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Frans G. von der Dunk

University of Nebraska - Lincoln, fvonderdunk2@unl.edu

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Chapter 10
Regulation of Space Activities in The Netherlands

From Hugo Grotius to the High Ground of Outer Space

Frans von der Dunk

10.1 The General Background: The Netherlands and Outer Space

The Netherlands, being aware of its relative size when compared to the major spacefaring nations not only globally but also in the European context, has always addressed outer space and space activities from the perspective of the role it could feasibly play. It has thus concentrated on a few niche areas which were either closely aligned to existing capabilities and experience or seemed to offer possibilities for mid-size economies and societies to play an important role.

From this perspective, firstly the scientific and technical sector might be mentioned. Throughout history, a number of Dutch astronomers and astronomy institutions have become famous across the world; and considerable know-how in those areas has been consequently accumulated. Hence, the Netherlands was always particularly interested in the scientific exploration of the universe – even if it did not require actual space activities to be undertaken.

The Dutch government had only two satellites launched on its own account, which were completely Dutch-built, and both of them for scientific purposes: the ANS (which stood for “astronomical satellite of the Netherlands”) in 1974 and the IRAS (Infra-Red Astronomical Satellite) in 1983. Both were launched using US launch vehicles. Since then, the Dutch involvement in satellite and other space projects has been only collaborative, and not autonomous or leading.

The same was true also for the two Dutchmen who have so far travelled to outer space. Both Wubbo Ockels and André Kuipers were part of the international manned spaceflight projects in the context of European cooperation in space, notably as astronauts of the European Space Agency (ESA)\(^1\) – even as Kuipers’

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\(^1\) The European Space Agency was established in 1975 by means of the Convention for the Establishment of a European Space Agency (hereafter ESA Convention), Paris, done 30 May 1975, entered into force 30 October 1980; 14 ILM 864 (1975).
first flight was paid for by the Dutch Ministries of Education and Science as well as Economic Affairs.

Similarly, in line with the long-time engineering traditions in the Netherlands, a distinct interest in space from the technical perspective has always thrived – from government and academic institutions such as the Dutch aerospace agency NIVR and the Technical University of Delft, to companies such as Fokker Space, later Dutch Space, and Stork, finding niche markets in such areas as robotic arms and solar panels. Again, strictly speaking this was not about space activities, but rather (in this case) about building hardware as subcontractors to other non-Dutch main contractors, or in the context of the Dutch membership of ESA and the various joint cooperative projects undertaken within that framework.

Secondly, it was the international orientation, specifically in the context of an international legal order flying the banner of peace and prosperity, which to a large extent determined the manner in which the Netherlands became involved in activities related to or carried out within outer space. This was a tradition going back as far as the seventeenth-century. Hugo Grotius, one of the founding fathers of international law, had written some of his most famous works on international peace and wars, respectively on the “outer space of his days” that was the realm of the high seas. Most of the Dutch activities focused, indeed, on ESA or other international cooperative projects under bilateral or multilateral treaties, preferably within a sound framework of international conventions and international law to guarantee that power and money would not be the only decisive factors in determining the shape and outcome of any such activities.

10.2 The Specific Background: The Netherlands and International Space Law

The longstanding focus on scientific/technical aspects of space activities on the one hand, and on an international/legal context for them on the other, constitutes the key for understanding the approach of the Netherlands towards international space law, as well as to the possibility, desirability or even the need to create national space legislation as the main topic of the present book.

Clearly therefore, it was natural for the Netherlands to be interested primarily in the international treaties thereby establishing primacy of the rule of law over power politics. With no capabilities or even intention to play a leading role in activities in outer space and in the absence of any private involvement in whatever space activities were undertaken, the existence of a substantial body of international law as such would generally be considered sufficient with no necessity of further national implementation.

Thus, to start with, the Netherlands became – as one of only a handful of states globally – a party to all the five treaties specifically developed with a view to outer space and space activities (commonly referred to as the corpus juris spatialis internationalis). Not accidentally, that development took place at the United Nations as
the prime global body tasked to maintain the rule of law and a minimum of peace and prosperity among nations.

Firstly, the 1967 Outer Space Treaty\(^2\) was domestically approved by national law on 12 June 1969, its ratification with the depositaries took place on 10 July 1969 and it entered into force for the Netherlands three months later, on 10 October 1969.\(^3\) Secondly, the 1968 Rescue Agreement\(^4\) was approved by the Dutch Parliament on 10 July 1980,\(^5\) as was the 1972 Liability Convention\(^6\) and the 1975 Registration Convention.\(^7\) Finally, the Netherlands is one of thirteen states currently party to the 1979 Moon Agreement,\(^8\) the last space treaty to see the light of day within the UN context.

All these treaties, however, become relevant only when the intention exists to enter into outer space with a man-made space object.\(^9\) As, moreover, the only space activities (in the above sense) undertaken by the Netherlands were carried out under the direct control of the government, the need to establish any form of “authorisation and continuing supervision” of “national activities in outer space” conducted by “non-governmental entities”\(^10\) was practically absent. Likewise, the need to deal with the consequences of international state liability for damage caused

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\(^3\) See Nederlandse Staatswetten, Editie Schuurman & Jordens, 104a (1981), at 3.

\(^4\) Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, London/Moscow/Washington, done 22 April 1968, entered into force 3 December 1968; 672 UNTS 119; TIAS 6599; 19 UST 7570; UKTS 1969 No. 56; Cmd. 3786; ATS 1986 No. 8; 7 ILM 151 (1968).

\(^5\) See supra note 3, 104a (1981), at 12.


\(^9\) This is essentially the case for the liability regime, where also failed launches could lead to application of that regime; cf. esp. Article I(b), Liability Convention. Most rules, rights and obligations contained in the corpus juris spatialis internationalis even start to become relevant, de jure or de facto, only once a space object has actually entered the realm of outer space – wherever that may begin.

