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Spain's National Security Strategy 2021 and Nuclear Terrorism

Abstract

The fundamental purpose of this article is to offer a perspective of the incidence of nuclear terrorism in the National Security Strategy of Spain. For this, it is intended to make a historical review of the different defence directives, and of other documents with an intimate relationship with security, which have contemplated the phenomenon of nuclear terrorism and the need to offer a timely response to this threat. Although there is little known background on this type of terrorism, its relevance cannot be denied in the context of the instruments with which Spain has provided itself to maintain a security situation. In this way, it is intended to analyse the way in which this threat has been treated in the aforementioned Strategy over time until reaching the latest version of 2021, and its annual update included in the last Annual National Security Report of 2020.

Keywords

Nuclear terrorism, security strategy, weapons of mass destruction, critical infrastructure, Spain.

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Introduction

The phenomenon of terrorism is not a new one, as it has a long and rich history, intermingling organisations of different types and inspirations, individual actors or lone wolves, and varied actions encompassing threats to security and order, propaganda and attacks, which at various times have been significant enough to influence the course of historical events. This is particularly significant in the 20th century, when terrorism experienced a violent upsurge and came to be seen as a phenomenon with global dimensions. An example of this is the attacks carried out by the terrorist organisation Al Qaeda in various US cities on 11 September 2001, using the hijacking of commercial airliners. This was an event that had the peculiarity of having an impact in several areas, thanks to the multiple consequences it eventually had, one of them being the hitherto barely contemplated possibility of a terrorist attack that could cause massive destruction. Precisely one of the most notable consequences of this attack was to set off alarm bells among those responsible for security in states and international organisations so that the strategies in place at the time to deal with the terrorist threat would be updated or new ones would be drawn up to provide a coherent response to this added dimension of the problem.

Moreover, if there is one defining characteristic of terrorism, it is the use of any means at its disposal to achieve a multidimensional moral, physical, economic, political and media impact. There is precisely one element whose use in the course of an attack is endowed with this power of impact, and that is the nuclear element.

Since its emergence in the aftermath of World War II, the nuclear element has been a crucially important factor whose impact has transcended the military sphere in which it was initially confined to other aspects of contemporary reality, such as the political, strategic, scientific, environmental, energy production, cultural and, lastly, terrorist activity. Everything related to the nuclear factor is invested with a distinctive aura that makes it easily accommodated in a preferential place in terms of political and media attention, which has the particularity of being precisely what terrorist organisations crave as an effective means to achieve their ends.

Spain is no stranger to this situation, and this has obliged governments at every historical moment to implement the necessary measures to maintain security, taking into account the possible threats to it that could arise from terrorism and, specifically, from the threat posed by the use of nuclear and radioactive materials in terrorist attacks. Precisely one of the main tools available to the Spanish government for maintaining the country's security in the aforementioned area is the National Security Strategy, the latest version of which corresponds to the year 2021, and which has undergone a notable evolution over time. The analysis of these developments forms the core of this research, in which the 2017 and the current 2021 Strategies are of particular relevance.

Nuclear terrorism

If there is one circumstance that characterises nuclear weapons from the beginning of the Cold War to the present day, it is their use as a deterrent by states that have succeeded in acquiring a nuclear arsenal. This is relevant not only because of the power granted by the mere possession of a nuclear arsenal, but also because of the knowledge of the rest of humanity that these weapons exist and that they can be used if necessary, as envisaged in the doctrines of use of nuclear states. This deterrent character, coupled with the immense destructive power associated with nuclear power, has not escaped the attention of those individuals and organisations bent on imposing their ideals by force, and has been a cause for concern in addition to the threat of terrorism by conventional means. Nuclear terrorism exists and is seen as a threat by states and international organisations, as evidenced by the adoption on 28 April 2004 of Resolution 1540 by the United Nations Security Council, which specifically mentioned weapons of mass destruction. It contained and detailed specific decisions on nuclear terrorism, such as the mandate to States to refrain from providing support to non-State actors seeking to develop nuclear weapons or their means of delivery, as well as to adopt domestic control measures to prevent the proliferation of nuclear weapons, including the observance of existing international treaties in this field, such as the Nuclear Non-Proliferation Treaty, the Chemical Weapons Convention and the Biological Weapons Convention. In addition, it was intended to strengthen international cooperation in all areas necessary in this regard. The resolution also established a Security Council committee, known as the 1540 Committee, which was to oversee the adoption of the resolution's measures by states.

Also on nuclear terrorism, mention should be made of the International Convention for the Suppression of Acts of Nuclear Terrorism, adopted on 13 April 2005 by the United Nations General Assembly and entered into force on 7 July 2007, whose preamble expresses concern that terrorist attacks in all their forms were increasing around the world at the time, noting that "Acts of nuclear terrorism can have the gravest consequences and threaten international peace and security". Precisely Article 2 of this Convention specifies that the offence of nuclear terrorism is committed when radioactive material or a nuclear explosive or radiation dispersal or radiation-emitting device is unlawfully and intentionally possessed or manufactured or used with the intent to cause death or serious bodily injury or substantial damage to property or the environment. It also covers the use of or damage to a nuclear installation in the event of the release of radioactive material or the risk thereof. Finally, blackmail, threats and participation in any of the above-mentioned actions also fall into this category.

