Legal Foundations and Essential Treaty Elements for a System of Common Security in Outer Space

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The author presents his personal views.

Introduction

Jonathan Granoff, Esq., President, Global Security Institute

The skills of law and diplomacy define the direction nations will take in dealing with one another. When these skills fail us, the natural tendency to quest for power and dominance fueled by fear and competition overcomes our similarly natural tendency toward cooperation and creativity, fueled by hope.

We have mastered energies operating at a subatomic level and have even begun to unravel mysteries of the genetic code. As we have progressed into ever new realms of discovery, capacities for blessing and cursing ourselves as a human community become ever more pronounced. Will we use this new knowledge to develop new devices to pursue dominance or advance our common interests? Will we learn how to fuel our economies in new renewable fashions and advance our health and well-being or will we make new exotic weapons?

The firmaments represent a new frontier in which we must answer these kinds of questions. As we relate to each other on this earthen sphere, so shall it be reflected above us. There is a framework for ensuring that we do it correctly. Dr. Detlev Wolter has succinctly and clearly set forth a path that will allow us to look upward and say to ourselves, "Behold, even above us we have found a way to work together for our common well being and peace."

The Global Security Institute is proud that he has permitted us to share these important essays with the world. Thank you, Dr. Wolter.

Common Security in Outer Space and International Law:

Book Abstract

Dr. Detlev Wolter

The legal status of outer space as determined in the Outer Space Treaty (OST) of 1967 requires that the use and exploration of space have to be in the "interest of all states" and "for the benefit of all mankind" (Article I OST). And thus emerges an implication, indeed an obligation of all states, to embrace “common” or “cooperative security” as the only option for truly guaranteeing the peaceful use of space. Such a cooperative regime finds its legal basis established in the mankind clause in Article I OST and the principle of cooperation and due account of the interests of all states in Articles IX and X OST, which are the principle elements attributing the status of outer space as a "common heritage of mankind".

However, in view of the risks of transgressing the line between the current passive military uses of space and the envisaged active military uses of a destructive nature in outer space ("weaponization of space") the substantive and procedural institutionalisation of the mankind clause, the cooperation principle and of the peaceful purpose clause as expressed in Articles I and IX OST becomes increasingly pressing.

These clauses were introduced in outer space law at the onset of the space age in 1957 by a joint draft UN General Assembly Resolution of the United States, France and Great Britain. These states had the same prime objective as the international community to ensure that outer space would not be monopolized by the security interest of one or a group of states but rather for the benefit of all states and for mankind as a whole. The peaceful purpose standard as well as the mankind-clause were then codified in the 1967 Outer Space Treaty. However, a controversy still continuing until today arose over the interpretation of the peaceful-purpose clause. The unproductive dichotomy when interpreting the peaceful purpose clause either through the "maximalist" school, according to which any military use of outer space is prohibited, or the "minimalist" approach viewing the term "peaceful" as only a confirmation of the prohibition of the use of force in outer space needs to be overcome. The solution lies in interpreting the term "peaceful purpose" in light of both the mankind clause of the common heritage of mankind principle and the cooperation principle as applied to the security field as well as by developing legal standards of peaceful use of outer space in the interests of the international community as a whole.

State practice, including the annual resolutions by the UN General Assembly on preventing an arms race in outer space since 1981, bears evidence that the international community has so far only accepted passive military uses of outer space by *reconnaissance*, navigation and communication satellites but rejects the unilateral transgression towards active military uses with destructive effect in the common space.

Steps to deploy a multilayered missile defence with space-based interceptors would violate the peaceful purpose standard and the mankind clause if pursued unilaterally and without the consent of the international community. The objective of space-based Missile Defence which, according to the *US National Missile Defense Act* of 1997 is to protect against

unauthorized nuclear attacks and against limited nuclear attacks of the so called 'rogue states', need to be implemented in the framework of a cooperative security regime for outer space. Otherwise, they will cause an arms race in space and stimulate nuclear proliferation on Earth.

In its advisory opinion of 1996 on the *Legality of Nuclear Weapons* the International Court of Justice concluded that the obligation of the nuclear weapons powers to achieve complete nuclear disarmament according to Article VI of the Nuclear Non-Proliferation Treaty (NPT) is an obligation to conclude, and not only to negotiate, a nuclear disarmament and non-proliferation agreement. The UN General Assembly has expressly stated that the obligations of the NPT apply to outer space as well. The unilateral pursuit of a space-based missile defence, with the risk of the weaponization of space, would run counter to the disarmament obligations of the nuclear powers. The bilateral Anti-Ballistic Missile (ABM) Treaty that prohibits the development and deployment of space-based ABM systems implemented the multilateral peaceful purpose standard which has effect *erga omnes*. Therefore, after its renunciation, the ABM Treaty has to be replaced by new cooperative security arrangements safeguarding the security interests of the international community in the use of outer space for the benefit of all mankind.

In the face of the changing character of security threats, “common security” is the new strategic imperative of the post-Cold War era. Even though general international law contains on several accounts the foundation for "common security", it cannot yet be regarded as a mandatory legal principle. However, the enhanced "common interest" obligations of the Outer Space Treaty render the pursuit of cooperative/common security in outer space a legal obligation in the implementation of the peaceful purpose standard in the use of the common space in the interest of all states and mankind as a whole. The Joint US-Russian Declaration adopted at the American-Russian summit of 23rd/24th May 2002, according to which both sides agreed to a far-reaching cooperation to meet *common security* challenges, in particular with regard to questions related to the national missile defense issue, opens the prospect that the former rivalling powers are willing to embark on a cooperative *strategic transition* towards *common security*. Without such a cooperative approach and without an adequate multilateral framework safeguarding the security interests of the international community with regard to the use of outer space, the legal principle of the peaceful use of outer space risks loosing its practical relevance as a limitation of military uses of extraterrestrial space in view of developments *de facto*.

The negotiation of a multilateral “Treaty on Common Security in Outer Space” (CSO-Treaty) as proposed in this book would be an appropriate institutionalisation of the peaceful purpose standard and the mankind clause as manifested in the Outer Space Treaty. Such a treaty would additionally lay the groundwork for a cooperative strategic transition towards rendering nuclear deterrence obsolete, thus replacing "Mutual Assured Destruction" by "Mutual Assured Security". Further adoption of "strategic reassurance measures", as stipulated in such a treaty, would keep outer space free of weapons and allow for an active non-proliferation policy of the international community.

The main elements of such a CSO Treaty can be categorized as follows:

1. Principles of cooperative security in outer space
   - Transparency and confidence-building
   - Defensive force configuration
   - Non-proliferation and disarmament

- Protection against unauthorized and accidental missile attacks and attacks in violation of non-proliferation regimes

2. Prohibition of active military uses of a destructive effect in outer space
3. Destruction of existing ASAT systems
4. Confidence-building measures
5. Protective regime for civil space objects and passive military uses of a non-destructive nature in outer space
6. Implementation: monitoring und verification by an International Satellite Monitoring Agency
7. Codification of further legal standards of peaceful use of outer space.

The international community should not fall behind the peaceful purpose standards in the use of outer space that were respected by both major space powers even at the height of the Cold War era. The Outer Space Treaty, with its mankind clause and the peaceful purpose standard, has in a far-sighted manner laid the foundation for the establishment of a regime of common security in outer space in order to prevent the transgression towards active military uses of a destructive nature in outer space and to secure a peaceful future in the common space.

Publications by the author on the topic:

"Common Security in Outer Space and International Law" (2006) by *Detlev Wolter,* UNIDIR, Geneva. An extensive study of the concept by the author was published in Germany by Duncker&Humblot:

Detlev Wolter, Grundlagen "Gemeinsamer Sicherheit" im Weltraum nach universellem Völkerrecht, Berlin, Juni 2003, 578 pages

Legal Foundations and Essential Treaty Elements for a System of Common Security in Outer Space

Dr. Detlev Wolter

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A. Introduction

This article presents the legal foundations and the essential elements for a Treaty of Common (Cooperative) Security in Outer Space. [1]

There is an urgent need for a comprehensive space security order that starts with a space arms control regime and also encompasses positive elements of cooperative space security like confidence-building measures, rules of the road, international verification as well as institutional strutures.[2] The need for such a preventive arms control regime cannot be overemphasized. As *Jonathan Dean*[3] has pointed out:

"... humanity is on the verge of an irreversible shift to active, destructive, military use of outer space, a global revolution in human security which will almost certainly surpass in significance the introduction of nuclear weapons. "

B. Foundations of Common Security in Outer Space

I. International Law, in particular the Outer Space Treaty and GA Resolutions on PAROS

Both contain several essential principles serving as the foundation of a CSO-Treaty:

(1) The use of outer space exclusively for peaceful purposes and in the common interest of all states and mankind as a whole.[4]

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According to Article II of the Outer Space Treaty Outer Space[5] outer spacce is a common territory beyond national jurisdiction, the global commons *par excellence.* In addition, the Outer Space Treaty provides in Articles I Para. 1 and IX for cooperation and consultation principles. Hence, security cannot be pursued in the interest of one State or a group of States. Instead, it has to be common or cooperative security.

