

**VIKINGS FIRST IN NATIONAL SPACE LAW:
OTHER EUROPEANS TO FOLLOW**
**The Continuing Story Of National Implementation
Of International Responsibility And Liability**

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Abstract

For a long time everybody thought that Christopher Columbus was the first to 'discover' the Americas, and only relatively recently it was discovered that actually the Vikings had preceded him by several centuries. Likewise, perhaps, everybody considered the United States of America to be the first state enacting national space legislation even in the narrower sense of the word, i.e. fundamentally encompassing a licensing system of some sort for private space activities, which was achieved with the FCC in 1970 formally declaring the 1934 Communications Act, including its licensing requirements for private operators, to apply to space communications as well. After all, the United States was one of the two original and major space powers, and had always been a staunch defender of private enterprise. But recently, in the context of a project undertaken in the LL.M. Programme on International Air and Space Law at the Leiden International Institute of Air and Space Law, a Norwegian national space act was unearthed, dating back to 1969 and thus preceding, properly speaking, the birth of US national space law with one year. The Vikings, it became clear, had not only been the first to come to America, they had also been the first to come to a national space law. Even if it contained a mere three paragraphs, it required indeed from private enterprise undertaking certain space activities (namely launch activities from Norwegian territory or quasi-territory) an authorisation of the Norwegian authorities. The present paper will briefly analyse this act as well as its actual implementation and

relevance, in terms of fulfilling international space law obligations. In the same vein, then some very recent efforts within Europe to establish national space law will be briefly considered. In particular this concerns France and Germany, two capitalist European space powers notably missing from the short list of states having a proper national space law in place, and the Netherlands – for obvious reasons of a chauvinistic nature.

1. Introduction

As is often borne out by discussion, the term 'national space law' is used with a considerable degree of variation in scope. In the broader sense, it would encompass all law on a national level exclusively or predominantly applicable to outer space and/or space activities. Thus, a law creating a national space agency as such would already be labelled a 'national space law'. Even broader, all national law exercising substantial *impact* upon space activities could be qualified as 'national space law', including for example legislation related to financing of mobile assets, insurance of certain activities, or general tort liability rules to the extent applicable (also) to space activities. Under such definitions, a considerable number of states – well into the double digits, if not indeed triple – would qualify as states having some sort of national space law(s).

However, very often such broad definitions lose their distinctiveness, and hence their value as an analytical tool. The major legal development within space activities over the last two or three decades is the increasing

private involvement therein; therefore, a narrower definition of 'national space law' as only that law which deals substantively with (the regulation of) private space activities – i.e. by means of a licensing system for private entities undertaking space activities – is proposed. When it comes to 'national space law' in this narrower sense, only a small number of states do qualify.

Hitherto, starting with Sweden¹ in 1982, and further in chronological order the United Kingdom², the Russian Federation³, South Africa⁴, the Ukraine⁵ and Australia⁶, six states had been known widely to have a single piece of national law in place (including such a licensing system for private space activities), even if sometimes very summary. And of course the United States, champion of private enterprise also in space, had developed the largest body of national law dealing with private space activities through licensing systems – actually, in the three fields where private involvement became a real issue, three separate sets of such legislation were elaborated⁷. Keeping the narrow definition of 'national space law' in mind, this went back to 1970. With the FCC in that year declaring the 1934 Communications Act, including its licensing system for private communication system operators, to be applicable also to space communications, the United States indeed was the 'first in national space law'.⁸

Or, so it seemed. Just as Columbus, for a long time considered the 'discoverer' of America, in the end turned out to have been preceded by the Vikings, recently a Norwegian national space law turned up – dating back to 1969, one year prior even to the first licensing system for private space enterprise in the United States.

The Norwegian Act on launching objects from Norwegian territory into outer space⁹ was the smallest of all, boasting only three paragraphs. The magic words, however, were there: anyone launching an object into outer space from Norwegian territory or facilities requires a permission from the Minister of Trade and Industry. And just as the Vikings

were in due course followed by more and more other Europeans, also in terms of national space law some other European states have already followed and more are to follow yet.

