

# The new Norwegian space law: work in progress

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# 1 Introduction

This article will present the ongoing work on the reform of the Norwegian space law, as well as some central legal issues discussed by the expert committee appointed to prepare a draft space law.<sup>2</sup> The Norwegian law which is currently in force is one of the oldest – arguably, *the* oldest<sup>3</sup> – piece of space legislation in the world. The law entitled “Law on launching of objects from Norwegian territory etc. into outer space”<sup>4</sup> was adopted in 1969, shortly after Norway ratified the Outer Space Treaty.<sup>5</sup>

The Norwegian space sector has grown and evolved considerably over recent decades.<sup>6</sup> At the present time, a very significant expansion in Norwegian space activities is planned for the Andøya Space Centre, which will start launching small satellites into polar and sun-synchronous orbits.<sup>7</sup> This important sectoral development should be seen within the

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<sup>2</sup> This article is based on the presentation by the author at the European Interparliamentary Space Conference (EISC) 2021, 10th May 2021. The author was a member of the expert committee appointed by the Ministry of Trade and tasked to prepare a proposed legal text. The Chair of the committee was law professor Trine-Lise Wilhelmsen (Scandinavian Institute of Maritime Law). Other members were: Terje Wahl/Bo Andersen (Norwegian space agency), Hege Susann Aalstad (Civil Aviation Authority), Frode Målen (Norwegian Communications Authority). The secretary of the committee was Simon Torp. The committee was advised by Prof. Steven Freeland (University of Western Sydney) on some of the issues. The committee worked on the law proposal for one year, in 2019, and in early 2020 the proposed text and the explanatory report called Right into Orbit (cited in fn. 13) was delivered to the Ministry.

<sup>3</sup> Frans G. von der Dunk, Atle Nicolaisen, «Vikings first in National Space Law: Other Europeans to Follow», (2001) Space, Cyber, and Telecommunications Law Program Faculty Publications. 39, available at: Digital Commons@University of Nebraska-Lincoln.

<sup>4</sup> Law # 38 adopted on 13<sup>th</sup> June 1969, in force as of 13<sup>th</sup> June 1969. In Norwegian: Lov om oppskyting av gjenstander fra norsk territorium m.m. ut i verdensrommet.

<sup>5</sup> *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other celestial bodies*, 610 UNTS 205. Norway signed the Treaty on 10<sup>th</sup> October 1967, ratified on 6<sup>th</sup> June 1969.

<sup>6</sup> See Norwegian Space Strategy [Høytflyvende satellitter – jordnære formål: En strategi for norsk romvirksomhet], Meld. St. 10 (2019 –2020), available in Norwegian at [regjeringen.no](http://regjeringen.no).

<sup>7</sup> [www.andoyaspace.no](http://www.andoyaspace.no).

broader perspective of Norway's membership of the UN Committee on the Peaceful Uses of Outer Space (COPUOS)<sup>8</sup>, as well as Norway's participation in the European Space Agency projects and the EU space programs. The Norwegian Space Strategy<sup>9</sup> (hereinafter the Strategy) underlines the significance of the space sector for both Norway, its co-operation partners and for various sectors, including maritime transport and offshore, which benefit from space-based services. The Strategy also highlights the relevance and importance of the legal framework for safe and sustainable space activities both in Norway and also globally.

Due to the active participation of commercial actors in today's space sector, appropriate laws and regulations at national level are indispensable for ensuring the responsible conduct of such actors in conformity with States' international obligations and national concerns. Although different countries have chosen somewhat different solutions to their domestic space legislation,<sup>10</sup> their experiences – especially those of Denmark, Finland, France and some others – have been very useful in the committee's work.<sup>11</sup>

Norwegian space law reform aims at meeting the requirements of the contemporary space sector, which is dynamic, international and increasingly dominated by commercial actors and inter-State cooperation. The space law currently in force contains only three articles, which prohibit launching of objects into outer space without permission from competent authorities. The law applies to launches from Norway's territory, including Svalbard, Jan Mayen and Norwegian dependencies, both from Norwegian vessels and aircrafts, as well as from areas beyond national sovereignty, if launching is undertaken by a Norwegian citizen or person domiciled

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<sup>8</sup> Established by UNGA Res. 1348 (XIII), 'Question of the Peaceful Use of Outer Space', 13 December 1948. Norway has been a member since 2017.

<sup>9</sup> Cited in fn. 6 above.

<sup>10</sup> A. Froehlich, V. Seffinga (eds.), *National Space Legislation*, Studies in Space Policy 15, Springer International Publishing AG 2018, [https://doi.org/10.1007/978-3-319-70431-9\\_3](https://doi.org/10.1007/978-3-319-70431-9_3)

<sup>11</sup> The committee also consulted UN Recommendations on National Space legislation as well as the Sofia guidelines for a Model Law on National Space Legislation, adopted by the International Law Association (ILA) Resolution 6/2012, available at [www.unoosa.org](http://www.unoosa.org).

in Norway. The law envisages that the authorities may attach certain conditions for launches and lay down provisions on control of launching activities included in the law. All in all, the current law does not meet the requirements of the international space law and is no longer adequate for the needs of today's space sector.

