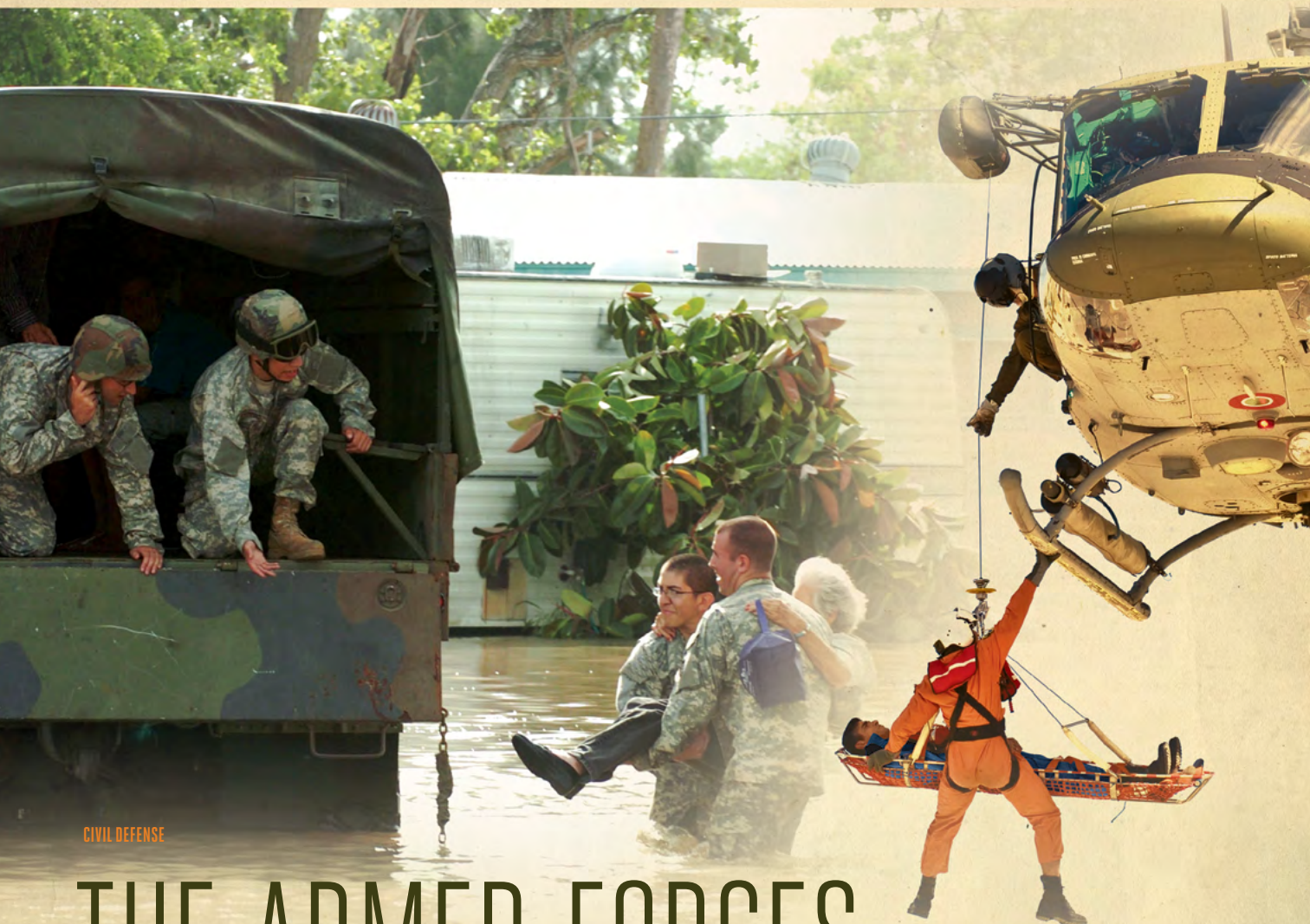


# VISIÓN CONJUNTA

AÑO 6. N°10. OCT 2014  
ISSN: 1852- 8619



CIVIL DEFENSE

## THE ARMED FORCES AND CIVIL DEFENSE

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de las Fuerzas Armadas

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N° de ejemplar: 10. Año 6. Editorial Visión Conjunta. 2014

Registro DNDA: 5144596 / ISSN: 1852- 8619

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## OUR ICON

Our icon is the famous Rubik's cube decorated with the colours of the Argentine flag and the coat of arms that identifies the *Estado Mayor Conjunto de las Fuerzas Armadas Argentinas*. We have elected this ingenious mechanism for our journal as it is the visual representation of the complex joint actions.

The image shows the challenge to combine in a harmonic way the elements that are part of the Armed Forces to achieve an efficient use of military instruments.

The proper use of the forces allows to set, at the same level, the coat of arms of the *Estado Mayor Conjunto* which implies a mental process to combine variables in a very complex setting.

In order to be successful as to the situation raised, it is necessary to have a broad mindset that allows to have a general perception of the target to be achieved; this defines our "joint perspective".



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# MESSAGE FROM THE DIRECTOR

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General Federico Sidders

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It has been six years since our first publication of the journal “Visión Conjunta”. We would like to thank those who have contributed and encouraged us to set a relationship with our readers. Publishing the work of professors, students and collaborators allows us to share knowledge and professional experience with the community.

The Escuela Superior de Guerra Conjunta (Joint Forces Staff College) is an opportunity for the integration of the military instrument of the Nation from a level of thought that has to be translated into the daily activities of the members of this team that is made up of men and women who make contributions according to their personal and professional experience.

Having different origins is an enriching experience. Specificity is an added value of which we have to make the most to promote creative, broad, respectful and understandable thinking in different places. This is why the success of Joint Military Action is supported by the strength of the specific forces.

Our challenge is to reach better education for our students and to provide them with tools to find the right solution for greatly dynamic situations that they will face during their career.

In this sense, on February 14, 2014, the Ministry of Education issued Resolution No. 112/14, through which the Master’s Degree in Joint Strategy and Strategic Level Conduction was given temporary official validity at national level.

Students will be granted this degree once they have finished their courses and passed their final assignment.

In April, we made a presentation to the National Evaluation and Accreditation Board (CONEAU, in its Spanish acronym) to give validity to the Master’s Degree and the Specialization in Operational Strategy and Joint Military Planning. This showed our teamwork spirit at the different levels of our Institution. The Instituto Universitario del Ejército (Army College), to which we are related for the master’s degree courses, has recently visited us thus contributing to our presentation to the CONEAU.

Resources have turned into actions and this allowed us to get to essential stages for the institutional life of our College with the purpose of contributing to our educational project.

Resources used for infrastructure, one of the indicators of academic welfare, have allowed us to open an amphitheater that can accommodate forty people and has technological equipment that makes it flexible.

With regard to our research area, we have started an academic work related to Civil Protection, the tile of which is “Support to Emergencies, Planning and Support to Civil Protection Operations”. These projects have a great influence on society at the moment of transferring knowledge.

As part of our identity building we will soon start a process for having permanent professors with the purpose of assuring quality and stability of our faculty.

With the purpose of promoting regional integration, we had officers from the Republic of Brazil, who are the first foreign students and are taking the Specialization in Operational Strategy and Joint Military Planning. We are open to receive and share their professional experience as we have been doing with students from other countries in the Master’s Degree.

In May, we published our third book, *Los Escritos Académicos en la Formación Militar*, a book written by professors of our Institution. The purpose of this book is to provide students with a tool to prepare their final assignments and theses.

Moreover, we have launched the website of our College ([www.esgcffaa.mil.ar](http://www.esgcffaa.mil.ar)), which has been designed according to the provisions of Law 26653 of information accessibility on websites. In this website, you will be able to find general information as well as this journal and other publications.

In June, the Graduates Center started carrying out its activities and its purpose is to be in contact with our former students who will be able to become part of our College community through our website.

Our purpose is to improve our educational proposal for which the ideas and suggestions of our readers are an important element of our communication.

# MALVINAS ACHIEVEMENTS

**Speech made by Colonel (Malvinas Veteran) Gustavo Manuel Salvadores during the ceremony held on April 2, 2014 for the 32nd anniversary of the Malvinas conflict.**

**T**hirty- two years ago, a group of Argentine men wearing the uniform of our Motherland made it possible for a dream of the Argentine people of fighting for territorial integration, landed on Malvinas ground to recover the Malvinas Island after almost 150 years of British misappropriation.

The law of the sea establishes as common law that any territory taken for such a period of time belongs to those who dominate it. This is how after a short planning, the Rosario Operation was carried out in order to recover them in the name of Argentine pride.

In spite of the great technological differences that existed between Argentina and Great Britain as the latter was supported by the North Atlantic Treaty Organization (NATO) and the United States, courage, bravery and heroic actions prevailed in the members of the Argentine Armed Forces as it occurred during the Liberation Campaigns at the beginning of the 19th century.

It is really sad to hear different versions that try to set aside the Malvinas element from the events that took place by saying that soldiers who fought were too young for war or that troops were not well equipped to be in the South Atlantic Theater of Operations without having previously got information about those events or having asked those who were honored to be there.

Although there were soldiers who had been recently incorporated and did not have the experience of the 1962 class, they fought like the best soldiers. They killed, died and came back to their land with no stridency, show but with pride, sacrifice, memories and lack of some things.

We have also commanded Officers and Petty Officers. They were simple men with virtues and defects. Men who decided to pursue the career of arms after we felt an interior call to do so. Men who love their motherland and citizens. We are interested in history and the integrity of our territory. We respect and practice its tradition, culture and faith in our elder ones. We worship God and we think that family is the ground for natural social order so we respect it and make it be respected.

Officers and Petty Officers are men of action, we are educated and trained for adversity, but in Malvinas there were no breaks to restore our energies. We had to recover, promote, help and emphasize the positive aspects of each situation, to gather our soldiers, permanently encourage them, support them emotionally, to be an example for them, teachers and leaders. In short, to be in command is easy to be said but not to be carried out. However, we did it successfully.



# THE ARMED FORCES AND CIVIL DEFENSE

Throughout history, the Armed Forces have assisted population when an emergency or catastrophe ravaged our territory or when it was necessary to help a neighbor country which was affected by an adverse event. These human aid activities are part of the extra missions of the Armed Forces that are currently organized to properly and efficiently respond to these situations in order to mitigate and ease their effects.

KEY WORDS: CIVIL DEFENSE / LEGAL FRAMEWORK / OPERATIONAL COMMAND / SUPPORT TO COMMUNITY

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By **Miguel Ángel Santiago**

Translated by Mariana Ríos Hudson

## INTRODUCTION

Civil Defense is that part of National Defense that comprises a set of non-aggressive measures and actions aimed at preventing, annulling or mitigating the effects that the armed conflict, the agents of nature or any other disaster of any origin may cause to population, their property and/or to the environment thus contributing to restore the normal life pace in the areas affected.

## LEGAL AND ORGANIC FRAMEWORK

First, it is worth mentioning those important aspects of the legal framework for this significant task. We will do this based on the Argentine Constitution in order to focus on the mission, functions and organization of the Operational Command of the Joint Staff and, mainly, on the civil defense activities carried out by the Armed Forces under its operational control in times of peace.

It is also worth mentioning that all efforts are addressed to support our society from which the Army, the Navy and the Air Force take their troops and, also, to support countries in the region.

The Argentine Constitution, in its Preamble, clearly sets forth the obligation to serve for common defense and general welfare... it is precisely there where we can find the grounds for the Armed Forces, which are considered to be the military instrument of National Defense, to carry out humanitarian aid activities.

It is really important to understand the Military Instrument of the Nation as an integrated instrument whose nature, origin, organization and doctrine of use is in line with joint action as a basic and essential concept to get the maximum operational capacity.

Executive Power Decree No. 1691/2006 which establishes the Regulations on Organization and Operation of the Armed Forces, states that the Main Mission of the Armed Forces is to:

Join forces and repel any foreign state military aggression in order to permanently guarantee and protect the interests of the nation, namely sovereignty, independence and self-determination, territorial integrity as well as the life and freedom of its inhabitants.

Also, it states that, in the general framework of the interests of national defense, participation of the Armed Forces in Operations to support the community of our country or friendly countries, among others, have to be considered as Supplementary Missions of the military instrument.

*The Argentine Constitution, in its Preamble, clearly sets forth the obligation to serve for common defense and general welfare... it is precisely there where we can find the grounds for the Armed Forces, which are considered to be the military instrument of National Defense, to carry out humanitarian aid activities.*

This Supplementary Mission is to be understood as follows:

In case of catastrophes, natural disasters or any other circumstances that may be determined pursuant to the laws in force, it is necessary to consider that, although they are important requirements of the nation that must be taken care of by means of operational and logistic capacities of the Armed Forces. As a supplementary mission of the military instrument, the participation of the Armed Forces in said support operations will be carried out based on the remaining dual capacities.

This dual capacity is available to serve the population with the purpose of maintaining and restoring normal life conditions.

Therefore, Law No. 23554 (National Defense), as ruled by Executive Power Decree No. 727/2006, states that the Joint Staff is the one responsible for conducting the planning process, defining doctrine and establishing training methods that allow for the integrated use of forces and to get the maximum operational capacity of the military instrument. The only traditional war experience that our country had was in the 20th century in the Malvinas War (1982), an event that clearly showed the importance of strategic planning and joint military action.

The ruling goes in this sense as it states that in times of peace, said Joint Staff will have the functional control of military means. With this purpose, a permanent working body is created and it will be responsible for the operations that require the use of the military instrument to achieve the goals established in the missions identified: Operational Command.

This Operational Command is precisely the one responsible for joint military training, the control of

joint exercises, the operational strategic planning and its execution as well as for military operations, therefore exercising the operational command of the means that are at their disposal. As the Command does not have organic operational forces, whenever these are required, they are provided by those responsible for their enlistment, training and support, that is, the Staff of the Armed Forces of the Nation.

The Operational Command has the mission to direct and coordinate the operational activities carried out by the Armed Forces in times of peace in order to contribute to the compliance with the operational responsibilities given to the Chief of Staff.

As regards this issue, its functions are:

- › To have the primary responsibility in the integral conduction of civil protection operations (civil defense) to be carried out in the Argentine territory as part of the response given by the Nation in case of social emergency or natural disasters and/or man-made disasters.
- › To have the operational control of the different forces of the Armed Forces at its disposal in order to carry out civil protection activities to support the Argentine provinces that are dealing with natural or man-made disasters which have not been declared national emergencies. Also, they have the function to deal

with those forces deployed abroad as a result of the execution of international cooperation agreements in case of catastrophe.

In order to comply with their mission and functions, in the current organic structure, the Command has a Head of Civil Defense Joint Military Operations that is responsible for advising and assisting the Operational Commander with regard to this type of tasks, that is, support to the community, humanitarian aid and humanitarian assistance. It is worth mentioning that these activities are carried out both in the national territory and abroad.

This Head of the Area actively takes part, within the framework of the Federal Emergency System, in the preparation of environment and civil protection policies and regulations that include planning, education, doctrine and training aspects to be included in the Armed Forces. Moreover, it has an active civic-military relationship by means of agreements, understandings and other administrative acts with national, governmental and non-governmental organizations to maximize the general cooperation and coordination regarding emergencies and disasters.

