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Managing Southern French Forests under—and before—Colbert: Between Law and Custom, ca. 1500-1700

Sébastien Poublanc¹

The early modern era was characterized by an unprecedented shortage of wood.¹ It was also defined by the accompanying, frantic search for sources of wood, particularly within the French kingdom. All circumstances contributed to make the shortage of forests and their products felt, be it for domestic needs (including construction and heating); for industrial demand (forges and furnaces); or for the state's developing needs regarding transatlantic commerce. Perceptions of this shortage differed according to whether one was in the provinces or a large urban center; although city dwellers felt the lack of wood keenly, the rural communities located near the forests benefited from privileged access to silvicultural products and actively participated in their management.

The forests were the collateral in a battle between multiple, competing interests—lay and ecclesiastical communities, individuals, wood merchants and barons, and above all, the king of France. Beginning in the sixteenth century, the king effectively asserted himself as a player of the first order; his many orders and laws were aimed at controlling the forests via the intervention of the increasingly powerful royal bureau of “Waters and Forests” (*Eaux et Forêts*). The king's laws sought to establish a harmony between the various modes of exploitation and management of the forest, with varying success in different provinces. Those provinces furthest away from the centers of power effectively maintained autonomy over woodland management.

¹ Translated from the French by S.C. Kaplan with assistance from Richard Keyser.

Because of these two facts—the desire to coordinate forest-related practices and the sustained autonomy of the provinces—the king decided to enact a large-scale homogenization of forest-management practices in 1661. Within the span of a few years, all of the Waters and Forests departments were reformed and given a single legal code, the *Grande Ordonnance* of 1669, which became known as the Great Reformation (1661-1685). The reform has often been perceived by scholars as the culmination of public forest management: rationalized, efficient, and accomplished under the leadership of a gifted administrator. Yet, a study of the archives demonstrates, to the contrary, the importance of agreements—dating back centuries—between the royal administration and southern French populations. The polar opposite of an effective and radical reformation, the reform engaged in a game of compromise and negotiation characteristic of older traditions.

A close study into the concrete impacts of the reform is illuminating. We will see that the reformation in the Midi does not represent the radical new approach touted by the reformers. Rather, the reformation archives demonstrate the longevity of the practical accords between the king, the local populations, and their forests. The archive from the *Grande Maîtrise* of Toulouse is a uniquely complete source, with twenty-seven linear meters of archived material, comprising 2,000 court cases, 1,000 forest maps, and information about 1,623 forests. It was also the only archive from the reform to have been directed by Louis de Froidour, who, because he began to take into account biological and geographical factors, is unanimously considered to be one of the pioneers of the modern, scientific silviculture that began to develop in the eighteenth century.

Froidour, Lord of Cerizy, lieutenant general at the bailiwick of Marle et La Fère County and reform commissioner, came from a family of Picard foresters, had a forestry as well as a legal background. Originally the representative of the Île-de-France department in 1662, he owed

his appointment as reform commissioner of the Midi as much to his relationship with Jean-Baptiste Colbert as to his skills. From 1665 to 1673, he surveyed the forests of the *Grand Maîtrise de Toulouse*, conducted trials and drafted forest regulations for each forest. At the end of the reformation, he was appointed Grand Master of the Waters and Forests of Toulouse, an office he held until his death in 1685

The Midi—here understood as the province of Languedoc and part of the province of Guyenne was also one of those out-of-the-way regions that maintained autonomy over woodland practices. Although it had been attached to the royal domain in 1271, the monarchical bureaucracy had difficulty establishing itself outside large cities, such as Toulouse and Montpellier. Despite these difficulties, locals adopted royal forest practices as early as the fourteenth century, long before the Great Reformation. Thus, between 1665 and 1673, the reformation in the Midi was more about enforcing centralizing power structures and systematic organization than overhauling resource management practices. Above all, the historical documents allow us to demonstrate the existence of a complex system of forest management, run by both the royal foresters and the village inhabitants. It demonstrates that the reformers adapted the *Grande Ordonnance*, incorporating local proto-silvicultural methods into individual regulations.

Forest Management Before Froidour's Reformation

Beginning in 1250, foresters supervised the personal estate of the count of Toulouse.¹⁷ After the reunification of the county with the king's domain in 1271, royal seneschals took over managing the woods. They spearheaded an ambitious project to consolidate the king's forest holdings via land exchange, inheritance, purchase of scattered parcels, and even arbitrary

appropriations. Not limited to the Midi, their goal was to limit the fragmentation of the woods to create viable, exploitable units rather than innumerable small plots.¹⁸ Consolidation was in part a response to the shrinking of woodlands at the turn of the fourteenth century, when an administration dedicated to controlling the forests became necessary.¹⁹ Part of this process was the creation of a forest guard (*custos*). Distributed according to the size and number of the royal forests, fifty-two *custos* charged with guarding the royal forests thus appeared under the authority of the first masters of the Waters and Forests. Invested with the power to police the woods, these officers protected royal interests in the harvesting of wood and timber. Their task remained the same from the first half of the fourteenth to the end of the fifteenth century. This deliberate creation of extensive areas of forest and its officers redrew the map of the region's woodlands in favor of the monarchy's territorial and economic interests.

Forester-captains were the heirs of the forest guard and are comparable to officers mentioned in the charters of Ile-de-France, Orleans, and the bailiwick of Sens, as well as Normandy and Anjou.²⁰ Local noble families used the office to augment their social status and their incomes and progressively monopolized the captaincies. Thus, local elite interest allowed for the maintenance of an official presence in the royal woods and guaranteed the survival of the forester office; it also allowed the captains to write the first forest regulations specific to the Midi.

According to the reformers' reports, the High and Low Pyrenees regions had long held the attention of the *Grande Maîtrise* of Toulouse. These strategically important areas contained important timber forests from which logs were floated to several cities on the plains—the Garonne for Toulouse, the Aude to resupply the Carcassonnais (forest district of Quillan), the Ardèche and the Rhone to supply the arsenals of the Levant (Villeneuve-de-Berg). The *Grande*

Maîtrise officers had two primary objectives in these regions: to protect those species deemed “useful” and to limit harvesting, whether commercially or by local users, especially when the traditional method of cutting one tree at a time, wherever the best specimens might be found, was used.

Legislators were aware of the extent of the harvesting done in this way, and their regulations demonstrate a desire, if not to eliminate it entirely, at least to limit it. Their first task was to identify the most endangered types of trees and understand their use. Oak woods, which were rare, verged on disappearing entirely from continuous harvesting by local inhabitants, while sawmills and charcoal burners rapidly devoured the pines and firs. By the beginning of the seventeenth century, conifers had all but disappeared from the lower margins of mountain forests. Both young and old trees were felled for boards and planks. As beech trees quickly filled in the resulting openings in the canopy, the younger firs and pines below went unpollinated for want of mature fruiting trees above them.²¹ The export of conifers enabled the construction of buildings throughout lower Languedoc, particularly in the Razès, the Carcassonnais, and the Lauragais (Castelnaudary and Quillan), while acorns from the oaks were essential to fatten up hogs.²² The disappearance of these trees would have significant economic repercussions, both at the local and regional levels and had to be preserved.

To effectively reduce the volume of wood used, the amounts that could be harvested were regulated: in Sault (Quillan), strict limitations meant that many traditional uses of wood were virtually prohibited. For example, the felling of young firs, whose supple wood was prized for making oars, was thus reduced to the bare minimum:

Employing a young fir tree for each horned stave used in the construction of these vessels
[...] it is impossible that we can do without it, without causing the public significant

inconvenience, we had to allow it in the following, as he considers that it should be done under certain conditions and to prevent the abuse that is committed there²⁵

Based on a policy of limiting waste that was meant to go into effect right away in order to assure the forests' growth, regulations were distributed throughout by the districts of the Pyrenees.