The work on the new law commenced in 2019, with a view to providing a contemporary and up-to-date legislative solution for the space sector. It should be pointed out that this article discusses the proposed legal text and the work of the expert committee as handed over to the responsible ministry. At the time of writing, it is not known whether the responsible ministry or the Parliament will follow the proposal or will choose to adjust the proposed draft. In this work, the committee also proposed alternative solutions to some of the issues, where deemed feasible. Ultimately, the legislator will have to choose the best solution by weighing economic, political, strategic or other interests. The final law text may obviously be different from the proposed legal text.

The committee considered several objectives when working out the proposal for a new law. To begin with, the law has to ensure compliance with the international obligations of Norway to authorize and supervise private space activities, and to ensure that space activities under Norwegian jurisdiction or control are safe and sustainable. The international space law leaves it to the States to detail out these obligations, while at the same time it is silent or unclear (or even outdated) on some essential questions. One of the significant issues is what activities should be encompassed by the new law, and what kind of provisions, obligations and requirements the new space law should include. It is also necessary to consider objectives, which may sometimes conflict with each other. For example, the law needs to be industry-friendly and encourage commercial space activities with a strong international dimension, meaning that it is important to ensure legal certainty for actors, many of whom come from foreign jurisdictions, and not to raise excessively high regulatory barriers. At the same time, it is crucial to determine the adequate level of safety, the acceptable level of risk and sufficiently stringent requirements for granting the permit, such as financial capacity of the operator, liability

and insurance. In addition, the technologically dynamic character of the space sector means that the conditions and *modus operandi* of space actors may change relatively quickly, requiring the law to be adaptable and flexible enough to adjust to new challenges. Although the envisaged space law is generally aimed at commercial space activities, state security aspects are also inevitably relevant for both for law-makers and for the competent space authorities, due to the dual-use character of the space sector and the critical importance space infrastructure has for the society.

Norway also has to tackle the novel challenges related to launching satellites into orbit from within Norway's territory. This is also a very significant expansion of Norwegian space activities in the legal context, with significant implications for international responsibility and liability, and clearly requires a legislative action. Among the EU/EEA States, Norway will be the only country to launch small satellites into orbit from a launch site located in Europe.<sup>12</sup> Norway will become an important launch site services provider for European and overseas partners, including private actors, and needs legislation which meets the interests of international space market.

It should be kept in mind that the proposed legal text is written in the Norwegian legal tradition, which is a part of the Nordic legal tradition. This means among other things that the law itself is a more general, framework law, which sets out the main provisions and requirements. The committee deemed such an approach to be both adequate and necessary to ensure that the law is future oriented, adaptable and flexible enough to adjust to new knowledge, new technological capabilities, and future international legal developments. The need for legal clarity also determined the choice of what obligations should be included in the text law, and in what detail, and what can be addressed instead through governmental regulations.

Of course, the actual 'living' space law is shaped not only by the space act to be enacted by the Parliament, but also – importantly – by

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<sup>12</sup> In the EU/EEA mainland territory. The nearest European launch site is located in Plesetsk, Russia. See Thomas G. Roberts, 'Spaceports of the World' < <https://aerospace.csis.org/data/spaceports-of-the-world/> > accessed 14 July 2021.

governmental regulations, conditions in the individual licences, principles of good administration, and self-regulation and contracts. The relevant legal considerations are clarified and expanded upon in the explanatory report ‘Right into orbit’,<sup>13</sup> which is one of travaux préparatoire for the forthcoming space law and will be relevant for the interpretation of this law.

The further discussion is as follows. First, the international legal framework is briefly presented in section 2. The scope of the proposed space law and central definitions are discussed in section 3. The requirements and conditions attached to the permit for space activities are examined in section 4. Last but not the least, section 5 contains an overview of the proposal concerning operator’s liability and the duty to obtain insurance. Section 6 concludes.

The proposed legal text also contains chapters on supervision, enforcement, investigation, and transition provisions, which are not discussed in this article.

## 2 The international legal framework governing space sector

The current international space law has been developed under the auspices of the UN COPUOS and consists of the international customary law, five global space treaties,<sup>14</sup> a number of UN Resolutions laying down

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<sup>13</sup> Rett i bane: Utredning fra utvalg oppnevnt av Nærings- og fiskeridepartementet til å foreslå ny lov om aktivitet i verdensrommet, available at [regjeringen.no](http://regjeringen.no).

