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First Considerations for a Practical Handbook to New Space Activities Regulators

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Introduction

With the adoption by the United Nations General assembly, on December 11, 2013, of a resolution bearing recommendations on national legislation relevant to the peaceful exploration and use of outer space, States have achieved a first level in the standardization of norms implementing the United Nations outer space treaties.

The identification of 'building blocks', as highlighted notably Project 2001 Plus, by the Institute of Air and Space Law of the University of Cologne and the German aerospace Center (DLR),[1] has provided precious elements for the drafting of national laws and regulations, allowing a certain degree of interoperability through national legal systems disparity and various interpretations of international instruments.

Since the beginning of the XXIst century, many States throughout the world have adopted space legislation. This type of initiative is not limited anymore to big space faring nations or to those who need to regulate a specific area of activities carried out on their territory (e.g. Sweden, Norway). Although space business has been historically anchored in countries disposing of large infrastructure for launching and monitoring spacecraft, the democratization process of space activities (privatization of activities and services, affordability of technology, accessibility to the market) has led to a migration of new space actors from from outside the traditional space-business areas. This was the case with Belgium, a country genuinely committed to scientific and technological research and development, mainly through the European Space Agency, but

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1 *Global and European Challenges for Air and Space Law at the Edge of the XXIst Century – Workshop Proceedings Volume IV: National Space Legislation*, Eds. Hobe S., Schmidt-Tedd B., Schrogl K-U., Cologne, June 2004.

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without operational capacities (no national ground infrastructure, no national satellite until 2014). With the growing role of private entities in the space operation sector, including as providers of institutional services, Belgium fount itself in the position of a State hosting activities to be regulated under the provisions of the United Nations outer space treaties. For instance, in the years 2000, Belgium was susceptible to qualify as a 'launching State' by the simple fact of the establishment, under Belgian law, of the Galileo Joint Undertaking, a public-private entity in charge of the in-orbit validation of the Galileo navigation system. The example of Dutch-based entreprises taking over the operation of foreign in-orbit systems (Intelsat satellites by New Skies Satellites n.v.) or considering the possible commercial exploitation of the MIR station (MirCorp) was another strong incentive for the Belgian Government to adopt a space legislation. This was done in 2005. Since then, other European States in a more or less similar situation have developed their national space law (e.g. The Netherlands, Austria, Denmark).

The new wave of space legislation in Europe is particularly interesting to review, first because those laws address issues specific to the democratization of outer space, and secondly because they have to tackle such issues in the context of European law. Even though the Treaty on the Functioning of the European Union explictly excludes space regulation from the competences of the Union, other integrated policies, such as those under the Single Market chapter, impose to Member States a smooth and careful approach of their legal intervention in the space sector. After all, space activities are economic business and, as such, benefiting from the basic freedoms guaranteed by the European Union.

European law is not the only framework that lawyers have to bear in mind. First of all, a space legislation / regulation has to fit the existing legal fabric within which it will apply. Administrative law, environment law, economic law, civil law, even criminal law will form, by reference, the tentacules of the space law apparel. Aside of the purely legal considerations, administrative technic appears not only as the instrumental layer for the effective implementation of the law, but also as a cement ensuring a solid cohesion between the different pieces of law applying to space activities.

Just as the identification of 'building blocks' or the recommendations for the design of national space legislation, the purpose of this paper is to address the administrative and practical requirements at the level of the implementation of such legislation, and the relevance of compiling into a handbook the expertise and experience continuously developed by practitioners in that domain. That result could serve as a support for new space regulators. The paper also highlights issues which should be considered by executive entities or organizations in charge of implementing the legislation / regulation. Finally, the paper addresses the question of how the expertise and experience gained through the job could be reported and serve in updating the handbook.

