

L. Cesaro
P. Gatto
D. Pettenella
(eds.)

The Multifunctional Role of Forests – Policies, Methods and Case Studies



Università degli
Studi di Padova

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Economia Agraria



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The Role of Institutions in Forest Development: The Case of Forest Services and Forest Owners’ Associations in Portugal

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Abstract

A characteristic of the Forest Services in Portugal since being established in 1824 is path dependence. Their course of action has been influenced by the conditions prevailing during the initial period of the activity of this agency. This influence took the form of a preference for instruments of direct intervention in forestry which are not well adapted to a country where 93.4% of the forest land is privately owned.

The situation began to change in the mid 1980s when forest policy changed course by making financial incentives to private forestry its main instrument. The major unintended side effect of this change in policy was the emergence of forest owners’ associations. Despite the fact that these organizations are becoming increasingly important for the development of private forestry, they have not yet reached the top of the priorities in forest policy. The resistance to giving them proper public support is a heritage of that long tradition of state interventionism in forestry.

Keywords: private forestry, forest owners’ associations, Forest Services, path dependence

1. The main thesis

The main thesis to be argued in this paper is that the history of the Forest Services in Portugal reveals a strong “path dependence” feature. This means that the conditions prevailing when this agency was established have been influencing its activity for most of the time since then.

The paper starts by identifying those conditions that may be relevant and then presents the main activities of the Forest Services since their creation in 1824, until the 1980s. The choice of this end point has to do with the fact that it was at that time that forest policy initiated a course where the role of those initial conditions began to weaken.

2. The initial conditions

2.1 Land use and forest land ownership distribution

What will be considered here as the closest ancestor of the present day Forest Services in Portugal was established in 1824 under the title of General Administration of the Crown Forests (AGMRC-Administração Geral das Matas da Real Coroa).

The AGMRC was created under the supervision of the Ministry of Navy, in the follow-up to the Liberal Revolution of 1821. Although these political events brought about some changes in landownership with the nationalisation of property held by the religious orders, in 1835, the distribution of ownership was not very different from the one presented in the following table.

At that time, by far the major issue at stake in the opinion of most of those who spoke publicly about forest policy was the need to take care of the very high percentage of land that was “uncultivated” and unfit for farming. One of the first comprehensive estimates of land use patterns dates back to 1868. Based on this and other complementary estimates, the land use distribution at that time was as follows (Mendes 2002):

- a) Forest land: 1240000 ha (14.1%)
- b) Agricultural land: 1886000 ha (21.5%)
- c) Uncultivated land unfit for agriculture: 5463000 ha (62.3%).

Given this large amount of “uncultivated” land, afforestation was set at the top of the forest policy priorities. It remained there until the 1990s, well after the protection of existing stands should have replaced it at the top. In fact, this change of course in forest policy should have begun in the 1950s when the rural population started its irreversible decline. Given Portugal’s climate and the type of afforestation that had been practiced until that time, it should have been anticipated that the decline in rural population would lead to an increased risk of forest fire, which had been controlled until then by the forest utilisations of the local population.

2.2 The initial mission of the Forest Services

As was clear in the initial naming of the Forest Services, its mission was to manage the Crown Forests. Created in the aftermath of the first changes in the political regime corresponding to the fall of the Ancien Regime and the rise of liberalism, the mission of this new public administration was to move towards full management control of the Crown forests by the State, replacing the organization by the Ancien Regime that was still trying to survive based on the old hunting rights of the Crown (“Monteiro Mor”). The mission of AGMRC was also to insure this public control when those lands were transferred to the full jurisdiction of the State in the 1830s, when the liberal regime was fully established. The ambition was also to enlarge the jurisdiction of the State over forest and afforestable land.

Table 1. Area of forests and other wooded land by types of ownership.

Types of owners	1928		1959		1974/82		1995	
	ha	%	ha	%	ha	%	ha	%
State forests	53662	2.3	58000	2.0	78000	2.6	40000	1.2
Communal forests	55954	2.4	145000	5.0	380000	12.4	180000	5.4
Private forests	2221824	95.3	2697000	93.0	2598000	85.0	3129000	93.4
TOTAL	2331400	100.0	2900000	100.0	3056000	100.0	3349000	100.0

Source: Mendes et al. (2004)

Table 2. Area of forests under the control of Administração Geral das Matas.

Years	Hectares
1824	14464
1835	16318
1836	19125
1839	19130
1840–47	19755
1847–65	19940

Source: Ministério das Obras Publicas, Commercio e Industria (1905).