<sup>14</sup> *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other celestial bodies* (Outer Space Treaty), 610 UNTS 205; *Convention on International Liability for Damage Caused by Space Objects*, 961 UNTS 187; *Convention on the Registration of Objects Launched into Outer Space*, 1023 UNTS 15; *The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space*, 672 UNTS 119; *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* (The Moon Treaty), 1363 UNTS 3.

Principles for outer space activities, and non-binding Guidelines.<sup>15</sup> These sources have been central for the work on the proposal for a new Norwegian space law.<sup>16</sup> This article does not discuss the Moon Treaty and the Agreement on Rescue of Astronauts, as these have not been directly relevant for the work on the legal text.<sup>17</sup>

The international governance of outer space takes place at several levels. The global space governance institution, COPUOS, has contributed significantly to the development of the policy on the long-term sustainability of outer space and has adopted guidelines on the mitigation of space debris.<sup>18</sup> Many of the practical space sector issues are not clearly regulated at the global level and need to be addressed through bilateral or multilateral treaties, and inter-governmental arrangements. Thus, other international organisations have played an increasingly significant role in the making and governance of space law. Importantly, the European Space Agency (ESA)<sup>19</sup> contributes to the formation of space law: it develops its own internal procedures, negotiates international agreements in the space sector and implements international space practices.<sup>20</sup> At the same time, there is a growing tendency for the unilateral regulation of space activities at the State level and by space actors not negotiated through the UN system, such as NASA's Artemis Accords.<sup>21</sup>

The cornerstone of international space law is the *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other celestial bodies* (Outer Space Treaty) of 1967.<sup>22</sup> Its provisions are developed further and supplemented in four

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<sup>15</sup> UN has adopted several Resolutions on space law topics and COPUOS adopted other instruments such as the Space Debris Mitigation Guidelines and Long-Term Space Sustainability Guidelines.

<sup>16</sup> The Moon Treaty is not ratified by Norway.

<sup>17</sup> However, they are briefly described in the report.

<sup>18</sup> See fn. 15 above.

<sup>19</sup> Multilateral Convention for the Establishment of a European Space Agency, done in Paris on 30 May 1975, 1297 UNTS I-21524.

<sup>20</sup> Francis Lyall and Paul B. Larsen, *Space Law: A Treatise*, 2<sup>nd</sup> edition, 2018, Routledge, p. 21.

<sup>21</sup> Available at [www.nasa.gov/specials/artemis-accords/index.html](http://www.nasa.gov/specials/artemis-accords/index.html).

<sup>22</sup> 610 UNTS 205.



other space conventions.<sup>23</sup> Three provisions in the Outer Space Treaty require particular attention for the purposes of the further discussion.

Firstly, Article VI of the Outer Space Treaty provides that State Parties shall bear international responsibility for governmental and non-governmental national activities in outer space, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. This provision arguably establishes a *lex specialis* provision on the international responsibility of States for space activities, whereby the State of nationality is directly responsible for State and non-State actors alike.<sup>24</sup> Article VI also says that the activities of non-governmental entities in outer space shall require authorization and continuing supervision by the appropriate State Party to the Treaty.

Secondly, Article VII of the Outer Space Treaty provides that States (Parties) that launch or procure the launching of objects into space from their territory or facility are internationally liable for damage to another State Party and its natural and legal persons on the Earth, in airspace or outer space.<sup>25</sup> Importantly, the launching from a State's 'facility' located outside the State's territory is included in the notion of the liability, alongside the 'territory'.<sup>26</sup>

Thirdly, Article VIII (first sentence) provides that "A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body." This provision establishes an important rule that there must always be a State, which exercises effective jurisdiction over space objects, and should be

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<sup>23</sup> See fn. 14 above.

<sup>24</sup> Bin Cheng 'Article VI of the 1967 Space Treaty revisited: "international responsibility", "national activities" and "the appropriate state" (1998) 26 *Journal of Space Law* 7, 15. See also Pablo Mendes de Leon and Hanneke Van Traa 'Space Law' in André Nollkaemper and Ilias Plakokefalos (eds) *The Practice of Shared Responsibility in International Law* (Cambridge University Press 2017) 453–78.

<sup>25</sup> See Liability Convention cited in fn. 14.

<sup>26</sup> The details liability regime are presented in the Liability Convention (fn. 14). The term 'space object' is used in this article in the same meaning as laid down in the space treaties, i.e. as man-made objects such as space rockets and their parts, satellites and other space crafts.

seen in light of Article VI above and the provisions of the Registration Convention discussed further below.

Regrettably, the Outer Space Treaty is vague or silent on a number of central issues. Thus, the notion of “the appropriate State” in Article VI of the Outer Space Treaty is not defined in the Treaty or elsewhere in the space law instruments. In scholarly writings, it is generally construed as a State holding effective jurisdiction over space activities.<sup>27</sup> The Treaty also does not define a “space object” or “outer space”, or what constitutes a “facility” within the meaning of Article VII. It is, in any case, generally agreed that the Treaty’s obligations also apply to some of the ‘space activities’ conducted on Earth and air space.<sup>28</sup> However, it is left to the discretion of States to define the terms and the scope of application in their national laws.

