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## A BRIEF OVERVIEW OF NORMS DEVELOPMENT IN OUTER SPACE

Facilitating the Process  
for the Development of an  
International Code of Conduct  
for Outer Space Activities



UNITED NATIONS

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# A Brief Overview of Norms Development in Outer Space

## Introduction

The use of norms of behaviour as a tool for managing the security of the outer space domain and the space activities of states is not a new concept. Since the beginning of the space age and the multilateralization of the regulation of space activities, norms of behaviour have played a key role in building the foundation for near-term improvement in stability and the coordination of day-to-day space activities and long-term progress in establishing a durable space security regime at the multilateral level.

In brief, norms of behaviour can be described as voluntary “rules of the road” that can set baseline standards of conduct intended to mitigate threats to safety, security, and stability in outer space. Historically, norms have provided flexible solutions in cases where there has been political will to address certain types of behaviour and conduct, such as in the use of landmines and cluster bombs, but where diplomatic and political hurdles have made the development of legal instruments impractical. However, it should be noted that the voluntary nature of adherence means that the framework itself will depend entirely on the broad support of stakeholders in order to generate the necessary social and political pressure needed for effective implementation.

In light of current multilateral efforts to develop new norms and associated frameworks for outer space activities, this paper provides a brief overview of previous space-related norms of behaviour initiatives and a brief assessment of their efficacy.

## Norms of behaviour as applied to outer space activities

### The first declaration of norms in outer space

Not long after the launch of Sputnik in 1957, an international declaration on outer space activities was adopted in the form of a United Nations General Assembly resolution as the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space (the Declaration of Legal Principles).<sup>1</sup> The declaration was not legally binding, but rather represented a collective affirmation of the guiding principles to which Member States proposed to adhere. Already at this early stage of multilateral space interaction, states were using political tools to create pressure for certain types of behaviour in space. The Declaration of Legal Principles commanded so much widespread support that, just five years later, the principles of the declaration were formalized by the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) into the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies (the Outer Space Treaty), the instrument which is considered to form the basis of outer space law.<sup>2</sup>

The adoption of the Outer Space Treaty marked the beginning of a period that saw a significant amount of political will aimed at the adoption of formal legal instruments.<sup>3</sup> The next few decades saw the adoption of four more treaties that dealt with specific aspects of outer space activities, although each received less and less support from the international community.<sup>4</sup> The last formal space treaty to be adopted by COPUOS was the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, which has only 15 parties, while the Outer Space Treaty has 102 parties.

Since the adoption of these instruments, the politics of space have significantly evolved. Cold War divisions no longer dominate, new actors with developmental rather than prestige- and security-related motivations are entering the domain, and states are now treating space as a cross-sectoral domain encompassing civil, military, commercial, and development aspects. As such, the balance of power in outer space has shifted significantly. This has resulted in little to no progress

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1 General Assembly, *Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space*, UN document resolution 1962 (XVIII), 13 December 1963.

2 S. Hobe, “Historical background”, in S. Hobe, B. Schmidt-Tedd, and K.-U. Schrogl (eds.), *Cologne Commentary on Space Law, Volume 1: Outer Space Treaty*, 2009, p. 16.

3 V. Kopal, “The role of United Nations declarations of principles in the progressive development of space law”, *Journal of Space Law*, vol. 16, no. 1, 1988, p. 10.

4 The Outer Space Treaty presently has 102 parties; the 1967 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space has 92 parties; the 1972 Convention on International Liability for Damage Caused by Space Objects has 89 parties; the 1976 Convention on Registration of Objects Launched into Outer Space has 60 parties; and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies has 15 parties. See United Nations Office for Outer Space Affairs, “Status of international agreements relating to activities in outer space”, [www.unoosa.org/oosa/en/SpaceLaw/treatystatus/index.html](http://www.unoosa.org/oosa/en/SpaceLaw/treatystatus/index.html).

being made on the development of formal legal instruments intended to update the existing outer space legal regime.<sup>5</sup> Looking at the adoption of the first non-binding declarations on norms for outer space to their eventual metamorphosis into the Outer Space Treaty may prove instructive for future initiatives.