Directive stated, "because those who aim to work on great or small projects in the said forests cut large quantities of trees all at once, a great portion of which they then leave and abandon [... thus,] new growth is impeded, which afterwards causes great clearings and empty areas in the said forests."²⁷

Waste of resources is a persistent theme in the archives. In the royal foresters' view, meridional populations thought of the forest as inexhaustible and did not attempt to optimize their use of its products. Acting on this belief, the regulations preceding the reformation attempted to curb harvesting by local inhabitants. Typically standing almost alone against the force of custom, the foresters did their best to enforce royal orders in their assigned forests; however, in order to succeed, the forest administrations had to compromise with the political powers already in place. In this way, local officials, like the consuls, became assistants to the forest administration in its efforts to combat local destructive practices. As incentive to respect the regulations, they received payment in kind, just like the foresters. When they too were confronted with wood shortages, the consuls adopted their own measures to guarantee wood to their communities in times of scarcity.

Communal Proto-Silviculture

Although the reformers dwelled at length on the destruction caused by the inhabitants, their letters and testimonies also frequently mentioned protective measures and forest

management plans. By the end of the Middle Ages, certain species—such as fir trees—were protected due to their economic value. From Antiquity to the Middle Ages, intensive silvopastoral exploitation favored the growth of beech trees, while the increase in the harvesting of beech wood resulting from fifteenth-century developments in metallurgy—coupled with diminishing forest resources—forced nearby villagers and metallurgists to favor fir for building and framing out mining tunnels. Locally, these developments prompted protections for stands of fir, which were placed off-limits. The French toponyms, “Bedats” or “Devèzes,” which were derived from contemporaneous Occitan, designate those as restricted areas. These pressures also led to the presence of fir woods in locations that were bio-climatically aberrant, but that allowed for both exploitation and surveillance: near villages and farther down valleys than they would otherwise be.²⁹

The fir tree was not the only one to benefit from such protection. In the Pyrenees, local communities actively protected oak trees to safeguard the acorn harvest for pigs. An economic resource of the first order—salable and consumable—pigs occupied a special place at the heart of meridional societies. In fact, these societies did not hesitate to protect oak woodland when needed. The reformers noted,

There are some regions planted with oak, but poorly growing, stunted, and of no value..., which are nevertheless preserved rather carefully by the inhabitants of the areas, without their selling it or even cutting from it except in cases of extreme necessity for heating, because of the acorn harvest which serves for the grazing of their hogs.³⁰

The same was true in Sault (Quillan) where the increasing scarcity of oaks since at least the middle of the sixteenth century led the forest administration to take protective measures.³¹

Further to the west, Froidour and his companions discovered “replanting,” the transplanting of trees into long deforested mountainous areas.³² In the plantations (*plantades*) of Bigorre and Béarn (Tarbes), plantations of widely-spaced oaks were established “after the ruin of ancient woods which the communities who wanted to have them had taken the pains to replant; and they had had this custom for several centuries.”³⁴ This socio-economic system allowed the inhabitants to find wood for their needs, grazing for their animals, forest litter, which was collected after it had been enriched by the pasturage of the sheep, as well as acorns for the hogs. The same principle was found in the silviculture of coppice-under-standards (*taillis-sous-futaie*) in Béarn and Soule (Tarbes), “which the people of this region had found that, thus cut or pruned, they normally put out a good quantity of branches and were good for the acorn harvest.”³⁵

Protecting the woods was not always due to economic concerns: protecting habitable spaces was also taken into account. Such was the case in Saint-Béat, where Froidour related that the inhabitants “did not dare chance going to cut any of the trees which had grown from the rocks, fearing that by weakening their roots, which seemed to embrace and retain the rocks, they would make the rocks fall.”³⁶ All of the above measures together helped to shape the wooded landscape that the reformers found at the beginning of their enterprise in 1666.

The Reformation: Inscribing Modernity in the Long Term

Before getting into the details of the reformation’s regulations, and how they brought together ancient texts and proto-silviculture, it is necessary to provide an overview of the mid-seventeenth-century forests. This will allow us to understand why the reformers largely broke with the Grande Ordonnance of 1669 and took local conditions into account. But even before introducing the forests, we should consider several contextual elements in order to understand

the differences between the writings of the seventeenth century and the traditional “proto-silviculture” that I have presented above. The foresters’ alarmist testimony aimed to show a gradual and continuing process of anthropization:

The said forest [*Montech*] had been reduced to such a state that the king could take no profit from it, and it was so stripped of trees by the flagrant infractions and overgrazing that are done there every day, and even in the state in which it is in, one should not expect it to reestablish itself unless it is cut back to the roots [to restart its growth]... The said forest having been found in such a poor state that one could practically traverse it entirely in a carriage.³⁷

But the reformers’ actions must be placed in their socio-cultural context: Froidour, primary author of the operation in the Midi, remained a city-dweller, as was Jean-Baptiste Colbert, the chief architect of the reformation as a whole. Both were indelibly marked by the townsfolk’s belief in a forest crisis. It is therefore not surprising to find many degraded (*abatardis*) forests in Froidour’s proposals, although they were only “degraded” because of his expectations and prescriptions for management. The locals had no difficulty finding the resources they needed the most in those same forests. His misrepresentation stands out so clearly because the reformation needed to justify its existence. This is undoubtedly one of the reasons that de Froideur standardized his surveyors’ reports: to discover only beautiful, tall forests where one expected to discover damaged woods would not have made any sense.³⁹

From Small Woods to Vast Forests

What did one see in the mid-seventeenth century woodlands of the Midi, then? Firstly, the view as a whole was not nearly so disastrous as the reformers made it out to be. Forests were found throughout the *Grande Maîtrise*, although they were widely dispersed and unevenly distributed. On the plains, the Midi's principle demographic reservoir, large forests remained the exception among a multitude of small woods, most of which belonged to local communities. The rare large forests still present today, like the Grésigne, Bouconne, or the forests located not far from Castelnaudary, mostly belonged to the king; they corresponded to those *custos* seen above.⁴⁰ A few rare communal forests, such as those of Valene at Montpellier or of Montgros, complete the picture.

