

BENCHMARK OF CONTEXT INDICATORS FOR SOP ENV

| Fields targeted by the SOP Environment   | Potential context indicators resulting from the SOP ENV analysis  | Context indicators targeted by the OP "Infrastructure and Environment" - Poland   | Context indicators targeted by the SOP CF-ERDF - Spain  | Context indicators targeted by the OP Environment - Slovakia  |
|--|---|---|---|---|
| <p><b>1. <u>Water sector covers issues like water resources, waste water treatment, public network for water supply, sewage network, pollution of surface and underground waters, water management units</u></b></p> | <ul style="list-style-type: none"> <li>- Percentage of untreated or insufficiently treated wastewater that flows directly into natural receivers</li> <li>- Population connected to water and sewage services</li> <li>- Percentage of wastewater treatment plants functioning adequately</li> <li>- Percentage of urban agglomerations with wastewater treatment plants</li> <li>- Length of drinking water supply network</li> <li>- Volume of supplied water</li> <li>- Percentage of localities endowed with sewerage networks</li> <li>- Length of sewerage network</li> <li>- Percentage of total wastewater</li> <li>- Population affected by intermittent water supply</li> <li>- Population potentially exposed to intermittent water supply risk</li> <li>- Percentage of non-compliant public systems supplying drinking water</li> <li>- Average consumption of chemical fertilisers</li> <li>- Areas vulnerable from percolation of nitrates to free aquifers</li> </ul> | <ul style="list-style-type: none"> <li>- Population using water supply network</li> <li>- Population using sewage network</li> <li>- Loads of pollutants in municipal waste carried away after treatment to waters or to the ground: BOD5, COD, Suspension, General nitrogen, General phosphor</li> </ul> | <ul style="list-style-type: none"> <li>- Volume of distributed water / capita</li> <li>- Volume of treated waste water / volume of collected waste water</li> <li>- Volume of treated waste water / capita – day</li> <li>- Volume of reused water / capita – day</li> <li>- Percentage of water lost in the distribution</li> <li>- Average tariffs for urban water supply services</li> <li>- Average tariffs for urban water sanitation services</li> <li>- Payments for irrigation services in intercommunity water basins (total of groundwater and surface water)</li> <li>- Surface waters</li> <li>- Annual variation in surface waters</li> <li>- Groundwater</li> </ul> | <ul style="list-style-type: none"> <li>- Population connected to public sewers</li> <li>- Percentage of population connected to Waste Water Treatment Plants (WWTP)</li> <li>- Share of population supplied with drinking water from public water supply network</li> </ul> |
| <p><b>2. <u>Waste management and soil protection covers issues like municipal waste generation, management and disposal, management of</u></b></p>   | <ul style="list-style-type: none"> <li>- Waste generated yearly, out of which, by source: mining, production, municipal, medical</li> <li>- Municipal waste recovered</li> <li>- Non-compliant municipal landfills and dumping sites in rural areas</li> <li>- Municipal waste generated in EU countries</li> <li>- Average annual increase ratio of municipal waste generated</li> </ul>   | <ul style="list-style-type: none"> <li>- Municipal waste collected selectively</li> </ul>   | <ul style="list-style-type: none"> <li>- Waste selectively collected / capita</li> <li>- Waste selectively collected / total of waste collected</li> <li>- Mixed waste / capita</li> <li>- Non-hazardous industrial waste / gross added value in industry</li> </ul>  | <ul style="list-style-type: none"> <li>- Waste generation</li> <li>- Amount of waste disposal</li> <li>- Rate of waste recovery</li> </ul>  |

