

Decree of 19 January 2015 expanding the scope of the Space Activities Act to include the control of unguided satellites (Unguided Satellites Decree)

We, Willem-Alexander, by the grace of God King of the Netherlands, Prince of Orange-Nassau, etc., etc., etc.

On the recommendation of Our Minister of Economic Affairs, no. WJZ / 14191480 of 4 December 2014;

Having regard to section 2, subsection 2 (b) of the Space Activities Act;

Having heard the Advisory Division of the Council of State (advisory opinion of 17 December 2014, no. W15.14.0451/IV);

Having seen the further report of Our Minister of Economic Affairs of 13 January 2015, no. WJZ / 14210052;

Have approved and decreed:

Article 1

The Space Activities Act also applies to the control from the Netherlands of an unguided space object in outer space by means of a communications link.

Article 2

1. The prohibition referred to in section 3, subsection 1 of the Space Activities Act does not apply until three months after the entry into force of this Decree to activities as referred to in article 1 that are being performed on the date on which this Decree enters into force.

2. The prohibition referred to in section 3, subsection 1 of the Space Activities Act does not apply until nine months after the entry into force of this Decree to activities as referred to in article 1 if a licence for these activities has been applied for no later than three months after the entry into force of this Decree.

Article 3

This Decree may be cited as the Unguided Satellites Decree.

Article 4

This Decree enters into force on 1 July 2015.

We order and command that this Decree and the explanatory memorandum pertaining to it be published in the Bulletin of Acts and Decrees.

Wassenaar, 19 January 2015

Willem-Alexander

H.G.J. Kamp
Minister of Economic Affairs

Published on the twenty-eighth of January 2015

I.W. Opstelten
Minister of Security and Justice

EXPLANATORY MEMORANDUM

I. General

1. Object and background

Unguided satellites have become increasingly important in the Netherlands in recent years. Some of these satellites are very small and cannot be controlled or manoeuvred in orbit after launching. The object of this order in council is to expand the scope of the Space Activities Act (referred to below by its Dutch abbreviation WRA) to include such satellites.

The most prominent company involved in the development and in-house construction of unguided satellites and the supply of parts and systems for unguided satellites to third parties is based in the Netherlands. It is one of the leading market players in international activities and projects involving such satellites. And in the academic field, Delft University of Technology promotes the development of unguided satellite technology through educational programmes. Students develop and build unguided satellites in cooperation with the Dutch aerospace industry.

Cooperation between production companies and research institutions in the field of unguided satellites will continue to intensify, boosting innovative skills and knowledge. By developing new space applications, the aerospace industry will act as an enabler for other industries covered by the 'top sector policy' pursued by the Ministry of Economic Affairs in areas such as the agri-food, high-tech systems & materials, logistics and water sectors (Parliamentary Papers, House of Representatives, 2012/13, 24 446, no. 51). Among the matters dealt with in the 2014-2020 space policy document (Parliamentary Papers, House of Representatives, 2013/14, 24 446, no. 55) are the importance of space flight operations, the creation of space infrastructure, the utilisation of geo/satellite data and opportunities for Dutch companies and research institutions to export products and services.

The advances in developing unguided space objects were not anticipated when the WRA was passed in 2007. The definition of space activities in the Act therefore refers to the launching, flight operation and guidance of space objects in outer space. However, what was anticipated at the time was that in a rapidly evolving sector such as the aerospace industry, developments might occur which would necessitate expansion of the statutory rules. The WRA therefore provides for the possibility of expanding its scope by order in council.

This need to expand the scope of the legislation now arises because unguided satellites do not necessarily pose a smaller risk than guided satellites. The technical requirements to be fulfilled by guided satellites and the requirement that there must be adequate insurance

against any damage should therefore be just as applicable to unguided satellites. Under article VI of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Dutch Treaty Series 1967, 31), the activities of non-governmental entities in outer space are subject to authorisation and ongoing supervision by the state concerned. As a communications link is maintained with the satellites from Dutch territory and it is customary for the satellites to be registered in the Netherlands a short while after a successful launch (section 11 of the Space Activities Act), the Netherlands must respect the treaty obligations on this point. Logically, unguided satellites should therefore be brought within the scope of the licensing system and the supervision and enforcement rules that also apply to guided satellites.

The draft decree has been transmitted to the European Commission pursuant to article 39, paragraph 5 of Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market (OJ L 376).