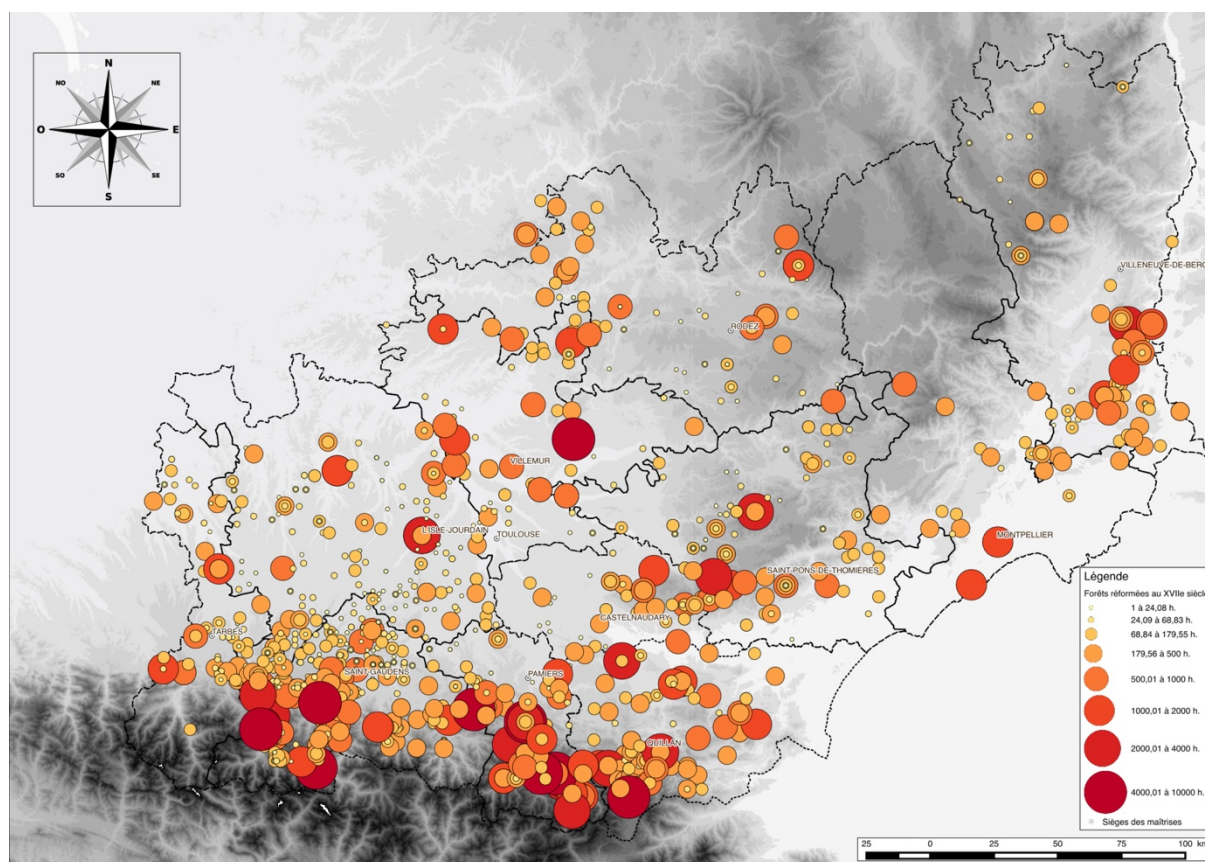


Figure 1: Distribution by Surface Area of Forests Reformed between 1665 and 1673

The ensemble shared certain characteristics—notably a significant fragmentation of the woodland cover. This was the result of the sustained drive by the local communities and elite classes, which was renewed in the sixteenth century, to clear these areas, particularly in Lower Languedoc. Indeed, the immediate environs of the Mediterranean littoral were quickly cleared. Most of the woods in the *Grande Maîtrise* were rather small: half covered less than 66.12 hectares, and a quarter less than 24.08 hectares. The region around Toulouse had the most thoroughly fragmented woodlands and the greatest percentage of small woods interspersed with cultivated areas, which is hardly surprising given its geographic proximity to the most populated areas of the Midi: here the *sylva* gave way to the plow. Bouconne and, to a lesser extent, the forest of Labarthe du Foussaret, remained the only vestiges of the medieval forest which had formerly extended up to the suburbs of Toulouse.⁴¹

Figure 2: Extent of Woodlands (in hectares) by Forest District (*maîtrise*) in hectares

Forest District (<i>maîtrise</i>)	Number of Forests	Average Area	Median Area (h.)	First Quartile (h.)	Third Quartile (h.)
L'Isle-Jourdain	183	80,54	28,50	12,54	62,70
Tarbes	124	128,87	43,61	23,66	43,61
Comminges	489	181,88	51,3	17,38	153,9
Saint-Pons-de-Thomières	199	143,95	50,44	27,93	122,98
Rodez	152	144,40	61,56	21,38	126,26

Villemur	80	213,55	83,22	31,56	147,62
Villeneuve-de-Berg	132	197,73	95,19	39,62	244,25
Castelnaudary	63	226,89	99,15	20,07	219,17
Montpellier	31	241,15	117,71	58,28	327,82
Pamiers	177	470,39	173,85	47,67	173,57
Quillan	111	415,20	200,64	79,87	358,92

In contrast, the less-populated mountainous spaces still had vast forests, “there where humans had confined them: often degraded, occasionally safeguarded, or even ‘gardened,’ in a word, remodeled.”⁴² Their locations had been determined by the population growth that marked the sixteenth century and continued into the following century, which increased the demand for arable land and led to the clearing.⁴³ This situation exacerbated the antagonism between the rural communities and the ironworkers who were the primary contributors to deforestation, first with mills, then with Catalan-style forges.⁴⁴ Although industrial demand encouraged the creation of protected areas, such as for firs, which were used to frame out mining tunnels, it also led to deforestation around villages. The mountains were in fact a crowded world, and in the competition for woodland resources, the forge-masters had the advantage over the villagers. Local scarcity of wood in the region of Foix (Pamiers) led, for example, to an accord of 1347-1348 between the Count of Foix and the inhabitants of Couserans, “who organize the supply of firewood for [iron-smelting in] Vicdessos from the forests of Comminges (Comminges).”⁴⁵ This agreement to bring in wood, which would have been mostly beechwood, from a distance of about 20 km was still in

effect at the time of the reformation. Thus, the preservation of the county's highland forests had helped to maintain, and no doubt even to expand, iron-smelting in Vicdessos.⁴⁶ But the only ones to benefit from this arrangement were the ironworkers; the local communities were excluded.

Calculating the area covered by woodlands does not suffice, however, to understand how the reformers judged a forest's quality; other considerations played a part, including its management, the age of its trees, and the species present.

Behind the Commissioners' Words, the Maintenance of Southern French Timber

The reformation commissioners' choice of words is important: it painted the image of destroyed forests, of ravaged trees eaten by animals whose "teeth, breath, and wool [...] were pestiferous and inappropriate to the woods."⁴⁷ These descriptions strike the reader's imagination, suggesting that the forests consisted of miserable coppices crowned from time to time by some scattered tall trees and populated mostly by small trees with spreading canopies.

The heavy symbolic weight of these words resulted from two factors, one emotional and the other economic. From the economic point of view, the taller "standard" trees (*baliveaux*) represented the principal capital of the forests, which is what the reformers wanted, especially the naval timbers so dear to the state. Timber stands also presented a certain majesty in the trees' rising toward the heavens: their height recalled man's erect posture and the "old witnesses of the ages past," as opposed to coppices, scraggy shrubs in the making, with little monetary value and no majesty.⁴⁸ Seventeenth-century foresters' contrasting perceptions of these two possible states of the forest imperceptibly influenced their writing.

For them, the type of management corresponded to the predicted maturation date of a given tree population, which was estimated within a certain age range. Thus, the precise age of

individual trees was a fact of less importance than the observed method of management and the nature of the land. Together, these allowed foresters to prepare for the forest's future. Within the *Grande Maîtrise*, the most common management style favored the short harvesting cycles of coppicing (*le taillis*). The duration of these cycles varied: foresters called those woods that were cut every ten years "young coppices" (*jeunes taillis*), while those that reached twenty to thirty years, provided that they were not destined to grow into timber, were described as "tall coppices" (*hautes taillis*). Altogether, coppices covered over 43 percent of the surface area in the *Grande Maîtrise*. In contrast to timber stands (*la futaie*), coppices were mentioned across the whole territory, and the forests that had none were quite rare, since coppicing typically accompanied population expansion. Its rapid harvest cycle provided firewood and space to pasture animals. At the same time, however, as people and animals took their share, they impeded woodland regeneration.

