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REPORT ON CHANGES IN SPACE LAW IN ITALY- PROPOSAL OF A DRAFT LEGISLATION

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Abstract

The paper considers Italian laws of ratification(execution orders) of the Outer Space Treaty and on the Agreement on Rescue, underlining the commitments undertaken by Italy which must be more clearly specified in a future implementation law. The paper also analyses the Italian ordinary ratification law of the Convention on Liability, describing its contents, and the delayed, but soon to be approved by Parliament, law for the ratification of the Convention on Registration.
After describing the contents of the recent law concerning the reorganisation of the Italian Space Agency, the paper concentrates on a suggestion for a more complete national space law draft. In the light of the guidelines in the White Paper for a European space policy and in harmonisation with other European laws we have tried to describe which elements should be inserted in the law in order to comply with international commitments.

1. Italian Legislation for the implementation of UN Conventions on space law

a) 1967 Treaty on principles governing the activities of States in the exploration and use of Outer Space, including the Moon and other celestial bodies

The Treaty[12], in force since Dec. 18th 1969, has been ratified by 97 countries[3]. Italy ratified the Treaty by law on January 28th 1970[4], depositing the ratifying instrument on may 4th 1972[5], and since this date the Treaty has been in force in Italy.
The ratification law consists in an execution order because the Italian legislator refers directly to the Treaty in the adaptation law, filling the latter with its contents. The obligations included in the Treaty are directly instilled in the Italian order and both governmental and private entities must comply[6].
Without analysing the well known contents of the Treaty, I would rather consider the legal implications of the Treaty in the Italian order.
The four main principles in the framework Treaty or space law constitution treaty: - exploration and use of space for the benefit of mankind, - freedom of exploration and use of any area of Outer Space by all States on a basis of equality and in accordance with international law, - Outer Space and other celestial bodies not being subject to national appropriation by claim of sovereignty, by means of use or occupation, - State liability for damage caused by a space object, even if

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consequent to a lawful behaviour such as the exercise of space activities, are now part of our law and must be respected by governmental and private entities.

Furthermore, if the first three principles are now customary rules in space law, they are even more binding in the Italian State, due to the general international law adaptation occurring on a constitutional level, in accordance with art. 10, comma 1 of the Constitution[7]. Another principle, specific of space law and opposed to the normal procedure of international law, is the principle in art. VI of the Outer Space Treaty stating that States party to the Treaty shall bear international responsibility for national activities in Outer Space whether such activities are carried out by governmental agencies or by private entities. This responsibility, in the English sense, means that States are required to carry out authorisation and continuing supervision over activities concerning their jurisdiction[8]. The principle is especially important because it strongly influences internal implementation regulations.

b) Agreement on the rescue of astronauts, the return of astronauts and the return of objects launched in Outer Space (April 22nd 1968)

On December 5th 1975[9], by presidential decree, Italy ratified the Agreement, depositing the ratification instrument on march 31st 1978[10]. The ratification law is an execution order wholly referring to the contents of the Agreement.

The danger and the relevant value for mankind of space activities have contributed to the formulation of a definition for astronauts as **"envoys of mankind"** (art. V of the OST) in order not to deprive the subjects of their nationality and to grant them a "super-national" status. However, experience has shown that astronauts, even those in international crews, are representatives of their country and cannot be subject to other legal obligations than those expressed in the OST and in other space law sources. The expression "envoy of mankind" is to be considered within the context of assistance and rescue operations to which countries are bound by their ratification oft the OST and the rescue Agreement and not in view of the fact that these subjects face greater risks in carrying out activities for the benefit of mankind.

In space law, despite the specific Agreement on rescue, regulations on astronauts are not complete or homogenous. The preparation and carrying out of inhabited international flights involve a series of legal problems concerning the crew, which must be specifically faced by national and international regulations. The Agreement stipulated by States participating in international flights have supported the development of more specific regulations. In particular, the regulation issued in occasion of the joint launch of the Spacelab on the shuttle and the Agreements among parties for the realisation of the International Space Station, in whose programme Italy participates as a member of ESA. The **code of Conduct** established by States partners in the ISS is a first example of international law on subjects such as crew conduct, the extension of the Commander's authority, hierarchical relations in orbit and responsibilities in flight and on ground. These rules contribute to the creation of a "status" of the astronaut, a figure which was romantically considered as an "envoy of mankind" and is now bound to specific rights and duties[11].