The legal order for outer space that exists today was elaborated in close relation to the international community's efforts to prevent the space powers from entering into an arms race in space. From the beginning of the space age, the international community raised the claim that the exploration and use of outer space shall be used exclusively for peaceful purposes in the interest, and to the benefit, of mankind

as a whole. The US and the USSR introduced the principle of peaceful use in proposals aimed towards developing a legal order that would limit the military use of outer space. The US proposed to the UN General Assembly in 1957 in its first memorandum devoted to arms control in outer space, that the United Nations should establish a multilateral control system with "international inspection and participation" as "the first step toward the objective of assuring that future developments in outer space would be devoted exclusively for peaceful and scientific purposes."[6]

(2) The obligation to prevent the weaponization of space

The deployment of space weapons would clearly not be a use in the " intersest of all states", it would thus violate Article I OST.[7] While the international community has accepted passive military uses of outer space, such as *reconnaissance* satellites, communication satellites, it clearly opposes the transgression of the threshold towards active uses of outer space of a destructive nature. Since 1981, the annual resolutions of the UN General Assembly regarding outer space and for the prevention of an arms race in outer space,[8] have repeatedly requested the the nuclear powers to:

- Actively participate in the prevention of an arms race in outer space "with a view to reaching agreement" as well as to restart or speed up parallel bilateral arms control negotiations concerning outer space;
- Refrain from any contrary activities.

Recently, Sri Lanka at the last First Committee meeting declared the PAROS Resolution in substance to be customary international law.[9] In addition, the GA in several PAROS resolutions stated explicitly that the NPT disarmament obligation also applies to outer space.[10] As the ICJ has stated in its Advisory Opinion in 1996 this is an obligation to conclude not only to negotiate a disarmament agreement.[11]

II. The Concept of Common Security ("Gemeinsame Sicherheit" by Egon Bahr/Hans Dieter Lutz)/Cooperative Security (Brookings Institution)

1. The origins of the concept of "Common Security"

Given the capability of mutually assured destruction, security can no longer be achieved against, but rather with the opponent. In this sense, common security is already a reality. The recognition that in the atomic era peace and security can only be guaranteed cooperatively, and that war as the continuation of politics by other means has been replaced by the absolute "futility of war"[12] lies at the heart of the concept of "common" or cooperative security. Helmut Schmidt[13] in his speech before the First UN Special Session on Disarmament in 1978 marked the starting point for its development by introducing the notion of "security partnership". The concept met international recognition with the Palme Commission's report of 1982[14] under the title of "Common Security" stating: "Security in the nuclear age is common security." The report was welcomed in the same year through Resolution 37/99 of the UN General Assembly,[15] which emphasized the central role of the United Nations "in furthering common security", and mandated the Disarmament Commission to examine the recommendations with a view of its efficient implementation.

In a similar vein, German Foreign Minister, Joschka Fischer,[16] put his speech before the General Assembly of the United Nations on 14 September 2002 under the *Leitmotiv* of the need to establish a "system of global co-operative security", declaring it to be a "central political task of the 21st century".

2. The structural elements of "Common Security"

The main elements of "common security" were elaborated by *Hans-Dieter Lutz* and *Egon Bahr*,[17] former State Secretary of the German Foreign Ministry, as well by the *Brookings Institution*[18] under the notion of "cooperative security" falling into five categories:

(1) Cooperative denuclearization
The defensive reorientation of military-strategic forces allows for the drastic reduction and eventually abolishment of nuclear weapons:
Thus, the concept contributes to the fulfilment of the nuclear powers' disarmament obligation according to Article VI of the NPT, as reaffirmed by the ICJ.

(2) Structural nonprovocation and defensive configurations
Structural nonprovocation implies that military forces are to be organized and equipped in a way, that they do not permit a successful military attack. Cooperative denuclearization is strengthened in a mutually reinforcing way by establishing force postures structurally incapable of supporting a nuclear attack.

(3) Internationalization of the response to an aggression
While the restructuring of the military capabilities towards an exclusively defensive configuration, buttressed by arms control regulations, would offer a maximum degree of international security, it could not be excluded, however, that in circumventing the agreed rules a particular state would secretly develop an offensive capability. Therefore, as part of a reassurance system the right to self-defence in the framework of a collective security system remains necessary.

(4) Restraints on military investment and proliferation

(5) Transparency and confidence-building measures
A central part of common security, which has to be understood as a process, is the multilateralization and possible institutionalization of transparency and confidence-building measures.

C. A Multilateral Agreement for 'Common Security' in Outer Space (CSO-Treaty)

I. Precursors

The proposal for a CSO-Treaty builds on the numerous treaty proposals of Member States,[19] the work of the PAROS WG (before it was discontinued),[20] and of the Expert Group on Confidence-Building in Outer Space,[21] as well as on the important academic and NGO contributions regarding PAROS.[22]

- The most comprehensive suggestions for an encompassing security order to safeguard the peaceful use of outer space came from the group of government experts (US, Russia, China, France, Canada, India, Pakistan, Bulgaria, Egypt, Argentina, Brazil and Zimbabwe) mandated in 1990 by the UN General Assembly to work out proposals for confidence-building measures in outer space. In its report,[23] the group suggests i.a. the following measures to be agreed in the CD and COPUOS: transparency measures concerning dual-use technology to secure its use for exclusively peaceful purposes, multilateral use of satellite remote sensing in the interest of the international community, as well as the creation of an international early warning system concerning accidents in outer space, "rules of the road" including safety margins between space objects, use of space technology for preventive diplomacy, crisis management, peaceful settlement of conflicts, establishment of an *International Satellite Monitoring Agency* and an *International Space Monitoring Agency,* and of a world space organization to promote confidence-building and cooperation in outer space in such issues as remote sensing, environmental monitoring, crisis prevention and forecasts of natural catastrophes.

II. A multilateral agreement on common/cooperative security in outer space (CSO Treaty) as a specialized agreement to implement the Outer Space Treaty in the field of security

1. Principles of the CSO Treaty

Taking into account the recommendations of the report of the Palme Commission on Common Security and the report of the UN experts group on confidence-building measures in outer space, the CSO Treaty should contain the following principles:

1. 1. Common/cooperative security

The CSO Treaty is based on the application of the concept of "common security" to outer space. It implements the obligation of the Outer Space Treaty on the use of outer space in the interest of mankind in the security field. At the same time it buttresses the necessary nuclear strategic transition towards mutual assured security in an adequate multilateral framework, which the nuclear powers have to set in place in order to fulfil their disarmament obligation under Article VI of the NPT. The concept of common security must be complemented by specific strategic elements going beyond the classic confidence-building measures. In particular the multilateralization of the American-Russian "cooperative threat reduction" (CTR) [24]programmes would lay the ground for a global system of cooperative threat reduction and an effective non-proliferation regime.

1. 2. Delimitation between general provisions on cooperative security and specific nuclear-strategic questions

It is necessary to distinguish between general provisions on cooperative security and specific issues of nuclear strategy, where the main responsibility for filling the cooperative security structures lies undoubtedly with the three major nuclear powers and potential opponents USA, Russia and China. Therefore, with regard to a "new strategic framework" and a "cooperative strategic transition" it would be difficult to

regulate these in detail in the multilateral CSO Treaty. Such a far-fledged multilateralization of nuclear-strategic questions would hardly be acceptable at present to the nuclear powers. As a start, it should suffice to provide the general principles and procedures regarding the necessary interface of these issues with the general security interests of the international community, including a flexible institutional arrangement, e.g. limited membership in a Standing Consultative Committee.