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I. Domestic Aspects

1. Nature of the National Regulatory Instruments

Article VI of the 1967 UN Outer Space Treaty (UNOST) imposes to States to authorize and continuously supervise non-governmental activities in outer space. The authorization and the supervision, althought considered as two distinct phases, are coupled by the provision of the Treaty: the State authorizing the activity is supposed to ensure its supervision. As logical as it may sound (the supervision must, among other purposes, help verifying the compliance of the activitiy with the authorization), the idea of having different States in charge of the authorization and of the supervision cannot be discarded (see further).

The fact that the implementation of Art. VI of the Treaty at national level is often referred to under the thematic of 'national space legislation' doesn't imply that all countries need to adopt new laws in order to fulfil their commitments under that provision. It cannot be excluded that existing laws might serve as a legal umbrella to adopt regulatory measures for space activities, for instance whenever space activities are considered as a sub-genre of aerial activities. In other case, national administrative law provides a sufficient basis to allow governmental authorities to deliver authorizations and ensure supervision.

Nonetheless, some provisions of the regulation of space activities call for a particular attention when it comes to the legal basis. This is the case, for instance,

- with provisions dealing with the collection and/or the handling of classified or sensitive information;
- with the access to premises or areas, including private property;
- with liability / compensation of damage caused by the activity, including the operation of the space object. It must be recalled that the international liability only concerns States parties to the treaties and bears no obligation for non-governmental operators. Therefore, apart from general liability law, no obligation exists under international law for the operator to compensate the damage. National space laws have to establish such an obligation;
- with provisions establishing criminal sanctions applicable to violation of the law ('*Nulla poena sine lege*').

On the other hand, some provisions, mechanisms or procedures need to remain at executive level in order to guarantee sufficient flexibility and reactiveness to policy makers and to the administration.

For instance, the identification of technical standards applicable to the activities under authorization may be left, to a large extent, to national regulators, so that references can be easily updated in accordance with

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international norms. Insurance coverage obligation may also be subject to executive appreciation, taking into account the reality of the space insurance market.

2. Scope of the National Space Law

Introductory remarks

Art. VI UNOST requires a national authorization and continuous supervision regime for activities carried on in outer space by non-governmental entities. Thus, although activities of governmental agencies fall under the international responsibility of States, they are not required to be subject to the said regime. According to some opinions, this distinction between governmental and non-governmental entities establishes the absolute character of the international responsibility under Art. VI of the Treaty. To make it short, whatever they do or not, States are responsible for their activities in outer space. This interpretation is logically coupled with the extensive interpretation of Art. VII of the Treaty and the liability of the State 'procuring' the launch for the damage caused by the object and this is in line with the text of the first sentence of Art. VI of the Treaty, which provides for the responsibility of the State for the national activities in outer space *and* for the compliance with the Treaty. This juxtaposition seems to imply that, independently from the question of the (non-)compliance, the State is to be held internationally responsible for its national space activities.

Another opinion about Art. VI of the Treaty is that the international responsibility for national space activity is a specific expression of the general principle of the State's international responsibility under international public law. According to this interpretation, the first sentence of Art. VI must be read not only in the context of the whole provision (which forms one solid block), but also in the wider context of the Treaty itself. Instead of making States responsible for anything that could happen, the Treaty sanctions the violation of its provisions including the compliance with international law, notably the United Nations Charter. The main focus of Art. VI is to establish not so much an obligation to repair, but rather an obligation comply to with applicable norms. This doesn't exclude, in a secondary phase, compensation claims by the State victim.

Another remark about the first part of Art. VI UNODST is the the distinction made between activities of non-governmental entities and activities of governmental agencies. The distinction is done at statutory level between entities carrying on the activities, and not between the activities themselves. Hence, governmental activities carried on by a non-govermental entity on behalf of a Government do require an authorization and a continuous supervision. The distinction appears to be based on the fact that the Treaty could not impose to States how to monitor and to control their governmental

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organisations. By contrast, compliance by non-governmental entities which, by definition, are not parties to the Treaty and not directly bound by its provisions, remains under the legislative responsibility of the States parties.
Another question in relation with the interpretation of Art. VI of the Treaty as establishing an absolute responsibility for States independently from the compliance obligation, is the question of the scope of that responsibility. If States can be held responsible for their national space activities even when no violation of international law has been demonstrated, then what would be the limits of such a responsibility? Moreover, what would be the purpose and the interest of the international liability of Art. VII of the Treaty? In that context, what would be the point of requiring an authorization and continuous supervision regime from Governments?