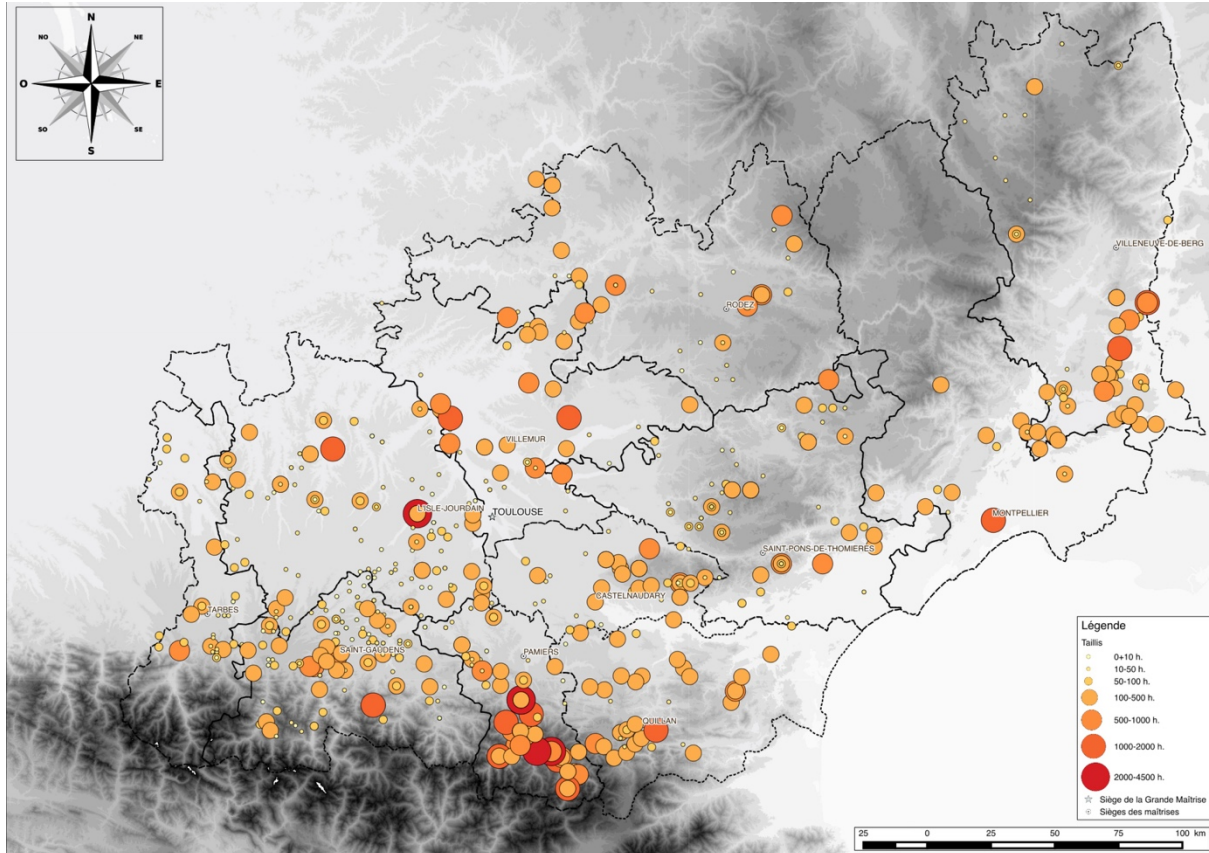


Figure 3: Management of Woodlands as Coppices (*en taillis*) in 1673

The choice to manage the forests to favor timber (*la futaie*) instead corresponded to woods which were not or had not been “cut in the ordinary ways of coppices, [and which] had been left to grow up to thirty, forty, fifty, hundred, and two-hundred years, and even more.”⁴⁹ The terminology that the reformers used to refer to various age classes reflects their overriding focus on the production of what they considered to be full-grown timber. For trees slated to grow into timber, those aged less than twenty years were called “regrowth of timber” (*revenu de futaie*); between twenty and thirty years, “quarter-timber” (*quart de futaie*); between thirty and sixty years, “half-timber” (*demi futaie*); between sixty and hundred and twenty years, “high timber” (*haute futaie*, or *jeune haut futaie*); and over hundred and twenty years, “old high

timber” (*vieille haute futaie*). By mapping these descriptions and other information provided by the reformers, we find that timber stands represented at minimum a third of the total wooded surface. In fact, there was even more timber than that, because we also need to take into account the significant percentage (16.09 percent) of woodlands that were under mixed management, supporting coppices and timber together.

Coppice	Timber	Hybrid
122,371 h.	91,014 h.	54,361 h.

Figure 4: Surface Area of Forest Management Types in the *Grande Maîtrise* of Toulouse in hectares

As expected, the timber stands were mostly located in the steepest areas of the *Grande Maîtrise*, such as the Pyrenees (Quillan, Pamiers, Comminges et Tarbes), the Causses of Quercy (Villemur), Montagne Noir (Saint-Pons), and the Haut-Vivarais (Villeneuve-de-Berg), where it is extremely difficult to extract logs. The report notes, “in local terminology, they call this place *cul d’Iher*, which means the ‘ass of Hell.’ The rest of the valley is very beautiful and quite pleasant [... and] the beech trees are very young and beautiful timber, and the firs are so beautiful and in such great number that one could take three to four thousand masts.”⁵⁰

A few extensive timber stands, mostly under royal control, were nevertheless successfully maintained on the plains; such was the case of the Grésigne and of the forests of Castelnaudary. However, the lay communities of villages and towns also safeguarded their lumber, particularly on the plains. It is interesting to note that 200 (of 859) still possessed timber stands, thereby disproving the view that ordinary people only concerned themselves with their

immediate interests. These timber stands also show that the local inhabitants' protective measures were effective. The entire issue for the reformers therefore consisted of combining this local silviculture with their regulations—without, however, crediting the creators of the earlier methods.

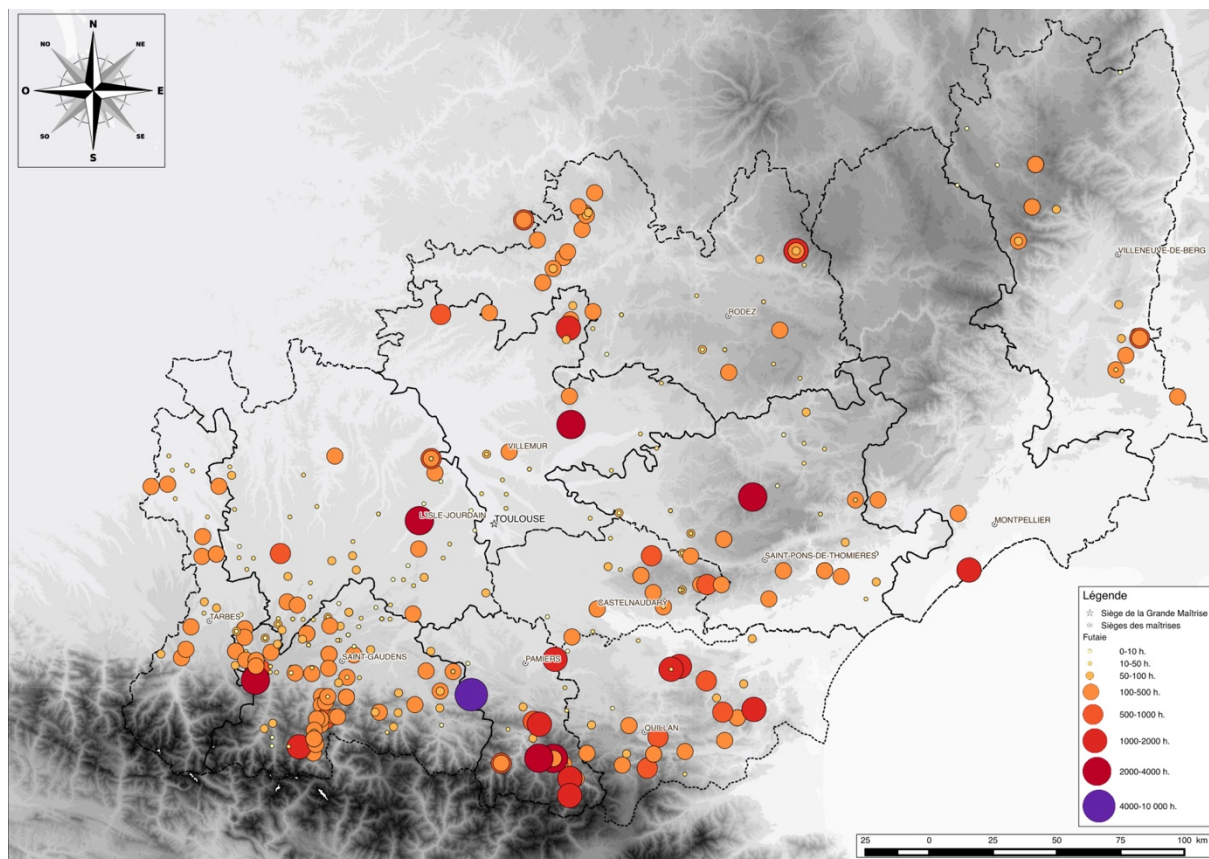


Figure 5: Management of Forests as Timber (*en futaie*) in 1673

The Regulations and Their Character

A Quarter, a Third, or No *Réserve*?

The arrival of the reformers led to a new bureaucratic approach towards forest regulation. In contrast to most foresters' limited education and narrow focus on their own practical experience, Froidour had a well-developed knowledge of forestry which had proved itself in the

woodlands of the Cardinal Mazarin, principal adviser of Louis XIV.⁵² Above all, the norms of forest management evolved considerably during the reformation. Although Froidour began to draft his regulations on the basis of older prescriptive texts, the *Grande Ordonnance* was issued in 1669.