A final observation is necessary on the subject of jurisdiction over astronauts. The principle of "quasi territoriality" to determine which State is to hold jurisdiction over astronauts seems to be prevailing over the principle of "nationality". Art. VIII of the OST follows the principle of territoriality when stating that "a State party to the Treaty on whose registry an object launched into Outer Space is carried shall retain jurisdiction

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and control over such object, and over any **personnel** thereof, while in Outer Space or on a celestial body". The Intergovernmental Agreement stipulated among States partners in the ISS adopts both criteria in art. 5.2 when stating that each element is under the operate jurisdiction of the launching States which have registered the element, these however extend their jurisdiction over personnel within or on the space station being their nationals. This could lead to possible regulation conflicts on the permanent station base, made up of more elements, inhabited by more people, of different nationalities, living and working together.

In practice the constitution of a European Astronaut Corps[12] by ESA according to which individual nationality of astronauts will only hold honorific[13] and not legal value. And the application of the code of conduct uniforming rules, lead to consider the criterion of "quasi territoriality" as prevailing. Such a choice is reaffirmed by national laws in different countries operating in space and by the rules adopted to regulate specific situations for astronauts, such as for the "space tourist" who could at times no be a national of a partner State and for those astronauts operating in extra-vehicular activity[14].

C) Convention on International liability for damage caused by space objects (march 29th 1972)

Up to January 1st 2003 the Convention has been ratified by 88 countries. Italian law n. 23 dated January 25th 1983 issued the internal application rules of the Convention on liability[15], with an adaptation which, contrarily to the previous Conventions, is not receptive but ordinary. The law modified, albeit only in part, the strength of the Convention and we shall briefly analyse these variations and suggest eventual further legislative interventions.

The Italian law is made up of six articles and it is applicable, as specified in art. 1, in the event of damage caused by space objects launched by a foreign State party of the Convention. In accordance with the Convention it is not applicable to damage caused by objects for whose launch the Italian State has been party or owner.

International responsibility of organisations is also excluded. In the event of damage caused by an international organisation, the request for compensation by the Italian State cannot be first presented to the organisation, which as established by the Convention is solidly responsible with the other States partners in the Convention itself, but only to the State from whose territory the launch took place, considered as a "launching State" in partial actuation of the Convention. .

Instead, the law guarantees the Convention more strongly when establishing that responsibility of the Italian State is of an objective nature and dies not admit a releasing evidence (art. V, comma 1). Therefore one must conclude exclusion for cases concerning exemption from absolute liability, as established by art VI of the Convention in the event of gross negligence or intentional damage by the State, or by persons it represents, which contributed to cause the damage except as a consequence of illegal behaviour, in accordance with international law and space law, by the launching State.

However, liability for fault is also excluded, as considered in art. III of the Convention for damage caused in Outer Space to another space object or people or property on board such object. The Italian State, besides taking on the heavy onus of compensation without proof of damage also for damage in Outer Space, does not follow the double responsibility regime established by the Convention. An absolute objective liability only for damage caused (despite all precautions undertaken by the launching State when sending objects into Outer Space) to passive third parties, third parties on ground or aircraft in flight who do not profit from space activities but are only exposed to the risk of damaging consequences, exempting them from a

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proof of damage which could hardly be reconstructed or which could even not exist at all. However, should the victim lose its extraneity because it also carries out space activities and therefore accepts the risks, the regime changes and is based on liability for fault. We hope that the legislator will revise its position or clarify the intention to generalise all kinds of damage in a system which becomes extremely relevant on the financial side for Italy, contrarily to what has been expressed by other partners in the Convention.

The Convention does not concern individuals directly, this is taken care of by the implementation law integrating the discipline in the Italian order. A greater protection is offered to Italian citizens, in fact the conditions established for the claim presentation differ from those established for foreigners. Art. 2 States that juridical or physical persons may obtain damage compensation from the Italian State within the limit of the amount that Italy has requested and obtained from the launching State. However, this limit could be compromising because if the Italian State obtains limited compensation, for political reasons, it would not be complying with the obligation established in art XII of the Convention, to pay for the whole damage determined in accordance with international law and the principles of justice or equity.

However, the Italian legislator wished intentionally to determine in favour of Italian citizens as a greater protection that the one offered by the Convention, and different to foreign citizens. The Italian State must pay compensation for Italian citizens, and only to them, even if it has not claimed compensation fro the launching State or if the claim has not been satisfied (art. 3). No mention is made of the time limit for considering the request as not being answered for.

Juridical or physical foreign persons can also claim compensation because either Italian territory is the place where they suffered damage or where they were resident at the tine of the accident and therefore the Italian State is authorised, in accordance with art VIII of the Convention, to represent them in the event of their national State not presenting a claim. However, foreigners may only obtain compensation by the Italian State if the latter has requested and obtained it from the liable State. No mention is made of the reciprocity treatment of Italian juridical or physical persons in foreign countries, specified in art. 10 of the Italian Constitution.