### Principles governing direct television broadcasting

When the first satellite began to transmit radio signals back to Earth, space activities were greatly influenced by Cold War tensions. Concerns over propaganda and state sovereignty left many wondering whether broadcast signals were a threat to internal national affairs.<sup>6</sup> Finding that the Outer Space Treaty did not directly address direct broadcasting by satellite, a number of initiatives sought to address the legal and political questions that arose from direct broadcasting by satellite.<sup>7</sup> Not long after the adoption of the Outer Space Treaty, the United Nations General Assembly was considering the possibility of elaborating principles to govern direct broadcasting by satellite with a view to concluding an international agreement.<sup>8</sup>

Two pre-existing initiatives were used as foundations for this effort. First, the 1971 Technical Restrictions of International Direct Television Broadcasting (Radio Regulation 428A) were adopted by the World Administrative Radio Conference. This regulation was intended to address the problem of signals being broadcast by one state spilling into another state and the coordination of radio frequencies through registration. The following year, the United Nations Educational, Scientific and Cultural Organization (UNESCO) adopted the Declaration on the Use of Satellite Broadcasting for the Free Flow of Information, which was intended to act as non-binding principles to govern satellite broadcasting and serve as the basis for further negotiations.<sup>9</sup>

During this period, a number of proposed conventions were also submitted to COPUOS intended to establish comprehensive guidelines for direct broadcasting by satellite.<sup>10</sup> To elaborate and discuss these proposals, a working group of the COPUOS Legal Subcommittee was established. Many of the participants of this work were encouraged by the fact that, when discussions opened, there was near consensus on many of the objectives of the envisaged principles.<sup>11</sup> However, it proved impossible to reconcile positions on several issues, including obligations for state consultations, the seeking of prior consent for broadcasting into a foreign state, state responsibility for all broadcast activities, and the applicability of the principles to international law. The divisions reflected the views and priorities of two distinct groups of states: those most interested in preserving the free flow of information and those seeking to protect state sovereignty. Despite best efforts to reconcile these views, COPUOS members were unable to reach consensus on a text. Nevertheless, the proposed Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting (Principles on Direct Broadcasting by Satellite) were adopted in 1982 by the General Assembly.<sup>12</sup>

In assessing the success of the Principles on Direct Broadcasting by Satellite, it is important to bear in mind that the strength of non-binding instruments can be measured by existing support as well as any initiatives that might emerge therefrom. In the case of the Principles on Direct Broadcasting by Satellite, consensus could not be reached for adoption

5 S. Aoki, "The function of 'soft law' in the development of international space law", in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 57–58; also G. Singh, "PPWT: an overview", in A. Lele (ed.), *Decoding the International Code of Conduct for Outer Space Activities*, 2012, pp. 47–48.

6 S. Schmahl, "The United Nations facing the challenges of the 'information society'", in A. von Bogdandy and R. Wolfrum, *Max Planck Yearbook of United Nations Law*, vol. 11, 2007, p. 202. F. Koppensteiner, "The 1982 UN Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting", in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 161–162.

7 V. Kopal, "The role of United Nations declarations of principles in the progressive development of space law", *Journal of Space Law*, vol. 16, no. 1, 1988, p. 12.

8 General Assembly, *Report of the Working Group on Direct Broadcast Satellites at its Third Session*, UN document A/AC.105/83, 25 May 1970, p. 11.

9 Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange, 15 November 1972.

10 F. Koppensteiner, "The 1982 UN Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting", in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 162, 165–167.

11 V. Kopal, "The role of United Nations declarations of principles in the progressive development of space law", *Journal of Space Law*, vol. 16, no. 1, 1988, p. 12.