Activities to Be Regulated

Those introductory remarks reflect an old discussion among space law scholars, and their sole purpose is to enlighten lawmakers in opting either for a comprehensive law including activities performed by governmental agencies, or for an exclusive regime dealing only with activities by non-govermental entities. In principle, an authorization cannot be granted to oneself. However, some examples of international legal instruments or mechanisms show the opposite. For instance, under the provisions of the 1991 Madrid Protocol on the protection of the environment in Antarctica, activities organized by governments themselves are subject to national permit. In practice, those permits are delivered by governmental authorities in charge of environmental policy, under the responsibility of the competent minister. Those permits constitute formal authorization delivered by one State department to another, but they also guarantee the compliance of the planned activities with the provisions of international law. The fact is that the 'authorization' as meant under Art. VI of the Treaty must be understood as an administrative act which, therefore, follows the same requirement and procedure as any other administrative decision. This notably includes the principle "*Nemo judex in causa sua*" according to which no one can be the judge of its own cause. This principle implies that the delivering authority must be independent from the requesting party, which is not *a priori* the case among the various members of a Government bound by the principle of political solidarity. Therefore, it could be difficult to put on equal footing the authorization delivered to a private company and the one delivered to a fellow minister, unless the regulatory authority enjoys full independence from the Government itself. In the latter case, the setting up of an independent regulatory body will certainly incur additional cost compared to a regular space agency' or administrative department (own structure, dedicated functioning resources, etc.), but, in return, it would allow to put governmental and non-governmental space actors on equal status from a regulatory point of view, favorizing a sound economic environment for the development of the space sector.

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In any case, be they subject to governmental policy or to legal regulation, governmental entities must fully comply with international law and derived norms. Compliance review must be carried on independently from the project and the mission, and with reference to appropriate standards meeting international requirements.

3. Who's in Charge?

The question of the authority in charge of implementing the space regulation is necessarily linked to the institutional framework to which the State has entrusted its space policy.

In countries with a national space agency, it seems logical to consider such a role to be played by the body in charge of space policy and/or space activities. Nevertheless, the administrative regulation of an economic area is a competence *per se*. Although the technical expertise related to space science and technology is indispensable, the job calls for a good knowledge of legal aspects. Furthermore, as pointed out above, it must be clarified whether the national space agency will or not be itself subject to the regulation, in order to avoid conflict of interests at structural level.

On the other hand, the solution of an administrative authority (ministry) must be assessed with respect to the accessibility and the availability of technical expertise. Such expertise must indeed be practically accessible (in-house, national or international), at reasonable cost and present the guarantee of impartiality with respect to the activity for which the authorization is asked.

All in all, the mission of the space regulator cannot be improvised. It must be consolidated on the basis of appropriate technical competence (both legal and technical) and at an appropriate level to ensure a sufficient degree of independence. The organic structure through which the mission is to be implemented doesn't matter as long as the functional organization allows the necessary degree of independence of the regulatory authority. This independence requires for instance that a national space agency in charge of the regulatory mission does not participate through its programmatic channels (e.g. R&D department) in the activity to be authorized and supervised. However, participation through financial contribution could be considered as non-conflictual with the regulatory mission if proportional, transparent and objective criteria are defined by the law or the regulation to allow activities with limited public funding to be subject to the regulatory authority of the funding agency.