It is not possible to consider the different treatment of Italian citizens as anti-constitutional because the right to compensation not an unalienable right of man and also because the foreign citizen is protected by his national State.

Art. 4 of the law establishes that those interested may forward a claim within five years from the damaging event or from the end of its effects. The difference of the laws terms from the terms established in the Convention (one year) allows the request to be presented through diplomatic procedures and accepted by the launching State.

Should the Italian State not have presented a claim or if the latter has not been satisfied, the amount of compensation is established in accordance with arts. 2056, 1223 and 1226 of the Civil Code (art. 5). These articles lead to compensation for the emerging damage and for loss of profit if they are immediate consequence of the damage itself. The judge will consider the loss of profit by an "equitable verification of the circumstances" and if the amount of damage cannot be proven, the judge will settle the damage by an "equitable evaluation".

A final observation on the law concerns the use of the term "compensation" - which is closely linked to damage consequent to illegal activities - rather than "indemnity" which refers to legal activities[16].

d) <u>Convention of Registration of objects launched into Outer Space (January 14th 1975)</u>

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Despite having ratified the Convention on liability in 1983 with a rather extraordinary attitude, Italy only recently is proceeding to ratify the Convention on registration which is necessary complementary to the first.

The Convention on registration, ratified by 45 countries, establishes to obligation for launching States to register space objects, launched in orbit and under their jurisdiction in an appropriate **registry** which they shall maintain (art. II). The State shall notify the Secretary General of the UN of the registration so that the details concerning the space object, as required in art. IV, may be filed in the international registry together with future information on the status and life of the object itself.

The filing in the registry of the registering State keeps trace of carried out launches and allows the **identification** of objects circulating in Outer Space. The details and information allow the connection of an object to the State holding jurisdiction and control over the objects and its personnel during the entire space flight. Filing in the registry appoints the State with the status of **"launching State"** in accordance with the 1972 Convention on liability.

Lack of registration does not lead to any specific sanction, but the launching State cannot benefit of any disposition of space law (rescue, recovery, restitution in the event of technical damage, cooperation from other States for the identification of a space object which has caused or could cause damage..)while not being exonerated from its responsibility in accordance with the 1972 Convention.

The Italian draft legislation, made up of 4 articles, concerning the "Acceptance of the Italian Republic of the Convention of registration of objects launched into Outer Space, New York January 14th 1975" is a mixed result of an execution order; since in art. 2 it gives full and complete execution to the Convention and of an ordinary law, since in subsequent articles 3 and 4 it issues internal execution rules concerning the entity competent for the registry. After having received the favourable opinion of the involved ministries, and after having considered some specific observations[17], the draft legislation has been approved by the Council of Ministers, nr. 160 on June 13th 2004, and is now ready for the approval procedure in Parliament.

The National Registration Registry has been created by art. 3 of the draft legislation and the Italian Space Agency (ASI) takes care of the institution and custody of the registry. Each space object launched by Italian physical or juridical persons or by Italian launch bases or under Italian control must be filed in the registry. No mention is made of objects launched abroad by Italian subjects or upon request of Italian clients or even for the eventual registration of foreign operators or international organisations whose headquarters are in Italy.

Art. 3.4 of the draft legislation States that the elements to be notified to the ASI are : a) name of launching State or States, b) appropriate designator of the space object or its registration number, c) date and territory or location of launch, d) general function and basic orbital parameters of the pace object, including nodal period, inclination, apogee and perigee. The list of elements corresponds to what is established in the Convention with the addition of "general function" of the space object, being quite a generic element but fruit of the mediation of the various involved ministries. It would be interesting to add, among the elements to be notified, the name of the satellite owner or of its components in order to anticipate a future guaranteeing regime, as studied by UNIDROIT in the Draft Protocol to the Convention on International Interests in Mobile Equipment in Matters specific to Space Assets, open to signature in Capetown on November 16th 2001.

Italy seems to accept the rather generic and political invitation on the Convention ("to the greatest extent feasible") to notify the abandonment of orbit by the space objects filed in the registry (art 3.5). It does not

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undertake the invitation, albeit it not being compulsory ("may notify the Secretary General every now and then") to communicate changes to the object or on the object which may occur during its life in orbit, including eventual loss of property. This last detail, in accordance with what has been expressed on the Draft Protocol, would allow a more prompt identification of the country responsible for the space object with all the relevant consequences.

Finally it is established that the Italian Space Agency shall inform the competent Ministers[18] of the details filed in the registry so that the obligations established by the Convention may be fulfilled.