12 F. Koppensteiner, "The 1982 UN Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting", in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 170–171; also V. Kopal, "The role of United Nations declarations of principles in the progressive development of space law", *Journal of Space Law*, vol. 16, no. 1, 1988, p. 12.

and few states have complied with its principles.<sup>13</sup> Nevertheless, many agree that, where more work needs to be done, the Principles might usefully serve as a starting point from which to address today's economic and social needs.<sup>14</sup>

### Principles relating to remote sensing of the Earth from outer space

The emergence of satellites capable of producing data of activity on Earth (that is, remote sensing) raised a host of political and legal issues in the international community. Given that all countries can be sensed from outer space, many states raised concerns at an early stage regarding who could use remote sensing technology, what could be done with the data, who had access to the data, and what, if any, were the rights of those who were being sensed.<sup>15</sup> States also recognized the potential social and economic benefits that could be derived from this technology and sought to establish common principles that could offer guidance for the development of national and international policies on remote sensing.<sup>16</sup> Negotiations on a formal instrument to govern remote sensing activities proved difficult particularly because the interests of states with remote sensing capabilities were quite distinct from those that did not have such capabilities.<sup>17</sup> Being unable to resolve certain key questions, such as those mentioned above, COPUOS adopted a broad set of general principles that all states could agree on—the 1986 Principles Relating to Remote Sensing of the Earth from Outer Space (the Remote Sensing Principles).

The Remote Sensing Principles “establish general regulatory norms of conduct” for those remote sensing activities that relate to natural resource management, land use, and the protection of the environment. They also lay out certain duties for states that are conducting sensing activities as well as the rights of those states that are being sensed. These include the duty to consult with states being sensed as well as an obligation to share data with sensed states on a non-discriminatory basis.<sup>18</sup> Due to political complexities, the Remote Sensing Principles refrain from addressing certain legal questions, such as whether a state has a proprietary right to images of its own natural resources.<sup>19</sup> The restricted language also means that the provisions of the principles will need to be amended in order to take into account the emergence of new technological capabilities, such as long-term Earth monitoring.<sup>20</sup>

The Remote Sensing Principles are seen as being a particularly useful as a first step in the establishment of a wider range of tools and cooperative measures. For example, the provisions in the Remote Sensing Principles on “protection of the Earth's environment” and “protection of mankind from all natural disasters” have led to the adoption of the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters, an instrument aimed at providing a unified system of data acquisition and delivery to those affected by natural or manmade disasters.<sup>21</sup> The Remote Sensing Principles have also been incorporated into numerous national, regional, and multilateral laws and policies, including those of France, Japan, India, Thailand, and the United States of America.<sup>22</sup> Such developments demonstrate the potential value of such norms in building subsequent national and international frameworks and for informing development of national space activities and regulation.

13 S. Schmahl, “The United Nations facing the challenges of the ‘information society’”, in A. von Bogdandy and R. Wolfrum, *Max Planck Yearbook of United Nations Law*, vol. 11, 2007, p. 205; F. Koppensteiner, “The 1982 UN Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 171–180; and V. Kopal, “The role of United Nations declarations of principles in the progressive development of space law”, *Journal of Space Law*, vol. 16, no. 1, 1988, pp. 12–14.

14 F. Koppensteiner, “The 1982 UN Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, p. 181; Y.M. Kolossov, “Prospect for an international treaty on telecommunications”, *California Western Law Review*, vol. 27, no. 1, 1990–1991, p. 177; S. Schmahl, “The United Nations facing the challenges of the ‘information society’”, in A. von Bogdandy and R. Wolfrum, *Max Planck Yearbook of United Nations Law*, vol. 11, 2007, pp. 229–230.

15 H. Desaussure, “Remote sensing satellite regulation by national and international law”, *Rutgers Computer and Tech Law Journal*, vol. 15, no. 1, 1989, p. 353.

16 C. Uriarte Vega, *Remote Sensing Policy and Law*, 2007, p. 12.

17 *Ibid.*, pp. 12–21.

18 F. von der Dunk, “United Nations principles on remote sensing and the user”, 2002, pp. 36–37, 39–40; and J.I. Gabrynowicz, “The UN principles relating to remote sensing of the Earth”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 189.

19 H. Desaussure, “Remote sensing satellite regulation by national and international law”, 15 *Rutgers Computer and Tech Law Journal*, vol. 15, no. 1, 1989, pp. 357, 374.

20 J.I. Gabrynowicz, “The UN principles relating to remote sensing of the Earth”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, p. 190.

21 *Ibid.*, p. 191.

