INTERNATIONAL CHARTER ON SPACE AND MAJOR DISASTERS ACCESSION IN THE LAYOUT OF NATIONAL POLITICAL AND LEGAL REGIMES[1]

Daniël Konrad T. Link*

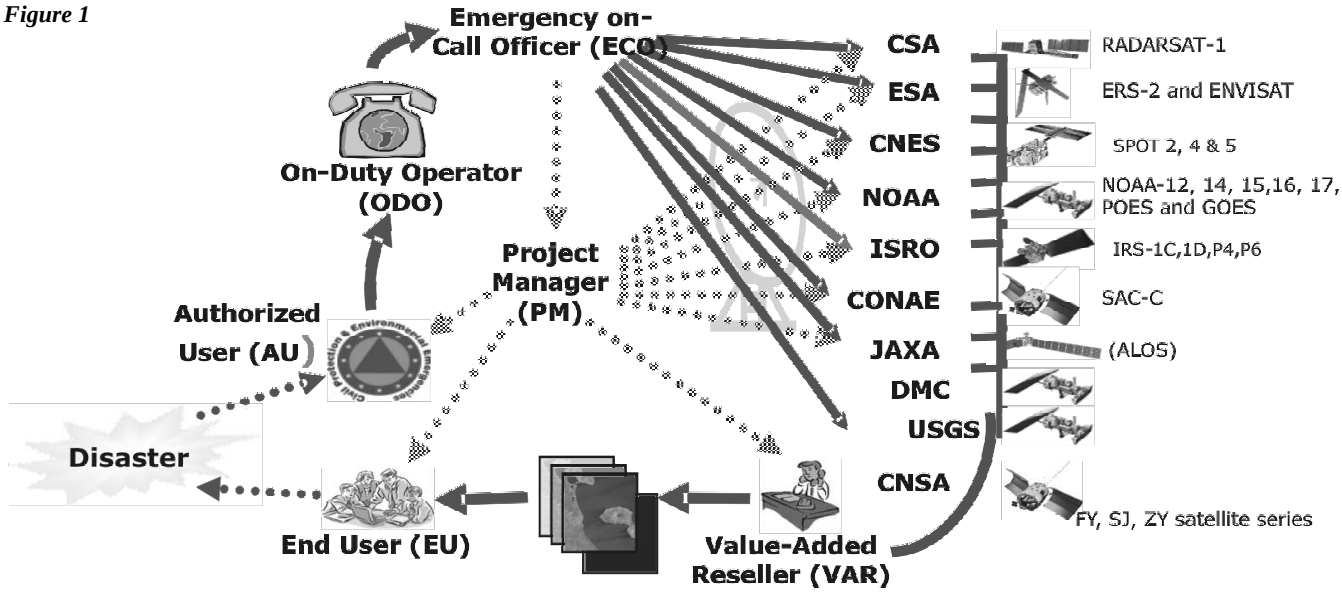
"The International Charter aims at providing a unified system of space data acquisition and delivery to those affected by natural or man-made disasters"[2] anywhere in the world.

This system was initiated by the European and French space agencies (ESA and CNES), with the Canadian Space Agency (CSA) signing on October 20th, 2000. It was followed by NOAA, CONAE, JAXA and more[3] recently having the Chinese space agency (CNSA) joining as a member.

"Each member agency commits resources to support the provisions of the Charter and thus is helping[4] to mitigate the effects of disasters on human life and property"[5], being member's contribution "essentially in the form of space data [and necessary human resource], and no funds are exchanged".[6] Article 3.1 of the Charter stipulates that "the parties shall develop their cooperation on a voluntary basis, no funds being exchanged between them"[7].

Charter Operations (Figure 1):[8]

Figure 1



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* Member of the Space Generation Advisory Council.

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[2] "through authorized users"; Bessis, J.-L., 2004. p1.

[3] Having UNOOSA as a Cooperating Body since 1st July 2003. Being able thus to request activations of the charter. Full Charter Members list at http://www.disasterscharter.org/participants_e.html; Plus, "the cooperative work with the UN organizations again allowed Charter coverage in situations where the Charter mechanism may not be known." International Charter Space & Major Disasters, Executive Secretariat, 6th Annual Report, January-December 2006.

[4] Article 6.2 International Charter on Space and Major Disasters: "new accession must, in particular: - bring a significant contribution by the acceding party to the intervention capacity required for the purposes of the Charter".

[5] BESSIS, J., p1.

[6] BEQUINON and all, p1.

[7] Remembering that a commitment to bear its share of the common costs is required for any new accession – Article 6.2 International Charter on Space and Major Disasters. One shall ask how to prevent from astronomical exceeding expected budged previously uncertain common costs. And if these common costs in certain year, due a major disaster event and the voluntary will to relief, take considerable unbearable percentage of a Country space program budget?