1. 3. Transparency, confidence-building and strategic confidence measures ("strategic reassurance measures")[25]

The CSO Treaty is based on the principles of transparency and confidence-building in the use of the common space in the security interests of mankind as a whole. It thus complements existing confidence-building provisions in the Outer Space Treaty, and those in the Registration Convention, in particular by introducing a "pre launch registration" and on-site inspection of launch sites as well as new strategic confidence-building measures such as "strategic reassurance measures" (SRM) and further cooperative security elements for outer space in the form of immunity and traffic rules for satellites.

1. 4. Structurally non-offensive force configurations, cooperative strategic transition and nuclear disarmament

Structurally non-offensive force configurations whereby armed forces are organized and equipped in such a way that does not permit a military offensive applied in outer space means that no active military uses of space could be permitted. A structurally non-offensive force configuration in outer space is thus best achieved by an explicit prohibition of active military uses of a destructive nature, i.e. a space weapons ban. It would also contribute to structurally non-defensive force configurations and nuclear disarmament on Earth by facilitating to overcome the strategy of nuclear deterrence.
The CSO Treaty creates the necessary conditions for a cooperative nuclear strategic transition. The strategic change would thus be oriented in accordance with the mankind-clause of the Outer Space Treaty towards the creation of common security for all states in the interest of mankind and guarantee at the same time that outer space will remain free of weapons. By limiting the number of ICBMs in accordance with Article VI of the NPT, the risk of unauthorized and accidental attacks would be considerably restrained, and thus the necessity of space-based defence systems further reduced. The Treaty thus leads in the long term to complete nuclear disarmament, to be monitored by cooperative verification including reliable on-site inspections in particular.

1. 4. Preventive arms control through a ban on active military uses of outer space

According to an expertise submitted to the German Bundestag[26] the creation of cooperative structures and political cooperation alone would not suffice to prevent an arms race if they were not complemented by preventive arms control measures for technological developments. Preventive arms control is of particular importance regarding space technology. The development of space weapons would trigger both a quantitative and especially a qualitative arms race. Completely new and unforeseeable arms control and non-proliferation problems would arise with the

continuous advancement of new technologies and applied physics principles that preventive arms control would effectively shut off. By creating legal clarity as to the prohibition of the development, production and deployment of space weapons, the Treaty would prevent a new arms spiral in both variants in keeping with the objectives of preventive arms control. Although a ban already of development and production of space weapons might be too ambitious, an explicit prohibition of the deployment of space weapons in a multilateral treaty would have a strong effect to slow down, if not stop altogether, the development of space weapons.

1. 5. Principle of equality

The respect of the principle of equal security according to the UN Charter (Article 2 Para. 1) would be more than merely a formal legal aspect in a CSO Treaty. The main purpose of the Treaty would be to prevent the sharpening of security inequalities that would arise by a transgression to active military uses of outer space, by setting up a system of common*, i.e.* equal security.

2. The main elements of the CSO Treaty

Most of the essential elements of a cooperative security system in outer space have already been proposed in one form or another to the CD or partly in bilateral American-Soviet/Russian arms control treaties. Therefore, the main task ahead is to combine the individual elements in a mutually reinforcing manner to build a coherent cooperative security system. In particular, the principles of common security in outer space have to be developed in terms of both substance and procedure with regard to the following main elements:

2. 1. Principles of cooperative security in outer space

2. 1. 1. Particular provisions on cooperative security in outer space

(1) Transparency and confidence-building
The state parties should commit themselves to be guided in all their military space activities by the principles of transparency and confidence-building as proposed by the respective UN Government Experts Group. The Treaty would also facilitate the strengthening and possible extension of the various control regimes for missile technologies and WMD, including the regulation of the transfer of sensitive technologies, by *i.a.* enhancing and extending the current MTCR regime (ICoC). The use of multilateral satellite monitoring[27] could encourage those states potentially acquiring ballistic missile technology to join such control regimes. A stimulus for this would be the prospect of a possible access to space technology for civil space activities offered under the common security regime.

(2) Structural non-provocation and defensive configurations
The state parties should commit themselves to conduct space activities in a way compatible with the principle of structurally non-offensive force configurations. A consultative committee to be set up would elaborate upon details.

(3) Non-proliferation and disarmament

The state parties should commit themselves to keep all military activities in outer space in conformity with the objectives of non-proliferation and disarmament according to Article VI of the NPT.

(4) Protection against unauthorized missile launches and attacks
In a cooperative framework the development of a limited (land – and air-based)-NMD system to combat ballistic missiles in the boost phase ("boost-phase NMD") renouncing the deployment of any space weapons could be considered, ideally under international control. The tasks of such a system should be enumerated and thus limited to the protection:

- against unauthorized and accidental missile launches; and
- against missile attacks in violation of the non-proliferation regime for ballistic missile technology and WMD.

The implementation of the system would have to be secured by a multilateral monitoring and verification mechanism. A standing consultative committee should work out the details of such a consensual NMD deployment.

2. 1. 2. Ban of active military uses of a destructive nature

A central provision of the CSO Treaty should be an explicit prohibition of active and destructive military uses in outer space in order to achieve the necessary legal clarity with regard to the implementation of the principle of the peaceful use of outer space. This principle would thus be confirmed and specified through a ban on space weapons, namely by explicitly banning space-based ASAT and BMD weapons. *Canada*[28] has rightly stated that without a general space weapons ban the prohibition of the use of force would also protect the deployment of space weapons. Such a result would run counter to the community-purpose of the peaceful use of the common space.

Concerning a prohibition of space weapons, in particular of a ban on space-based BMD and ASAT systems, five issues need to be tackled:

(1) Definition: the issue of so-called "non-dedicated systems",[29] i.e. the delimitation between prohibited ASAT systems from permitted civil space objects that could be misused such as through collision or docking, in an ASAT function;

(2) Verification: especially given the possible residual ASAT capability of "non-dedicated systems" an effective international verification is necessary including of missile launch pads *in situ*;

(3) Applicability of the prohibition also in the case of conflict;

(4) Verifiable destruction of existing ASAT capabilities, which should be complemented by also limiting the number of military satellite launches;

(5) Immunity of satellites: an explicit prohibition of ASATs should also ban non space-based ASAT systems and thus guarantee a complete protection of all peaceful satellites.

The Treaty stipulation prohibiting space weapons could read as follows:

The States Parties commit themselves to refrain from any deployment or use of any object in space or on Earth, *that was designed or modified specifically for the purpose to inflict permanent physical damage on any other object through the projection of mass or energy respectively*. In particular, the deployment of *BMD* and *ASAT* systems in outer space are prohibited, except for a system put under the aegis of the UN for the purpose of implementing and enforcing a non-proliferation regime and for the purpose of protecting against unauthorised and accidental missile launches on the decision of the UN Security Council and the UN General Assembly.

Such a prohibition of active military uses of outer space corresponds to the requirements of a cooperative approach in the NMD issue. Thus, numerous American and international studies[30] have shown that a space-based NMD system to intercept warheads in their midcourse in outer space would not be viewed as cooperative by Russia and China, but rather as destabilizing. An explicit prohibition of space-based BMD systems, with the exception of non-destructive sensor satellites, is indispensable to not only safeguard the principle of the peaceful use of outer space as a prerequisite for common security in outer space, but also to permit the necessary cooperative approach with regard to the nuclear-strategic and arms control questions raised by NMD.

2. 2. Destruction of existing ASAT-capabilities/arsenals

Existing ASAT systems only have the capability to destroy satellites in near-Earth Orbit (NEO). The strategically important satellites used for early warning, navigation and precise guidance systems are stationed in the GEO or on other high-Earth Orbits, and are thus considered to be not yet at risk. However, LEO satellites fulfil important functions in crisis situations such as photo *reconnaissance*, ocean surveillance and electronic intelligence. Furthermore, as in the Gulf war, they deliver real-time intelligence to all military operations. In a crisis situation the fear that an opponent may destruct one's satellites can represent an "irresistible temptation ... to remove such satellites from the sky". It is, therefore, necessary to provide for the destruction of existing land and air-based ASAT systems not only as a matter of congruence with the prohibition of space-based ASAT systems, but also to safeguard the security in outer space in crisis situations.