This is the content of the draft legislation, which in its briefness only wishes to create the compulsory registry and to identify the entity bureaucratically responsible for it.

No mention is made of problems strictly connected to registration such as authorisation and control of the State over the space object and the competent entity to exercise this duty, procedures for registration, list f requirements the object must meet for authorisation and licence requests, questions concerning intellectual property and finally the eventual registration or penalty tax in the event of a delay or lack of registration. This will be mentioned further ahead in the suggestions for a more complete draft legislation.

At present Italy does not wish to ratify the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, dated December 18th 1979, which has only been ratified by ten countries due to its specific regime on use of lunar resources for the benefit of all mankind.

2. Reorganisation of the Italian Space Agency

The legislative decree nr. 128[19] dated June 4th 2003 establishes the reorganisation of the Italian Space Agency (ASI). Since the law dated may 30th 1988[20] instituting the Italian Agency, many modification laws have been issued up to the reorganisation decree which establishes in detail the mission, activities and bodies of the entity and all other details necessary to its functioning.

The Agency is a national public entity, a juridical person with financial and management independence, for the promotion and development of research, of national and international projects together with the Ministry for Foreign Affairs. The Ministry for Education, University and Scientific Research (MIUR) (art. 2.3) controls the entity: it approves the three-year activity plan, which is updated yearly (art 14) in accordance with the opinion of the Ministries of Finance, of Public Functions and of Defence; it approves the preliminary and final budget of the Agency together with the Ministry of Finance and under the supervision of the Corte dei Conti (art. 18). Furthermore the MIUR, in accordance with the ministry of defence, of productive activities, infrastructures and transportation, of communications and environment and protection of territory, promotes the definition of the governments trend on the subject of aerospace matters, supporting the ASI in international Agreements, it coordinates the ASI programmes with the activities of other administrations, studies the industrial influence of such activities (art. 21) and finally approves the national aerospace plan for a period of three years (art. 20).

The ASI establishes the National Space Plan and manages its actuation according to the government's lines and within the framework of coordinating international relations, ensured by the Ministry for Foreign Affairs, it takes part in the works of the Council of the European Space Agency and in its programmes, it stipulates bilateral or multilateral Agreements for Italian participation in space programmes or enterprises, it supports and coordinates Italian participation in projects and initiatives of the European Union (art. 3).

The international side of the Agency's activities is in line with the goals which the

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European Union wishes to reach by carrying out a European space policy as established in the 2003 White Paper[21] in two phases: the first (2004-2007) will consist in carrying out activities foreseen in the Agreement between the European Union and the ESA[22]; the second (from 2007 onwards) will start after the entry in force of the European Constitutional Treaty[23] where Outer Space will be configured as a shared competence among the European Union and its member States. Naturally European space policies will only be carried out with a process of harmonisation of the laws of its member States and with a harmonious, balanced, sustainable development of economic activities[24].

The ASI promotes, finances and carries out private and public projects and offers consulting activities; it coordinated and finances research activities, handling the broadcasting of results through specific Agreements with Universities (art. 3).

There are various organs within the ASI; they act on the principle of separation of duties: planning, management and evaluation responsibility.

The **President**, representing the Italian Government in the Council of the European Space Agency, establishes guidelines and supervises the development of the entity, he summons the Board of Directors and the Technical Scientific Council, he names the General Director with the decision of the Board of Directors. The office lasts five years and may be renewed only once (art. 6).

The **Board of Directors** generally plans the lines of the Agency through the predisposition of a three-year plan, budget planning, naming directive organs, deciding on major investments. It is made up of the President and 7 other members, in force for 4 years, named by the involved ministries (art 7).

The **Technical Scientific Council** is an advisory organ for the board of directors on technical and scientific matters. It expresses its evaluation on the three-year plan and selects the development lines for space and aerospace research. It is made up of the President and 11 members, chosen by the involved ministries among famous scientists who may also be of other nationality (art. 8).

There are two control organs: one is administrative (the **Board of Auditors**) with three effective and three reserve members, and the other is scientific (**evaluation Committee**) made up of 5 members external to the ASI (arts 9 and 10).

The handling and actuation of the Board of Director's resolutions and of the measures issued by the President are managed by the **General Director**. The latter arranges the preliminary and final budge, and regulation guidelines, and also presents a yearly report on the research activities and results to the president and to the board of directors. The general director is in force for four years and his appointment may be renewed only once (art. 11)

The income of the ASI is based on contributions from the Fund for the financing of public research entities, on programmes in cooperation with the ESA and consequent international Agreements, on the results of research and licence concessions (art. 15).

The instruments through which the ASI carries out its research activities are essentially based in Agreements stipulated with consortiums, foundations or private or public companies, among which the Universities (art. 16).The ASI also cooperates with the CIRA.

