

Humanitarian Law Implemented

Space Communication in the Service of International Humanitarian Law

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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 the context of humanitarian crises (natural or man made disasters) is the project emergency.lu based on a network of international agreements, including the ITU framework, national legislation of Luxembourg and contracts.

I. Introduction

Emergency.lu launched by the Luxembourg Government is one of the projects aiming at the establishment of Internet connectivity in areas without any infrastructure. The motive of such projects is the need to re-establish telecommunication networks at the scenes of humanitarian catastrophes, where helplessness and lack of coordination are often predominant, e.g. after the 2010 earthquake in Haiti. The main character of the programme is a civil one, following natural catastrophes. However, its technology can be applied both in times of natural catastrophes and the periods following civil or international armed conflicts.

The nomadic satellite-based telecommunication system – ‘emergency.lu’ – aims to assist humanitarian agencies responding to communities affected by natural disasters, conflicts or protracted crises.¹ This system 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. It has capacity to intervene globally.

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1 See www.itu.int/net/pressoffice/press_releases/2011/52.aspx.

According to the programme, the volunteers of Luxembourg Civil Protection can be involved in emergency missions abroad setting up space communication networks in such regions. Once delivered to the disaster zone, it takes less than an hour to hook up a telecom terminal to its inflatable antenna, to point the antenna to a satellite in geostationary orbit, 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 cell phones and use the satellite capacity at no cost.

As an example of the restoration of communication networks using Luxembourg-based space technology,² the communication restoration programme 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.³ Based on the coordination through an international Emergency Telecommunications Cluster (ETC), the programme succeeded in providing security and data telecommunications and coordination services to the humanitarian community. With the humanitarian crisis in December 2013, the programme 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.

Emergency.lu is in permanent preparedness. In the periods when the system is not needed, a complementary programme SATMED – a global satellite enhanced cloud-computer based telemedicine platform – can be used.⁴ Both these component parts aim to protect civil population by facilitating the work of humanitarian organizations, relief workers and health care providers.

All of these humanitarian activities are based on a national and international legal framework. 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. The contribution uses extensively the facts contained in the Master thesis written by the co-author of this study, Loren François Florey.⁵

II. International Background

Attacks to telecommunication networks may be qualified under specific conditions as an “armed attack” in the wording of the UN Charter and evoke a situation of military conflict where international humanitarian law – *ius in*

2 <http://ictemergency.wfp.org/web/ictopr/countries-south-sudan>.

3 www.etcluster.org/emergencies/south-sudan-conflict.

4 <http://satmed.lu/#services>.

5 L. F. Florey, Luxembourg’s Global Telecommunication Platforms via Satellite, Master Thesis, University of Luxembourg, 2014.

bellum – is applicable.⁶ It may also be argued that the restoration of telecommunication networks belongs to the category of obligations 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 1949⁷ – *ius in bello*.

However, and this is the area on which the contribution is focused on, it may be further argued, that the fast renewal of connectivity belongs today to the central tasks of states in a humanitarian crisis of whatever source or legal character it might be – victims of natural catastrophes, or formerly belligerent parties in a post-conflict situation. These may decide to accomplish this task making recourse on their local sources, to conclude agreements with other administrations in the region, or to take into account the international support, such as the project emergency.lu.

In the framework of the United Nations, the global responsibility for the coordination of the information and communications technology (ICT) responses to emergencies lies by the UN World Food Programme (WFP)⁸ which is the designated Global Emergency Telecommunication Cluster (ETC) Lead Agency. In an emergency, ETC functions as a platform enabling the exchange of information among the members – humanitarian, private sector and governmental organisations that have an interest in humanitarian assistance and can commit to making a positive contribution to technology in emergency response.⁹

This cluster is a “global network of organizations that work together to provide common communication services in humanitarian emergencies”.¹⁰ In order to become 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. A formal request for membership submitted to the ETC Secretariat that outlines the nature of an organisation’s interest, the role that it wishes to play and the contribution that it commits to make to the work of the ETC, has to be adopted by a consensus of all ETC members.¹¹ In this structure, the Ministry of Foreign Affairs, Directorate for Development Cooperation is representing Luxembourg.

6 J.-C. Woltag, Cyber Warfare, Max Planck Encyclopedia of Public International Law (MPEPIL), para. 8-9.

7 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.