The Outer Space Treaty lays down general duties of States to prevent harmful contamination of the Earth and outer space, as well as to avoid harmful interference with the activities of other States in outer space.<sup>29</sup> However, it does not detail out obligations of States with regard to safety, environment and other aspects of space activities. Regrettably, it also does not provide for more specific regulations on space debris. More specific obligations and principles on some of these issues have been developed through non-binding instruments. These instruments have been consulted by the expert committee in its work on the law draft proposal and examined accordingly in the report.<sup>30</sup>

The provisions of the Outer Space Treaty on liability of the launching State and registration of space objects are detailed out in, respectively, the Convention on International Liability for Damage Caused by Space Objects (hereinafter the Liability Convention) and the Convention on

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<sup>27</sup> See, e.g., Bing Cheng (fn. 24 above).

<sup>28</sup> This is confirmed by the overall context of the Treaty and the UN Resolution ‘Recommendations on national legislation relevant to the peaceful exploration and use of outer space’ 68/74 (2013) A/RES/68/74 at 2. See also Cheng (fn. 24) 19.

<sup>29</sup> Article IX.

<sup>30</sup> See Steven Freeland, Note to Norwegian Space Law Committee on Space Debris, appendix 3 to Right into Orbit (fn. 13), p. 165.

the Registration of Objects Launched into Outer Space (hereinafter the Registration Convention).

The Liability Convention provides greater details on the Outer Space Treaty's provisions on liability for damages. It recognizes in its preamble "the need to elaborate effective international rules and procedures concerning liability for damage caused by space objects and to ensure, in particular, the prompt payment under the terms of this Convention of a full and equitable measure of compensation to victims of such damage". The Liability Convention Article I contains a short list of relevant definitions, followed by provisions spelling out the liability of States for damage caused by space objects.

The Liability Convention defines the concept of "damage" as "loss of life, personal injury or other impairment of health; or loss or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organisations" (Article I.1.a). The concept of a 'launching State' means a "State which launches or procures the launching of a space object" and (or) a "State from whose territory or facility a space object is launched".<sup>31</sup> As in the Outer Space Treaty, the facility is not defined in this Convention (Article I(c), see also Article V.3).<sup>32</sup> Further, the Liability Convention clarifies that the "term "space object" includes component parts of a space object as well as its launch vehicle and parts thereof." (Article I(d)).

The Liability Convention provides for more detailed rules on the international States' liability for damage caused by space objects. Firstly, it provides that a launching State "shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight" (no-fault or strict liability).<sup>33</sup> The Liability Convention's provision on no-fault liability goes further than the general provisions of international law on State liability. Secondly, the fault-based

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<sup>31</sup> See also the UN Resolution on the application of the concept of the "launching State" adopted on 10 December 2004.

<sup>32</sup> On the notion of 'facility' and launches from vessels at sea see Alla Pozdnakova, *Oceans as Spaceports: State jurisdiction and Responsibility* (2020) 26 JIML.

<sup>33</sup> Article II.

regime is envisaged for damage being caused “elsewhere than on the surface of the Earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State”.<sup>34</sup>

The Convention also provides for the joint and several liability of launching States, which jointly cause damage to a third State.<sup>35</sup>

Importantly, the Liability Convention also envisages that its provisions will not apply to damage caused by a space object of a launching State to two categories of nationals.<sup>36</sup> Firstly, it does not apply to damage caused to nationals of the launching State itself. Secondly, it does not apply to damage caused to foreign nationals when they participate in the operation of that space object from the time of its launching or at any stage thereafter until its descent, or when they are in the immediate vicinity of a planned launching or recovery area upon an invitation by that launching State.

An unclear issue is whether the liability regime set up by the Liability Convention also extends to cases where the State of nationality of private (non-governmental) actors launching space objects from abroad is considered as being the ‘launching State’ for the purposes of the Convention. The wording of the Convention appears to include only State launches from abroad, whereas in this author’s view a broader logic of the Convention and other international space law instruments may suggest otherwise.<sup>37</sup>

The Registration Convention<sup>38</sup> follows up provisions of the Outer Space Treaty and the Liability Convention on the international liability of States for their national activities in outer space. Article I of the Registration Convention contains a list of definitions identical to that of the Liability Convention (apart from the term “damage”, which is not

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<sup>34</sup> Article III.

<sup>35</sup> Articles III, IV and IV. Article VI provides for an exception to liability in cases where damage was caused by gross negligence or intentionally by the claimant State or its natural or juridical persons.

<sup>36</sup> Article VII.

