

Supplementary Materials

Table S1. All statistical data collected (socioeconomic and environmental).

	Variable	Description	Source
Socioeconomic	CEEA	Consumption of electric energy (kWh) – agriculture, forestry and fishing	INE
	CEED	Consumption of electric energy (kWh) – domestic	INE
	CEEI	Consumption of electric energy (kWh) – industry, construction and water	INE
	CEET	Consumption of electric energy (kWh) – total	INE
	CP	Cereals production (kg)	INE
	CRI	Crude rate of increase (%)	INE
	CTAE	Collective tourist accommodation establishments (No.)	INE
	CY	Cereals yield (kg/ha)	INE
	DRFPP	Dynamism relative factor of purchasing power (index)	INE
	ECA	Electricity consumers (No.) – agriculture, forestry and fishing	INE
	ECD	Electricity consumers (No.) – domestic	INE
	ECI	Electricity consumers (No.) – industry, construction and water	INE
	ECT	Electricity consumers (No.) – total	INE
	EI	Export intensity (%)	INE
	EMPA	Employment (No. Thousands) – agriculture, forestry and fishing	INE
	EMPI	Employment (No. Thousands) – industry, construction and water	INE
	EMPS	Employment (No. Thousands) – services	INE
	EMPT	Employment (No. Thousands) – total	INE
	GDP	Gross domestic product (€)	INE
	GPCF	Gross fixed capital formation (€)	INE
	GPE	Gross production of electricity (kWh)	INE
	GVA	Gross value added (€) – total	INE
	GVAA	Gross value added (€) – agriculture, forestry and fishing	INE
	GVAI	Gross value added (€) – industry, construction and water	INE
	GVAS	Gross value added (€) – services	INE
	OTP	Olive trees production (kg)	INE
	OTY	Olive trees yield (kg/ha)	INE
	PCGDP	Per capita Gross domestic product (€/per inhabitant)	INE
	PCPP	Per capita purchasing power (%/per inhabitant)	INE
	PES&T	Persons employed in science and technology (% of active population)	INE
	PI	Potentiality index	INE
	PPP	Proportion of purchasing power (%)	INE
	RP	Resident Population (No.)	Pordata
	VP	Vineyard production (kg)	INE
	VY	Vineyard yield (kg/ha)	INE
Environmental	EEPBL	Environmental expenditure (€) - protection of biodiversity and landscape	INE
	EEPBLPC	Environmental expenditure (€/per inhabitant) – protection of biodiversity and landscape	INE
	EET	Environmental expenditure (€) - total	INE
	EETPC	Environmental expenditure (€/per inhabitant) - total	INE
	EEWM	Environmental expenditure (€) - waste management	INE
	EEWMP	Environmental expenditure (€/per inhabitant) - waste management	INE
	ER	Environmental revenues (€) - total	INE
	ERPBL	Environmental revenues (€) - protection of biodiversity and landscape	INE
	ERWM	Environmental revenues (€) - waste management	INE
	IWM	Investments on waste management (€) - total	INE
	UWC	Urban waste collected (t)	INE
	UWCPC	Urban waste collected per inhabitant (kg/hab)	INE
	VSW	Volumes stored by watershed (10 ⁶ m ³)	SNIRH

INE - National Statistics Institute of Portugal; SNIRH - National System of Hydrological Resources

Table S2. LUCC in Continental Portugal between 1995 and 2007 (area in ha).