2.3 The belief in the virtues of direct State intervention in forestry

Almost all those speaking publicly and taking public decisions about forestry in those initial times of the Forest Services were unanimous in the advocacy of a leading role for the State in the huge task of afforestation to be undertaken throughout the country. These advocates were certainly aware of the fact that the State, through the Forest Services, had jurisdiction over only a very tiny part of the forests and afforestable land. However, they thought that the private forest owners had neither the will, nor the power to carry out the task. So the main role in this role should be taken by the State, through the Forest Sector or the municipalities.

2.4 The forest profession

When AGMRC was established there was no higher education in forestry in the country. The first Portuguese graduating in forestry got their degrees in Germany (Tharandt) and France (Nancy). The organization of the higher forest education which started in Lisbon in the 1860s was based on these experiences. For more than a century this was the only school of forestry in the country.

The generations of foresters trained in this school had an education with a strong Germanic influence. This orientation favoured a regime of forest management where timber supply and public authority had a leading role. This was very clear in the government commissioned report to organize the forest higher education and the Forest Services by Venâncio Deslandes (Deslandes, 1858) who travelled for one year in that part of Europe.

That kind of orientation was not well adapted to a country where the State only had authority over a very tiny part of the total forest and afforestable land. It was also not well adapted to a country where Mediterranean conditions prevail over a large part of the territory and where agro-forestry and sylvo-pastoral land uses were spread throughout most of the forest and afforestable land.

3. The long history of direct public intervention in forestry

3.1 Afforestation of the coastal dunes

Afforestation as an instrument for erosion prevention had been advocated and attempted as an important mission for a public agency since AGMRC was set up and even before then. The agency headquarters were located in a public forest established in the Middle Ages in an area of dunes along the coast, possibly with that purpose.

This kind of afforestation was the effectively first main mission of the Forest Services. After some failed attempts in the beginning of the 19th century, it was restarted in the 1850s. With ups and downs, it continued until the 1890s when big problems in the public finances and the loss of financial autonomy of the Forest Services meant no funds were available to proceed with the afforestation. The process restarted after those difficulties were overcome, at the beginning of the 20th century, lasting until the 1940s. This was one of the most important legacies of the direct intervention of the Forest Services with very significant social benefits.

3.2 The laws of the “Forest Regime”

The management of the existing forests under the public domain and the extension of this domain to the afforested coastal dunes were still a very tiny part of the total forest and afforestable land in the country. Almost all the rest were either communal, belonging to the municipalities or local communities, or privately owned lands. The ambition prevailing in the Forest Services was to become a leading agent in the afforestation of these communal and private lands, based on the assumption that local communities and private forest owners did not have the means and the will to do so.

After the opportunity was lost to promote a massive transfer of ownership of part of those lands to the public domain in the mid 19th century, only three ways were left to fulfil that ambition of direct public intervention in afforestation. One was to use the power of the public authority to expropriate private lands to promote some “public interests”. In this case, the main “public interest” the Forest Services could appeal to was erosion prevention. This path for forest policy was pointed out in some articles of the 1886 decree abolishing AGMRC and replacing it with the Forest Services. The decree stipulated that the State had the right to expropriate, and transfer to the jurisdiction of the Forest Services for afforestation, uncultivated lands belonging to private owners if they were unwilling to do the afforestation on their own that was needed to prevent erosion and improve water resources management. This forest policy path was never undertaken to a noticeable scale. One reason was its high cost for the public finances, which went through very hard times soon after that decree was published.

Another possible path for direct public intervention in afforestation was to appeal to the municipalities instead of relying on the State budget and on agencies belonging to the central public administration, such as the Forest Services. In the 19th there were some timid attempts in this direction. One example was a law proposed by the Government to Parliament in 1857,

Table 3. Area of dunes afforested by the Forest Services.

Years	Hectares	Years	hectares	Years	hectares	Years	hectares
1850–86	1580	1908	370	1930	1007	1952	32
1887	102	1909	338	1931	763	1953	142
1888	128	1910	378	1932	496	1954	67
1889	423	1911	350	1933	703	1955	42
1890	217	1912	314	1934	1559	1956	133
1891	246	1913	262	1935	3368	1957	101
1892	2	1914	336	1936	2402	1958	0
1893	29	1915	352	1937	3179	1959	473
1894	5	1916	416	1938	3001	1960	461
1895	40	1917	410	1939	2477	1961	540
1896	139	1918	375	1940	2069	1962	391
1897	32	1919	372	1941	1187	1963	439
1898	52	1920	434	1942	1491	1964	289
1899	3	1921	499	1943	1146	1965	901
1900	58	1922	320	1944	140	1966	840
1901	0	1923	446	1945	308	1967	820
1902	0	1924	276	1946	0	1968	456
1903	253	1925	299	1947	0	1969	505
1904	386	1926	516	1948	210	1970	326
1905	327	1927	471	1949	32	1971	263
1906	276	1928	635	1950	111	1972	172
1907	749	1929	1065	1951	100	1973	0

