

# FRENCH NATIONAL SPACE LEGISLATION: A BRIEF “PARCOURS” OF A LONG HISTORY

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## I. INTRODUCTION

Although France was the last state in Europe to adopt a national space act,<sup>1</sup> it is by no means the least spacefaring

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1. I. Marboe & F. Hafner, *Brief Overview over National Authorization Mechanisms in Implementation of the UN International Space Treaties*, in NATIONAL SPACE LEGISLATION IN EUROPE, 6 STUD. SPACE L. 29, 39 (Frans G. von der Dunk ed. 2011).

nation of Europe. Indeed, it is often referred to—rightly so—as a major launching state.<sup>2</sup> France has a major space launching facility in its territory: the Guyane Space Center (GSC) used by a commercial space “workhorse,” Arianespace.<sup>3</sup> The Ariane 5 fleet is the European Space Agency’s (ESA) heavy launcher, and although it is launched six to seven times a year, only one or two of those launches are for institutional purposes.<sup>4</sup> In other words, the Ariane 5 is usually used commercially. France is also host to the ESA headquarters (located in Paris).<sup>5</sup> Furthermore, France continues to have a “large and growing space industry.”<sup>6</sup> It is therefore unsurprising that space legislation has existed in France since the early 1960’s, albeit not in the form of a uniform space act. France’s significant ongoing involvement in private space activities makes it a significant player in the increasingly commercialized space industry.

## II. A HISTORY OF FRENCH SPACE LEGISLATION

On December 19, 1961, France created the *Centre National d’Etudes Spatiales* (National Center for Space Studies) (CNES).<sup>7</sup> The CNES was created to be: (1) a public scientific and technical institution; (2) of an industrial and commercial nature; (3) having financial autonomy; and (4) placed under the authority of the Prime Minister.<sup>8</sup> The CNES website proudly

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2. *Id.* at 39 n.44.

3. MATTHEW J. KLEIMAN, JENNIFER K. LAMIE & MARIA-VITTORIA “GUGI” CARMINATI, *THE LAWS OF SPACEFLIGHT: A GUIDEBOOK FOR NEW SPACE LAWYERS* 47 (2012); *Service & Solutions*, ARIANESPACE, <http://www.arianespace.com/about-us/service-solutions.asp> (last visited Oct. 29, 2013).

4. KLEIMAN, LAMIE & CARMINATI, *supra* note 3; see *Service & Solutions*, *supra* note 3 (noting Ariane 5 was launched seven times in 2012).

5. Marboe & Hafner, *supra* note 1, at 39; *ESA Headquarters*, ESA, [http://www.esa.int/About\\_Us/Welcome\\_to\\_ESA/ESA\\_headquarters](http://www.esa.int/About_Us/Welcome_to_ESA/ESA_headquarters) (last visited Oct. 29, 2013).

6. Marboe & Hafner, *supra* note 1, at 39.

7. Loi 61-1382 du 19 décembre 1961 instituant un centre national d’études spatiales [Law 61-1382 of Dec. 19, 1961 establishing the National Center for Space Studies], *JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE* [J.O.] [OFFICIAL GAZETTE OF FRANCE], Dec. 20, 1961, p. 11665, *repealed by* Ordonnance 2004-545 du 11 juin 2004 relative à la partie législative du code de la recherche [Ordinance 2004-545 of June 11, 2004 on the Legislative Part of Research], *JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE* [J.O.] [OFFICIAL GAZETTE OF FRANCE], June 16, 2004, p. 18.

8. *Id.*

announces that as of October 29, 2013, “the agency’s more-than 2,400-strong workforce constitutes an exceptional pool of talent, with some 1,800 engineers and executives, 35% of whom are women.”<sup>9</sup>

The CNES’s duties are to (1) collect information on national and international space activities, (2) prepare and propose to the Interministerial Committee for Scientific and Technical research programs of national interest in space, (3) ensure execution of such research projects, either in its own laboratories and technical institutions or using private or public institutions or by financial participation, (4) follow, along with the Minister of Foreign Affairs, problems of international cooperation, and (5) ensure, either directly or indirectly, publication of scientific work regarding problems related to space.<sup>10</sup> These duties are consistent with the CNES’s announced goal of being a public scientific research institution rather than an administrative and regulatory one.<sup>11</sup> And, as we will see, even in the context of licensing and authorization, the CNES largely maintains its role as a technical and scientific advisory institution.

