**October 2019**

**EUSAIR Multimodal Transport Model**

**Zoning System Technical Note**

**Prepared for:**

**EUSAIR Thematic Steering Group2**

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**Glossary of abbreviations**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**Country codes after ISO 3166 alpha-2 code**

Albania AL

Bosnia and Herzegovina BA

Croatia HR

Greece GR

Italy IT

Kosovo XK

Montenegro ME

North Macedonia MK

Serbia RS

Slovenia SI

# Introduction

## Adriatic-Ionian Region Masterplan for Transport Interconnectivity – AIM-TI

In order to support the development of the European Union Strategy for the Adriatic and Ionian Regions (EUSAIR) the Transport Subgroup of the Thematic Steering Group of the EUSAIR Transport and Energy Networks Pillar (TSG2) has proposed to develop a Transport Master Plan, i.e. the **A**driatic **I**onian Region **M**asterplan for **T**ransport **I**nterconnectivity – **AIM-TI**.

The AIM-TI is conceived as a tool for the coordinated implementation of the macro-regional strategy in the framework of the EU policies for the Union’s Enlargement and Cooperation with Neighbouring Countries, Territorial Integration and Cohesion, Single European Transport Area. It aims at identifying projects of macro-regional relevance and support their implementation towards a more competitive and resource efficient transport system in the Adriatic-Ionian Region, with a focus on the maritime dimension of the macro-regional transport and economic systems, green and multimodal accessibility to urban, transport and touristic nodes.

As part of the activities for the elaboration of the AIM-TI a transport model will be developed, i.e. the **E**USAIR **M**ultimodal **T**ransport **M**odel – **EMTM**.

## EUSAIR Multimodal Transport Model – EMTM

The EMTM is a macrosimulation model based on the CUBE specialised software by Bentley Industries (former Citilabs), that will be used for the description of the existing and future networks of the region and the simulation of the current and forecasted transport flows across them.

The EMTM will be developed as a multimodal tool. It will focus on long-distance flows of both freight and passengers transport; it will simulate rail, road and short sea shipping traffic. In order to develop such a model a number of information and data are required, including a set of socioeconomic information to estimate current and future traffic. Transport models simulate the distribution of traffic and transport flows along networks and routes across territories. The areas covered by transport models are usually disaggregated into subareas, referred to as Traffic Analysis Zones (TAZs). TAZs are used to describe the distribution of Origin and/or Destination of transport flows in the study area. As transport activities are embedded in society traffic flows are estimated based on socioeconomic information processed with reference to TAZs, i.e. population, GDP, employment, motorisation, household structure…The number and size of the TAZs depends on the geographic scale and purposes of the models. As a general praxis for large scale models, TAZs correspond to individual or aggregated statistical units as defined by national or international institutes of statistics.

This technical note describes the system of zones identified for the EMTM and the main socioeconomic parameters associated with them.

The note is assumed to be used for validation and integration purposes by the Transport Subgroup Members of the TSG2.

# Zones of the EMTM

## EMTM Zoning System

Dedicated to the simulation of transport flows at the international scale in a macro-regional territory, the TAZs of the EMTM generally correspond to the Nomenclature of Territorial Units for Statistics – NUTS 3 zones.

### Nomenclature of Territorial Units for Statistics (NUTS)

The Nomenclature of Territorial Units for Statistics (NUTS) is a hierarchical system for dividing up the economic territory of the European Union (EU) for the purpose of collection, development and harmonisation of European regional statistics, socioeconomic analyses of the regions and framing of EU regional polices. Four different levels of units have been defined and used by Eurostat to collect and deliver territorial statistics:

* NUTS 0: covering the entire country;
* NUTS 1: covering major socio-economic regions;
* NUTS 2: covering basic regions for the application of regional polices;
* NUTS 3: covering small regions for specific diagnoses.

Basic principles adopted by the European Union to define the Nomenclature of Territorial Units for Statistics are as follow:

* **Principle 1**. **Population thresholds** (for NUTS 3: 150,000 – 800,000). For administrative levels of NUTS, it is sufficient if the average size of the corresponding regions lies within the thresholds; in case of non-administrative levels, each individual region should do so. Exceptions exist however in case of geographical, socio-economic, historical, cultural or environmental circumstances.

Despite the aim of ensuring that regions of comparable size all appear at the same NUTS level, each level still contains regions which differ greatly in terms of population.

* **Principle 2**. NUTS favours **administrative division**. For practical reasons the NUTS classification generally mirrors the territorial administrative division of the Member States. This supports the availability of data and the implementation capacity of policy.
* **Principle 3.** Regular and extraordinary **amendments**. The NUTS classification can be amended, but generally not more frequently than every three years. The amendments are usually based on changes of the territorial structure in one or more Member States. In case of a substantial reorganisation of the administrative structure of a Member State, amendments to the NUTS may be adopted at intervals of less than three years. This has only happened once so far, in 2014 for Portugal.

### Zones of the EMTM

NUTS 3 are available in all EU Member States and candidate countries of the Adriatic Ionian Region, i.e. Albania, Croatia, Greece, Italy, North Macedonia, Serbia, Slovenia. For Montenegro, where only one NUTS 3 is defined, it was decided to divide this unit into smaller units (aggregating data on the basis of information available at the municipal level) that are generally comparable in terms of area with NUTS 3 regions. For Bosnia and Herzegovina and Kosovo TAZs were identified by combining local administrative units, mainly on the basis of geographical, socioeconomic or cultural considerations. The table below lists the TAZs of the EMTM by country in the Adriatic Ionian Region.

Table : TAZs of the EMTM by country in the Adriatic Ionian Region

|  |  |  |
| --- | --- | --- |
| COUNTRY | CODE | NUMBER OF ZONES |
| Albania | AL | 12 |
| Bosnia and Herzegovina | BA | 18 |
| Croatia | HR | 21 |
| Greece | EL | 52 |
| Italy | IT | 69 |
| Kosovo | XK | 7 |
| Montenegro | ME | 8 |
| North Macedonia | MK | 8 |
| Serbia | RS | 25 |
| Slovenia | SI | 12 |
| TOTAL |  | **232** |

*Source: Authors, based on Eurostat and National Statistics*

Figure : TAZs of the EMTM in the Adriatic Ionian Region

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*Source: Authors, based on Eurostat and National Statistics*

Overall 232 TAZs have been identified for the EMTM in the Adriatic Ionian Region, which are graphically represented in the map above.