22 *Ibid.*, pp. 189–190.

### The principles and safety framework for the use of nuclear power sources in outer space

Another category of space activities that has been addressed through the establishment of norms of behaviour is the use of nuclear power sources in space assets. Such power sources are mainly used to power probes bound for deep space exploration, though they are sometimes used on space assets placed in Earth orbit.<sup>23</sup> The potential threat of radiation leaking from one of these devices and complications regarding the end-of-life and disposal phases of a mission of such assets caused significant concern among the international community. This led to the adoption of two voluntary tools for the establishment of norms of behaviour for the responsible use of nuclear power sources.

The first initiative involved the adoption of the United Nations Principles Relevant to the Use of Nuclear Power Sources in Outer Space (Principles on Nuclear Power Sources). These Principles are intended to provide voluntary guidelines to ensure the safe use of nuclear power sources in outer space. They were first tabled in 1978 before COPUOS following the re-entry of a satellite carrying a nuclear power source over Canada.<sup>24</sup> Throughout the ensuing discussions, concerns were raised that these new Principles might inhibit the development of new technology, particularly for propulsion.<sup>25</sup> As a result, following a lengthy negotiation process, the final text of the Principles was narrowly drawn to cover only nuclear power sources used for the generation of electrical power for non-propulsion purposes. In light of the relatively few such missions that have been carried out since adoption of the Principles on Nuclear Power Sources, the drawing of any conclusions is still premature.<sup>26</sup> Nevertheless, a case can be made for the efficacy of the Principles as they served as the foundation for an additional framework for nuclear power source-related activities.

The second set of norms dealing with nuclear power sources is a product of a collaborative effort between the COPUOS Scientific and Technical Subcommittee and the International Atomic Energy Agency (IAEA)—the Safety Framework for Nuclear Power Source Applications in Outer Space (the Nuclear Power Source Framework). The Framework was developed to give high-level guidance that provided for both the programmatic and technical aspects of safety, including the design and application of space nuclear power sources.<sup>27</sup> The Nuclear Power Source Framework is a set of non-binding guidelines based on best-practice measures developed by the Soviet Union and the United States of America, the two states with the most experience in nuclear power source activities.<sup>28</sup>

As with the case of the Principles on Nuclear Power Sources, few instances have arisen in which the Framework applies, so it is difficult to gauge its effectiveness. Nevertheless, technical experts consider the Framework to be a strong foundation for national policies and standards and have encouraged its use as the foundation for any future international initiatives on this type of activity.<sup>29</sup>

### The Declaration on Exploration of Outer Space for the Benefit of All States

One of the pillars of the Outer Space Treaty is the principle that “the exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind” (art. I). This has proven to be an ambitious statement whose component terms remain largely undefined, such as the concept of the “distribution of benefits to all states”.<sup>30</sup> Since the adoption of the Outer Space Treaty, two dominant points of view have emerged on this issue: on the one hand, some states see no specific obligation to cooperate, while on the other hand, others see an

23 COPUOS and the International Atomic Energy Agency, *Safety Framework for Nuclear Power Source Applications in Outer Space*, 2009, § 1.1; see also F. Lyall and P.B. Larsen, *Space Law: A Treatise*, 2009, p. 293.

24 See “Settlement of claim between Canada and the Union of Soviet Socialist Republics for damage caused by ‘Cosmos 954’ (Released on April 2, 1981)”, [www.jaxa.jp/library/space\\_law/chapter\\_3/3-2-2-1\\_e.html](http://www.jaxa.jp/library/space_law/chapter_3/3-2-2-1_e.html).

25 D.A. Porras, “The United Nations Principles on the Use of Nuclear Power Sources in Outer Space: the significance of a soft law instrument after nearly 20 years in force”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, p. 210.

26 See “Notifications by Member States of safety assessments carried out for nuclear-powered space objects”, [www.oosa.unvienna.org/oosa/natact/sdnps/nps-safety.html](http://www.oosa.unvienna.org/oosa/natact/sdnps/nps-safety.html).

