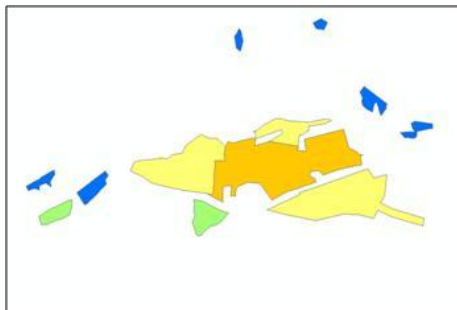# Population

Layer description

Definition: To define the general human pressure in an area by activities and including tourist activities and settlements.

Realization: To attend an appropriate spatial precision the population data has to be refined based on spatial disaggregation. The Population Data is distributed by the factor k, which describes the relation between site density and population density depending on the ratio of residential classes.

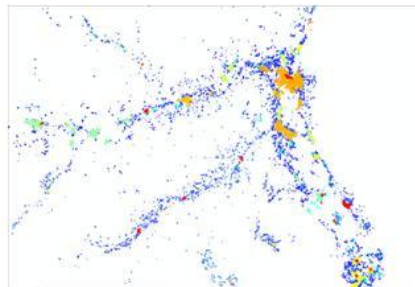$$k = \frac{\text{population}}{\sum\limits_{i} A_i * site\_density_i} \qquad\qquad \text{pop.dens. per hectare} = k * site\_density_i$$

classified residential areas

COMM_N	COMM	POP_91	POP_07	OVN_05
12001	Agra	342	405	0
12002	Albizzate	5089	5014	2344
12003	Angera	5384	5672	16324
12004	Arcisate	8946	9859	740
12005	Arsago Seprio	4121	4746	0
12006	Azzate	3720	4297	1512
12007	Azzio	646	755	154
12008	Barasso	1636	1728	0
12009	Bardello	1274	1512	0
12010	Bedero Valcuvia	504	625	0
12011	Besano	2154	2485	0
12012	Besnate	4633	5253	0
12013	Besozzo	7630	8971	111
12014	Biandronno	3109	3233	17454
12015	Bisuschio	3760	4200	0

population & tourist data

population & overnights per hectare

The tourist activities are represented by the overnights per year per municipality. These data was refined by the same distribution like the population data. It was added to the population value in the following way:

$$population \,\&\, tourist\ activities = \; population + \frac{ovn * \text{ImpFct}}{365}$$

ovn: total overnights per municipality per year
ImpFct: factor of impact of a tourist overnight relative to a local inhabitant, it was set to 2 due to the higher recreational activity

Classification: The Residential classes as well as the Population per Hectare values are classified by expert opinions.

Current classification:

Ratio of sealed surface per hectare for the residential classes

Residential class	Ration in %
sparsely rural	9
dense rural	24
sparsely urban	40
dense urban	62

Classification population value

Inhabitants per hectare	Indicator Value (0-100)
0	100
2	90
5	80
9	70
16	60
26	50
43	40
67	30
106	20
172	10
300	0

Layer Legend

- 1
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100