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The relationship of international humanitarian law and territorial sovereignty with the legal regulation of outer space (2)

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HUMANITARIAN LAW IMPLEMENTED: SPACE COMMUNICATION IN THE SERVICE OF INTERNATIONAL HUMANITARIAN LAW

Abstract

Ius in bello as enshrined in the primary humanitarian law (1949 Geneva Conventions, 1977 Additional Protocols and international customary law) requires concrete measures in order to protect specific groups such as the civilian population. Such measures cannot be implemented without viable communication channels, including via satellites. One of the projects guaranteeing the fast deployment of satellite communication in situ in the context of humanitarian crises (natural or man made disasters) is the project emergency.lu which is based on a network of international agreements, including the ITU framework, national legislation of Luxembourg and relevant contracts.

1. Introduction

In Luxembourg, outer space activities are daily reality. So I was only slightly surprised having met the co-author of this study, than the student of the Master program in Space Communication and Media Law at the University of Luxembourg, who offered an excellent presentation dealing with a specific project of Luxembourg, emergency.lu. He told us that one of his friends, a volunteer of Luxembourg Civil Protection, was involved in an emergency mission abroad where a renewal of collapsed communication after a natural catastrophe based on space communication network was of an utmost urgency. Once delivered to the disaster zone, it took less than an hour to hook up a telecom terminal to its inflatable antenna, to point the antenna to a satellite in geostationary orbit, 36.000 km above, and to provide high speed internet connectivity, for voice, data and image transmission, enabling aid workers on the spot to register their laptops, tablets and cellphones and use the satellite capacity at no cost. As a matter of fact, all these humanitarian activities are based on a national and international legal framework. From the presentation, a successful Master thesis was written the majority of the information of this contribution is based on. After Humanitarian Law in its broader sense became one of the topics of the 2015 IAC, I asked my former student to prepare a contribution about this project together; fortunately for me, he agreed.

It is known that the motives for the establishment of projects leading to the recovery of telecommunication networks were the helplessness and the lack of coordination at the scenes of humanitarian catastrophes, e.g. after the 2010 earthquake in Haiti. Emergency.lu launched by Luxembourg is one of the projects which aim at the establishment of Internet connectivity, even in the areas where there is no infrastructure. The main character of the program is a civil one, following natural catastrophes. However, its technology can be applied both in the time of natural catastrophes, and the periods following civil or international armed conflicts. The project is complemented by SATMED - a telemedicine platform - used in the periods when emergency.lu is not needed. Both its parts aim to save the life of civil population by facilitating the work of humanitarian organizations, relief workers and health care providers.

As an example of the restoration of communication networks using Luxembourg-based space technology[[1]](#endnote-1), the activation of the communication restoration program in South Sudan in 2011 can be mentioned, where on-going clashes between pro-government and anti-government forces have undermined the security situation and have had dire humanitarian consequences.[[2]](#endnote-2) Based on the coordination through an International Emergency Communications Cluster (ETC), the program succeeded in providing security and data telecommunications and coordination services to the humanitarian community; with the humanitarian crisis in December 2013, the program expanded to new locations in the interior of South Sudan, supporting humanitarian organizations involved in the crisis response through the provision of vital telecommunication services.

The first two chapters of the contribution give an overview of the international and national legal basis of this project. The conclusion analyses its place in the framework of international space law, telecommunication law and international humanitarian law.

1. International Background

Notwithstanding the fact that attacks to telecommunication networks may be considered under specific conditions armed attack in the wording of the UN Charter and evoke a situation of military conflict where international humanitarian law – *ius in bellum* - is applicable[[3]](#endnote-3), it may be also argued that the restoration of telecommunication networks belongs to the category of obligation of occupying powers to guarantee supplies “essential to the survival of the civilian population” comparable to clothing, bedding, or means of shelter provided by Article 69 of the 1977 Protocoll I to the Geneva Conventions of 12 August 1949[[4]](#endnote-4) - *ius in bello.*

It may be further argued that the fast renewal of connectivity belongs today to the central post conflict tasks of formerly belligerent parties, or of. States- victims of natural catastrophes – this is the area on which the present contribution is focused on. These may decide to accomplish the task making recourse on their local sources. They may also conclude agreements with other administrations in the region. Or, they may decide to take into account the international support – such as the one where the project emergency.lu plays a vital role.