27 COPUOS and the IAEA, *Safety Framework for Nuclear Power Source Applications in Outer Space*, 2009, § 1.3; see also L. Summerer and U.M. Bohlmann, “The STSC/IAEA Safety Framework for Space Nuclear Power Source Applications”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, p. 231.

28 L. Summerer and U.M. Bohlmann, “The STSC/IAEA Safety Framework for Space Nuclear Power Source Applications”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 261–265; see also D.A. Porras, “The United Nations Principles on the Use of Nuclear Power Sources in Outer Space: the significance of a soft law instrument after nearly 20 years in force”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 227–232.

29 L. Summerer and U.M. Bohlmann, “The STSC/IAEA Safety Framework for Space Nuclear Power Source Applications”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 261–265.

30 G. Hafner, “The Declaration of International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, p. 268.

obligation for space-faring states to ensure all states benefit from space use and exploitation.<sup>31</sup> In order to give some guidance on what might be considered the “duty of cooperation”, the United Nations General Assembly adopted the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries (the Declaration on Cooperation).<sup>32</sup>

During the course of negotiations within COPUOS to adopt the Declaration on Cooperation, a number of states expressed concerns over the creation of affirmative duties to cooperate or transfer technology and expertise.<sup>33</sup> The resulting text was, therefore, crafted so as not to create any new duties, but reiterated pre-existing norms and left states free to determine the level of participation and cooperation with one another.<sup>34</sup> It has served as the impetus for numerous cooperative initiatives, for example by regional space organizations in South-East Asia and in the Americas.<sup>35</sup> The Declaration on Cooperation is seen as an affirmative step to steer state behaviour in a particular direction, in this case towards greater cooperative efforts.<sup>36</sup> Such efforts have played a significant role in raising awareness about the potential of space-based services, encouraging new actors to enter the space domain and helping inform and direct their approaches to space activities. Norms of this type may play a key role in influencing the behaviour of new entrants.

### Space Debris Mitigation Guidelines

As discussed above, space debris has emerged as one of the most significant threats for space assets. Finding that a number of national space agencies had developed similar measures to address this issue, the Inter-Agency Space Debris Coordination Committee (IADC)<sup>37</sup> formulated the IADC Space Debris Mitigation Guidelines, based on the best practices employed by members. These were submitted to the COPUOS Scientific and Technical Subcommittee, where the comments of states were considered and incorporated into an updated draft text. COPUOS endorsed this revised text in 2007, agreeing that the “guidelines would increase mutual understanding on acceptable activities in space and thus enhance stability in space-related matters and decrease the likelihood of friction and conflict”.<sup>38</sup> The General Assembly also endorsed the Guidelines, inviting Member States to implement them through their own national mechanisms.<sup>39</sup>

The Guidelines provide voluntary technical guidance for United Nations Member States that might be “considered during planning and design of spacecraft and launch vehicles in order to minimise or eliminate generation of debris during operations”.<sup>40</sup> Under the terms of application, the Guidelines state that “Member States and international organizations should take voluntary measures, through national mechanisms or through their own applicable mechanisms” to prevent the creation of space debris during all mission phases, from the manufacturing and operational phases, including launch, mission and disposal of the space asset.<sup>41</sup>

Some states, including France, Germany, Italy, Japan, the United Kingdom, and the United States, have formally announced incorporation of the Guidelines into domestic licensing requirements for space operations.<sup>42</sup> However, the Guidelines have served as benchmarks for standards adopted by numerous national space agencies, such as of China and Malaysia, and

31 Ibid.

32 General Assembly, *Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries*, UN document A/RES/51/122, 13 December 1996.

33 G. Hafner, “The Declaration of International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 269–271.

34 R. Jakhu, “United Nations Principles on Outer Space”, [www.oosa.unvienna.org/pdf/sap/2005/nigeria/presentations/01-03\\_2.pdf](http://www.oosa.unvienna.org/pdf/sap/2005/nigeria/presentations/01-03_2.pdf), p. 10.