<sup>37</sup> However, the scholarly literature is not quite consistent on this issue. The committee discussed this issue but did not draw a conclusion.

<sup>38</sup> Cited in fn. 14 above.

defined in the Registration Convention). The “space object” is accordingly defined in the same brief terms as including the component parts of the space object, as well as its launch vehicle and parts thereof” (Article I(b)).

Importantly, the Registration Convention requires that launching States register the space object under a number of conditions. Article II provides that “[w]hen a space object is launched into Earth orbit or beyond, the launching State shall register the space object by means of an entry in an appropriate registry which it shall maintain. Each launching State shall inform the Secretary-General of the United Nations of the establishment of such a registry.” Furthermore, if there is more than one launching State for a space object – not unusual in the contemporary space sector – the Convention requires that these States jointly determine which one of them shall register the object. This decision is “without prejudice to appropriate agreements concluded or to be concluded among the launching States on jurisdiction and control over the space object and over any personnel thereof.”

An important requirement of this Registration Convention relates to the obligation of launching States to establish a national registry of space objects “launched into orbit or beyond.” States may themselves determine the information to be submitted to their national registry of space objects, but Article IV of the Convention lists the information to be sent to the UN Secretary-General.<sup>39</sup>

The Liability Convention and the Registration Convention do not adequately take into account the present realities of the contemporary space sector dominated by non-State, commercial actors. They also do not regulate situations where the jurisdiction and control over the space object in orbit is transferred to a third (not launching) State or to private

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<sup>39</sup> Each State of registry shall furnish to the Secretary-General of the United Nations, as soon as practicable, the following information concerning each space object carried on its registry: (a) Name of launching State or States; (b) An appropriate designator of the space object or its registration number; (c) Date and territory or location of launch; (d) Basic orbital parameters, including: (i) Nodal period; (ii) Inclination; (iii) Apogee; (iv) Perigee; (e) General function of the space object.

actors of a third State.<sup>40</sup> These Conventions' approach to launching States can be basically summed up as 'once the launching State, always the launching State'. The State from whose territory a foreign space object was launched may still be internationally liable for the space object, which is not carried on its registry and which it does not effectively control. As clarified further, the proposed legal text also attempted to tackle these issues through certain national provisions.

### 3 Scope of the proposed space law

An important part of the work on the new law was to determine the structure and scope of the law, as well as to elaborate on the relevant definitions to be applied in the law. The proposed legal text is considerably longer than the Norwegian space law currently in force, because it has a broader reach, both in substantive and geographic terms.<sup>41</sup> The law is proposed to regulate space activities.<sup>42</sup> Importantly, the proposed legal text also defines *space activities*: these are activities related to launch, operation and return of space objects, and activities "substantially related to" launch, operation and return. Thus, the proposed legal text is generally aimed at tackling all activities related to a satellite's or other space object's lifetime, from launch to the ending of the operation. A generally formulated definition is, in the committee's view, necessary, because it may be difficult to draw a precise borderline and regulations need to adjust to current realities in the very dynamic space sector.<sup>43</sup> Thus, as

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<sup>40</sup> A satellite in orbit may be sold on to new owners, or other operators may take over the control and operation of the satellite.

<sup>41</sup> The proposed legal text contains eight chapters with 38 paragraphs in total.

<sup>42</sup> Article 1 of the proposed legal text: the Norwegian text is available in *Right into Orbit* (fn. 13), p. 136.

<sup>43</sup> In any case, the proposed legal text does not seek to include into the notion of 'space activities' issues such as the regulation or recognition of property rights to natural resources in outer space, human spaceflight, downloading of data from satellites, remote sensing and other activities not related to the launch, operation and return of space objects.

with some other issues regulated by the law, it is important to leave some room for discretion to the competent authorities.

The committee decided not to propose a definition of ‘outer space’ or delimitation of ‘outer space’ in the national law. While the Outer Space Treaty indirectly defines outer space as ‘including the Moon and other celestial bodies’ (and the void between them), the international law is silent on the issue of the borderline between air and outer space. Most States have chosen to adopt a functional approach to the delimitation of air and outer space.<sup>44</sup> Indeed, it seems unnecessary to adopt a legal provision determining where outer space starts for the purposes of national law, before more progress is made on this definition at the international level.