| Fields targeted by the SOP Environment  | Potential context indicators resulting from the SOP ENV analysis   | Context indicators targeted by the OP "Infrastructure and Environment" - Poland                     | Context indicators targeted by the SOP CF-ERDF - Spain  | Context indicators targeted by the OP Environment - Slovakia   |
|---|--|---|---|--|
| <p><b>the waste resulting from construction and demolition activities, medical activities, soil pollution and contaminated areas</b></p>                      | <ul style="list-style-type: none"> <li>- Ratio of urban population covered by sanitation services</li> <li>- Ratio of rural population covered by sanitation services</li> <li>- Medical waste disposed by incineration and through thermal sterilization</li> <li>- Non-compliant medical waste treatment installations</li> <li>- Surface of polluted soil and contaminated sites</li> </ul> |   | <ul style="list-style-type: none"> <li>- Production of urban waste / household</li> <li>- Waste collection: glass / mixed waste</li> <li>- Waste collection: plastic / mixed waste</li> <li>- Waste collection: paper and carton / mixed waste</li> </ul> |  |
| <p><b>3. <u>Air quality and climate changes</u> covers issues like dust, emission of SO<sub>2</sub> and NO<sub>x</sub>, Large Combustion Plants (LCP)</b></p> | <ul style="list-style-type: none"> <li>- Pollutant emissions</li> <li>- Commitment to emission reduction in accordance with Gothenburg Protocol</li> <li>- Consumption of energy from renewable sources</li> <li>- Increase of energy efficiency</li> <li>- Non-compliant LCP</li> </ul>   | <p><i>No context indicators established</i></p>   | <ul style="list-style-type: none"> <li>- Emissions of greenhouse effect gases</li> </ul>  | <ul style="list-style-type: none"> <li>- Greenhouse gas emissions</li> </ul>                             |
| <p><b>4. <u>Nature protection and biodiversity conservation</u> covers issues like natural habitats, species of flora and fauna, protected areas,</b></p>     | <ul style="list-style-type: none"> <li>- Surface of virgin forests</li> <li>- Percentage of natural and semi-natural habitats out of country surface</li> <li>- Surface covered by Natural Parks, National Parks and Biosphere Reserves</li> </ul>   | <p><i>No context indicators established</i></p>   | <ul style="list-style-type: none"> <li>- Surface of protected natural areas / total area</li> </ul>   | <ul style="list-style-type: none"> <li>- Number of NATURA 2000 declared areas</li> </ul>                 |
| <p><b>5. <u>Natural risks</u> covers issues like floods, situation of sea environment and coastal areas</b></p>   | <ul style="list-style-type: none"> <li>- Victims and material losses of floods</li> <li>- Seaside losses due to erosion</li> <li>- Endangered and vulnerable species</li> </ul>  | <ul style="list-style-type: none"> <li>- Volume of water stored in artificial reservoirs</li> </ul> | <p><i>No context indicators established</i></p>   | <ul style="list-style-type: none"> <li>- Area of the territory with flood protection measures</li> </ul> |

## OVERVIEW OF CONTEXT INDICATORS IN OTHER OPERATIONAL PROGRAMMES

### 1. Operational Programme “Infrastructure and Environment” 2007 - 2013 – Poland

Context indicators were established at the level of Priority Axis, but not all PAs were assigned such indicators. In the table below we only present the PAs for which context indicators were established.

| Name of indicator   | Measurement Unit  | Source   |
|---|-------------------|--|
| <b>Priority Axis I – The water and sewage management</b>  |                   |  |
| Population using water supply network   | Thou. inhabitants | Central Statistical Office (CSO) „Communal Infrastructure” |
| Population using sewage network   | Thou. inhabitants | CSO „Communal Infrastructure”                              |
| Loads of pollutants in municipal waste carried away after treatment to waters or to the ground: BOD5, COD, Suspension, General nitrogen, General phosphor | Thou. tons/year   | CSO „Environment protection”                               |
| <b>Priority Axis II – Waste management and the protection of earth</b>  |                   |  |
| Municipal waste collected selectively   | %                 | CSO „Municipal Infrastructure”                             |
| <b>Priority Axis III: Resource management and counteracting environmental risks</b>   |                   |  |
| Volume of water stored in artificial reservoirs   | m <sup>3</sup>    | Ministry of Environment (MoE)                              |
| <b>Priority Axis IX: Environment-friendly energy infrastructure and energy efficiency</b>   |                   |  |
| Power of installed electric energy from renewable sources (RSE)   | MW                | The Energy Regulatory Office (ERO)                         |
| Generation of electric energy from RSE  |                   | ERO  |
| Power of installed electric energy in professional power generating plants (co-generation)  | MW                | Energy Market Agency (EMA)                                 |
| Annual production of bio-components/bio-fuels (excluding bioethanol)  | tones             | Ministry of Economy (MoEc)                                 |