Sources:

a) 1850–1906: Ministério do Fomento (1912)

b) 1907–73: Rego (2001)

setting a target of 190 000 ha to be afforested in 50 years. To accomplish this target each of the 3800 parishes existing in the country should carry out the afforestation of 1 ha per year, on average. The main stumbling block for this, both at that time and until the 1970s, was that the local public administration, at both parish and municipal level, did not yet have a well-defined status within the structure of the public administration after the liberal reforms initiated in the 1820s, and their human and financial resources were very weak.

The third path that was left for direct public intervention in afforestation was to give up on the transfer of land ownership to the State and appeal to the transfer of management rights, especially where that was easier, namely the communal lands which were still very important in the mountainous regions of Northern and Central Portugal. For the foresters and others who wrote and spoke about forestry issues, most of those land were “uncultivated” and good for afforestation. Part of the reality that was forgotten in these statements is that, in many cases, they had sylvo-pastoral and other kinds of uses that were important for the survival of the local communities. So if afforestation was to be carried on those lands, in order to be well accepted by the local communities and not contribute to the acceleration of rural depopulation, it should accommodate those traditional uses. What happened in most cases, is that those communal lands were seen by the Forest Services and other relevant stakeholders involved in forest policy design as “uncultivated” and their traditional uses by the local communities were seen as a nuisance to be got rid of for the purposes of afforestation.

It was with this vision that this “uncultivated” part of the country was elected as the main front for direct public intervention in forestry for more than a hundred years. The stage for this intervention was set during the 19th century in three ways:

- a) some consensus was developed involving the AGMRC, the rest of the public administration, the forestry profession, and others who wrote and publicly spoke about forest policy issues advocating the need to carry out afforestation in the communal lands under the direct intervention of the public administration,
- b) AGMRC initiated some inventories of that territory, laying down the technical foundations for more complete works that were done later;
- c) some works of afforestation were initiated on communal lands located in mountain areas of Northern and Central Portugal, which were transferred to the jurisdiction of the Forest Services, allowing this agency to gain some experience in a type of afforestation that was different from that of the coastal dunes.

The legal framework for the afforestation of the commons was set on these foundations, with the so-called laws of the “Forest Regime”, consisting of four decrees published in 1901, 1903 and 1905. Going straight to the essential part of this legislation, it marks the end of the illusions about expropriation which was still underlying the 1886 legislation. With the laws of the “Forest Regime” the main instrument to promote afforestation became the transfer of management rights to the Forest Services. These laws also made some room for in-kind and financial incentives to private forestry, but they were not implemented to a noticeable scale until the 1980s.

The main elements of the 1901 decree are as follows:

- a) a legal definition of the concept of “Forestry Regime” opening up different ways of public intervention in all forest ownership types, without the pre-requisite of expropriation;
- b) a rationale for these kinds of public intervention:
 - direct intervention if the main goal is what we now call the promotion of public goods (“utilidade pública”) provided by forests, which the decree explicitly considers to be the case of the contribution of forests to the prevention of soil erosion, water resources protection and climate regulation;
 - indirect intervention through the provision of public incentives, if the goal is to motivate improved forest management in non-State forests;
- c) a rationale for entrusting the power of direct intervention to the State, in the first place, with the possibility of delegation of this public authority to municipalities, forest owners’ associations or individuals, that rationale being the provision of public goods;
- d) a specification of the different modalities of the “Forestry Regime”:
 - the “total forestry regime”;
 - the “partial forestry regime” which includes three sub-cases:
 - the “mandatory partial forestry regime”;
 - the “voluntary partial forestry regime”;
 - the “partial forestry regime of simple policing”;
- e) a legal mechanism to engage the public intervention in each of these kinds of regimes which did not rely on expropriation. This mechanism is a governmental decree of submission of the land to the Forestry Regime based on a previous study developed by the Forest Services to assess the public interest of the submission.