While the *Grande Ordonnance* was meant to guide management of forests throughout the kingdom, it was above all a text built on the reformation of the forests of the Île-de-France. It did not consider the vicissitudes of management in each province, whether these concerned the feasibility of cutting by *tire et aire*, the regeneration of conifers, or the utility of allowing special privileges for mountain communities. It was left to the commissioners, therefore, to respect the spirit of the *Grande Ordonnance* while managing the forests in a way which accommodated the interests of all involved.

The reformation regulations were a patchwork begun in 1665, the first texts were delivered in 1667 and continued in fits and starts as the reformation progressed in the *Grande Maîtrise*. The *Grande Ordonnance* was issued in 1669 and registered in Toulouse's *Parlement* in 1670. From then on, new rules were superimposed onto the commissioners' orders; however, the commissioners continued to draft provisional regulations that took into consideration the specifics of each local region, breaching the unitary law of the *Ordonnance*. There was therefore no singular text of the law, but a plurality of opinions concerning each space under local forest management, "entirely in accordance with the king's order, except in two or three small points which can easily be reconciled."⁵³ Without lingering over the repetitive aspects of the *Ordonnance*, we can point out the regional specificities of forest management.

The first difference concerns the question of the reserve (*réserve*), an area set aside for the growth of timber. In each forest, the *Ordonnance* called for a reserve equivalent to a quarter

of the total surface area. Far from privileging this system, Froidour and the other reformers preferred to integrate each woodland reserve into its environment. In order to accomplish this innovative choice, they established a typology of the different types of trees based on locale.

For the reformers, there was no reason to transform the scrubland (*garrigue*) of the Lower Languedoc and the Causses, into timber land. Composed essentially of shrubby vegetation, profoundly impacted by the exploitation of those with local use rights, these extensive zones did not have enough trees to make a reserve, particularly since the majority of its species could not produce useful timber. In these conditions the reformers ordered that these spaces be managed in such a way as to rapidly produce wood for inhabitants (*bois d'affouage*).

Small and thin, trees of ten to twenty years of age formed an ideal coppice for everyday usage by local inhabitants. Furthermore, the proper age for harvesting was correlated to surface area: the larger the woodland, the greater the possibility of aging the coppices so as to diversify their use. The system was, however, not quite as uniform as it appeared. In the royal forests, reserves were established where timber stands had long existed. The forest of Roucoux was “previously planted with tall timber of the same type and quality, as it was told to us, and according to what we have been able to learn from the sorts of tree that we have found there.”⁵⁴ From it, they endowed a reserve of eighty-five hectares and employed a slower rhythm of harvesting, about every twenty-five years. Few in number, these forests demonstrate the rationality of the commissioners for whom forest management did not have to be uniform but was understood to embrace a range of particular cases.

Due to their recognition of local conditions, the list of woods that could be converted into timber stands was drastically reduced. Far from insisting that each forest have its own reserve, the reformers based their decisions in part on anthropogenic pressures:

Moreover, given that the said forest [*La Selve*] is planted with many “white woods” (*bois blancs*) [broadleaf trees like maple and poplar that were less valuable than oak or beech], which are not at all appropriate for growing timber (*a estre mis en futaye*), and besides which is nothing more than a shrub which, during a century or the six score years at least that must be given to the woods in order to allow them to grow as timber, being exposed to the pillaging of four or five villages which surround it, is hardly in a state to defend itself from their offenses, timber stands should only be reserved in the large bodies of forest. And given also that in the course of time, it would be irritating to incessantly and over many years pay wages and other rights to the officers of a forest from which the king takes no profit, we are of the opinion that for the good management of the said forest, harvests should be set at the age of forty years, at which time the beech and maple wood are good not only for the charcoal burners, as is hazel, but for all sorts of construction work and for the work of cartwrights.⁵⁵

The beginnings of anthropization and the problems linked to the woods’ protections is summed up perfectly here: converting coppices into timber stands is a long-term operation, and one that necessitated a fallow time that required enforcement. Uncompressible, this span of time allowed the trees to grow and eventually furnish precious timber standards. To that end, the forest needed to fulfill two conditions: it had to have defensive structures and guards, and it needed to be situated in a space of little anthropogenic pressure. These characteristics excluded small wooded areas, in which the needs of the locals would push them to attack the reserved trees, condemning the operation to failure.

The commissioners were pragmatic: the flexible principles articulated for the Selve forest were applied to all of the forests in the *Grande Maitrise*. Thus, only those woods were endowed with reserves that had the proper soil and terrain for growing timber, quality species, outlets for its products, a substantial surface area, and which were not subject to excessive anthropogenic pressures. Rather than fall prey to the lure of profit above all, the reformers moderated their regulations, even in cases where a woodland could have produced fine timber stands. In opposition to the dogma of standardization, officials proposed a model of management based on societal needs; however, in order to assure the production of construction lumber and thereby avoid having their reforms undone, they referred to King Charles IX's ordinance of 1561, which had prescribed that a third of the woodlands belonging to commoners and ecclesiastical communities be set aside for timber.⁵⁶

In reality, the institution of a third of the forest as a reserve essentially concerned the ecclesiastical forests. The regulation thus attempted to compensate for the small number of reserves in communal wooded areas, which far outnumbered ecclesiastical woodlands. An adept politician, Froidour authorized religious communities to fell mature timber without first paying the *maîtrises* for the royal patent letters that were normally required, a measure that he hoped would assure their submission. In the end, only the royal forests conformed to the order of 1669: just this once, the king set the example for his domain.

Assuredly, the commissioners wandered rather far from the prescriptions of the *Grande Ordonnance*; rather than putting a quarter of every forest in reserve, they promoted an assortment of organizational measures destined to satisfy needs for construction lumber as well as those of the neighboring inhabitants. In these conditions, the choice on whether or not to establish a reserve reflected local realities.

On the Proper Economy of Woods: Planting Trees

The application of the above reserve of one-third was not the only exemption to the *Grande Ordonnance* proposed by the commissioners; other peculiarities appeared in their regulations. Among them, the question of replanting, which was intended to remediate the clearing of the woods with new plants and accompanied by specific defensive measures, was remarkable as much due to its breadth as to its discretion.

Recognizing the benefit of this communal practice, which benefitted hogs and other grazing animals, the commissioners adopted its precepts while regularizing the procedure. The reformers' sense of superiority again appears here: they claimed that although the locals acknowledged the gravity of their situation, they did not act on it and neither knew nor chose "lands to acquire and use according to their nature."⁵⁷ The reformers therefore mandated the planting of four to five saplings for each old tree felled. The number was deliberate: it took into account the inevitable losses that diminished the density of the coppices. Additionally, the communities were required to watch over the saplings for three years and to replace any losses that might occur. Even so, the measure did not suffice to repopulate the forests: it was an expedient solution to limit the impact of current usage and did nothing for the already deforested spaces.

In order to repopulate those, the reformers required some communities to sow acorns or seeds. Although this measure was less costly than transplanting saplings, it still required the governing bodies of villages or towns characteristic of the Midi (*consulats*) to maintain the seedlings so that their density corresponded to the commissioners' prescriptions. The reformers mandated replanting mostly within an area that formed a triangle of which Lourdes, Auch, and

Saint-Gaudens formed the vertices; however, the measure was not limited to this area. It was also applied to other forests, notably in Rouergue.