By a decree issued by the Minister for education the ASI has obtained the transfer of the base and the control over **San Marco** satellites in cooperation with Rome University "La Sapienza". The decree specifies rules for regulations, budget and personnel which do not need to be further discussed.

The regulation seems to be quite detailed and in many aspects quite exhaustive. No mention is made, compared to the first law instituting the ASI, of a regulation on intellectual property and copyright. Art. 2 of the old law dated 1988 established that

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the SI is the owner of the products which may derive from financed projects or from contracts or deriving patrimonial rights. The inventor was entitled to recognition and to an adequate reward. Procedures for copyright and licence concession were bound to special terms and conditions approved by the competent ministries[25]. This lack of regulation should be somehow removed in order to establish a certainty of rights also for private parties.

3. Proposal for a Draft Law

a) The European White Paper

Being party to the Outer Space Treaty and accepting its principles, or to the Registration Convention and establishing a registry as required, is not enough. Art. VI of the OST establishes international liability for national activities in Outer Space, whether such activities are carried out by governmental agencies or by non-governmental entities. This responsibility means that States must carry out **authorisation** and continuing **supervision** for activities taking place under their jurisdiction. Furthermore, liberalisation of space matters, leading to privatisation for many operators in Outer Space either due to the exit of public sectors or due to changes in commercial private companies, and the increase of private sector activities in new space initiatives lead to the necessity to establish a public authorisation and supervision system for these activities.

Having accepted, by ratification of the 1972 Convention on Liability, such a strict system as **absolute objective responsibility** for damage caused by space objects on earth and to aircraft in flight, means that the State must take all necessary measures to face consequences deriving from its support to other activities.

This is why various countries in the world (United States, Russia, Ukraine, Australia, Argentina, South Africa, Brazil, Hong Kong) and in Europe (United Kingdom, Sweden, Norway, and draft laws of Germany, France, Belgium and Holland)[26] have established a specific legislation regulating space activities under the jurisdiction of the State.

Should we only consider the European framework, in the attempt to create an Italian law on space activities to be harmonious with the others, it is necessary to start from the previously mentioned White Paper of the 2003 Commission.

The White Paper, as opposed to the Green Paper - where ideas are illustrated in view of a public debate - is a document with proposals for EU actions within the specific space framework and aims at harmonising different national policies. The main purpose of the White Paper is to elaborate a **European space program** in cooperation with ESA in two phases:1) the first phase (2004-2007) for the realisation of matters covered by the Agreement stipulated between the European Community and the ESA. The two organisations will establish common goals and launch joint initiatives, albeit maintaining their own rules. The ESA should be the Union's Operational Agency for space matters; 2) the second phase (from 2007 onwards) with the entry in force of the European Constitutional Treaty establishing space to be a shared competence between the Union and its members. At this stage the ESA should be positioned within the European Union framework and it would have to consequently modify its Constitution. This final hypothesis does not seem to be feasible at the moment.

Among the aims the White Paper wishes to achieve there is the aim of space becoming a contribution to Common Foreign Policy Security including Common European Security and Defence Policy. Specific approaches must be developed in order to guarantee the dual use of space facilities in view of public need, as established on a European level- Besides observation and telecommunication satellites already in use for security measures, further

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developments on global monitoring are necessary. This involves the multinational military initiative on "Common Operational Requirements for a European Global Satellite System", subscribed by six countries of the EU, but yet to be extended to other member States, describing the common operational requirements necessary to develop a global satellite observation military system. Most of the observation requirements linked to security and defence will be covered by GMES services (Global Monitoring for Environment and Security), a joint EU/USA initiative combining space and local observation systems in order to sustain the purposes of the EU in global governance and sustainable development[27].
In this framework of European cooperation Italy and France subscribed an Agreement in Turin on January 30th 2001 concerning cooperation for a facility for earth observation using radars and optical sensors and specifying the framework within which the dual system should be used and developed. The dual satellite observation system developed in the intergovernmental Agreement fir military and civil use (institutional and commercial) is based on the Italian and French programs for small satellites such as Pleiades and SkyMed[28]. In Italy, for the development of the Cosmos SkyMed radar component, the ASI and the Ministry of Defence subscribed a Convention on November 24th 2002, establishing a cost of 600million euros, 25% of which to be debited to the ministry of Defence and the remaining 75% to the ASI. The Convention also establishes Agreements for the realisation of the system, for its dual use[29], and for property rights. These rights refer to technical information produced during the programme's activity and belong to the ASI and to the Ministry of Defence in respect of their participation quotas. It would be necessary that this system be also addressed towards the monitoring of space **debris** in view of the realisation of an autonomous European system, because at present only an American military system (NORAD) holds the necessary equipment to guarantee such monitoring[30].