## EMTM TAZs by country and their socioeconomic parameters

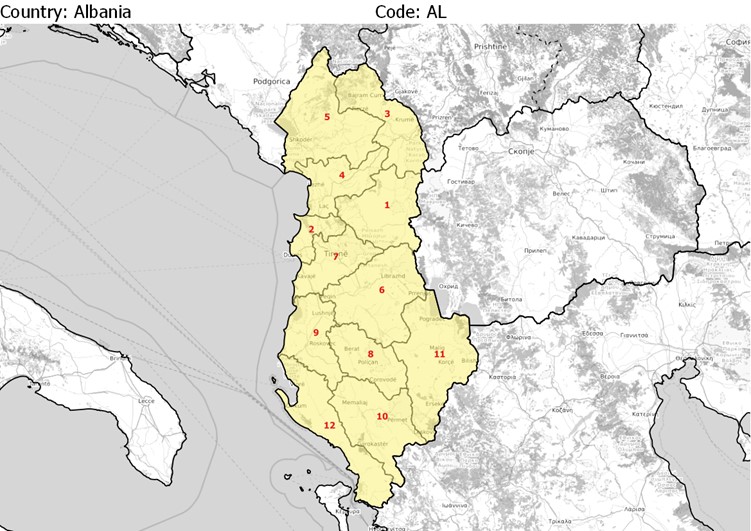
### Albania

The zoning system of the EMTM in Slovenia has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: counties of Albania;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in Albania.

Figure : TAZs of the EMTM in Albania



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in Albania is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Albania and main socioeconomic parameters

|  | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| --- | --- | --- | --- | --- | --- | --- |
| AL | 1 | AL011 | Diber | 125,579 | 372 | n.a. |
| AL | 2 | AL012 | Durres | 284,823 | 1,148 | n.a. |
| AL | 3 | AL013 | Kukes | 79,559 | 191 | n.a. |
| AL | 4 | AL014 | Lezhe | 129,019 | 383 | n.a. |
| AL | 5 | AL015 | Shkoder | 207,924 | 600 | n.a. |
| AL | 6 | AL021 | Elbasan | 283,822 | 791 | n.a. |
| AL | 7 | AL022 | Tirana | 862,361 | 4,866 | n.a. |
| AL | 8 | AL031 | Berat | 131,942 | 437 | n.a. |
| AL | 9 | AL032 | Fier | 302,507 | 1,246 | n.a. |
| AL | 10 | AL033 | Gjirokaster | 65,939 | 263 | n.a. |
| AL | 11 | AL034 | Korce | 214,321 | 638 | n.a. |
| AL | 12 | AL035 | Vlore | 188,795 | 641 | n.a. |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices 2017) refer to 2017, employment data are not available*

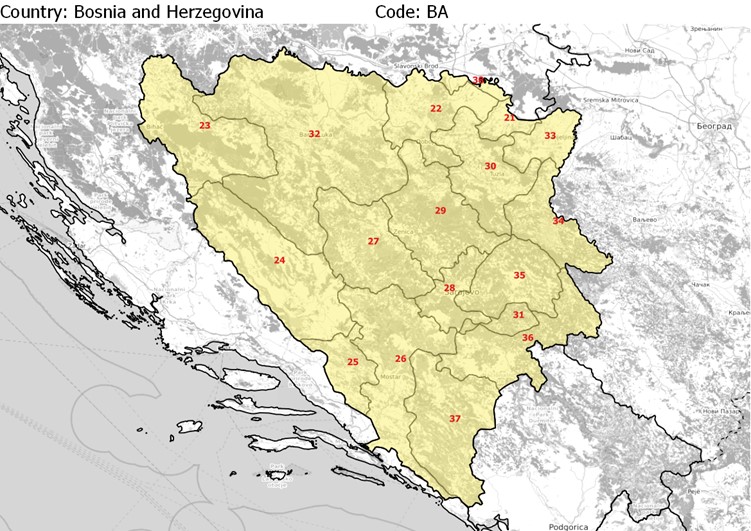
### Bosnia and Herzegovina

The zoning system of the EMTM in Bosnia and Herzegovina has been developed on the basis of the following basic principles:

* Zoning level of detail: comparable to NUTS 3;
* Corresponding administrative unit: cantons of Bosnia and Herzegovina Federation, autonomous Brcko District, statistical regions of Republika Srpska (aggregation of municipalities of Republika Srpska);
* Data source: Institute for Statistics of Federation of BiH/FIS, Institute for Statistics of Republika Srpska/RSIS.

The map in the following figure represents the TAZs of the EMTM in Bosnia and Herzegovina.

Figure : TAZs of the EMTM in Bosnia and Herzegovina



*Source: Authors, based on Institute for Statistics of Federation of BiH/FIS, Institute for Statistics of Republika Srpska/RSIS*

The correspondence table between EMTM TAZs and statistical units in Bosnia and Herzegovina is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Bosnia and Herzegovina and main socioeconomic parameters