Another issue about identifying the authority in charge of authorization and supervision of space activities is the option for a single-desk policy. Space activities need to be regulated under the provisions of the outer space treaties, notably to ensure their full compliance with their provisions as well as with derived or subsequent norms, including the United Nations General Assembly resolutions. But they also fall under other legal or regulatory norms:

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telecommunications law, protection of information, export & trade, etc. Those latter areas are generally managed by distinct authorities with historic competences (see radio regulation). It is therefore very difficult to envisage a centralization of all regulatory competences in the hands of one single authority, especially a newly established one. That being said, considering the growing role of 'non-traditional' space industry, the idea of a single-desk support for all applications and procedures in connection with the activity should be considered. Electing a national point of contact for the filing of the application and for providing support could facilitate the process, without jeopardizing the existing competences of the various authorities involved. In all regulatory areas, the specificities of the space domain could be tackled by the point of contact, either to the competent authorities or to the applicant.

4. Authorizing and Supervising: From Compliance Checking to In-Depth Technical Review

If we consider the 'authorization' as meant in Article VI UNOST as a legal title, it must be delivered on the ground of established criteria. The review of the compliance with those criteria might substantially vary from one regulatory system to another. Under the Belgian space law[2] for instance, the regulator verifies the compliance of the activity with the norms of reference on the sole basis of the technical description provided by the applicant. Although the law allows inspections of the applicant premises, facilities and documentation, the authorization is granted on the assumption that the application reflects the reality of the activity. That assumption is based on the fact that the first person interested in the compliance is the applicant himself, considering the limitation of liability provided by the Belgian space law. On the other hand, failure to provide correct and complete information relevant for the authorization results in the applicant's full liability in case of damage. However, in the case of very complex missions or whenever the norms of reference are subject to discussion with respect to a particular activity, the Belgian authority has the means to submit the application to technical review by an independent expert.
In countries with national space agencies, the technical review of the activity under application might imply *in situ* inspection, testing by simulation and application of specific quality norms to the industry. All in all, if in-depth review process might be justified for complex or hazardous activities (e.g. involving nuclear power source or human transport), it must also be noted that the responsibility of the authority, and thus of the State, becomes higher. The legal justification for granting or denying the authorization also becomes more complex given all the parameters to be reviewed and the need to translate technical appreciation into legal argumentation.

2 Loi du 17 septembre 2005 relative aux activités de lancement, d'opération de vol ou de guidage d'objets spatiaux.

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In any case, authorizing and supervising space activities just can't be done by lawyers only. It is a very complex job which calls for expertise from various horizons. If the regulatory authority doesn't dispose of the appropriate technical expertise internally, specific arrangements must be foreseen in the law to allow external support from an independent expert. Such expertise can come either from foreign or international agencies, or from the national industry or academies to the extent that the expertise is commonly ackowledged and that the expert are not compromised in any way in the activity under review.

An important distinction needs to be done between licensing systems and authorization systems. In principle, the license is a title delivered to a natural person or a company whose ability in a peculiar field is acknowledged. In countries with industries dedicated to space operations or services, licensing might provide a solution for establishing and maintaining a good level of professional skills and capacities and facilitate the authorization process which focuses on the activity itself.

The fact that current space activities appear quite diversified with respect to the type of operator, their purpose, their business model, makes the regulation work even more complex and, at the same time, crucial. Launching an object in outer space has become, to some extent, more affordable, more accessible, safer and technically easier. While Governments might define and implement policies to make such an entreprise worth the effort and the investment, it is not sure whether they should *regulate* the actual purposes of each activity. Some people tend to think that sending in orbit a cubesat designed by students is nothing else than adding one more piece of debris to the space junk. Other claim that outer space shouldn't be monopolized by big companies or historic operators. That issue is at the very core of national space law: by extending the regulatory review to the functionality of the spacecraft, its technical capacity to perform its mission (e.g. quality of transponders, structural integrity resistance, etc.), State may be able to intervene into the project policy and therefore operate a pre-selection of activities with respect to the functional quality. This goes beyond the review of compliance and safety that is induced by the outer space treaties and traditional space law. According to what one could describe as a 'traditional *bona fide* interpretation' of the provisions of the 1967 UN Outer Space Treaty, States should make sure that the object they launch in outer space are not put on a trajectory where they would collide with other objects, that it does not fall back on Earth and that it does not cause harmul interference (in the largest meaning of the term) with other ongoing space activities. This interpretation does not include ensuring the sustainability of the systems and the guarantee for a succesful mission. Step by step, qualitative criteria have been included in national policies and, therefrom, in some national regulations. Quality seems to have been associated to a more sustainable use of outer space, moving the responsibility of State from avoiding or preventing bad things to happen towards making sure good things actually

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happen. And that responsibility has become a joint commitment of Governments and industry.