35 N. Peter, “The changing geopolitics of space activities”, *Space Policy*, vol. 22, no. 2, 2006, p. 107.

36 G. Hafner, “The Declaration of International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, p. 287.

37 Originally founded in 1993, the current members of the IADC are Agenzia Spaziale Italiana, Centre National d’Etudes Spatiales, China National Space Administration, Canadian Space Agency, German Aerospace Center, European Space Agency, Indian Space Research Organisation, Japan Aerospace Exploration Agency, US National Aeronautics and Space Administration, State Space Agency of Ukraine, Russian Federal Space Agency, and UK Space Agency.

38 General Assembly, *Report of the Committee on the Peaceful Uses of Outer Space*, UN document A/62/20, 2007, paras. 118–119; see also S. Aoki, “The function of ‘soft law’ in the development of international space law”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 75–76.

39 General Assembly, *International Cooperation in the Peaceful Uses of Outer Space*, UN document A/RES/62/217\*, 1 February 2008; see also F. von der Dunk, “Contradictio in terminis or realpolitik? A qualified plea for a role of ‘soft law’ in the context of space activities”, in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 54–55.

40 IADC Space Debris Mitigation Guidelines, document IADC-02-01, 15 October 2002, p. iii.

41 See chps. 3 and 4 of the IADC Space Debris Mitigation Guidelines.

42 General Assembly, *Report of the Scientific and Technical Subcommittee on its Forty-Second Session, Held in Vienna from 21 February to 4 March 2005*, UN document A/AC.105/848, 25 February 2005, para. 91; see also M. Listner, “Legal issues surrounding space debris remediation”, *The Space Review*, 6 August 2012; and F. von der Dunk, “Contradictio in terminis or realpolitik? A qualified plea for a role of ‘soft law’ in the context

have served as the basis for further development of debris mitigation measures.<sup>43</sup> One analyst noted that, because of the observable deterioration of the space environment and mankind's increased dependence on it, "wider endorsement of the mitigation guidelines is just a matter of time".<sup>44</sup>

### Hague Code of Conduct against Ballistic Missile Proliferation

One example of the development of norms beyond the ambit of the United Nations is the International Code of Conduct against Ballistic Missile Proliferation, which "seeks to bolster efforts against the worldwide proliferation of ballistic missiles by agreeing on a set of general principles and commitments, amplified by modest confidence-building measures".<sup>45</sup> This tool was adopted as a means of addressing a gap in the non-proliferation framework, namely the development, testing, and deployment of ballistic missiles.<sup>46</sup> Owing to the dual-use nature of rockets, this tool also applies to the use of space launch vehicles. In particular, the Hague Code of Conduct's members "voluntarily commit themselves politically to provide pre-launch notifications ... on ballistic missile and space-launch vehicle launches ... and test flights", as well as to submit an annual declaration of policies on ballistic missiles and space-launch vehicles.<sup>47</sup>

The first draft of the Hague Code of Conduct was put forward in 2000 by partners of the Missile Technology Control Regime (MTCR)<sup>48</sup> as a means of establishing modest guidelines under which states would commit to exercising maximum possible restraint in the development, testing, and deployment of ballistic missiles capable of delivering weapons of mass destruction.<sup>49</sup> This would also cover space-launch vehicles which, by virtue of their technical nature, could also be used to deliver such weapons. As had been seen during the development of the MTCR, this was a topic in which diverse views were difficult to reconcile due to the role of ballistic missiles in national defence programmes.<sup>50</sup> In addition, a number of key states, such as Brazil, India, and South Africa, had expressed concern that the Hague Code of Conduct might interfere or limit the legitimate aspirations of states to develop peaceful space technologies such as space launch vehicles.<sup>51</sup> The resulting text, therefore, makes a distinction between ballistic missiles and space launch vehicle. Nevertheless, a number of states opted not to participate in the negotiation process, citing this issue as one of its central objections.<sup>52</sup>

Despite the misgivings of some states, the Hague Code of Conduct is seen as another positive step in the process for establishing concrete global non-proliferation norms, as evidenced by the notable growth of its membership from the original 93 members to 134 (the MTCR has only 34 members).<sup>53</sup> The United Nations General Assembly welcomed the adoption of the Hague Code of Conduct and has continued to support the ongoing process for the Code's implementation. However, some have criticized the utility of this framework because of some states' failure to fully implement the Code, as

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of space activities", in I. Marboe (ed.), *Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law*, 2012, pp. 54–55.