At this point, it is necessary to explain the difference between nuclear and radioactive materials, as defined in the Spanish Nuclear Energy Act 25/1964 of 29 April 1964. Article 2(8) defines nuclear substances as follows:

- (i) nuclear fuels, other than natural uranium and depleted uranium, which alone or in combination with other substances can produce energy by a self-maintained process of nuclear fission outside a nuclear reactor.

(ii) radioactive products or radioactive waste.

Paragraph 2 of the same Article also defines radioactive material as “containing substances which emit ionising radiation”.

That said, and as set out in the Convention, all the possible ways in which nuclear terrorism can manifest itself are defined, namely the use of a conventional nuclear weapon, the construction of an improvised nuclear device, the manufacture of a radiological dispersal device, the use of a radiation exposure device and the attack on a nuclear or radioactive facility in such a way as to release radiation into the surrounding environment.

With regard to the first option, the use of a nuclear weapon, it should be noted that that only eight countries have proven nuclear arsenals, which are guarded by a wide range of security measures to prevent misuse, sabotage or theft of the weapons. These countries are the United States, Russia, the United Kingdom, France and China, recognised as nuclear states by the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), plus India, Pakistan and North Korea, which have nuclear arsenals outside the law. The likelihood of a terrorist organisation gaining access to one of these facilities and managing to extract a weapon is remote under current circumstances. Even so, there may be some conditions that make it easier for terrorists to operate, the most important being the weakening or destruction of the state with the nuclear arsenal, as happened at the time of the collapse of the Soviet Union, or as could happen in Pakistan if instability in that country increases.

The second option, the manufacture of an improvised nuclear device, is also unlikely. While it is possible that a group of people with no prior knowledge of nuclear weapons could build one if they had the appropriate materials and funding, as the US Office of Technology Assessment (OTA) outlined in a 1977 report, there is a difficult hurdle to overcome, and that is obtaining the properly enriched uranium or plutonium that is essential for a nuclear explosion to take place. These materials cannot be legally acquired by private individuals and, like nuclear weapons, are held in maximum security.

The manufacture of a radiological dispersal device is an inexpensive and very accessible option for a terrorist organisation, as the design of such devices requires only the radioactive material and a means to disperse it, which can be an explosive. The wide diffusion of radioactive sources and their use in areas as diverse as medicine, agriculture, industry, construction and mining means that radioactive sources sometimes go astray, which can lead to them falling into the hands of terrorist organisations. This can be verified by consulting the International Atomic Energy Agency's (IAEA) Illicit Trafficking and Incident Database (ITDB), created in 1995 to provide States with information on reported trafficking activities involving nuclear and radioactive elements. These activities fall into three groups, with Group I covering incidents related to security, or very likely to be related to trafficking or illegal uses, Group II covering incidents whose purpose is unknown, and Group III covering events that are not related to trafficking or illegal uses. The 2020 report on the ITDB contains a number of

interesting data, including the reporting of 189 incidents in 2019 and the total number of events reported from 1993 to 2019, which was 3686, of which 290 are in Group I, 1023 in Group II and 2373 in Group III. There is some documented history of threats to use a radiological dispersal device, the most notable of which was in Izmailovsky Park in Moscow on 23 November 1995, when a group of Chechen separatists placed a container with explosives and a large quantity of the radioactive isotope caesium-137, but the explosion did not actually take place.

The fourth option, the fabrication of a radiation exposure device, is the easiest to carry out, as it is only necessary to obtain the radioactive material and place it in the vicinity of the chosen target. The dangerousness of the radioactive source will depend on the type of radiation emitted, the most dangerous being gamma radiation, as it has a long range and penetrating power. There is also documented history of the use of a radiation exposure device in an attack, most notably that of a Chinese scientist named Gu Tianming, who was convicted in 2003 for having placed several samples of the radioactive isotope iridium-192 in the workplace of another scientist at a hospital in the city of Guangzhou, affecting a large number of people who were at the site.

As for the last of the options, the attack on a nuclear or radioactive facility, there are various possibilities for carrying it out, since aircraft can be used for this purpose, as in the case of 9/11, explosives placed inside the facility or an attack from the outside using mortars or grenade launchers. Nuclear power plants can be the most desirable targets for a terrorist organisation, which makes them highly protected, in addition to the robustness of their structures, which must contain the nuclear reactor and provide shielding against the radiation emitted inside. There are several precedents of attacks against nuclear power plants, such as the one that occurred on 27 April 1979 at the Surry nuclear power plant in the United States, in which two individuals took advantage of the access card to the facilities of one of them to sabotage 62 nuclear fuel rods. In addition to the nuclear power plants, there are other facilities related to nuclear fuel and other radioactive elements, such as the fuel assembly factories, of which there is one in Spain, at Juzbado, in the province of Salamanca, and the radioactive waste disposal facilities, of which Spain also has one at El Cabril, in the province of Cordoba, although this is dedicated to housing very low, low and intermediate level waste.