The focus of this work was on the need to establish a system of permits to which certain conditions and obligations are attached, to be supplemented by the internal safety routines of companies and their supervision and enforcement by the state. The proposed legal text requires the operator to obtain a permit for space activities conducted from “the Norwegian territory, from Norwegian vessels and aircrafts and by Norwegian nationals abroad”.<sup>45</sup> Thus, the proposed text does not just focus on space object launches from Andøya, but also regulates Norwegian companies and individuals engaged in space activities abroad.<sup>46</sup> This includes, importantly, space activities conducted from another State’s territory and is primarily intended to meet the requirements of Article VI of the Outer Space Treaty. The proposed legal text also includes space activities from Norwegian vessels and aircrafts, thereby ensuring that Norway regulates all national activities outside its territory. It is also important to include vessels and aircrafts in order to reflect the provisions on launching a State’s ‘facility’ in conformity with Article VII of the Outer Space Treaty and the Liability Convention. The proposed legal text also envisages that, within the limits of international law, the responsible

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<sup>44</sup> Denmark has enacted a 100-km limit in their national space laws. A recent launch by Sir Richard Branson and his team (Virgin Galactic) illustrated that also an altitude of 86 km could be sufficiently high, at least for ‘space tourists’. See also Peter Lødrup, *Luftrett og romrett [air law and space law]*, *Tidsskrift for rettsvitenskap*, 1961, s. 561.

<sup>45</sup> Article 2 of the proposed legal text, *Right into Orbit* (fn. 13), p. 136.

<sup>46</sup> Telenor’s satellites; also Norsat etc.

ministry may extend the application of this Act to foreign vessels or facilities outside of Norwegian territory.<sup>47</sup>

The proposed legal text includes a definition of a ‘space object’, which largely corresponds to treaty definitions: any object or part of an object used in space activities.<sup>48</sup> Activities involving a space object are regulated in a number of the proposed legal text’s provisions. With regard to the requirements on transferring a space object to another operator abroad, this requires consent by the competent ministry and may also require the conclusion of an agreement with the relevant State.<sup>49</sup> Chapter 3 of the proposal envisages registration of an object launched into outer space in line with the requirements of the Registration Convention. Importantly, the damage caused by a space object is subject to liability provisions of the proposed law, as discussed further in section 5.

A central notion used throughout the legal text is ‘operator’: it is a subject of rights and obligations in the law and is defined as “anyone who carries out space activities”.<sup>50</sup> The ‘operator’ may be the permit-holder under the law, but regardless of whether or not the permit-holder, anyone who actually conducts space activities must comply with the requirements and obligations set out in the law.<sup>51</sup> By contrast to a ‘space object’, which is defined (or, rather, described) in the international space law, the notion of ‘operator’ is not laid down in the treaties. Danish and Finnish space laws also use corresponding notions in relation to “operator”, which appear to be generally used in practice. The notion of the ‘operator’ does raise a number of important concerns and ambiguities which deserve further attention.

It should be noted that the proposed draft does not expressly envisage exceptions from permit requirements for some sectors or types of operators directly in the proposed law (for example, for the Military & Defence sector or for the Education and Research sector). If exceptions

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<sup>47</sup> See Pozdnakova (fn. 32) for the discussion of this issue.

<sup>48</sup> Article 3 of the proposed legal text.

<sup>49</sup> Article 8 of the proposed legal text.

<sup>50</sup> Art. 3 of the proposed legal text.

<sup>51</sup> Comments to the proposed legal text, Right into orbit (fn. 13), p. 136.



are deemed necessary, the committee proposed that they can be laid down in regulations as deemed adequate.

## **4 The requirement to obtain a permit and the obligations of the operator**

The space law currently in force<sup>52</sup> laconically provides that launching of objects into outer space is prohibited without a permit, and that the competent authorities may attach conditions to this permit. The law itself does not specify which requirements or criteria must be met to acquire the permit. Generally, this is within the authorities' room for discretion when deciding to grant or reject an application for permit.

The proposed legal text also requires that operators must obtain a permit to be allowed to carry out space activities, but it is considerably more specific with regard to the requirements to be met.<sup>53</sup> Both the law in force and the proposed legal text implement the requirements of Article VI of the Outer Space Treaty, which provides that the 'appropriate State' must authorize (and continuously supervise) national non-governmental space activities. Conducting space activities covered by the law without a permit may result in criminal liability.<sup>54</sup> However, by contrast with the space law in force, the proposed legal text contains provisions detailing out the requirements and conditions, which must be met by the person seeking the authorization. Although the responsible authority will retain a significant degree of discretion under the new law (including the right to reject an application, which meets the necessary requirements), it must comply with principles of good administration and, as the case may be, EEA law prohibition of discrimination and internal market rules.

To obtain a permit, the operator must meet certain requirements and accept conditions, which the competent authority deems necessary to

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<sup>52</sup> Cited in fn. 4 above.

<sup>53</sup> Article 4 of the proposed legal text.

