

SUPPLEMENTARY MATERIALS

Ecosystem Services-based city ranking in Italy: a tool to enhance sustainable thinking in regeneration strategies

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1. Italian Provinces



Figure S1 – Italian Provinces and territorial districts.

2. Italian Provinces ranked by ES-based city ranking

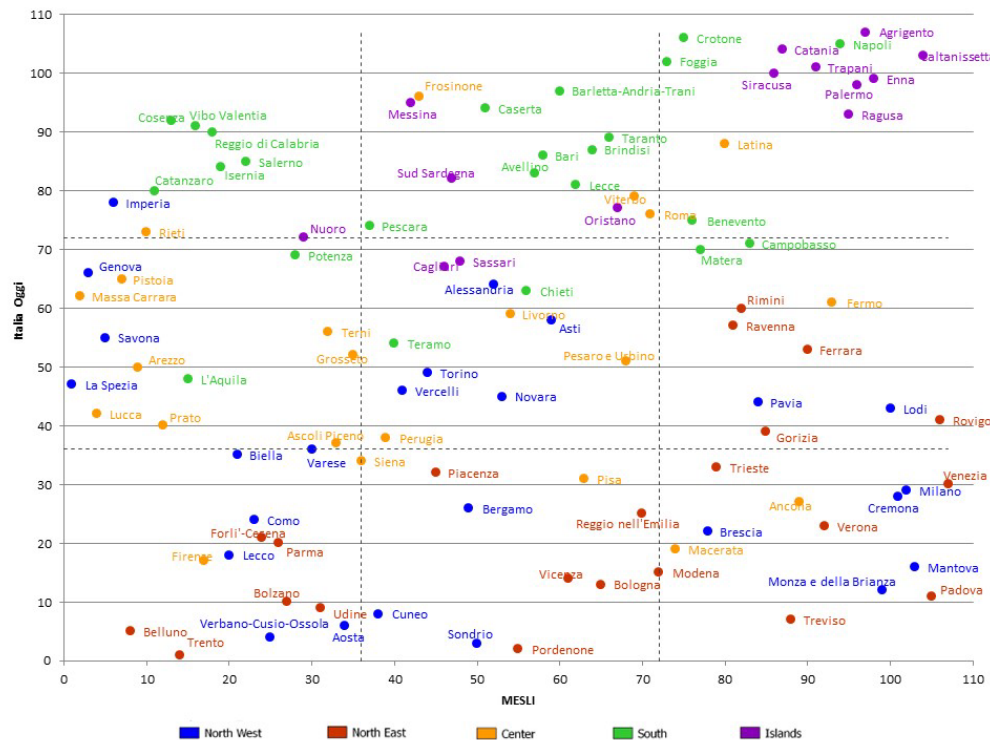
Based on the average values, we then assigned to each province the order number within the ranking representative of ecosystem multifunctionality (Table 1).

Table S1 - Ranking of the Italian Provinces representative of ecosystem multifunctionality

Province	Ranking	Province	Ranking	Province	Ranking
La Spezia	1	Pescara	37	Foggia	73
Massa Carrara	2	Cuneo	38	Macerata	74
Genova	3	Perugia	39	Crotone	75
Lucca	4	Teramo	40	Benevento	76
Savona	5	Vercelli	41	Matera	77
Imperia	6	Messina	42	Brescia	78
Pistoia	7	Frosinone	43	Trieste	79
Belluno	8	Torino	44	Latina	80
Arezzo	9	Piacenza	45	Ravenna	81
Rieti	10	Cagliari	46	Rimini	82
Catanzaro	11	Sud Sardegna	47	Campobasso	83
Prato	12	Sassari	48	Pavia	84
Cosenza	13	Bergamo	49	Gorizia	85
Trento	14	Sondrio	50	Siracusa	86
L'Aquila	15	Caserta	51	Catania	87
Vibo Valentia	16	Alessandria	52	Treviso	88
Firenze	17	Novara	53	Ancona	89
Reggio di Calabria	18	Livorno	54	Ferrara	90
Isernia	19	Pordenone	55	Trapani	91
Lecco	20	Chieti	56	Verona	92
Biella	21	Avellino	57	Fermo	93
Salerno	22	Bari	58	Napoli	94
Como	23	Asti	59	Ragusa	95
Forlì-Cesena	24	Barletta-Andria-Trani	60	Palermo	96
Verbano-Cusio-Ossola	25	Vicenza	61	Agrigento	97
Parma	26	Lecce	62	Enna	98
Bolzano	27	Pisa	63	Monza e della Brianza	99
Potenza	28	Brindisi	64	Lodi	100
Nuoro	29	Bologna	65	Cremona	101
Varese	30	Taranto	66	Milano	102
Udine	31	Oristano	67	Mantova	103
Terni	32	Pesaro e Urbino	68	Caltanissetta	104
Ascoli Piceno	33	Viterbo	69	Padova	105
Aosta	34	Reggio nell'Emilia	70	Rovigo	106
Grosseto	35	Roma	71	Venezia	107
Siena	36	Modena	72		

3. Pair-wise comparisons among Italian rankings

A relevant way to compare territorial units ranking is to analyse the scatter distribution pair-wise with MESLI. In the following diagrams, this comparison is proposed also showing the classification of provinces per territorial districts (see colours in Fig. 1). In this way it is possible to highlight how territorial differences are cached by each rank.