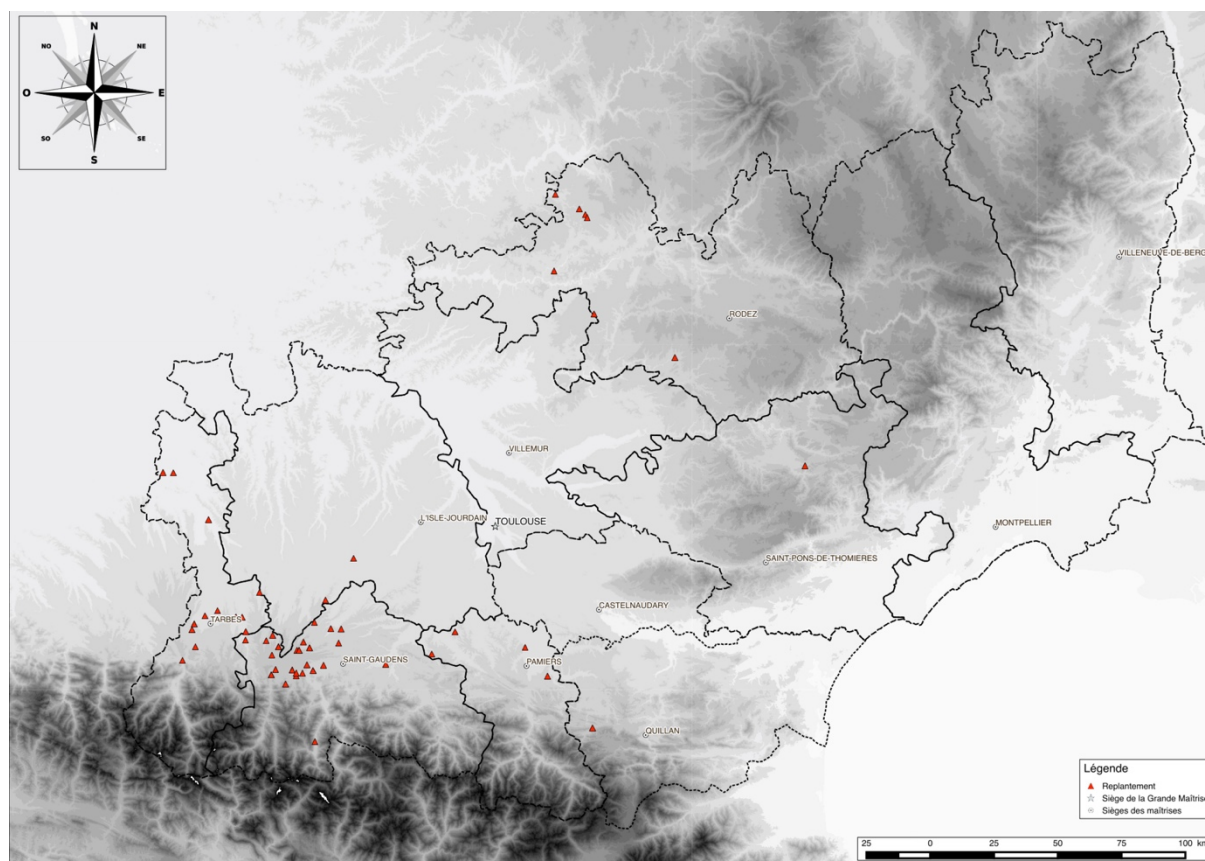


Figure 6: Prescriptions for Replanting in 1673

Whereas replanting aimed to replace or increase the number of trees within wooded areas, a separate set of procedures (*enfrichement*) promoted planting trees, whether by transplanting saplings or by sowing seeds, in areas that had been deforested or were for other reasons considered to be “useless and empty lands” anywhere these might be found in the forests of the *Grande Maîtrise*. The experts indicated, however, that clearings outside of the royal forests should not be replanted—only those within the perimeter of the forest, in order to avoid usurpation of these areas by other parties. To this end, the commissioners indicated “that they should be sown or planted with seeds of the best and most appropriate type of tree for each site

in the said forests, such as fir in the Pyrenees, and oak in the other mountains, or beech or chestnut, at least in the soils which will not be strong enough to grow oak or fir.”⁵⁸ Ecological preoccupations thus warred with economic considerations: it was necessary to optimize the parcels’ productivity by excluding all “white wood” in favor of the most marketable resources. Religious communities and commoners had to replant the empty spaces inside their woods in the same way.⁵⁹

Far from limiting themselves only to the question of useless and empty places, the commissioners also directed landholders on how best to “mix” (*panacher*) their timber stands, by replanting timber trees within stands that had become too old. Beyond the benefits of regeneration, the principal concern was to wrest revenue from these wooded areas in bad shape, where the wood was sold cheaply.

Regulating the Harvest

For replanting, the reformers added new material on a topic not treated by the *Grand Ordonnance*. In other areas, they directly contradicted its directives. They denounced its prescriptions to only harvest via *tire et aire*, which, as noted above, consisted of thoroughly harvesting from one contiguous plot to another. In fact, this method had a rather shadowy presence in the seventeenth century: though officially favored, it was seldom applied in a standard form, even at the heart of the royal domain. In Burgundy, Picardy, and the Île-de-France foresters employed numerous variants.⁶⁰ The *Ordonnance* was neither set in stone nor definitive: in practice its prescriptions formed a framework that was adapted to a given region. Things were no different in the southern part of the realm, where Froidour at first fervently opposed foraging

(*furetage*), or the harvest of individual trees based on their size wherever they were found (*la coupe par pied d'arbres*).⁶¹

His negative view of foraging reflected the standard view of seventeenth-century foresters. Froidour tried to replace it in the southern forests with the practice of *tire et aire*; however, the first fir forests in which it was applied did not provide the hoped-for results: nothing regrew! The southern regions were not the North, and the administrative considerations that guided the reformer had, in the end, less of an impact than the silvicultural results.⁶² Froidour rapidly came around to what he had previously condemned:

No felling by *arpent* [a measure of area, roughly equivalent to an acre], given that the said trees [firs] were not regrowing at all from the roots and were coming only from seeds. It would be dangerous to establish felling by acre and by *tire et aire*, and there would be danger that [the fir] would not come back, or at least not until after very many years, as experience has shown in all the places where such harvests have been made.⁶³

A certain number of forests thus escaped the prescriptions of the *Grande Ordonnance*: to the 249 forests of fir in mountainous areas can be added all the those located in the plains, but whose steep local terrain made them difficult to exploit. Locals were stakeholders in the process. It fell to them to choose which trees to cut, while saving those believed to be pollinators or that had economic value. Essentially, they were restricted to the crooked, poorly growing trees that were nevertheless sufficient for domestic needs. Foraging thus remained the solution reserved for the most difficult woodlands. Along with resprouting from stumps cut back to the base (*le recépage*), clearing or expurgation, and the *tire et aire*, it rounded out the reformers' options.

The choice of method depended on each forest's state: any woods that were too damaged to be exploited immediately were given over to resprouting by cutting down to the base. Woodlands made up of overly dense stands of young trees were "purged," while the establishment of scheduled harvests (*la coupe réglée*) with *tire et aire* depended on the volume of wood that could be harvested within a given surface area. Cutting back to the stumps was a treatment of last resort applied when woodlands were deemed too degraded for other treatments. It aimed to restore the space to *tabla rasa* so that, over the course of several seasons, the tree population might regenerate and be harvested by *tire et aire*. They described it as the same as "a head whose hair has been ravaged and thinned by illness," and for "which it is necessary to shave so that the hair might grow back in great abundance." They urged that it was the same for degraded forests. "It is necessary to "resprout" (*recepter*) them so that the wood might come back" to re-establish the woodland.⁶⁴ The process was also employed in stands of excessively old timber. It allowed for the regeneration of the stock of trees to improve exploitability. The marked parcels were entirely harvested by *tire et aire*, but without the usual preservation of scattered "standard" trees (*baliveaux*). Thereafter the forest could be managed normally.

Purgation was also employed to regenerate a forest. But Froidour and his deputies' understanding of that term differed. Froidour believed it to be "a monster" that had to be eradicated, all the more so because it "was very common in this Province [Languedoc], and notably in the king's forests."⁶⁵ Cut in this fashion, the forest becomes trapped in a state that impedes any development, as only a few strong saplings of the same age are left at each harvest, surrounded by younger branches. The wood harvested in this way had only minimal commercial value, serving mainly for firewood or for making small objects. Even so, purgation was

particularly easy for those populations with only the simplest tools, which doubtless explains its widespread application.