Therefore, in connection with the third possibility of how to arrange the fast process of restoration, we are asking on which legal instruments bind the third States – and here we took the example of Luxembourg – if they wish to contribute to the process of restoration of telecommunication in a humanitarian crisis of whatever source or legal character it might be.

Primarily, it is the Article 1, para 3 of the UN *Charter,* which requires international cooperation in solving international problems of an economic, social, cultural or humanitarian character.

In the UN framework, the global responsibility for the coordination of the information and communications technology (ICT) responses to emergencies lies by the UN World Food Programme (WFP)[[5]](#endnote-5) who is the designated Global Emergency Telecommunication Cluster (ETC) Lead Agency. This cluster is a “global network of organizations that work together to provide common communication services in humanitarian emergencies”.[[6]](#endnote-6) In emergency, ETC functions as a platform enabling the exchange of information among the members - humanitarian, private sector and government organisations that have an interest in humanitarian assistance, and can commit to making a positive contribution to technology in emergency response[[7]](#endnote-7). To be an ETC member the organisation must have an interest in humanitarian assistance, support the achievement of the mandate of the ETC, and actively participate in or contribute to ETC activities at the global and local levels. To become an ETC member, a request needs to be submitted to the ETC Secretariat that outlines the nature of an organisation's interest, the role that it wishes to play and a description of the contribution that it commits to make to the work of the ETC. Due diligence of the organisation will be conducted to ensure its membership would not be inconsistent with humanitarian or IASC principles. Requests will be reviewed by the full ETC membership and a consensus reached to accept or reject the request[[8]](#endnote-8). In this international structure, Luxembourg is represented by the Government of Luxembourg, Ministry of Foreign Affairs, Directorate for Development Cooperation.

Membership in ECT is automatically open to all Inter-Agency Standing Committee (IASC) associated organisations[[9]](#endnote-9) - a unique forum involving the key UN and non-UN humanitarian partners which has been established in June 1992 in response to United Nations General Assembly Resolution 46/182 on the strengthening of humanitarian assistance. [[10]](#endnote-10)

Non-surprisingly, one of the significant members of the ECT is the International Telecommunication Union (ITU). As can be seen on Article 40 of the ITU Convention addressing the priority of telecommunication concerning the safety of life,[[11]](#endnote-11) the transmission of emergency messages was always one of its crucial tasks. The ITU has started own initiative, a Framework for Cooperation in Emergencies (IFCE), which aims to extending of all ICT services and applications to all phases of disaster management. The IFCE is an “ITU strategic initiative” targeting at the facilitation of the rapid deployment of emergency communication systems in the event of sudden on-set disaster, or a long-term deployment in chronic or recurrent humanitarian context or as a part of a preparedness strategy in developing countries.

Luxembourg participates in this platform on the basis of the 2011 Agreement to Cooperate on Strengthening Emergency Telecommunications and Rapid Response in the Event of Natural Disasters[[12]](#endnote-12) signed by the Minister for Development Cooperation and Humanitarian Affairs of Luxembourg and the Director of ITU’s Telecommunication Development Bureau (BDT) on 6th December 2011. The nomadic satellite-based telecommunication system – ‘emergency.lu’ – aimed at assisting humanitarian agencies respond to *communities affected by natural disasters, conflicts or protracted crises[[13]](#endnote-13)* is available as a global public good to the international humanitarian community as of 1 January 2012, with Luxembourg funding its development, implementation, operation and maintenance to the tune of € 17.2 million. ITU obliged itself to encourage its 193 Member States to use the ‘emergency.lu’ platform and facilitate the rapid deployment of emergency telecommunication systems in the event of a sudden-onset disaster, or a longer-term deployment in chronic or recurrent humanitarian contexts or as part of a preparedness strategy in developing countries, as well as to ITU negotiate appropriate regulatory and legal frameworks with the national communication Administrations, particularly Telecommunication Regulatory Authorities, to assist in deployment.[[14]](#endnote-14)” In case of deployment and use in one of the ITU member States, ITU declares itself to be responsible for obtaining customs clearances, licenses and other governmental approvals and permissions required to deploy the program.