[8] HUSSON, A., p8.

Table 1

Event / Location	Project Manager
Hurricane, Texas - USA September 12th 2008	Center for Space Research, University of Texas at Austin
Cyclone, Yangon - Myanmar May 04th 2008	UNOSAT
Oil Spill, Norway (North Sea) December 12 2007	European Maritime Safety Agency
Earthquake, Afghanistan April 03 2007	USGS
Floods, South of France September 06 2005	ESA
Fires, Coimbra- Portugal, August 23 2005	DLR

Where Disaster means a "situation of great distress involving loss of human life or large-scale damage to property, caused by a natural phenomenon, such as cyclone, tornado, earthquake, volcanic eruption, flood or forest fire, or by a technological accident, such as pollution by hydrocarbons, toxic or radioactive substances;"[9] Authorized User (AU) is "a civil protection, rescue, defense or security body from the country of a Charter member"[10]; On-Duty-Operator as a "centralized 24 hour/day call-receiving unit"[11], taken care by ESA/ESRIN in Frascati, Italy[12]; Emergency on-Call Officer (ECO) is a function that "rotates among partner agencies on a weekly basis"[13]; Project Manager in his turn "is designated by the Executive Secretariat according to location, type of disaster and expertise"[14].

Few examples of PM's designated in recent past events (Table 1):[15]

The International Charter on Space and Major Disasters is "a good example of a concrete implementation of key principles of space law, but simultaneously its operation invokes the need for a more comprehensive legal regime of earth observation (EO)"[16].

Among the key principles implemented important to briefly mention: "for the benefit and in the interest of all countries"[17] "should contribute to promoting and fostering international cooperation on an equitable and mutually acceptable basis"[18], "remote sensing activities shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic, social or scientific and technological development, and taking into particular consideration the needs of the developing countries"[19], "remote sensing shall promote the protection of mankind from natural disasters"[20], "in order to maximize the availability of benefits from remote sensing activities"[21], "capable of averting any phenomenon harmful to the Earth's natural environment shall disclose such information to States concerned"[22], "affected by natural disasters, or likely to be affected by impending natural disasters, shall transmit such data and information to States concerned as promptly as possible"[23].

Furthermore, while analyzing the Charter's Article 4.1[24] conformity with Article XI[25] of the Outer Space Treaty, again it is very visible the Treaty's implementation. Plus reinforcement of important binding and non-binding regulations, such as Article IV[26] of the Convention on

[9] Article I International Charter on Space and Major Disasters – Definitions.

[10] www.disasterscharter.org/activate_e.html; access on September 6th 2008.

[11] BEQUINON and all, p1.

[12] Address: Via Galilei Galileo I-00044 Frascati (RM), Italy.

[13] And "An important prerequisite for total operation integration of a member agency is its ability to deliver the ECO function". BEQUINON and all, p1.

[14] "PM is qualified in data ordering, handling and application; PM ensure the data sent corresponds to what the user expect; PM assists the user throughout the process. PM writes up a final operation report". HUSSON, A., p11.

[15] See all Charter Activations and respective Project Manager details at: www.disasterscharter.org/new_e.html;

[16] ITO, A., p1.

[17] Article I, 1967 OST.

[18] §3, Annex; UN GA Resolution 51/22.

[19] Principle II; UN GA Resolution 41/65.

[20] Principle XI; UN GA Resolution 41/65.

[21] Principle VI; UN GA Resolution 41/65.

[22] Principle X; UN GA Resolution 41/65.

[23] Principle XI; UN GA Resolution 41/65.

[24] Shall maintain list of available space facilities, including the following details: mission characteristics, orbital characteristics, operational condition, programming procedure, products and services provided by ground systems.

[25] The States Parties "agree to inform the Secretary-General of the United Nations as well as the public and the international scientific community, to the greatest extent feasible and practicable, of the nature, conduct, locations and results of such activities".

[26] "the following information concerning each space object carried on its registry: (a) Name of launching State or States; (b) An appropriate designator of the space object or its registration number; (c) Date and territory or location of launch; (d) Basic orbital parameters, including: (i) Nodal period, (ii) Inclination, (iii) Apogee, (iv) Perigee; (e) General function of the space object.

Registration of Objects Launched into Outer Space and UN GA Resolution 62/101 of December 2007[27].

Nevertheless, certainly, this same Article 4.1[28] of the International Major Disasters Charter is a key item which, willing to be a Member, National Policy responsible members (in example of States) shall undertake technical and juridical analysis to define the extent limit between "free exchanges of information" and sharing risk of "sensitive[29] potential competitiveness enhancing information".[30] Especially if curiously one seeks to fully interpret the nature of USA political will practical decision[31] to accomplish accession with NOAA and USGS.