An important piece of legislation complementary to the Forestry Regime decrees is one which restored some financial autonomy to the Forest Services through the ear marking of the revenues of timber sales in public forests to the funding of that agency. For this purpose the decree created what was called the Special Fund of the Forest Services. This fund could also have been an instrument to provide incentives to private forestry, but it was never very active in this direction. This failure was the reason for several reforms of this fund throughout the 20th century (1945, 1963, 1964, 1973) to make it an effective instrument to promote private forestry, something which it never managed to achieve, until its abolition in 1977.

Table 4. Definition of the modalities of the Forestry Regime.

Modality	Owner	Manager	Enforceability of submission to the Forestry Regime	Rights of the owner	Duties of the owner
Total	State	State (Forest Services)	Legally mandatory		
Mandatory partial	a) Municipalities b) Local communities c) Private lands within the limits of a polygon defined by lands submitted to the total regime	Owners or the State (Forest Services) if the owners don't have the means to take care of the afforestation on their own	Legally mandatory	Receive part of the proceeds from the new forests ¹	Let part of the proceeds from the new forests go to the Forest Services to pay back the afforestation costs ¹
Voluntary partial	Private lands outside the limits of a polygon defined by lands submitted to the total regime	Owner	Voluntary (depends on the initiative of the owner)	Access to public incentives (technical assistance provided by the Forest Services for the management plans, free supply of seedlings, tax exemptions, etc.)	Respect of the forest management plan approved by the Forest Services
Partial of simple policing	Private lands outside the limits of a polygon defined by lands submitted to the total regime	Owner	Voluntary (depends on the initiative of the owner)	Free access to the services of the Forest Guard to enforce the private ownership rights of the owner	Provision of 1 ha of land for each 500 ha placed under public surveillance for cultivation by the guard for his own subsistence

1. In the case that a forestation and forest management are the responsibility of the Forest Services.

Table 5. Implementation of the Forestry Regime (ha).²

Years	Total regime	Mandatory partial	Voluntary partial	Partial of simple policing	Total area submitted
1931	57000	76000		267000	400000
1950	51000	336000	89000	378000	854000
1960	53000	452000	89000	531000	1125000
1973	50000	503000		866000	1419000

Source: Baptista (1993)

2 These areas include not only forests, but also lands making up the holdings submitted to the Forestry Regime.

Table 6. Afforestation of communal lands by the Forest Services in the mountain areas.

Years	Hectares	Years	Hectares	Years	Hectares	Years	Hectares
Before 1891	0	1912	69	1934	754	1956	12149
1891	47	1913	30	1935	1169	1957	16035
1892	16	1914	163	1936	820	1958	18904
1893	0	1915	271	1937	732	1959	16270
1894	0	1916	326	1938	599	1960	13309
1895	0	1917	186	1939	2621	1961	13929
1896	0	1918	323	1940	2394	1962	14835
1897	20	1919	443	1941	2371	1963	10535
1898	102	1920	543	1942	3930	1964	14266
1899	87	1921	639	1943	2796	1965	7627
1900	32	1922	508	1944	3926	1966	8174
1901	23	1923	491	1945	2868	1967	8470
1902	32	1924	456	1946	1642	1968	8015
1903	167	1925	423	1947	2935	1969	7175
1904	259	1926	439	1948	6917	1970	5434
1905	273	1927	409	1949	6077	1971	4794
1906	270	1928	703	1950	6877	1972	4236
1907	260	1929	913	1951	7299	1973	4506
1908	235	1930	1040	1952	7500	1974	2606
1909	822	1931	868	1953	8040	1975	1448
1910	89	1932	651	1954	8383	1976	1274
1911	75	1933	863	1955	8003	1977 ³	773

Sources:

a) until 1906: Ministério do Fomento (1912)

b) 1907–72: Rego (2001)

c) 1973–77: INE, Estatísticas Agrícolas (data including afforestation in all forest land under the management of the Forest Services)

3 Last year of implementation of the Afforestation Plan of the Commons.

The implementation of this legislation went as follows:

- the total regime fully accomplished its mission by ending up covering all the State forests;
- the mandatory partial regime became the main front of the Forest Services work until the 1970s with the Afforestation Plan of the Commons (1939–77);
- the voluntary partial regime was a failure because only a very few private forest owners participated;

- d) the partial regime of simply policing was widely used by large landowners in the southern regions to establish and protect their private hunting rights, without substantial effects on improved forest management (Gomes 1969).