43 L. Viikari, *The Environmental Element in Space Law: Assessing the Present and Charting the Future*, 2008, pp. 96–97.

44 J. Su, "The environmental dimension of space arms control", *Space Policy*, vol. 29, no. 1, 2013, § 3.3.

45 D. Gormley, "Making the Hague Code of Conduct relevant", Nuclear Threat Initiative, 20 July 2009, [www.nti.org/analysis/articles/making-code-conduct-relevant/](http://www.nti.org/analysis/articles/making-code-conduct-relevant/).

46 P. Kerr, "Code of Conduct aims to stop ballistic missile proliferation", *Arms Control Today*, January/February 2003, [www.armscontrol.org/act/2003\\_01-02/icoc\\_janfeb03](http://www.armscontrol.org/act/2003_01-02/icoc_janfeb03).

47 See Austrian Foreign Ministry, "Hague Code of Conduct against Ballistic Missile Proliferation (HCOC)", [www.bmeia.gv.at/index.php?id=64664&L=1](http://www.bmeia.gv.at/index.php?id=64664&L=1).

48 The MTCR is a voluntary association whose members promote non-proliferation of unmanned delivery systems for weapons of mass destruction through national export controls; US Department of State, "Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC)", [www.state.gov/t/isn/trty/101466.htm](http://www.state.gov/t/isn/trty/101466.htm).

49 See Nuclear Threat Initiative, "Hague Code of Conduct against Ballistic Missile Proliferation (HCOC)", [www.nti.org/treaties-and-regimes/hague-code-conduct-against-ballistic-missile-proliferation-hcoc/](http://www.nti.org/treaties-and-regimes/hague-code-conduct-against-ballistic-missile-proliferation-hcoc/).

50 W. Pal Singh Sidhu, "Looking back: the Missile Technology Control Regime", *Arms Control Today*, April 2007, [www.armscontrol.org/act/2007\\_04/LOOKINGBACK](http://www.armscontrol.org/act/2007_04/LOOKINGBACK); see also M. Smith, "Pragmatic Micawberism? Norm construction on ballistic missiles", *Contemporary Security Policy*, vol. 27, no. 3, 2006, p. 526; and D. Gormley, "Making the Hague Code of Conduct relevant", Nuclear Threat Initiative, 20 July 2009, [www.nti.org/analysis/articles/making-code-conduct-relevant/](http://www.nti.org/analysis/articles/making-code-conduct-relevant/).

51 M. Smith, "Stuck on the launch pad? The ballistic missile code of conduct opens for business", *Disarmament Diplomacy*, no. 68, 2003.

52 Ibid.

53 M. Smith, "Pragmatic Micawberism? Norm construction on ballistic missiles", *Contemporary Security Policy*, vol. 27, no. 3, 2006, p. 536–537; see also A. Lele, "The Hague Code of Conduct: predicting the future", Society for the Study of Peace and Conflict, 15 January 2013, [www.sspconline.org/opinion/HagueCodeofConduct\\_PredictingtheFuture\\_15012013](http://www.sspconline.org/opinion/HagueCodeofConduct_PredictingtheFuture_15012013); *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms*, Weapons of Mass Destruction Commission, 2006; D. Gormley, "Making the Hague Code of Conduct relevant", Nuclear Threat Initiative, 20 July 2009, [www.nti.org/analysis/articles/making-code-conduct-relevant/](http://www.nti.org/analysis/articles/making-code-conduct-relevant/); US Department of State, "Tenth anniversary of the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC)", media note, 12 November 2012; and "The Hague Code of Conduct against Ballistic Missile Proliferation (HCOC)", [www.hcoc.at/index.php](http://www.hcoc.at/index.php).



well as the absence of several key states from the list of signatories.<sup>54</sup> This underlines the extent of the reach of such types of norms as, in that they are non-legally binding documents, there is no obligation created and thus there is potentially a higher chance for weak adherence.