#### THE ARMED FORCES AND CIVIL DEFENSE

Through Ministry Resolution No. 121 of the year 2006, the Chief of Staff of the Armed Forces is granted powers to coordinate operations and activities for community



*This Operational Command is precisely the one responsible for joint military training, the control of joint exercises, the operational strategic planning and its execution as well as for military operations, therefore exercising the operational command of the means that are at their disposal.*

support in case of social emergency or natural or man-made disasters. This will only take place whenever the Ministry of Defense and/or national authorities state that the Armed Forces have to take part in missions to support the community.

Through the Executive Power Decree No. 636/13, the Military Coordination Secretary for Assistance in case of Emergency was created within the Ministry of Defense. This secretary is responsible for institutional coordination and deployment of the Armed Forces for immediate response in case of emergencies and natural/ man-made disasters.



Subsequently, through Resolution No. 297/14 of the Ministry of Defense, the Regulation of the Chief of Staff of the Armed Forces No. 03/2014 was passed: Civil Protection Activities (Support to Community, Humanitarian Aid –in the country-, Humanitarian Assistance –to other countries-), and through the latter, the Special Order No. 01/2014 was passed: Joint Action of the Armed Forces committed to Civil Protection Missions.

These two documents deal with the actions carried out by the Armed Forces committed to missions to support the community, they coordinate both personnel and means of the three forces and organize the national territory in Emergency Zones.

The foregoing, under the structure of an Emergency Zone Command per zone, is aimed at getting a better response once the adverse event has been produced; a situation that is coordinated from the highest military conduction level and in permanent communication with the Ministry of Defense.

Some of the support functions that the Armed Forces may serve as from their capacities, organization, human and material resources, are the following:

- › Organization of Emergency Operation Centers: deployment of facilities, communications, technology resources, security and personnel specialized in planning and conduction.
- › Transport: planning, direction and control of the transport of personnel and stock by different means (air, land, river and sea) that may be available.
- › Evacuation: transport of people and items that have been affected by a disaster to secure areas. Evacuation may be carried out by different means (air, land, river and sea) that may be available.
- › Accommodation: shelter to persons affected by an emergency through the deployment of means for temporary shelter and the operation of evacuees centers.
- › Rationing: support for the preparation and distribution of food for the people affected and the personnel committed to the emergency response.
- › Items supply: reception, storage and distribution of items for the personnel affected and to support the operation.
- › Sanitary assistance: sanitary assistance to people with the remaining military means (priority 2) as priority 1 is to provide assistance to the military personnel that are giving support to the emergency.
- › Communications: support with specialized personnel and campaign communications facilities that increase the capacities of the territorial network for the conduction of the emergency by the responsible authorities.
- › Debris removal: removal of material after events of collapse by trained personnel and heavy machinery.



- › Search and rescue: use of land, air and maritime means with the equipment and training necessary for the search and rescue of persons in any type of geographical setting.
- › Demolition: blowing- up by specialized personnel and adequate means.
- › Building: construction that will improve transit and defense of the area affected (bridges, roads, retaining walls), by means of the use trained personnel and proper materials.
- › Support to fire- fighting: support to personnel specialized in fire- fighting by means of logistic activities (transport, rationing, supply) and exploration of the areas affected.
- › Labour: organization of groups for the handling of items in storage, supply, distribution and works.

### TRAINING AND DOCTRINE

The Armed Forces are permanently carrying out activities to train their members regarding disaster prevention, response and mitigation of effects.

In this sense, the Operational Command of the Joint Staff of the Armed Forces (Head of Civil Defense) carries out the following training courses:

- › Civil Protection Planning
- › Methodology for the Direction of Emergency Operations Centers

### › Managers of the CRISIS system

The Joint Staff College has recently started carrying out a new research project related to “Support to Emergencies, Civil Protection Operations Planning” and is planning to carry out a seminar on civil protection during the year 2014 for the post- degree courses to be offered at this Institution.

The Institution is currently working on training programs regarding civil protection in order to include them in the lower execution levels.

From the point of view of training, several exercises have been carried out with the purpose of training organizations to respond to natural disasters. These exercises have been carried out based on risk maps regarding earthquakes, floods, volcanic ashes, chemical spills, nuclear accidents, epidemics, among others.

Moreover, some other exercises are carried out periodically to support catastrophes in the region, whether with the participation of personnel and means of our Armed Forces abroad or the participation of the Armed Forces of the region in our country.

These exercises are:

- › Ejercicio Solidaridad (Solidarity Exercise) with Chile
- › Ejercicio Masi with Bolivia
- › Ejercicio Hermandad (Brotherhood Exercise) with Peru
- › Ejercicio Integración (Integration Exercise) with Bolivia and Peru

*The CRISIS system (S- C) allows to collect, analyze and integrate all relevant information related to a crisis event by updating and completing the situation chart and making it possible to coordinate different actors and to transmit requirements and execution orders.*

Additionally, there has been a great effort to update doctrine and the Joint Civil Protection Regulations have been reedited, cooperation manuals for catastrophes have been prepared with those countries with which we have executed agreements and civil protection tactical procedures manuals have been prepared to standardize usage criteria to get more efficiency in the response.

#### COOPERATION AMONG COUNTRIES IN THE REGION

Important progress has been made as regards mutual confidence and security measures, mainly bilateral, agreed during the last years among neighboring countries. The Argentine Republic has executed cooperation agreements with Chile and Peru committing to implement humanitarian aid among countries in case of disaster.

We are also working to execute similar agreements with Bolivia, Paraguay, Brazil and Uruguay.

#### MAIN SUPPORT ACTIVITIES IN ARGENTINA AND OTHER COUNTRIES IN THE REGION

Among the most important operations carried out by the Armed Forces, we can mention the following:

##### › San Juan earthquake (1944):

This earthquake destroyed the city of San Juan and neighboring cities. It has caused about 10,000 deaths out of a total population of 90,000. It has also caused damage in the north of the province of Mendoza. The highest degree of the earthquake intensity was IX (Mercalli scale).

The Regimiento de Infantería de Montaña 22 “Teniente Coronel Juan Manuel Cabot” (an Army unit), located in the province of San Juan, was on the field, but part of it had to come back to the headquarters. Neither the Army nor the Nation had experience to respond to such event. Officers, petty officers and soldiers offered their assistance. Also, tents and supplies were made available and they helped with the evacuation and further rebuilding of the city.

##### › Caucete earthquake (1977):

This earthquake destroyed buildings in the department of Caucete. The destruction phase of the earthquake took more than one minute. It caused 65 deaths and more than 300 people were seriously injured. It affected the departments of 25 de Mayo, Sarmiento, Pocito and the north of Mendoza, where adobe buildings were destroyed in more than 50%. The highest degree of the earthquake intensity was IX (Mercalli scale). Most of the personnel of the Comando del Cuerpo del Ejército III (Army Command), located in Cordoba and the Brigada de Montaña VIII, with units in San Juan and Mendoza gave support to the community. Support consisted in evacuation, operation of evacuees’ centers, debris removal, sanitary assistance, distribution of supplies and water, among other activities.

##### › Flood in the Littoral (1998):

In 1998, there were extraordinary rainfalls in the high and medium basins of the rivers Paraná and Uruguay that caused a huge rise of the water level that affected seven provinces: Chaco, Corrientes, Formosa, Santa Fé, Entre Ríos, Misiones and part of the province of Buenos Aires. More than 100,000 people were evacuated but more than 400,000 were affected. About 17,790,000 hectares were flooded causing great agricultural and farming losses.

In this event, the response capacity of the provinces was exceeded. For this reason, the National Administration took control of it. The President of the Nation ordered the use of the Armed Forces. A Disaster Zone Command “Litoral” was created with the purpose of coordinating support operations of the Armed Forces, Security forces and the police in the areas affected.

The main activities carried out by the forces at the disposal of the Emergency Zone Command were the following:

#### Miguel Ángel Santiago

Captain. Staff Officer. Bachelor in Navy Systems for Defense. He holds a Master's Degree in Urban Development Environmental Management from Universidad de Mar del Plata. During the years 2012 and 2013, he was head of the Department of Risk Management at the Joint Staff of the Armed Forces, Operational Command, Area of Civil Defense. He is currently Head of the Civil Defense Department of the Operational Command of the Armed Forces.

- › Evacuation of people affected
- › Move of people and personal belongings
- › Distribution of food, clothing, medicine and other materials
- › Construction and maintenance of bridges and roads
- › Load and unload of elements of any type
- › Lodging and rationing for people
- › Drainage of flooded sectors

For this National Emergency, the Armed Forces were deployed during 13 months.

It is also important to mention the support to neighbor countries when they suffered serious damage caused by different natural disasters. This is the case, among others, of the support given to Chile during the earthquake of the year 2010. In this situation, a mobile hospital, a water- treatment plant and generators were deployed with the personnel necessary to operate them for a period of six months.

During the floods that took place in Bolivia in 2007, military engineering, marines, water- treatment plants and helicopters were used. Air Force planes were used to transport personnel and means. All of them have operated during two months.

In other emergency situations, we have assisted: Peru in the earthquakes of Arica (2004) and Pisco (2007),

Ecuador when the Tunguragua Volcano erupted, Chile during the fire at the Parque Torres del Paine (2009), just to mention some of the many situations during which assistance was provided.

### ACTIVITIES CARRIED OUT NOWADAYS

The main activities carried out by the Armed Forces during the year 2013 have been:

- › Support to the National Plan for the prevention and control of dengue in the north west and north east of the Argentine Republic by carrying out training activities for the personnel and participation in workshops organized by national and provincial entities.
- › Support during forestry fires:
  - › In the province of Chubut: El Hoyo
  - › In the province of Tierra del Fuego
  - › In the province of Buenos Aires: fire in a farm in the city of Azul
- › Support to the National Plan for Fire Management with helicopters of the Argentine Army
- › Support during an emergency caused by the ashes of the Puyehue Volcano.
- › Support during an emergency caused by a tornado in the Metropolitan area of Buenos Aires.



***The Armed Forces develop ongoing activities to train their member in the prevention of disasters, response and mitigation of their effects.***

- › Support to the “AHÍ” Plan in the following shantytowns:
  - › City of Buenos Aires: Barrio No. 6 Cildañez, Barrio No. 15 Lugano, Barrio No. 31 Retiro, 1- 11- 14, 21- 24 Zabaleta.
  - › In the Greater Area of Buenos Aires: city General San Martín: Independencia, La Cárcova, Barrio Hidalgo. City of Quilmes: Novak, Odisea, Emporio del Tanque, Los Álamos, Kolinós, Km 13, La Sarita, 9 de Agosto, Del Carmen. City of Avellaneda: Wilde, Corina. City of Lanús: Eva Perón, La Fe, Acuba, Monte Chingolo.
  - › Sanitary campaign to support riverside inhabitants in the Delta of the rivers Paraná and Uruguay in the provinces of Buenos Aires, Entre Ríos, Santa Fé, Corrientes and Chaco.
  - › Support during the floods in the province of Buenos Aires, in the cities of Carlos Casares, Bolívar, Tapalque, Las Flores, Pehuajó and Azul, among others.
  - › Support during the flood in La Plata city, an event for which 27,452 men and 2,295 vehicles were used between April 3 and 25, 2015.
  - › Support in the city of Rosario during the explosion that took place in a building in the city center which caused the death of more than twelve people.
  - › Transport of members of a brigade to Puerto Natales (Chile) to collaborate in the fire which took place in Torres del Paine.

**THE “CRISIS” SYSTEM, EMERGENCY MANAGEMENT**

At the request of the Joint Staff of the Armed Forces in the year 2006, the Technical and Scientific Research Center for Defense (CITEDEF, in its Spanish acronym) and the National Geographic Institute (IGN, in its Spanish acronym) developed an information system, the functions of which are aimed at the training and management of a crisis. Said information system, which took the name of “CRISIS” system (S- C, in its Spanish acronym), allows to collect, analyze and integrate all relevant information related to a crisis keeping the situation chart updated and complete by making it possible for the coordination of the different actors and the communication of requirements and orders.

Nowadays, the system is developed and is frequently used both for training and management activities which shows that it is a very useful tool for the purposes for which it was created.

**TO FUTURE**

Civil protection military operations carried out by the Armed Forces, which have the purpose of solidarity, allow to verify and train the Military Instrument for the functions of Command, that is, those activities related to planning, conduction, coordination and control. They also make it possible to carry out all activities related to logistics, supply, distribution, storage and transport.

At the same time, these operations allow to carry out other activities related to the Main Mission, such as the support to communications, engineering works and treatment of hazardous materials. These actions, which are within Complementary Missions, require a high recruitment level thus contributing to keeping the proper training of the Military Instrument and checking the effectiveness and efficiency of organizations and their procedures for usage.

It is important to mention that in the international context, there is a new concept regarding the use of the Armed Forces in Humanitarian Aid actions. For example, during the 2009 Wilton Park Conference about “The use of military resources for humanitarian response to natural disasters”, the following was expressed:

*Although the Armed Forces have traditionally not been considered critical in the response to natural disasters, their role has been redefined during the last years as from the growing impact of catastrophes and the decision of states to deploy their military resources which have become valuable tools to face humanitarian crisis.*

The foregoing allows to conclude that *the intervention of the Armed Forces in Civil Defense operations will continue being real and will tend to grow.*

Therefore, it is necessary to make estimations in order to have prepared and equipped forces to respond to future demands of that nature and to have a budget that allows for its efficient compliance without reducing military capacities with the purpose of complying with this part of Civil Defense in an efficient way.

The Armed Forces are looking to future taking into consideration their capacity to support different emergencies that may occur. Resources of the Armed Forces are resources of the state that are made available for the main purpose of Defense. However, these resources are very useful for assistance in case of emergency. In this context, the Armed Forces respond to the requirements of different government authorities thus becoming an important part of the Response Plan.



# THE USE OF DRONES IN ARMED CONFLICTS

The continuous increase in the use of unmanned aircrafts and the different criteria used to decide as to their possible attacks raise legal questions in the field of International Law

KEY WORDS: DRONES / INTERNATIONAL HUMANITARIAN LAW / INTERNATIONAL LAW OF ARMED CONFLICTS / ARMED CONFLICTS/ ROBOT / LETHAL WEAPONS

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By **Gustavo H. Krasňansky and María Elena Rossi**

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Translated by Mariana Ríos Hudson

## INTRODUCTION

An Unmanned Aerial Vehicle or Unmanned Aerial System, also known as drone, is an aircraft that has no crew on board. It is defined as a reusable vehicle with no crew that can keep a controlled and sustained flight level propelled by a reaction or blowing engine<sup>1</sup>.

Although there is nowadays no doubt about their efficiency, versatility and capacities, even in the civil environment, we can foresee an important UAS deployment with an operation requirement in the whole structure of the air space. There are still many challenges pending, among which we can find: insertion in the air space, operators training, certification of the system

airworthiness, radio- electric spectrum for command, control and payment charge or risk management.

The International Civil Aviation Organization (ICAO) regards UAV as aircrafts. Therefore, the current Recommended Regulations or Civil Aviation technical specifications are applicable to all of them<sup>2</sup>.

It is interesting to analyze the use of drones in areas of armed conflict, particularly their use for military purposes from a point of view of the legal framework.

With respect to this, the Bureau of Investigative Journalism, a non- profit organization based in London estimates that attacks with drones that occurred between 2004 and 2013 have caused, only in Pakistan, between

2500 and 3000 deaths (including hundreds of civilians and almost 200 children) and more than a thousand injured people<sup>3</sup>.

## GENERAL LEGAL FRAMEWORK

Semi- automatic systems, such as drones, are controlled and driven by humans remotely. Regulations regarding international law of armed conflict (ILAC) do not make any reference to the use of drones but it is applicable to it<sup>4</sup>. In this way, principles of International Humanitarian Law, such as the distinction between civil and military targets and the necessary proportionality in the use of force, imply a potential interest in the use of drones.