### 2. Operational Programme “Cohesion Fund - ERDF” 2007 – 2013 – Spain

Context indicators are established at programme level. The ones related to Environment are included in the next table, divided into two sections: one for environment and one for environment sustainable development.

| Name of indicator  | Measurement Unit | Source                                 |
|--|------------------|--|
| <b>Environment</b>   |                  |  |
| Emissions of greenhouse effect gases*                          | 1990 = 100       | World Watch Magazine                   |
| Waste selectively collected / capita                           | Tons / capita    | National Institute of Statistics (NIS) |
| Waste selectively collected / total of waste collected         | %                | NIS                                    |
| Mixed waste / capita   | Tons / capita    | NIS                                    |
| Non-hazardous industrial waste / gross added value in industry | Tons/mil. EUR    | NIS                                    |
| Production of urban waste / household                          | Tons/household   | Ministry of Environment (MoE)          |
| Waste collection: glass / mixed waste                          | %                | NIS                                    |

|  |  |          |
|--|--|----------|
| Waste collection: plastic / mixed waste  | %  | NIS      |
| Waste collection: paper and carton / mixed waste   | %  | NIS      |
| Volume of distributed water / capita   | m3/capita                                | NIS      |
| Volume of treated waste water / volume of collected waste water  | %  | NIS      |
| Volume of treated waste water / capita - day   | m3/inhab./day                            | NIS      |
| Volume of reused water / capita - day  | m3/inhab./day                            | NIS      |
| Percentage of water lost in the distribution   | %  | NIS      |
| Average tariffs for urban water supply services  | EUR/m3                                   | MoE      |
| Average tariffs for urban water sanitation services  | EUR/m3                                   | MoE      |
| Payments for irrigation services in intercommunity water basins (total of groundwater and surface water) | EUR/m3                                   | MoE      |
| Surface of protected natural areas / total area  | %  | MoE      |
| Investments of enterprises in environment protection / gross added value in industry                     | %  | NIS      |
| Investments of enterprises in environment protection / total gross added value                           | %  | NIS      |
| <b>Environment sustainable development</b>   |  |          |
| Current expenditures of companies for environment protection / no. of companies                          | EUR/enterprise                           | NIS      |
| No. of patents related to environment sector / 1000 patents  | %  | Eurostat |
| European Patent Office (EPO) patents applications related to environment sector / million inhabitants    | no. of applications/<br>mil. inhabitants | Eurostat |
| Surface waters   | Thou. m3                                 | NIS      |
| Annual variation in surface waters   | %  | NIS      |
| Groundwater  | Thou. m3                                 | NIS      |

\*this indicator does not follow the criteria set for the rest of context indicators: unofficial source and periodicity of data publication

### 3. Operational Programme “Environment” 2007 – 2013 – Slovakia

Context indicators were established at the programme level, as shown in the table below:

| Name of indicator   | Measurement Unit                              | Source                                |
|---|---|---------------------------------------|
| Greenhouse gas emissions  | Thousand tons CO <sub>2</sub> eq <sup>1</sup> | Slovak Hydro-meteorological Institute |
| Waste generation  | Million tons                                  | Ministry of Environment (MoE)         |
| Amount of waste disposal  | Million tons                                  | MoE                                   |
| Rate of waste recovery  | %   | MoE                                   |
| Population connected to public sewers   | number (in thousand)                          | MoE                                   |
| Percentage of population connected to Waste Water Treatment Plants (WWTP)         | %   | MoE                                   |
| Share of population supplied with drinking water from public water supply network | %   | MoE                                   |
| Area of the territory with flood protection measures                              | Sq.km.  | MoE                                   |
| Number of NATURA 2000 declared territories  |   | MoE                                   |

<sup>1</sup> Aggregated emissions of greenhouse gas expressed as CO<sub>2</sub> equivalent recalculated using GWP