On July 19, 1989, the French legislature created the Space Committee.<sup>12</sup> The Space Committee was placed under the co-leadership of the Minister of Defense and Minister of Industries.<sup>13</sup> Its goals are to (1) analyze civil and military space plans, (2) examine the effect of space programs on the French and European industries, (3) prepare France’s position statements regarding international space collaboration, and (4)

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9. *About CNES*, CNES, <http://www.cnes.fr/web/CNES-en/3773-about-cnes.php> (last visited Oct. 29, 2013). As a comparison, only twenty percent of NASA engineers are women. Lori. B. Garver, Deputy Adm’r, NASA, Remarks for Women’s Empowerment-Women’s Education at Johns Hopkins University Women’s Network (Mar. 14, 2012) *available at* [http://www.nasa.gov/pdf/655357main\\_garver\\_apl\\_hopkins.pdf](http://www.nasa.gov/pdf/655357main_garver_apl_hopkins.pdf).

10. Loi 61-1382 art. 2.

11. *See* Loi 61-1382 arts. 1–2 (establishing the CNES’s mission to guide the scientific investigations carried out in the field of space research).

12. Loi 89-508 du 19 juillet 1989 portant création du comité de l’espace [Law 89-508 of July 19, 1989 establishing the Committee of Space], *JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE* [J.O.] [OFFICIAL GAZETTE OF FRANCE], July 21, 1989, p. 9,128.

13. *Id.* art. 1.

recommend any necessary action to the Prime Minister.<sup>14</sup> The Space Committee meets twice a year and its secretariat is provided by the CNES.<sup>15</sup>

Finally, on June 3, 2008, France issued the *Loi relative aux opérations spatiales* (French Space Operations Act) (FSOA),<sup>16</sup> which was—as stated previously—the first uniform law of its kind in France, and the last adopted by a European country to date.<sup>17</sup> According to the head of the CNES legal department, the FSOA establishes a coherent national framework reflecting France's international obligations:

Basically, the French Space Operations Act establishes a coherent national legal framework which sets forth an authorisation and monitoring regime for Space operations carried out under French jurisdiction and/or for which the French Government bears international liability either under UN Treaties (namely the 1967 Outer Space Treaty, the 1972 Liability Convention and the 1976 Registration Convention) or under its European commitments with ESA and its Member States.<sup>18</sup>

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14. *Id.* art. 2, *amended by* Loi 93-408 du 19 mars 1993 modifiant le décret 89-508 du 19 juillet 1989 portant création du comité de l'espace [Law 93-408 of Mar. 19, 1993 amending Decree 89-508 of July 19, 1989 establishing the Committee of Space] JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Mar. 21, 1993, p. 4,434.

15. *Id.* art. 3, *amended by* Loi 93-408 du 19 mars 1993 modifiant le décret 89-508 du 19 juillet 1989 portant création du comité de l'espace [Law 93-408 of Mar. 19, 1993 amending Decree 89-508 of July 19, 1989 establishing the Committee of Space] JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Mar. 21, 1993, p. 4,434.

16. Loi 2008-518 du 3 juin 2008 relative aux opérations spatiales [Law 2008-518 of June 3, 2008 on Space Operations], JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], June 4, 2008, p. 9,169; Philippe Clerc, Head, CNES Legal Dep't, Presentation for the UN Legal Subcomm. on Peaceful Uses of Outer Space (Forty-eighth Session): The French Space Operation Act (Mar. 23–Apr. 3, 2009) [hereinafter Clerc FSOA], *available at* <http://www.oosa.unvienna.org/pdf/pres/lsc2009/pres-04.pdf> (presentation made by the French delegation at the 48th session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space).

17. *See* Marboe & Hafner, *supra* note 1, at 39 (discussing the establishment of the FSOA).

18. Philippe Clerc, *The French Space Operations Act One Year of Implementation*, OLE MISS 1 (Mar. 1, 2012), <http://www.spacelaw.olemiss.edu/events/pdfs/2011/clerc-paper-galloway.pdf> [hereinafter *FSOA One Year*].

Subsequent to passage of the FSOA, the French legislature issued several implementing Decrees, including one “specifically dedicated to the issue of authorization.”<sup>19</sup> The implementing Decrees are as follows: Decree no. 2009-640 (9 June 2009), Decree no. 2009-643 (9 June 2009), Decree no. 2008-518 (3 June 2008), and Decree no. 2009-644 (9 June 2009).