For the purposes of International Humanitarian Law, the legitimacy in the use of drones, taking into consideration those principles mentioned, lies in checking whether they actually have the advantage to allow to make more precise attacks, avoiding or minimizing the loss of civilians, injuries caused to civilians and/or damage to civilian property.

Moreover, when drones are used in situations that are not related to armed conflicts, the applicable law will not be international humanitarian law but domestic law and international law of human rights<sup>5</sup>.

The situation is even more complex, for example, in the case of a person directly taking part in hostilities from the territory of a non- belligerent state or who moves within the territory of a non- belligerent state after having taken part in an armed conflict. The issue lies in getting to know whether lethal force may be legally used against that person and which legal framework would be applicable. There are different opinions about this.

The International Committee of the Red Cross (ICRC) considers that International Humanitarian Law would not be applicable in such situation, which means that this person should not be regarded as a legitimate target under the laws of war<sup>6</sup>. Advising to do the opposite would imply that the whole world may be considered a potential battlefield and, therefore, any person could be considered a legitimate target for International Humanitarian Law<sup>7</sup>.

Attacks with drones are aimed at one specific military target (an individual or group of individuals) as it is

considered a threat. The current international laws do not include an exact definition of this type of acts; however, there is a common element in all operations with said purposes: the intended use of lethal force against an individual or group of individuals considered to be a potential threat by those carrying out the attack.

## DEBATE ON LEGALITY OF ATTACKS WITH DRONES

Having defined the area of study, the debate on legality of operations with armed drones implies two key issues. First, whether the operation is a legal act of the use of force according to international law which has few exceptions regarding the prohibition of the use of force: the exercise of the right of legitimate defense “in case of armed attack” and the authorization by the Security Council given within the framework of Chapter VII of the UN Charter.

Second, whether the attack was in line with International Humanitarian Law, that is, standards that rule the behavior of parties in an armed conflict. These regulations rely on two important principles: proportion, that is, not to cause consequential damages that are not proportional with relation to the proposed military target, and distinction that requires to distinguish between combatants –that may be a legal attack target– and civilians that cannot be legally attacked unless they directly take part in hostilities.

## RECENT USE OF DRONES IN CONFLICT SITUATIONS

### Tribal Areas under the Federal Administration of Pakistan

By August of this year, the number of confirmed attacks

*There are still many challenges pending, among which we can find: insertion in the air space, operators training, certification of the system airworthiness, radio- electric spectrum for command, control and payment charge or risk management.*

1. interference with missiles.

2. However, the complete integration of UAS in the different types of air space and airports will need the development of “new” regulations to complement the existing ones. The goal of ICAO is to provide with the international regulatory framework to support the safe operation of UAS in the whole world in a harmonized and proper way that may be compared to the operation of manned aircrafts.

3. Available at [http://www.swissinfo.ch/spa/noticias/politica\\_suiza/La\\_Fronda\\_se\\_organiza\\_V\\_drones\\_y\\_robots\\_asesinos.html?cid=35857204](http://www.swissinfo.ch/spa/noticias/politica_suiza/La_Fronda_se_organiza_V_drones_y_robots asesinos.html?cid=35857204)

4. Interview to Peter Maurer, president of the ICRC held on May 10, 2013, on the ICRC website.

5. Interview to Peter Maurer.

6. Interview to Peter Maurer.

7. Regarding possible attacks with drones carried out by the United States in the borders of Afghanistan and Pakistan, in order to state whether the Geneva Conventions have been breached, the Human Rights Council asked Ben Emmerson, UN Special Rapporteur on Counter Terrorism and Human Rights, to carry out some research on that topic. According to the British lawyer, the main purpose of the study is to assess whether the attacks with drones have caused a disproportionate number of civilian victims, which is against International Humanitarian Law (IHL). The results of the research carried out will be presented during the 68th UN General Assembly.



with drones (between 2004 and 2013) carried out by the Central Intelligence Agency (CIA) in the area of the Tribal Areas under the Federal Administration (FATA) of Pakistan was 369<sup>8</sup>.

There may be three possible contexts applicable to these cases:

- › Context of international armed conflict: In this context, both International Humanitarian Law and International Law of Human Rights are applicable. It is important to understand the specialty criteria among them taking into considerations the circumstances of the case under study.

The different Geneva Conventions (I to IV) of 1949, in Article 2, establish that said Conventions will be applicable to all cases in which state of war has been declared or when there is an armed conflict between two or more member states, even in the case in which one of the states involved has not been recognized by the others. In light of the foregoing, we do not consider attacks with military drones in FATA as an international armed conflict, they are not part of a context of state of war declaration nor are they considered as an armed conflict among States.

- › Context of non- international armed conflict: The question, in this context, would be within the criteria of the Geneva Conventions of 1949 and common law. The non- state organization needs to have a minimum structure so that it will be possible to identify its members. Second, it is essential that all Geneva Conventions be applicable. Moreover, the non- state organization has to be armed and able to set out conflict to government levels.

Besides this, the State in conflict (which has to be intense and continued) must try to counteract the members of the non- state organization with its regular military forces. Last, it is important for the conflict in question to be subject to discussion by the UN Security Council or General Assembly.

Under these standards, in the case of FATA, we can observe that the Additional Protocol II to the Geneva Conventions of 1949 on protection of victims of non- international armed conflicts is applicable to those States that are part of it. The United States government has not signed nor ratified it, so it is not applicable to them as regulations, although we can say that the provisions stated therein are binding in this case because of the *ius gentium*.

However, attacks were not carried out by the armed forces but by the CIA and, also, the random characteristic of these attacks is not in line with the need to have a certain intensity level and continuity in the conflict.

- › Context of inter- state use of the armed force: The UN Charter expressly forbids the use of the armed force<sup>9</sup>, with two exceptions: that the territorial State where operations are carried out agrees to the use of force within its territory by a third party State or that it cannot deal with the threat by itself or that the State making use of the armed force is legitimated by the right to legitimate defense, whether individual or collective<sup>10</sup>.

Taking into consideration the consent given by the territorial State, although we can say that the State gives legitimacy to the use of force in the territory of the State in question, this does not mean that International

Humanitarian Law is not applicable to attacks or military operations being carried out. The Pakistan Prime Minister; Nawaz Sharif, has condemned attacks with drones in Pakistan saying that said practices “are a violation of international law and of the UN Charter”<sup>11</sup>.

If we go further in detail, we can mention that in a ruling issued on April 11, 2013 by the Supreme Court of Peshawar, it is clear that attacks with drones are a war crime and a serious violation to human rights.

In the case of attacks with drones in the FATA region (Pakistan), those attacks were firstly considered as legitimate based on the idea that the Pakistan government would not or did not want to deal with the problem of terrorism in its territory. Even the possibility that there was an implicit agreement between the United States and Pakistan which authorized attacks with drones was considered.

Another sign of the lack of acceptance with respect to the consent given by Pakistan can be found in the ruling issued on April 11 by the Supreme Court of Peshawar in which it is stated that attacks with drones are considered a war crime and a serious violation of human rights.

We also have to remember that the exceptional exercise of the right to legitimate defense inherent to the States requires that the use of force be made because of a first attack by another State.

However, after September 11, 2001, the United States administration has accepted the theory of preventive or anticipatory legitimate defense for which a first attack is not necessary. This doctrine is extremely controversial.

Another issue that has been largely discussed in relation with the right to legitimate defense is whether it can justify the use of the armed force against non- state organizations or groups. As regards this issue, the International Court of Justice has resolved in a case related to armed activities in the territory of the Democratic Republic of Congo to deny such possibility so it will not be possible to justify attacks with drones under the theory of legitimate defense<sup>12</sup>.

### **Attack in Datta Khel (North Waziristan) Pakistan**

In March 2011, while a meeting in Datta Khel was being held among its residents and some Taliban representatives to solve a conflict regarding a chromium mine in the area, there was an attack with US unmanned aircrafts that killed 26 people, of which some were Taliban insurgent and the rest, most of them, were civilians.

Information from US and Pakistan official sources gave different numbers of people dead and of civilians and insurgent people. According to the information given by US intelligence agents, of the 32 people who were present at the meeting, 13 were Taliban insurgent and 11 of them were killed. Datta Khel is one of the most attacked targets in the

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air campaign that the CIA carries out by means of the use of drones over Pakistan<sup>13</sup>.

### **Differences between attacks in Afghanistan, Iraq and Pakistan**

In the international perception, and more in particular in the US perception, there is a clear armed conflict between the US and Al- Qaeda (as well as the forces supporting them and providing shelter).

As the Security Council has recognized the right to legitimate defense after the September 11 attacks to the United States, it seems to have implicitly recognized, according to part of the doctrine, that it was an “armed attack” as defined in Article 51 of the Charter, thus giving the possibility for the actual exercise of legitimate defense by the State that was attacked.

According to different reports, operations with drones in conflict areas, such as Afghanistan and Iraq, are carried out by American Armed Forces. The Army prepares a list of persons selected as target of eventual attacks. In order for them to be included in the list, two verifiable human information sources and additional material evidence are necessary (Report of the Special Rapporteur: par. 9, par. 21)<sup>14</sup>.

8. "Covert War on Terror"; The Bureau of Investigative Journalism. Available at <http://www.thebureauinvestigates.com/category/projects/drone-data/>

9. Article 2.4 of the 1945 UN Charter.

10. United Nations Organization, UN Charter; article 51: 1945.

11. "Sharif blasts US drone attacks on Pakistani soil", PressTV; May 31, 2013.

12. Available at [http://www.centredelas.org/index.php?option=com\\_content&view=article&id=1065%3Aison-legales-los-ataques-con-drones-militares&catid=40%3Aconflictos-i-guerres&Itemid=61&lang=es](http://www.centredelas.org/index.php?option=com_content&view=article&id=1065%3Aison-legales-los-ataques-con-drones-militares&catid=40%3Aconflictos-i-guerres&Itemid=61&lang=es)

13. Available at <http://www.ieee.es/documentos/areas-tematicas/retos-y-amenazas/2011/detalle/DIEEE037-2011.html>

14. See Pozo Serrano, Pilar; "The use of drones in current conflicts: an international law perspective". Available at [http://www.belt.es/expertos/home2\\_experto.asp?id=5712](http://www.belt.es/expertos/home2_experto.asp?id=5712)

On the contrary, the air campaign against terrorists from Afghanistan, sheltered in Pakistan, was carried out by the CIA.

### Attacks from Israel

Selective attacks have become an open and declared practice since September 2000.

The process for approval of a selective attack in Israel requires:

- › Information that shows that the identified person has actively taken part in terrorist acts (planning, execution or preparation of the attack).
- › Determination of the place and method of attack to be used (generally, an air attack).
- › Assessment of the risk of side effects and of potential political impact. If there are real chances to catch the person identified, this possibility must always be chosen.

The complete plan must be approved by a high level political representative and the possibility for the practice to have an external, judicial or any other kind of review is not considered.

The Israeli Supreme Court ruled regarding this governmental policy in a decision held in December 2006 which accepts the practice of the government but with some corrections. In this ruling, the Court considered that the Intifada that started in 2000 was different from the First Intifada in the sense that it was an international armed conflict between Israel and Palestinian terrorist groups which gave legitimacy to the use of force by Israel.

However, based on the characteristics of the conflict, the decision imposed conditions on Israel regarding the legality of operations of selective attacks that were more restrictive than those established in the International Humanitarian Law regulations that are applicable to conventional international armed conflicts.

First, the description of the members of terrorist organizations as illicit fighters (decided by the Israeli government) is rejected and they are considered civilians who participate directly in hostilities. The ruling highlights that the mere belonging to a terrorist organization would not be enough to turn an individual into a legitimate attack target and it is necessary to give evidence of their direct participation in the instigation or execution of a terrorist act.

Second, the ruling does not consider general International Humanitarian Law provisions as it conditions the legitimacy of selective attacks to the lack of a reasonable option to arrest the terrorist, a feature that was already part of Israeli policies. The ruling also adds that

*It is important to note that, although drones are not illegal in themselves, their use is subject to international law.*

some incidents related to this practice may be subject to judicial review<sup>15</sup>.

### Air attack in Yemen in September 2011

Al- Awlaki, an extreme Muslim minister, was killed during an air attack in September 2011 in Yemen. Other two important cases were the ones of Samir Khan and Awlaki's son, Abdulrahman, a young 16- year- old boy from Denver, both of whom died in the same attack.

### CONCLUSIONS

From the texts and background analyzed, we can conclude that:

- › In the context of International Law applicable to Armed Conflicts, the use of drones has not been prohibited nor considered as deceitful or discriminatory. In this sense, they are not different from weapons shot from manned aircrafts such as helicopters or other combat aircrafts. However, it is important to note that, although drones are not illegal themselves, their use is subject to international law<sup>16</sup>.
- › Moreover, the use of drones does not always have weapons or war purposes. For example, as regards civilian uses, they can help to identify fire events and, therefore, save lives. They can also be used to gather key information for the personnel providing assistance in areas affected by natural disasters. In the future, it is possible that drones may also help to distribute emergency aid in distant zones. Actually, most military drones do not carry weapons and they are used for surveillance purposes, in particular to give information about the location and identification of enemy targets.
- › As regards military uses, those who are in favour of their use state that they contribute to the precision of attacks and the reduction of side effects. However, there are reports of damage caused to civilians considered as undesired effects.
- › There are neither treaties nor agreements of this type or any other international regulations regarding this type of devices.
- › However, International Humanitarian laws are applicable to all weapons used and to how they are used. The parties to a conflict must always have in mind the principle of distinction (both between combatants and civilians and military targets and civil property). Moreover, they cannot be used to transport prohibited weapons, such as chemical or biological agents.

- › It is necessary to give preference to weapons that allow to enhance the accuracy of attacks and that contribute to avoid or reduce loss of civilian lives, injuries to civilians or damage to civil property. It is still necessary to determine whether drones fall into this category.
- › In situations in which there is no armed conflict, national laws and the international law of human rights are applicable, in particular regulations regarding maintenance of order.
- › Pursuant to International Humanitarian Law, it is possible to use lethal force against combatants and civilians that directly take part in hostilities during an armed conflict.
- › An interesting question is the legal term to be used for teleoperators of distant weapons systems, as in this case. These persons are the ones who operate the system, identify the target and shoot missiles. It is, *prima facie*, understood that drones operators and their chain of command are responsible for what happens. Distance does not release them from the obligation to apply the principles of distinction and proportionality and to take all necessary precaution for the attack. By analogy, teleoperators are not different from manned aircraft pilots as regards their obligation to abide by International Humanitarian Law and, also, they can be subject to legal attacks pursuant to International Humanitarian Law<sup>17</sup>.
- › Pursuant to the *ius ad bellum*, regulations of International Law that establish when the use of force is legal in international relations, the prohibition of threat and use of force set forth in article 2.4 of the Charter does only admit two exceptions: the exercise of the “inherent right to individual and group legitimate defense” in case of an armed attack, recognized in article 51 of the Charter and, also, in custom law rules, or the possible authorization of the use of force by the Security Council within the framework of Chapter VII of the Charter.
- › Pursuant to the *ius in bello*, all parties to a conflict –even in those cases in which the use of force is not justified– must respect some regulations regarding means and methods of combat. International Humanitarian Law is based on two main principles: proportionality (between the expected specific military advantage and the foreseeable incidental damages caused to civilians) and distinction (between civil and military targets).
- › Following this analysis, there are weapons that are

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15. See Pozo Serrano, Pilar; *op. cit.*

16. ICRC. Available at <http://www.icrc.org/spa/resources/documents/interview/2013/05-10-drone-weapons-ihl.htm>

17. Available at [www.icrc.org](http://www.icrc.org)



***El Derecho Internacional Humanitario se fundamenta en dos principios cardinales: el de proporcionalidad (entre la ventaja militar concreta esperada y los previsibles daños incidentales a civiles) y el de distinción (entre objetivos civiles y militares).***

illegal themselves because they cause indiscriminate damage or unnecessary suffering, such as chemical and bacteriological weapons which led to their prohibition and there are some other weapons which may be legal according to the way they are used.