2. Unguided satellites

The growing interest in unguided satellites in the Netherlands and their increasing use and importance mirror international developments. Opportunities exist for Dutch industry, research institutions and the services sector to exploit the global market for space technology, products and services. Providing clarity about how the Netherlands fulfils its international obligations will help to create a climate in which private market participants can develop new space activities in a stable environment. This will aid the innovative capacity of the Netherlands, and strengthen the connection between science and technology and the use of space data. Developing unguided satellites involves high-calibre technological employment. Expanding the scope of the WRA provides certainty to the market participants concerned and will help to attract experienced and recognised aerospace companies which will benefit from clear and balanced legislation.

Unguided satellites cannot be manoeuvred in flight to maintain or alter their orbital position. As the communications capabilities of most of today's unguided satellites are limited and due to the current state of technology, the present generation of unguided satellites operate for the most part independently. On the basis of international classification, unguided satellites are divided into the following groups by weight:

- minisatellites with a weight of between 100 and 500 kg
- microsatellites with a weight of between 10 and 100 kg
- nanosatellites with a weight of between 1 and 10 kg

- picosatellites with a weight of between 100 grams and 1 kg
- femtosatellites with a weight of under 100 grams.

Dutch companies and research institutions interested in developing unguided satellites tend to focus mainly on nanosatellites and microsatellites. As these satellites can be bought and launched relatively cheaply, easily and quickly, the number of unguided satellite applications from the Netherlands is expected to rise. At present, ten players are active in this market in the Netherlands. There are expected to be three licence holders in the Netherlands in the short term, plus an additional two in the medium term.

The Radiocommunications Agency Netherlands is implementing the WRA and supervising compliance on behalf of the Minister of Economic Affairs. The Agency will base the licensing system for unguided satellites on the present procedure applicable to space activities.

3. Regulatory burden and impact on business

As noted in section 1 above, unguided satellites should, in principle, fall under the same licensing and supervision system as guided satellites. The Radiocommunications Agency has standardised the licensing, supervision and registration process. The existing application form for a licence to operate a guided satellite has been modified in some respects for use in relation to unguided satellites. As no new information obligations have been included in the licensing process for unguided satellites, the administrative burden has been minimised. The applicant is required to supply the following with the application form: information about the activities to be undertaken in space, financial and technical data, a liability insurance policy, a certificate from the International Telecommunication Union for the use of radio frequency rights and a statement about the company's knowledge and experience of space activities.

The application form need be completed only once because the licence is granted for the duration of the space activity. It follows that a new application need not be submitted for each new unguided satellite. As a company applying for a licence will take a maximum of four hours to complete an application form and assuming that it is completed by a highly qualified employee (€60 per hour), the administrative cost is €240.

Five applications for licences can be expected from companies and research institutions which are concerned with developing unguided satellites and their commercial applications. Total administrative costs are therefore likely to be $5 \times €240 = €1,200$. It is impossible to say precisely in advance in what years the applications will be made.

Incidentally, a market survey shows that this niche market does not feature either large companies (>250 employees) or microbusinesses and self-employed persons without employees.

Besides imposing a very limited administrative burden the order in council also entails some substantive obligations. For example, the licence conditions include an obligation to take out liability insurance to cover the proposed activities. The annual premium for an insured amount of \$20 million is around 0.1% of the cover and will generally cost \$20,000. These costs can be regarded as inherent in the nature of the business since the companies concerned would take out this insurance even if the obligation were not included in the licence conditions.

II. Individual articles

Article 1

Once launched, unguided satellites cannot be manoeuvred to maintain or alter their orbital position, for example in order to prevent a collision with another space object or avoid space debris. However, even in the case of unguided satellites it is necessary to obtain authorisation from the International Telecommunication Union (ITU) before launch to operate in a given orbital position using certain radio frequencies and related technical parameters (also known as filing rights). Under the ITU Radio Regulations it must be possible to switch the transmitter of an unguided satellite on and off by means of a telecommand or to identify and solve other problems. For this purpose, it is necessary to establish a communications link. If a communications link is used to control an unguided satellite, for example by switching the transmitter on and off, the WRA is applicable.

Article 2

The WRA is also applicable to existing activities that fall within the scope of article 1 of this order in council. This means that a licence is required for these activities too. Regulations and restrictions may be attached to the licence in so far as allowed by the WRA. Examples are rules governing the safety of persons and goods (section 3, subsection 3 of the WRA).

Without transitional arrangements, existing activities would immediately be prohibited when the Decree enters into force since they do not meet this licence obligation. Paragraph 1 provides for a transitional provision for such activities which gives the person having to obtain a licence time to prepare and submit an application. Paragraph 2 also takes account of the time it takes the Radiocommunications Agency to carefully assess complex applications for licences for existing activities.

H.G.J. Kamp
Minister of Economic Affairs