2. 3. Protection of civil space objects and passive military uses of a non-destructive nature

The creation of an immunity regime for civil space objects[31] and satellites with passive military tasks of a non-destructive nature would be an important part of the confidence-building measures. By determining the range of the satellite uses protected under the immunity regime, the necessary legal clarity as to the admissibility of these uses would be achieved. Some believe that the prohibition of the use of force would be sufficient to protect existing satellite uses. This, however, does not take into account the fact that a number of states have voiced doubts as to the admissibility of even the existing passive military uses. This concerns in particular the use of satellites as precise guidance systems for nuclear weapons. An immunity regime is all the more necessary as the dual-use capabilities of most satellites may cause civil space objects to become targets of interference or attacks by ASAT weapons in a crisis situation.
An immunity regime for satellites, which would be specified by "rules of the road" in the framework of a "space code of conduct",[32] would be an important contribution to "traffic security" in the near-Earth and geostationary orbit. An important element

of such traffic rules would be to respect certain security distances as well as provisions to avoid collisions, which become necessary also for environmental protection against the increasing *space debris*.

2. 4. Mechanisms of implementation control: monitoring and verification

The CSO Treaty would contain appropriate mechanisms of implementation control through multilateral monitoring and verification[33] of both the ban on space weapons as well as of the protection regime including the immunity rules for space objects used for peaceful purposes.

By having recourse to satellite reconnaissance, such a space weapons agreement could be reliably verified.

The range of possible verification measures spans from the classic "national technical means" (i.e. national military reconnaissance satellites) to both "passive cooperative" and "active cooperative" verification such as on-site-inspections in the form of "continuous monitoring", "invitational inspections" or "challenge-inspection"(anytime-anywhere inspection).[34]

In addition to a "space-to-Earth-verification", outer space has a peculiar requirement for "ground-to-space" and "space-to-space" verification methods. For the monitoring of the proposed protection regime for civil space objects such as safety margins, a "space-to-space" verification seems indispensable. "Space-to-space"-verification could also be used for the monitoring of a space weapons ban, and for this purpose be complemented by inspections of missile launch pads *in situ*. The satellites used for this type of verification could, according to *Bhupendra Jasani*, a renowned military and arms control expert, ideally form "multilateral technical means (MTM)" for the verification of a space weapons ban. In the meantime, civil and commercial satellites have also reached a technical stage capable of supporting verification.

The use of satellites for international verification, be it through an international verification agency's satellites[35] or by having verification data and imagery of national satellites at its disposal, would pave the way for general international verification for bi- and multilateral arms control, non-proliferation and disarmament treaties. The monitoring and verification mechanism of the CSO Treaty could thus also be used for monitoring the compliance of further arms control and non-proliferation treaties, in particular of the CTBT and the NPT, as well as for crisis prevention purposes.

3. Appropriate international fora for negotiating the agreement

The issue of military uses of outer space has taken on significance for all future space activities. Active military uses of outer space would have considerable repercussions on the safety of civil and particularly commercial uses of space. Further, the impact of such a transgression on international security in terms of nuclear strategy, the relationship between defensive and offensive weapons, and the entire bi- and multilateral arms control, non-proliferation and disarmament regimes, makes it necessary to treat the issue comprehensively from all angles. Therefore, the convocation of a separate international state conference under the

aegis of the UN to negotiate a CSO Treaty would seem to be appropriate. Such a multilateral conference of plenipotentiary state representatives could potentially break the impasse at the CD by negotiating the necessarily comprehensive treaty with sufficient authority that would offer new advantages of a comprehensive security order beneficial in particular to the space powers with regard to their civil space uses. This agreement should, as with the Outer Space Treaty and the specialized space agreements, be approved by the UN General Assembly for its adoption by the international community. One could also consider including NROs and the numerous international scientific organizations dealing with space and disarmament issues at an early stage in the process.
On 5 February 2001 *Canada*[36] reaffirmed its commitment to convene a review conference on the Outer Space Treaty with the objective to negotiate an additional protocol about the military use of outer space. The proposal for a CSO Treaty, as an implementation agreement of the Outer Space Treaty, could be tabled at such a conference.

4. "Common Security" in outer space as a means to overcome nuclear deterrence

The nuclear-strategic objective of common security is to replace the deterrence strategy of "Mutual Assured Destruction" by "Mutual Assured Security".[37] Thus, it matches President Reagan's goals pursued under SDI, and the goals that are currently linked to the introduction of strategic defense systems in the framework of a "strategic transition". A US national defence against ballistic missile attacks could render nuclear weapons obsolete, thereby causing nuclear offensive weapons to become superfluous. The main difference, however, is that the concept of "common security" wants to achieve this by cooperation and structural change, whereas the proponents of a space-based missile defence view that this could be the result of technological developments in the form of new defensive systems in outer space. Yet, the scientific consensus is quite clear that there cannot be absolute security by technical means.

Overcoming deterrence through a new relationship between offensive and defensive systems and eventually abolition, however, is only possible in a cooperative environment.[38] The recognition by the nuclear powers of the necessity to cooperate in order to achieve security lies at the heart of the concept of common security. Its realization would renounce new armaments in outer space or on Earth.

The concept thus constitutes an ideal basis for a cooperative nuclear strategic transition that would allow the fulfilment of the nuclear disarmament obligations according to Article VI of the NPT, and that would free mankind of the scourge of nuclear terror. Common security opens the perspective for genuine disarmament by establishing on all sides non-provocative structures through defensive configurations. In the words of the late *Dieter Lutz*:

Common security requires the replacement of the deterrence strategy by a strategy of prevention renouncing any measures of preemption and retaliation (in particular with weapons of mass destruction). [39]

A strategic transition towards cooperation is also a prerequisite of an active policy of non-proliferation. Developing a multilateral Treaty on Common Security in Outer

Space could facilitate the cooperative transition from MAD to CTR.

US Senator Lugar,[40] one of the co-authors of the programmes, rightly demands a globalization of cooperative threat reduction programs. This is only possible in an adequate multilateral framework. Similarly, Europe has strengthened efforts to make the *International Code of Conduct against the Ballistic Missile Proliferation (ICoC*) multilateral by including a greater number of states with missile technology, in particular China, Pakistan, India, Iran and Israel. An extension of these programmes alone, however, would not suffice to overcome nuclear deterrence. All measures need to be additionally embedded in a comprehensive system of common security.

The interest of mankind-clause under international space law demands that common security interests take precedence over national or bilateral security interests, thus opening the chance for the international community to overcome nuclear deterrence by requiring compliance with the principle of cooperation and the nuclear disarmament obligations under Article VI of the NPT that also applies to outer space.

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[1] Both are based on extensive research which I have published in June 2003 in Germany in a monograph entitled: "*Grundlagen ‚Gemeinsame Sicherheit' im Weltraum nach universellem Völkerrecht. Der Grundsatz der friedlichen Nutzung des Weltraums im Lichte des völkerrechtlichen Strukturprinzips vom Gemeinsamen Erbe der Menschheit*, Berlin 2003; s. also Wolter „Common Security in Outer Space and International Law, UNIDIR 2006.

[2] Secure World Foundation, *Achieving Space Security. A Preliminary Action Inquiry for a Canadian Campaign to Prevent the Weaponization of Space*. Prepared by the Polaris Institute, February 2005 p. 13; Hitchens, *Future Security in Space: Charting a Cooperative Course*, 2004. For an overview of types of space-based weapons and satellite interference, s. Wright/Grego/Gronlund, *The Physics of Space Security. A Reference Manual*, 2005 and DeBlois/Garwin/Scott Kemp/Marwell, "Space Weapons. Crossing the Rubicon*", International Security*, Vol. 29, Issue 2, Fall 2004, p. 50. Current proposals to prevent the weaponization of space had been discussed at the 2003 and 2005 UNIDIR Conferences on Outer Space Security, for the 2003 conference s. United Nations Institute for Disarmament Research, *Safeguarding Space for All: Security and Peaceful Uses*, 2004

[3] Jonathan Dean, endorsement of my forthcoming book entitled „Common Security in Outer Space and International Law, UNIDIR 2006