8 www.wfp.org/.

9 www.etcluster.org/about-etc/members.

10 <http://ictemergency.wfp.org/web/ictopr/emergency-telecommunications-cluster>.

11 www.etcluster.org/about-etc/members.

Additionally, the membership in ECT is automatically open to all associated organisations of the Inter-Agency Standing Committee (IASC)¹² – a unique forum involving both the key UN and non-UN humanitarian partners which has been established in June 1992 in response to UN General Assembly Resolution 46/182 on the strengthening of humanitarian assistance.¹³

One of the crucial members of the ECT is the International Telecommunication Union (ITU) which always considered the transmission of emergency messages to be one of its crucial tasks.¹⁴ The ITU has started, on its own initiative, a Framework for Cooperation in Emergencies (IFCE), which aims to extend all ICT services and applications to all phases of disaster management. The IFCE is an “ITU strategic initiative” targeting a facilitation of the rapid deployment of emergency communication systems in the event of a sudden on-set disaster or a long-term deployment in chronic or recurrent humanitarian contexts or as a part of a preparedness strategy in developing countries.

Luxembourg participates in IFCE on the basis of the 2011 Agreement to Cooperate on Strengthening Emergency Telecommunications and Rapid Response in the Event of Natural Disasters¹⁵ signed by the Minister for Development Cooperation and Humanitarian Affairs of Luxembourg, and the Director of ITU’s Telecommunication Development Bureau (BDT) on 6 December 2011. The ITU encourages its 193 Member States to use the ‘emergency.lu’ platform and to facilitate the rapid deployment of emergency telecommunication systems in the event of a sudden-onset disaster or a long-term deployment in chronic or recurrent humanitarian contexts, as well as to negotiate appropriate regulatory and legal frameworks with the national communication Administrations, particularly Telecommunication Regulatory Authorities.¹⁶ In case of deployment and use in one of the ITU member States, the ITU shall be also responsible for obtaining customs clearances, licenses and other governmental approvals and permissions required to deploy the programme.

Furthermore, Luxembourg is party of the 1998 Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations,¹⁷ which has been elaborated under the auspices of the ITU 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 sud-

12 <http://interagencystandingcommittee.org/iasc/>.

13 A/RES/46/182, 19 December 1991.

14 ITU Convention., e.g. Article 40.

15 Cooperation Agreement between the Government of Luxembourg and ITU, 6 December 2011.

16 www.itu.int/net/pressoffice/press_releases/2011/52.aspx.

17 UNTS, vol. 2296, p. 5.

denly 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 telecommunication services. Regulatory barriers that impede the use of telecommunication resources 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 telecommunication teams. The Convention defines the status of the relief workers, as well as their privileges 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 2012¹⁸ with a reservation common to all Members of the European Union.¹⁹ Concerning to some authors, the Convention is less functional at large as expected, as some signatory States face difficulties when implementing its far-reaching provisions in their national legal order.²⁰

III. 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”²¹ – concluded according to the 1915 Law on Commercial Societies.²² The agreement is in force until the complete implementation of the project, with the possibility of the Government of Luxembourg to suspend the project in earlier stages.

The joint venture has three main mandates: The first mandate is the establishment of detailed specifications and implementation procedures, as well as 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

18 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](http://www.itu.int/ITU-D/emergencytelecoms/tampere.html).

19 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.

20 Fn 5, p. 15.

21 Contrat d’Association Momentanée – NSCF – emergency.lu, 13 January 2011.

22 Loi du 10 août 1915 concernant les sociétés commerciales (Loi du 12 juillet 2013).

terminals and different elements concerning the logistic chain of deployment, including the training and information of the personnel. The third mandate deals with the operational and maintenance aspects of the project, including the costs of the global satellite footprint.

According to the agreement, 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 storage of one deployment kit. 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 Law of 25th June 2009 on Public Procurements.²³ 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 labour, supply of products or any provision of services, a “negotiated procedure” based on this law is applicable. This is 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 it.²⁴

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 2011²⁵ and prolonged until 2020 in at the end of the year of 2014. The contractual body remains unchanged, however minor changes have been done, e.g. the Steering Committee of the project has been revised in order to make it more efficient. This contract fixes the obligations of the parties, as well as the details of implementation of the project.