2. From public space law to private involvement in space activities

Let us first, prior to dealing with this new old national space law and the other developments, recapitulate the international background to national space acts in general. Whilst states still comprise the major category of actors in space, nowadays more and more private entities have become interested in carrying out activities in outer space. These developments present a clear challenge to international space law as such, since presently private enterprise is not directly bound by those rules.

National space legislation would then offer the most comprehensive instrument to deal with private participation in space activities, by establishing comprehensive legal effects of public space law *vis-à-vis* private enterprise. States can and should exercise their sovereignty to control, in law, the international effects of private space activities and preserve the relevant public interests in such activities. Domestic legislation in addition presents a possibility for states to promote, substantiate and execute general domestic policies with respect to the activities of private entities. It thus also presents a means for states to harness private enterprise for the public cause in space. For European states finally, a few additional issues arise in this context, in view especially of the role of the European Space Agency (ESA) which co-ordinates much of Europe's space endeavour. From a similar perspective the European Community, increasingly involved in matters of outer space, plays a crucial role in Europe. Nevertheless, there is a crucial role to play for national space law also in the European context.

When it comes to enacting domestic space legislation, public international space law

itself both calls for establishment of such legislation, and provides for the outlines thereof as to its scope. (And, of course, it provides for some general rules as to its contents.) Notably, from the present perspective this follows from the Outer Space Treaty of 1967¹⁰, the Liability Convention of 1972¹¹ as elaborating Article VII of the Outer Space Treaty, and the Registration Convention of 1975¹² as elaborating Article VIII of the Outer Space Treaty.

A state essentially will have to exercise any jurisdiction available primarily *vis-à-vis* those particular categories of private activities in respect of which it can be held accountable, i.e. responsible and/or liable, as a state.

Elsewhere, the issue of state responsibility has been analysed extensively.¹³ Article VI of the Outer Space Treaty provides that states are internationally responsible for “national activities in outer space”, including cases where these are “carried on (...) by non-governmental entities”. In other words: a state is internationally responsible for private space activities as long as these can be defined as national activities (in outer space) of that state. Article VI however still begs the question for *which* categories of private space activities is *which* particular state to be held responsible on the international plane? The absence of agreement regarding the answer to this question, amongst authorities as much as amongst experts, allows – and has indeed already led – individual states, where applicable, to interpret the term at their own discretion.

Article VI further provides that “the appropriate State” actually *has* to authorise and continuously supervise activities undertaken by non-governmental entities. This other key phrase of Article VI however also lacks a commonly accepted interpretation – let alone enjoy an authoritative definition. Hence, also in this case uncertainty at the theoretical level leads to national discretion at the level of implementation.

As to (state) liability, Article VII of the Outer Space Treaty as further elaborated by the Liability Convention¹⁴ provides that states are

“internationally liable for damage to another State (...) or its natural and juridical persons”, if such damage is caused by relevant space objects. This then concerns in cumulative fashion the state which “launches” the space object, the state which “procures the launching” of that space object, the state “from whose territory” the launching of that space object occurs, and the state from whose “facility” that space object is launched. By implication, this also applies to damage caused by space objects launched with private involvement. In other words: a state is liable under international space law for a (private) activity and the damage it causes, in case (A) that activity involves a space object and (B) the state concerned was involved in the launch of that space object in any of the four modes mentioned.

As was analysed elsewhere in more detail¹⁵, three of these four criteria could – depending upon their being narrowly or broadly interpreted and applied – be found to point at no state as such, alternatively to states involved on a contractual – and thus conscious! – basis. This is radically different with respect to the remaining criterion for becoming a liable entity, which applies exclusively to states: as long as all launches are conducted from some state’s territory, there will always be a state liable under this criterion, even in case of (otherwise) completely private launches. Consequently, for the purpose of Article VII of the Outer Space Treaty and the Liability Convention, any national legislation should at least deal with launches conducted from a state’s territory by private entities.