<sup>54</sup> Norwegian Criminal Law, Section 167.

attach to the permit. The goal of such requirements and conditions is to prevent accidents and damage arising from lack of safety precautions, and minimize the risks associated with inherently ultra-hazardous space activities. It is outside the ambition of this article to provide a detailed overview of the proposed legal text and the committee's position, but the requirements may be summed up as follows:

*Firstly*, the operator itself – i.e. the person or entity involved with space activities – must meet certain requirements relating to its competence and resources to conduct space activities in a reasonable and safe manner. Article 5 of the proposed legal text entitled 'Conditions for licence' envisages that the responsible ministry: "may grant a licence to conduct space activities if the operator meets the following requirements: (a) The operator has the necessary expertise to operate space activities in a responsible manner, has necessary financial resources to conduct space activities, and the activity is insured in accordance with [A.P. this law – discussed in section 5 below]."<sup>55</sup>

As space activities vary greatly in terms of their characteristics, the hazards they represent, and the competences, which are required, the requirements will be construed differently depending on the peculiarities of the space activity in question.

*Secondly*, the proposed legal text places requirements on the manner in which the space activity is conducted. Article 5 (b) provides that "the space activity is carried out in a responsible manner, without unnecessary or disproportionate consequences to the environment on earth or in outer space." The obligations of the operator with regard to responsible and safe space activities and the prevention of space debris are set out in detail in chapter 4 of the proposed legal text. The operator must document that these requirements are met when applying for the permit. One of the very pressing global concerns with regard to the launch of space objects is space debris. It is, therefore, crucial that the space law contributes to the minimization of space debris, if zero debris is not yet technologically possible. With regard to space debris prevention, the committee proposed a best practices approach in light of international guidelines and

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<sup>55</sup> Author's translation.

standards.<sup>56</sup> The proposed legal text seeks a flexible approach allowing applicable requirements to evolve in line with technological developments.

*Thirdly*, the draft space law requires that provisions of other relevant legislative acts are also met by the operator.<sup>57</sup> Importantly, the operator must comply with rules on export control,<sup>58</sup> as well as with the International Telecommunications Union (ITU) rules on allocation of frequencies. With regard to the latter, a frequency is indispensable for communications with the satellite or another space object, and must be obtained by the operator through the Norwegian or foreign communications authority which grants frequencies in line with ITU rules.<sup>59</sup>

*Last but not the least*, the space activity may not run counter to Norway's security or foreign policy interests.<sup>60</sup>

It should be noted that Article 6 of the proposed legal text provides that the competent ministry can also impose conditions on the permit that go beyond the requirements of the law. This approach is generally in line with general Norwegian public law on licences and permits and is subject to principles of good administration and prohibition on the authorities to abuse power.

The draft only envisages one – general – type of permit, which includes all types of space activities regulated by the law. The committee deemed it feasible to detail out the types of permits (licenses) in the governmental regulations, rather than include a law provision with different types of licenses, as is done by some countries.<sup>61</sup>

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<sup>56</sup> Right into orbit (fn. 13 above).

<sup>57</sup> Article 5(c) of proposed legal text.

<sup>58</sup> Act relating to Control of the Export of Strategic Goods, Services, Technology, etc (eksportkontrolloven) # 93 adopted on 18 December 1987.

<sup>59</sup> In Norway, this is the Norwegian Communications Authority (Nkom).

<sup>60</sup> Article 5(d) of the proposed legal text.

<sup>61</sup> Some States have enacted laws specifying different types of licences and, correspondingly, different requirements applicable to such licences.

## 5 Liability and insurance

A central aspect of the proposed legal text is the Chapter (5) on liability and insurance.<sup>62</sup> These are the two requirements which show the tension between the ‘industry friendly’ objective of the space law reform and the risk and safety considerations. As the ultra-hazardous nature of space activities suggests, the primary task of the legislator is to establish a legal framework, which *prevents* accidents from happening, through the requirements described earlier. Generally, the probability of damage being caused by an accident related to the launch of a space object (assuming the safety is adequately assured) is relatively low; however, the consequences could be disastrous if it happens.<sup>63</sup> The international legal framework described earlier places liability for damage on the launching State (or States), which will be internationally liable for damage caused by the space object on the Earth’s surface, atmosphere and(or) in outer space. The concern is especially serious with regard to forthcoming launches of small satellites into orbit from Andøya: indeed, as explained earlier, Norway is internationally liable for damage caused by space objects launched by the governmental and private (Norwegian or foreign) operators from its territory.

The central question is whether national law should envisage opportunities for recourse against an operator in cases where Norway as a launching State is held internationally liable under the international liability regime for damage caused by the space object. Another question is whether the operator should be directly liable for damage going beyond the scope of international liability provisions. A question of insurance also arises: should the law envisage a mandatory insurance and (or) other form of security of compensation?

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<sup>62</sup> For a detailed discussion of these issues in the committee’s work, see Trine-Lise Wilhelmsen, *Ansvar for skade voldt av romgjenstand* [Liability for damage caused by a space object], *Tidsskrift for erstatningsrett, forsikringsrett og trygderett*, Årgang 17, nr. 1 -2020, s. 39–71, <https://doi.org/10.18261/ISSN.2464-3378-2020-01-03>.