Another legal source for emergency communication where Luxembourg is a party is the 1998 Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations[[15]](#endnote-15), set up under the ITU auspices and entered into force in 2005.

According to this Convention, a „disaster“ is „a serious disruption of the functioning of society, posing a significant, widespread threat to human life, health, property or the environment, whether caused by accident, nature or human activity, and whether developing suddenly or as the result of complex, long-term processes” (Article 1 para 6). The Convention calls on States to facilitate the provision of prompt telecommunication assistance to mitigate the impact of a disaster, and covers both the installations and operation of reliable, flexible telecommnication services. Regulatory barriers that impede the use of telecommunication ressources for disasters should be waived: these barriers include the licensing requirements to use allocated frequencies, possible restrictions on the import of telecommunication equipment, as well as any limitations of movement of telecommuncations teams. Furthemore, the agreement defines the status of the relief workers, as well as their priviledges and immunities, and foresees the conclusion of bilateral agreements between the helpers and the receiving state.

At present, there are 47 Parties to the Tampere Convention, with Luxembourg having acceded in 2012[[16]](#endnote-16) with a reservation common to all Members of the European Union.[[17]](#endnote-17) Concerning to some authors, the Convention is less functional at large as expected, as many signatory States have first to implement the provisions of the treaty in their national legal order.[[18]](#endnote-18)

1. National Framework

Emergency.lu was officially launched in December 2011: On 13 January 2011, HITEC Luxembourg S.A. and SES Astra Techcom S.A. formed a joint venture “National Satellite Communication Framework (NSCF) – emergency.lu” on the basis of an Agreement - “Contrat d’Association Momentanée – NSCF – emergency.lu“ [[19]](#endnote-19) - concluded according to the 1915 Law on Commercial Societies.[[20]](#endnote-20) The agreement is in force until the complete implementation of the project, with the possibility of the Government of Luxembourg to cease the project in earlier stages. As a structure without own legal personality, the joint venture has no capacity to enter into contracts; the partners are jointly and severally bound towards third parties and also jointly and severally liable (?).

The joint venture has three main mandates: The fist mandate is dedicated to the establishment of detailed specifications and implementation procedures, as well as to the definition of the details of the configuration of the existing system. The second mandate concerns the deployment and configuration of the platform which enables to operationalize e.g. satellite communication modules, the HUBs, the computer servers and the software, eighteen preconfigured satellite terminals and different elements concerning the logistic chain of deployment, including the training and information of the personnel. The third mandate contains operational and maintenance aspects, including the costs of the global satellite footprint.

Furthermore, the agreement stipulates that NSCF – emergency.lu shall work together with Luxembourg Air Rescue (LAR) – the holding company of Luxembourg Air Ambulance S.A. (LAA), with the view to operate a global deployment service and the maintenance of the platform. LAR is affiliated to the joint venture through a letter of exclusive cooperation and an agreement between the LAR and the Ministry of Foreign Affairs (?).