\(^10\) These concepts and terms are the ones used by Article VI, Outer Space Treaty, to indicate international responsibility for space activities for certain states exists, which would almost automatically suggest a need for such states to control those activities if not undertaken by the states themselves.
by space objects (also) if privately launched, owned and/or operated\textsuperscript{11} was basically absent, since there was no private launch, ownership or operation which the Dutch government needed to be concerned about from that angle.

Because of the Dutch interest in maintaining international peace and security by means of the rule of law, the Netherlands furthermore became a party to such treaties as the 1963 Partial Test Ban Treaty\textsuperscript{12} and the 1996 Comprehensive Test Ban Treaty,\textsuperscript{13} both of which have a specific bearing on the regime applicable to outer space and space activities. At the same time, neither of them requires much attention from the perspective indicated above with regard to the establishment of national space legislation.

In a similar vein, since the Dutch focus is on international cooperation, especially when the pooling of financial and technical resources would result in added value and synergies, the Netherlands became a member, in addition to ESA, of the major international organizations undertaking space activities. This concerned, most importantly, INTELSAT\textsuperscript{14}, INMARSAT\textsuperscript{15}, and EUTELSAT,\textsuperscript{16} all international satellite consortia prior to their privatization. Also EUMETSAT,\textsuperscript{17} the cooperative organization in Europe for satellite meteorology, counts the Netherlands as one of its members. As for ESA itself, in the context of its optional programmes which

\textsuperscript{11}This is the consequence of the space liability regime offered by Article VII, Outer Space Treaty, and the various clauses of the Liability Convention.

\textsuperscript{12}Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Moscow, done 5 August 1963, entered into force 10 October 1963; 480 UNTS 43; TIAS 5433; 14 UST 1313; UKTS 1964 No. 3; ATS 1963 No. 26.

\textsuperscript{13}Comprehensive Test Ban Treaty, New York, done 24 September 1996, not yet entered into force.

\textsuperscript{14}INTELSAT was originally established by means of the Agreement Relating to the International Telecommunications Satellite Organization (INTELSAT), Washington, done 20 August 1971, entered into force 12 February 1973; 1220 UNTS 21; TIAS 7532; 23 UST 3813; UKTS 1973 No. 80; Cmd. 4799; ATS 1973 No. 6; 10 ILM 909 (1971), and the corresponding Operating Agreement Relating to the International Telecommunications Satellite Organization (INTELSAT), Washington, done 20 August 1971, entered into force 12 February 1973; 1220 UNTS 149; TIAS 7532; 23 UST 4091; UKTS 1973 No. 80; Cmd. 4799; ATS 1973 No. 6; 10 ILM 946 (1971).

\textsuperscript{15}INMARSAT was originally established by means of the Convention on the International Maritime Satellite Organization (INMARSAT), London, done 3 September 1976, entered into force 16 July 1979; 1143 UNTS 105; TIAS 9605; 31 UST 1; UKTS 1979 No. 94; Cmd. 6822; ATS 1979 No. 10; 15 ILM 1052 (1976), and the corresponding Operating Agreement on the International Maritime Satellite Organization (INMARSAT), London, done 3 September 1976, entered into force 16 July 1979; 1143 UNTS 213; TIAS 9605; 31 UST 1; UKTS 1979 No. 94; Cmd. 6822; ATS 1979 No. 10; 15 ILM 233, 1075 (1976).

\textsuperscript{16}EUTELSAT was originally established by means of the Convention Establishing the European Telecommunications Satellite Organization (EUTELSAT), Paris, done 15 July 1982, entered into force 1 September 1985; Cmd. 9069; Space Law – Basic Legal Documents, C.II.1, and the corresponding Operating Agreement Relating to the European Telecommunications Satellite Organization (EUTELSAT), Paris, done 15 July 1982, entered into force 1 September 1985; Cmd. 9154; Space Law – Basic Legal Documents, C.II.2.

allow for opting out with regard to any space programme in which a state is not par-
ticularly interested, the Netherlands has contributed (usually with a modest share) to many of such programmes, including that of building the International Space Station.

In all such cases, however, Dutch contributions either take the form of direct governmental involvement or, if private, of subcontracting at the level of hard-
ware or software development. Thus, in none of these cases was particular attention necessary for implementation of the relevant clauses of the *corpus juris spatialis internationalis* at the domestic level.

### 10.3 New Developments: The Changing Dutch “Spacescape”

Such was the situation regarding the Dutch “spacescape” roughly until well into the 1990s. It may be noted that, until that point, amongst the Western-European countries, only Norway (in a very perfunctory fashion), Sweden and the United Kingdom had bothered to establish their respective national space laws. Then, however, several developments started to converge to create a new environment for space activities in the Dutch context.

One development of global dimensions concerned a general tendency to increas-
ingly accept private parties as proper partners in space endeavours also outside the United States (which had already in 1984 enacted its first national space act providing for the licensing of private space actors). This development was cer-
tainly stimulated by the breakdown of communism in the Soviet Union, and the 1991 collapse of the Soviet Union itself, causing the most significant international opposition to capitalism and private enterprise in general (as well as the Cold War

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calling for governmental control over space activities) to disappear almost entirely. Russia, as the Soviet Union's main successor, established a national space law providing for a licensing system for private space actors in 1993, whereas the Ukraine, number two in the line of succession, followed suit in 1996.

A second development concerned, for Europe, the increasing involvement of the European Community, later European Union, in the area of space activities. Whereas until 1985 the ESA served as the exclusive framework for the determination and implementation of any European space policies (as distinct from national space policies of the member states), the European Community under the 1986 Single Act received its first – albeit marginal – measure of competence in the area of space, to the extent that space activities could be subsumed under the heading of "research and development".

The increasing commercialisation of the telecommunications sector as a whole, and the specific sub-sector of satellite communications following closely on its heels, caused such involvement to shift into higher gear. The 1987 Green Paper on the liberalisation of telecommunications had explicitly excluded satellite communications, but this omission was soon remedied by another Green Paper three years later.