From the other end, any implementation on a national level, to cover for responsibilities and liabilities at the international level, most notably by means of a national space law, requires the exercise of the relevant state’s jurisdiction.¹⁶

From this perspective, as the ‘mirror side’ to space law responsibility and liability, jurisdiction can of course generally be based on the notions of ‘territory’ and ‘nationality’. Whilst the first would allow for legislation

applicable to anyone undertaking relevant space activities from national soil, the second would allow for legislation applicable to anyone with the nationality of the state under consideration undertaking such activities. It may be noted here, that the absence of territorial sovereignty in outer space, in accordance with Article II of the Outer Space Treaty, only precludes direct application of a state's jurisdiction to *manned* space activities, i.e. where the actors are truly out of reach of the individual state's territorial sovereignty. In the case of all unmanned space activities, by contrast, the true legal actors find themselves on earth, and hence usually on some state's territory or other.

In addition as it were, Article VIII of the Outer Space Treaty and the Registration Convention allowed for the exercise of a third, space-specific type of jurisdiction: the quasi-territorial jurisdiction which may be applied to a space object and all personnel thereof registered by the state at issue.

Consequently, it is essentially those three bases for the exercise of jurisdiction which may allow a state to cover its international space law responsibility and liability as far as relevant private entities and their activities are concerned, and which hence should be used, where relevant, to establish national space legislation viz. a national licensing system for private space entrepreneurs.

3. The Norwegian Act of 1969

The above provides the backdrop against which the Norwegian Act of 1969 must be analysed. It should be realised though, that at that time, neither the Liability Convention nor the Registration Convention had yet been concluded. In implementing perceived international responsibilities and liabilities on a national level, the Norwegian authorities had to make do with the general provisions of, in particular, Articles VI, VII and VIII of the Outer Space Treaty as summarily sketched before.

Norway ratified the Outer Space Treaty on July 1st 1969 – two weeks after entry into force of the Norwegian Act. Consequently, Norway is also the only state so far whose enactment of a national space law even *precedes* becoming party to the Outer Space Treaty, in respect of which the former supposedly provides for implementation. During the process of ratification the Ministry of Justice and the Ministry of Trade and Industry realised that it further required national implementing legislation to be enacted: already seven years before ratification launching activities from Andøya had started. However, the drafting fathers of the Act were of the opinion that it was not necessary to establish an elaborate law to satisfy the requirements of the Outer Space Treaty; a summary act would suffice.

The essence of the Norwegian Act as found in its paragraph 1 is that one needs permission to launch objects into outer space from Norwegian territory (including Svalbard and Jan Mayen),¹⁷ or anything which may be considered as such. Under the last category the Norwegian Act understands Norwegian “outposts” (i.e. Norwegian bases on Antarctica!), Norwegian vessels, Norwegian aircraft and the like.¹⁸ Finally, if any Norwegian citizen or permanent resident undertakes a launch falling within the material scope of the Act, when this occurs from outside any state's territorial sovereignty he or she also requires permission.¹⁹ Consequently, in terms of Article VI of the Outer Space Treaty, the authorisation- and continuous supervision-requirement is applied both to Norwegian territory, and to Norwegian nationals where no other state's territorial sovereignty applies: a rather comprehensive scope of the Act *ratione personae* is the result.

The formal denouncement of the exercise of jurisdiction in cases where other states may exercise their territorial jurisdiction is noteworthy. Whilst it may prevent conflicts of jurisdiction, the question remains whether Norway would not nevertheless remain internationally responsible under Article VI

of the Outer Space Treaty for such activities it declined to exercise jurisdiction over, in view of the most common interpretations of “national activities” which include ‘activities by nationals’.

The Act itself does not specify what the requirements or conditions for obtaining permission are. Paragraph 1 merely mentions that certain terms might be established for such permission, further to which paragraph 2 provides the Ministry with the competence to actually issue regulations on control of the activities concerned. Apparently, in the absence of any detailed regulation as to which terms should or might be imposed, the Ministry retains full discretion in every particular case to demand certain conditions to be fulfilled or not. According to the Ministry, there is no general practice in respect of implementation of the Act. (Paragraph 3, the final paragraph of the Act, merely states that it enters into force immediately.)