As a public- private partnership structure, the project falls under the scope of the 2009 Law of 25th June 2009 on Public Procurements.[[21]](#endnote-21) The Directorate for Development Cooperation and Humanitarian Affairs of the Ministry for Foreign and European Affairs acts in the function of a “state body” as the contracting authority. When concluding a public contract with economic operators having as object the labor, supply of products or any provision of services, a “negotiated procedure” based on this law has been chosen as applicable. This was possible due to the fact that the equipment and services needed for the realization of the project are of such a specific nature that only ascertained economic operators can be entrusted with.[[22]](#endnote-22)

On the basis of this procedure, a Contract between the Government of Luxembourg, the joint venture NSCF - emergency.lu and Luxembourg Air Ambulance was signed on 31 March 2011.[[23]](#endnote-23) This contract fixes the obligations of the Parties, as well as the details of implementation of the project. In April 2013, the contract has been prolonged until 2020 (?). Moreover, a Steering Committee of the project was established.

In 2012, the Ministry for Foreign and European Affairs of Luxembourg has concluded a contract with Skype Communications SARL[[24]](#endnote-24) making the software available to NSFC as a part of emergency.lu. The Ministry was granted by Skype the right to a “worldwide, non-exclusive, non-sub licensable, non-transferable, royalty-free and perpetual license” to use the Skype Customized Client, including all related material, to its own internal communication purposes and to sub-license the software to the NSCF for the implementation of the emergency.lu project.

1. Implementation of the Project with International Partners

In the period following the concluding of the 2011 contract, between 2012–2015, the Government of Luxembourg has signed numerous Emergency Standby Agreements with diverse international structures on the use of emergency.lu. According to these agreements, the partners maintain a pool of operational resources including personnel, technical expertise, services and equipment that can be deployed to the contracting partner at the onset of emergency. Some of these structures belong to the UN system, such as the United Nations Children Fund (Unicef)[[25]](#endnote-25) or the Office of the UN High Commissioner for Refugees (UNHCR).[[26]](#endnote-26) (or the UN World Food program?)

The most recent Standby Agreement sighed by Luxembourg has been concluded on 14 July 2015 with the International Organization for Migration (IOM), with the aim to have recourse on its resources in case of natural catastrophes or on the places not equipped with telecommunication infrastructures. For example, emergency.lu will enable to connect the personnel of IMO with their seat in Geneva and coordinate humanitarian actions on the spot.[[27]](#endnote-27)

In the legally binding standby agreements, Luxembourg offers its support – the material, mostly the satellite ground terminals, the personnel and the know-how - to the other contracting Party. The collaboration arising out of the standby agreement is based on a best-effort basis, meaning that the Government of Luxembourg does not have to guarantee that the Service Packages and experts will be available each time when a request for deployment is issued. The Minister for Cooperation and Humanitarian Affairs (is it still the right name?) of Luxembourg is competent to decide whether the personal and equipment are sent, according to the concrete situation. Moreover, in case of long-term missions, the support of an ongoing humanitarian operation can be subject to the approval of local authorities and the license for a satellite earth station from a competent regulatory body.

Each standby agreement contains a standard arbitration clause: Any dispute, controversy or claim between the organization and Luxembourg arising our or relating to the Agreement will be settled amicably by negotiation or by any other non-judicial means including arbitration, as agreed upon by the Parties. The standby agreements enters into force upon signature by both Parties and shall stay in force until either Party terminates the Agreement, given three months written notice to the other Party.

The Humanitarian Intervention *Team* of Luxembourg (HIT) – the Support Team members, the Standby Personal, the Short Term Experts or the Experts in the wording of the standby agreements – was created on the basis of a European initiative formulated in the 1999 Community Civil Protection Programme.[[28]](#endnote-28) In the course of the implementation of the programme, an intervention group assigned to humanitarian missions outside the territory of Grand Duchy was created. – is this the same group? [[29]](#endnote-29)