- › The International Court of Justice has indicated that States must not use weapons that cannot distinguish civil targets from military ones (ICJ, Nuclear Weapons Advisory Opinion, p. 257), stating, however, that international practice establishes that for a certain type of weapons to be against International Humanitarian Law, they have to be prohibited by an international treaty. This has been confirmed by article 8.2.b.xx) of the Rome Statute of the International Criminal Court, which describes the following as war crimes in international armed conflicts: Employing weapons, projectiles and

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material and methods of warfare which are of a nature to cause superfluous injury or unnecessary suffering or which are inherently indiscriminate in violation of the international law of armed conflict, provided that such weapons, projectiles and material and methods of warfare are the subject of a comprehensive prohibition and are included in an annex to this Statute, by an amendment in accordance with the relevant provisions set forth in articles 121 and 123.

- › We understand, then, that the specific nature of drones is not per se or intrinsically against International Humanitarian Law. It is said that they are more a means of transport than a weapon or, in any case, a mixed system that is as legal as any other system used in a theater of operations with a control, surveillance and accuracy capacity that is the result of a cutting edge technology.
- › Therefore, they are not prohibited by the law nor by agreements and their use is permitted provided they comply with International Humanitarian Law provisions.
- › The question is not whether the aircraft is manned or not but whether it complies with applicable regulations or not.
- › Therefore, legality of their use must be analyzed in each specific case. The main objections against their use focus on three elements: the fact that drones have been one of the systems used by some states to make "selective attacks"; the intervention of civilians at some stages of the operations carried out by means of drones as this may imply a direct participation of civilians in hostilities and, last, the application of the principle of proportionality, that is, whether the military advantage expected from the attack would justify the number of foreseeable civilian victims. As regards the latter, it is necessary to explain that the different interpretations of the concept of military necessity and the principle of proportionality become more complex due to the differences as to a factual question as already mentioned, the number of civilian and military victims<sup>18</sup>.
- › The mandate of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Christof Heyns, before the Commission on Human Rights of the UN General Assembly dated April 9, 2013, recommends States to establish moratoria on aspects of lethal autonomous robotics and calls for the establishment of a high level panel for those devices that can articulate an international community policy on this issue.

18. Consultation source and extract from conclusions available at [www.iecee.es](http://www.iecee.es). Opinion documents, Pilar Pozo Serrano, No. 37/2001, "The use of drones in current conflicts: an international law perspective".



In the era of Digital Revolution, technology has become a very important factor. However, Internet may be a double- edged sword, as it is sometimes a useful tool and some other times a threat with respect to which institutions controlling security and defense of a nation must be alert. This is why Brazil has decided to implement policies to face a latent cybernetic threat

KEY WORDS: CYBERWAR / THREAT / SECURITY / VULNERABILITIES

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By **Augusto Cesar Amaral**

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Translated by Mariana Ríos Hudson

**T**he 21<sup>st</sup> century is known as the century of the Digital Revolution because of the progress in computing and telecommunications. As any other tool, technology may be used for the progress of humankind or any other purpose. Nowadays, we cannot say that a country may not suffer a cyber- attack that implies not only a cybercrime but also a state cyber aggression in its different ways.

Thus, cybernetic threat affects security and defense of any state. Brazil is not an exception to this. However, what is the importance of this threat? What are the main vulnerability factors?

Based on the Brazilian National Defense Policy implemented in 2005, we will explain the way in which its capacities for Cybernetic Security and Defense of the National Critical Infrastructure are organized and we will try to answer the following question: Is Brazil able to

provide an effective defense against attacks carried out in an increasingly hostile cybernetic scenario?

### CONCEPTS AND DEFINITIONS

The great technological progress made during the last 30 years in the field of Information Technology and Communications (ICT) has led to significant changes in the way individuals, organizations and nations relate among each other and are organized.

Nowadays, we can see a great dependence of individuals, social groups, public and private organizations, government critical structures, countries' security and defense on information systems that are interconnected through complex data processing networks. These are vulnerable to attacks and fraud by different agents in a new interaction space called cyberspace:

*An environment characterized by the use of electronics and the electromagnetic spectrum to store, modify and exchange data through a network system and the associated physical infrastructure. Cyberspace may be considered an interconnection of human beings through computers and telecommunications without considering its physical dimension<sup>1</sup>.*

*...it includes the organizing structure of the Internet, devices connected to the Internet as well as conventional and wireless networks. Some of these networks are administered by government and private entities, some are connected to a broader Internet and some are not<sup>2</sup>.*

*In essence, security refers to the condition of being secure, free from risks and/or threats, danger and, if necessary, to be able to defend oneself with high probabilities of success. Defense is the action carried out to protect oneself against such risks, threats, danger and damage<sup>3</sup>.*

We can, thus, state that, within a state, cybernetic security refers to the protection and guarantee of use of information strategic assets that control the national critical infrastructure<sup>4</sup>. Cybernetic defense refers to the setting of defensive or aggressive actions in the context of military planning to be carried out in cyberspace and which may cause a cyberwar.

### CYBERNETIC THREATS AND VULNERABILITIES

There is much news about cyber- attacks against citizens, organizations, companies and critical structures of a country. These may come from anywhere and it is very

difficult to identify their author or source. They may be launched by young amateurs without great intentions, economic fraud criminal groups, industrial espionage companies, terrorist groups for political purposes or even state agents.

There are many associated risks and systems vulnerabilities. Most acts come from the attraction that cyberspace causes as it offers greater profitability, globalness and ease, impunity for any type of activity.

Conflicts may be as simple as civil disputes over the ownership of a domain name or more complex disputes such as deliberate campaigns of cyber- attacks as part of a conventional war among technologically advanced states.

It is important to make a distinction between cyber threats and crimes as most cybercrimes do not even represent a threat for the security of the country because they do not affect their critical infrastructure and they have to be dealt with in the areas of justice and law.

*However, some analysts consider that: the feeling of insecurity in the network and the alarming existence of cybercrimes are the result of information resources artificially created by the cybersecurity industry which, of course, is interested in exaggerating cybercrimes; that is, in the creation of a subjective feeling of insecurity and alarm in the network<sup>5</sup>.*

Others, such as David Betz and Thomas Rid question the use of the term cyberwar saying that:

*The term cyberwar is, of course, intriguing. But what does it actually mean for strategists concerned about the*



*In the context of defense, the responsibility of the cybernetic sector was given to the Brazilian Army which, by means of the creation of the Cybernetic Defense Center, aims at contributing to increase security and capacity to act in a network, both in the military area and different sectors of the government and society.*

## ***Cybernetic threats affect security and defense of any state. Brazil is not an exception to that. However, what is the magnitude of this threat? What are the main vulnerability factors?***

*balance of ends, means in conflicts nowadays? Not so much. In fact, it is not only a neologism of meaning, but it is also a distraction with no sense in strategic terms. Contemporary strategists who consider that cyberwar is a new decisive form of conflict are mistaken<sup>6</sup>.*

*Cyberwar has never happened in the past: this does not happen today and it is unlikely to affect our future. All prior and current political cyber-attacks –as opposed to cybercrimes– are sophisticated versions of three activities that are as old as human conflict: sabotage, espionage and subversion<sup>7</sup>.*

### **BRAZIL**

In 2005, after a long period of time without a defense policy, the Brazilian Government issued its National Defense Policy –PND<sup>8</sup>, in its Spanish acronym, a document that has the purpose of making all sectors of Brazilian society aware of the importance of the country's defense.

It sets forth that the cyber sector is strategic for National Defense which must be strengthened in order to reduce vulnerability of systems that have support for information technology and communication or allow its quick recovery. Therefore, it must be able to oppose to possible cyber-attacks.

Also, when it comes to national security and measures for critical infrastructure security, the National Defense Strategy –END, in its Spanish acronym (2008), mandates the enhancement of devices and security procedures that reduce vulnerability of systems related to National Defense against cyber-attacks and, if necessary, that allow for its quick recovery, under the responsibility of the Chief of Staff of the President of the Republic, the Ministries of Defense, Communications and Science and Technology and the Institutional Security Cabinet of the President of the Republic.

The Institutional Security Cabinet, an entity that coordinates the activity of information security in Brazil, launched in 2010 the Libro Verde de Seguridad Cibernética [Green Book on Cyber Security] with the purpose of creating the necessary conditions for cyber security with respect to the understanding of new requirements for the protection of the Brazilian state and society.

This book aims at facing the challenge of gathering the agendas of the government, schools, the private sector<sup>9</sup> and the third sector in an effort to build common thought and guidelines for a Cybernetic Security National Policy including the following factors: political and strategic, economic, social and environmental, communications and information technology, education, legal affairs, international cooperation and security of critical infrastructure. It considers cyber security a strategic responsibility of the state that is key for the maintenance and preservation of critical infrastructure of the country, such as energy, transport, telecommunications, water, finance, information, among others.

In the context of defense, the responsibility of the cyber sector was given to the Brazilian Army which, through the creation of the Cybernetic Defense Center, aims at

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6. Betz, D.; "Cyber war is not coming. Infinity Journal"; Issue Nro. 3, Summer; 2001; pages 21 – 24. Available at [https://www.infinityjournal.com/article/23/Cyberwar\\_is\\_not\\_coming/](https://www.infinityjournal.com/article/23/Cyberwar_is_not_coming/)

7. Rid, T.; The cyber war will not take place. London: C. Hurst & Co.Ltd; 2013.

8. Decree No. 5484; June 30, 2005; Brazil.

Available at [http://www.planalto.gov.br/ccivil\\_03/\\_Ato2004-2006/2005/Decreto/D5484.htm](http://www.planalto.gov.br/ccivil_03/_Ato2004-2006/2005/Decreto/D5484.htm)

9. Third sector usually refers to a group of institutions whose main characteristic is to be "private but not profitable" and to act in the public sector to meet demands that are not met by the State or the market. This is a highly diverse scope of organizations that act within a non- profitable sector (non- governmental organizations, foundations, school canteens, cooperatives, etc.), which authors usually call in different ways: non- profitable sector, social or solidarity economy, third way or third sector.

10. Portaria Normativa; N° 3389 /MD; Brazil; December 21, 2012. Available at: [https://www.defesa.gov.br/arquivos/File/legislacao/emcfa/publicacoes/md31\\_p\\_02\\_politica\\_cibernetica\\_de\\_defesa.pdf](https://www.defesa.gov.br/arquivos/File/legislacao/emcfa/publicacoes/md31_p_02_politica_cibernetica_de_defesa.pdf)

*Cybernetic defense refers to the implementation of defense and attack actions in the context of military planning to be carried out in cyberspace and which can lead to cyber war.*

increasing security and capacity to act in a network both in the military area and in different sectors of the government and society.

The Defense Center focuses its actions on the training of human resources, doctrine updating, security enhancement, response to network incidents, incorporation of lessons learned and protection against cyber- attacks.

Following the ongoing process, the Ministry of Defense published in 2012 a document that explains the Cybernetic Defense Policy<sup>10</sup> and sets forth the guidelines for the Cybernetic Defense Military System (SMDC, in its Spanish acronym) to consolidate itself. The document indicates the responsibility of the Armed Forces in the prevention of the criminal use of the Internet and other networks as well as the protection of data and essential communications.

### SECURITY SYSTEM AND CYBERNETIC DEFENSE

Nowadays, we can say that Brazil is about to consolidate the Brazilian Cybernetic Defense Military System. This will be applied at national level and has been prepared at the highest political level, represented by the Institutional Security Cabinet (GSI/PR, in its Spanish acronym) and the Federal Public Administration (APF, in its Spanish acronym), and has been through the Ministry of Defense (MD, in its Spanish acronym) which is in charge of the strategic- political relation and reaches the lowest levels of command of the Armed Forces that act at operational and tactical level with the purpose to involve the whole society in the defense of national interests in cyberspace.

In this system, the Security Cabinet (GSI/PR) coordinates actions that affect security of the society and the State: Cybernetic Security, Communications and Information Security and National Critical Infrastructure Security.

Apart from contributing to the national effort in the areas of security, the Ministry of Defense is responsible for Cybernetic Defense operations.

For this purpose, the Armed Forces have received this command:

- › **At strategic level:** to carry out the necessary actions for their performance in situations of crisis or armed conflict and episodic characteristics in a situation of peace and institutional normality.

- › **At operational level:** to carry out defensive and attack actions related to the preparation and use in military operations of any nature and intensity that are inherent to cyber- war.

### CONCLUSIONS

Can Brazil provide an efficient defense against attacks originated in an increasingly hostile cyber environment?

We can nowadays say that there is no country capable of defending itself against cyber-attacks in an efficient way. Context constantly changes and new threats appear every moment. Data processing and information systems are, in general, very vulnerable and actors involved are very different among them.

It is impossible to predict an attack or identify its origin with precision. Security sectors focus their actions on the identification and elimination of vulnerability points of the systems used and the capacity to recover themselves and not to replicate damage after the attack.

In this sense, Brazil, as some other countries, has the purpose to create awareness and involve the different sectors of the Brazilian society, including the political area, the armed forces, academics, the private sector and the third sector as to the problem of security and cyber defense.

Brazil has worked to organize and train agencies related to security and cyber defense, information and communications security, security of critical infrastructure which develop activities that complement and overlap among them.

It has also designed the Brazilian Cyber Defense and Security System which is coordinated by the Institutional Security Cabinet of the President of the Republic and is supported by the Ministry of Defense as regards defense actions.

There, cyber defense is mainly developed by the Cyber Defense Center of Brazil, a recently created military unit that has the purpose of generating knowledge and doctrine, train human resources and apply defense and attack actions of cyber war.

We can conclude that Brazil has all the necessary conditions to develop its Cyber Defense and Security System and, therefore, face any attack that may affect the functioning of its critical infrastructure.

### › REFEREED ARTICLE

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# PRESERVATION OF THE ENVIRONMENT

Its influence on the conduction of military operations

The different attempts to civilize war have restricted military actions prohibiting the use of weapons that cause damage to the environment. There are international legal obligations and domestic laws that require countries to protect the environment against the effects of armed conflicts which are included in directives, instructions, manuals and military training programs. These legal obligations are restrictions for the Commander of a Theater of Operations in the planning and conduction of an armed conflict.

KEY WORDS: INTERNATIONAL HUMANITARIAN LAW / ENVIRONMENTAL DAMAGE / ARMED CONFLICT / LEGAL ADVISOR

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By **Fernando A. Bartrons**

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Translated by Mariana Ríos Hudson



## INTRODUCTION

In times of armed conflicts, damage to the environment is unavoidable. Wars have caused great damage, part of which has been long-lasting. Many battlefields of the First and Second World Wars cannot be used yet while others pose significant risks for the population due to the presence of war material such as mines or projectiles.