The favourable reactions to the policy proposals of the Commission in the 1990 Green Paper for the purpose of liberalising and privatising satellite communications then led the Commission to establish the baseline for that process by means of the 1994 Satellite Directive, to be followed in due course by more Directives and Regulations guiding the process further along. As a result of such measures, an Internal Market for telecommunications in general, but also for...
satellite communications in particular, was gradually arising within the European Community, then Union.

Finally, these developments within the European context mirrored closely related developments at the global level. In the mid-1990s the World Trade Organisation (WTO), almost as soon as it was established, started to apply the General Agreement on Trade in Services (GATS) to the telecommunications sector, by means of the 1997 Agreement on Basic Telecommunication Services and the individual schedules of commitments to open up national markets on a reciprocal basis. Increasing pressure also upon the incumbent international satellite organizations INTELSAT, INMARSAT and EUTELSAT could gather steam in these contexts, leading to their ultimate but inevitable privatization by the turn of the century.

For the Netherlands, these developments brought the prospect of private space activities for commercial gain to the fore and the possibility for the country to benefit from such developments. The privatization process left its mark, for example, on the incumbent national telecommunications service provider PTT, later KPN, both in relation to its own status and as to its hitherto exclusive access to the international satellite communication infrastructure offered by INTELSAT, INMARSAT and EUTELSAT for the Dutch market. However, this did not trigger much thought on any need or desirability for a Dutch national space law, since there did not seem to be any newcomers waiting in the aisles to enter the Dutch market yet.

Furthermore, the clustering of private space companies from major European states looking for a neutral home for their overarching construction led to the legal establishment of the European Aeronautic Defence and Space company (EADS) as the holding consortium in the Netherlands, headquartered in Amsterdam, though it should be noted that this concerned the manufacturing industry only.

Therefore, the two single most important developments in this area which finally triggered discussion within the Netherlands towards the end of the 1990s on the desirability or even the need for a national space law and accompanying licensing system were the establishment of two new private companies of a rather different nature.

10.4 Mircorp and New Skies Satellites

By the turn of the century, an exciting new prospect in terms of manned spaceflight loomed. With the Russians strapped for cash and their Mir space station hanging on against all odds following a few serious incidents, the possibility of extremely rich

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31The WTO was created under the Agreement Establishing the World Trade Organization, Marrakesh, done 15 April 1994, entered into force 1 January 1995; 1867 UNTS; UKTS 1996 No. 57; ATS 1995 No. 8; 33 ILM 1125, 1144 (1994).
private individuals paying for their own trip to, and stay on board an orbiting space station followed by a safe homebound journey, was all of a sudden becoming very real.

A small company was established in the Netherlands, called MirCorp, for the purpose of brokering appropriate deals between the Russian Space Agency and potential customers willing to pay sums of money in the range of US$ 20,000,000 for a one-week trip to the Russian space station. In the final resort, though Mir itself had to be de-orbited prematurely (from this perspective) in early 2001, this initiative resulted in the first-ever tourist in outer space, Dennis Tito, being sent to the ISS in April 2001.

The final stretch of the deal no longer saw MirCorp in charge, as in the meantime it had been somehow restructured and replaced by Space Adventures, with the business operation thus essentially being relocated to the United States. Nevertheless, the prospect of a private company which, because of its headquarters and formal place of establishment, was to be considered a Dutch company for the purposes of international law, suddenly brought the possibility of the legal involvement of the Netherlands under international space law to the fore.

MirCorp’s clients would be launched “by” Russia, (i.e., the Russian Space Agency) on board a Soyuz spacecraft from the Bajkonur launch base, which qualified as a Russian launch facility on Kazakh territory. Hence any damage caused by those Soyuz flights would, under the Liability Convention, lead to joint and several liability of Russia and Kazakhstan. The fact that MirCorp, as a Dutch company for the purposes of international (space) law, was actually the launch customer, however, raised the question whether this would in addition qualify the Netherlands as the state “which (…) procure[d] the launch” – and thus the spectre for the Netherlands to be faced with claims that it would be jointly and severally liable for such damage, too.

There is no clear guidance on the international level as to what extent a “State which (…) procures the launch” would, should or could, for the purpose of the Liability Convention, be considered to include a state whose company procures the launch, though it would be fair to say that most authors on the subject would, indeed, uphold the broader interpretation. Therefore, with a view to the possibility of such

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34 Cf. e.g. the famous dictum of the International Court of Justice in the Barcelona Traction Case; Case Concerning the Barcelona Traction Light and Power Company, Limited (Second Phase)(Belgium v. Spain), International Court of Justice, 5 February 1970, I.C.J. Rep. 1970, 4, at 42, § 70.
36 Cf. Articles I(c) and V of the Liability Convention.
37 Article I(c), sub (i) of the Liability Convention.
38 It should be kept in mind that the Liability Convention just refers to “a state which (…) procures” (Article I(c) (i); emphasis added), not to “a state which procures or whose private entities procure”; references to private enterprise should not be simply read into a case where explicitly only reference is made to “states”. With reference furthermore to the manner in which individual states have implemented this clause, as it turns out most states have actually refrained from
a claim being actually brought forward at some point in time, it was clear that the Netherlands would do well to consider domestic implementation, including a system of licensing, liability reimbursement and insurance provisions, of the relevant elements of the Liability Convention at the very minimum.

As indicated, MirCorp was relocated to the United States before any such implementation could take effect, but this is where the other new, private company of interest came in: New Skies Satellites. New Skies Satellites originated in the bosom of INTELSA T, which in the course of the mid-1990s faced the combined pressure of calls for privatisation and its own inability to appropriately and flexibly handle high-end value-added commercial satellite services. As one consequence of those developments, it was announced on 31 March 1998 that New Skies Satellites would be established as an independent private company, with its legal incorporation in the Netherlands and its headquarters in The Hague. It was bequeathed with six of INTELSA T’s twenty-four then-operational satellites as start-up capital assets.