Genesis of the National Security Strategy

The current National Security Strategy is largely an heir to defence directives issued from 1980 to 2008, as well as being influenced by a variety of security and defence-related documents. The purpose of the defence directives was to set out the main objectives that needed to be achieved in order to ensure national defence, including in detail the lines of action deemed necessary to achieve these objectives. The frame of reference in which these directives were framed was that offered by the strategic scenario, which evolved from a situation dominated by the confrontation of blocs led by the United States and the Soviet Union during the 1980s and early 1990s to a situation

throughout this second decade characterised by a climate of détente between the two superpowers in which, nevertheless, there were still more limited conflicts and the proliferation of weapons of mass destruction had not been halted, as expressed in the preamble to the 1996 National Defence Directive.

An important milestone in 2000 was the publication for the first time in Spain of the Defence White Paper, which offered the basic lines of defence policy framed, as in the case of the directives, by the strategic context of the time, the roles played by the European Union and the North Atlantic Treaty Organisation (NATO) in this context and, finally, the actions carried out by Spain to successfully adapt to this situation. Chapter I of this publication, on the strategic scenario, already considered the panorama of risks, in which the need to consider the problem of terrorism in its international dimension appeared, adding that in order to achieve a security situation that would effectively protect society, it was necessary to take into account a broader concept in which the coordination of the elements available in this sense would play an important role. The White Paper also highlighted the presence of nuclear weapons proliferation, which it described as a serious factor of instability, stating that the control of dual-use technologies, both civilian and military, was vital in the fight against it.

The next document of interest is the publication of the 2003 Strategic Defence Review. This already brought national defence capabilities into line with the changes in the international strategic landscape following the terrorist attacks of 9/11, and further stated that “The threat of terrorism is coming to the fore, and the fight against it is being considered as a key element of the strategy of security and defence organisations”. It also indicated that the proliferation of weapons of mass destruction could constitute a serious threat to stability and that collective means of defence needed to be put in place to deal with them. Finally, and as a further threat to be taken into account, attacks and aggressions on the environment were mentioned, which, in the case of nuclear installations or nuclear-powered ships or nuclear weapons systems being involved, can be of great relevance in the context of security. As for risks, Annex B (sic), Risks and scenarios for security and defence, indicated that, apart from the proliferation of weapons of mass destruction in the Mediterranean area, smuggling of nuclear material or accidents in industrial facilities or constructions, such as nuclear ones, also constituted risks.

The 2004 National Defence Directive in particular already makes an explicit link between terrorism and nuclear power. The analysis of the strategic scenario at the time indicates that terrorist attacks in several countries highlighted the inability of traditional military superiority to ensure security and deter terrorist organisations from operating wherever they have the opportunity. This is also evident in the case of weapons of mass destruction falling into the hands of terrorist organisations, which at the time was judged to be the most serious threat to global security.

The National Defence Directive issued in 2008 also identified international terrorism as a serious threat. It stressed that terrorism, organised crime and the proliferation

of weapons of mass destruction should be considered as the most important transnational threats to society. In addition, it was further stated that the possible combination of these three elements could have catastrophic consequences.

Its objectives were, firstly, to detect threats to national security, then to carry out an analysis of the possible risks and finally to draw up a catalogue of responses that also took into account the coordination between all the actors involved. One of the most serious security threats identified was the proliferation of weapons of mass destruction and the possibility of them falling into the hands of terrorist organisations. It was further noted that Al Qaeda and other terrorist groups were known to be pursuing the acquisition of nuclear and radioactive materials at this time, and that it was therefore necessary to pay due attention to their areas of operation. The importance of maintaining the security of so-called critical infrastructures, including nuclear power plants, was also noted, as set out in the National Critical Infrastructure Plan approved in 2007.

A new, short National Defence Directive was adopted in 2012. Weapons of mass destruction reappear as a global threat, along with the spread of fanatical groups and movements of various kinds. The inclusion of the need to carry out a review of the aforementioned Spanish Security Strategy is relevant, and the fruits of this review can be seen the following year.