[4] For the genesis of the principle of peaceful use of outer space see Menon, *The United Nations' Efforts to Outlaw the Arms Race in Outer Space. A Brief History with Key Documents*, 1988, p.40; Andem, *International Legal Problems in the Peaceful Exploration and Use of Outer Space*, 1992; Jessup/Taubenfeld, *Controls for Outer Space and the Antarctic Analogy*, 1959, p.252; Galloway, "The United States and the 1967 Treaty on Outer Space", Proceedings from the 40th Colloquium on Space Law, 1998, p.18; Sontag, *Der Weltraum in der Raumordnung des Völkerrechts. Hoheitsrechte im Weltraum*, 1966, p.133; Vázquez, *Cosmic International Law*, 1965, p.149; Jenks, *Space Law*, 1965, p.44; Vlasic, "The Legal Aspects of Peaceful Uses of Outer Space", in Jasani (ed.), *Peaceful and Non-Peaceful Uses of Space. Problems of Definition for the Prevention of an Arms Race*, 1991, p.39; Vlasic, "Disarmament Decade, Outer Space and International Law", *McGill Law Journal* 25, 1981, p.135; Reijnen, *The United Nations Space Treaties Analysed*, 1992, p.41; Reijnen, "The Prevention of an Arms Race in Outer Space", in Benkö/Graaff/Reijnen (eds.) *Space Law in the United Nations*, 1985, p.181; Rehm, *Rüstungskontrolle im Weltraum*, 1965, p.91; Taubenfeld, "Consideration at the United Nations of the Status of Outer Space", *AJIL* 53, 1959, p.405; Jasentuliyana, *International Space Law and the United Nations*, 1999, p.24; Benkö/Schrogl, "The UN Committee on the Peaceful Uses of Outer Space" in Benkö/Schrogl (eds.), *International Space Law in the Making. Current Issues in the UN Committee on the Peaceful Uses of Outer Space*, 1993, p.7; Wolfrum, "The Problems of Limitation and Prohibition of Military Use of Outer Space", *ZaöRV* 44, 1984, p.784; Marcoff, *Sur L'Interpretation Juridique de l'Article 4 du Traité Régissant les Activités Spatiales des Etats, Revue général de l'Air 31*, 1968, p.42; Marcoff, "Disarmament and 'Peaceful Purposes' Provisions in the 1967 Outer Space Treaty", *JSL* 4, 1976, p.11; Cheng, "Military Use of Outer Space: Article IV of the 1967 Space Treaty Revisited", in Cheng/Kim (eds.), *The Utilization of the World's Air Space and Free Outer Space in the 21st Century*, 2000, p.309; Filho, "Total Militarization of Space and Space Law: The Future of the Article IV of the 67' Outer Space Treaty", Proceedings from the 40th Colloquium on Space Law, 1998, p.358; Heintze, "Peaceful Uses of Outer Space and International Law", in Bender/Hagen/Kalinowski/Scheffran (eds.), *Space Use and Ethics*, vol. 1, 2001, p.243; Andem, "Implications of the 1967 Outer Space Treaty in the New Millennium: A Brief Reflection

on the Implications of Proposed Missile Defense Systems, Proceedings from the 43rd Colloquium Space Law, 2001, p.275; Heath, "Mahan's Legacy: How Will a New Generation of Weapons fit into Competing Visions of Outer Space", Proceedings from the 43rd Colloquium Space Law, 2001, p.298

[5] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Monn and Other Celestial Bodies" (Outer Space Treaty) of 27 January 1967, unanimously adopted by the UN General Assembly, UN Doc. A/RES/2222 (XXI), 19 December 1966

[6] US Memorandum Submitted to the First Committee of the General Assembly, 12 January, 1957, UN Doc. GAOR XI A/C.1/738, printed in Department of State, "Documents on Disarmament 1945-1959" (1960 publication 7008), vol. 2, 733; Jessup/Taubenfeld, *Controls for Outer Space and the Antarctic Analogy*, 1959, p.252; generally on the role of the US in the introduction of the principle of peaceful use of outer space Galloway, "The United States and the 1967 Treaty on Outer Space", Proceedings from the 40th Colloquium on Space Law, 1998, p.18; Vázquez, *Cosmic International Law*, 1965, p.149; Wolfrum, *Die Internationalisierung staatsfreier Räume*, 1984, p.275

[7] On the efforts of the international community to prevent an arms race in outer space from an international legal perspective see Vereshschetin, *Prevention of the Arms Race in Outer Space. International Law Aspect*, UNIDIR, 1986; Magno, "How to Avoid the militarisation of Outer Space", Proceedings from the Of the 26th Colloquium Space Law, 1984, p.221; Agrawala, "An Approach to Arms Control in Outer Space", *ZaöRV* 45, 1985, p.543; Vlasic, "Disarmament Decade, Outer Space and International Law", *McGill Law Journal* 25, 1981, p.135; Menon, *The United Nations' Efforts to Outlaw the Arms Race in Outer Space. A Brief History with Key Documents*, 1988, p.40; Reijnen, *The United Nations Space Treaties Analysed*, 1992, p.41; Reijnen, "The Prevention of an Arms Race in Outer Space", in Benkö/Graaff/Reijnen (eds.) *Space Law in the United Nations*, 1985, p.181; Christol, "The Common Interest in the Exploration, Use and Exploitation of Outer Space for Peaceful Purposes: The Soviet-American Dilemma", Proceedings from the 27th Colloquium Space Law, 1985, printed in Christol, *Space Law. Past, Present and Future*, 1991, p.13. In the arms control literature see Rousseau, "Disarmament since 1945", in Matte (ed.), *Arms Control and Disarmament in Outer Space*. Lecture-Seminars given at the Centre for Research of Air and Space Law, 1985, p.149; Johnson, "Multilateral Approaches to Preventing the Weaponization of Space", *Information Bulletin des International Network of Engineers and Scientists Against Proliferation*, No.18, September 2001, p.71. Brazil and a number of Latin American States condemned the plans of an active military use of outer space as a "flagrant violation" of the Outer Space Treaty and called for the urgent negotiation of an agreement on the prohibition of space weapons. Declaration by the Latin American Countries Members of the Legal Sub-Committee of the Committee of the Peaceful Uses of Outer Space, Working Paper, A/AC.105/C.2/L.142, 6 April 4.

[8] Res. A/RES/39/59 of 12 December 1984; A/RES/36/97 C u. 99, 9 December 1981; A/RES/37/83, 9 December 1982 (introduced by socialist and non-aligned States); and 37/99 D, 13 December 1982 (introduced by Western States); A/RES/38/80, 15 December 1983; A/RES/39/59, 12 December 1984; A/RES/40/87, 12 December 1985 printed in Welck/Platzöder, *Outer Space Law*, 1987, p.609 and 611; GA/RES/54/53, 1 November 1999 (160 yes votes); A/RES/55/32 of 3 January 2001, para. 4; and A//RES/56/23, 21 December 2001 (156-0-4 abstentions: USA, Micronesia, Israel, Georgia); for a detailed analysis of such a legal obligation see Wolter, note 1 p. 418

[9] The First Committee Monitor, Final Edition, November 1-5, 2004, www.reachingcriticalwill.org, p. 7

[10] Res. A/RES/39/59 of 12 December 1984; A/RES/36/97 C u. 99, 9 December 1981; as well as A/RES/37/83, 9 December 1982 (introduced by socialist and non-aligned States); and 37/99 D, 13 December 1982 (introduced by Western States); A/RES/38/80, 15 December 1983; A/RES/39/59, 12 December 1984 "Prevention of an Arms Race in Outer Space"; A/RES/40/87, 12 December 1985 printed in Welck/Platzöder, *Outer Space Law*, 1987, p.609 and 611

[11] ICJ Reports 1996, p.264 para. 99

[12] Friedmann, *The Changing Structure of International Law*, 1964, p.13; Stein, "Impact of New Weapons Technology on International Law: Selected Aspects", *RdC* 133 II, 1971, p.248

[13] Schmidt, "Speech Before the 1st Special Assembly of the United Nations on Disarmament" New York: 25 May 1978, in Bundespresseamt (ed.), *Stichworte zur Sicherheitspolitik*, 1978, p.7

[14] The Palme Report. Report of the Independent Commission on Disarmament and Security: "Common Security", 1982, p.22

[15] UN Doc. A 37/99 Resolution B on the "Report of the Independent Commission on Disarmament and Security Issues", 13 December 1982

[16] Speech of the German Foreign Minister, Joschka Fischer, before the General Assembly of the United Nations on 14 September 2002 "In Favour of a System of global cooperative security", printed in IP 11/2002, Doc., 129