The Short Term Experts are volunteers of the Civil Protection of Luxembourg, and have to undergo training in ICT and information management in order to be able to assemble the antennas and to manipulate the ground terminals. They are accorded the status of “Expert on Mission” for the United Nations within the meaning of Article VI, sections 22 and 23 of the 1946 Convention on the Privileges and Immunities of the United Nations,[[30]](#endnote-30) in case that the organization, Party of the Standby Agreement, belongs to the UN system. On each mission, the Experts operate under the authority of the respective organization, Party of the Standby Agreement. In addition, the Experts have to comply with the rules and procedures applied by the contracting organization.[[31]](#endnote-31) Some of the Parties may require each supporting member to sign a statement that they accept to be bound by the standards of conduct contained therein. It is also common to include in the standby agreement a provision requiring the Support Team members to sign an Undertaking containing their obligations vis-à-vis the contracting organization, when taking up their tasks under the agreement.[[32]](#endnote-32) The Government of Luxembourg is contractually liable for the actions of its deployed personal. The contracting partner is responsible for all necessary operational and administrative in-country support to the Support Team.

The Government of Luxembourg is obliged to ensure that the members of the team are of good health; each member of the group has to have an insurance, covering life and malicious act, death, medical issues, unemployment, third party liability and accident insurance; the life and malicious act insurance must includewar risk (sic!) and other extraordinary risks for Support Team members.

The system emergency.lu has the capacity to intervene globally. The system is in permanent preparedness, in times of no-need, a complementary program Satmed – a global satellite enhanced cloud-computer based Telemedicine platform - uses the technology with the goal to improve public health in developing and emerging countries.[[33]](#endnote-33)

1. Conclusions

As envisaged in the beginning of the contribution, the place of the emergency.lu in the framework of international space law, and international humanitarian law shall be shortly analyzed.

## What are the space law implications of the program? As the project is using pre-booked and ad-hoc satellite capacity, its activities can be only hardly categorized as “national activities” in the sense of Article VI of the 1967 Outer Space Treaty. The responsibility and liability for space activities according to space agreements remain attached to the States launching the satellites used for the signals –which might be the same one as in case of the satellites launched by the SES and registered by Luxembourg.

## However, the project emergency.lu has implications in the area of international telecommunication law: Emergency.lu is using mostly the C-band frequencies to make it less sensitive to atmospheric disturbances and generally provide a more reliable connection. Internet access to the users is provided through WIDER, a specific Wi-Fi solution, which is connected to the terminal.[[34]](#endnote-34) In order to coordinate its use in the international scale, the administration of Luxembourg had to enter into the contact with the ITU prior to starting the implementation of the project, in order to receive an international recognition of the use of necessary frequencies.[[35]](#endnote-35)

What are the humanitarian law aspects of the program? Humanitarian law is not only applicable to military conflicts, but extends also to situations which remain outside the scope of the UN Charter’s prohibition of the use of force, in particular armed conflicts within the territory of a State, or civil wars. Without answering the question whether destroying of telecommunication network falls under the means allowed by international humanitarian law, it may be argued that the restoration of telecommunication networks belongs to the category of obligation of occupying powers to guarantee supplies “essential to the survival of the civilian population” comparable to clothing, bedding, or means of shelter provided by Article 69 of the 1977 Protocol I to the Geneva Conventions of 12 August 1949 - *ius in bello.* It may be added that the fast renewal of connectivity belongs today to the central post conflict tasks of formerly belligerent parties, or of States- victims of natural catastrophes.