Spain's 2013 National Security Strategy emerged as a revision of the 2011 strategy, motivated by the need to contemplate and adapt to the transformations that have occurred. Of particular note is chapter 3, on risks and threats to national security, section 2 of which is devoted to terrorism. It states that terrorism constitutes a threat to the security of citizens, putting at risk, inter alia, critical infrastructures, supplies and services. Paragraph 7, which deals with the proliferation of weapons of mass destruction, and which is labelled as a serious threat to international peace and security, notes that the risk of terrorist groups getting hold of these weapons adds a new dimension to an already serious threat. Chapter 4 of the Strategy set out twelve priority areas for action, defining in each of them an objective to be achieved and the lines of action required to achieve it. In the sphere of action of the fight against terrorism, the objective was to neutralise this threat and reduce the vulnerability of society to its attacks, highlighting among the lines of action those relating to protection, with an increase in the levels of protection of sensitive targets, and those relating to prosecution, with the adoption of measures to prevent access to the materials necessary to carry out the attacks. In the area of non-proliferation of WMD, the designated objective was to prevent proliferation by preventing access to WMD materials by terrorists. The main lines of action proposed to achieve this objective, apart from the now traditional promotion of multilateralism, were the development and updating of national plans to prevent proliferation and mitigate risks in the nuclear, chemical and biological fields; the reinforcement of policies and practices for controlling exports of dual-use materials; the strengthening of measures to combat transfers of knowledge, technology,

goods and equipment; and, finally, the deepening of capabilities to prevent the threat of terrorist attacks with these materials.

2017 National Security Strategy.

In 2017, the need arose to review and update the previous strategy in order to adapt it to the inexorable passage of time and changes in the strategic scenario. As on previous occasions, this new strategy analysed the threats and challenges that it was considered necessary to confront in order to guarantee national security, and also made explicit the general objectives that should guide the state's action and the areas in which they are developed, each with its specific objective and the corresponding lines of action to achieve them.

Threats

Chapter 4 thus identified these threats and challenges, with jihadist terrorism prominently identified as one of the main problems facing the international community. The exposure to threats to which critical infrastructures could be subjected, which could compromise the provision of essential services, was also covered. Initially, jihadist terrorism was fully identified as one of these threats, and attacks on critical infrastructure were identified as one of its targets. Another threat identified was the proliferation of weapons of mass destruction, with the possibility that this proliferation could be exploited by non-state actors being of particular concern. The wide availability of radioactive materials, which, as mentioned above, are used in various fields such as health, industry, agriculture and the environment, which makes them more likely to be accessed by criminal organisations, can be highlighted in relation to this threat.

Other threats were also identified as taking place in the so-called global common spaces, including cyberspace, where the possibility of cyber-attacks against critical infrastructures was envisaged. Precisely the next type of threats identified were those related to critical infrastructures, which could include those related to the nuclear industry.

Areas and lines of action

Chapter 5 of the Strategy focused on identifying and describing the five general objectives that were intended to guide state action in the specific area of security. In order to achieve these objectives, fifteen areas were developed, each of which was assigned a specific objective and a number of lines of action to achieve it. Among the proposed areas, the following can be chosen for the purpose of this research.

The “Fight against terrorism” included four lines of action: prevention, protection, prosecution and response preparedness. In terms of prevention, it is worth highlighting the strengthening of the mechanisms established in the fight against the financing of terrorism, with Spain’s participation in various international initiatives in this respect. It also includes the strengthening of Spain’s international contribution to the fight against terrorism in the organisations to which it belongs, especially NATO and the European Union, and in those initiatives of which it is a member. With regard to the action line on protection, two proposals are included. The first of these aims to strengthen national counter-terrorism capabilities and the cooperation and coordination of counter-terrorism efforts between the various agencies involved at the national level. The second of the proposals in this line of action concerns cooperation with the partner countries most affected by terrorism and, particularly closely, with the European Union, and adopting measures to improve border control. One of the actions in which Spain collaborates is the European Union’s network of CBRN Centres of Excellence, which emerged thanks to the Neighbourhood, Development and International Cooperation Instrument in 2010, in which 62 countries from 8 regions around the world participate, and which aims to address CBRN threats of external origin by promoting cooperation with relevant actors and supporting countries that have more limited defence capabilities in this area. With regard to the line of action relating to prosecution, which envisaged strengthening the legal instruments in the fight against terrorism, mention can be made of the 2015 reform of the Criminal Code, which replaced the 1995 version, and in which the offences relating to the illicit use of nuclear and radioactive materials are clearly defined, both in Chapter V, On the possession, trafficking and storage of weapons, munitions or explosives, in Articles 566 and 567, and in Chapter VII, On terrorist organisations and groups and terrorist offences, in Article 574, paragraph 2 and paragraph 3. Finally, the response preparedness action line includes the formation of a comprehensive coping structure called the National Security System, with the National Security Council at its apex.

In the area of non-proliferation of weapons of mass destruction, the following lines of action can be highlighted. The first of these refers to the promotion of multilateralism and the fulfilment of international commitments in which Spain participates. These include the Global Initiative to Combat Nuclear Terrorism and the Proliferation Security Initiative. With regard to the first of these, it can be said that it was formalised in 2006 and is currently made up of 89 countries and six international organisations, its purpose being to strengthen international capabilities focused on the prevention and detection of activities related to nuclear terrorism and the response in the event of terrorist actions using nuclear and radioactive means. The second initiative was established in 2003 as a multinational response to the challenge posed by the threat posed by weapons of mass destruction and involves more than 100 nations. The second line of action was to secure nuclear and radioactive materials and facilities. In this respect, mention should be made of the approval of Royal Decree 1308/2011, of 26th September, on the physical protection of nuclear facilities and materials and radioactive sources, modified by Royal Decree 1086/2015, of 4th December, which includes the measures required for the security of nuclear power plants and other