The preparatory works do not help much in this regard; though in principle they would further define the scope of the law,²⁰ under the text of the Act as referred to above, it is still up to the Ministry itself to decide the conditions and terms for the licence. The preparatory works further specify that the obligation to obtain permission covers all kinds of objects that can be launched into outer space. The main objective is to regulate launching activities from Norwegian territory; however, the Act also covers for instance activities on the high seas when Norwegian citizens undertake the launch.

Of course, one should finally note that *ratione materiae* all other space activities than launching are not covered – such as satellite communications, satellite navigation and satellite remote sensing. Perhaps at the time of enunciation this made sense – after all, in 1969 such things as ‘commercial launch contracts’ or ‘in-orbit sales’ were still unheard of, and the simple focus of the Outer Space Treaty on launch as the link between damage and liability seemed to make perfect sense.

However, nowadays Norway – as most other Western European states – has experienced satellite communications by private entities as much as by governmental ones, may face interesting prospects of partially privatised launch activities from its launch facilities, has a national company involved in the relatively new venture of Sea Launch²¹, and through its membership of the European Space Agency is becoming involved in the European plans to develop GALILEO, a partly private European satellite navigation system. Such developments might lead to a need to reconsider the national Norwegian legal framework as well.

4. The Implementation of the Norwegian Act

As mentioned, the relevant Ministry issuing the licence is the Ministry of Trade and Industry. Only one entity so far has been granted licences: the Andøya Rocket Range (ARR) company, a company with limited liability registered in Norway. Its owners are the Norwegian Space Centre (NSC) with 90% of the shares and Kongsberg Defence and Aerospace with 10%. ARR is therefore formally speaking a private company, but majority-owned by the NSC and in actual practice closely co-operating with it. The NSC in its turn is an independent governmental foundation, which receives its support from the Norwegian state.

ARR possesses two licenses, of which one applies to their launching facilities at Andøya. Here they have equipment to launch scientific rockets with a payload of up to 20,000 kg. From their launching facilities at Ny-Aalesund, Svalbard, subject of their other license, it is possible to launch rockets with a payload of up to 3,000 kg. As to the licence concerning the facilities at Andøya for example, the current one is provided for two successive years, containing conditions related to safety, responsibility, liability, and contractual relationships. However, the licence is not very comprehensive or

detailed, and the language can in this respect best be described as rather vague.

ARR has naturally the main responsibility for safety and security. It has to make sure that the launches are carried out under proper conditions and that the instructions are written in a clear and concise form. Each launch (or set of launches with the same type of rockets) has to be approved by the Norwegian Defence Research Establishment (Forsvarets forskningsinstitutt, FFI), by means of a safety clearance.

The Norwegian state is internationally liable for damage in accordance with the provisions of the Outer Space Treaty to start with; ARR and the owners of the rocket shall jointly and severally take over this liability. In other words: the state has the right to claim reimbursement from ARR and others that procure the launch. It should be noted here that ARR only provides the launching facilities, in most cases it does not enjoy ownership in the rockets. It is therefore that the license in this respect requires other relevant parties to also accept the conditions in the license, and that the contract in principle divides the liability between them. All the parties mentioned in the contract are to obtain insurance that covers possible damage.

In the Act no limitations are provided for in respect of reimbursement; consequently, the Norwegian state has the right to have the whole amount of any claim paid under international space law liability reimbursed. The Ministry furthermore requires that ARR's liability should be covered by insurance of a satisfactory amount. Also in this case, there are no upper limits; however, "satisfactory" in this context means that only scenarios reasonably possible should be covered. No further directions are given.

As mentioned, in 1969 there was not yet any Liability Convention to be taken into consideration in implementing (more detailed) international treaty obligations; and formally this did not change until 1995 when Norway ratified the Liability Convention (as well as the Registration Convention). In this

respect, however, ARR still only has to make sure that the launches are carried out with the minimum of risk. When it comes to the Outer Space Treaty furthermore, ARR anyhow has to respect the other duties and principles the Norwegian state has agreed upon when ratifying the treaty. To which extent the detailed obligations of the Liability Convention (or Registration Convention for that matter) would automatically follow from those "other duties and principles", however, remains an issue for further analysis.