### III. PRE-2008 FRENCH REGULATION OF SPACE

The FSOA marked a turning point in French space legislation. This turning point naturally begs the question: how was space—and especially commercial space—regulated prior to 2008? Commentators answer by noting that, prior to 2008, the “regulatory framework for space activities had been determined by administrative practices with no unified legal basis.”<sup>20</sup> However, France did exercise control and continuous supervision of private space activities for which it could be held “responsible and/or liable.”<sup>21</sup> Given the absence of a regulatory regime, France exercised such control and oversight via “*de facto* control of the private activities arising in the French context.”<sup>22</sup> The best illustration of this *de facto* control is France’s *de facto* regulation of Arianespace.

Arianespace is a French, *private*, company and “the world’s number one in the commercial space launch services market.”<sup>23</sup> But Arianespace was not directly controlled or supervised by the CNES.<sup>24</sup> Rather, CNES exercised a *de facto* control by being the largest shareholder among the French shareholders of

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19. Marboe & Hafner, *supra* note 1, at 39–40 (citing Decree no. 2009-643).

20. *Id.* at 39; See Philippe Clerc, Head, CNES Legal Dep’t, Presentation at the Toulouse Space Show: Imposition of Space Sustainability Guidelines on the Commercial Space Sector, Can National Space Law Offer Solutions? The French Space Operations Act’s Contribution 6 (June 26, 2012) [hereinafter Imposition of Space Sustainability Guidelines], available at [http://www.iislweb.org/docs/2012\\_Clerc.pdf](http://www.iislweb.org/docs/2012_Clerc.pdf) (noting the lack of specific legislation before 2008).

21. A. Kerrest de Rozavel & F.G. von der Dunk, *Liability in the Context of National Authorisation*, in NATIONAL SPACE LEGISLATION IN EUROPE 125, 150 (Frans G. von der Dunk ed. 2011).

22. *Id.*

23. *Id.* at 151.

24. *Id.*

Arianespace.<sup>25</sup> The other shareholders, however, were made up of private companies from other ESA countries.<sup>26</sup> In addition to this *de facto* control, Arianespace was governed by “a triangle of legal documents involving Arianespace, France and ESA.”<sup>27</sup> These documents consisted of: the Arianespace Declaration of 1980, a Convention between ESA and Arianespace, and a continuing series of protocols between France and ESA.<sup>28</sup> This last series of protocols governed GSC.<sup>29</sup> The agreements apportioned responsibility and liability among France and ESA. For example, for ESA-operated launches, “ESA [was] liable and [would have] safeguard[ed] France from any claims for damages, excluding willful misconduct by the French government or its agencies.”<sup>30</sup> However, if Arianespace were to conduct a launch for a third-party, leading to third-party liability for France, Arianespace would only have to reimburse France up to approximately sixty million euros.<sup>31</sup> This sixty-million-euro ceiling was later incorporated into the FSOA, as discussed below, and was replicated, in some fashion, by legislations all over the world.<sup>32</sup>

#### IV. POST-2008 FRENCH REGULATION OF SPACE

Before going any further, it is noteworthy to explain a word-use particularity arising from French-English translation. Although in the U.S. licensing system, the FAA is said to “license” space activities, thereby authorizing them, under the French system, licensing and authorization are two distinct concepts. Indeed, although licensing under a U.S. nomenclature is the end-all be-all of regulatory authority, in the French

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25. *Id.*

26. *Id.*

27. Kerrest de Rozavel & von der Dunk, *supra* note 21, at 151.

28. *Id.* at 151–52.

29. *Id.* at 152.

30. *Id.*

31. *Id.* at 152–53.

32. See Clerc FSOA, *supra* note 16 (explaining that Article 14 of the FSO limits claims for compensation to a fixed ceiling of 60 million Euros); John Horner, Marsh Space Projects, Presentation at the World Space Risk Forum: Space Liability Insurance 8, at the World Space Risk Forum (Feb. 29, 2012), available at <http://worldspaceriskforum.com/2012/presentations/>

context a license is only one of multiple steps required to reach the end goal of “authorization.”<sup>33</sup> As a result, the word “authorization” under the French system is better understood as referring to the word “licensing” in the U.S. system.