b) Elements to be introduced in an Italian draft law for space activities (Space Law)

The White Paper only specifies the programmatic lines for a European space policy, however it does not enter into details for a uniform formulation of national laws in the member States on space matters. This is the future duty of the Council and of the Commission through community regulation systems. However, because this does not seem to be going to happen in the near future, and because States do not willingly accept limitations, considering the urgent necessity to create a regulation in such a delicate sector, it would be better to proceed by detecting common requirements and in consideration of other European laws in force or in course of actuation.
Definition - Different foreign laws agree in considering **space activity** as any activity concerning the launch of a space object, all the necessary operations for the functioning of such objects and any other activity carried out in Outer Space or on celestial bodies[31].
Licence - We have already mentioned the necessity, deriving from the combined application of articles VI and VII of the OST - ratified by Italy - to regulate by law the authorisation to be requested to public and private entities wishing to carry out space activities[32].In lack of law, governmental agencies could be authorised through specific regulations by the supervising authorities, should be instead considered by the law and they should also request authorisation in order to specify their mission in face of the commercial and industrial sector also to ensure respect to rules of free national or European trade.
Furthermore the request for authorisation by private entities, juridical or physical persons should be definitely made compulsory. The application of the Italian law could go beyond a national framework

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and also refer to public or private European entities with headquarters in Italy or Italian companies abroad. The "extra-territorial" use of internal law must be compatible with other involved sovereign rights[33]. Some European law limit the obligation to request authorisation only to private parties, either physical or juridical persons[34].

Normally the **entity** granting authorisation is a governmental entity or a body operating under the supervision of a ministry. The Swedish National Space Board holds the national registry and forwards the authorisation request, after having consulted the National Post and Telecom Agency - being the main agency for frequency allocation - to the Ministry of Industry, enclosing its favourable opinion and some details on the mission[35]. In Norway, the Ministry of Trade and Industry grants authorisation and exercises supervision. The German draft law also mentions the designation of a competent ministry.

In France the registry is held by the National Agency (CNES). However, it is being discussed whether to create a new structure, with the new law, separating administrative and regulatory functions from the carrier's or to formally assign this authority to the CNES. This same problem is to be faced in Italy, where at present the ASI is the depository of the registry; however, with a law on space, should the ASI be entrusted with authorisation competency, albeit under the supervision of the specific competent ministry, it would be necessary to clearly distinguish the different activities in order to prevent risks of competence, interest and responsibility conflicts.

Access to the registry by third parties upon expense payment is generally admitted, whereas the government may decide discretional on a **tax for authorisation**.

Conditions - Since space activities may lead to absolute objective liability for the State, the request to comply with a preliminary technical evaluation under public control is justified, in order to evaluate and prevent risks whenever possible. Some laws, such as the English one, do not insist on this aspect requesting a **compulsory insurance**[36] instead. Among conditions, some of the most farsighted laws (English law, German project) require that activities must not contaminate environment on earth or in Outer Space. In the event of **nuclear use** the law could also request compliance with the 1992 UN Principles on the Use of Nuclear Power in Outer Space.

Limitations - Limitations to the concession of authorisation, generally established by all European laws, are placed if: public health is endangered; if the activity is opposed to the State's international obligations; if national security is at risk.

Control - The same entity granting authorisation carries out supervision over activities during their development in Outer Space. Control refers to compliance with the conditions for authorisation. Eventual illegal acts occurring in transgression of conditions established for the licence may involve payment of fines. Releasing evidence is admitted to prove that all due diligence and precautions had been maintained in order to avoid the occurrence of an illegal act.

Responsibility - A complete law cannot forget to face the subject of liability for damage caused by authorised space activities. In the event of death, injuries or damage to people or property belonging to other States or private or juridical foreign persons, the operator must compensate the Italian State having compensated the damaged subjects in accordance with the 1972 Convention, within a maximum limit which can be covered by insurance. It would be best to make insurance compulsory within minimum and maximum limits, beyond which the State is answerable for. Insurance should cover risks involved in all various phases: pre-launch, launch, positioning in orbit, location and return. Furthermore procedures for damage claims should be clearly specified.