| COUNTRY | TAZ | NUTS3 | NAME | AGGREGATED MUNICIPALITIES | POPULATION | GDP | EMPLOYEES |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BA | 21 | n.a. | Brcko District | - | 93,028 | n.a. | n.a. |
| BA | 22 | n.a. | Doboj | Brod, Vukosavlje, Derventa, Grad Doboj, Donji Zabar, Modrica, Pelagicevo, Petrovo, Stanari, Samac | 165,508 | n.a. | n.a. |
| BA | 23 | n.a. | Unsko-sanski kanton | - | 299,343 | n.a. | n.a. |
| BA | 24 | n.a. | Kanton 10 | - | 90,727 | n.a. | n.a. |
| BA | 25 | n.a. | Zapadno-hercegovacki kanton | - | 97,893 | n.a. | n.a. |
| BA | 26 | n.a. | Hercegovacko-neretvanski kanton | - | 236,278 | n.a. | n.a. |
| BA | 27 | n.a. | Srednjobosanski kanton | - | 273,149 | n.a. | n.a. |
| BA | 28 | n.a. | Kanton Sarajevo | - | 438,443 | n.a. | n.a. |
| BA | 29 | n.a. | Zenicko-dobojski kanton | - | 385,067 | n.a. | n.a. |
| BA | 30 | n.a. | Tuzlanski kanton | - | 477,278 | n.a. | n.a. |
| BA | 31 | n.a. | Bosansko-podrinjski kanton | - | 25,336 | n.a. | n.a. |
| BA | 32 | n.a. | Banja Luka | Grad Banja Luka, Gradiska, Istocni Drvar, Jezero, Knezevo, Kozarska Dubica, Kostajnica, Kotor Varos, Krupa na Uni, Kupres, Mrkonjic Grad, Novi Grad, Ostra Luka, Petrovac, Grad Prijedor, Prnjavor, Ribnik, Srbac, Teslic, Celinac, Sipovo | 524361 | n.a. | n.a. |
| BA | 33 | n.a. | Bijeljina | Grad Bijeljina, Lopare, Ugljevik | 132,343 | n.a. | n.a. |
| BA | 34 | n.a. | Zvornik | Bratunac, Vlasenica, Grad Zvornik, Laktasi, Milici, Osmaci, Srebrenica, Sekovici | 149,817 | n.a. | n.a. |
| BA | 35 | n.a. | Sokolac | Grad Istocno Sarajevo, Han Pisejak | 63,444 | n.a. | n.a. |
| BA | 36 | n.a. | Foca | Visegrad, Kalinovik, Novo Gorazde, Rogatica, Rudo, Foca, Cajinice | 52,959 | n.a. | n.a. |
| BA | 37 | n.a. | Trebinje | Berkovici, Bileca, Gacko, Istocni Mostar, Ljubinje, Nevesinje, Grad Trebinje | 64,585 | n.a. | n.a. |
| BA | 38 | n.a. | Posavski kanton | - | 48,089 | n.a. | n.a. |

*Source: Authors, based on Institute for Statistics of Federation of BiH/FIS, Institute for Statistics of Republika Srpska/RSIS; Notes: population data refer to 2013 for Federation of Bosnia and Herzegovina and for Brcko District and to 2017 for Republika Srpska, GDP and employment data are not available*

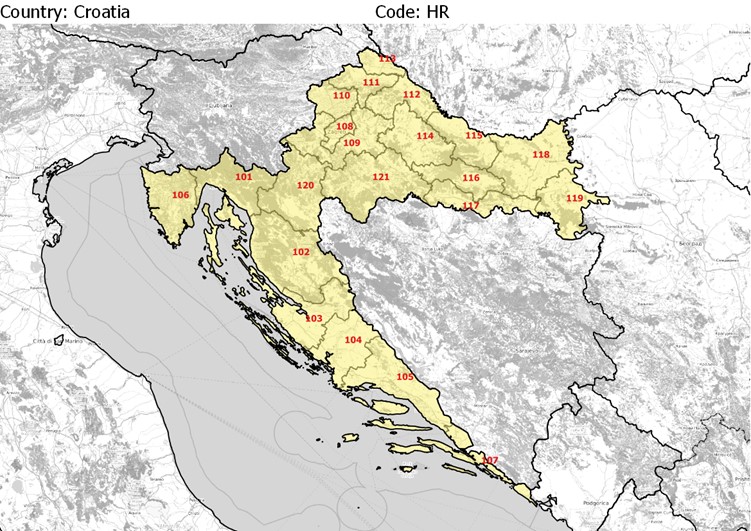
### Croatia

The zoning system of the EMTM in Croatia has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: counties of Croatia;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in Croatia.

Figure : TAZs of the EMTM in Croatia



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in Croatia is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Croatia and main socioeconomic parameters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| HR | 101 | HR031 | Primorsko-goranska zupanija | 288,328 | 3,874 | 104,500 |
| HR | 102 | HR032 | Licko-senjska zupanija | 46,485 | 400 | 12,799 |
| HR | 103 | HR033 | Zadarska zupanija | 169,306 | 1,544 | 42,280 |
| HR | 104 | HR034 | Sibensko-knisnska zupanija | 102,238 | 902 | 27,480 |
| HR | 105 | HR035 | Splitsko-dalmatinska zupanija | 451,226 | 3,910 | 131,640 |
| HR | 106 | HR036 | Istarska zupanija | 208,109 | 2,936 | 75,340 |
| HR | 107 | HR037 | Dubrovacko-neretvanska zupanija | 121,671 | 1,374 | 37,190 |
| HR | 108 | HR041 | Grad Zagreb | 803,647 | 15,677 | 412,370 |
| HR | 109 | HR042 | Zagrebacka zupanija | 313,072 | 2,700 | 74,130 |
| HR | 110 | HR043 | Krapinsko-zagorska zupanija | 127,060 | 951 | 32,920 |
| HR | 111 | HR044 | Varazdinska zupanija | 169,805 | 1,619 | 58,660 |
| HR | 112 | HR045 | Koprivnicko zupanija | 110,129 | 1,018 | 29,110 |
| HR | 113 | HR046 | Medimurska zupanija | 111,669 | 1,068 | 35,390 |
| HR | 114 | HR047 | Bjelovarsko-bilogorska zupanija | 110,841 | 861 | 28,390 |
| HR | 115 | HR048 | Viroviticko-podravska zupanija | 78,239 | 489 | 18,140 |
| HR | 116 | HR049 | Pozesko-slavonska zupanija | 70,937 | 456 | 17,310 |
| HR | 117 | HR04A | Brodsko-posavska zupanija | 146,288 | 931 | 32,790 |
| HR | 118 | HR04B | Osjecko-barnjska zupanija | 287,124 | 2,559 | 83,640 |
| HR | 119 | HR04C | Vukovarsko-srijemska zupanija | 163,324 | 1,086 | 39,080 |
| HR | 120 | HR04D | Karlovacka zupanija | 119,464 | 1,023 | 35,110 |
| HR | 121 | HR04E | Sisacko-moslavacka zupanija | 155,251 | 1,262 | 40,550 |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices 2017) refer to 2016 and employees data refer to 2016*