related facilities and defines the competences of the different actors in the nuclear field, such as the Ministry of Industry, Tourism and Trade, the Ministry of Foreign Affairs and Cooperation, the Ministry of the Interior and the Nuclear Safety Council. The Nuclear Safety Council's Security Guide 8.1 "Physical protection of nuclear material in nuclear and radioactive facilities" and Royal Decree 451/2020 of 10 March on the control and recovery of orphan radioactive sources can also be cited in this respect. As for the third line of action, it referred to the fight against illicit trafficking in WMD-related materials and technologies and their means of delivery. The main effort is to strengthen national and international policies and practices implemented for the control of international trade in dual-use materials, as well as those in place to oppose illicit transfers of knowledge, technology, goods and related equipment. Spain actively participates in various initiatives aimed at achieving these goals, such as the Zangger Committee, whose purpose is to prevent the transfer of materials that could be involved in acts related to nuclear proliferation. Other initiatives of a similar scope are the Nuclear Suppliers Group, which aims to prevent any type of material produced by partner countries from being transferred for purposes related to nuclear proliferation; the Missile Technology Control Regime, involved in the control of unmanned systems capable of delivering weapons of mass destruction; and the Wassenaar Arrangement, instituted with the aim of contributing to transparency in transactions involving conventional arms and dual-use materials and technologies, and with the objective of preventing their acquisition by terrorist organisations. With regard to the fourth line of action, its purpose was to promote international cooperation in the fight against trafficking in nuclear and radioactive materials in order to improve the security of the international logistical chain and border control. One of the most noteworthy initiatives in this section is the protocol based on the Megaports Initiative, applied since 2010 in the event of the detection of an inadvertent movement or illicit trafficking of radioactive material in ports of general interest, which defines the functions and procedures for action of the organisations involved.

The next line of action was to strengthen national non-proliferation through compliance with existing regulations. In this respect, mention may be made of the functions of the Nuclear Safety Council, responsible for regulating the operation of the nuclear and radioactive facilities existing in Spain, which, as could not be otherwise, includes those aspects most closely related to nuclear security, and which must also adapt the national legislation to international standards, mainly those issued by the IAEA or the European Atomic Energy Community (EURATOM).

To conclude this analysis of the 2017 National Security Strategy, mention can be made of four more areas where the impact of nuclear terrorism was taken into account. These were the Protection of Critical Infrastructures, in which mention can be made of Royal Decree 704/2011, of 20 May, approving the Regulation on the protection of critical infrastructures and the National Commission for the Protection of Critical Infrastructures, responsible for the approval of sectoral strategic plans, one of which is precisely that corresponding to the nuclear industry, which was also one of the first to receive the corresponding approval; Energy Security, precisely in relation to nuclear facilities due to their attractiveness as targets for terrorist organisations and taking

into account the consequences that their service may have for other infrastructures and for the population; and finally the Protection against Emergencies and Disasters and Environmental Preservation, all motivated by the impact that the incidents in which they are involved could have on them; the Protection of the Environment and the Protection of the Environment, all of this motivated by the impact that incidents in which they are involved could have on the environment, and the protection of the environment.

Annual National Security Report 2020.

This report, the eighth since they began to be drafted in 2013 and the last one available, aims to describe the national security environment since the publication of the previous report, analysing the challenges that Spain must face to guarantee its security and the responses that have been implemented to achieve the desired security situation, always taking into account the framework offered by the Strategy. This report takes a look at the fifteen areas identified in the 2017 National Security Strategy and highlights the challenges to be taken up and the main achievements in each of them. It is to be expected that the publication of the Annual National Security Report 2021 will follow the structure defined in the new 2021 Strategy. It is worth noting, however, that nuclear terrorism appears in several areas of the latest report, as detailed below.

In the field of terrorism, the new developments in the report are presented in the two sections on challenges and achievements. The first section only mentions the challenge of increasing the level of security in relation to goods in transit through the territory of the European Union, in which it is necessary to take special account of dual-use goods and radioactive products, among others. In terms of achievements, the importance of the 2019 National Counter-Terrorism Strategy is cited, with the rest of this section focusing on achievements against the jihadist threat.

Interestingly, previous security reports did cover various facts relating to nuclear terrorism. Thus, the 2018 report indicated in the section on achievements and protection that the Armed Forces had developed the COTA MALLA contingency plan in support of the State Security Forces and Corps as responsible for the prevention and anti-terrorist protection of Critical Infrastructures. Also in the 2019 report, mention was made in the same concept of the review carried out by the Armed Forces of their Action Plan, the aim of which is to enable them to act as support in the protection of critical infrastructures. This last report adds in the same section that since 2011, European customs have been carrying out security risk analysis and protection of European Union citizens with regard to goods transported through European territory, with special attention to dual-use goods and radioactive products, among others. Also in the section on response preparedness, achievements are noted in the 2018 report, such as the collaboration of the State Security Forces and Corps in various national and international forums and working groups related to CBRN materials and in the preparation of a guide for first responders in incidents of the same nature, and in the

2019 report where this participation in forums and meetings on CBRN materials is highlighted.