3.3 The last major operation of direct public intervention in afforestation: the Portuguese Forest Project (1981–88)

By the mid 1970s the afforestation of the commons was over. Also, after the 1974 Revolution when a democratic political regime was restored, a decree was approved to give the commons back to the control of the local communities. So within this context, and after several minor attempts initiated in the 1950s, the Forest Services finally turned their attention towards private forestry. Their main priority remained afforestation and their main instruments remained direct state intervention in private forest land. This intervention was organized under the so-called Portuguese Forest Plan, which was funded by the World Bank and ran from 1981 until 1988. The main institutions in charge of implementing this plan were two state-controlled agencies: the Forest Services and the nationalised pulp and paper company (PORTUCEL). The Forest Services assumed direct responsibility for preparing and implementing the afforestation plans in two types of lands:

- a) in the public and communal lands under the management of the Forest Services;
- b) in the lands of NIPFOs willing to accept afforestation under the following conditions:
 - all the technical responsibility and almost all the funding of the investment costs were on the shoulders of the Forest Services;
 - the landowners had to commit themselves to keep their lands in this kind of use and manage the new plantations appropriately;
 - the public funding of the investment costs was a loan which had to be paid back by the forest owner with 40% of the revenues from fellings of the new plantations when they came of age, until the total amortisation of the loan, for no more than 60 years.

The programme also provided a loan to PORTUCEL for afforestation of the lands already owned by company, or on new lands bought or leased for this purpose. There were also funds available to support the creation of cooperatives of private forest owners and for the organisation of a public forest extension service within the structure of the Forest Services. We should remember that since their creation in the 19th century, these services had mostly focused on the management of public or communal forests, leaving the three-quarters of the forest lands in the hands of NIPFOs without enough technical support.

The main implications of the programme for the issues tackled in this paper are the following:

- a) it showed the great difficulties of the Forest Services to carry out a strategy of direct interventionism in private forestry, similar to the intervention they were long accustomed to in State and communal forests;
- b) it also showed the great difficulties of the Forest Services to set up two instruments aimed at private forestry, more precisely a public forest extension service and the organization of forest owners' associations.

3.4 The turning point: the EU co-funded programmes in the 1980s and 1990s

Since the country's accession to EEC in 1986, Portuguese forestry has benefited from a series of programmes of financial incentives to afforestation, reforestation and improvement of existing stands:

Table 7. Targets and outcomes of the Portuguese Forest Project.

	Targets	Outcomes
Time horizon	1980/85	1981/88
Afforestation (ha)	150000	131908
1. By the Forest Services		
- total area	90000	71908
- conifers	60500	50026
- eucalyptus	16000	8429
- other broadleaves	13500	7886
- natural regeneration	-	5586
2. By PORTUCEL (pulp and paper company)		
- total area	60000	60000
- conifers	30500	n. a.
- eucalyptus	29500	n. a.
Creation of a public forest extension service	X	Nothing was done
Credit for cooperatives of forest owners	X	Nothing was done

Source: Mendes et al. (2004)

- the Forest Action Programme (PAF-Programa de Acção Florestal) implemented from 1987 to 1995;
- the Forest Development Plan (PDF-Programa de Desenvolvimento Florestal) implemented from 1994 to 1999;
- Reg. (EEC) 2080/92 whose implementation started in 1994.

There are some common features to these programmes:

- a) financial incentives under the form of grants;
- b) initiative left to the private forest owners to apply for these incentives and carry out the plans for afforestation and improvements in the existing stands.

With these incentive schemes, the Forest Services finally abandoned their old orientation of being willing to take on direct responsibility for the afforestation of private lands. They replaced that orientation with one of providing financial incentives to private forestry. In the beginning, the Forest Services managed to keep some control in the management of these incentives, but soon had to yield many of these responsibilities to the public institute in charge of managing the EU structural funds for agriculture, forestry and fisheries.

In the first EU co-funded incentive scheme (PAF) there was still the purpose of setting up a public forest extension service in the Forest Services to provide technical assistance to private forest owners. However, as in the previous Portuguese Forest Project, there was no implementation of this component.

As we will see, the institutional response to that implementation failure was the emergence of forest owners' associations.

That failure was the last attempt and last opportunity for the Forest Services to develop some productive intervention in private forestry. Having lost this chance, as well as part of their responsibilities for managing the financial incentives in forestry, and also being on a receding course from their role in managing the forests installed in the commons, from the 1980s the Forest Services had two possible courses for action with respect to private forestry:

Table 8. Number of forest owners' organisations by region and by year

Region	North West	North East	Central West	Central East	Ribatejo	Alentejo	Algarve	TOTAL
Year								
1977	1	1	9	1	4	3	0	19
1998	13	6	13	14	9	6	6	67
1999	14	40	15	20	11	4	6	110
2002	22	25	28	28	13	8	6	130

Source: Mendes et al. (2004)

- a) to remain attached to the old position of state intervention in private forestry, now increasingly limited to administrative intervention;
- b) to evolve a position of promotion and support of forest owners' associations.

