

## Structural organization of QGIS-project blocks and parameters of the layers

Group / Database	Layer Name	Data Type	Layer Description	Role in the Project
<i>Base layers (context)</i>				
<i>project_admin_boundaries</i>	<i>project_admin_boundaries</i>	Polygon	Administrative boundaries of the Russian Federation (state border and federal subjects)	Visual context
<i>extension 3857</i>	<i>project frame</i>	Polygon	Spatial extent of the project (study area boundary)	Visual context
	<i>Rivers</i>	Line	Major rivers of the study region	Visual context
	<i>Lakes</i>	Polygon	Lakes (including Lake Baikal)	Visual context
<i>Input data (USLE- model inputs)</i>				
<i>USLE_parameters / ABC</i>	<i>ABCbkl9419_WGS84</i>	Point	USLE coefficients <i>A</i> , <i>B</i> , and <i>C</i> at nodes of a regular $1/8^\circ \times 1/8^\circ$ grid <sup>o</sup>	Model input parameters
<i>Maximum_Credible_Magnitude / MCM USLE</i>	<i>Mmax_bklABC9419dS125h6_dM0_WGS84</i>	Point	Maximum Credible Magnitude (MCM) for $T = 50$ years and exceedance probabilities of 10%, 5%, and 1%	Model input parameters
<i>MCM_USLE_structural_dominant_directions</i>	<i>MCM_USLE_structural_dominant_directions_t50p10</i>	Line	Dominant directions of seismic impact propagation derived from MCM ( $T = 50$ years, $P = 10\%$ ) and active fault data	Model input parameters
	<i>MCM_USLE_structural_dominant_directions_t50p5</i>	Line	Dominant directions of seismic impact propagation derived from MCM ( $T = 50$ years, $P = 5\%$ ) and active fault data	Model input parameters
	<i>MCM_USLE_structural_dominant_directions_t50p1</i>	Line	Dominant directions of seismic impact propagation derived from MCM ( $T = 50$ years, $P = 1\%$ ) and active fault data	Model input parameters

Group / Database	Layer Name	Data Type	Layer Description	Role in the Project
<i>USLE_based_Seismic_Effects (Model output)</i>				
<i>MI_T50_P10</i>	<i>MI_USLET50P10</i>	Raster	Expected maximum macroseismic intensity over 50 years ( $P=10\%$ )	Modeling result
	<i>vi_uslet50p10</i>	Polygon	Area of expected maximum intensity VI over 50 years ( $P=10\%$ )	Modeling result
	<i>vii_uslet50p10</i>	Polygon	Area of expected maximum intensity VII over 50 years ( $P=10\%$ )	Modeling result
	<i>viii_uslet50p10</i>	Polygon	Area of expected maximum intensity VIII over 50 years ( $P=10\%$ )	Modeling result
<i>MI_T50_P05</i>	<i>MI_USLET50P5</i>	Raster	Expected maximum macroseismic intensity over 50 years ( $P=5\%$ )	Modeling result
	<i>vi_uslet50p5</i>	Polygon	Area of expected maximum intensity VI over 50 years ( $P=5\%$ )	Modeling result
	<i>vii_uslet50p5</i>	Polygon	Area of expected maximum intensity VII over 50 years ( $P=5\%$ )	Modeling result
	<i>viii_uslet50p5</i>	Polygon	Area of expected maximum intensity VIII over 50 years ( $P=5\%$ )	Modeling result
<i>MI_T50_P01</i>	<i>MI_USLET50P1</i>	Raster	Expected maximum macroseismic intensity over 50 years ( $P=1\%$ )	Modeling result
	<i>vi_uslet50p1</i>	Polygon	Area of expected maximum intensity VI over 50 years ( $P=1\%$ )	Modeling result
	<i>vii_uslet50p1</i>	Polygon	Area of expected maximum intensity VII over 50 years ( $P=1\%$ )	Modeling result
	<i>viii_uslet50p1</i>	Polygon	Area of expected maximum intensity VIII over 50 years ( $P=1\%$ )	Modeling result

Group / Database	Layer Name	Data Type	Layer Description	Role in the Project
<b>Validation and Reference Data</b>				
<i>Active_faults_reference/ AFEAD_v2022_BKL</i>	<i>AFEAD_v2022_BKL</i>	Line	Active fault database of the region [19]	Reference data for dominant direction estimation
<i>Specialized_Catalog_of_ Earthquakes_BKL</i>	<i>Specialized_Catalog_bkl</i>	Point	Specialized earthquake catalog ( $M \geq 5.5$ , 124 events prior to 2013)	Validation of model maps
<i>Reference_hazard_models/ OSR_2016_fragment</i>	<i>MI_GSZ2016T50P10</i>	Raster / Polygon	GSZ-2016 hazard map fragment ( $T = 50$ years, $P = 1\%$ )	Comparative analysis
	<i>MI_GSZ2016T50P5</i>	Raster / Polygon	GSZ-2016 hazard map fragment ( $T = 50$ years, $P = 10\%$ )	Comparative analysis
	<i>MI_GSZ2016T50P1</i>	Raster / Polygon	GSZ-2016 hazard map fragment ( $T = 50$ years, $P = 1\%$ )	Comparative analysis
<i>Reference_hazard_models/ GEM_2023_fragment</i>	<i>MI_GEM2023_1T50P10</i>	Raster / Polygon	GEM-2023 global hazard map fragment ( $T = 50$ years, $P = 10\%$ )	Comparative analysis
<b>Verification and Comparison (Logical block; users' layers)</b>				
<b>Логический блок, без отдельных слоёв</b>				
			Overlay and comparison of USLE-based seismic effect maps with the earthquake catalog, GSZ-2016, and GEM-2023	Analysis, validation, and comparison