In the area of non-proliferation of weapons of mass destruction, a number of milestones can be noted, both in terms of challenges and achievements. Firstly, with regard to the challenges, they need to improve legislation to combat illicit trafficking in dual-use material more effectively and to improve mechanisms for the prevention, detection and control of financial flows related to proliferation. In addition, special mention is made of the need to ensure the security of nuclear, radioactive, chemical and biological materials and facilities by promoting a culture of security and awareness in the areas where these materials are used. Related to this aspect is the need to amend and update the aforementioned Royal Decree 1308/2011.

In terms of achievements, the section on effective multilateralism and strengthening the international non-proliferation regime highlights Spain's active participation in the international initiatives related to non-proliferation already described in the previous analysis of the Strategy. In the section on international cooperation in the fight against illicit trafficking, it is worth highlighting the participation of the Tax Agency's Customs and Excise Department in, among others, three meetings held within the European Union's Working Group on Detection Technologies for the exchange of information and the preparation of documents on the use of detection technologies. Mention is also made of the adoption of various regulations whose fundamental purpose is linked to non-proliferation. In the section on guaranteeing the security of nuclear facilities and materials and radioactive sources, compliance with the requirements contained in Royal Decree 1308/2011 is confirmed through the coordination of the Secretariat of State for Security and with the collaboration of the Nuclear Safety Council in the assessment of the Physical Protection Plans of the related facilities and transport. Strict compliance with all other national and international regulations in this regard should also be noted.

With regard to the area reserved for the protection of critical infrastructures, and in terms of the challenges, the existence of a threat with a double aspect, physical and logical, is highlighted. In this regard, it should be noted that during 2020, 13,023 cybersecurity incidents reported by the Essential Services Operators to the State Secretariat for Security were managed, of which only 0.17 related to the nuclear industry. In terms of achievements, work is well underway to amend Law 8/2011 and Royal Decree 704/2011, the Regulation on Critical Infrastructure Protection, with the future implementation of new supervision and coordination systems. Also noteworthy is the deployment of the Civil Guard Response Unit in various nuclear power plants which, between March and June 2020, was supported by units of the Armed Forces.

In the area of Emergency and Disaster Protection, the Civil Guard held an International Workshop on the development of a National Framework for Nuclear Security Event Response Management, with the participation of several countries, in March

2020, as well as the approval of Royal Decree 586/2020, of 23 June, on mandatory information in the event of a nuclear or radiological emergency.

2021 National Security Strategy.

The 2017 Strategy was a milestone in terms of contemplating the nuclear factor in Spain's national security, as its presence was notable, as described in the previous section. In December 2021, this strategy was repealed, following the adoption of the 2021 National Security Strategy. This new strategy emerges in a context strongly dominated by the COVID-19 pandemic that has been affecting Spain and the rest of the world since the beginning of 2020. This is reflected in the introduction to the document, which states that under normal conditions the new strategy would have been adopted by 2022. It also points to the increased use of hybrid strategies by both state and non-state actors "... as a tool to put pressure on democratic governments ...". Despite these root causes for redrafting, it is also possible to find several references to the influence of nuclear terrorism and its involvement in the maintenance of national security, which is a clear exponent of the relevance of this threat in the current context.

The new Strategy is divided into five chapters and includes some new features compared to the previous editions discussed in this article. The first chapter, entitled "Global Security and Vectors of Transformation", describes the international security context, while outlining the main dynamics of transformation, which are defined by the vectors of the geopolitical context, the socio-economic environment, the digital transformation and, finally, the ecological transition. Of these vectors, the one relating to the geopolitical context is of great interest to this research, in which it is worth noting the statement made regarding the generalised deterioration of international relations in all their facets, which is ultimately favouring the emergence of a new type of multilateralism, of a hybrid nature and in which emerging and non-state actors play an important role. It also mentions with particular emphasis the increased use of hybrid strategies employing conventional means and others related to disinformation campaigns, cyber-attacks, espionage, social subversion, sabotage, economic coercion or the asymmetric use of military means, all with the aim of destabilising or exerting political, social or economic coercion. Finally, mention is also made of the possibility that Afghanistan, once the withdrawal of multinational forces is completed, could become a haven for jihadist terrorist organisations.

Risks and threats

The analysis of risks and threats to national security can be found in chapter 3. This is a major departure from previous strategies, as these risks and threats are conceptualised as dynamic, interrelated and subject to change, with technology and the hybrid strategies mentioned above playing a decisive role.