In particular Norwegian participation in the Sea Launch project merits being referred to here, since it provides a new development in terms of launching in the context of the Outer Space Treaty and the Liability Convention, and the issue of liability and its consequences. The Kværner Group, one of the four shareholders in the Sea Launch consortium (with a 20% share), after all is an engineering company as such registered in Norway even though headquartered in London. Kværner has according to the Ministry of Trade and Industry never applied for a licence under the Norwegian act, and the Ministry is of the opinion that it does not need such a license because Sea Launch operates from the high seas and the platform is not registered in Norway. However, the Norwegian Act covers also launches from the high seas when Norwegian citizens undertake such launch; the scope of the act might in this respect also apply to Kværner to the extent a launch by Sea Launch can be defined as (*inter alia*, in view of the other shareholders) a launch by Kværner.

5. Other European States to Follow

As mentioned, the Vikings of Norway did not remain long without other Europeans following their example. Sweden (Norway's fellow Vikings), the United Kingdom, the Russian Federation and the Ukraine had established their own national space laws already in the previous millennium. Notably missing so far were in particular France,

Germany and Italy, the three major space powers from Western Europe.

Over the last few years it became apparent to these three states, that the ongoing commercialisation of space would require national legislative action of some measure of comprehensiveness. Since years France has become a major player in the private launch business through Ariespace, and an equally important player in satellite remote sensing through SPOT and SPOTImage. Germany has seen several private companies, starting with Eurokot and OHB System, take advantage of interesting opportunities to harness the heritage of Soviet space power for private causes. Italy still has a sleeping beauty in the form of the two platforms in equatorial as well as territorial Kenyan waters, San Marco and Santa Rita, potentially open to private launches and related uses. All three finally, as are many smaller European states, are part of the European Union, where privatisation of satellite communication and resulting licensing schemes are a major issue, and of the constituency building GALILEO, the European satellite navigation system.

Especially in the case of France and Germany the discussion has now reached the stage where it seems no longer an issue *whether* a national space law will be established, but rather *what* it should deal with and *how* it should deal therewith.

As to France, the special case of private launch services provider Ariespace had, at least as far as international liability was concerned²², been essentially covered by a complicated international legal structure with three documents at the core: the Ariespace Declaration²³, the Ariespace Convention²⁴ and the CSG Agreement²⁵. And as for SPOTImage, its operations could still be fairly easily controlled *de facto* by the dependency of that company upon satellite data delivered by the SPOT satellite system – for some 90% paid for and run by French governmental authorities.²⁶ However, in particular with the advance of private enterprise in satellite communications a

national legal system tailored to a single national – even if somehow private – entity did not seem sufficient anymore to ensure the French space industry its proper place under the sun.

Consequently, the French authorities are currently preparing a draft text for national space legislation, with inclusion of a few essential elements already agreed upon. Firstly, the law will contain a licensing system for satellites involved in communication or navigation services. Secondly, it will include a licensing system for private providers of launch services, taking into account global competition aspects. Thirdly, it will incorporate a licensing system for private remote sensing systems, dealing *inter alia* with public aspects such as data distribution. Fourthly, it will provide for a specific regime regarding securities in satellites, taking the developments in the context of UNIDROIT into consideration.

In Germany, the need for some form of general licensing system was perceived equally broadly. The examples earlier mentioned of private German initiatives building upon old Soviet accomplishments in the field of launching, the increasing private interest in satellite communications and remote sensing data for geographical information systems and environmental purposes, and the commercial opportunities expected to arise from the development of satellite navigation and the impending commercialisation of the International Space Station all conspired to call for a framework law.

Therefore, also in Germany a drafting exercise is under way, which should lead to a national space law likely dealing with the following six core issues. Firstly, it will comprise a system of authorisation of private entities conducting space activities. Secondly, an obligatory registration of relevant categories of space objects is provided for. Thirdly, absolute liability for damage suffered within Germany as a consequence of space activities will be