Having said this, the FSOA focuses on three main issues, addressed in turn below: (1) creation of an authorization regime; (2) spreading of liability between the state and private entities; and (3) the creation of sanctions for noncompliance with the FSOA and ancillary laws and regulations.<sup>34</sup> The FSOA’s stated goals are to:

- set up a coherent national regime to authorize and monitor space operations under French jurisdiction or for which the French government bears international liability as a Launching State, in accordance with UN Treaties principles (Article VI and VII of the Outer Space Treaty, the Liability Convention, and the Registration Convention) (discussed below);
- reflect international agreements regularly signed between France and ESA since 1975, in particular, those related to the Guiana Space Centre (GSC); and
- implement commitments taken by France under the Declaration on the Launchers Exploitation (an IGA since 1980) to other European States participating to the Ariane, Vega, and Soyuz programs.<sup>35</sup>

The rest of this section addresses how the FSOA achieves its stated goals.

One last introductory point, before discussing France’s responsibility and liability for private space activities under the FSOA, is a reminder of why France—and other actors—may feel France has international responsibility and liability for the actions of private actors. Under Article VI of the Outer Space

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33. See Julien Mariez, CNES Legal Department, Presentation for the UN Legal Subcomm. on Peaceful Uses of Outer Space (Forty-ninth Session): The Law, Decrees, and Technical Regulations on space operations of France 9 (Mar. 26, 2010), available at <http://www.oosa.unvienna.org/pdf/pres/lsc2010/tech-05.pdf>.

34. Marboe & Hafner, *supra* note 1, at 39.

35. Imposition of Space Sustainability Guidelines, *supra* note 20, at 6.

Treaty, France “bear[s] international responsibility for national activities in outer space . . .” and, with respect to “[t]he activities of nongovernmental entities in outer space,” must “require authorization and continuing supervision . . . .”<sup>36</sup> This makes France *responsible* for outer space activities by its private companies. Under Article VII of the Outer Space Treaty, France is “internationally liable for damage to another [country] or its natural or juridical persons” if it “launches or procures the launching of an object into outer space,” or if the object is launched from France’s “territory or facilit[ies].”<sup>37</sup> This makes France *liable* if it procures a launch of, launches, its territory is used to launch, or a facility it owns is used to launch a damaging object. France’s position is that the FSOA allows it to comply with these international obligations of responsibility and liability.

#### A. *Jurisdiction and Authority*

First, under the FSOA, the French authorizing authority is the Ministry of Research in charge of outer space affairs (Ministry of Research).<sup>38</sup> As part of its authority, the Ministry of Research assesses corporate, financial, and professional requirements.<sup>39</sup> However, technical assessments are delegated to the CNES, which is in charge of reviewing launches, satellite operations, and safety regulations at GSC from a technical standpoint.<sup>40</sup>

The FSOA provides for the licensing of “Space Operations” as defined in Article 1.3 of the FSOA, which encompasses launches, on-orbit command (or transfer of command), and the return of a space objects:

any activity consisting of launching or attempting to launch an object in outer space, or in ensuring the command of a space object during its journey in outer

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36. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies art. VI, Oct. 10, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty].

37. *Id.* art. VII.

38. Clerc FSOA, *supra* note 16, at 14; Mariez, *supra* note 33, at 8.

39. Clerc FSOA, *supra* note 16, at 14.

40. Clerc FSOA, *supra* note 16, at 17; Mariez, *supra* note 33, at 8.

space [. . .], as well as during its return to Earth.<sup>41</sup>

Under Articles 1.4 and 1.5 of the FSOA, France draws a distinction between the “launching phase” and the “command phase.”<sup>42</sup> The “launching phase” is the “period of time which starts when the launching operations become irreversible and ends when the object to be put in [o]uter space is separated from its [l]aunching vehicle.”<sup>43</sup> The “command phase” begins after the space vehicle separates from the launcher and ends with the termination of the mission, which consists of either: (1) the final maneuvers of de-orbiting and when passivation activities have been completed; (2) the operator has lost control over the space object; or (3) the return to Earth or the full disintegration of the space object into the atmosphere.<sup>44</sup>