By itself, the establishment of New Skies Satellites and the transfer of six satellites in orbit to it would have called for a measure of “authorization and continuing supervision” as the operation of the satellites and the leasing of transponders on board by the company would certainly qualify as “national activities in outer space” for which the Netherlands would bear international responsibility.39 Also, the mere fact of legal incorporation and establishment of physical headquarters in the Netherlands gave the Dutch authorities the actual opportunity to exercise the necessary measure of control (“authorization and continuing supervision”) over the company. At the time, however, existing business operation requirements under general Dutch law were considered sufficient to take care of any potential risk that New Skies Satellites’ activities would come into conflict with the provisions of the Outer Space Treaty and other rules of space law without the Dutch authorities being aware of such conflicts. Consequently, the Netherlands would be able to comply with and take care of its voluntarily assumed international obligations.

Next to the general accountability which Article VI of the Outer Space Treaty imposed on the Netherlands, however, there was no need to cover international liabilities under the Liability Convention. The six satellites had been launched as INTELSA T satellites, which under the Liability Convention’s premise of “once a launching state, always a launching state” meant that the later transfer of ownership of the satellites in orbit did not change anything regarding their status under that Convention.40

requiring a license merely for the procurement by a private company of a launch, which means that those states apparently consider private procurement not to be included, so that it is not necessary to domestically cover themselves against presumed international consequences under the Liability Convention. As a matter of fact, the UK Outer Space Act is the only domestic space law that explicitly requires a license for the mere activity of procuring a launch (as per Section 1(a)). While most authors, as indicated, hold an opposite view, an unequivocal interpretation of the Liability Convention’s text by states is clearly absent.

39Article VI of the Outer Space Treaty.
40It should be kept in mind that the Liability Convention does not take any other state into consideration for apportionment of liability but the state(s) involved in the launch as “launching states”, and
Since INTELSAT itself had not made use of the option under Article XXII of the Liability Convention to accept the substantive rights and duties of the Convention by a special Declaration,\\(^{41}\) presumably the totality of member states of INTELSAT should be seen as jointly fulfilling the criterion of states having procured the launches of those six satellites. The Netherlands was thus only one amongst many, and any potential claim would have been dealt with by applicable internal INTELSAT procedures.

The effect of any contractual arrangements on this matter between New Skies Satellites on the one hand and INTELSAT / the INTELSAT member states on the other would there remain exclusively internal in effect, and not change the situation vis-à-vis third states under the Liability Convention.

This fundamentally changed in 2002 however, a year after the launch of the first space tourist as originally arranged by MirCorp. New Skies Satellites was experiencing continuous market growth and prospering as a consequence, and soon was in need of additional satellite capacity. Thus, in April 2002, the company had its first new satellite launched, and more would follow, and this time there was little doubt that New Skies Satellites was directly involved in the manufacture and launch of satellites itself.

There was some discussion at that time whether the “turn-key” contract which New Skies Satellites had concluded with the satellite manufacturer, which tasked the latter to arrange for and buy the launch and hand over the “keys” to the satellite only once it was in orbit, would qualify the Dutch company as the “procuring entity”. However, the better view is clearly that, even if New Skies Satellites was not directly paying for the launch, its interest in having the satellite launched was the sole reason why it was launched, so that this would, at the very least, constitute “procurement by proxy”.

As discussed earlier, once the company would be considered to have procured the launch, most authors would agree that this would effectively mean that (in this case) the Netherlands would qualify as the procuring state for purposes of the Liability Convention. Thus, this development finally set the train in motion leading to the ultimate drafting of a Dutch national space law.

The Dutch Ministry of Economic Affairs, triggered by an “alert” from the Ministry of Foreign Affairs that amongst others the above developments might involve international responsibility and liability for the Dutch state under the applicable treaties, took the lead. It firstly commissioned two studies, one by the International Institute of Air and Space Law in Leiden on the narrower legal aspects neither Liability Convention nor Registration Convention have allowed for qualification as launching / liable state after the launch, e.g. by in-orbit take-over. Even more crucially, the Registration Convention does not even formally allow for re-registration.

\\(^{41}\)It may be noted, that Article XXII(1), Liability Convention, specifically required a majority of INTELSAT member states (some 140 at the time) to be parties to the Outer Space Treaty and the Liability Convention itself, which is a quite stringent condition – even as of 1 January 2006, the Outer Space Treaty had 98 states parties, the Liability Convention 83. See the website of the UN Office for Outer Space Affairs, at http://www.unoosa.org/oosa/en/SpaceLaw/treaties.html.
and one by a British consultancy firm Actinus on the broader economic and political ramifications and parameters. Without much hesitation, both studies recommended the drafting of a stand-alone framework national space law, rather than the amendment of existing regulations pertaining to general licensing of businesses, as the specifics of the international “spacescape” would not be easily taken account of in sufficient measure under the latter approach.

Next, as part of a broader process within the Ministry of Economic Affairs of reinvigorating Dutch involvement in all sorts of space activities and applications, especially as pushed by Minister Brinkhorst during the period in which he was at the helm (which lasted from 2003 to 2006), the Ministry of Economic Affairs supervised the process of actual drafting, in cooperation with other relevant Dutch Ministries such as those of Foreign Affairs, Transport and Waterworks (in view of their key role in telecom and navigation applications), Agriculture (in view of agricultural applications of space), Education and Science, Defence, and Justice.