[17] Bahr, "Gemeinsame Sicherheit: Einführende Überlegungen", in Bahr/Lutz (eds.), *Gemeinsame Sicherheit*, Vol. 2, 1987, p.18; Lutz, "Gemeinsame Sicherheit – das Konzept. Definitionsmerkmale und Strukturelemente im Vergleich mit anderen sicherheitspolitischen Modellen und Strategien", in Bahr/Lutz (eds.), *Gemeinsame Sicherheit*, Vol. 2, 1987, p.54

[18] Nolan, "The Concept of Cooperative Security", in Nolan (ed.), *Global Engagement. Cooperation and Security in the 21st Century*, The Brookings Institution, 1994, p.9

[19] Italy, OR GA A/7221, 9 September 1968; Italy, A/AC.187/97, 1 February 1978. "Additional Protocol to the 1967 Treaty on Principles Governing Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies"; Italy, proposal in the CD/9, 26 March 1979 printed in Welck and Platzöder, *Outer Space Law,* 1987, p.121; Letter Dated 10 August 1981 from the Soviet Foreign Minister to the Secretary-General, ORGA A/36/192, 20 August 1981; on the Soviet proposals see Kolosov, "The USSR and the 1967 Treaty on Outer Space", Proceedings from the 40th Colloquium of Space Law, 1998, p.14; Kolosov, "Non-Use of Forces in Outer Space", Proceedings from the 25th Colloquium on Space Law, 1983, p.205; Zhukov, "Towards the New Treaty on military Space Activity Limitation", Proceedings from the 26th Colloquium on Space Law, 1984, p.371; Christol, "The Use of Outer Space for Peaceful Purposes. Legal and Political Implications", Proceedings from the 28th Colloquium on Space Law, 1986, p.4; Italy, proposal in the CD/9, 26 March 1979 printed in Welck and Platzöder, *Outer Space Law*, 1987, p.121; Sweden, CD/PV 252, 20; Italy, CD/PV 253, 17; China, CD/579, 19 March 1985, p.1; He Quizhi, "Towards Legal Control of Space Arms. A Difficult Process", in Matte, (ed.), *Arms Control and Disarmament in Outer Space*, Lecture-Seminars given at the Centre for Research of Air and Space Law, Montreal: McGill University, 1985, 125; He Quizhi, "On Strengthening Legal Measures for Prevention of Arms Race in Outer Space", Proceedings from the 27th Colloquium on Space Law 1985, p.354; Canada, CD/320, 26 August 1982; CD/PV 252, 22 March 1984, p.15; CD/301, 21 March 1985, p.16; on the active role of Canada in the CD and in particular on the agenda topic PAROS see Cleminson, "Banning the Stationing of Weapons in Space Through Arms Control: A Major Step in the Promotion of Strategic Stability in the 21st Century", in Biere and Mataila (eds.), *Arms Control and the Rule of Law: A Framework for Peace and Security in Outer Space,* Proceedings of the 15th Annual Ottawa NACD Verification Symposium, 1998, p.35; Baines, "A Variant of a Mandate for an Ad Hoc Committee on Outer Space within the Conference on Disarmament: A Convention for the Non-Weaponisation of Outer Space", in Beier and Mataila (eds.), *Arms Control and the Rule of Law: A Framework for Peace and Security in Outer Space,* Proceedings of the 15th Annual Ottawa NACD Verification Symposium, 1998, p.65; India, CD/PV 486, 6; CD/PV 484, 7 February 1989, 15; Chowdhury, "Legal Aspects of Maintaining Outer Space for Peaceful Purposes", Proceedings from the 31st Colloquium on Space Law, 1989, p.14; Pakistan, "Proposal Relating to the Prevention of an Arms Race in Outer Space, International Instrument to Supplement the ABM Treaty", CD/708, Sri Lanka, CD/PV 325, 30 July 1985, p.12; Sweden, CD/PV 516, p.18; CD/PV 484 of 7 February 1989, p.15; Danielsson, "The ABM Treaty: To be or not to be", in Jasani (ed.), "Space Weapons and International Security" 1987, p.163; Danielsson, "Approaches to prevent an arms race in outer space" in Jasani (ed.), *Space Weapons – The Arms Control Dilemma,* SIPRI, 1984; Canada, "The Non-Weaponisation of Outer Space", Working Paper to the CD, 5 February, 2001; "Proposal concerning CD action on outer space", CD/1569, 4 February 1999. See also proposals in US Congress: The Space Preservation Act, 107th Congress 1st Session, H. R. 2977, 2 October, 2001 and Draft Treaty Presented to the U.S. Senate Foreign Relations Committee, May 1983, by the Union of Concerned Scientists, in Welck and Platzöder, *Outer Space Law*, 1987, p.125; see also Gottfried, "An ASAT Test Ban Treaty", in Jasani (ed.), *Space Weapons - The Arms Control Dilemma,* SIPRI, 1984, p.132; Spacey II, "Does the United States Need Space-Based Weapons?", College of Aerospace Doctrine, Research and Education, Air University, September 1999, http://research.au.af.mil. Fischer/Labusch/Maus/Scheffran, "Entwurf eines Vertrages zur Begrenzung der militärischen Nutzung des Weltraums" in Labusch/Maus/Send (eds.), *Weltraum ohne Waffen. Naturwissenschaftler warnen vor der Militarisierung des Weltraums,* 1984, p.175; Welck and Platzöder, *Outer Space Law,* 1987, p.129 and Johnson, "Multilateral Approaches to Preventing the Weaponisation of Space", *Disarmament Diplomacy* No. 56, 2001; reprinted in INESAP Information Bulletin No. 18, September 2001, p.71

[20] Report of the PAROS Committee, CD/1271, 24 August 1994, p.7

[21] UN Study of a Group of Government Experts, "Study on the Application of Confidence-building Measures in Outer Space", UN Doc. A/48/305, 1994, p.41 (Publication Sales No. E 94.IX.6); Cleminson, "Confidence-Building Measures and Outer Space", in Alves (ed.), *Building Confidence in Outer Space Activities: CSBMs and Earth-to-Space Monitoring,* UNIDIR, 1995, p.29

[22] Arms control literature on PAROS: Alves, *Prevention of an Arms Race in Outer Space: A Guide to the Discussions in the Conference on Disarmament*, UNIDIR, 1991; Beier/Mataila (eds.), *Arms Control and the Rule of Law: A Framework for Peace and Security in Outer Space*, Proceedings of the Fifteenth Annual Ottawa NACD Verification Symposium, 1998, p.65; Cleminson, "Banning the Stationing of Weapons in Space Through Arms Control: A Major Step in the Promotion of Strategic Stability in the 21st Century", in Beier/Mataila (eds.), *Arms Control and the Rule of Law: A Framework for Peace and Security in Outer Space*, Proceedings of the Fifteenth Annual Ottawa NACD Verification Symposium, 1998, p.65; Jasani, "The Arms Control Dilemma – An Overview" in Jasani (ed.), *Space Weapons – The Arms Control Dilemma*, SIPRI, 1984, ; Feigl, "Mehr Sicherheit durch Vertrauensbildung und Verhaltenskontrolle: Zur Konzeption eines umfassenden Schutzregimes für den Weltraum", in Zunker (ed.), *Weltordnung oder Chaos? Beiträge zur internationalen Politik. Essays in Honour of Klaus Ritter,* 1993, p.513; Legal literature: Jankowitsch, "Arms control in space: the need for new legal action", in