4. Development of the forest owners' associations since the 1990s

To apply for the financial incentives which became available for private forestry in 1987, forest owners had to prepare and conduct forest management plans. So they needed technical assistance which could not be provided by the Forest Services. To respond to this demand associations of forest owners began to develop throughout the country, especially in the Northern and Central regions where small scale forestry prevails.

Even though this development is a side effect of the change in forest policy, it was not explicitly targeted and supported by that policy. There was also no intensive commitment by the Forest Services to provide technical assistance for the creation and development of most of these organizations.

During their initial stages they received most of the public financial support from incentive schemes which were not directly related to forestry.

Despite the fact that more and more of the instruments of public policy aiming at reaching private forestry have to go through forest owners' associations, the time has not yet come where this necessity has risen to a priority of action in the Forest Services agenda. What still more often happens is an attempt to stick to different forms of administrative interventionism. Old habits die hard.

5. Conclusions

In a country with 93.4% of private forest land, with often fragmented ownership, the emergence of the forest owners' associations in the 1990s has been a major structural change. This change was an unintended side effect of the new kind of forest policy initiated in mid 1980s, but it has not yet been fully accommodated by policy. Much of the resistance to being more supportive of this kind of organization is probably a heritage of the long-held tradition and ambition of direct state interventionism in forestry.

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References

- Baptista, Fernando Oliveira. 1993. A política agrária do Estado Novo. Porto: Edições Afrontamento.
- Deslandes, Venâncio Augusto (1858) Ensino e Administração Florestal. Relatório Apresentado a Sua Excelência o Ministro das Obras Públicas, Comércio e Indústria em Setembro de 1858. Lisbon: Ministro das Obras Públicas, Comércio e Indústria.
- Gomes, António M. Azevedo. 1969. Fomento da arborização nos terrenos particulares. Lisbon: Fundação Calouste Gulbenkian.
- Mendes, Américo M. S. Carvalho. 2002. A economia do sector da cortiça em Portugal. Evolução das actividades de produção e transformação ao longo dos séculos XIX e XX. Paper presented at the XXII Meeting of the Portuguese Association of Economic and Social History, University of Aveiro, 15–16 November 2002. (www.egi.ua.pt/xxiiaphes/Artigos/Américo_Mendes.pdf).
- Mendes, Américo M. S. Carvalho, Diana Feliciano, Marisa Tavares & Rafael Dias. 2004. Portuguese Forests. Country level delivered to the EFFE project – Evaluating Financing of Forestry in Europe. Porto: Portuguese Catholic University – Faculty of Economics and Management.
- Ministério das Obras Publicas, Commercio e Industria. 1905. Anuario dos Serviços Florestaes (1902–1903). Boletim da Direcção Geral da Agricultura, Oitavo Anno, N.º 3. Lisboa: Imprensa Nacional.
- Ministério do Fomento. 1912. Anuario dos Serviços Florestaes (1906–1907). Boletim da Direcção Geral da Agricultura, Undecimo Anno, N.º 9. Coimbra: Imprensa da Universidade.
- Rego, Francisco Castro. 2001. Florestas públicas. Lisbon: Comissão Nacional Especializada de Fogos Florestais & Direcção Geral das Florestas.



In April 2005, over 70 scientists gathered to discuss forest multifunctionality and its different economic connotations. The fact that multifunctionality is deeply embedded in the nature of forests seems never to have been questioned. However, several definitions of multifunctionality have been proposed over the years from various perspectives: biological, ecological, functional and managerial. Forest economists themselves have been discussing the economic nature of multifunctionality and its consequences on resources allocation for a long time, but they all seem to agree that forest multifunctionality can be meant as the capacity of forests to provide a large array of goods and services – private and public, market and non-market – at the same time.

The presentations and discussions were gathered under five themes:

- Policies for shaping the rural environment
- Role of institutions in the decision-making process
- Database and information systems for managerial economics and green accounting
- Non-market forest products and services – methodological issues, policy and management implications

These proceedings compile the papers of the International Conference "The Multifunctional Role of Forests Policies, Methods and Case Studies" organised in 24–30 April, 2005 in Padova, Italy.