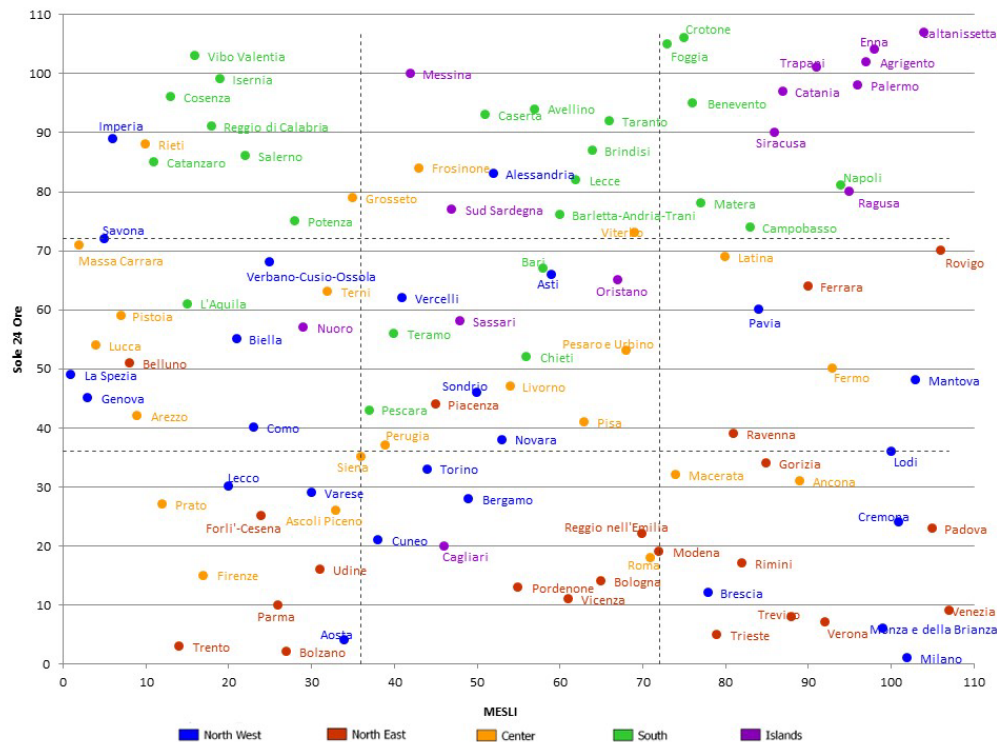


Figure S3 – Comparison between Sole 24 ore's and MESLI indexes

In the top ten positions in the *Sole 24 Ore's* ranking (Figure 3), the Provinces of Northern Italy still prevail with Milano in the first place. The Province of Florence is once again first among the provinces in the centre of Italy. Cagliari, in 20th place, is the first among the provinces of the Islands while we can find the first province of the district of Southern Italy almost in the middle of the ranking.

The last ten positions refer to Provinces of the Peninsular Southern Italy (Isernia, Vibo Valentia, Foggia and Crotona) and the Island of Sicily. In last place lays the Province of Caltanissetta.

With the exception of Milan, characterized by a resident population of over 3,200,000 inhabitants, the average size of the provinces classified within the top ten places and with an average population of about 601,000 inhabitants grows, ranging from about 100,000 inhabitants of Aosta to over 920,000 inhabitants of Verona.

The geographical component of the *Sole 24 Ore* ranking is less pronounced than in the *Italia Oggi* ranking. The Provinces of the North-Eastern district still prevail in the first half and the Provinces of Southern Italy and the Islands in the second half. It is precisely the Provinces in the Sicily region that show the greatest consistency between the MESLI and *Sole 24 Ore* rankings.