Jasani (ed.), *Space Weapons – The Arms Control Dilemma*, SIPRI, 1984, p.173; Jasentuliyana, *International Space Law and the United Nations*, 1999; Kries, "Space-Based Defences and the Law of Outer Space", Proceedings from the 30th Colloquium on Space Law, 1988; Chayes, Abraham/Chayes Antonia H. /Spitzer, "Space Weapons: The Legal Context", in Long/Hafner/Boutwell (eds.), *Weapons in Space,* 1986; Hurwitz, *The Legality of Space Militarization*, 1986; Fischer, "Völkerrechtliche Schranken der Weltraumrüstung" in Labusch/Maus/Send (eds.), *Weltraum ohne Waffen. Naturwissenschaftler warnen vor der Militarisierung des Weltraums,* 1984; Gorove, *Developments in Space Law: Issues and Policies*, 1991; Gorove, "Arms Control in Space: Issues and Alternatives", *ZLW* 33, 1984; Gorove, "Arms Control Provisions in the Outer Space Treaty: A scrutinising reappraisal", *Georgia Journal of International and Comparative Law* 3, 1973, p.116; Markoff, "Disarmament and 'Peaceful Purposes' Provisions in the 1967 Outer Space Treaty", *JSL* 4, 1976, p.11; Agrawala, "Arms Control in Outer Space", *ZaöRV* 45, 1985, p.543; Reijnen, *The United Nations Space Treaties Analysed*, 1995, p.103; Reijnen, "The Prevention of an Arms Race in Outer Space", in Benkö/Graaff/Reijnen (eds.), *Space Law in the United Nations*, 1985, p.147; Vlasic, "Space Law and the Military Applications of Space Technology", in Jasentuliyna (ed.), *Perspectives on International Law*, 1995, p.385; Vlasic, "The Legal Aspects of Peaceful and Non-Peaceful Uses of Outer Space", in Jasani (ed.), *Peaceful and Non-Peaceful Uses of Space. Problems of Definition for the Prevention of an Arms Race,* UNIDIR, 1991, p.37; Vlasic, "Disarmament Decade, Outer Space and International Law", *McGill Law Journal* 25, 1981, p.135; Christol, "The Common Interest in the Exploration, Use and Exploitation of Outer Space for Peaceful Purposes: The Soviet-American Dilemma", Proceedings from the 27th Colloquium in Space Law in Christol, *Space Law. Past, Present and Future*, 1991, p.13: Christol, "The Use of Outer Space for Peaceful Purposes. Legal and Political Implications", Proceedings from the 28th Colloquium on Space Law, 1986, 4; Magno, "How to Avoid the Militarisation of Outer Space", Proceedings of the 26th Colloquium on Space Law 26, 1984, p.221

[23] UN Study of a Group of Government Experts, "Study on the Application of Confidence-building Measures in Outer Space", UN Doc. A/48/305, 1994, p.41

[24] Senator Lugar urges to adopt an active global non-proliferation policy proposing the globalisation of the "Nunn-Lugar"-programme of 1991, which was so far limited to the threat reduction of the former Soviet Union. The objective would be to identify, control and finally destroy all WMD worldwide by achieving a "satisfactory level of accountability, transparency, and safety ... in every nation with a WMD program". He announced a draft bill for this purpose, which should authorize the administration to globalize the "Nunn-Lugar" programme by approaching all relevant States. Speech by Senator Lugar, "NATO After 9/11: Crisis or Opportunity?", Council on Foreign Relations, 4 March, 2002

[25] "Strategic mistrust in the post-Cold War era creates the need for measures to reduce suspicions between and among states about their long-term political, military, and economic objectives - that is, their strategic intentions. Broadly speaking, strategic reassurance measures are steps that one nation takes to address the concerns of other nations that are suspicious of its broad, long-run intentions." Garrett, "The Need for Strategic Reassurance in the 21st Century", *Arms Control Today* 31, March, 2001, p.9

[26] Petermann/Socher/Wennrich, "Präventive Rüstungskontrolle bei Neuen Technologien. Utopie oder Notwendigkeit?" Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag, 1997, p.137 Krepon, "Moving Away From MAD", *Survival* 43, 2001, p.81

[27] UN GA, A/S-15/34, 5 UN Doc. A/34/374, 27 August 1979; Oudraat, "International Organizations and Verification", in Sur (ed.), *Verification of Disarmament or Limitation of Armaments: Instrument, Negotiations, Proposals*, UNIDIR, 1992, p.234; Courteix, "Les 'satellites Bleus' au Service de la Paix et du Désarmement", *GYIL* 24, 1981, p.228 ; Jakhu/Trecroce, "International Satellite Monitoring for Disarmament and Development", *AASL* V, 1980, p.524

[28] Canada, "Proposal concerning CD action on Outer Space", CD/1569, 4 February, 1999; according to the *Space Law Committe*e of the *International Law Association* report of its 69th Conference the Outer Space Treaty of 1967 should not be amended. The proposal for a CSO-Treaty is directed, like the Canadian proposal, at the adoption of a separate agreement of implementation of the Outer Space Treaty in the security field. For various options to be pursued by the UN General Assembly s. Secure World Foundation, *Achieving Space Security. A Preliminary Action Inquiry for a Canadian Campaign to Prevent the Weaponization of Space*. Prepared by the Polaris Institute, February 2005 p. 13

[29] Gottfried, "An ASAT Test Ban Treaty", in Jasani (ed.),*"Space Weapons - The Arms Control Dilemma",* SIPRI, 1984, p.132; Scheffran, "Moving Beyond Missile Defense. The Search for Alternatives for the Missile Race", *INESAP Information Bulletin* No.18, September 2001, p.52; Jasani/Hafner, "The Case for a Limited ASAT Treaty", in Jasani (ed.), *Outer Space. A Source of Conflict or Co-operation?* Tokyo: United Nations University, 1991, p.234; Jasani, "Outer Space - Battlefield of the Future", *Futures,* October, 1982, p.435; Jasani, "Security - A New Role for Civil Remote Sensing Satellites", in Benkö/Kröll (eds.), "Liber Amicorum in Honour of Böckstiegel", 2001, p.344

[30] Glaser/Fetter, "National Missile Defence and the Future of U.S. Nuclear Weapons Policy", *International Security* No.26, Summer 2001, p.40, which represents the prevailing arms control assessment of the NMD-plans; s. also Korb/Tiersky, "The end of Unilaterlism? - Arms Control After September 11", *Arms Control Today*

No. 31, October 2001, p.3; Mendelsohn, "America, Russia and the Future of Arms Control", *Current History* No. 31, October 2001, p.323; Rubin, "From Incentives to Preemption: Adjusting Options to Deal with Different States of Concern", UNIDIR/Wilton Park, January, 2002; Miller, "The Flawed Case for Missile Defence", *Survival* 43, NR. 3, Autumn 2001, p.107; Krepon, "Moving Away From MAD", *Survival* 43, 2001, p.85; Garwin, "A Defence That Will Not Defend", *The Washington Quarterly* 23, 2000, p.109; Garwin, "The Wrong Plan", *The Bulletin of the Atomic Scientists*, March/April 2000, p.36; Postol, "Hitting Them Where It Works", *Foreign Policy*, Winter 1999/2000, p.117; Bielefeld/Neuneck, "Raketenabwehr-Optionen für die Bush-Administration: Die technische Dimension", *Sicherheit und Frieden*, 2/2001, p.95; Pullinger, "Missile Defence in Perspective", *ISIS Briefing on Ballistic Missile Defence*, No.7, London: November 2001, p.10; Scheffran, "Raketenabwehr, Stabilität und präventive Rüstungskontrolle. Von SDI zu NMD", *Wissenschaft und Frieden*, January 2001, p.23; Scheffran, "Moving Beyond Missile Defense. The Search for Alternatives for the Missile Race", *INESAP Information Bulletin* No.18, September 2001, 9; Neuneck, "Defense, Deterrence or Disarmament? The United States, Europe and Arms Control", *INESAP Information Bulletin* No. 18, September 2001, p.52; In contrast, Rubin holds the view that, due to the novelty of the question a final assessment would not yet be possible: "Passive and active defense against the missiles and WMD of States of Concern is a natural and understandable response of threatened nations, yet its impact on proliferation is controversial, especially that of missile defense. .. Critics of the US NMD program maintain that deploying a home front missile defense will not reduce the missile threat from States of Concern but rather prompt the deployment of more, better and deadlier missiles against the US ... Proponents of defense, on the other hand, argue that Defenses complicate the job of the aggressor, forcing him into costly improvements of his ... Due to the novelty of the issue, there is no evidence as yet either way." However, in the final result Rubin also pleads for the strengthening of the non-proliferation regime. Rubin, "From Incentives to Preemption: Adjusting Options to Deal with Different States of Concern", UNIDIR/Wilton Park, January, 2002, p.9

[31] s. note 29

[32] DalBello, "'Rules of the Road': Legal Measures to Strengthen the Peaceful Uses of Outer Space", Proceedings from the 28th Colloquium on Space Law, 1986, p.8

[33] Ekblad, "Prospects of Verifying Space Weapons Treaties", Proceedings from the 35th Colloquium on Space Law, 1993, p.346; Ondrej, "Some Legal Aspects of Verification in and from Outer Space", Proceedings from the 33rd Colloquium on Space Law, 1991, p.338; Kries, "Satellite Verification and European Arms Control", Proceedings from the 33rd Colloquium on Space Law, 1991, p.375; Scheffran, "Moving Beyond Missile Defense. The Search for Alternatives for the Missile Race", *INESAP Information Bulletin* No.18, September 2001, p.80; Alves, *Prevention of an Arms Race in Outer Space: A Guide to the Discussions in the Conference on Disarmament*, UNIDIR, 1991;