The effects of wars at the expense of the environment is an unknown topic although wars have caused species of plants and animals to have disappeared, soil erosion, and the pollution of air and water, among other things.

Nowadays, the destruction power of combat means used in armed conflicts and available in arsenals represents a threat for the environment as they may cause unprecedented serious damage to humankind.

This is why great importance is given to humanitarian law provisions related to the protection of the environment in times of conflict and, also, an ongoing review and improvement of said laws are required due to the appearance of new technology and combat means.

Although the issue of preserving the environment is present in the Argentine military doctrine, there is no clear prioritization between the preservation of the environment and the fulfillment of the mission within a Theater of Operations by the Operational Commander.

This situation leads to the question: What are the factors that an Operational Commander must consider in order to establish a priority between the fulfillment of the mission and the preservation of the environment during armed conflicts?

## LEGAL FRAMEWORK

International law, and particularly international humanitarian law, has attempted to protect people and their belongings and to limit the powers of the parties at war with the purpose of protecting the environment.

International humanitarian law is a group of legal provisions included in treaties; even in common law (customs) that regulate rights and obligations of the parties at war and the protection of people and civil items that may be affected in armed conflicts. It is included in two sets of rules: the law of The Hague, the purpose of which

*Although the issue of preserving the environment is present in the Argentine military doctrine, there is no clear prioritization between the preservation of the environment and the fulfillment of the mission within a Theater of Operations by the Operational Commander.*

is to restrict methods and means used in war and the law of Geneva which mainly aims at defending people and property affected by hostilities.

The law of Geneva is known as the fullest set of rules as it attempts to include both aspects of International Humanitarian Law and it is today the most important set of rules in force. Its universality lies in the number of countries that has ratified the four Geneva Conventions of 1949 and its two additional protocols of 1977<sup>2</sup>.

Moreover, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques<sup>3</sup> is the only specific International Treaty regarding this aspect.

As regards the environment, the purpose of International Humanitarian Law is to limit damage caused by armed conflicts at a level that may be deemed as tolerable. For this reason, it prohibits, among other things, military means and methods that:

- › Do not differentiate among the people that take part in combats and the people that are not part of them in order to respect the lives of civil population, civilians and civilian items.
- › Consider the environment as a military target.
- › Use the environment as war means or method.
- › Cause unnecessary damage or suffering.

In particular, article 53 of the Geneva Convention on the protection of civilian persons in time of war sets forth the prohibition to destroy real or personal property belonging individually or collectively to private persons or to the State or to other public authorities, except where

1. Among the main instruments of the Law of The Hague, there are The Hague Conventions of 1899 and 1907; the Geneva Protocol of 1925, which prohibits the use of chemical and bacteriological weapons and the UN Convention of 1980 on prohibitions or restrictions of the use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects.

2. Member states: Geneva Conventions (1949); Additional Protocol I (1963). Additional Protocol II (1976). Available at <http://www.icrc.org/spa/>

3. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques. Available at <http://www.icrc.org/spa/resources/documents/misc/treaty-1976-enmod-convention-5tdm2l.htm>

4. Additional Protocol I to the 1949 Geneva Conventions relating to the protection of victims of international armed conflicts, 1977. Available at <http://www.icrc.org/spa/resources/documents/misc/protocolo-i.htm#8>

5. It includes all techniques that aim at the dynamics, composition or structure of the Earth, including its biotic, lithosphere, hydrosphere and its atmosphere or the outer space.

6. For this environmental modification to be prohibited, the use of prohibited techniques must cumulatively be for hostile purposes, cause destruction, damage or injury to any other State Party and to have widespread, long-lasting or severe effects.

such destruction is rendered necessary by military operations.

Moreover, article 147 also mentions this concept indicating that if extensive destruction was carried out unlawfully and wantonly and not justified by military necessity, it will be deemed as a serious breach and international criminal law will be applicable.

Also, article 35.3 of the Protocol I to the 1949 Geneva Conventions on the protection of international armed conflicts of the year 1977 prohibits methods and means which are intended, or may be expected, to cause widespread, long- lasting and severe damage to the natural environment. Article 55 sets forth that attacks by way of reprisals are prohibited and article 56 protects the environment by prohibiting the attack of works and installations containing dangerous forces (dams, dykes, nuclear electric generating stations), even where these objects are military objectives if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population and damage to the environment. Article 57, in this sense, establishes precautions in the conduct of military operations and attacks by stating the obligation to protect civilian objects, among which there is the environment.

Therefore, environmental protection is based on three key International Humanitarian Law principles: humankind, distinction and proportionality.

### INTERNATIONAL PROVISIONS

Although international regulations mentioned contribute to the protection of the environment, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) is the specific international set of rules regarding these issues.

This Convention, which came into force on October 5, 1978, constitutes a response to the means used in Vietnam and has the purpose to actually prohibit the use of environmental modification techniques<sup>5</sup>, whether for military or any other hostile purposes in order to avoid risks posed by their use. Consequently, State Parties commit themselves not to use environmental modification techniques for military or any other hostile purposes that have widespread, long- lasting and severe effects as the means of destruction, damage or injury to any other State party<sup>6</sup>.

Although the agreements to construe the ENMOD Convention are not an integral part of it, they highlight the



magnitude of widespread, long- lasting and severe effects in the sense that:

- › Only one of those effects is enough for the Convention to be applicable.
- › Widespread effects refer to a surface of several hundred kilometers.
- › Long- lasting effects refer to a period of several months or a season.
- › Severe effects refer to serious or obvious damage for human life, natural and economic resources or other riches.

Although the ENMOD Convention is the specific international law instrument as regards this issue, its key complement is Additional Protocol I to the 1949 Geneva Conventions of the year 1977 mentioned before. However, there are many differences in the following terms:

- › The Convention refers to the use of environmental modification techniques and limits the deliberate manipulation of natural processes that may cause natural phenomena, such as hurricanes, earthquakes, tidal waves, rain or snow, while Additional Protocol I states the obligation to protect the environment prohibiting all means and methods that may break essential natural balances for the environment.
- › They give different meanings to the terms widespread,

*International humanitarian law is a group of legal provisions included in treaties; even in common law (customs) that regulate rights and obligations of the parties at war*

long- lasting and severe. Moreover, these concepts are cumulative in Additional Protocol I, while in the case of the ENMOD Convention, only one of them is enough for it to be applicable.

- › The ENMOD Convention sets forth a procedure for periodic revision of its development.

#### NATIONAL LAWS

The Argentine Constitution –as amended in 1994– establishes that treaties and conventions signed by the State are in a position higher than national laws. As regards the specific framework of National Defense, the ENMOD Convention is the one that regulates environmental protection.

Moreover, National Defense Law No. 23554 establishes that the Armed Forces abide by internal discipline



regulations and will adjust their actions to the national and international law applicable to armed conflicts.

In this sense, Law No. 26200 has included those crimes regulated by the International Criminal Court and, therefore, the list of war crimes of the Rome Statute with those included in the 1949 Conventions and the Additional Protocol I of 1977 (which were not included in the Statute) is now complete. All of this with the exception that breach of war laws does not constitute war acts and, therefore, they are sanctioned by the Criminal Code of the Nation (with the incorporation, replacement and modification of Annex I of the Law No. 26394) or by Law No. 26200, whichever is applicable.

However, some disciplinary sanctions and other administrative and/or civil liability provisions may be applied to some breach pursuant to Annex IV of Law No. 26394. Notwithstanding the provisions regarding breach of war laws, any other act that may pose a risk to the peace and dignity of the Nation may be sanctioned (Book Two, Title IX, Chapter II of the Criminal Code of the Nation and section 220 as amended by Article 7 of Annex I of Law 26394).

### Results of the analysis of laws

From the analysis we have made of the International and Domestic laws in force, we can conclude that:

- › There are few International Humanitarian Law provisions that expressly refer to environmental protection during armed conflicts and, the ones that refer to them, are inadequate and they lack information. An example of this is the concept of widespread, long-lasting and severe damage as described in Additional Protocol I because it is not precise and it is not easy to measure.
- › As regards Domestic Laws, they do not give precision and do not contribute to assure and directly protect the environment, thus causing a lack of clear and precise legal guidelines for a Commander, assisted by his advisors, to be able to determine whether their decisions are within the legal framework.
- › There is no precision as to incidental damage against civilian property as a consequence of the attack to military targets. The lack of information in this case refers to proportionality practical questions when the damage to the environment is incidental damage<sup>7</sup> caused by attacks against military targets.
- › There is uncertainty as to the protection of the environment established by International Humanitarian Law in case of non- international armed conflicts, taking into consideration that most current armed conflicts nowadays are not international.

*As regards Domestic Laws, they do not give precision and do not contribute to assure and directly protect the environment, thus causing a lack of clear and precise legal guidelines for a Commander, assisted by his advisors, to be able to determine whether their decisions are within the legal framework.*

### MILITARY DOCTRINE REGARDING ENVIRONMENTAL PROTECTION

The National Specific and Joint Military Doctrine that refers to the protection or damage to the environment in a Theater of Operations is the following:

#### International Law of Armed Conflicts (PC 08- 01)

Environmental protection in a Theater of Operations is established in the International Law of Armed Conflicts (PC 08- 01) of the year 2010. According to its purpose and characteristics, it is a set of basic doctrine regulations to be applied in military planning, both at joint and specific level, and that is compulsory for all levels of conduction. In this sense, it allows, in the conduction of operations, to inform about legal war means and procedures, regulations applicable to the behavior of military forces in operations and regulations to be complied with by population and civilian property.

These regulations are compulsory and based on International Conventions related to the International Law of Armed Conflicts (Conventions, Protocols, etc.), passed by the Argentine Congress and are at a higher level than domestic laws.

With respect to environmental protection regarding armed conflicts, it refers to the basic principles of:

- › *Principle of distinction:* In order to guarantee the protection of civilian property, to distinguish this from military targets.
- › *Principle of limitation:* As regards the election of methods or means of combat that cause widespread, long- lasting and severe damage to the natural environment.
- › *Principle of proportionality:* Methods or means cannot be indiscriminate or excessive with respect to the defined military advantage.

7. Incidental damage is any unintended or accidental damage resulting from a military operation.

› *Principle of military necessity*: Any combat activity must be justified by military necessity reasons. Therefore, military authorities are obliged to adopt the necessary measures so that their subordinates know the rights and obligations they have pursuant to the Conventions and Protocols.

As necessity, these Regulations establish that the Chief of the Joint Staff and of the respective Staffs of each force and, also, the Commander of a Theater of Operations, must have an entity or Legal Officer to advise on the application of Conventions and Protocols.

With respect to this, Major Jorge Jesús Antelo<sup>8</sup>, explains that these specialists must be aware of the planning method in order to interpret it and to be able to advise on the treatment that combatants, civilians and special property must receive and on those aspects regarding combat procedures that may be legally used and the conditions that legitimate a military target. These aspects are essential and must be assessed during the development of operational planning.

As regards property, military target refers to that property which, because of its nature, location, purpose or use, efficiently contributes to military action or whose total or partial destruction, capture or neutralization offers a defined military advantage in the circumstances of the case<sup>9</sup>.

The International Committee of the Red Cross specifies four key characteristics that condition the military target: Nature (specific value of the object for the armed forces), location (geographical value or position at strategic or tactical level), use (responds to the use of the object) and purpose (foreseeable use of the element with respect to its aptitude for military operations).

For the election of the military target with protection or immunity, the Operational Commander must consider that this protection is not complete as war operations do not guarantee absolute precision as there may be some accidental –involuntary- or incidental damage. The latter must be considered a foreseeable risk.

There are circumstances in which the attack to a protected military target will be legitimate: it has to respond to a military necessity and the principle of proportionality, which establishes that a military action is proportionate when it does not cause excessive damage with respect to a defined military advantage<sup>10</sup>, has to be respected.

***Although military authorities are obliged to know the rights and obligations set forth in applicable Conventions and Protocols, it is necessary to have permanent advisors specialized in International Law of Armed Conflicts at Operational Level.***

#### **Regulations for the Conduction of the Land Military Instrument (ROB 00- 01)**

These specific regulations from the year 1992 establish destruction as a complementary operation, attempting to limit or extinguish the operational possibilities of the enemy through evacuation, pollution or total or partial destruction of targets in a specific area using procedures and/or means, such as flood, fire, demolition (by means of mechanical or explosive means), removal and, eventually, the installation of certain type of obstacles<sup>11</sup>.

Its scope may range from the destruction of facilities to the execution of a plan that involves the concept of destroyed land.

As these operations may affect civil population, they will be planned and executed so that they do not cause, in any case, unnecessary or excessive damage and, specially, additional suffering to population<sup>12</sup>. Although they are conducted and executed at tactical level, the Military Strategic and Operational level will be responsible for establishing the rules for said operations and their limits aimed at preventing unnecessary or excessive damage.

#### **Planning and Strategy Manual for Joint Military Action at Operational Level- The Campaign (MC 20- 01)**

The version published in 2013 explains the planning method for the operational level called “Systemic Operational Design”. Stages 1 to 5 of the planning define the resolution of the commander and, based on this, the concept of operation. Based on the contribution made by Major Antelo, we can identify the intervention of the Legal Advisor specialized in International Law of Armed Conflicts during planning in the following manner:

1. In the analysis of the mission, it is necessary to highlight those activities, whether implicit or deducted, that show

8. Antelo, Jorge Jesús; “Derecho Bélico en el Planeamiento de Comando; Air & Space Power Journal”; edición 1999; First trimester. Rescatado de <http://www.airpower.maxwell.af.mil/apjinternational/apj-s/1999/1trimes99/antelo.htm>

9. Ministry of Defense; Joint Staff of the Armed Forces; Argentine Republic; Derecho Internacional de los Conflictos Armados; PC – 01; 2010.

10. Mullinen, Frédéric; *Manual sobre el derecho de la Guerra para las FFAA*; International Committee of the Red Cross; 1991; p. 89.

11. Ejército Argentino; *Reglamento de Conducción para el Instrumento Militar Terrestre [Regulations for the Conduction of Land Military Instrument]*; ROB 00-01; 1992; p. 214.

12. Argentine Army; op. cit.; p. 214.



difficulties to comply with the objective established without any breach. This allows to have criteria to state action modes; therefore, the respect for International Law of Armed Conflicts may be a determining factor.

2. During the analysis of the situation, it is necessary to include treaties agreed by the parties as they impose combat methods and means.
3. In the analysis of Modes of Action, it is necessary to consider the influence of International Law of Armed Conflicts as regards the analysis and selection of –not protected- targets and proper procedures to prevent incidental or accidental damage. This is due to the fact that, if there is any breach, it will be necessary to check that adverse consequences do not risk the fulfillment of the objective established. However, even when identifying the risk of breach, the Mode of Action cannot be disregarded as the Commander may accept it.
4. In the confrontation of the Tentative Modes of Action, it would be necessary to analyze the possibility for any breach to occur because of incidental or accidental damage and how this will influence on the sequence of the Mode of Action. The existence of breach during

confrontation does not prevent the retention of the Mode of Action. Acceptability is at the exclusive discretion of the Commander.

5. In the comparison of Retained Modes of Action, the use of International Law of Armed Conflicts as selection criteria may, in some situations, have a significant influence and be absolute for the selection of the best Mode of Action. In all cases, it is convenient to select the Mode of Action that, having a similar military advantage, implies less risk to cause damage to property and people.

When proposing the Mode of Action that is regarded as the most convenient, it is necessary to expose in a detailed and careful way the risk of breach of International Law of Armed Conflicts that each Mode of Action poses.