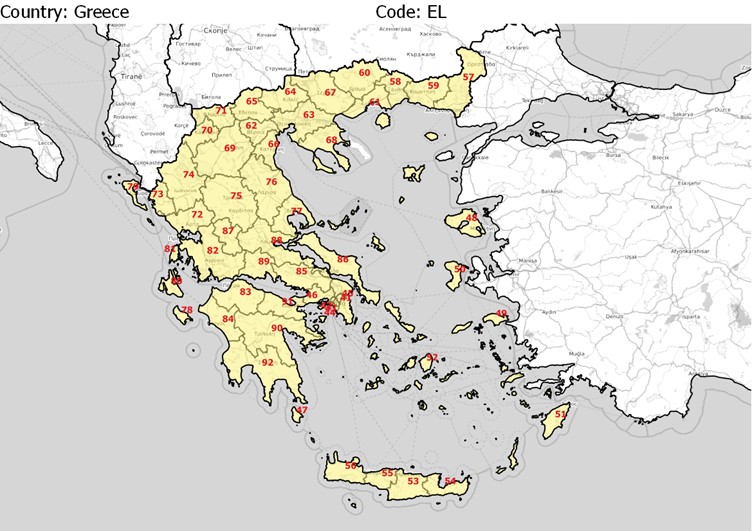
### Greece

The zoning system of the EMTM in Greece has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: regional units or combinations thereof;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in Greece.

Figure : TAZs of the EMTM in Greece



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in Greece is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Greece and main socioeconomic parameters

| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| --- | --- | --- | --- | --- | --- | --- |
| EL | 41 | EL301 | Voreios Tomeas Athinon | 586,621 | 14,894 | 212,260 |
| EL | 42 | EL302 | Dytikos Tomeas Athinon | 484,628 | 5,472 | 90,180 |
| EL | 43 | EL303 | Kentrikos Tomeas Athinon | 924,917 | 29,871 | 450,080 |
| EL | 44 | EL304 | Notios Tomeas Athinon | 531,739 | 9,723 | 136,260 |
| EL | 45 | EL305 | Anatoliki Attiki | 561,097 | 10,518 | 154,520 |
| EL | 46 | EL306 | Dytiki Attiki | 178,703 | 4,066 | 65,650 |
| EL | 47 | EL307 | Peiraias, Nisoi | 505,854 | 9,328 | 148,130 |
| EL | 48 | EL411 | Lesvos, Limnos | 106,184 | 1,279 | 17,670 |
| EL | 49 | EL412 | Ikaria, Samos | 43,523 | 532 | 8,670 |
| EL | 50 | EL413 | Chios | 53,993 | 644 | 12,240 |
| EL | 51 | EL421 | Kalymnos, Karpathos, Kos, Rodos | 211,425 | 3,230 | 61,250 |
| EL | 52 | EL422 | Andros, Thira, Kea, Milos, Mykonos, Naxos, Paros, Syros, Tinos | 126,958 | 2,751 | 29,300 |
| EL | 53 | EL431 | Irakleio | 311,640 | 4,215 | 78,840 |
| EL | 54 | EL432 | Lasithi | 74,463 | 1,115 | 13,590 |
| EL | 55 | EL433 | Rethymni | 87,482 | 1,174 | 18,090 |
| EL | 56 | EL434 | Chania | 159,089 | 2,228 | 39,720 |
| EL | 57 | EL511 | Evros | 147,709 | 1,833 | 32,490 |
| EL | 58 | EL512 | Xanthi | 112,112 | 1,124 | 22,470 |
| EL | 59 | EL513 | Rodopi | 111,731 | 1,122 | 19,240 |
| EL | 60 | EL514 | Drama | 96,836 | 1,015 | 14,470 |
| EL | 61 | EL515 | Thasos, Kavala | 134,411 | 1,808 | 27,599 |
| EL | 62 | EL521 | Imathia | 141,517 | 1,532 | 24,160 |
| EL | 63 | EL522 | Thessaloniki | 1,108,085 | 15,552 | 302,800 |
| EL | 64 | EL523 | Kilkis | 80,762 | 918 | 13,020 |
| EL | 65 | EL524 | Pella | 138,583 | 1,572 | 22,480 |
| EL | 66 | EL525 | Pieria | 131,388 | 1,421 | 20,670 |
| EL | 67 | EL526 | Serres | 169,242 | 1,678 | 20,800 |
| EL | 68 | EL527 | Chalkidiki | 110,545 | 1,565 | 12,190 |
| EL | 69 | EL531 | Grevena, Kozani | 173,569 | 2,552 | 33,370 |
| EL | 70 | EL532 | Kastoria | 47,723 | 517 | 8,430 |
| EL | 71 | EL533 | Florina | 50,196 | 847 | 9,459 |
| EL | 72 | EL541 | Arta, Preveza | 122,687 | 1,414 | 23,230 |
| EL | 73 | EL542 | Thesprotia | 45,131 | 532 | 7,080 |
| EL | 74 | EL543 | Ioannina | 167,432 | 2,013 | 36,310 |
| EL | 75 | EL611 | Karditsa, Trikala | 238,594 | 2,545 | 40,570 |
| EL | 76 | EL612 | Larisa | 282,542 | 4,070 | 67,530 |
| EL | 77 | EL613 | Magnisia, Sporades | 204,738 | 2,599 | 36,410 |
| EL | 78 | EL621 | Zakynthos | 39,938 | 722 | 12,010 |
| EL | 79 | EL622 | Kerkyra | 102,613 | 1,548 | 23,160 |
| EL | 80 | EL623 | Ithaki, Kefallinia | 38,945 | 566 | 4,570 |
| EL | 81 | EL624 | Lefkada | 23,935 | 288 | 4,090 |
| EL | 82 | EL631 | Aitoloakarnania | 204,159 | 2,360 | 34,280 |
| EL | 83 | EL632 | Achaia | 303,224 | 3,956 | 63,970 |
| EL | 84 | EL633 | Ileia | 156,587 | 1,716 | 28,810 |
| EL | 85 | EL641 | Voiotia | 121,004 | 2,509 | 32,299 |
| EL | 86 | EL642 | Evvoia | 212,764 | 2,836 | 36,030 |
| EL | 87 | EL643 | Evrytania | 19,285 | 198 | 4,090 |
| EL | 88 | EL644 | Fthiotida | 160,278 | 2,196 | 37,360 |
| EL | 89 | EL645 | Fokida | 42,430 | 446 | 7,010 |
| EL | 90 | EL651 | Argolida, Arkadia | 180,508 | 2,790 | 36,640 |
| EL | 91 | EL652 | Korinthia | 148,540 | 2,006 | 29,349 |
| EL | 92 | EL653 | Lakonia, Messinia | 250,134 | 3,081 | 48,150 |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices 2017) refer to 2016 and employees data refer to 2016*