1. http://ictemergency.wfp.org/web/ictepr/countries-south-sudan. [↑](#endnote-ref-1)
2. http://www.etcluster.org/emergencies/south-sudan-conflict. [↑](#endnote-ref-2)
3. J.-C. Woltag, Cyber Warfare, Max Planck Encyclopedia of Public International Law (MPEPIL), para 8-9. [↑](#endnote-ref-3)
4. Protocol Additional to the Geneva Conventions of 12 August 1949, and relating the Protection of Victims of International Armed Conflicts (Protocol I), 1125 UNTS 3. [↑](#endnote-ref-4)
5. http://www.wfp.org/ [↑](#endnote-ref-5)
6. http://ictemergency.wfp.org/web/ictepr/emergency-telecommunications-cluster. [↑](#endnote-ref-6)
7. http://www.etcluster.org/about-etc/members. [↑](#endnote-ref-7)
8. http://www.etcluster.org/about-etc/members. [↑](#endnote-ref-8)
9. http://interagencystandingcommittee.org/iasc/. [↑](#endnote-ref-9)
10. **A/RES/46/182, 19 December 1991.** [↑](#endnote-ref-10)
11. ITU Convention. [↑](#endnote-ref-11)
12. Cooperation Agreement between the Government of Luxembourg and ITU, 6 December 2011. [↑](#endnote-ref-12)
13. See http://www.itu.int/net/pressoffice/press\_releases/2011/52.aspx. [↑](#endnote-ref-13)
14. http://www.itu.int/net/pressoffice/press\_releases/2011/52.aspx. [↑](#endnote-ref-14)
15. UNTS, [vol. 2296](http://treaties.un.org/doc/Publication/UNTS/Volume%202296/v2296.pdf" \t "_blank), p. 5.

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    [↑](#endnote-ref-15)
16. <https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXV-4&chapter=25&lang=en#EndDec>, details on http:// www.itu.int/ITU-D/emergencytelecoms/tampere.html. [↑](#endnote-ref-16)
17. Reservation*:*To the extent to which certain provisions of the Tampere Convention on the Provision of Telecommunications Resources for Disaster Mitigation and Relief Operations fall within the area of responsibility of the European Community, the full implementation of the Convention by Luxembourg has to be done in accordance with the procedures of this international organisation. [↑](#endnote-ref-17)
18. Loren François Florey, Luxembourg’s Global Telecommunication Platforms via Satellite, Master Thesis at the University of Luxembourg, p. 15. [↑](#endnote-ref-18)
19. Contrat d’Association Momentanée – NSCF – emergency.lu dated 13 January 2011. [↑](#endnote-ref-19)
20. Loi du 10 août 1915 concernant les sociétés commerciales (Loi du 12 julliet 2013). [↑](#endnote-ref-20)
21. Law of 25th June 2009 on Public Procurements. [↑](#endnote-ref-21)
22. Article 8 para 1.e of the 2009 Law concerning public procurements. [↑](#endnote-ref-22)
23. Contract between the Government of Luxembourg abd NSFC – emergency.lu and Ducair, 31 March 2011. [↑](#endnote-ref-23)
24. 20 March 2012, as amended. [↑](#endnote-ref-24)
25. http://www.unicef.org/. [↑](#endnote-ref-25)
26. http://www.unhcr.org/cgi-bin/texis/vtx/home. [↑](#endnote-ref-26)
27. See the information on the website http://www.emergency.lu/. [↑](#endnote-ref-27)
28. Council Decision of 9 December 1999 establishing a Community action programme in the field of civil protection, 1999/847/EC. [↑](#endnote-ref-28)
29. Law of 12 June 2004 concerning the creation of an Administration of rescue services. [↑](#endnote-ref-29)
30. 1 UNTS 15. [↑](#endnote-ref-30)
31. E.g. Article 6.4 of the Standby Agreement with UNHCR. [↑](#endnote-ref-31)
32. E.g. the respective provision oft he Standby Agreement with the UNHCR: „Luxembourg shall ensure that ist personal, including deployed experts, abide by and respect their contractual obligations pursuant to this Agreement, and remind them that no re-negotiations of terms shall occur in the field.“ [↑](#endnote-ref-32)
33. http://satmed.lu/#services. [↑](#endnote-ref-33)
34. http://ictemergency.wfp.org/web/ictepr/wavelength15/beach-ball-for-emergency-response. [↑](#endnote-ref-34)
35. R. Thurmes, Luxembourg Administration ans Notifying Administration, in: Mahulena Hofmann (ed.), International Regulations of Space Communications, 2013, 173 ff. [↑](#endnote-ref-35)