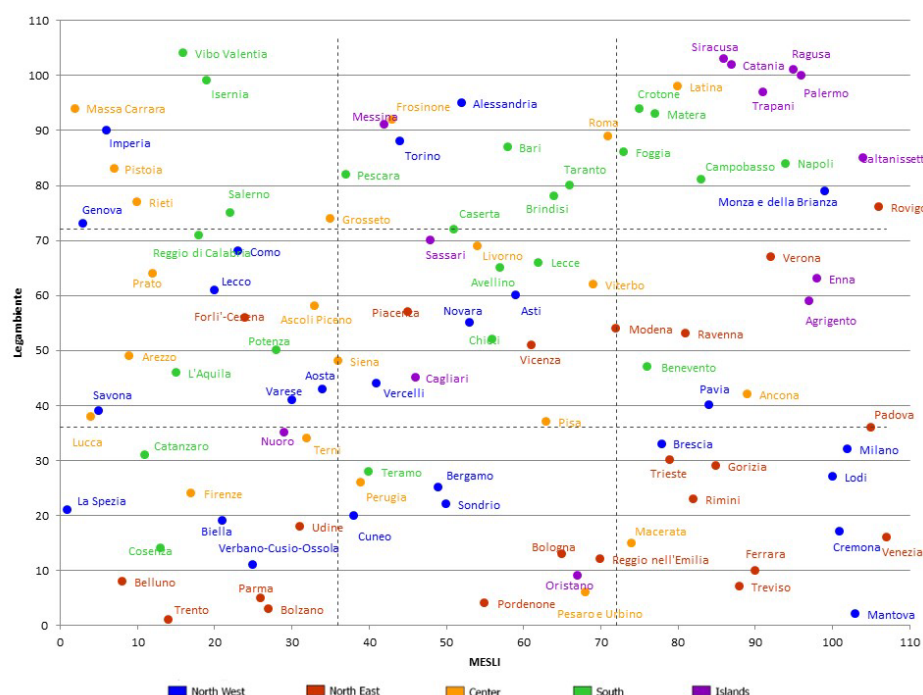


Figure S4 – Comparison between *Legambiente*'s and MESLI indexes

Legambiente's ranking rewards medium-sized cities (on average about 420,000 inhabitants) with Trento leading the ranking, followed by Provinces of the North East district, the centre and the Islands.

Although the Provinces of Fermo, BAT and South Sardinia are not included in the ranking, the tendency of the Southern Provinces and Islands to occupy the lowest positions is confirmed.

The Figure 4, which represents a comparison between the Legambiente and MESLI rankings, shows no correspondence between the positions in the rankings and the geographical location of the Provinces. There is also no significant correspondence with regard to the population of the Provinces. For example, Florence, a metropolitan city with almost a million inhabitants, and Biella, with fewer than 200,000 inhabitants, are in the top third of both rankings.

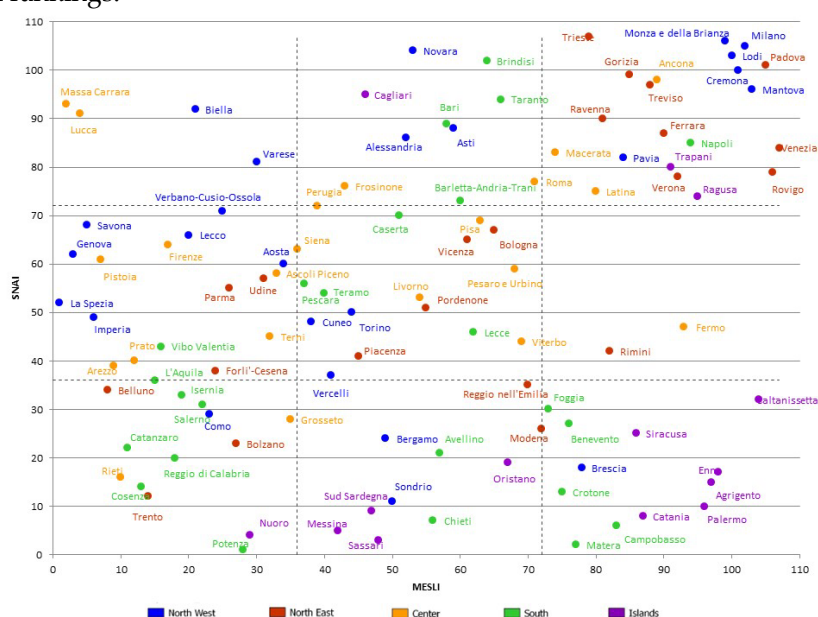


Figure S5 – Comparison between SNAI - derived and MESLI indexes

The ranking derived from the SNAI classification (Figure 5), overturns the previous ones and advances in the first places Provinces of the Southern district, Potenza and Matera, and of the Islands (Sassari).

In the last ten positions the Northern Provinces prevail with Trieste (N-E distribution), holding the last position. In the last three positions also Milan, the second most inhabited province in Italy. The SNAI ranking is characterized by the presence of certain geographical matches. At the top of the ranking are indeed many Provinces belonging to the North-Eastern District and most of the Provinces of Southern Italy and the Islands.