2007																						
	<i>Pinus pinaster</i>	<i>Quercus suber</i>	<i>Eucalyptus</i>	<i>Quercus rotundifolia</i>	Other <i>quercus</i>	Other broadleaves	<i>Pinus pinea</i>	Other coniferous	Rain-fed crops	Irrigated crops	Rice	Vineyards	Olive	Other permanent	Grassland	Wetlands	Settlements	Shrubland	Other Land	Total	Unchanged (%)	Changes (%)
1995																						
<i>Pinus pinaster</i>	1057632	4679	120685	123	4177	17044	1903	933	4877	2302	0	2482	891	879	1263	187	16284	20590	1160	1258091	84.1	15.9
<i>Quercus suber</i>	2430	844962	3049	3103	109	413	4014	4	1295	856	3	466	529	34	7941	965	2191	651	180	873195	96.8	3.2
<i>Eucalyptus</i>	17751	2641	642502	1102	315	2810	1942	222	1768	2130	0	878	892	206	1065	699	7941	2577	579	688021	93.4	6.6
<i>Quercus rotundifolia</i>	166	5689	577	571613	4	45	5981	0	4241	661	1	561	925	54	11495	11494	1027	679	59	615270	92.9	7.1
Other <i>quercus</i>	2618	237	321	60	193227	1833	9	112	605	45	0	452	133	86	162	115	585	2231	31	202860	95.3	4.7
Other broadleaves	4905	436	2349	35	1762	217038	209	85	1027	410	6	578	342	691	405	498	2011	3120	54	235963	92.0	8.0
<i>Pinus pinea</i>	924	843	588	123	2	48	136056	35	317	249	2	66	23	32	368	74	1816	69	89	141723	96.0	4.0
Other coniferous	381	9	111	142	27	58	18	9199	6	4	0	8	4	6	23	0	56	205	32	10289	89.4	10.6
Rain-fed crops	23599	12603	9963	3391	6625	20481	10302	1342	983357	42627	92	22068	34037	11737	84654	3253	23788	26440	113	1320473	74.5	25.5
Irrigated crops	2386	237	2027	39	653	2652	461	88	23965	342217	4417	10578	3763	2844	9523	990	9526	2560	33	418959	81.7	18.3
Rice	1	8	3	0	0	32	25	0	757	2744	31153	21	130	103	442	66	46	16	0	35548	87.6	12.4
Vineyards	1299	158	874	22	145	682	212	35	13004	7447	12	166266	2035	1706	6163	90	2183	1827	22	204181	81.4	18.6
Olive	4010	4111	1620	807	348	1041	1696	39	13191	2150	0	5636	389151	1761	5925	976	4882	16868	34	454246	85.7	14.3
Other permanent	451	123	569	138	48	1204	697	10	6343	2185	29	1747	726	71732	2467	87	1799	2524	10	92888	77.2	22.8
Grassland	8406	25611	5404	7509	613	1886	20893	685	65861	7982	117	5435	8243	2165	422567	4030	9073	25642	345	622468	67.9	32.1
Wetlands	7	5	3	1	0	45	0	0	33	10	9	4	0	0	64	131185	316	21	138	131840	99.5	0.5
Settlements	447	53	437	115	27	188	58	51	248	87	9	30	33	22	501	217	334595	1098	48	338264	98.9	1.1
Shrubland	94747	10623	22273	5504	7455	53220	22025	2067	13466	1268	2	4194	4728	2401	27432	2429	13778	856344	4406	1148361	74.6	25.4
Other Land	1168	4	262	0	117	2209	3	43	59	38	3	19	16	5	3336	110	721	27077	68418	103608	66.0	34.0
Total	1223329	913032	813617	593827	215652	322929	206505	14950	1134420	415412	35856	221488	446601	96464	585795	157465	432617	990541	75750	8896250		
Unchanged (%)	86.5	92.5	79.0	96.3	89.6	67.2	65.9	61.5	86.7	82.4	86.9	75.1	87.1	74.4	72.1	83.3	77.3	86.5	90.3			
Changes (%)	13.5	7.5	21.0	3.7	10.4	32.8	34.1	38.5	13.3	17.6	13.1	24.9	12.9	25.6	27.9	16.7	22.7	13.5	9.7			
Gains (ha)	165697	68070	171115	22214	22426	105890	70449	5751	151063	73195	4702	55222	57450	24732	163228	26280	98022	134197	7333			
Losses (ha)	-200459	-28233	-45519	-43658	-9634	-18924	-5667	-1090	-337115	-76742	-4395	-37915	-65095	-21156	-199901	-656	-3669	-292018	-35190			

Overall unchanged: 84%; Overall changes: 16%; Kappa coefficient: 82.4%.

Table S3. LUCC in Continental Portugal between 2007 and 2010 (area in ha).