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4. Conclusions

Each State, in order to comply with international obligations undertaken with Treaty ratification, must issue an internal implementation regulation controlling the behaviour of private and public entities within the specific framework of the Treaty.
Italy has already taken on specific commitments by ratifying the Treaty on Outer Space, the Rescue Agreement and the Convention on Liability, and further commitments are to be taken with the future ratification of the Convention on Registration. It is now time to issue a complete National Space Law regulating space activities as other European States have already done (Norway, Sweden, United Kingdom) or are about to do so (Germany, France, Belgium and Holland).
We have suggested a proposal for a draft law in line with the need for harmonisation of European laws on the matter, to face the various commitments that Italy has undertaken with the ratification of space Treaties. Such a law must define space activity, compulsory authorisation for carrying out such activity, conditions requested for such authorisation, entity entrusted with the registration registry, the grant of authorisation and the exercise of control and supervision. The law should not omit handling responsibility for the Italian State, should it be considered a "launching State", in the event of damage caused to foreign third parties. Connected problems to be faced concern the definition of maximum limit within which the Italian private operator should pay compensation and finally compulsory insurance.

1

NOTES

[2]For the text in the mentioned agreements see *United Nations Treaties and Principles on Outer Space, United Nations 1999, A/AC. 105/722; A/CONF.184/BP/15* and for the Italian text DURANTE, *Lezioni di diritto aerospaziale*, Rome, 1988

[3]Status on January 1st 2003, Annual Report 2003, IISL, Standing Committee on the status of international Agreements relating to Activities in Outer Space, chairman: A.D. Terekhov, senior legal officer, Office of Legal Affairs United Nations

[4]In *Gazz. Uff.* March 21st 1970, n. 72, in *LEX*, Legislazione Italiana, part I, I sem. 1970, vol. CXI, p689

[5]In *Gazz Uff.* June 8th 1972, n. 146, in *LEX*, Legislazione Italiana, raccolta cronologica, year LVIII- 1972 part I and II, Jan.-June, p. 1337

[6]For the value of treaties introduced in Italian law, see CONFORTI, *Diritto internazionale* Napoli 2002, p301 and foll..; SPERDUTI, *Trattati Internazionali e leggi dello Stato*, in *Riv. di dir. Internaz.*1982, p. 5 and foll..; BUERGENTHAL, *Self-executing and Non Self-executing Treaties in National and International Law*, in *Recueil des Cours de l'Académie de droit international de La Haye* 1992,IV,303 and foll..; VERESHCHETIN, *New Constitutions and the Old Problem of the Relationship between International Law and National law*, in *European Journal of International Law 1996, p 29 and foll..*

[7] Art. 10, comma 1 states "Italian order complies with generally acknowledged international law rules" thus establishing a special procedure (as opposed to ordinary procedures for creating rules in italian order), or by referral procedure v, CONFORTI, *Diritto internazionale, cit,*, note 5, p. 313 and foll..; CASSESE, *Modern Constitutions and International Law*, in *Recueil des Cours de l'Académie de droit international, 1985*, III, p.368 and foll..

[8]See CATALANO SGROSSO, *La responsabilità degli Stati per le attività svolte nello spazio extra-atmosferico*, Padova 1990, pages 133 and foll.

[9]Dec. Pres. December 5th 1975, n. 965 in *Gazz. Uff.* N. 102 April 17th 1976

[10]Communication of the Ministry of Foreign Affairs concerning the entry into force of the Agreement on March 31st 1978 in *Gazz. Uff.* may 20th 1978

[11]See CATALANO SGROSSO, *Legal Status, Rights and obligations for the crew in Space, in Journal of Space Law*, 1988, vol.26, n.2, p.163 and foll.

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[12]Resolution march 25th 1988, ESA/C/CXXXIV res. 2 (final)

[13]Three Italian astronauts have flown in space missions: Nespoli, space engineer, Guidoni, who flew on the Tethered in 1996 and Vittori, test pilot of the Italian Air Force , who operated as flight engineer in cooperation with the Soyuz Commander in the transportation flight, and carried out a series of experiments in the ISS "Marco Polo" mission departed from Baikonur on April 25th 2002.

[14]See CATALANO SGROSSO, *Application of the rules of conduct to the first crews on board the International Space Station*, in *Proc of the 45th colloquium on the law of Outer Space, IISL*, Houston2002, p.77 and foll.

[15] The Convention on Liability was executive with a law dated May 5th 1976, n. 426 in *Gazz. Uff.* June 19th 1976, n.160, *sup. Ord.* entered in force in Italy on February 22nd 1983, in *Gazz. Uff.* May 28th 1983, n. 145; the Convention, up to January 1st 2003, has been ratified by 88 countries; see. . CATALANO SGROSSO; *La responsabilità degli Stati per le attività svolte nello spazio extra-atmosferico, cit.*note 7, p. 42 and foll..