Among all these techniques, *tire et aire* remained the preferred method. It underpinned the reign of “coppice under standards” a hybrid method that attempted to straddle the fence by reconciling the production of firewood and other small wood for domestic needs with that of timber for construction. Economic necessity determined the age of future coppicing: the greater the anthropogenic pressure, the shorter the harvesting cycle and the younger the coppice would be, thereby providing precious firewood. Only in larger woodlands was it possible to lengthen the harvest cycle enough to increase the trees’ age and thus the quality of wood. Generally, coppices remained young and the wood harvested from them was of a mediocre quality. The same went for standards: with only young saplings to compete with for light, they grew short and stocky, with spreading canopies—the complete opposite of the beautiful tall trunks that foresters hoped for. Of a mediocre quality at best, their trunks were generally disdained by builders. In the best case, they were bought by naval commissioners, who used a great deal of twisted wood in the hulls of their vessels. Moreover, even when timber stands were well protected in a reserve the results were often no better. If the “standard” trees (*étalons*) grew continuously, the various age-classes that were left to grow after each thinning, including those sixty-eighty years old (*baliveaux modernes*), hundred or more years old (*baliveaux anciens*), four times the age of the surrounding coppice woods (*bisanciens*), and five to six times the age of the coppice (*vieilles écorces*) would eventually close the canopy and smother both coppice and all the younger *baliveaux*. Despite these inconveniences, coppice-under-standards remained the preferred method for reformers, who used it to raise the age at harvest. In the reformers’ thinking, the short

harvesting cycles of the coppices in the *Grande Maîtrise* needed to be gradually lengthened to at least ten to twenty-five years in order to provide more ample resources to the public.

Conclusion

All throughout the reformation, the royal commissioners took into account the ways of life of the Midi's inhabitants. From the plains of the Garonne to the peaks of the Pyrenees, they recognized people's profound attachment to and identification with their forests. Their forest regulations reflected these peculiarities born of the long anthropogenic modification of the woods of the Southwest. In crafting them, the reformers reprised the principal of inquiry as a fundamental element of the *Waters and Forests*: careful investigation allowed royal agents to understand the management of these immense territories.

While the *Grande Ordonnance* remains the referent text *par excellence* in matters of management, the reformers dedicated themselves to understanding local needs in order to protect the forests from any excess. This was no altruistic decision: achieving the objectives of the State required walking a fine line between coercive management and respecting regional practices, such as the replanting and reserves. It required an older layer of medieval structures, reinforced and multiplied, to watch over them.

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¹ Jérôme Buridant, « Du "modèle" à la pratique : la gestion des peuplements caducifoliés dans la France Moderne, XVIe-XVIIIe siècle », in *Les forêts d'Occident du Moyen Âge à nos jours. Actes des XXIVes Journées internationales d'histoire de l'Abbaye de Flaran 6, 7, 8 Septembre 2002*, éd. par Andrée Corvol (Toulouse: Presses universitaires du Mirail, 2004), 203.

¹⁷ Henri Gilles, « L'administration royale des Eaux et Forêts en Languedoc au Moyen-Âge », *Bulletin philologique et historique (jusqu'à 1610)*, 1966, 333.

¹⁸ Philippe Jéhin, « Les forêts des Vosges du Nord du Moyen Age à la Révolution milieux, usages, exploitations » (Presses universitaires de Strasbourg, 2005), 31.

¹⁹ Michel Devèze, « La vie de la forêt française au XVIe siècle » (S.E.V.P.E.N, 1961), 50.

²⁰ Edouard Decq, « L'administration des Eaux et Forêts dans le domaine royal en France aux XIVe et XVes siècles. Mémoire posthume d'Edouard Decq », *Bibliothèque de l'École des chartes* 83/84, n° 1 (1022): 78.

²¹ Christian Fruhauf, *Forêt et société: de la forêt paysanne à la forêt capitaliste en pays de Sault sous l'Ancien régime (vers 1670-1791)*, éd. par Centre national de la recherche scientifique. Centre régional de publication de Toulouse (Paris, France: CNRS éditions, 1980), 72.

²² *Ibid.*, 63.

²⁵ ADHG, fonds de la réformation de Froidour, 8 B 025, f°300 v, *Procès-verbal d'avis des commissaires portant règlement général pour les forêts de la maîtrise de Quillan avec ordonnance provisoire pour l'exécution du règlement contenu en l'avis cy dessus jusqu'à ce qu'il ait plu au roi autrement y pourvoir*, 8 May 1670.

²⁷ « Et parce que ceux qui ont dessein de travailler en gros ou menus ouvrages auxdites forests coupent tout a la fois tres grande quantité d'arbres dont ils en laissent apres et abandonnent une grande partie et ainsy outre la perte desdits arbres a cause qu'ils demeurent et se pourrissent sur les lieux, ils occupent de grandes places auxquelles les rejets et renaissances sont empeschées, qui causent apres de grandes clairieres et vaccans esdites forests. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 009, f°121 v, *Reglement concernant les forests de la vallée de Barousse fait le dernier octobre 1625 par le lieutenant general de la Table de Marbre*, 31 October 1625.

²⁹ « Jérôme Bonhôte et al., « Histoire de l'environnement et cartographie du temps dans la moitié est des Pyrénées. Pour une "chrono-chorologie" », in *Les temps de l'environnement* (Toulouse: Presses universitaires du Mirail, 2000), 502.

³⁰ « Il y a quelques contrées plantées de chesne [*Quercus pyrenaica*], mais mal venant, rabougré et de nulle valeur [...] sont conservez neantmoins assez precieusement par les habitans des lieux sans qu'il s'en vende et mesme qu'ils s'en coupe que dans les extremes necessitez pour le chauffage à cause du glandage qui sert pour la paisson de leurs porcs. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 009, f°288 r,

Proces verbal d'avis pour le reglement des coupes des forests dependantes de la maistrice de Commenge, 8 May 1670.

³¹ Christian Fruhauf, « De la forêt paysanne à la forêt capitaliste en pays de Sault sous l'Ancien Régime », *Revue forestière française* 31, n° numéro spécial « Sociétés et forêts » (1980): 160-65. The oaks in question were mostly pubescent oaks (*Quercus pubescens*) and some green oaks (*Quercus ilex*).

³² Michel Bartoli et Bernard Gény, *Histoire des forêts du Béarn jusqu'en 1789. Découverte du règlement forestier de Louis de Froidour (1673)*, Société des sciences, lettres et arts de Pau et du Béarn (Orthez, 2015).

³⁴ « Après la ruine des anciens bois que les communautés qui en ont voulu avoir aient pris le soin d'en replanter et il y a plusieurs siècles qu'on y est dans cet usage. », Michel Bartoli, *Louis de Froidour (1626 ?-1685) : notre héritage forestier*, Les dossiers forestiers 23 (Paris: Office national des forêts, 2011), 104.

³⁵ « Dont les gens de cette contrée ont expérimenté que, ainsi tronçonnés ou écimés, poussent ordinairement quantité de branches et sont bons pour le glandage. », *Ibid.*, 106.

³⁶ « N'osent se hasarder d'aller couper aucuns des quelques arbres qui sont venus sur ces rochers, crainte qu'esbranlant leurs racines qui semblent embrasser et retenir ces rochers, ils ne les fassent tomber. », Paul de Castéran, *Lettres écrites par M. de Froidour, grand maître enquêteur et général informateur des Eaux et Forêts au département de la grande maîtrise de Languedoc à M. de Hericourt, son procureur général à Toulouse et à M. de Medon, conseiller au présidial de Toulouse, publiées avec des notes par M. Paul de Casteran*, (Auch: Imprimerie et lithographie G. Foix, 1899), 350.

³⁷ « Ladite forest [*Montech*] estoit reduitte en tel estat que le roy n'en tiroit aucun proffit & qu'elle se despeuploit de bois par les grands delits & abrouτισsemens que l'on y faisoit tous les jours & mesme qu'en l'estat auquel elle estoit, il ne falloit pas attendre qu'elle se peut restablir a moins qu'elle ne fut receppée [...] ladite forest s'estant trouvée en sy mauvais estat qu'on auroit peu la traversser presque par tout en carosse. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 002, f°278 v, *Proces verbal de la visitation de la forest de Montech*, 28 September 1666.

³⁹ Poublanc, « Compter les arbres », 89.

⁴⁰ Henri de Coincy, « Quelques précisions sur les grandes maîtrises des Eaux et Forêts en Languedoc », *Annales du Midi*, 1924, 39-57, 184-203.