In 2012, the Ministry for Foreign and European Affairs of Luxembourg concluded a contract with Skype Communications SARL²⁶ making its software available to NSCF 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 internal communication purposes and to sub-license the software to the NSCF for the implementation of the emergency.lu project.

23 Law of 25 June 2009 on Public Procurements.

24 *Supra* note 23, Article 8 para. 1.e.

25 Contract between the Government of Luxembourg and NSFC – emergency.lu and Ducair, 31 March 2011.

26 20 March 2012, as amended.

IV. Implementation of the Project with International Partners

In the period following the concluding of the 2011 contract, the Government of Luxembourg signed numerous Emergency Standby Agreements with several international structures on the use of emergency.lu. Some of these structures belong to the UN system, such as the United Nations Children Fund (Unicef)²⁷ or the Office of the UN High Commissioner for Refugees (UNHCR) and the UN World Food program.²⁸ The most recent Standby Agreement signed by Luxembourg was 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 in regions without telecommunication infrastructures. For example, emergency.lu will enable the connection of the personnel of IMO with their seat in Geneva and coordinate humanitarian actions on the spot.²⁹

According to these legally binding 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 an emergency situation. 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 Luxembourg Minister for Cooperation and Humanitarian Affairs 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.

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.³⁰ In the course of the implementation of the programme, an intervention group assigned to international humanitarian missions has been created. This intervention team is composed of several specialized units, such as the

27 www.unicef.org/.

28 www.unhcr.org/cgi-bin/texis/vtx/home.

29 See the information on the website www.emergency.lu/.

30 Council Decision of 9 December 1999 establishing a Community action programme in the field of civil protection, 1999/847/EC.

logistical support team (Log) or the Technical Assistance and Support Team (TAST).³¹

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,³² 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.³³ 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.³⁴

The contracting partner is responsible for all necessary operational and administrative in-country support to the Support Team, whereas the Government of Luxembourg is contractually liable for the actions of its deployed personal. It is also 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 include war- and other extraordinary risks for Support Team members.

Each standby agreement contains a standard arbitration clause: Any dispute, controversy or claim between the organization and Luxembourg arising out of 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 enter 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.

31 Law of 12 June 2004 concerning the creation of an Administration of Rescue Services.

32 1 UNTS 15.

33 E.g. Article 6.4 of the Standby Agreement with UNHCR.

34 E.g. the respective provision of the Standby Agreement with the UNHCR: “Luxembourg shall ensure that its 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.”

V. Conclusion

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 analysed.

- 1 What are the space law implications of the programme? The project emergency.lu uses both pre-booked and ad-hoc capacity available on GSO satellites. Without launching any distinct space object or without operating of satellite station, providing of Internet to re-establish connectivity in crises areas can be hardly automatically categorised as “national activity” in the sense of Article VI of the 1967 Outer Space Treaty. Therefore, responsibility and liability for space activities according to space agreements remain attached to the States launching and operating the satellites used for the transmission of signals – which might be Luxembourg in many cases of the satellites operated by the SES, but a different State when using capacities on satellites launched by other States Parties of the Outer Space Treaty.
- 2 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 to 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.³⁵ In order to coordinate the use of the C-band in the international scale, the Government of Luxembourg had to enter into contact with the ITU prior to launching the project, in order to receive an international recognition of the use of necessary frequencies.³⁶

What are the humanitarian law aspects of the programme? Humanitarian law is not only applicable to military conflicts, but also extends 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 of whether the destruction of telecommunication networks falls under the means allowed by international humanitarian law, it may be argued that the restoration of such 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*. The fast

35 <http://ictemergency.wfp.org/web/ictopr/wavelength15/beach-ball-for-emergency-response>.

36 R. Thurmes, Luxembourg Administration as Notifying Administration, in: M. Hofmann (ed.), *International Regulations of Space Communications*, 2013, 173 ff.

renewal of national and international connectivity can be seen also a significant post-conflict task of formerly belligerent parties.

It can be concluded that the potential of the projects as emergency-lu is more extensive than the support of states – victims of natural catastrophes; its technology can be used in crises of whatever source it might be, helping to fulfill the purposes of international humanitarian law.