[16] For observations on the Italian implementation law see . SPADA, *Indennizzo per i danni causati da oggetti spaziali*, in *La Comunità Internazionale,*1983, p.699 and foll.; DE BELLIS, *Le norme italiane di attuazione della Convenzione sulla responsabilità per i danni causati da oggetti lanciati nello spazio extra-atmosferico*, in *Rivista di diritto internazionale,* 1984, p.794 and foll..

[17] Need for some Ministries (Ministry of Productive Affairs) to be placed among the administrations to receive communications from the Italian Space Agency, need for a classified system (Ministry of Defence) for the use of military or dual use satellite systems whose details must necessarily be generic, according to the Convention. The draft of law is currently being examined by the Foreign Affair Commission of the Camera dei Deputati, with number A.C.5106

[18]Ministry of Education, University and Research, Ministry of productive activities and Ministry of Foreign Affairs

[19]In *Gazz. Uff.* June 6th 2003, n. 129

[20]In *Gazz. Uff.* 8/6/1988,n. 133

[21] White Paper (Outer Space: a new European frontier for the expanding Union – Action plan for the actuation of a Europan Space Policy), approved by the Commission in Brussels on November 11th 2003, COM (2003) 673 final

[22]EC/ESA Framework Agreement concluded on November 25th 2003, Council Decision 12585/03, Oct. 7 2003

[23] The European Constitutional Treaty is about to be signed, Outer Space is considered as a shared competence

[24] For the European space policy and the harmonious development of European national laws see MARCHISIO, *Potential European Space Policy and its impact on National Space Legislation*, in *Proc. of the Workshop*,29/30 January 2004, Berlin: *"Towards a Harmonised Appraoch for National Space Legislation in Europe*, Project 2001 plus, Cologne 2004, p.145 and foll..; *ibidem* SCHMIDT-TEDD, *Methods of Harmonisation – Global or Regional/European Harmonisation* , p. 137 and foll..

[25] For a comment on the first law see CATALANO SGROSSO, *Establishment of the Italian Space Agency*, in *Proc. of the 35th Colloquium*, Bangalore, 1988,p.162 and foll.

[26] For a collection of these laws see *Documentation of the Project 2001Plus Workshop "Towards a Harmonised Approach for National Space Legislation in Europe"*, 29/30 January 2004, Berlin, Documentation : *National Space Legislation*

[27] For the subjects which could be studied in the GMES programme see White Paper, *cit* note 20, p. 12 and foll, and for the subjects face d by the global European military satellite system, see *ibidem*, p.17 and foll.

[28] Dual use is made up of:; - an optical component with two satellites and relevant ground functions, developed under French direction; - a radar component including four satellites and the relevant ground functions, developed under Italian direction; - a ground processing segment jointly developed by France and Italy

[29]The Ministry of Defence and MIUR had already stipulated an agreement to "promote, in the space field, information exchange on respective activities and cooperation within the framework of mutual interest initiatives , on a national or international level"

[30] This being in line with matters discussed in the IADC (Inter-Agency Space Debris Coordination

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Committee) created in 1993, as suggested by the USA and now including the ten major Space Agencies. Awaiting stricter dispositions on space debris to be issued by UNCOPUOS

[31] See an excellent study on French website:

www.recherche.gouv.fr/rapport/droitespace/disposgenerales.pdf , chap. 1: *Missions publiques de réglementation, d'autorisation, de surveillance et de condite des activités spatiales*

[32]Art VI of the OST:" "States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial Bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall required **authorization and continuing supervision** by the appropriate State Party to the Treaty..."
Art. VII OST: "Each State Party to the Treaty that launch or procures the launching of an object into outer space, including ....and each State Party from whose territory or facility an object is launched , is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including .....". Such responsibility is specified in detail by the 1972 Convention on Liability

[33] As mentioned in the French draft law, see study *Missions publiques...., cit.* note 3, pp. 31-32,

[34]As in section 2 of the Act on Space Activities (1982:963) of Sweden § 1 "by a Norwegian citizen or person with habitual residence in Norway", of the Act on Launching objects from Norwegian territory etc. into outer space, 13 June n.38.169 Norway; art. 2 of the Outer Space Act (1986) , United Kingdom e sect. 1 German Draft law in the version of 15 October 2002, adding "any activities performed under governmental support are not considered as activities...,v. *Documentation cit.* note 25

[35]Decree on Space Activities (1982:1069),for comments see: .HEDMAN, *Vertices of an Administrative Procedure/Costs :the Swedish Experience*, in *Towards a Harmonised Approach....cit., note* 23, p. 75 and foll.

[36]See CROWTHER/TREMAYNE-SMITH, *Safety evaluation within the United Kingdom's Outer Space Act, in Toward a Harmonised approach...,* note 23, p. 75 and foll