As a result, on 24 January 2007 the Dutch Space Activities Act (Law Incorporating Rules Concerning Space Activities and the Establishment of a Registry of Space Objects)\(^\text{42}\) was officially enacted by the Dutch Parliament and published on 6 March 2007. By decision of 30 November 2007, the Act finally entered into force together with the Decision on the Register for Space Objects (Besluit register ruimtevoorwerpen) which elaborated the relevant part on establishment of a national register.\(^\text{43}\)

The accompanying explanatory memorandum\(^\text{44}\) explains the background of the Act by making specific reference to the Actieplan Ruimtevaart [Netherlands Space Action Plan].\(^\text{45}\) As elaborated in the Actieplan, Dutch space activities will continue to be conducted predominantly in an international context, taking into consideration the character of the space sector as a high-technology industry characterized by high investment and long payback times. The Actieplan then outlines the key ambitions of, and priorities for, the Dutch government as being science (specifically listing astrophysics, planetary research, gravitational research, atmospheric and climate research, and microgravity research), operational usage of space activities (with a focus on earth observation, satellite navigation and satellite communications), and infrastructure development (from launch vehicles to satellite platforms and the International Space Station).

\(^{42}\)See 80 Staatsblad (2007), at 1.

\(^{43}\)See 492 Staatsblad (2007).

\(^{44}\)The Dutch version thereof can be found in Tweede Kamer der Staten-Generaal, Vergaderjaar 2005-2006, 30 609, nr. 3. As with the Space Activities Act itself, the English translation used for the purposes of this article, which is on file with the author, was an unofficial one; it was made official however later in the course of 2007.

\(^{45}\)See Tweede Kamer der Staten-Generaal, Vergaderjaar 2004–2005, 24 446, nr. 27.
10.5 The Dutch Space Activities Act

The Dutch Space Activities Act, as becomes already clear from its full title, effectively incorporates two main aspects. It deals in particular with private space activities for which the Netherlands could be held internationally responsible and/or liable under the *corpus juris spatialis internationalis*, and the more specific issue of establishing a formal registration procedure and a national register of space objects with a view to, *inter alia*, dealing with the same set of space activities.

The Act comprises 28 sections, spread out over seven chapters.

10.5.1 Chapter 1: General Provisions

Chapter 1 comprises the General Provisions. Section 1 lists the relevant definitions, of which the most interesting ones from the perspective of international space law concern “space activities” (defined as “the launch, the flight operation or the guidance of space objects in outer space”) and “space object” (“any object launched or destined to be launched into outer space”).

While it may be considered unlikely that space activities involving the launch of a space object will take place from the Dutch territory (at least as far as the territory of the Netherlands itself is concerned), the same does not apply to the flight operation or the guidance of space objects in outer space. Navigation, tracking and control of space objects during the launch phase and in outer space require a control centre using remote-control technology, which could certainly be established on, and hence the relevant activities conducted from, Dutch territory.

Section 2 warrants comprehensive quotation, as it defines the scope of the Act in terms of its licensing system. It provides as follows:

1. This Act applies to space activities that are performed in or from within the Netherlands or else on or from a Dutch ship or Dutch aircraft.
2. By Order in Council this Act can also be declared wholly or partly applicable to:
   
   (a) designated space activities that are performed by a Dutch natural or juridical person on or from the territory of a State that is not party to the Outer Space Treaty or on or from a ship or aircraft that falls under the jurisdiction of a State that is not party to the Outer Space Treaty;
   
   (b) the organization of outer-space activities by a natural or juridical person from within the Netherlands.

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46Section 1(b), Space Activities Act. It may be noted, that the term “space activities” as such is not to be found in the space treaties, only closely related ones appear; Article I, Outer Space Treaty, for example refers to “the exploration and use of outer space”, whilst Article VI, Outer Space Treaty refers to “activities in outer space”.

47Section 1(c), Space Activities Act. This definition is of interest *inter alia* with a view to Article I (d), Liability Convention, and Article I(b), Registration Convention, which only offer a rudimentary definition of the term “space object”.
Firstly, it should be pointed out that “the Netherlands” in this context refers only to that part of the territory of the Kingdom of the Netherlands which is situated in Europe. Whilst for the purpose of international law including the space treaties, the Netherlands as a state includes the overseas territories of Aruba and the Dutch Antilles, and hence would be internationally responsible and liable also for space activities conducted from those territories, the approach has been taken internally to allow those two territories to make up their own minds. It may be noted here, that the government of Aruba has stated that it intends to draft regulations designed to bar space activities from the territory of Aruba, whereas the government of the Dutch Antilles plans to draft legislation that will be closely modelled on the provisions of the Dutch Space Activities Act.

Secondly, the mere organization of space activities “from within the Netherlands” does not automatically fall within the scope of the Act. This is especially interesting in the light of the discussion on the “procurement” of launches referred to above, where the Dutch authorities consider that the mere organization of activities in the Netherlands does not lead to liability for the Netherlands under the Liability Convention. The explanatory memorandum specifically refers to the commercial organization of space tourist flights as one of the activities under this heading which might in the not-too-distant future require application of the Space Activities Act. It should be pointed out, that once space tourist flights themselves are conducted from the territory of the Netherlands, this would obviously fall within the scope of Section 2(1) of the Act, and hence the Act would automatically apply.

Thus, in terms of delimiting its scope, the Space Activities Act applies the territorial criterion in a broad sense in that it also encompasses activities to which Dutch jurisdiction applies on a quasi-territorial basis, such as Dutch ships and Dutch aircraft. The criterion of nationality is only applied, under Section 2(2), in case the

48 As a consequence of this particular structure of the Kingdom of the Netherlands, the instrument of a “Kingdom Act” is available to ensure that certain laws apply to the comprehensive Kingdom of the Netherlands, that is including the overseas territories. Whilst the space treaties have been implemented by means of such Kingdom Acts, it was decided not to use this instrument in case of the Space Activities Act. Furthermore, it should be noted that currently major constitutional changes in the status of the Dutch Antilles are taking place.

49 In other words: also the Netherlands in principle does not consider “procurement” by a private party to require a license for Liability Convention-purposes; although a possible exception might be made in the future for space tourism.