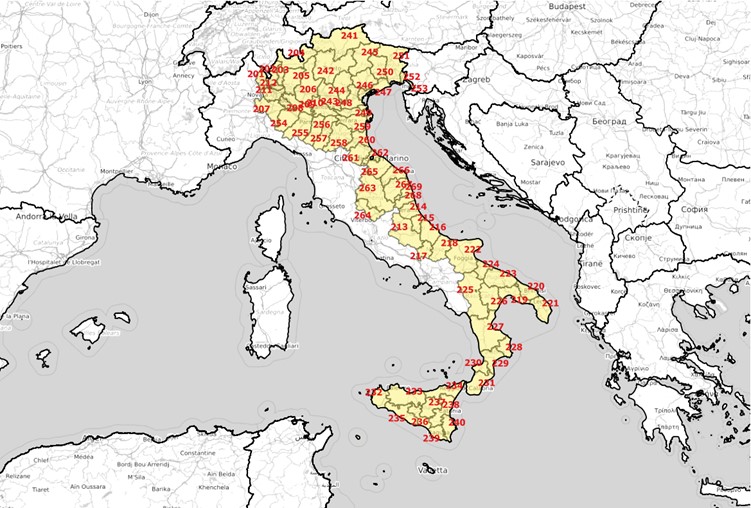
### Italy

The zoning system of the EMTM in Italy has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: provinces of Italy;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in Italy.

Figure : TAZs of the EMTM in Italy



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in Italy is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Italy and main socioeconomic parameters

| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| --- | --- | --- | --- | --- | --- | --- |
| IT | 201 | ITC41 | Varese | 890,043 | 25,567 | 267,000 |
| IT | 202 | ITC42 | Como | 600,190 | 16,505 | 174,100 |
| IT | 203 | ITC43 | Lecco | 339,238 | 10,075 | 100,800 |
| IT | 204 | ITC44 | Sondrio | 181,437 | 5,234 | 61,200 |
| IT | 205 | ITC46 | Bergamo | 1,109,933 | 34,805 | 374,800 |
| IT | 206 | ITC47 | Brescia | 1,262,678 | 40,666 | 418,000 |
| IT | 207 | ITC48 | Pavia | 547,251 | 13,024 | 133,600 |
| IT | 208 | ITC49 | Lodi | 229,338 | 5,999 | 61,400 |
| IT | 209 | ITC4A | Cremona | 359,388 | 10,725 | 103,800 |
| IT | 210 | ITC4B | Mantova | 412,610 | 12,602 | 137,200 |
| IT | 211 | ITC4C | Milano | 3,218,201 | 168,419 | 1,561,700 |
| IT | 212 | ITC4D | Monza e della Brianza | 868,859 | 25,699 | 252,500 |
| IT | 213 | ITF11 | L'Aquila | 301,910 | 7,260 | 85,400 |
| IT | 214 | ITF12 | Teramo | 309,859 | 7,183 | 90,500 |
| IT | 215 | ITF13 | Pescara | 321,309 | 7,750 | 83,800 |
| IT | 216 | ITF14 | Chieti | 389,169 | 9,608 | 118,100 |
| IT | 217 | ITF21 | Isernia | 85,805 | 1,648 | 19,500 |
| IT | 218 | ITF22 | Campobasso | 224,644 | 4,445 | 54,900 |
| IT | 219 | ITF43 | Taranto | 583,479 | 10,297 | 141,799 |
| IT | 220 | ITF44 | Brindisi | 397,083 | 7,027 | 92,400 |
| IT | 221 | ITF45 | Lecce | 802,082 | 12,718 | 171,700 |
| IT | 222 | ITF46 | Foggia | 628,556 | 10,874 | 140,400 |
| IT | 223 | ITF47 | Bari | 1,260,142 | 26,534 | 348,300 |
| IT | 224 | ITF48 | Barletta-Andria-Trani | 392,546 | 6,046 | 86,700 |
| IT | 225 | ITF51 | Potenza | 370,680 | 8,484 | 96,900 |
| IT | 226 | ITF52 | Matera | 199,685 | 3,406 | 46,699 |
| IT | 227 | ITF61 | Cosenza | 711,739 | 11,071 | 152,600 |
| IT | 228 | ITF62 | Crotone | 175,566 | 2,741 | 37,300 |
| IT | 229 | ITF63 | Catanzaro | 362,343 | 6,862 | 97,300 |
| IT | 230 | ITF64 | Vibo Valentia | 161,619 | 2,465 | 33,700 |
| IT | 231 | ITF65 | Reggio di Calabria | 553,861 | 9,760 | 126,300 |
| IT | 232 | ITG11 | Trapani | 434,476 | 6,768 | 89,500 |
| IT | 233 | ITG12 | Palermo | 1,268,217 | 23,046 | 281,600 |
| IT | 234 | ITG13 | Messina | 636,653 | 11,099 | 145,400 |
| IT | 235 | ITG14 | Agrigento | 442,049 | 6,521 | 88,400 |
| IT | 236 | ITG15 | Caltanissetta | 269,710 | 4,123 | 56,500 |
| IT | 237 | ITG16 | Enna | 168,052 | 2,598 | 32,500 |
| IT | 238 | ITG17 | Catania | 1,113,303 | 19,679 | 259,200 |
| IT | 239 | ITG18 | Ragusa | 321,359 | 5,551 | 83,200 |
| IT | 240 | ITG19 | Siracusa | 402,822 | 7,640 | 95,300 |
| IT | 241 | ITH10 | Bolzano-Bozen | 524,256 | 22,101 | 215,700 |
| IT | 242 | ITH20 | Trento | 538,604 | 18,885 | 193,700 |
| IT | 243 | ITH31 | Verona | 921,557 | 30,486 | 323,900 |
| IT | 244 | ITH32 | Vicenza | 865,082 | 28,367 | 300,800 |
| IT | 245 | ITH33 | Belluno | 205,781 | 6,788 | 71,200 |
| IT | 246 | ITH34 | Treviso | 885,972 | 28,140 | 298,000 |
| IT | 247 | ITH35 | Venezia | 854,275 | 26,594 | 284,500 |
| IT | 248 | ITH36 | Padova | 936,274 | 31,245 | 331,300 |
| IT | 249 | ITH37 | Rovigo | 238,588 | 6,104 | 67,600 |
| IT | 250 | ITH41 | Pordenone | 312,051 | 9,382 | 106,800 |
| IT | 251 | ITH42 | Udine | 531,466 | 15,811 | 177,400 |
| IT | 252 | ITH43 | Gorizia | 139,673 | 3,817 | 44,400 |
| IT | 253 | ITH44 | Trieste | 234,682 | 7,966 | 87,300 |
| IT | 254 | ITH51 | Piacenza | 286,758 | 8,982 | 98,100 |
| IT | 255 | ITH52 | Parma | 448,899 | 16,125 | 171,700 |
| IT | 256 | ITH53 | Reggio nell'Emilia | 532,483 | 18,495 | 181,800 |
| IT | 257 | ITH54 | Modena | 700,862 | 26,474 | 259,200 |
| IT | 258 | ITH55 | Bologna | 1,009,210 | 39,825 | 404,600 |
| IT | 259 | ITH56 | Ferrara | 348,362 | 9,270 | 98,100 |
| IT | 260 | ITH57 | Ravenna | 391,414 | 12,367 | 127,900 |
| IT | 261 | ITH58 | Forli -Cesena | 394,067 | 12,385 | 130,300 |
| IT | 262 | ITH59 | Rimini | 336,786 | 9,846 | 104,700 |
| IT | 263 | ITI21 | Perugia | 660,690 | 16,478 | 202,400 |
| IT | 264 | ITI22 | Terni | 228,218 | 5,086 | 61,600 |
| IT | 265 | ITI31 | Pesaro e Urbino | 360,711 | 9,555 | 111,899 |
| IT | 266 | ITI32 | Ancona | 474,124 | 13,932 | 162,200 |
| IT | 267 | ITI33 | Macerata | 318,921 | 8,019 | 90,300 |
| IT | 268 | ITI34 | Ascoli Piceno | 209,450 | 5,247 | 58,300 |
| IT | 269 | ITI35 | Fermo | 174,849 | 4,332 | 49,100 |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices) refer to 2016 and employees data refer to 2016*