<sup>63</sup> On the Cosmos 954 accident, see, e.g., Lyall&Larsen (fn. 20).

The space law in force does not expressly regulate the issue of liability, compensation and insurance, but it would be feasible to impose such requirements on operators in light of Norway's international liability as a launching State.<sup>64</sup> However, it may be more reasonable to lay down such provisions in the legal text: among other points, this enables the injured private persons to seek compensation directly from the operators in the national courts.

Section 21 of the proposed law provides that the operator is "irrespective of fault liable for damages to persons and property on earth as well as aircraft in flight caused by space objects." The proposed legal text imposes the liability for damage on the operator of space activities. However, the strict liability does not apply if the injured has acted intentionally or grossly negligently, or were injured during the participation in the same launch project. For other types of damage caused by space activities, the operator is liable in accordance with Norwegian law of torts.<sup>65</sup> Section 23 of the proposed law enables Norway to seek recourse from the operator in cases where Norway has compensated for the damage in line with the international liability rules.

The committee assessed the issue of the amount of compensation to be borne by an operator. The Liability Convention does not contain any limitations on the launching State's liability in cases of damage caused by the space object. Considerations of the foreseeability of economic burdens, insurance and the need to set up an industry-friendly legal framework suggest that the operator's liability should not be unlimited.<sup>66</sup> The operator's liability is proposed to be limited to the amount of 600 million Norwegian krone (NOK), unless the operator acted with intent or with gross negligence.

The proposed legal text recommends to provide for a requirement for the operator to hold insurance or other adequate security sufficient

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<sup>64</sup> See *Right into Orbit* (fn. 13), p. 101. See also Act relating to electronic communications (The Electronic Communications Act) # 83 adopted on 4<sup>th</sup> July 2003, para 6-7.

<sup>65</sup> Article 22. See also *Wilhelmsen* (fn. 62).

<sup>66</sup> See *Right into Orbit* (fn. 13), p. 110.

to cover the compensation.<sup>67</sup> The upper limit of 600 million NOK is also proposed for such insurance coverage. The legislator's task here would be to consider whether this approach to liability is acceptable.

The committee also examined the question of liability in cases of joint launch projects and the feasibility of regulating such cases expressly through the legal text, i.e. by imposing certain rules on the agreements between operators and insurance, and whether strict liability provisions should be envisaged in such cases. As noted earlier, the Liability Convention's provisions on strict liability do not apply in cases of joint launches by two or more States (between these States and their nationals).<sup>68</sup> In practice, liability issues are resolved by participating States or industry participants, through inter-party cross-waiver of liability,<sup>69</sup> also known as the knock-for-knock principle.<sup>70</sup> If necessary, such agreements may be regulated through governmental regulations. Lastly, the committee decided not to extend the strict liability provisions to cases where damage is caused through joint launches, but instead to leave these cases to be regulated through general Norwegian torts law.<sup>71</sup>

## 6 Conclusions

This article presents some of the central provisions in the proposed draft of the new Norwegian space law and the expert committee's analyses and arguments behind these provisions. With regard to the draft space law, it remains to be seen whether the legislator will find the committee's proposal acceptable and whether any adjustments will be made to the proposed legal text. It was not always easy to come up with solutions for the complex issues which the committee faced. International space

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<sup>67</sup> Article 25 of the proposed law. Some sectors are state-insured.

<sup>68</sup> Article III and VII.

<sup>69</sup> See Steven Freeland, appendix to *Right into Orbit* (fn. 13).

<sup>70</sup> Wilhelmsen (fn. 62), pp 66–67.

<sup>71</sup> Wilhelmsen (fn. 62), p. 67; *Right into Orbit* (fn. 13), p. 110.

treaties are not clear and to a large extent out-of-date on some of the important issues pertaining to central definitions in space law, standards for the responsible use of outer space, and liability issues. While the work on the proposed legal text was informed by other countries' experiences with the space legislation, different countries have also chosen somewhat varying approaches to central space law issues and legislative formats. The committee kept in mind that Norway differs from most other European and Nordic states because of its plans to begin orbital launches from its own territory at Andøya.

The work on the Norwegian space law draft began in 2019, but it is fair to say that the Norwegian space law reform had begun even earlier: Norway's joining as a member of UN COPUOS in 2017 may have been the decisive step in this direction. It should be pointed out that the reform of space legislation will not be finished with the Norwegian Parliament's enacting the legal text; rather, this will be yet another important event, to be followed by the adoption of regulations, development of administrative and branch practices etc. The international space law framework is also evolving, with new instruments being adopted under the auspices of COPUOS and other international fora. New issues arise which are not included in the scope of the draft space law arise and are not properly regulated at the international level, for example, space tourism, space mining and 'privatisation' of natural resources of the Moon, asteroids and Mars. These should be considered in the future space legislative work.