Underestimating the negative effects that this breach may cause is not only disloyal with the Commander, but also makes him adopt a resolution with consequences that could not be assessed properly.

After deciding to make this decision, the Commander explains his concept of operation which must include the particular criteria related to compliance with legal provisions, especially when it is possible to predict breach of war law in that resolution. These criteria must be included

although they may be a restriction to freedom of action of the level below planning.

### Aspects of Joint and National Specific Military Doctrine

From the analysis of the Joint and National Specific Military Doctrine, we can draw the following conclusions:

- › Although military authorities are required to know the rights and obligations stated in the applicable Conventions and Protocols and to adopt the necessary measures so that their subordinates may be trained in relation with this, it is necessary to have the permanent presence of legal advisors specialized in International Law of Armed Conflicts at the Operational Level.
- › The legal advisor must know the planning method used at the operational level in order to interpret it and to participate in an integral way during its development and in the actions.
- › With respect to the advice to be provided, this will imply checking that the mission to be fulfilled does not have any breach to war law provisions; if there is risk to cause breach and there is a military necessity to carry out the operations planned; knowing the consequences of this allows to frame actions to fulfill the mission and its conciliation with statements admitted by International Law of Armed Conflicts.
- › Applying International Law of Armed Conflicts since planning has a decisive value for the fulfillment of the mission.
- › The analysis of the Military Objective allows to legitimate and justify it from the point of view of War Law. This analysis requires to define its use in order to detect possible dual uses, that is, civilian property may be used for war efforts, thus becoming a legitimate target that may be attacked. Its analysis, from the point of view of International Law of Armed Conflicts perfects and clarifies its knowledge.
- › The Commander needs to know the risk of possible breach of International Law of Armed Conflicts that imply operations planned by the tactical level in order to analyze to which extent they affect their desired effect or the fulfillment of the mission. Therefore, the recurrence among planning levels becomes significantly important.

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*The greater commitment and awareness of international courts as regards issues of environmental damage, which is a tendency promoted by a growing presence of non-governmental organizations and more gravitation of environmental movements, will make future Commanders be prosecuted for war crimes.*

The Commander must have as much details as possible regarding the operational objective that intelligence may provide him with. This will allow to make a proper decision before the attack, to choose the most proper tactics and techniques during the attack and to legally justify, if necessary, the military advantage after the attack and justify possible collateral damage as well as to carry out all necessary actions to mitigate and/or repair them.

### ENVIRONMENTAL PROBLEMS CASES

The Vietnam War was an asymmetrical conflict that did not have defined war fronts with lightning attacks.

Between 1961 and 1971, the US Army carried out the Ranch Hand Operation with the purpose of preventing the enemy from natural means that helped them to hide themselves and to hide their actions and means and which also provided them with supplies. This is how it carried out a widespread defoliant spread (Agent Orange) that contained dioxin<sup>13</sup>, a chemical product that is toxic. The systematic application of this herbicide, the excessive tree felling, and the fire with napalm, phosphorus and magnesium have been the cause of irreversible changes in areas which were productive before. Environmental damage was long-lasting and its effects can be seen nowadays. (See Image 1).

In 2003, a group of American researchers estimated that the amount of defoliant spread was 77 million liters which affected 1.8 million hectares of farm surface and 20% of forests.

The bombing of NATO over Kosovo in 1999, also known by its code name, Operation Allied Force, was a military air operation that had the purpose of expelling the Serbian, get peace forces to have permanence and refugees to return. Attacks occurred between March 24 and June 11, 1999. The main strategy was a long and sustained campaign over strategic targets, such as bridges, factories and power stations.

According to the Serbia Environmental Protection Agency (SEPA), bombing by the NATO caused long-lasting damage to the environment as thousands of tons of toxic chemical products, which were stored in factories, were spread on the soil, the atmosphere and river basins, thus affecting human beings and fauna. In this war, NATO was accused of using air missiles with depleted uranium in order to increase its kinetic energy causing leukemia among allied land troops<sup>14</sup>. (See Image 2).

NATO stated that “dual use targets” were attacked – which were used by civilians and military men at the same time- explaining that these facilities were potentially useful for Serbian military men and, therefore, this bombing was justified.

In the actions prior to the Second Lebanon War, the Hezbollah organization arrested two Israeli soldiers to release Arab prisoners from Israeli prisons.

The Israeli Army, in response to the actions of said organization, started the Operation Just Reward with the purpose of destroying Hezbollah infrastructure in the south of the country and moving the armed group out to the north. The operation included bombing of transport, communications, energy, military and urban facilities, causing, in a few hours, dozens of civilian victims and great material damage.

According to the report submitted on January 23, 2007 by the United Nations Environment Program (UNEP), it was concluded that Lebanese authorities face serious environmental damage as a result of the armed conflict

due to the strong bombing by Israel against civilian targets that are not part of the conflict, thus causing a negative environmental impact on the region. The report states: Many of the places bombed, burned factories and industrial buildings are contaminated with different toxic products and substances that are harmful for health. Subsequent analysis would confirm the use of phosphorus against civilians. Moreover, the Israeli government acknowledged to have used the controversial weapons with phosphorus in the attacks against its targets during the month war in Lebanon.

Apart from this, there was also an oil spill caused by the bombing of Israeli planes against the warehouses of a power station, the consequence of which was that the content of about 110,000 barrels was spilled in the Mediterranean Sea. This was defined as the greatest catastrophe in the Lebanon history.

In September 2013, the UN resolved that the state of Israel had to pay a billion dollars to the state of Lebanon as compensation for the environmental damage caused by the Israeli state. Lieutenant General Dan Halutz, commander in chief of the Defense Forces from Israel resigned on January 17, 2007 due to his liability for the mistakes made during the conflict. (See Image 3).

13. A very stable chemical product which can only be broken down slowly and that is part of the food chain.  
14. Safont Resardi, Nuria; “¿Síndrome de los Balcanes?” Available at <http://www.dmedicina.com/vida-sana/actualidad/sindrome-de-los-balcanes>

1. AIRCRAFT OF THE US AIR FORCE USING DEFOLIANT IN VIETNAM



2. INDUSTRIAL FACILITIES IN ZASTAVA, SERBIA



In the context of the domestic armed conflict in Syria, which started in 2011, between the armed forces that are loyal to the president Bashar al Assad and the National Coalition for the Syrian Revolutionary and Opposition Forces (NCSROF), there had been during the year 2013 attacks with chemical weapons against civil population. The use of this type of weapons has caused an international reaction which may lead to an international armed conflict. Russia and Iran have threatened to make a military intervention if there is a US attack against Syria (See Image 4).

The United States had planned to bomb strategic targets, among which there may be air bases, launch tracks, command posts, but they would include chemical weapons storehouses as the risk to cause collateral damage would be very high.

As response to the international reaction, the UN Security Council unanimously approved the resolution that sets forth the destruction of Syrian chemical weapons in a joint mission with the Organization for the Prohibition of Chemical Weapons (OPAQ) and states the possibility to issue new resolutions with the purpose of imposing sanctions if the disarmament plan is not respected.

On October 14, Syria adhered to the Convention on Prohibition of Chemical Weapons within the framework of a US- Russia agreement made in Geneva. The Opposition Forces and the Syrian Revolution requested the Security Council to take the government of Assad to the

International Criminal Court (ICC) because of the attacks that took place.

### SUMMARY

After having identified and analyzed the cases that represent environmental problems, we can make the following conclusions:

- › International courts have not sentenced any Operational Commanders nor have they been charged with war crimes as they have caused widespread, long-lasting and severe damage to the environment within the framework of armed conflicts, but states have been charged with that.
- › The greatest commitment and awareness of international courts as regards environmental damage, which is a trend promoted by a growing presence of non- governmental organizations and greater gravitation from environmental movements, will make future Commanders be charged with war crimes.
- › As regards bombing by NATO in Kosovo, it is clear that knowing breach in advance allows to prepare explanations in line with International Law of Armed Conflicts or the way to hide the operation. If there are no explanations, it is necessary to have sufficient political weight in the international community to approve legitimacy of the action in victory. It is also necessary to consider that in case of defeat, said action will be regarded as war crime.

3 . DAN HALUTZ RESIGNED ON JANUARY 17, 2007 BECAUSE OF HIS LIABILITY FOR MISTAKES MADE DURING THE CONFLICT IN LEBANON



4 . ATTACKS WITH CHEMICAL WEAPONS TO THE SYRIAN POPULATION



*The Commander may fulfill his mission breaching conventions and protocols but accepting the risks implied: causing widespread, severe and long-lasting damage to the environment. It is true that this situation may “be detrimental to the fulfillment of the objective, even if there is a victory in war. History shows that, when war laws are observed, subsequent peace times are more stable” and, therefore, last longer.*

- › In the cases analyzed, we can see that commanders preferred to fulfill their mission. This may be easier to achieve if War Law is breached but the consequences of this may be harmful even in the case of victory, respect for laws of war allows for a stable and long-lasting peace.
- › Last, we can see that the Operational Commander is the one that has authority to give priority to the fulfillment of the mission even when there is risk to affect the environment. This is based on the acknowledgment by Custom Law of its commitment to fulfill the mission (a basic principle of the military discipline and the exercise of command).

## CONCLUSIONS

For the purposes of correctly analyzing problems, it is necessary to state the following concepts that allow to give grounds for the conclusions of this work:

- › Every armed conflict causes damage to the environment.
- › The first responsibility of an Operational Commander is to carry out all necessary actions for the fulfillment of the mission.
- › International law of armed conflicts guides the Commander on how to do that legally.

In order to give an answer to the initial question on what factors an Operational Commander must have into consideration in order to give priority to the fulfillment of the mission and the preservation of the environment during armed conflicts, we can conclude the following:

- › International law, which aims at limiting damage caused by armed conflicts at a level that may be considered as tolerable. This means that International Law of Armed Conflicts states and accepts that damage to the environment during armed conflicts are, *per se*, unavoidable.
- › National Law that implies environmental awareness due to the treaties and conventions which, directly or indirectly, protect the environment and which, as international law does, it accepts the possibility that it may be affected because of a military need by applying the principle of proportionality.
- › The doctrine itself which states the execution of operations in the fulfillment of the mission in order to affect the environment in a controlled way and without causing widespread, long-lasting and severe damage in the fulfillment of the mission.

Therefore, the main objective of an Operational Commander is the fulfillment of the mission, a task that implies knowledge of and respect for International Law of Armed Conflicts. He is expected to win the war, that is, to contribute to the achievement of the national objective through the use of weapons.

Because of imperative military need, the Commander may fulfill his mission by breaching conventions and protocols but taking the risks of causing widespread, long-lasting and severe damage to the environment. It is true that this situation may affect the achievement of the ultimate objective even when they succeed in war. History shows that, when war laws are respected, subsequent peace is more stable<sup>15</sup>... and, therefore, it lasts longer.

However, it is necessary to mention that there may be exceptional situations in which the magnitude of the damage to be caused to the environment makes the Commander give priority to the preservation of the environment and, therefore, redesign the mission.

This is why we do not aim at making judgments with respect to the decisions the Commander must make for the fulfillment of the mission as this will be based on the context in which he makes the decision. It is the Commander the one who has to analyze all factors that gravitate in each situation and common sense must prevail.

As the topic may be subject to further analysis, it will be necessary to state new research lines according to the permanent evolution and complexity of the topic.

As the then Mayor Jesús Antelo expressed: *Respect for war law will provide the conductor with the confidence that he has fought in a legitimate way and, if he had been defeated, not to cope with the shame to be accused of being a criminal by his winners.*

15. Antelo, Jorge Jesús; op. cit.

# LAW ON NATIONAL MOBILIZATION

## A challenge pending in the new defense scenario

Mobilization is an integral process that is planned and directed by the National Government with the purpose of adapting potential to the requirements of National Defense. Therefore, a Law on National Mobilization is necessary in order to meet needs of national defense in a new national and regional context.

KEY WORDS: **MOBILIZATION / LAWS / MULTIDIMENSIONAL SECURITY / THREATS**

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By **Eduardo Miguel Tourné**

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Translated by Mariana Ríos Hudson

### WHAT IS MOBILIZATION?

In the Joint Publication Glossary of Military Use Terms for Joint Military Action (RC 00-02), mobilization is defined as the adequacy of the resources of the Nation to the needs of National Defense<sup>1</sup>. This definition seems to be very concise. If we start from the meaning of the word “mobilize” included in the dictionary of the Real Academia Española, we can see it has two meanings: First, to put in activity or movement and second, call, enlist, to put on a war footing troops or other military elements.

Therefore, a more precise definition may be: the set of measures and procedures to which the potential of the nation adapts for the purposes of complying with the requirements of national defense with aptitude and opportunity.

The reference to the national potential includes material and human resources present and possible to be obtained required by national defense to fulfill its objectives. The capacities of the military instrument of a state are a priori the resources permanently mobilized which will meet the demand of defense according to what has been planned. When its operational or support capacity has been exceeded, there is the need for national mobilization with the characteristic of incorporating or adapting material and human resources in aptitude and opportunity that allows to increase their capacities and, therefore, get the support of their efforts thus allowing for a proper balance in the cost-benefit relation. This balance is difficult to measure in the area of national defense.

As it is ruled by aptitude and opportunity conditions, national mobilization is not an improvised activity. On the contrary, it must be organized and foreseeable. The detail of possible resources to be mobilized and the procedures that allow for its rapid availability according to the real needs imposed because of the situation must be included within a proper legal framework that allows to achieve the maximum efficiency in the purpose sought.

In this article, we analyze the situation of the law on national mobilization in Argentina and the legal framework in some countries of the region.

This comparison makes it possible to have a proper reference framework that allows to describe important aspects regarding areas, activities and resources to be mobilized in general terms and, therefore, be able to determine what organization models are needed for its implementation.

The prevailing Argentine defense policy sees cooperative security as an option in the defense of South American interests and identity. Therefore, it is necessary to take the current integration framework into account.

### CONTEXT: SCENARIO AND THREATS

Although it presents several lines of action, national defense policy may be summarized in three criteria: cooperation, non- proliferation and control of weapons and defense expenses. Therefore, it is in relation with these criteria that the law of mobilization finds its focus.



This national defense policy occurs in a context in which traditional regional threats do not seem to be a possibility as they take place within a framework of integration processes which, for Argentina, started with MERCOSUR and were continued with UNASUR and the South American Defense Council. It is here where the new strategic challenges become important.

Anyway, no state in the union rejects the design of its military instrument according to its need for self-defense with autonomous criteria. However, they do not disregard cooperative vision. In conclusion, regardless of the feeling of lack of threat of third states, the image that a medium power has of itself is that it will always make an effort to care for its interests, even those that are extensive... Therefore, the medium power will always try to create and keep sufficient power means under national control in order to start and support coercive actions, the result of which will be the preservation of its vital interests<sup>2</sup>.

As regards the determination of threats, within the framework of the meeting of the Committee on Hemispheric Security (CHS) held in March 2000, the following was established:

In relation with threats to security in the Hemisphere, delegations agreed in the sense that the main problems in terms of security that American states face at the beginning of the 21<sup>st</sup> century are not caused by possible external military threats but by new and complex phenomena such as drug trafficking, arms trafficking, transnational

crimes by non- state actors with their consequences of violence and destabilization of political institutions. As regards small island states, threats to security also include natural disasters, transfer of nuclear waste in the waters of the Caribbean Sea, vulnerability against economic globalization, among others. In spite of the approaches coincidences, there were calls in favour of higher concept accuracy and careful definitions in this field<sup>3</sup>.