According to the head of the CNES’s legal department, the FSOA does not cover human spaceflights, suborbital flights, command of space probes, and sounding rockets or balloons;<sup>45</sup> however, these activities are ultimately covered by alternate French laws or case-by-case agreements.<sup>46</sup> For example, human spaceflights are covered by the IGA.<sup>47</sup> Suborbital flights are governed by a combination of air and space law which is still, as of now, in flux.<sup>48</sup> Sounding rockets and balloons are governed by air law because they “do not fall within the scope of the definition of a space operation.”<sup>49</sup>

The FSOA licensing process applies to any person or company that: (1) launches from the French territory *or* from a facility under the jurisdiction of France, or who plans to reenter an object into national territory *or* onto a facility under French jurisdiction; (2) any French operator, regardless of where they launch from; (3) any French person or corporation

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41. Loi 2008-518 art. 1.3.

42. *Id.*

43. *Id.*; see Imposition of Space Sustainability Guidelines, *supra* note 20, at 7.

44. Loi 2008-518; Imposition of Space Sustainability Guidelines, *supra* note 20, at 7.

45. Imposition of Space Sustainability Guidelines, *supra* note 20, at 8.

46. See *id.* (discussing which activities do not fall within the scope of the FSOA regime, but are covered by French air law and the IGA).

47. *Id.*

48. *Id.*

49. *Id.*

headquartered in France, operator or not, that will launch or even just command a space object; and (4) anyone previously authorized under French law who wants to transfer control or command of a space object.<sup>50</sup> This is an extremely broad application of French law, but it is also quite consistent with the definition of “launching state” as found in the Liability Convention.<sup>51</sup> In addition, the FSOA applies to “space activities carried out from vessels or aircrafts registered in the state’s national register.”<sup>52</sup> This particular inclusion of vessels or aircrafts “registered” in the state’s national register incorporates and is consistent with France’s obligations under the Registration Convention,<sup>53</sup> which is in turn consistent with the FSOA’s stated purpose of ensuring France’s compliance with the Registration Convention.<sup>54</sup> This is significant because, as discussed above, one of the stated goals of the FSOA is to ensure France’s compliance with its international obligations, which include the terms of the Liability Convention and the Registration Convention.

### 1. *Authorization and Licensing*

#### a. *Of Authorizations and Licenses*

The FSOA provides several types of licenses and authorizations. First, there is a “Single Authorization” which allows a particular operator to conduct a particular activity, at a particular time, one single time.<sup>55</sup> Second, applicants can get an “Administrative License” that attests to the corporate, financial,

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50. Loi 2008-518 arts. 2–3; Imposition of Space Sustainability Guidelines, *supra* note 20, at 11.

51. See Convention on International Liability for Damage Caused by Space Objects art. 1, Mar. 29, 1972, 961 U.N.T.S. 13810 [hereinafter Liability Convention] (defining “launching State” to include a state which launches a space object or a state from where a space object is launched).

52. Marboe & Hafner, *supra* note 1, at 39 (citing Loi 2008-518, art. 2.2).

53. Registration Convention, G.A. Res. 3235 (XXIX), arts. 1–2, U.N. Doc. A/RES/3235(XXIX) (Nov. 12, 1974).

54. *FSOA One Year*, *supra* note 18, at 1; see Clerc FSOA, *supra* note 16 (stating that the purpose of the FSOA is to adhere to the French government’s international commitments).

55. *Id.* at 4 (stating that authorization follows different stages from the beginning of the operation to the completion of that same operation).

and professional guarantees of the applicant,<sup>56</sup> which is accompanied by an authorization for each operation on a case by case basis, which would include a technical assessment for each operation. Third, an applicant can obtain the license described above, in addition to a “Technical License,” which is a certification of technical conformity of the “generic systems and procedures used,” with an added authorization on a case by case basis to assess if there are differences between the systems used and the generic systems and procedures already licensed.<sup>57</sup> Logically, if there are no differences between the generic systems and those being used for the particular operation, the authorization process can be significantly shortened. Fourth, an applicant can obtain a license equivalent to an authorization for determined operations within a determined period, without case by case authorization.<sup>58</sup> This entails only a duty to notify the Ministry and the CNES of the applicant’s activities.<sup>59</sup> Fifth, an applicant can obtain a simplified authorization (which entails technical control exemptions) for space operations being carried out from a foreign territory.<sup>60</sup>

*b. The Authorization Process*

As part of the authorizing process, the applicant has to provide detailed information about its “Space Operations,” as that term is defined in the FSOA. This information includes (1) a description of the space operation to be conducted, as well as systems and procedure that the applicant intends to implement, (2) a general notice of compliance with technical regulations, (3) internal standards and quality management provisions, (4) risk management plans for ensuring the safety of property and people, as well as protection of public health and the

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56. *See id.* (stating that an applicant for an administrative license must present moral, financial and professional guarantees); Imposition of Space Sustainability Guidelines, *supra* note 20, at 17.