## Ongoing multilateral initiatives to develop norms of behaviour

At present, there are a number of ongoing initiatives that seek to establish non-legally binding norms of behaviour similar to those described above. It is particularly interesting that, unlike many of the previous instruments that sought to regulate very narrowly defined categories of behaviour, these initiatives cover a range of general activities in outer space.

### The United Nations Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities

The Group of Governmental Experts (GGE) is an initiative originating in the United Nations General Assembly First Committee, which deals with disarmament, global challenges, and threats to peace and security that affect the international community, and seeks out solutions to the challenges in the international security regime. The GGE is intended to help improve transparency in space and reduce the risk of misunderstandings and miscommunications among outer space actors.<sup>55</sup> The GGE's goal is to produce a consensus report that will outline recommendations for the strengthening of safety and security in outer space and may lay the basis for the development of future frameworks and norms of behaviour for space activities. This work is scheduled to be completed in 2013 when the GGE presents its report to the First Committee.

### COPUOS Working Group on Long-Term Sustainability of Space Activities

In the context of COPUOS, the Working Group on long-term sustainability of space activities is presently engaged "to examine and propose measures to ensure the safe and sustainable use of outer space for peaceful purposes, for the benefit of all countries".<sup>56</sup> This Working Group is divided into four subgroups, which cover space utilization, space debris, space weather, and regulatory regimes. Much like the Nuclear Power Source Framework, these measures will be technical in nature, but with sufficient flexibility so that policymakers and key stakeholders will be able to adapt them to ongoing as well as new operations. The Working Group intends to introduce a first draft of its recommended measures in 2014.

### International Code of Conduct for Outer Space Activities

An International Code of Conduct for Outer Space Activities has recently been tabled by the European Union. This initiative is intended to "enhance the security, safety and sustainability of all outer space activities"<sup>57</sup> by encouraging responsible behaviour in space by developing best-practice guidelines. This initiative is based on three principles: freedom for all to use outer space for peaceful purposes, preservation of the security and integrity of space objects in orbit, and due consideration for the legitimate security and defence needs of states. The European Union has announced that it is carrying out open-ended consultations, inviting as wide a range of states as possible to submit comments with the aim of achieving a text that will command widespread support. This initiative is unique in that it seeks to address space activities in a comprehensive framework, addressing both civil and security space issues.<sup>58</sup>

## Conclusion

In the context of outer space, norms of behaviour are useful tools that can help define the parameters of responsible behaviour, support existing international regimes, and give guidance to key stakeholders as they develop their own space programmes. The examples cited in this paper illustrate how norms can, for example, provide technical guidance for specific hazardous activities, such as the Nuclear Power Source Principles and Framework. They also illustrate how norms have served as intermediary steps in an ongoing process to find solutions to legal, technical, and political issues in space.

54 See General Assembly, *The Hague Code of Conduct against Ballistic Missile Proliferation*, UN document A/RES/59/91, 17 December 2004; and General Assembly, *The Hague Code of Conduct against Ballistic Missile Proliferation*, UN document A/RES/67/42, 4 January 2013.

55 General Assembly, *Transparency and Confidence-Building Measures in Outer Space Activities*, UN document A/RES/63/68, 12 January 2009.

56 P. Martinez, Chair of the Working Group, "The role of COPUOS in promoting sustainability of outer space", presented at the UNIDIR seminar "The role of norms of behaviour for African Space Activities", Addis Ababa, 7–8 March 2013.

57 Revised draft International Code of Conduct for Outer Space Activities, art. 1.1, [www.consilium.europa.eu/media/1696642/12\\_06\\_05\\_coc\\_space\\_eu\\_revised\\_draft\\_working\\_\\_document.pdf](http://www.consilium.europa.eu/media/1696642/12_06_05_coc_space_eu_revised_draft_working__document.pdf).

58 European Union, "EU Statement—United Nations First Committee: outer space", 22 October 2012, paras. 10, 12, [www.eu-un.europa.eu/articles/en/article\\_12753\\_en.htm](http://www.eu-un.europa.eu/articles/en/article_12753_en.htm).



**Facilitating the Process for the Development of an  
International Code of Conduct for Outer Space Activities**  
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