	2010																					
	<i>Pinus pinaster</i>	<i>Quercus suber</i>	<i>Eucalyptus</i>	<i>Quercus rotundifolia</i>	Other <i>quercus</i>	Other broadleaves	<i>Pinus pinea</i>	Other coniferous	Rain-fed crops	Irrigated crops	Rice	Vineyards	Olive	Other permanent	Grassland	Wetlands	Settlements	Shrubland	Other Land	Total	Unchanged (%)	Changes (%)
2007																						
<i>Pinus pinaster</i>	1192765	1556	16438	17	800	1629	1174	220	749	406	0	646	241	153	212	15	2876	3157	276	1223329	97.5	2.5
<i>Quercus suber</i>	208	909833	760	168	56	114	493	5	66	45	1	31	89	2	376	56	232	469	29	913032	99.6	0.4
<i>Eucalyptus</i>	3270	705	802734	215	58	461	252	29	418	268	1	192	350	92	346	32	2429	1551	213	813617	98.7	1.3
<i>Quercus rotundifolia</i>	75	801	36	590742	77	74	78	1	250	35	0	156	604	1	368	138	275	106	8	593827	99.5	0.5
Other <i>quercus</i>	627	79	67	70	213722	322	0	9	192	8	0	100	15	14	13	11	173	225	4	215652	99.1	0.9
Other broadleaves	2820	175	1479	54	498	268987	54	26	372	119	0	176	49	51	96	102	612	47170	88	322929	83.3	16.7
<i>Pinus pinea</i>	288	314	134	169	8	7	204897	14	42	15	0	3	31	2	39	10	524	1	5	206505	99.2	0.8
Other coniferous	76	18	9	0	0	40	0	14661	3	0	0	0	20	7	0	1	24	91	0	14950	98.1	1.9
Rain-fed crops	752	1361	366	496	181	590	77	43	1096530	6356	61	3392	11339	983	8260	201	2139	1283	11	1134420	96.7	3.3
Irrigated crops	1884	19	120	3	19	30	3	6	1597	401641	2458	1097	3839	410	1142	104	977	61	2	415412	96.7	3.3
Rice	0	0	0	0	0	4	0	0	4	243	35547	0	38	0	2	10	7	0	0	35856	99.1	0.9
Vineyards	41	1	106	0	32	61	7	3	2647	1338	16	213322	716	278	2527	0	272	122	0	221488	96.3	3.7
Olive	57	43	319	18	10	55	42	0	2103	223	0	445	440134	121	1536	167	596	730	1	446601	98.6	1.4
Other permanent	146	1	16	6	3	49	17	5	797	313	0	134	431	92802	826	3	175	119	619	96464	96.2	3.8
Grassland	829	1645	488	886	80	245	228	70	10476	2433	168	911	5656	287	548856	480	1909	9889	260	585795	93.7	6.3
Wetlands	1	0	0	7	0	3	0	0	0	7	1	0	11	0	4	157399	24	7	1	157465	100.0	0.0
Settlements	69	0	137	6	6	18	13	13	69	80	3	21	13	10	209	610	431120	200	20	432617	99.7	0.3
Shrubland	5717	685	15313	245	796	1448	117	47	2244	195	8	741	871	316	3845	182	2541	954110	1118	990541	96.3	3.7
Other Land	167	4	373	0	5	13	0	3	6	2	0	21	26	0	99	2	135	2919	71975	75750	95.0	5.0
Total	1209790	917239	838896	593102	216352	274150	207454	15156	1118568	413729	38262	221390	464472	95528	568756	159524	447040	1022211	74631	8896250		
Unchanged (%)	98.6	99.2	95.7	99.6	98.8	98.1	98.8	96.7	98.0	97.1	92.9	96.4	94.8	97.1	96.5	98.7	96.4	93.3	96.4			
Changes (%)	1.4	0.8	4.3	0.4	1.2	1.9	1.2	3.3	2.0	2.9	7.1	3.6	5.2	2.9	3.5	1.3	3.6	6.7	3.6			
Gains (ha)	17025	7406	36161	2361	2631	5162	2556	495	22038	12088	2716	8067	24338	2726	19900	2125	15921	68101	2655			
Losses (ha)	-30564	-3199	-10882	-3085	-1931	-53941	-1608	-289	-37890	-13771	-309	-8166	-6467	-3662	-36939	-65	-1498	-36430	-3775			

Overall unchanged: 97.1%; Overall changes: 2.9%; Kappa coefficient: 96.6%.

Table S4. LUCC in Continental Portugal between 1995 and 2010 (area in ha).