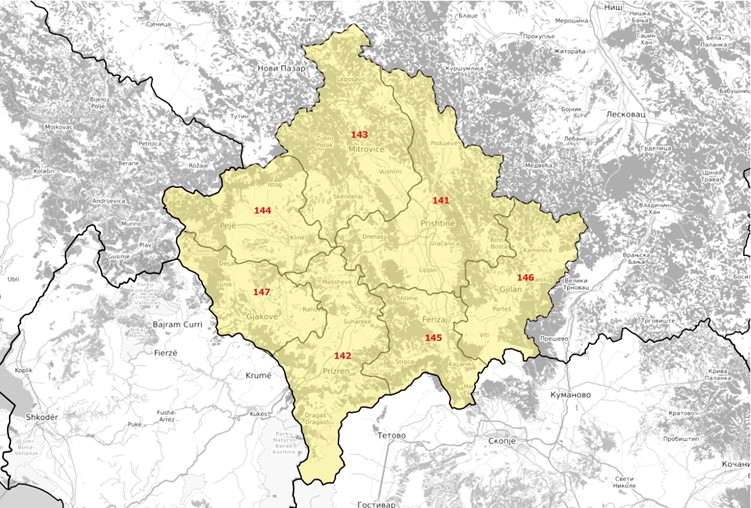
### Kosovo

The zoning system of the EMTM in Kosovo has been developed on the basis of the following basic principles:

* Zoning level of detail: comparable to NUTS 3;
* Corresponding administrative unit: UNMIK’s districts of Kosovo;
* Data source: Kosovo Agency of Statistics (ASK).

The map in the following figure represents the TAZs of the EMTM in Kosovo.

Figure : TAZs of the EMTM in Kosovo



*Source: Authors, based on Kosovo Agency of Statistics*

The correspondence table between EMTM TAZs and statistical units in Kosovo is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Kosovo and main socioeconomic parameters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| XK | 141 | n.a. | Pristina | 484,517 | n.a. | n.a. |
| XK | 142 | n.a. | Prizren | 347,506 | n.a. | n.a. |
| XK | 143 | n.a. | Kosovksa Mitrovica | 225,212 | n.a. | n.a. |
| XK | 144 | n.a. | Pec | 178,326 | n.a. | n.a. |
| XK | 145 | n.a. | Ferizaj | 179,245 | n.a. | n.a. |
| XK | 146 | n.a. | Gjilani | 166,212 | n.a. | n.a. |

*Source: Authors, based on Kosovo Agency of Statistics; Notes: population data refer to 2016, GDP and employment data are not available*