Statements made during this meeting gave rise to the so-called concept of multidimensional security.

There are new strategic challenges apart from the traditional view of threat.

Since 2003 up to now, security issues have evolved and, apart from the statements made by Committee on Hemispheric Security, there are also the following remarks: Cyber war which requires specialized human resources, civic- military cooperation and integration among nations and natural disasters that go beyond small state islands, such as the flood in Bolivia or the earthquake in Chile, both of which required interstate aid to mitigate, at least, its initial effects.

1. Ministry of Defense; Joint Staff of the Armed Forces, Argentine Republic; Glossary of Military Use Terms for Joint Military Action; RC 00-02; 2010 edition.

2. Hill, Richard; Estrategia marítima para potencias medianas [Maritime Strategy for Medium Powers]; Instituto de Publicaciones Navales, Buenos Aires; 1990;

3. Report of the special meeting of the Committee on Hemispheric Security held on May 8, 2000. Available at <http://www.oas.org/csh/spanish/ncsdoc%20infopresid.asp>

## LAW ON NATIONAL MOBILIZATION

The Law on National Mobilization No. 17649/1968 was derogated by National Defense Law No. 23554/88. Therefore, Argentina lost an essential instrument that allowed it to organize its resources in case there is a situation of war or conflict and also for any other support activity that national defense deems as necessary within the legal framework in force. An example of this may be support activities carried out in case of natural disasters (whether national or regional), the reaction in case of pandemic and the availability of specialized human resources in the cyber space.

Law 23554/88, in its sections 45 and 46 paragraph C, sets forth that the National Defense Council had to present a draft project on territorial organization and mobilization for defense in a period of 365 days, something that did not occur. Section 32 of said law states that mobilization plans necessary to adapt resources of the Nation for national defense needs will be prepared by the Ministry of Defense and passed by the President of the Nation<sup>4</sup>.

Section 4, paragraph D of Law No. 24948/1988, Reorganization of the Armed Forces, establishes that said reorganization will assure mobilization, political, strategic and logistic predictions that allow to increase the operational capacities of our Armed Forces in short periods of time in case of crisis situations<sup>5</sup>. Section 11 refers to the members of the Armed Forces by mentioning staff for a certain period of time and from the reserve. Last, section 33

paragraph b.4 sets forth the obligation to prepare a project for mobilization law within a period shorter than a year as from the enactment of the law.

Executive Power Decree No. 355/02, which amended the Law of Ministries, sets forth, among the competences of the Ministry of Defense, the competence of taking part in the preparation of the mobilization policy and National Mobilization Plan in case of war and their implementation<sup>6</sup>. Moreover, Executive Power Decree No. 357/02 states the preparation of the mobilization policy and the National Mobilization Plan and their implementation in case of war as well as the participation, with other State agencies, in the planning and coordination of civil defense as objectives of the Secretary of Military Issues<sup>7</sup>.

In this sense, the Libro Blanco de la Defensa 2010 [Book on Defense], in line with the provisions of section 8 of National Defense Law, when describing the organization of the system, sets forth the preparation and implementation of national mobilization<sup>8</sup> as one of its purposes and it also defines its regional cooperative dimension.

Law No. 17649/1968<sup>9</sup>, which has been derogated, established that the fields of mobilization were: The Military Mobilization Plan (which includes the Joint Mobilization Plan), the Economic Mobilization Plan, the Foreign Policy Mobilization Plan and the Domestic Policy Mobilization Plan.

It explained that the activities mentioned in said plans would be carried out during situations of peace or war/



conflict with the measures and procedures that said plans stated. The Military Industrial Mobilization Plan did not only include the obtention of war material or critical or strategic raw materials, but also included scientific and technical research, the promotion of production and transformation forecasts, which implied enlistment activities carried out in peace times.

The General Direction of Military Manufacturing kept the stock of the industry which could be modified for the service of defense, if necessary. These records are nowadays not updated.

Section 11 of this law stated the responsibilities of the Ministry as to competence regarding preparation of the plans mentioned. This led to the integration of all components of national power with policies aimed at strengthening national awareness with respect to the importance of problems inherent to mobilization and training courses for staff carrying out planning activities for mobilization and adopting pertinent decisions.

Thus, the structure of the mobilization conduction, of which the President of the Nation is responsible, was supported not only by the Armed Forces, but also by the whole political structure, even at municipality level with the corresponding responsibilities.

The Argentine National Mobilization Law has not been prepared yet. However, countries in the region have already implemented theirs.

*Although national defense policy has several lines of action, it may be summarized in three criteria: cooperation, non-proliferation and control of weapons and defense expenses.*

## MOBILIZATION AT REGIONAL LEVEL

In this essay, we will make reference to laws from Brazil, Chile and Peru which allow to add new aspects regarding the derogated law and knowledge to be taken into consideration when drafting the Argentine law.

It is worth mentioning that the circumstances in which national mobilization is planned vary from state to state. This is partly because of the differences with respect to the use of the military instrument depending on the circumstances.

From the analysis, we can state that Brazil<sup>10</sup>, in its mobilization law, states the case of foreign attack, including not only the traditional vision of harmful acts against national sovereignty, but also against national institutions although this may not mean invasion to the national territory.

On the other hand, it explains the principles of action of the National Mobilization System (SINAMOB, in its Spanish acronym), among which we can highlight the promotion of national development and cooperation in the search for a synergy situation that allows for the proper use of national power.

This mobilization is implemented in three documents:

- › National Mobilization Policy, the purpose of which is to define objectives and actions aimed at its planning.
- › National Mobilization Government Guidelines that allow for an orientation for the conduction of mobilization.



4. Law on Argentine National Defense; No. 23554, April 26, 1988. Available at <http://www.infoleg.gob.ar/infolegInternet/anexos/20000-24999/20988/texact.htm>
5. Law on Reorganization of the Armed Forces, No. 24948, April 3, 1998. Available at <http://www.infoleg.gob.ar/infolegInternet/anexos/50000-54999/50229/norma.htm>
6. Executive power decree 355/02, on amendment of the Law of Ministries, February 22, 2002. Available at <http://www.infoleg.gob.ar/infolegInternet/verNorma.do?id=72483>
7. Executive Power Decree 357/02, on Organization of the National Administration; February 22, 2002. Available at <http://www.infoleg.gob.ar/infolegInternet/anexos/70000-74999/72486/texact.htm>
8. Ministry of Defense of the Argentine Republic; Libro Blanco de la Defensa; 2010.
9. Argentine Republic; Law on Defense and Security – Civil Defense – Mobilization, No. 17569, March 1, 1968. Available at [http://www1.infojus.gov.ar/legislacion/ley-nacional-17649-defensa\\_seguridaddefensa\\_civilmovilizacion.htm;jsessionid=1fc14sca2s2ba1gvhplxqcosm6?0](http://www1.infojus.gov.ar/legislacion/ley-nacional-17649-defensa_seguridaddefensa_civilmovilizacion.htm;jsessionid=1fc14sca2s2ba1gvhplxqcosm6?0)
10. Executive Power Decree No. 6528, on National Mobilization and creation of the National Mobilization system (SINAMOB, in its Spanish acronym); Brazil; August 2, 2008. Available at [http://www.planalto.gov.br/ccivil\\_03/\\_ato2007-2010/2008/Decreto/D6592.htm](http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/Decreto/D6592.htm)



› National Mobilization Plan, which defines actions and goals to meet the needs established in the Defense Military Strategy.

With reference to the organization of the Mobilization System, Brazil has chosen a centralized management of the system through the Ministry of Defense that ends with a decentralized execution by mobilization subsystems divided by government areas.

In the case of Chile<sup>11</sup>, mobilization occurs within the framework of what is called “states of exception” allowing the executive power to adopt different measures, among which we can find mobilization. Law No. 18415 regulates this situation which seems to be aimed at the requirements of foreign security.

Chile has added an interesting aspect as regards the setting of the degree of reserve, whether public or secret, that mobilization may have at the time of execution pursuant to the level of discretion imposed by the situation. For its implementation, it has the General Direction of National Mobilization (DGMN, in its Spanish acronym), which is not only responsible for records and databases with the annual inclusion for obligatory military service, but also for the control of weapons and toxic substances.

Apart from the traditional vision, Peru<sup>12</sup> states emergency situations caused by natural disasters or any other disaster that affect security. It particularly explains that in cases of natural disasters, mobilization will be a responsibility of the National Civil Defense System.

All countries state the planning stage in a permanent and integral way as part of the defense strategic planning. Also, mobilization and demobilization stages are also considered as an integral part of the cycle and this may be total or partial. The demobilization stage is stated in all laws of the countries analyzed because, as it occurs with mobilization, it requires estimates that assure its efficient compliance. As regards mobilization of staff, it is worth mentioning the systems of Chile and Brazil when discussing obligatory vs. voluntary military service as, within the concept of “obligatory”, there is the criterion of first selection of voluntariness.

## CONCLUSIONS

Designing military capacities requires a redesign of the mobilization system that must be included in the defense strategic planning cycle.

Mobilization capacity, expressed in a proper legal framework and included in the defense policy, is an

11. Executive power decree- Law 2306, on Enlistment and Mobilization of the Armed Forces; Chile; September 12, 1978. Available at [http://www.dgmn.cl/transparencia/leyes\\_dgmn/nuevas/D.Ley%202.306%20Dicta%20normas%20sobre%20reclutamiento.pdf](http://www.dgmn.cl/transparencia/leyes_dgmn/nuevas/D.Ley%202.306%20Dicta%20normas%20sobre%20reclutamiento.pdf)  
Constitutional Organic Law over States of Exception, No. 18415; Chile; June 14, 1985; Available at [http://www.dgmn.cl/transparencia/leyes\\_dgmn/nuevas/\(10\)LOC\\_18415.pdf](http://www.dgmn.cl/transparencia/leyes_dgmn/nuevas/(10)LOC_18415.pdf)  
Law on Mobilization; No. 18953; Chile; February 22, 1990. Available at [http://www.dgmn.cl/transparencia/leyes\\_dgmn/nuevas/Ley%2018.953%2009.MAR.1990%20Dicta%20Normas%20de%20Movilizacion.pdf](http://www.dgmn.cl/transparencia/leyes_dgmn/nuevas/Ley%2018.953%2009.MAR.1990%20Dicta%20Normas%20de%20Movilizacion.pdf)

12. National Mobilization Law, No. 28101; October 22, 2013; Peru. Available at <http://www.resdal.org/Archivo/peru-movilizacion-nacional.pdf>

essential element of the cooperation effect sought in regional defense.

A Mobilization law must integrate all areas of national power from a systemic conception taking into consideration that it must adapt to reality in which although strategic risks are more restricted in time, they are more spontaneous in their formation in an uncertainty environment.

Therefore, mobilization requires a high forecast level in order to face danger with the maximum option capacity, which includes the military capacity, with aptitude and in a timely manner. In this context, all strategic risks should be considered.

Regional cooperation level poses a challenge when designing the National Defense System and, therefore, the national mobilization, but this does not imply that the preservation of vital interests is subject to the self-defense level.

However, this level finds a place for integration in areas such as science and technology which allow for the development of a military instrument in line with the political attitude of cooperation. This makes it easier to strengthen interoperability and mutual confidence measures and to avoid dependence that may subject autonomy when stating the defense of vital interests.

Developing dual media and technology provides the necessary sustainability aspect that, if regionally integrated, makes it possible to promote its feasibility.

Laws from Brazil, Chile and Peru show interesting aspects both in the areas of mobilization to be considered and organization. The centralized conduction model with decentralized execution which includes all government areas seems to be a better proposal than the derogated Law No. 17649 optimizing, mainly, the planning stage.

The model explained in the Brazilian law- Mobilization Policy, National Mobilization Government Guidelines and the National Mobilization Plan is key for the conduction of planning and execution.

Therefore, the consolidation of the guiding documentation pursuant to the logics of the defense planning cycle is still a relevant aspect for Argentina which may allow to reach the desired effect. It is important to highlight

*All countries state the planning stage in a permanent and integral way as part of the defense strategic planning. Also, mobilization and demobilization stages are also considered as an integral part of the cycle and this may be total or partial.*

the legal framework provided by the concept of states of exception as explained in the laws from Chile, which may include natural disasters, and also in the laws from Peru.

From the concepts exposed by Brazil, we can highlight the one referring to considering acts that are harmful to sovereignty although this may not mean invasion of the national territory, an aspect that needs to be taken into account as we are neighbor countries.

As regards mobilization, it is important to mention the principles of action of the SINAMOB related to the promotion of national development and cooperation which are taken as the guiding principles of a national policy that must integrate all structures of the state.

From the point of view of Argentina, the SINAMOB principles are interesting as they express a way to generate development conditions in favour of mobilization and, also, a coincidence of principles with national defense principles stated in the Libro Blanco de la Defensa.

Last, it is important to consider a Mobilization Plan and a demobilization stage. This must be taken into account in terms of the organization of the activity and, mainly, to provide legal certainty to individuals and legal persons based on the estimations of compensation/remuneration to be given.

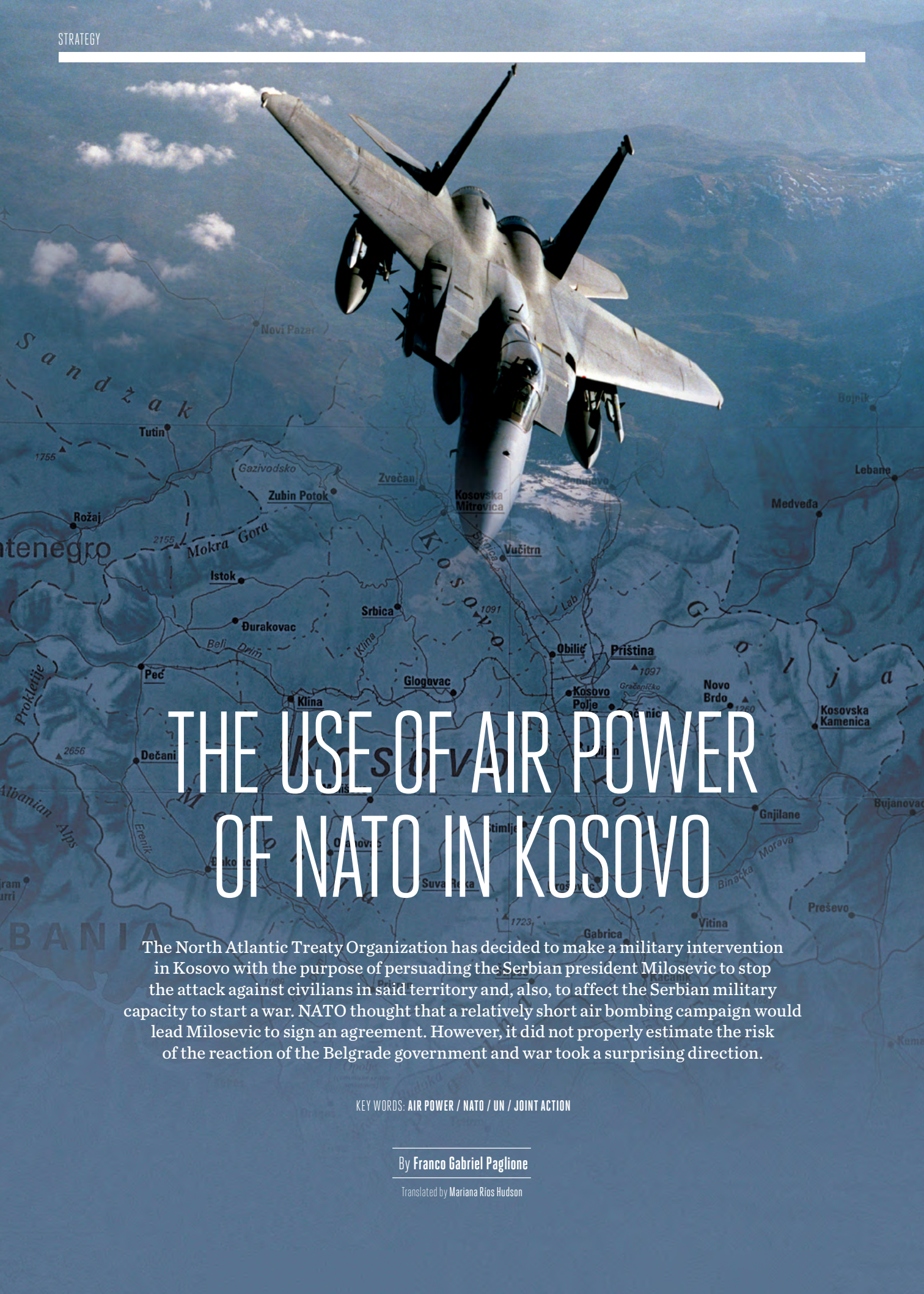
It is essential to prepare a National Mobilization Law. This will allow to integrate national power searching for synergy and it must be ruled according to the laws in force and the actual conduction capacity of the government area or authority that is responsible for its direction.