50 The terms “Dutch ship” and “Dutch aircraft” are defined by Section 1(d) and (e) respectively, in both cases with reference to Dutch law. Space activities conducted “from a Dutch space object” are not considered feasible for the time being, hence do not require inclusion in this clause at this point. In addition, it should be noted that formally space objects do not acquire a “nationality”, but merely a “state of registration” by virtue of Article VIII, Outer Space Treaty, and Article II, Registration Convention. This is different for ships and aircraft; see resp. Article 5(1), Convention on the High Seas, Geneva, done 29 April 1958, entered into force 30 September 1962; 450 UNTS 82; TIAS 5200; 13 UST 2312; UKTS 1963 No. 5; Cmdnd. 584; ATS 1963 No. 12; and Article 91(1), United Nations Convention on the Law of the Sea, Montego Bay, done 10 December 1982, entered into force 16 November 1994; 1833 UNTS 3 & 1835 UNTS 261; UKTS 1999 No. 81; Cmdnd. 8941; ATS 1994 No. 31; 21 ILM 1261 (1982) for ships; and Article 17, Convention on
territory of a state not party to the Outer Space Treaty is concerned, in order to fill any gaps in international responsibility resulting from that latter scenario.

Clearly then, the Netherlands views the reference to “national activities in outer space” in Article VI of the Outer Space Treaty to refer principally to “activities conducted from Dutch territory”, and only under special circumstances, almost as a generous gesture to help prevent any gaps in international responsibility from occurring, to “activities conducted in the territory of another State by Dutch nationals, whether juridical or natural.”

10.5.2 Chapter 2: Licences

Chapter 2, comprising Sections 3–10, outlines the licensing regime which is established by the Space Activities Act.

Section 3 is the key section. Subsection 1 constitutes the baseline, as it decrees the fundamental illegality of conducting any of the space activities to which Section 2 makes reference without a proper license. Section 3(2) reiterates the focus of the Act on private space activities, as activities performed by or under the responsibility of the Dutch government do not require a license.

Subsection (3) prescribes the main conditions to which a license may be subject, as far as the Act itself is concerned. It provides as follows:

Regulations and restrictions can be attached to the license for the following purposes:

(a) the safety of persons and goods;
(b) protection of the environment in outer space;
(c) financial security;
(d) protection of public order;
(e) security of the State;
(f) fulfilment of the international obligations of the State.

Those are quite general requirements which are found in most other national space laws and licensing systems in one form or another.

Other Sections, however, add more specific or elaborate requirements. Section 3(4), for example, adds another key condition for procuring a license; i.e., the licensee shall insure himself against any liability “arising from the space activities for which a license is required”. A reasonability-criterion is built into the Act, as per the estimate of the authorities.51

International Civil Aviation, Chicago, done 7 December 1944, entered into force 4 April 1947; 15 UNTS 296; TIAS 1591; Cmd. 6614; UKTS 1953 No. 8; ATS 1957 No. 5; ICAO Doc. 7300 for aircraft. At the same time, in view of the resulting jurisdiction and the prohibition of double registration, for all practical purposes the registration of space objects should be deemed to lead to the same result as the granting of nationality thereto.

51See Section 3(7), Space Activities Act, allowing imposition of further rules “in order to implement the provisions of Subsection 4”.

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51 See Section 3(7), Space Activities Act, allowing imposition of further rules “in order to implement the provisions of Subsection 4”.
Next, Section 6 contains a list of grounds upon which the issuance of a license must or may be refused, which of course also translates into requirements to be fulfilled for such a grant. A license will be refused if “(a) this is necessary in order to comply with a treaty or a binding decision of an international institution; (b) the safety of persons and goods, environmental protection in outer space, the maintenance of public order or national security might be jeopardized by issuing the licence; (c) its issuance would contravene rules laid down by or pursuant to this Act.”

In addition, a license, may be refused for certain self-evident or procedural reasons, namely if: “(a) a previously issued licence has been revoked owing to infringement of rules laid down by or pursuant to this Act or of the regulations attached to the licence; (b) the applicant has not discharged his obligations under a previously issued licence; (c) the application or the applicant does not comply with the rules laid down by or pursuant to this Act; (d) there is good reason to fear that the applicant will not act in accordance with the rules laid down by or pursuant to this Act; (e) this is necessary in order to protect the interests referred to in Section 3, Subsection 3.”

So, the Act essentially is a framework law, leaving considerable flexibility for the Dutch authorities to add further requirements as expertise grows, concurrently with the possibility to draft tailor-made provisions and requirements for specific types and categories of space activities. For example, the Act allows the Minister to impose additional requirements, which may relate to “(a) the applicant’s knowledge and experience; (b) authorization for the use of frequency space [spectrum]”.

Chapter 2 also contains a number of provisions which are essentially procedural in nature. For example, there is a 6 month time limit within which a license application has to be decided upon. Section 7 provides, in extended fashion, for reasons for which a license may be revoked, and the applicable procedures for revocation. Licenses are not transferable, although provision is made for cases in which the license has been issued to “a juridical person that is merged, divided or changes its name”, which is of course common practice in general business environments.

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52 Section 6(1), Space Activities Act.
53 Section 6(2), Space Activities Act.
54 Section 4(3), Space Activities Act.
55 See Section 5, Space Activities Act.
56 Thus, the license will be revoked amongst others if that is necessary “to comply with a treaty or a binding decision of an international institution” (Section 7(1.b)), or if “the safety of persons and goods, environmental protection in outer space, the maintenance of public order or national security” (Section 7(1.c)) would be jeopardised. Similarly, the license may be revoked amongst others if the relevant rules have been infringed, if “the space activities have not been commenced within the stipulated time limit” (Section 7(2.b)), if “the purpose of the space activities for which the licence was issued has changed substantially” (Section 7(2.c)), or if “this is justified by a change in the technical or financial capabilities of the licence-holder” (Section 7(2.d)).
57 Section 8 of the Space Activities Act.
Section 9 leaves open the possibility for the authorities to charge a fee for administrative services offered, viz. activities undertaken in the context of the licensing process, without any reference to an amount or even a method for calculating it. One reason for the vagueness of this provision was the lack of experience hitherto in the Netherlands with license applications in such a special sector as space, and the resulting unpredictability of most details of such applications. In the accompanying explanatory memorandum, a very rough estimate of relevant costs for the administrative body is made, referring to application costs being in the range of 500–1,000 Euros, non-recurring costs in the range of 3,000–6,000 Euros and ongoing costs in the range of 2,000–4,000 Euros per year.