57. Imposition of Space Sustainability Guidelines, *supra* note 20, at 17.

58. *FSOA One Year*, *supra* note 18.

59. *See id.*; Clerc FSOA, *supra* note 16, at 15.

60. *See* Loi 2008-518 art. 4.4 (stating that applicant may be exempt from control and transfer requirements of the FSOA if the operation is conducted from a foreign state).

environment, (5) hazard studies and environmental impact studies, (6) risk management measures, and (7) planned emergency relief measures.<sup>61</sup>

Once the Ministry and CNES receive this information, applicants are subjected to one of two authorization timelines. If the applicant is using an operational system, ready to be commercially exploited, authorizations can be issued in four months, during which CNES has two months to perform technical assessments.<sup>62</sup> These time delays apply if the applicant has not previously obtained a license for any other aspect of its operations.<sup>63</sup> Alternatively, if the applicant already holds a license from the Ministry for other aspects of its operations, the CNES will authorize the proposed activity in one month, during which the CNES has fifteen days to perform technical assessments.<sup>64</sup> However, if the applicant is proposing to use a Not-Yet-Developed System, the authorization procedure will be longer.<sup>65</sup>

The applicant has the option of first submitting itself to a “pre-application procedure” whereby the CNES issues a certificate of preliminary technical conformity, which can accelerate future issuance of authorization/license to the operator, but is not an actual license or step in the authorization process.<sup>66</sup> Under the pre-application procedure a person or operator also has the opportunity to submit its innovative system or subsystem under development to CNES’s technical assessment.<sup>67</sup> This process is not mandatory, and it is separate from the formal authorization procedure.<sup>68</sup> However, it can be used before public authorities, at a later time, as evidence of compliance with technical requirements.<sup>69</sup>

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61. *FSOA One Year*, *supra* note 18, at 3.

62. *Id.* at 3–4.

63. *Id.*

64. *Id.*

65. *See id.* at 4 (stating that applications for authorization are usually submitted months or even years before launching).

66. *FSOA One Year*, *supra* note 18, at 4.

67. *Id.*

68. *Id.*

69. *See id.* at 4 (explaining that certificate constitutes a valid reference when later applying to the Minister of Space Affairs for authorization).

*i. Post-Licensing Compliance*

An authorized operator, having obtained either a license or an authorization, must subsequently continue to comply not only with the FSOA, but also with the Authorization Decrees (ADs), listed above, the CNES Decree, and its Technical Regulations (TR) as well as the specific terms of the particular authorization.<sup>70</sup>

The CNES oversees compliance with the technical terms of the authorization via several different operatives.<sup>71</sup> State Agents ensure that operators comply with their obligations.<sup>72</sup> They are entitled to visit and inspect sites, and they can request documents to verify compliance.<sup>73</sup> If there is a failure to comply, Sworn Agents are called in to investigate and record violations.<sup>74</sup> If an applicant is found in violation of either the terms of its authorization, the FSOA, the ADs, the CNES Decree, or the TR, it will be assessed sanctions (described below). Lastly, CNES Controllers oversee operator compliance with the TR on a “daily, continuous, and nonintrusive manner.”<sup>75</sup>

*ii. Sanctions*

If an authorized operator is found in violation of relevant regulations, it can be subjected to withdrawal or suspension of the authorization granted.<sup>76</sup> In addition, the “administrative authority may enjoin the operator to take, at its own expenses,

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70. *Id.* at 4.

71. *See, e.g.*, Loi 2008-518 art. 7, §§ 2, 5 (providing that a number of state-sanctioned representatives, such as airline and maritime inspectors, may oversee space operations). This paper only focuses on the state representatives particularly assigned to the oversight of space activities.