[34] For a good overview of the various methods of verification see Cleminson/Alves, "Space Weapons Verification: A Brief Appraisal", in Sur (ed.), *Verification of Disarmament or Limitation of Armaments: Instruments, Negotiations, Proposals,* UNIDIR, 1992, p.177; Ekblad/Orhaug, "Verification of Outer Space Treaties by an ISMA", Proceedings from the 31st Colloquium on Space Law, 1989, p.22; Arms control literature: Gmelch, *Verifikation von multi- und internationalen Rüstungskontrollabkommen. Aufgaben, Probleme, Lösungsansätze*, 1993; Legal literature: Dekker, "The Law of Arms Control", *International Supervision and Enforcement,* 2001

[35] s. note 27

[36] s. note 28

[37] Bahr/Lutz, "Gemeinsame Sicherheit: Einführende Überlegungen" in Bahr/Lutz (eds.), *Gemeinsame Sicherheit – Idee und Konzept. Zu den Ausgangsüberlegungen, Grundlagen und Strukturmerkmalen Gemeinsamer Sicherheit* (1st. ed), 1986, p.26

[38] Krepon, "Moving Away From MAD", *Survival* 43, 2001, p.85;

[39] Lutz, "Gemeinsame Sicherheit – das Konzept. Definitionsmerkmale und Strukturelemente im Vergleich mit anderen sicherheitspolitischen Modellen und Strategien", in Bahr/Lutz (eds.), *Gemeinsame Sicherheit*, Vol. 2, 1987, p.54

[40] Speech by Senator Lugar, "NATO After 9/11: Crisis or Opportunity?", Council on Foreign Relations, 4 March, 2002

Common Security in Outer Space and International Law:

Book Abstract

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The legal status of outer space as determined in the Outer Space Treaty (OST) of 1967 requires that the use and exploration of space have to be in the "interest of all states" and "for the benefit of all mankind" (Article I OST). And thus emerges an implication, indeed an obligation of all states, to embrace “common” or “cooperative security” as the only option for truly guaranteeing the peaceful use of space. Such a cooperative regime finds its legal basis established in the mankind clause in Article I OST and the principle of cooperation and due account of the interests of all states in Articles IX and X OST, which are the principle elements attributing the status of outer space as a "common heritage of mankind".

However, in view of the risks of transgressing the line between the current passive military uses of space and the envisaged active military uses of a destructive nature in outer space ("weaponization of space") the substantive and procedural institutionalisation of the mankind clause, the cooperation principle and of the peaceful purpose clause as expressed in Articles I and IX OST becomes increasingly pressing.

These clauses were introduced in outer space law at the onset of the space age in 1957 by a joint draft UN General Assembly Resolution of the United States, France and Great Britain. These states had the same prime objective as the international community to ensure that outer space would not be monopolized by the security interest of one or a group of states but rather for the benefit of all states and for mankind as a whole. The peaceful purpose standard as well as the mankind-clause were then codified in the 1967 Outer Space Treaty. However, a controversy still continuing until today arose over the interpretation of the peaceful-purpose clause. The unproductive dichotomy when interpreting the peaceful purpose clause either through the "maximalist" school, according to which any military use of outer space is prohibited, or the "minimalist" approach viewing the term "peaceful" as only a confirmation of the prohibition of the use of force in outer space needs to be overcome. The solution lies in interpreting the term "peaceful purpose" in light of both the mankind clause of the common heritage of mankind principle and the cooperation principle as applied to the security field as well as by developing legal standards of peaceful use of outer space in the interests of the international community as a whole.

State practice, including the annual resolutions by the UN General Assembly on preventing an arms race in outer space since 1981, bears evidence that the international community has so far only accepted passive military uses of outer space by *reconnaissance*, navigation and communication satellites but rejects the unilateral transgression towards active military uses with destructive effect in the common space.

Steps to deploy a multilayered missile defence with space-based interceptors would violate the peaceful purpose standard and the mankind clause if pursued unilaterally and without the consent of the international community. The objective of space-based Missile Defence which, according to the *US National Missile Defense Act* of 1997 is to protect against

unauthorized nuclear attacks and against limited nuclear attacks of the so called 'rogue states', need to be implemented in the framework of a cooperative security regime for outer space. Otherwise, they will cause an arms race in space and stimulate nuclear proliferation on Earth.

In its advisory opinion of 1996 on the *Legality of Nuclear Weapons* the International Court of Justice concluded that the obligation of the nuclear weapons powers to achieve complete nuclear disarmament according to Article VI of the Nuclear Non-Proliferation Treaty (NPT) is an obligation to conclude, and not only to negotiate, a nuclear disarmament and non-proliferation agreement. The UN General Assembly has expressly stated that the obligations of the NPT apply to outer space as well. The unilateral pursuit of a space-based missile defence, with the risk of the weaponization of space, would run counter to the disarmament obligations of the nuclear powers. The bilateral Anti-Ballistic Missile (ABM) Treaty that prohibits the development and deployment of space-based ABM systems implemented the multilateral peaceful purpose standard which has effect *erga omnes*. Therefore, after its renunciation, the ABM Treaty has to be replaced by new cooperative security arrangements safeguarding the security interests of the international community in the use of outer space for the benefit of all mankind.

In the face of the changing character of security threats, “common security” is the new strategic imperative of the post-Cold War era. Even though general international law contains on several accounts the foundation for "common security", it cannot yet be regarded as a mandatory legal principle. However, the enhanced "common interest" obligations of the Outer Space Treaty render the pursuit of cooperative/common security in outer space a legal obligation in the implementation of the peaceful purpose standard in the use of the common space in the interest of all states and mankind as a whole. The Joint US-Russian Declaration adopted at the American-Russian summit of 23rd/24th May 2002, according to which both sides agreed to a far-reaching cooperation to meet *common security* challenges, in particular with regard to questions related to the national missile defense issue, opens the prospect that the former rivalling powers are willing to embark on a cooperative *strategic transition* towards *common security*. Without such a cooperative approach and without an adequate multilateral framework safeguarding the security interests of the international community with regard to the use of outer space, the legal principle of the peaceful use of outer space risks loosing its practical relevance as a limitation of military uses of extraterrestrial space in view of developments *de facto*.

The negotiation of a multilateral “Treaty on Common Security in Outer Space” (CSO-Treaty) as proposed in this book would be an appropriate institutionalisation of the peaceful purpose standard and the mankind clause as manifested in the Outer Space Treaty. Such a treaty would additionally lay the groundwork for a cooperative strategic transition towards rendering nuclear deterrence obsolete, thus replacing "Mutual Assured Destruction" by "Mutual Assured Security". Further adoption of "strategic reassurance measures", as stipulated in such a treaty, would keep outer space free of weapons and allow for an active non-proliferation policy of the international community.

The main elements of such a CSO Treaty can be categorized as follows:

1. Principles of cooperative security in outer space
   - Transparency and confidence-building
   - Defensive force configuration
   - Non-proliferation and disarmament

- Protection against unauthorized and accidental missile attacks and attacks in violation of non-proliferation regimes

2. Prohibition of active military uses of a destructive effect in outer space
3. Destruction of existing ASAT systems
4. Confidence-building measures
5. Protective regime for civil space objects and passive military uses of a non-destructive nature in outer space
6. Implementation: monitoring und verification by an International Satellite Monitoring Agency
7. Codification of further legal standards of peaceful use of outer space.

The international community should not fall behind the peaceful purpose standards in the use of outer space that were respected by both major space powers even at the height of the Cold War era. The Outer Space Treaty, with its mankind clause and the peaceful purpose standard, has in a far-sighted manner laid the foundation for the establishment of a regime of common security in outer space in order to prevent the transgression towards active military uses of a destructive nature in outer space and to secure a peaceful future in the common space.

Publications by the author on the topic:

"Common Security in Outer Space and International Law" (2006) by *Detlev Wolter,* UNIDIR, Geneva. An extensive study of the concept by the author was published in Germany by Duncker&Humblot:

Detlev Wolter, Grundlagen "Gemeinsamer Sicherheit" im Weltraum nach universellem Völkerrecht, Berlin, Juni 2003, 578 pages