

Table S1. Land uses legend reclassified and used in metronomica model

Code	Description
Vacant	
1	Shrubs formations
2	Non-vegetated open space
Functions	
3	Pastures
4	Homogeneous non-irrigated agricultural areas (wooded)
5	Mediterranean forest
6	Intensive agriculture
7	Extensive agriculture
8	Forestry crops
9	Pinus forests
10	Continuos urban fabric
11	Discontinuos urban fabric
12	Industrial and commercial units
Features	
13	Wetlands
14	Mineral extraction and dump sites
15	Beaches, dune and sand plains

Table S2. Drivers of the land use model at local level. For agriculture, suitability is calculated on a yearly basis in the physical suitability model based on climate change scenarios and local characteristics.

Population = (Socio-economic)	Demography Population aggregation (concentration index) (Countryside and urban integration): approximation to internal migration Ownership
Infrastructures and accessibility = (Technologic)	Infrastructure distribution. Distance to roads Communications network concentration Distance to cities and markets Irrigation accessibility (hydraulic infrastructure) Technological network
Environment= (Nature)	Natural conservation units River network Climatic perturbations (drought and fires)
Cultural= (Cultural)	Cultural landscapes (impact on conservation)

Source of information REDIAM (<http://www.juntadeandalucia.es/medioambiente/site/rediam>)

Table S3. Change matrix 1999 - 2007

	Shrubs	Non-vegetated open space	Pastures	Homogeneous non-irrigated agricultural areas (wooded)	Mediterranean forest	Intensive agriculture	Extensive agriculture	Forestry crops	Compact wooded area (Pinus)	Continuous Urban fabric	Discontinuous urban fabric	Industrial and commercial units	Wetlands	Mineral extraction and dump sites	Beaches, dune and sand plains
Shrubs	2 588 773.89	46136	13 996.92	4 985.98	29783	8115	5 383.93	3 851.59	6 096.64	370.79	4 229.50	14 554.57	1 642.44	3 170.00	4.13
Non-vegetated open space	15598	53502	2086	958,7	1289	2927	346,7	4325	2008	8,48	371,5	531,3	708,4	229,8	0
Pastures	19 244.97	6737	267 368.44	7 087.57	478,9	7570	6 471.27	525.26	24.79	596.86	2 925.48	6 991.00	702.41	538.99	41.97
Homogeneous non-irrigated agricultural areas (wooded)	249.76	2377	2 629.37	1 384 309.81	7,11	4646	3 145.96	0	0	310.42	4 721.05	6 662.08	615.85	1 076.53	0
Mediterranean forest	6E+05	3834	565,6	1366	8E+05	679	42,8	73,23	873,8	41,56	3004	1257	405,9	274,7	0
Intensive agriculture	133,3	2080	1931	3897	284,4	5E+05	1858	0	0	337,1	7219	6177	941,7	947,5	0
Extensive agriculture	924.11	1251	5 105.77	108 983.69	69,19	71537	1 093 318.86	115.71	0.42	566.77	108 372.70	15 175.74	1 910.71	1 456.40	0
Forestry crops	9 282.64	20638	783.59	143.76	1253	971,2	37.05	44 209.30	129.34	0.63	7.21	322.24	69.94	79.15	0
Compact wooded area (Pinus)	4 654.66	2818	544.02	4.24	2374	50,64	13.35	0	323 423.16	35.49	4.82	545.36	24.81	114.60	11.48
Continuous Urban fabric	0	1,8	0	0	0	0	0	0	0	64 347.05	0	16.22	0.03		0
Discontinuous urban fabric	624.66	953,6	815.49	9 148.64	140,6	9228	2 792.71	0	0	438.53	484 324.26	8 679.29	278.89	223.36	0
Industrial and commercial units	1 035.49	57,06	611.33	201.56	33,65	71	1 248.86	78.93	8.65	1 511.90	10.28	106 955.53	136.83	37.22	4.80
Wetlands	202.06	4430	7 976.37	140.47	27,04	274,5	190.39	0	2.61	0.88	27.82	495.93	256 132.56	15.61	46.91
Mineral extraction and dump sites	61.90	26,91	352.55	151.05	0	290,3	95.30	0	0	28.82	4.12	686.30	70.62	18 404.12	0
Beaches, dune and sand plains	0	0	0	0	0	0	0	0	0	0	0	9.84	117.21	0	6 150.35

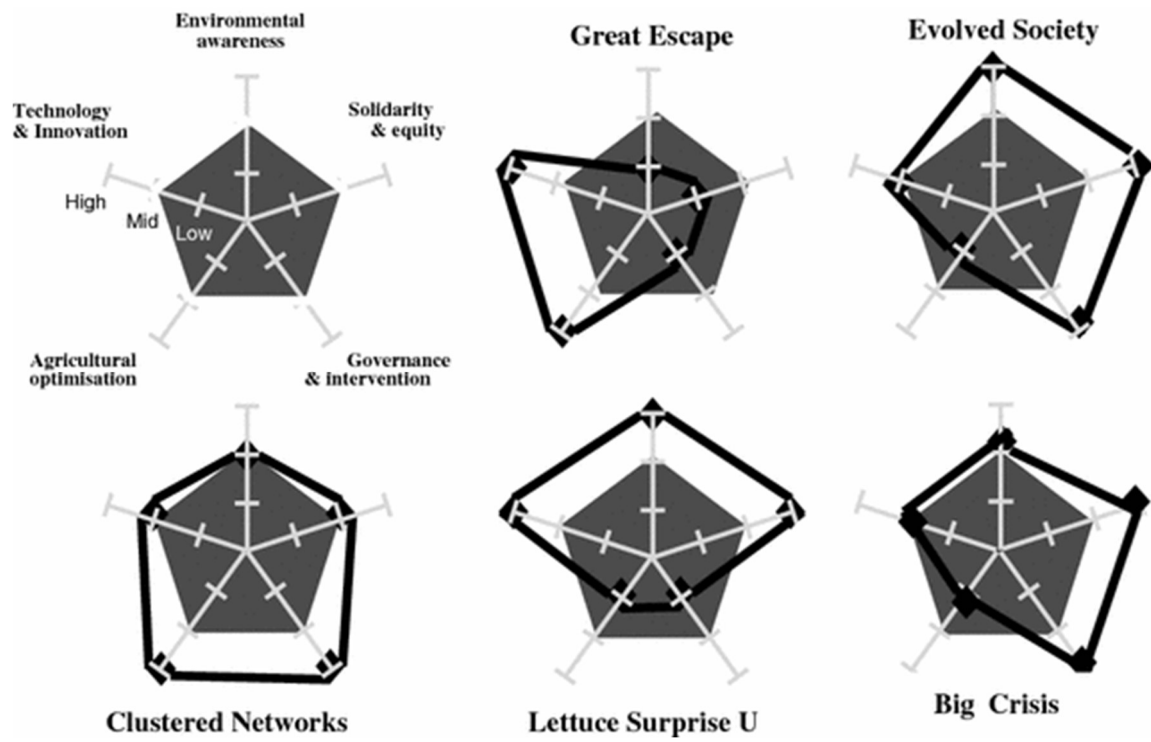


Figure S1. Main driving forces of PRELUDE scenarios [44].