72. Loi 2008-518 art. 7; Imposition of Space Sustainability Guidelines, *supra* note 20, at 18.

73. Loi 2008-518 art. 7; Imposition of Space Sustainability Guidelines, *supra* note 20, at 18.

74. Loi 2008-518 art. 10; Imposition of Space Sustainability Guidelines, *supra* note 20, at 18.

75. Loi 2008-518 art. 7; Imposition of Space Sustainability Guidelines, *supra* note 20, at 18.

76. Loi 2008-518 art. 9, §2; Imposition of Space Sustainability Guidelines, *supra* note 20, at 23.

the appropriate measures to limit the risks of damage caused by the space object.”<sup>77</sup> Further, the authorized operator can be fined up to 200,000 euros *per violation*.<sup>78</sup>

### *B. Liability and Indemnification*

The FSOA enforces France’s obligations under Article VII of the Outer Space Treaty and under the Liability Convention by, first, wholly incorporating the concepts of fault-based liability as contained in both U.N. documents. The FSOA imposes absolute, joint and several liability for damage on the ground and in air space,<sup>79</sup> which is consistent with Article IV of the Liability Convention.<sup>80</sup> The FSOA imposes fault-based liability for damage caused in outer space, which is consistent with Article VI of the Liability Convention.<sup>81</sup> In addition, the FSOA imposes a limitation term on liability or, in other words, a statute of limitation on operator liability.<sup>82</sup>

The statute of limitations provides that, except in the case of a willful misconduct, an operator’s liability ends when all the obligations set out in the authorization or the license are fulfilled, or at the latest one year after the date on which these obligations should have been fulfilled.<sup>83</sup> Subsequently, the French Government will be liable in the operator’s place for damages occurring after the one-year period.<sup>84</sup> In addition to this one year statute of limitation which not only releases the operator of liability, but puts the French Government on the hook, the FSOA also contains generous indemnification

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77. Loi 2008-518 art. 9; Imposition of Space Sustainability Guidelines, *supra* note 20, at 23.

78. Loi 2008-518 art. 11.

79. Imposition of Space Sustainability Guidelines, *supra* note 20, at 24.

80. Liability Convention, *supra* note 51, art. IV.

81. *See* Loi 2008-518 art. 13 (explaining that liability other than on the ground or in air space can only be sought for misconduct); Imposition of Space Sustainability Guidelines, *supra* note 20, at 24.

82. Loi 2008-518 art. 13; Imposition of Space Sustainability Guidelines, *supra* note 20, at 24.

83. Loi 2008-518 art. 13; Imposition of Space Sustainability Guidelines, *supra* note 20, at 24.

84. Loi 2008-518 art. 13; Imposition of Space Sustainability Guidelines, *supra* note 20, at 24.

provisions.<sup>85</sup>

The FSOA requires an operator to obtain sixty million euros of insurance in case of damages.<sup>86</sup> But what is striking—and has been copied to varying degrees the world over—is that under French law, and except in cases of willful misconduct or gross negligence, an operator's liability is *limited* to sixty million euros.<sup>87</sup> If the amount of damages exceeds sixty million euros, the French government supersedes the operator's obligation to indemnify, thereby creating an absolute liability ceiling for space operators licensed under French law.<sup>88</sup> This indemnification applies to contractors, subcontractors, customers, and insurers.<sup>89</sup> Further, if the French government is sued by another state under the U.N. space treaties (particularly the Liability Convention), the French state's right of recourse against the space operator is limited to the fixed ceiling of sixty million euros.<sup>90</sup>

In a further effort to manage risk, Article 20 of the FSOA validates the internationally accepted practice of cross-waivers between space actors.<sup>91</sup> Under the FSOA, the cross-waivers are applicable and enforceable by default to all contracts related to space operation.<sup>92</sup> The only circumstances under which the default recognition of cross-waivers will not apply are if (1) there are manufacturing incidents or failure of a satellite (for damage caused in orbit) and (2) there is willful misconduct.<sup>93</sup>

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85. See *FSOA One Year*, *supra* note 18, at 6 (explaining that liability apportionments form an indemnification ceiling).

86. *Id.* at 7.