5. Registering and Notifying

With the adoption of the United Nations General Assembly Resolution 62/101 of 17 December 2007 bearing recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects, a new era has opened for national space objects registrars. The information to be managed were until then those specified under the provisions of the 1975 UN Registration Convention (UNRC) and were rather basic: the designation of the object, the date and the place of launching, the orbital parameters (nodal period, inclination, apogee, perigee) and the general purpose of the mission. Those were the only elements required to characterize the object and to be formally notified to UNOOSA, together with appropriate updates and any additional information provided by the State on a voluntary basis.

Again, it must be emphasized that the Convention only specifies the information which needs to be notified to the United Nations Secretary General's office. It is explicitly provided that the content of the national registry is left to the sole appreciation of the State concerned. This is an important fact, considering the *national registration* is the act by which the State of registry extends its jurisdiction and control over the object. In other words, elements specified under Article IV.1 of the 1975 UN Registration Convention are not necessarily those featured on the national register. In practice, it seems reasonable to consider that the national register must feature those basic elements, together with additional information about the object, the mission, the operator and/or the owner. To that extent, UNGA Resolution 62/101 has cristallized existing practices and strengthened the relation between the international notification and the national registration.

The recommendations of 2007 pursue a triple objective: (a) to ensure a better uniformity of data provided by States, (b) to collect more relevant information in a spirit of better cooperation, but also for a better management of space activities, (c) to foster adequate arrangements between co-launching States in ensuring a proper registration of the object. Those objectives can be seen in the line of the previous UNGA resolution (Resolution 59/115 of 10 December 2004 on the application of the concept of Launching State), especially to the extent that both instruments address the cases of joint launching and in-orbit transfer.

According to the UNGA Resolution of 2007, the State of registry is encouraged to provide information using unifomized format and units:

- a designator on the model adopted by COSPAR (International Committee for Space Research),
- UTC time reference,
- metric references.

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Moreover, the State of registry is invited to provide additional information in complement to those featured in the Convention:

- any information the State considers as useful or relevant about the object or the mission,
- GSO position if applicable,
- any change of orbital status (beyond those specified by the Convention),
- indicative expected time of decay or reentry,
- positioning on disposal orbit.

The UNGA Resolution of 2007 is also an important step in constituting a network of focal points and official websites among States, indirectly encouraging them to enter into a direct administrative cooperation. Indeed, despite the substantial interests at stake, any observer of the space regulation practice will notice the relative absence of collaboration, or even systematic contact, between national authorities involved in a joint activity. While intergovernmental cooperation often provides the necessary framework to address regulatory issues, it is not the case for private projects. The participation of non-governmental entities in a foreign or joint project or activity doesn't systematically involve their respective national authorities, making it sometimes difficult to manage regulatory aspects afterwards.

An early task of the national regulator in the authorization process is to collect relevant information from the operator. The law may provide for specific elements to be communicated in support of the application, but considering the specificities of each activity undertaken, it is likely that it should also take into account the need for *ad hoc* information or documentation. Such requests for additional information may have a sensitive character with respect to administrative law. Although the discretionary power of investigation of the administrative authority may be justified to a certain point considering the type of activities concerned, the general principle of equal and fair treatment must be effectively guaranteed. This principle must be kept in mind for instance while checking the financial capabilities of applicants. An equitable degree of investigation must be ensured. Another 'temptation' for national regulators could be to take into account geostrategic or economic aspects in formulating their decision, for instance by influencing the use of launch services from a certain country rather than another. This is not the purpose of space regulation. Unless the recourse to certain technologies or services is legally prohibited, strategic or economic policies should not be imposed through the authorization process.