Finally, Section 10 was drafted to focus on what is currently termed “Disasters” but should more properly have been labelled “Incidents”. It casts a duty upon the licensee to take steps to the greatest extent possible, to prevent any jeopardy to safety of persons and goods, the environment of outer space, the maintenance of public order and national security or damage that might result from the licensed activities at issue. This is essentially the definition of the concept of “incident” as it is used in this Section. The unlikelihood of manned space activities being conducted from the Netherlands (as opposed to being organised from the Netherlands) is evident from the fact that the usual distinction in comparable regimes such as the Australian national space law between “accidents” (where people actually get hurt or even killed) and “incidents” (where such injury has been merely threatened but in the end has remained absent) has not been used in this context.

The section also imposes the obligation to provide the Dutch authorities with information on “a. the causes of the incident and the circumstances under which the incident occurred; b. the relevant information that is needed in order to assess the nature and the seriousness of the consequences of the incident; c. the steps that have been taken or are being contemplated in order to prevent, limit or rectify the consequences of the incident; and d. the steps that have been taken or are being contemplated in order to prevent such an incident recurring during a space activity”.

10.5.3 Chapter 3: Registry of Space Objects

As mentioned above, the second major reason for establishing the Dutch Space Activities Act relates to the establishment of a national register for space objects in

58 See Section 10(1) of the Space Activities Act.
59 See the discussion supra, on the de facto exclusion in particular of space tourist activities from the scope of the Act.
61 Section 10(2) of the Space Activities Act.
fulfilment of relevant obligations under the Outer Space Treaty and the Registration Convention.

To be sure, the relevance of such a national register was not limited to the private activities which constitute the main target of the Act, as any space object launched with the involvement of the Netherlands with the status of a “launching State” immediately raises the issue as to whether the Netherlands should also act as the state of registry (and in the hypothetical case where the Netherlands would qualify as the only launching state, simply results in an obligation to do so). 62

And, indeed, during the discussions on the development of the Space Activities Act, it was repeatedly asserted that, in case a decision is made not to draft such an Act, the need for the establishment of a national registry would remain independently of such an Act. If the Act would not come about, other less administratively burdensome but also less transparent and legally secure, means should be found to achieve the desired result.

As it is, now Section 11 provides for the registration obligation as follows:

1. Our Minister shall maintain a registry with information concerning space objects that are being used in connection with space activities as referred to in Section 2.
2. The licence-holder shall, at times to be determined by Order-in-Council, furnish the information required for the registry.
3. Our Minister will be responsible for registering space objects that are being used in connection with space activities that are performed under the responsibility of one or more of Our Ministers.
4. Rules will be laid down by or pursuant to an Order-in-Council with a view to implementing this section. 63

As the explanatory memorandum makes clear, the information to be included in the national register must, at any rate, include the information that the Netherlands in turn would be obliged to provide to the UN Secretary-General for the purposes of fulfilling obligations assumed under the Registration Convention. 64 Article IV of the Registration Convention in this regard provides for the following parameters:

(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.

62 Cf. esp. Article II of the Registration Convention.
63 “Our Minister” is the standard legal phrase referring effectively to the government; the “our” referring in the form of a pluralis majestatis to the Queen of the Netherlands.
64 See Articles III and IV of the Registration Convention.
The specific character of this chapter becomes clear once more where Section 11(3) of the Space Activities Act provides that governmental space activities fall within the scope of the Act for this particular purpose.

10.5.4 Chapter 4: Redress

Chapter 4 harks back on the most significant scenario within the context of the risk that licensed space activities cause damage of a possible catastrophic nature and size as has been touched upon already, namely situations in which the liability regime under the *corpus juris spatialis internationalis* becomes applicable.

The sole section in this chapter, Section 12, starts by establishing the primary obligation of reimbursement – if the Netherlands “is obliged to pay compensation under Article VII of the Outer Space Treaty or the Liability Convention, the State is entitled to recover this sum, in full or in part, from the party whose space activity has caused the damage”. It may be recalled, that the liability regime under the Liability Convention essentially provides for unlimited compensation.

The principle of unlimited compensation however is qualified, or more precisely the burden resulting from that principle for the licensee is mitigated by the clauses limiting the liability of the licensee as well as the actual reimbursement of the Dutch government “to the value of the sum insured” referring back to Section 3(4) under which the Dutch government is given the discretion to determine “the maximum possible cover”. From the explanatory memorandum it transpires that the Dutch government is effectively contemplating the use of a loosely-defined version of the Maximum Probable Loss-concept as used in comparable clauses in US and Australian national licensing regimes.

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65See Section 3(3) with the most fundamental requirements for the granting of a license, and Section 3(4) referring more specifically to the liability and insurance issues at stake.

66Section 12(1) of the Space Activities Act.

67Cf. Article XII of the Liability Convention, which specifies that “The compensation which the launching State shall be liable to pay for damage under this Convention shall be determined in accordance with international law and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred.”

68Section 12(2), (3) of the Space Activities Act.

In the alternative (depending, of course, on the manner in which the insurance contract is drafted), the Netherlands can exercise its right of redress directly against the insurer.\(^70\) In any event, the Dutch government is certain that any claim for compensation made against it under applicable liability regimes of international space law as a result of a licensee’s activities can, at least as to its substantive financial consequences, be subrogated to the extent of the sum insured.

### 10.5.5 Chapter 5: Enforcement

Chapter 5 encompasses eleven sections, from Sections 13 to 23, dealing with various elements of enforcing the Space Activities Act and its licensing regime at the domestic level. It includes some procedural aspects of determining whether infringements have occurred and of imposing the relevant sanctions. For example, the power to impose penalties will lapse five years after the infringing act has been committed; whereas objections and appeals are allowed for in due form.\(^71\) By their very nature, many of these provisions refer back to existing elements of Dutch national law.