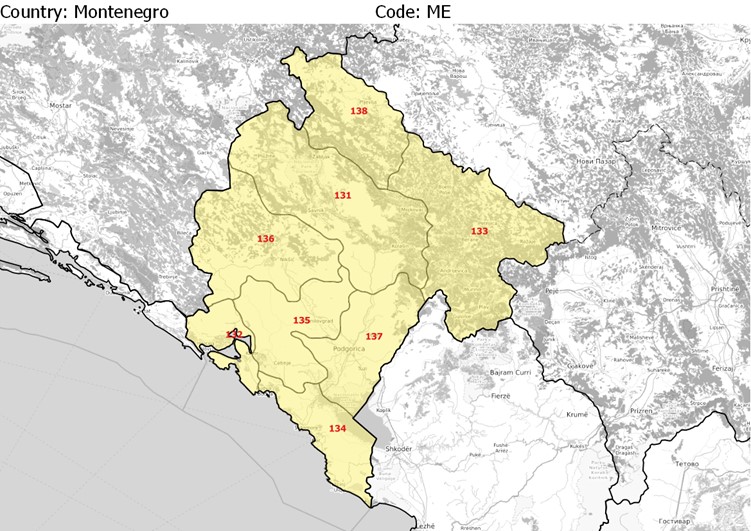
### Montenegro

The zoning system of the EMTM in Montenegro has been developed on the basis of the following basic principles:

* Zoning level of detail: comparable to NUTS 3;
* Corresponding administrative unit: aggregation of municipalities of Montenegro;
* Data source: Statistical Office of Montenegro (MONSTAT).

The map in the following figure represents the TAZs of the EMTM in Montenegro.

Figure : TAZs of the EMTM in Montenegro



*Source: Authors, based on Statistical Office of Montenegro*

The correspondence table between EMTM TAZs and statistical units in Montenegro is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Montenegro and main socioeconomic parameters

| COUNTRY | TAZ | NUTS3 | NAME | AGGREGATED MUNICIPALITIES | POPULATION | GDP | EMPLOYEES |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ME | 131 | n.a. | Mojkovac | Savnik, Kolasin, Mojkovac, Pluzine, Zabljak | 23,274 | n.a. | n.a. |
| ME | 132 | n.a. | Kotor - Herceg Novi | Kotor, Herceg Novi, Tivat | 68,115 | n.a. | n.a. |
| ME | 133 | n.a. | Bijelo Polje | Gusinje, Rozaje, Andrijevica, Berane, Bijelo Polje | 116,520 | n.a. | n.a. |
| ME | 134 | n.a. | Bar | Ulcinj, Bar, Budva | 84,781 | n.a. | n.a. |
| ME | 135 | n.a. | Danilovgrad | Cetinje, Danilovgrad | 33,928 | n.a. | n.a. |
| ME | 136 | n.a. | Niksic | - | 70,042 | n.a. | n.a. |
| ME | 137 | n.a. | Podgorica | - | 197,589 | n.a. | n.a. |
| ME | 138 | n.a. | Pljevlja | - | 28,124 | n.a. | n.a. |

*Source: Authors, based on Statistical Office of Montenegro; Notes: population data refer to 2017, GDP and employment data are not available*

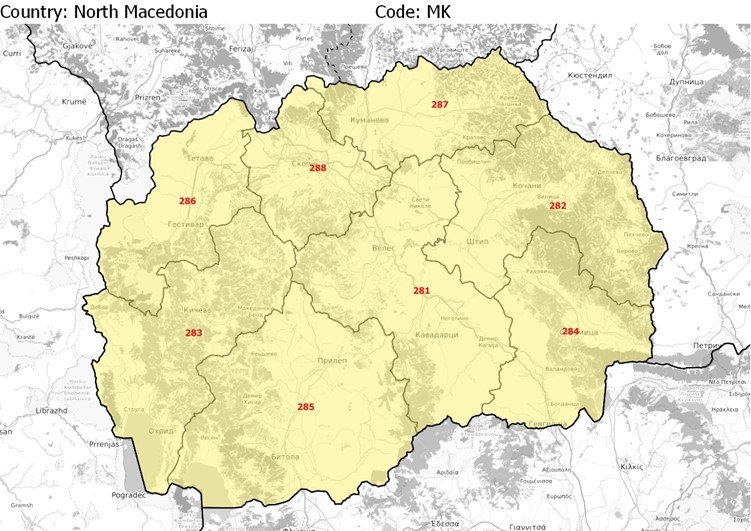
### North Macedonia

The zoning system of the EMTM in North Macedonia has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: statistical regions of North Macedonia;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in North Macedonia.

Figure : TAZs of the EMTM in North Macedonia



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in North Macedonia is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in North Macedonia and main socioeconomic parameters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| MK | 281 | MK001 | Vardarski | 152,569 | 750 | 43,520 |
| MK | 282 | MK002 | Istocen | 176,261 | 763 | 58,040 |
| MK | 283 | MK003 | Jugozapaden | 219,729 | 792 | 48,340 |
| MK | 284 | MK004 | Jugoistocen | 173,517 | 963 | 46,880 |
| MK | 285 | MK005 | Pelagoniski | 229,993 | 1,056 | 64,879 |
| MK | 286 | MK006 | Poloski | 320,765 | 690 | 52,540 |
| MK | 287 | MK007 | Severoistocen | 176,127 | 481 | 33,060 |
| MK | 288 | MK008 | Skopski | 624,522 | 4,161 | 210,850 |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices 2017) refer to 2016 and employees data refer to 2016*

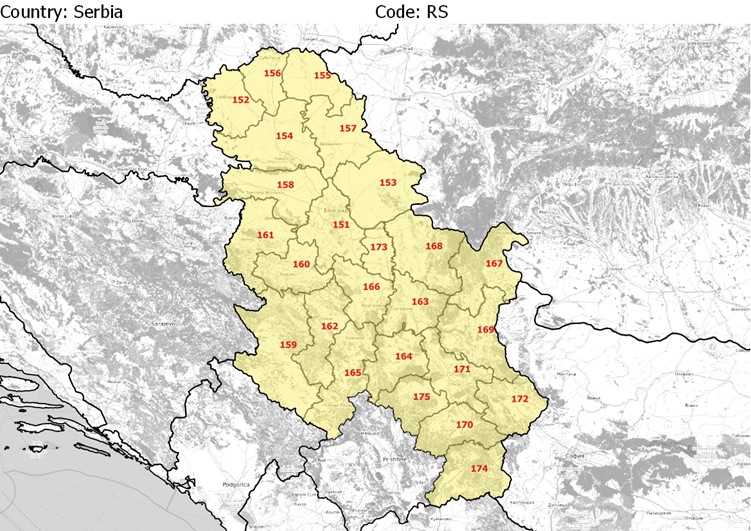
### Serbia

The zoning system of the EMTM in Serbia has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: districts of Serbia;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in Serbia.