In same line, possible to include in this analysis scope, is the risk and fragility of sharing information which easily translates the State technological limits – giving open conscious opportunity to others States know the innovation level needed to conduce "unseen" operations, higher risk of system attack[32] exposure[33], or to commercially offer systems which far exceed the competitors known proposals.

To be analyzed though, is not whether this concern affects political decisions in a time when all major space actors reaffirm the importance for international cooperation and the peaceful uses of outer space. But on how[34] [35] to get involved protecting[36] their own wealth[37], with the continued overall growth in the global commercial space industry, with regional tensions being "significant driver of military space acquisitions"[38], and with the increasing importance of commercial sector achievements in developing space systems for civil and military purposes.

Taking into special consideration that to adhere to the Charter, one "agrees to contribute to the commitments made by the parties under Article IV"[39], contribution of the parties "by constructing a database of disaster management 'know-how' in the form of preparing scenarios for which satellites can be used to respond to the different types of disasters and the post-activation reports indicating the overall assessment of the whole activation process – including problems and findings."[40] The Charter parties, though, shall ensure that associated bodies[41] "use the supplied information only for the purposes defined with the Secretariat"[42].

Plus, few questions arise from a legal aspects interpretation on Article 5.4 6th item: "confirm that no legal

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[27] Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects. Special attention to item 2. (b) – "Consideration should be given to the furnishing of additional appropriate information to the Secretary General on the following areas: (i) The geostationary orbit location, where appropriate; (ii) Any change of status in operations (inter alia, when a space object is no longer functional); (iii) The approximate date of decay or re-entry, if States are capable of verifying that information; (iv) The date and physical conditions of moving a space object to a disposal orbit; (v) Web links to official information on space objects;

[28] Added by same Charter Article 4.2, second paragraph – "Once these new methods (or technologies) have been identified and validated by the design authorities and associated bodies, they may, with the Board's approval, be subjected to pre-operational implementation testing."

[29] "The most important argument against cooperation is the possibility of the transfer of sensitive technology." POLLPETER, K. p44.

[30] Information which can give an extra competitive edge or leading position to a State, or method / technology which propitiates a State to, with reduced costs, better compete in world-level market.

[31] "We would like to emphasize a key feature in this strategy: that the U.S. pursue *cooperative i*nternational arrangements. Traditionally the American national security apparatus has strenuously avoided international involvement in space and information endeavors. This is due in large part to the fact that these technologies have been at the heart of our intelligence collection activities and were considered too sensitive to share." WORDEN, S. and RANDALL C., p1

[32] "Elements of space systems will be targets of information attack operations, to include computer network operations." The US Army's CCP, p13.

[33] "Ground segments and communications links remain the most vulnerable components of space systems, susceptible to attack by conventional military means, computer hacking, and electronic jamming." Trend 7.1: Space Security 2008; Project Ploughshares.

[34] "Patents are thus becoming a preferred weapon to help to obtain or defend market share, or to procure revenues from someone else's market share." Example of given patent (range of protection): for the "Comsat Maneuver", patent granted, "concerns a method to prolong a satellite's useful life by letting it drift from it's nominal position, thus conserving precious fuel and extending the period during which the satellite is at least approximately at its nominal position". SMITH, Bradford Lee. p5. Small example of competitiveness extra edge advantages: "Arabsat Awards COMSAT Systems Division $1.2M to Employ 'Comsat Maneuver'".

[35] A good example pointing to this concern: "Sensitive or advanced remote sensing data are only approved for export on the basis of government-to-government agreements which include end-use and retransfer assurances that protect US-controlled technical data and broader national security issues" – BROWNING, R., HARRIS R. p3.

[36] Good example with this approach is the German Satellite Data Security Act – SatDSiG which has an entire section (Section 17) to define about Sensivity check (including data obtained and form of processing used).

[37] "Generally, however, all national data policies and law share the same fundamental principles. They make data available for scientific, social, and economic benefit but restrict access to some data for national security reasons". MOSTESHAR, S. p6.

[38] Trend 5.2: Space Security 2008. p18.

[39] Article 6.1, second paragraph; International Charter on Space and Major Disasters.

[40] ITO, A., p4.

[41] Article I International Charter on Space and Major Disasters – Definition of associated bodies: "means the rescue and civil protection, defense and security bodies or other services referred to in Articles 5.2 and 5.3"; Article 5.2: "an institution or service responsible for rescue and civil protection, defense and security under the authority of a State whose jurisdiction covers an agency or operator that is a party to the Charter".