In view of the international nature of the space industry, an interesting clause is contained in Section 20(2). For any oral discussion on potential infringements of the Act and/or sanctions imposed as a consequence, a person “who does not adequately understand the Dutch language” is entitled to an interpreter, “unless it can reasonably be assumed that this is not necessary”.

Perhaps the most interesting section within this chapter is Section 15 that deals with sanctions. Generally, violations of any of the licensing obligations contained in Sections 3, 7 and 10 can be sanctioned with administrative penalties up to a maximum of 450,000 Euros or 10% of the “relevant annual sales of the company in the Netherlands, whichever is the greater”.\(^72\) Violations of the regulations pertaining to the registration of relevant space objects can be sanctioned with administrative penalties up to 100,000 Euros.\(^73\)

### 10.5.6 Chapter 6: Amendments to Other Legislation

The sole Section comprising Chapter 6, which is Section 24, represents an effort to ensure coherence and compatibility with existing Dutch national legislation while maintaining the key benefit of the Space Activities Act, i.e., providing potential space entrepreneurs with a one-stop licensing regime.

In particular, the offence resulting from Section 3 as regards the illegality of undertaking space activities without a license respecting the conditions mentioned in Subsection 3, the safety of persons and goods, protection of the environment in outer

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\(^70\)Section 12(4) of the Space Activities Act.

\(^71\)Section 17(1) resp. (2) of the Space Activities Act.

\(^72\)Section 15(1) of the Space Activities Act.

\(^73\)Section 15(2) of the Space Activities Act.
space, financial security, protection of public order, security of the Netherlands, and fulfillment of the international obligations of the Netherlands, as well as a failure to comply with necessary instructions as regards the activities under the license under Section 7(3) or a failure to comply with the obligations of the licensee once an incident has occurred under Section 10, are now all included in the scope of the Economic Offences Act.\textsuperscript{74} Likewise, violations of the licensee’s obligations with regard to the registration of licensed space objects are now incorporated in the Economic Offences Act (notably as part of Section 1(4)) through Section 24(2) of the Space Activities Act).

10.5.7 Chapter 7: Concluding Provisions

Chapter 7 comprising Sections 25–28, offers a surprisingly small number of concluding provisions, including one clause referring to another Dutch Act (the General Administrative Law Act) with a view to an impending amendment of that Act which would cause some procedural clauses of the Space Activities Act to cease to apply.\textsuperscript{75} Section 25 is the most interesting provision in this chapter. It provides for a transitional arrangement, which, in view of the fact that at that point in time only New Skies Satellites was a matter for consideration, is a very succinct one. Activities already ongoing at the point in time when the new Act enters into force may continue for another twelve months without a license – but then would require a license to be allowed to proceed.\textsuperscript{76}

10.6 The Netherlands: A New Gateway to Outer Space?

It may seem that the process of domestic implementation of some key provisions of the corpus juris spatialis internationalis in the Netherlands has only just begun. The 2007 Space Activities Act is a framework law for all practical purposes, even if it manages to provide for a sufficient measure of implementation for the time being. As the last formalities required before the Act can enter into force were being cleared away, a process of further implementation by means of drafting a set of guidelines was set in motion. At this stage, it would be premature to go much further in view of the relatively scarce experience with private space entrepreneurship so far within the Netherlands and the resulting uncertainty as to what the next application for a license would look like in detail, let alone what common requirements could find their way into a high-level comprehensive legislation.

\textsuperscript{74}See Section 24(1) of the Space Activities Act. Reference is made here to Section 1(1) of the Economic Offences Act.

\textsuperscript{75}See Section 26 of the Space Activities Act.

\textsuperscript{76}Section 25(1) of the Space Activities Act.
At the same time, beyond New Skies Satellites which appears to be the most, perhaps even the only visible player in this game at this stage, various new developments can be discerned by those looking at close range. Allusions have been expressed about a second player in that very same game waiting in the wings for a proper transparent legal regime to arise. Charting different territories, a small company Isis has been established to broker piggy-back deals for small satellites amongst other efforts to open up new and niche markets. And with the commercial interest in space tourism spreading like wildfire, at least one venture is now seeking out the Netherlands, notably its Caribbean dependencies, as a legal basis for their operations.

Of course, many of such activities or initiatives would not automatically be Dutch in nature. Yet, it is interesting to note that the Netherlands, with its national space law well in place and on the verge of being activated, has now joined a still relatively small group of Western states. As a matter of fact, since the mid-1980s when the United Kingdom joined Norway and Sweden, just one more Western European state had drafted national space law before the Netherlands caught on – the southern neighbour of the Dutch: Belgium, in 2005.

Such major spacefaring nations within Europe as France, Germany, Italy and Spain, though all to some extent involved in discussions regarding the establishment of a proper national act dealing with, in particular, private space activities, interestingly enough have not yet achieved that feat. Even France, indeed Western Europe’s foremost space power and enjoying the presence since many years of Arianespace and SpotImage, key players in the global private space arena, has only realised a national space act after the Dutch did.77

From that perspective, it will certainly be interesting to follow the development of the national legal framework for private space activities within the Netherlands. It has turned out possible elsewhere too, for a mid-sized economy like the Netherlands to become very prominent in proportional terms by the sheer means of offering legal transparency in addition to international orientation, business acumen and a focus on high-key technologies, and transport- and telecommunication-related applications. Maybe the low lands of the Netherlands will indeed provide an interesting springboard into the high ground of outer space – provided of course, honouring the tradition of Hugo Grotius, that space will largely be preserved for peaceful and commercial purposes.

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77 This concerns the Law on Space Activities (Loi relative aux opérations spatiales); Loi No. 2008-518 du 3 juin 2008; 34 Journal of Space Law (2008), at 453; unofficial translation 34 Journal of Space Law (2008), at 453.