87. Loi 2008-518 art. 15; Imposition of Space Sustainability Guidelines, *supra* note 20, at 25.

88. Imposition of Space Sustainability Guidelines, *supra* note 20, at 25.

89. *Id.*

90. Loi 2008-518 art. 14; Imposition of Space Sustainability Guidelines, *supra* note 20, at 25.

91. Loi 2008-518 art. 20; Imposition of Space Sustainability Guidelines, *supra* note 20, at 26.

92. Loi 2008-518 art. 20; Imposition of Space Sustainability Guidelines, *supra* note 20, at 26.

93. Loi 2008-518 art. 20; Imposition of Space Sustainability Guidelines, *supra* note 20, at 26.

### 1. *Specific Regime*

Five “specific regimes” related to outer space are either not governed by the FSOA or are subject to alternative regimes: (1) space-based data systems; (2) CNES Operations; (3) the exploitation of GSC; (4) governmental space activities; and (5) Intergovernmental Organizations (i.e., ESA and EU).<sup>94</sup>

With respect to “space-based data systems,” usually referred to as remote sensing operations, operators are merely under an obligation to declare such space-based data systems to the French government.<sup>95</sup> Also, the French government is entitled to exercise “shutter control” to safeguard, the “fundamental interests of the Nation.”<sup>96</sup> Space-based data systems are governed by implementing decrees and ministerial orders.<sup>97</sup>

With respect to the CNES, some of its operations are not subject to the FSOA.<sup>98</sup> These exempt operations are its regular activities under the CNES’s “public service missions,”<sup>99</sup> and second, its space programs operated for other public entities, such as Defense ministry, ESA, or in cooperation with other countries.<sup>100</sup> However, these are subject to the CNES’s TRs.<sup>101</sup>

With respect to the GSC, the President of CNES is entrusted with “administrative police” power with regards to GSC.<sup>102</sup> The President has to ensure safety of persons, goods, and environment on Earth or during a launch, coordinate implementation by all companies and entities located in GSC of any regulation aimed at ensuring safety of facilities and the activities conducted, and set out all applicable safety rules for GSC.<sup>103</sup> Therefore, although the FSOA does not directly govern

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94. *FSOA One Year*, *supra* note 18, at 7–9.

95. *Id.*

96. *Id.*

97. *See id.* (“The relevant Implementing Decree and Ministerial Order specify the technical characteristics of the concerned data, the competent administrative authority, and the types of restriction measures the Government may take”).

98. *Id.* at 7–8.

99. *See id.* at 8.

100. *FSOA One Year*, *supra* note 18, at 7–8.

101. *Id.*

102. *Id.* at 9.

103. *Id.*

the GSC, the French government still has *de facto* control of the GSC via the CNES.<sup>104</sup>

With respect to other governmental space activities, which include defense activities and meteorological activities *not* carried out by CNES, these are within the scope of the FSOA authorization regime even though they are carried out by the government.<sup>105</sup>

With respect to IGO activities, they are not subject to the FSOA.<sup>106</sup> However, this is likely because IGOs are governed by UN Space Treaties, and the EU has a shared space competence under Article 189 of the Lisbon Space Treaty.<sup>107</sup> Further, the EU and ESA must respect legislation of their Member States, including France, that deal with public order.<sup>108</sup> In other words, the EU and ESA may not be subject to the FSOA, but they certainly have to respect it to the extent that not doing so would affect French public order.<sup>109</sup> Lastly, the EU and the ESA may choose to apply certain provisions of the FSOA and implement decrees and regulations.<sup>110</sup>

## V. CONCLUSION

The FSOA reflects a concerted effort by France to comply with its international obligations related to outer space activities. As discussed, the FSOA closely mirrors both explicit and implicit obligations under Articles VI and VII of the Outer Space Treaty, the Registration Convention, and the Liability Convention. The FSOA also leaves technical regulation to a specialized agency, the CNES, while separating out the more administrative oversight (corporate, financial, and professional aspects) to a government Ministry. The FSOA also reflects a desire to bring “into the fold” the greatest number of space actors possible. France chooses to apply its responsibility and

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104. *Id.*

105. *See id.* at 8. (emphasizing that CNS activities such as orbit operations or operations on behalf of the Ministry of Defense are not affected by FSOA).

106. *FSOA One Year*, *supra* note 18, at 9.

107. *Id.*

108. *Id.*

109. *Id.*

110. *See id.*

liability obligations to a broader array of entities than required by the Outer Space Treaty, the Liability Convention, or the Registration Convention. The French government could have limited itself to authorizing and overseeing the four categories identified in the Liability Convention, which do not include French individuals and operators anywhere in the world. But by broadening the applicability of its laws, the French government is indicating that the risk is worth it or—as the French would say—“le jeu en vaut la chandelle.”