[42] Article 5.4 International Charter on Space and Major Disasters.

action will be taken against the parties in the event of bodily injury, damage or financial loss arising from the execution or non-execution of activities, services or supplies arising out of the Charter". For example, and in the case of data misinterpretation leading to wrong logistic decisions (of routing trucks, cargo, helicopters, human resources); temporarily lack of communication in remote areas which may lead in unnecessary efforts or life losses due not accomplishment of rescue and emergency procedures[43]; or leading to "wrong instructions for evacuation given to the crisis victims resulting in more casualties."[44] The analysis point here is to know in which extent this may harm the right of the people that could rely on better political-economical arrangements[45] (State-to-State international agreements "on reasonable cost terms"[46]), more individualized care (through a relationship, more prepared for local features and characteristics[47]) and with a responsibility and liability set for the good professional operation of the service, plus for the good of the people.

Worthy to mention is the current doctrine understanding that after close examination "under the Charter, one can construe that there exists obligation between crisis victims and partner agencies and therefore, Good Samaritan law does not apply"[48]. Furthermore, "it raises a question within the Charter operation as to whether or not free provision of services is sufficient to justify the waiver of liability."[49] Additionally, for or against private operators included as associated bodies for example, can "to bring legal action on a national level"[50] be a possibility?

Due Charter's[51] flexibility[52], driving force conformity with Hyogo's Framework for Action 2005 - 2015 Strategic Goals[53] and integration with UNSPIDER[54], in an easier way States optimistically willing to contribute, can find the mission format suitable to undertake.

Cooperating, socio-economic benefits and political achievements[55] can be well perceived. Especially when ambitious global level integration is managed[56] with respect to the State's wealth, interests and political projection.

Opportunities to increase importance in this arena are enabled by the need to work with future issues.[57] Plus, life cost saved through relief, humanist principles and best endeavours in a linked act, should always speak louder argument than budget costs or rivalries.

With consideration to the herein mentioned understanding and with the very suitable recommendations from SBDA[58] (Associação Brasileira de Direito Aeronáuti-

[43] Including fail in connecting disaster zone to the outside world and eminent further risks.

[44] ITO, A. p5.

[45] "In order to make available opportunities for participation and enhance the mutual benefits to be derived therefrom." Principle XIII. UN GA Resolution 41/65.

[46] Principle XII. UN GA Resolution 41/65.

[47] Pre-event high resolution satellite data, detailed ground information, better knowledge of local awareness, better sensitive information protection, historical atlas of disasters and main concerns, strong and developed relationship with serviced Nation bodies, others random methods (with ground team, unmanned aerial vehicle, different categories tests and databases and others) to better construct maps and monitor geo and climate characteristics among others.

[48] ITO, A., p7.

[49] ITO, A., p8.

[50] "A possible solution is to bring legal action on a national level."; "In a country where a comprehensive national space law is in force". KERREST, A., p3.

[51] "as a contribution to the management of crisis arising from natural or technological disasters". Article II International Charter on Space and Major Disasters.

[52] Considering Article 7.1 of the International Charter on Space and Major Disasters "The possibility of pursuing the mission in a modified form shall be examined by the parties", "the party intending to withdraw shall endeavour to maintain continuity of its current contribution." And same Charter Article 3.4 "The authorities and bodies concerned in a country affected by a disaster (beneficiary bodies) should request the intervention of the parties either directly through the rescue and civil protection, defense and security bodies of the country to which one of the parties belongs or of a State belonging to international organizations that are parties to the Charter (associated bodies) or where appropriate via a cooperating body acting in partnership with an associated body."

[53] With the international acknowledgment for efforts, the more effective integration of disaster risk considerations into sustainable development policies, strengthening of institutions and emergency preparedness, response and recovery programmes among others.

[54] United Nations Platform for Space-based Information for Disaster Management and Emergency Response. As a "coordinating entity that brought together the disaster management and the geospatial communities." Supporting the full disaster management cycle; global measures, ensure the harmonization of the various initiatives, access to information, regional and country profiles and capacity building as remarkable key features.

[55] Optimisation of resources (both financial and technical), access to new technologies, access to new industry's niche; handle major relationships – good example is the CSA cooperation with ESA; political showcase – as one extra measure in political relations for political achievements, continuity in a National image constructing will show reaction driving capability and excellency on Disaster response, institutional and professional capacity development, new and effective methods created and consolidated in the use of Earth Observation and Disaster Management among others.

[56] Respecting the layout of the State political and legal regimes.

[57] Harmonization of platforms, differentiate map products according to the needs, continually produce damage assessment maps, compatible community standards, technological and budget achievement for Future Imaginary Architecture, frequency of observations with multiple satellite types, confrontation between the derivative products of space originated data and ground measures, necessary high resolution data among others.

[58] Brazilian Society for Air and Space Law – www.sbda.org.br;

co e Espacial) for Brazil to become a member of the International Charter on Space and Major Disasters, strengthening vision and willingness to maintain and enhance constant measures in favor of mankind's benefit, peaceful purpose, humanist principles and special needs of developing and least developed countries, devote Brazil to participate with cooperation and operation, as part of its own Space Policy adding this one more initiative, among many others that show Brazil's international transparency and peaceful cooperation.

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