Among these risks and threats, are the section on “Terrorism and violent radicalisation”, which mentions the different means used by terrorist organisations, and is significantly relevant to this study. “Threats to critical infrastructures”, in which both physical and digital aspects are also of increasing importance, as are “Emergencies and Disasters”, a section which considers both natural causes and those deriving from human action – both accidental and intentional. Nuclear and radiological risks are mentioned in relation to “Aerospace vulnerability”, with the possibility of using drones to interfere in operations or even to attack critical infrastructures, and that relating to “Organised crime and serious crime”, since, as stated in this same section, “the convergence between terrorist groups and organised crime networks is on the rise. The increasingly decentralised organisational patterns of these criminal actors favour their cooperation and facilitate terrorist financing”; and finally the “Proliferation of weapons of mass destruction”, where it is necessary to take into account the possible diversion and smuggling of dual-use materials that can be used in the commission of terrorist attacks.

Integrated strategic planning

This is found in chapter 4 and bases the maintenance of the desirable security situation on the establishment of three objectives: progress in the crisis management model, the promotion of the security dimension of technological capabilities and strategic sectors, and the development of Spain's capacity for prevention, deterrence, detection and response to hybrid strategies. In addition, integrated planning for National Security Policy is being developed, which includes three strategic axes: protect, promote and participate.

With regard to the first of these axes, dedicated to protection, various sections are defined in which it is possible to find references to nuclear terrorism. The first section, on deterrence and defence, refers to the maintenance of adequate, technologically advanced military capabilities, including CBRN defence. In this regard, the Ministry of Defence has a wide range of resources at its disposal, including the Military School of NBC Defence, the “VALENCIA” NBC Regiment No. 1, other NBC defence units in various brigades of the Army, the Navy and the Air Force, the Military Emergency Unit and the National Institute of Aerospace Technology.

The second section of this axis deals with the fight against terrorism and violent radicalisation, in which the Security Forces and Corps, which also have capabilities to deal with the terrorist threat with nuclear and radioactive materials, such as the Explosive Ordnance Disposal and CBRN Defence Service and the Response Unit deployed in various nuclear power plants of the Guardia Civil, and the TEDAX-NRBQ Unit of the National Police Corps, to name but a few, play a prominent role. The fight against terrorism is structured in four pillars, which are to prevent, protect, prosecute and prepare the response, as set out in the 2019 National Counter-Terrorism Strategy. The purpose of this Strategy is to serve as “...a unified and updated reference framework

to prevent, combat and counter the threat posed by terrorism and violent extremism against Spanish citizens and interests, and in its development nuclear terrorism is prominently contemplated. Thus, in the pillar dedicated to protection and within the internal sphere, various strategic lines are proposed, two of which are related to nuclear terrorism. These are 3, which considers it necessary to have adequate knowledge of information on strategic infrastructures, and 5, which aims to harmonise and coordinate the way in which the National Critical Infrastructure Protection Plan is activated in the face of the terrorist threat. In the external sphere, strategic line 6 highlights the need to promote cooperation in security, control and non-proliferation of international trafficking of CBRN materials. Also in the pillar dedicated to prosecution is the internal area with strategic line 16 on the need to strengthen control measures and early warning systems in relation to CBRN materials, in the external area line 9 with the proposal to improve the exchange of information on CBRN materials and, in the area of global common spaces, the importance of strengthening the control of CBRN materials is highlighted. In the last of the pillars on response preparedness, one can cite, in the internal sphere, strategic line 6, which aims to promote contingency plans for terrorist attacks using CBRN means. It is also worth highlighting the importance given to the fight against the financing of terrorism, with Spain participating in various international initiatives in this respect. Mention may be made in this regard of the 1999 International Convention for the Suppression of the Financing of Terrorism, whose preamble notes that the financing of terrorism is a matter of concern to the international community, because the number and seriousness of acts related to international terrorism depend to a large extent on the funds available to terrorist organisations and because the legal instruments previously in force did not address this circumstance. There have also been initiatives in the European area in which Spain participates, such as Directive (EU) 2015/849, on the prevention of the use of the financial system for money laundering or terrorist financing, and the 2016 Action Plan to Enhance the Fight against Terrorist Financing, which states that “Terrorists and terrorist organisations need funding... Cutting off their sources of funding, making it more difficult for them to evade detection when using these funds and making the best possible use of any information from the funding process are measures that can ... contribute greatly to the fight against terrorism”.

Finally, the third section within this axis is the one dealing with action in crisis situations, where the importance of protecting critical infrastructures should be highlighted.

The second axis, dedicated to the promotion of prosperity and well-being of citizens, is also divided into several sections. The first of these refers to the security of global common spaces, which include cyberspace, maritime space, airspace and outer space, and on which the various initiatives implemented to prevent attacks on critical infrastructure and to combat trafficking in dual-use or radioactive materials and technologies have already been described.

Another section of interest is the fight against organised crime and serious crime, where the promotion of prevention, research and analysis of the links between or-

ganised crime and terrorism is important. In this regard, mention can be made of the approval of the National Strategy against Organised Crime and Serious Crime 2019-2023, which, in the section corresponding to illicit arms trafficking, establishes various lines of action, one of which focuses on “Improving the development of intelligence for the assessment of the threat of illicit trafficking in firearms, their parts and ammunition, with special emphasis on links with other criminal areas, terrorism, proliferation of weapons of mass destruction, CBRN and diversion from legal trade”.

