EU) br. 691/2011 Europskog parlamenta i Vijeća od 6. srpnja 2011. o europskim ekonomskim računima okoliša.

Računima emisija u zrak prikupljaju se i prikazuju podaci o fizičkim tijekovima plinovitim tvari ili čestica ("emisije u zrak"). Njima se prikupljaju emisije u zrak u nacionalnom gospodarstvu raščlanjene prema gospodarskim djelatnostima iz kojih nastaju te emisije (proizvodne djelatnosti poslovnih subjekata i privatnih kućanstava) na način opisan u Europskom sustavu nacionalnih računa (ESA).

### Definicije

**Emisije u zrak** jesu fizički tijek plinovitim tvari ili čestica iz gospodarstva (processa proizvodnje ili potrošnje) koje onečišćuju atmosferu. Emisije u zrak obuhvaćaju emisije stakleničkih plinova CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFC, PFC i SF<sub>6</sub>, NF<sub>3</sub> te emisije onečišćivača zraka NO<sub>x</sub>, SO<sub>x</sub>, NH<sub>3</sub>, NMHOS, CO, PM<sub>2,5</sub> i PM<sub>10</sub>.

### Kratice

|                                   |  |
|-----------------------------------|--|
| CH <sub>4</sub>                   | metan  |
| CO                                | ugljičkov monoksid                                 |
| CO <sub>2</sub>                   | ugljičkov dioksid                                  |
| EU                                | Europska unija                                     |
| NMHOS                             | nemetanski hlapivi organski spojevi                |
| Gg                                | gigagram (1 gigagram = 1 kilotona)                 |
| HFC                               | hidrofluorouglikovodik                             |
| Mg                                | megagram (1 megagram = 1 tona)                     |
| NH <sub>3</sub>                   | amonijak   |
| N <sub>2</sub> O                  | didušikov oksid                                    |
| NO <sub>x</sub>                   | dušikovi oksidi                                    |
| PFC                               | perfluorouglikovodik                               |
| PM <sub>2,5</sub>                 | lebdeće čestice (manje od ili jednake 2,5 mikrona) |
| PM <sub>10</sub>                  | lebdeće čestice (manje od ili jednake 10 mikrona)  |
| SF <sub>6</sub> , NF <sub>3</sub> | sumporni heksafluorid i dušikov trifluorid         |
| SO <sub>x</sub>                   | sumporovi oksidi                                   |
| t                                 | tona   |

### Znakovi

0 podatak je manji od 0,5 upotrijebljene mjerne jedinice

## NOTES ON METHODOLOGY

### Source and methods of data collection

The data source for air emission accounts is the data compilation of the Croatian Bureau of Statistics and the Ministry of Economy and Sustainable Development.

The air emission accounts are one of the several physical modules of Eurostat's programme of environmental economic accounts. They are covered by the Regulation (EU) No 691/2011 of the European Parliament and of the Council of 6 July 2011 on European environmental economic accounts.

Air emission accounts collect and present data on physical flows of gaseous or particulate materials ("air emission"). They collect air emissions in the national economy classified according to economic activities in which these air emissions occur (production activities of business entities and activities of private households), as explained in the European System of National Accounts (ESA).

### Definitions

**Air emissions** are a physical flow of gaseous or particulate materials from economy (production or consumption processes) that pollute the atmosphere. Air emissions include emissions of greenhouse gases CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFC, PFC and SF<sub>6</sub>, NF<sub>3</sub> as well as emissions of air pollutants NO<sub>x</sub>, SO<sub>x</sub>, NH<sub>3</sub>, NMVOC, CO, PM<sub>2,5</sub> and PM<sub>10</sub>.

### Abbreviations

|                                   |  |
|-----------------------------------|--|
| CH <sub>4</sub>                   | methane  |
| CO                                | carbon monoxide  |
| CO <sub>2</sub>                   | carbon dioxide   |
| EU                                | European Union   |
| Gg                                | gigagram (1 gigagram = 1 kilotonne)                              |
| HFC                               | hydrofluorocarbon  |
| Mg                                | megagram (1 megagram = 1 tonne)                                  |
| NH <sub>3</sub>                   | ammonia  |
| N <sub>2</sub> O                  | nitrous oxide  |
| NMVOC                             | non-methane volatile organic compounds                           |
| NO <sub>x</sub>                   | nitrogen oxides  |
| PFC                               | perfluorocarbons   |
| PM <sub>2,5</sub>                 | particulate matter (less than or equal to a nominal 2.5 microns) |
| PM <sub>10</sub>                  | particulate matter (less than or equal to a nominal 10 microns)  |
| SF <sub>6</sub> , NF <sub>3</sub> | sulphur hexafluoride and nitrogen trifluoride                    |
| SO <sub>x</sub>                   | sulphur oxides   |
| t                                 | tonne  |

### Symbols

0 value not zero but less than 0.5 of the unit of measure used

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