⁴¹ Louis Vié, « Louis de Froidour commissaire député pour la reformation puis grand maître des eaux et forêts », *Revue de Comminges*, 1913, 198.

⁴² « Là où les sociétés humaines les ont cantonnées : souvent dégradées, parfois sauvées voire "jardinées", en un mot remodelées . », Georges Bertrand, « La forêt pyrénéenne réinventée », *Revue de Comminges*, n° 2 (1998): 254.

⁴³ Emmanuel Le Roy Le Roy Ladurie, « Histoire et environnement », *Annales. Économies, Sociétés, Civilisations* 29, n° 3 (1974): 190.

⁴⁴ Jérôme Bonhôte, Jean Cantelaube, et Catherine Verna, « De la mouline à la forge à la catalane : six siècles de sidérurgie directe dans les Pyrénées ariégeoises (XIIIe-XIXe siècles). », *Revue de Comminges*, n° 4 (2000): 768.

⁴⁵ *Ibid.*

⁴⁶ Ibid., 764.

⁴⁷ « La dent, l'haleine et la laine [...] sont pestifères aux bois et malvenants. », Louis de Froidour, *Reglement fait par le sieur de Froidour, grand maistre des Eaux & Forests au département de Languedoc, Haute Guyenne, Bearn, Basse Navarre, Soule & Labourd, concernant les forests du país de Bigorre. Les observations faites contre ledit reglement et les motifs dudit reglement avec les réponses dudit sieur de Froidour ausdites remarques & observations. Fait à S. Jean de la Castelle, le 29 decembre 1684* (Toulouse: J. Pech, 1685), 63.

⁴⁸ Alain Corbin, *La douceur de l'ombre. L'arbre, source d'émotions, de l'Antiquité à nos jours* (Paris: Fayard, 2013), 56.

⁴⁹ « Coupés en coupes ordinaires de taillis, [et qu'] on laisse croître jusqu'à 30, 40, 50, 100, & 200 ans, & au delà. », Froidour, *Instructions pour les ventes des bois du roy*, 9.

⁵⁰ « L'on appelle cet endroit en terme du pays cul d'Iher, qui signifie cul d'Enfer. Du reste la vallée est fort belle et fort agréable, contient presque une lieue de pays. Ce qui est à main gauche qui est le revers des montagnes qui sépare la France et l'Espagne est entièrement planté de bois, [...]; les hestres [*Fagus sylvatica*] sont très jeunes et belle fustaye, et les sapins [*Abies alba*] sont si beaux et en si grand nombre qu'on peut y prendre trois à quatre mille matz. », Castéran, *Lettres écrites par M. de Froidour, grand maître enquêteur et général informateur des Eaux et Forêts au département de la grande maîtrise de Languedoc à M. de Héricourt, son procureur général à Toulouse et à M. de Medon, conseiller au présidial de Toulouse, publiées avec des notes par M. Paul de Casteran*, 149.

⁵² « Jérôme Buridant, « Froidour avant Froidour : l'action de Louis de Froidour dans les forêts du nord de la France, 1651-1666 », *Les Cahiers de Framespa. Nouveaux champs de l'histoire sociale*, n° 13 (15 mars 2013), doi:10.4000/framespa.2267.

⁵³ « Entièrement conforme à son ordonnance, sauf en deux ou trois petits points qui se peuvent facilement concilier. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 001, f°393 r, *Remarques sur l'ordonnance du roy*, 5 May 1670.

⁵⁴ « Autrefois plantée d'une haute fustaye de mesme essence et qualité, comme on nous l'a dit et selon que nous l'avons peu connoistre par les sortes de bois que nous y avons trouvé. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 020, f°107 r, *Procez verbal de visitation des bois de Masux Barrot Fabret et Roucoux du mas de Malet*, 11 October 1669.

⁵⁵ « Du reste, comme ladite forest [*La Selve*] est plantée de beaucoup de bois blancs qui ne sont point propres a estre mis en fustaye, et que d'aillieurs ce n'est qu'un buisson qui pendant un siecle ou six vingt ans au moins qu'il fault donner au bois pour le laisser croistre en fustaye, estant exposé au pillage de quatre ou cinq villages dont il est environné, n'est point en estat de se deffendre de leurs delicts, les fustayes ne devant estre reservées que dans les grands corps de forests, et veu aussy que dans la suite des temps, il seroit fascheux de payer incessamment et pendant longues années des gages et autres droicts a des officiers d'une forest dont le roy ne tireroit aucun proffit, nous sommes d'advis que pour le bon mesnagement de ladite forest, les coupes en doivent estre réglées a l'age de quarante ans, auquel temps les bois de hestre [*Fagus sylvatica*] et erables [*Acer campestre*] non seulement sont bons pour charbonner, ainsy que le bois de coudre, mais pour toutes sortes d'ouvrages, de charonnage. », Archives

départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 051 A 1, *Proces verbal d'avis pour le reglement des coupes des forests de Lauragois*, 2 January 1670.

⁵⁶Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 001, f°396 r, *Remarques sur l'ordonnance du roy*, 5 mai 1670.

⁵⁷ « Les terres pour les acquérir et employer selon leur naturel. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 011, f°209 v, *Procès contre les habitants de Lourette*, 27 July 1668.

⁵⁸ «Qu'elles doivent estre semées ou plantées de la semence et de l'essence de bois la meilleure et la plus convenable pour chacun fonds desdites forests, comme de sapin [*Abies alba*] dans les Pirenées & de chesne [*Quercus pubescens*] dans les aultres montagnes ou de hestre [*Fagus sylvatica*] ou de chasteigner [*Castanea sativa*] au moins dans les fonds quy ne seront pas asses forts pour pousser du chesne ou du sapin”, Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 001, f°501 r, *Proces verbal d'avis de Messieurs les commissaires deputez pour la reformation generale des Eaux et Forests au departement de la grande maistrise de Toulouse donné a sa maiesté pour l'inféodation ou repeuplement des terres desfrichées dans les forests des maistrises de Quillan, Pammiers, Saint Gaudens et Saint Pons*, 7 May 1670.

⁵⁹ Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 001, f°325 r, *Proces verbal d'avis pour les reglements des bois des beneficiens, des communautes ecclesiastiques & seculiers et des particuliers mesmes*, 27 July 1668.

⁶⁰ Buridant, « Du “modèle” à la pratique : la gestion des peuplements caducifoliés dans la France Moderne, XVIIe-XVIIIe siècle », 213.

⁶¹ Froidour, *Instructions pour les ventes des bois du roy*, 16.

⁶² Gustave Huffel, *Histoire des forêts françaises, de l'origine jusqu'à la suppression des maîtrises des Eaux et Forêts* (Nancy: Ecole Nationale des Eaux et Forêts, 1925), 75.

⁶³ « Aucune coupe par arpent, joint que lesdits arbres [*Abies alba*] ne repoussant point par les racines et venant seulement de semance, il seroit dangereux d'en establir les coupes par arpent et a tire et aire & qu'il y auroit peril qu'il n'en reviendroit plus, du moins que par un tres long cours d'années ainsy que l'experience l'a fait voir en tous les lieux ou l'on a fait de pareilles coupes. », Archives départementales de la Haute-Garonne, fonds de la réformation de Froidour, 8 B 009, f°310 r, *Proces verbal de la reformation generale des Eaux et Forests de la maistrise particuliere de Commenge établie a Saint Gaudens*, 19 July 1673.

⁶⁴ « Pour bien entendre cette sorte de vente, il faut se figurer une teste que quelque maladie a dépoüillée & dégarinée de cheveux, laquelle il faut raser pour les y faire revenir & les faire recroître avec abondance ; il en est de mesme des forests en ce que lors qu'elles ont esté pillées & depeuplées de bois ou abruties par les bestiaux, il faut les receper pour y faire revenir le bois ; c'est un ménagement que l'on pratique ordinairement pour le restablissement des bois, & la coupe qui se fait pour cela s'appelle recepage. », Froidour, *Instructions pour les ventes des bois du roy*, 18.

⁶⁵ « Est tres-commune en cette Province, & notamment dans les forests du roy. », *Ibid.*, 17.