	2010																					
	<i>Pinus pinaster</i>	<i>Quercus suber</i>	<i>Eucalyptus</i>	<i>Quercus rotundifolia</i>	Other <i>quercus</i>	Other broadleaves	<i>Pinus pinea</i>	Other coniferous	Rain-fed crops	Irrigated crops	Rice	Vineyards	Olive	Other permanent	Grassland	Wetlands	Settlements	Shrubland	Other Land	Total	Unchanged (%)	Changes (%)
1995																						
<i>Pinus pinaster</i>	1038959	5839	133182	119	3965	13623	2643	1091	5232	2642	0	3145	1135	948	1434	256	19491	23083	1306	1258091	82.6	17.4
<i>Quercus suber</i>	2475	844315	3579	2888	165	500	4061	7	1115	841	4	488	683	38	7734	1041	2411	658	193	873195	96.7	3.3
<i>Eucalyptus</i>	17672	3201	638460	1293	321	2354	2139	214	1954	2355	0	945	1031	335	1329	737	9779	3221	681	688021	92.8	7.2
<i>Quercus rotundifolia</i>	213	6160	581	569696	20	105	6022	1	4048	565	1	773	1840	53	11453	11697	1225	759	59	615270	92.6	7.4
Other <i>quercus</i>	2296	310	370	123	193215	1512	8	125	659	50	0	539	148	90	215	136	719	2313	31	202860	95.2	4.8
Other broadleaves	5239	567	2716	80	1741	215288	261	95	1189	476	6	624	386	748	426	611	2376	3011	126	235963	91.2	8.8
<i>Pinus pinea</i>	894	797	632	284	2	43	135394	46	298	252	2	67	62	34	368	88	2286	80	94	141723	95.5	4.5
Other coniferous	402	9	115	142	26	53	18	9069	8	4	0	8	10	2	19	1	74	295	32	10289	88.1	11.9
Rain-fed crops	24036	13839	12717	3519	6784	20815	10260	1376	963436	45452	127	23819	45992	11953	82426	3862	26169	23774	117	1320473	73.0	27.0
Irrigated crops	3983	254	2170	38	678	2468	508	96	23672	335413	6820	10427	6319	2711	8978	1095	10628	2671	31	418959	80.1	19.9
Rice	1	17	3	0	0	35	25	0	649	2817	31065	21	356	103	311	78	51	16	0	35548	87.4	12.6
Vineyards	1293	163	988	10	150	619	225	40	13750	7799	27	162129	2810	1887	7735	96	2534	1910	17	204181	79.4	20.6
Olive	4077	4209	1632	823	371	1112	1744	40	14448	2306	0	5917	385305	1806	6777	1231	5424	16980	45	454246	84.8	15.2
Other permanent	450	138	612	145	50	1238	713	10	6589	2348	29	1814	887	69935	2692	96	2002	2509	629	92888	75.3	24.7
Grassland	8882	26640	5787	8163	706	1986	21047	722	67607	8894	155	5726	12135	2257	406356	4382	10442	30216	363	622468	65.3	34.7
Wetlands	5	5	6	2	0	34	0	0	33	15	10	4	0	0	61	131171	331	27	136	131840	99.5	0.5
Settlements	416	57	516	115	27	184	67	54	235	112	11	26	36	22	499	222	334566	1052	47	338264	98.9	1.1
Shrubland	97336	10713	24506	5661	8014	11949	22315	2127	13585	1349	2	4892	5321	2603	26868	2608	15725	888198	4591	1148361	77.3	22.7
Other Land	1162	7	10324	0	119	231	4	42	62	37	3	27	16	5	3076	116	809	21438	66131	103608	63.8	36.2
Total	1209790	917239	838896	593102	216352	274150	207454	15156	1118568	413729	38262	221390	464472	95528	568756	159524	447040	1022211	74631	8896250		
Unchanged (%)	85.9	92.0	76.1	96.1	89.3	78.5	65.3	59.8	86.1	81.1	81.2	73.2	83.0	73.2	71.4	82.2	74.8	86.9	88.6			
Changes (%)	14.1	8.0	23.9	3.9	10.7	21.5	34.7	40.2	13.9	18.9	18.8	26.8	17.0	26.8	28.6	17.8	25.2	13.1	11.4			
Gains (ha)	170831	72924	200435	23406	23137	58862	72060	6087	155132	78316	7197	59261	79167	25593	162400	28353	112475	134014	8500			
Losses (ha)	-219133	-28880	-49561	-45574	-9645	-20675	-6329	-1220	-357037	-83546	-4483	-42053	-68941	-22953	-216113	-669	-3699	-260164	-37477			

Overall unchanged: 83.4%; Overall changes: 16.6%; Kappa coefficient: 81.8%.