Figure : TAZs of the EMTM in Serbia



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in Serbia is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Serbia and main socioeconomic parameters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| RS | 151 | RS110 | Beogradska oblast | 1,685,797 | 14,750 | n.a. |
| RS | 152 | RS121 | Zapadnobacka oblast | 176,379 | 718 | n.a. |
| RS | 153 | RS122 | Juznobanatska oblast | 282,199 | 1,315 | n.a. |
| RS | 154 | RS123 | Juznobacka oblast | 617,702 | 4,072 | n.a. |
| RS | 155 | RS124 | Severnobanatska oblast | 139,088 | 585 | n.a. |
| RS | 156 | RS125 | Servernobacka oblast | 180,790 | 878 | n.a. |
| RS | 157 | RS126 | Srednjobanatska oblast | 178,099 | 825 | n.a. |
| RS | 158 | RS127 | Sremska oblast | 301,958 | 1,412 | n.a. |
| RS | 159 | RS211 | Zlatiborska oblast | 272,400 | 1,136 | n.a. |
| RS | 160 | RS212 | Kolubarska oblast | 166,120 | 664 | n.a. |
| RS | 161 | RS213 | Macvanska oblast | 284,375 | 921 | n.a. |
| RS | 162 | RS214 | Moravicka oblast | 202,973 | 907 | n.a. |
| RS | 163 | RS215 | Pomoravska oblast | 203,302 | 663 | n.a. |
| RS | 164 | RS216 | Rasinska oblast | 228,139 | 716 | n.a. |
| RS | 165 | RS217 | Raska oblast | 306,422 | 809 | n.a. |
| RS | 166 | RS218 | Sumadisjka oblast | 285,755 | 1,322 | n.a. |
| RS | 167 | RS221 | Borska oblast | 115,716 | 497 | n.a. |
| RS | 168 | RS222 | Branicevska oblast | 171,353 | 718 | n.a. |
| RS | 169 | RS223 | Zajecarska oblast | 110,516 | 338 | n.a. |
| RS | 170 | RS224 | Jablanicka oblast | 204,400 | 532 | n.a. |
| RS | 171 | RS225 | Nisavska oblast | 365,097 | 1,373 | n.a. |
| RS | 172 | RS226 | Pirotska oblast | 86,517 | 403 | n.a. |
| RS | 173 | RS227 | Podunavska oblast | 190,124 | 425 | n.a. |
| RS | 174 | RS228 | Pcinjska oblast | 199,239 | 464 | n.a. |
| RS | 175 | RS229 | Toplicka oblast | 85,812 | 257 | n.a. |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices 2017) refer to 2016, employment data are not available*

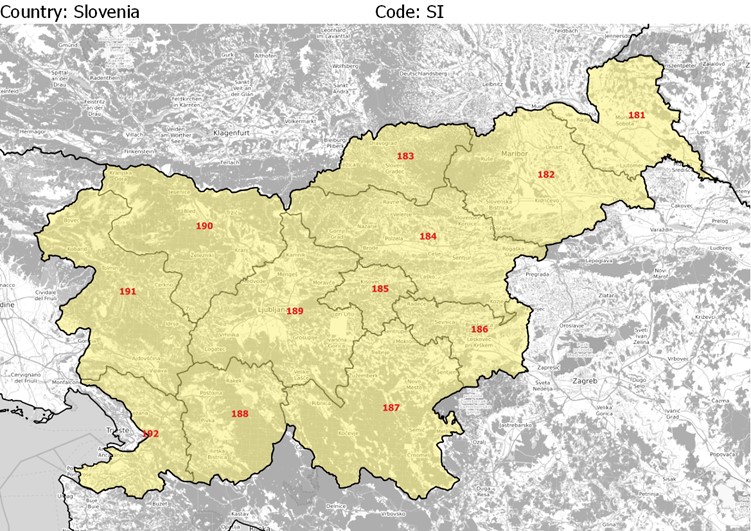
### Slovenia

The zoning system of the EMTM in Slovenia has been developed on the basis of the following basic principles:

* Zoning level of detail: NUTS 3;
* Corresponding administrative unit: statistical regions of Slovenia;
* Data source: Eurostat.

The map in the following figure represents the TAZs of the EMTM in Slovenia.

Figure : TAZs of the EMTM in Slovenia



*Source: Authors, based on Eurostat*

The correspondence table between EMTM TAZs and statistical units in Slovenia is provided below, together with the main socioeconomic parameters.

Table : TAZs of the EMTM in Slovenia and main socioeconomic parameters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| COUNTRY | TAZ | NUTS3 | NAME | POPULATION | GDP | EMPLOYEES |
| SI | 181 | SI031 | Pomurska | 115,477 | 1,611 | 32,830 |
| SI | 182 | SI032 | Podravska | 322,043 | 5,412 | 112,490 |
| SI | 183 | SI033 | Koroska | 70,761 | 1,173 | 22,540 |
| SI | 184 | SI034 | Savinjska | 254,761 | 4,858 | 95,450 |
| SI | 185 | SI035 | Zasavska | 57,280 | 625 | 12,470 |
| SI | 186 | SI036 | Posavska | 75,544 | 1,307 | 22,150 |
| SI | 187 | SI037 | Jugovzhodna Slovenija | 142,711 | 2,921 | 51,370 |
| SI | 188 | SI038 | Primorsko-notranjska | 52,582 | 788 | 15,650 |
| SI | 189 | SI041 | Osrednjeslovenska | 539,672 | 15,869 | 282,280 |
| SI | 190 | SI042 | Gorenjska | 203,800 | 3,769 | 67,399 |
| SI | 191 | SI043 | Goriska | 117,747 | 2,252 | 41,220 |
| SI | 192 | SI044 | Obalno-kraska | 113,517 | 2,416 | 42,050 |

*Source: Authors, based on Eurostat; Notes: population data refer to 2017, GDP data in million EUR (current market prices 2017) refer to 2017 and employees data refer to 2017*



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