The third of the axes refers to Spain's participation in the preservation of international peace and security and the defence of its strategic interests. The first section of this axis is called Enhanced Multilateralism, and in this area we can highlight various Spanish contributions and initiatives, such as support for the United Nations International Convention for the Suppression of Acts of Nuclear Terrorism, the United Nations Global Counter-Terrorism Strategy of 8 September 2006, the IAEA Convention on the Physical Protection of Nuclear Material, adopted on 26 October 1979 and initially entering into force on 8 February 1987, and the establishment of the Centre of Excellence against Improvised Explosive Devices in 2010 in the Madrid town of Hoyo de Manzanares, to name but a few.

The National Security System and crisis management

Chapter 5 discusses the importance of the National Security System, in which the leading role is taken by the National Security Council. The Council has a number of specialised committees as supporting bodies, including the Situation Committee, the Specialised Committee on Immigration, the National Maritime Security Council, the National Cybersecurity Council, the Energy Security Committee, the Non-Proliferation Committee, the National Aerospace Security Council and, finally, the Specialised Committee on Counter-Terrorism, created in 2020. Of particular importance to the fight against nuclear terrorism are, of course, the Non-Proliferation and Counter-Terrorism Committees.

Conclusions

Following this analysis of successive national security strategies and the 2020 Annual National Security Report, a number of observations can be made regarding the view of nuclear terrorism as a tangible threat to the maintenance of security. Firstly, there is no doubt that this element, which featured prominently throughout the 2017 Strategy, has been somewhat blurred in the current Strategy, being overshadowed by the prominence given to other types of risks and threats. Even so, its presence is mainly felt in the sections dedicated to terrorism, organised crime and critical infrastructure protection. In any case, the importance of this factor, which has led to the approval of the aforementioned International Convention for the Suppression of Acts of Nuclear Terrorism, as well as its appearance in other relevant initiatives such as the

IAEA Convention on the Physical Protection of Nuclear Material, the United Nations Global Counter-Terrorism Strategy, the Global Initiative against Nuclear Terrorism, the European Union Action Plan on Chemical, Biological, Radiological and Nuclear Security and the holding of the Nuclear Security Summits, has already been explained in the introduction to this research. Spain, as a major player on the international stage, consequently views nuclear terrorism as a credible threat to its security, and this is reflected in the current National Security Strategy, thus giving it the importance it deserves as a factor capable of causing great havoc should it succeed in carrying out its actions. The active involvement of the Department of Homeland Security, the State Security Forces, the Armed Forces and other public and private actors testifies to this importance and the credibility of the threat. It is also necessary to highlight the cross-cutting nature of this threat, as it appears in various sections of past and present strategies, which requires an additional effort of coordination between all parties involved in achieving and maintaining a safe and secure situation in which society can function free from danger.

With respect to the latest Annual National Security Report, it can be certified that it covers what was set out in the 2017 Strategy with respect to nuclear terrorism, although it lacks some emphasis on some issues, which are detailed below: With regard to the terrorist threat, the discussion in this area is almost exclusively limited to jihadist terrorism, with a brief mention of nuclear terrorism in the section on challenges and no reference to achievements. It seems that some activities developed in this sense should have had their place here so that, at least, the existence of an effort in the fight against this type of terrorism would be manifested. Nor is there any mention of possible challenges or achievements in the field of energy security, in which the nuclear industry is so important as a fundamental part of the current energy mix, especially at a time when a major effort is being made to limit the consumption of fossil fuels as a further element in the fight against climate change. Also missing is any reference to the nuclear industry in the area of Environmental Preservation, both in terms of its low carbon dioxide emissions and the problem of waste management, especially in view of the problems relating to the future Centralised Temporary Storage Facility for radioactive waste, the closure of the Santa María de Garoña nuclear power plant and the recent refusal to grant a concession for uranium mining in the province of Salamanca. These are, in short, issues that could have been better addressed in this report but have been inexplicably sidelined. It is to be hoped that the next Annual National Security Report to be published in the course of 2022 will be adapted to the new structure of the Strategy and that it will also address the threat posed by nuclear terrorism with the prominence it deserves.

As stated above, the threat posed by this particular type of terrorism is real and is considered to be so by countries and international organisations. Spain shares this position in a resolute manner and has consistently been obliged to take the appropriate measures to guarantee its security, as evidenced by the importance given to nuclear terrorism in the defence directives and the other documents analysed in this research. The current picture, set out in the current 2021 Strategy and in the latest annual report, highlights this issue, showing the importance of nuclear terrorism issues for the

maintenance of national security. To conclude, it should be pointed out that all the efforts made to combat this threat will be sterile if international cooperation and the involvement of all actors with a role to play in this area are not fostered, which is why multilateralism, on which Spain focuses a large part of its efforts, should continue to be the fundamental tool on which the work to be carried out is based.

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