Finally, another sensitive issue is the handling of private information by the national regulator. In many cases, the information provided together with the application is the property of the applicant or of third parties. To the extent provided for by the law, this information might become public for the purpose

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of ensuring transparency. Protection of sensitive material (sometime classified) or intellectual property rights must be guaranteed by the law. In this respect, it is recommended that national space legislation and regulation do not derogate to existing provisions on the protection of information or intellectual rights. That being said, it must be understood that the 'democratization' of (non-governmental) space activities goes along with the necessity to apply the principles and standards which rule modern administrative processes, including the principle of transparency. In a world where the citizens are expected to become actors and makers of their own environment and life, it seems logical and reasonable to allow them the greatest access possible to relevant information. That concern now includes space activities. Nevertheless, it belongs to the policy of each Government to determine to which extent such a transparency requirement remains compatible with the contingencies of the space business and its regulation.

Notification of national registry's entries to UNOOSA has been made considerably easier to handle for national regulator (and probably for the UN Office as well) since the use of a dedicated form published online. This idea was part of UNGA Resolution 62/101. A next step in that direction of uniformisation could be the adoption, by UNCOPUOS, of a model form proposed to States and to be used to collect information from the applicants. This idea was superficially discussed in the frame of the UNCOPUOS Working Group on National Space Legislation. Obviously, the use of such a model would be on a voluntary basis by each national regulator, but it could facilitate exchange of information and help harmonising practices, especially among States involved in the same activity.

6. Time Management

In space activities business, time represents an odd factor. Launch and positioning are calculated to the second, while projects may be subject to delays of several months. Experience shows that, just as definition, development, validation or in orbit testing phases, the regulatory phase must be integrated in the project calendar from its very beginning. That phase must be interpolated neither too late nor too soon, but it must definitely be taken into account in the early design of the mission. The technical characteristics of the spacecraft, the onboard technology, the duration of the mission, the launch opportunities are among the parameters that will determine the regulatory process. Therefore, this 'passive' (or 'anticipative') implementation of regulatory norms requires full awareness from the project management because, once the regulation has entered its 'active' phase, it is likely too late to perform any substantial design modification if required.

The duration of the regulatory procedure, including the administrative handling of the application and technical investigation, is also a key factor. Legal deadlines may vary from one State to another, but they must fit the

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natural process of the activity, taking into account the time required to collect information, to negociate contracts and to obtain firm dates (e.g. launching). Fast procedures may also be considered, especially in States where a license can be delivered to operators with recurring activities.

II. International Aspects

1. Arrangements with Other States Involved

The development of non-governmental activities, especially in the frame of small and medium-size projects, has highlighted the need for intergovernmental agreements and arrangements. Those were already envisaged and recommended by the United Nations treaties and resolutions, but, quite often, the provisions dealing with regulatory aspects were, tacitly or explicitly, included in intergovernmental agreements which govern institutional cooperation. With the ability of (new) space actors to enter into direct relations for the purpose of implementing a joint project, the issue is now how governments can follow up and take appropriate arrangements, preferably in advance, to deal with the legal aspects related to such activities.
From a regulatory standpoint, intergovernmental arrangements in the case of joint launches must address three main issues: authorization and licensing, liability apportionment and election of State of registry.

(a) Authorization and Licensing

The first issue to be covered is the application of the respective national laws and regulations. Several situations can be envis aged as States involved have or not a space legislation. Conflicts of laws must be addressed in the cases where the criteria of application of the national law are not exclusive of those of the foreign law (e.g. definition of 'operator'). The fact that Article VI of the 1967 UN Outer Space Treaty only foresees one single 'appropriate State' to deliver the authorization and ensure continuous supervision of the activity is not the only reason why double authorization should be avoided. Such a situation would end up with the probability of conflictual authorizations and would result in a legal uncertainty, both for the operator and for the States. Therefore, bilateral arrangements dealing with that issue are a must.

(b) Co-Launching State(s)

The 1972 UN Liability Convention also provides for the possibility for States involved in the same launch as 'co-Launching States' to decide upon a specific apportionment of their respective obligations in the liability execution. Such arrangement may also provide for a financial contribution from one State to another in case of activation of the international liability for a damage caused by a space object, but not on the basis of its capacity of launching State.
Until now, it must be noted that launching States agreement or arrangements are quite seldom. Most of the time, nothing specific is provided for at

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intergovernmental level (leaving the by default apportionment ratio of 50%/50% applicable). In certain cases of institutional cooperation (e.g. ISS), States have concluded a waiver of liability. However, such arrangements do not really respond to all scenarios that may occur if a damage is caused by the object.
The fact is that the space liability has not appeared as a real matter for concern among States until now and remains somehow misunderstood. It is therefore difficult to advise national regulators on how to actually deal with international liability at the level of its implementation.

(c) Election of the State of Registry

The issue of the State of registry has unexpectedly become a complex one with the rise of cubesat projects. Article VIII UNOST doesn't indicate how the State of registry must be designated. It only deals with the consequences of the registration. Those must not be underestimated: retaining jurisdiction and control over a space object may be a question of national sovereignty. Under Article VIII UNOST, the registration is a source of international obligation, but also of national prerogatives. Prestige of 'flying the national flag' also comes to mind.
The criterion to designate to State of registry is actually to be found in UNRC. Quite simply, the State of registry must be the launching State. In the case of multiple launching States, it is up to them to elect the one which will serve as State of registry. Logically, this should be the State exercising the authority over the activity, that is the 'appropriate State' in charge of authorization and supervision under Article VI UNOST. But nothing prevents co-launching States to elect a State of registry which is not in charge of regulating the activity (i.e. authorizing and supervising the activity, or licensing the operator). In such a case, a tight collaboration will be necessary between the State of registry and the State of authorization considering that the object itself will be placed under the jurisdiction and control of the former while the operator and the activity will remain under the authority of the latter.

2. Foreign or International Technical Support

As previously mentioned, technical support for the implementation of duties and tasks related to the regulation of space activities may be provided by non-national partners. For countries which do not dispose of technical review or validation capacities, specific agreements may be considered with foreign or international institutions. This is how specific agreement has been concluded between Belgium and ESA in order to allow the Belgian regulator to submit the technical aspects of applications (in the most complex cases) to ESA according to the terms of ESA services to third parties.
The technical review is not the only area where external expertise may be requested by a State. The tracking of the object in orbit requires capacities that

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only a few space faring nations have developed. Belgium, like several countries or organizations, has entered into a non-binding cooperation agreement with the United States of America to allow a swift exchange of data on the operation and the real-time tracking of spacecraft in orbit.
It is particularly recommended that national regulators enjoy the legal or administrative capacity to conclude or to implement such agreements which constitute an operational support to their administrative tasks.

III. Conclusion

With the adoption of the UNGA Resolution on national space legislation and the multiplication of national laws in that rather unknown domain, experience and expertise appears more and more valuable. Exchange and sharing of information have already started, both in formal and informal processes. Lessons learned, considerations for the future, new aspects are subject to discussion on multilateral and bilateral basis.
Guidance is needed by space operators, especially newcomers, in order to raise awareness on space law and regulation. It is also needed for governmental departments or agencies which are entrusted with the implementation of national space legislation.
The focus must not be limited to space law, the treaties and resolutions, but must also take into account the peculiarities of domestic administrative and economic law. The regulatory level goes deeper than the legal review of space law principles. It includes a depiction of and, hopefully, a solution, for every detailed question that regulators are susceptible to face in their job. Because that's within those tiny details that the interoperability of national laws and, eventually, the integrity of space law, are to be achieved.
Therefore, we envisage the pratical handbook for space regulators as a living document, compiling periodic inputs, testimonies and suggestions from national regulators towards national regulators, but also to the attention of lawmakers with the view of constantly improving legislation dedicated to the space business and of continuously improving the quality of regulation.