The National Mobilization Law is pending at strategic level which, beyond its main function of adapting the national power for the purpose of meeting the requirements of Defense in a new regional and national context, becomes an opportunity and tool to promote the development of the country. Therefore, it aims at optimizing regional integration as well as the cost- benefit relation of the defense system that is so difficult to determine and reach.

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> REFEREED ARTICLE



# THE USE OF AIR POWER OF NATO IN KOSOVO

The North Atlantic Treaty Organization has decided to make a military intervention in Kosovo with the purpose of persuading the Serbian president Milosevic to stop the attack against civilians in said territory and, also, to affect the Serbian military capacity to start a war. NATO thought that a relatively short air bombing campaign would lead Milosevic to sign an agreement. However, it did not properly estimate the risk of the reaction of the Belgrade government and war took a surprising direction.

KEY WORDS: AIR POWER / NATO / UN / JOINT ACTION

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By **Franco Gabriel Paglione**

Translated by Mariana Rios Hudson

## NATO MILITARY INTERVENTION IN KOSOVO

### Political situation in the region and causes of the military intervention

The province of Kosovo is in the south of Serbia within the Balkan Peninsula. Its population is both of Serbian and Kosovar Albanian origin, most of which is Albanian.

The contemporary beginning of the Kosovo crisis has its origin in the reforms made by Marshal Tito during the Socialist Federal Republic of Yugoslavia (SFRY). In 1974, these reforms led to a new Constitution that would give Kosovo autonomy and would allow it to create an institutional separation from Belgrade. Although the province was still officially part of the Serbian territory, it had administration, parliament, judicial and educational system.

In 1980, Tito's death led to violence again in Kosovo. Kosovar Albanians wanted to be acknowledged as Republic, while the Serbians fought for Belgrade to control the province.

Slobodan Milosevic became, in 1989, president of the Serbian Republic and this situation changed the status of the region eliminating the autonomy of Kosovo and putting it under the control of Belgrade, capital of Serbia.

An important actor appeared in the Kosovar scenario in 1996 to worsen the crisis: Kosovo Liberation Army (KLA). This was formed among the communities of Kosovar emigrants in Europe who decided to gather weapons and prepare for a chase

campaign against the police and Serbian military facilities in Kosovo as they saw they had no Western support to their cause.

By the summer of 1998, the Kosovo Liberation Army took 40% of the province, leading to reprisal from the Serbian government and militiamen who decided to take civilians as target for their attacks. The excessive and indiscriminate use of force by Serbia against the Albanian population in

Kosovo and the ouster of more than 230,000 people from their homes made the international community react against the crisis by means of the passing of Resolution 1199 of the UN Security Council in September 1998. This Resolution stated that Serbian authorities had to accept a ceasefire and a partial withdrawal of the troops from Kosovo<sup>1</sup>.

The ceasefire helped the guerrillas to reorganize themselves, re-design

POLITICAL MAP OF THE WESTERN BALKANS 2008



1. Gómez Puentes, Juliana; "Análisis de la intervención de la OTAN en la crisis de Kosovo, como reflejo de las transformaciones del concepto estratégico de la Alianza de 1999" [Analysis of the NATO intervention in the Kosovo crisis as a reflection of the strategic concept of the 1999 Alliance]; 2009, p. 22.

and prepare a new attack. The Kosovo Liberation Army did not have the intention to negotiate and, in fact, publicly declared the purpose to involve the countries of the European Union and the United States in the crisis for them to favour the autonomy or independence of Kosovo.

Milosevic breached this agreement and continued bringing troops into Kosovo. This led the NATO Secretary General to issue an order on March 24, 1999 without the authorization of the UN Security Council, for the military heads of the Alliance to start the air attacks over the 20 military and police targets of Serbia and Kosovo. This intervention was justified under the expression of humanitarian aid, that is, with the main purpose of ending homicides and expulsion of Kosovar Albanian people by Serbian forces<sup>2</sup>.

This defense organization, which reached its optimal level during the Cold War, was organized to face the threat of a specific enemy: The Soviet Union. With the dissolution of the USSR in December, 1991, the crisis in Communist countries and the dissolution of the Warsaw Pact, NATO should have been dissolved and replaced in Western Europe with a native defense organization. This conflict gave the United States the ideal argument to adopt the new legitimacy of NATO<sup>3</sup>.

### Events that led to the exclusive use of Air Power

Political leaders of the United States have showed an increasing disagreement with the possibility to have US casualties. This was mainly observed in those circumstances that do not imply a clear and immediate danger for the vital strategic interests of that country. These leaders have

*Slobodan Milosevic became, in 1989, president of the Serbian Republic and this situation changed the status of the region eliminating the autonomy of Kosovo and putting it under the control of Belgrade, capital of Serbia.*

used air power more frequently and this was not due to a joint operation with land forces, but to a replacement of land power.

The Allied Force Operation came after an important event, Desert Storm Operation, which took place in 1991 and during which Iraq challenged the concrete interests of the United States in the Persian Gulf. This operation was designed and conducted giving the highest priority

to the need to minimize casualties. The air campaign of the coalition had an average of 2,500 daily takeoffs using more than 1,800 last generation combat aircrafts. This huge attack which lasted almost 3 weeks and which was prior to the deployment of US land forces caused the defeat of the Iraqi Army in Kuwait. The result of this was: 146 casualties among 500,000 US military men committed<sup>4</sup>.



2. Gómez Puentes, Juliana; op.cit.; page 27.

3. Ramonet, Ignacio; Guerras de Siglo XXI. Nuevos miedos, nuevas amenazas; Editorial Arena Abierta; Paris; 2002; page 111

NATO decided to carry out military operations over Serbia only using the Air Force resources. This decision was implemented with the intention to intimidate Milosevic's administration so that the ethnic cleaning campaign could come to an end in Kosovo and with the idea that a limited bombing would help to achieve the goal of finishing Serbian actions against Kosovar- Albanian population<sup>5</sup>.

Expectations about a rapid defeat of Milosevic's regime was one of the main conditions when starting the air campaign, in particular for the administrations of Clinton and Blair, who believed that they would be able to break the defense and combat will of the Serbian, thus leading to their fall in few days using only air power and smart bombs<sup>6</sup>.

### USE OF AIR POWER IN KOSOVO Development of Air Campaign

The NATO Operational Command received the mission to neutralize and harm the Army and the security structure that president Milosevic uses to defeat and destroy the Albanian majority in Kosovo. The Alliance deployed an important Air Force of 1055 aircrafts of all types in the surroundings of the Theater of Operations, where the main contributor was the United States with 730 aircrafts<sup>7</sup>.

NATO used a series of air bases located in European territory where it deployed the aircrafts mentioned before with the purpose of being able to plan the air power available from said bases.

These favorable relative positions were complemented with the use of an

US aircraft carrier in the waters of the Adriatic Sea.

Air attacks against targets in Serbia and Kosovo were conducted under strict rules of engagement (ROE), part of which included the restriction to fly at an altitude of 4,000 meters over the land level to protect NATO aircrafts from land hostile fire.

4. Record, Jeffrey; "The Allied Force Operation"; Military Review; N° 4; July - August; Fort Leavenworth, Kansas; 2000; page 13.

5. Vázquez, Hernán; "Lecciones aprendidas de la Operación Allied Force - May - June, 1999 - Kosovo"; January - March 2001; page 21.

6. Battaleme, Juan; "El balance ofensivo-defensivo y las guerras de Kosovo, Afganistán e Irak"; Revista de Publicaciones Navales; N° 693; 2nd. semester; Buenos Aires; 2006; pages 176-185.

7. Ciaschini, Ricardo et al.; Desde el dogfight hasta los UCAV. Evolución del poder aéreo; Gráfica Independencia Argentina; Buenos Aires; 2002; page 145.

### DEPLOYMENT AIR BASES USED BY NATO



Source: "Grand Logistics. Distance to target. Operation Allied Force". June 10, 2009

The bad climate conditions in Kosovo at the end of March and beginning of April prevented recognition aircrafts from identifying Serbian Third Army units that kept their military vehicles out of the roads, while hundreds of Albanian refugees left Kosovo. The location, identification and assessment of damage are the three most important and difficult aspects when applying air power. Fixed targets that were easy to locate and identify were politically sensitive and targets that were politically more acceptable to be attacked were difficult to locate and identify<sup>8</sup>.

Air power was never planned to be used decisively and it was used at the end of the campaign in light of the extension of the conflict and the humanitarian catastrophe. While the daily average during the Gulf War was 2,500 daily takeoffs, the initial average of the Allied Force was between 50 and 70 daily takeoffs and rose to 300 firstly and to 600 by the end of the war<sup>9</sup>.

During the 78 days of operation, we can see the variations in the use of air power, which increased as the Air Campaign advanced and the number of aircrafts available and material targets authorized to be attacked increased. In the graphic "Aircrafts used in the Allied Force Operation" we can clearly observe what we have mentioned before, being the United States the highest contributor both in the initial phase and the end of the conflict.

8. Haun, Phil M.; "Air Power versus a Fielded Army. A Construct for Air Operation in the Twenty- First Century"; March, 2003. Published in: Air & Space Power Journal. Available at <http://www.airpower.maxwell.af.mil/apjinternational/apj-s/2003/1trimes03.htm>

9. Ciaschini, Ricardo et al.; op. cit. Article 8; page 82.

10. Frechero, Germán; "Campaña aérea de la OTAN en Kosovo 1999. Cinco interrogantes controversiales"; Revista de la Escuela Superior de Guerra Aérea; N° 226; First Edition 2008; Buenos Aires; page 75.

11. Vázquez, Hernán; op. cit; Article 6; page 22.

12. Strikland, Paul C.; "Doctrina del poderío aeroespacial de la USAF- ¿Decisiva o Coercitiva?" Available at <http://www.air-power.maxwell.af.mil/apjinternational/apj-s/2000/4trimes00/editorial.htm>

***The characteristics of current and future wars make it necessary to have not only joint operation, but also the balanced participation of the most capable forces for each situation, moment and convenience.***

In the end, it was not possible to stop the killing of Kosovar- Albanian civilians beyond the surrender of Milosevic. Of course, one of the main reasons for this was the huge number of restrictions that affected the use of air power.

#### **Political Restrictions that affected the Use of Air Power**

The Air Campaign had to meet the criteria to reduce to a minimum their own casualties, to reduce collateral damage and to prevent serious damage to the Serbian infrastructure but, at the same time, it had to stop the ongoing violence as soon as it could<sup>10</sup>.

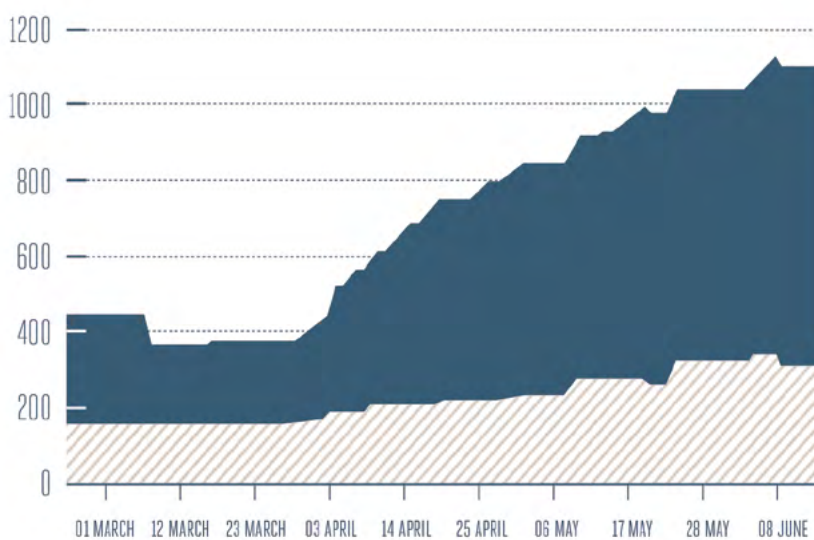
Controversial restrictions and interests of the 19 countries of the Atlantic Alliance prevented forces that were at the disposal of the Organization from taking part to give a rapid

military solution to the conflict in Kosovo. Subsequent analysis of the air intervention confirmed that if some strategy had been applied with the use of the Air Force over Serbia, this could have contributed to reach the goals set by President Clinton in a shorter period of time<sup>11</sup>.

Since the beginning, military men had been politically restricted. But it seems to be clear that politicians, especially those that are in Washington, have never had the intention to reach a total war.

An aspect that limited the effectiveness of air power was the target selection process which was reserved for the maximum political level conduction, both from the United States and NATO taking freedom of action from the commander of the Theater of Operations, General

#### **AIRCRAFTS USED IN THE ALLIED FORCE OPERATION**



Source: "Global Security. Org. Operation Allied Force. Order of Battle Trends"

Wesley Clark. Although the number of targets authorized to be attacked was increased as the Air Campaign advanced, it did not allow to have decisive results as they were mainly directed to the Forces of the Serbian Third Army.

The commander of the Allied Air Forces in Europe, lieutenant general Michael Short, considered that the most efficient tactic for the first night of war was an oppressive attack to the power stations in Belgrade and to the Departments of Government with the purpose of destroying the enemy's fight will. However, political restrictions prevented them from doing so<sup>12</sup>.

#### END OF AIR CAMPAIGN

#### Implementation of a NATO Multi- national Force in Kosovo

The gathering of land forces in Albania and the deployment of the Task Force Hawk, with Apache helicopters threatening with a land invasion by NATO forced Milosevic to accept the conditions proposed to end Serbian violence in Kosovo<sup>13</sup>.

#### DEPLOYMENT OF THE MULTI- NATIONAL FORCES IN KOSOVO



Source: "European orient news. NATO: Le secrétaire général se rend au Kosovo".



Under the terms of this agreement, the Serbian administration had to:

- › *Immediately start to withdraw all Serbian military forces from Kosovo.*
- › *Allow a security multi-national force conducted by NATO called “Kosovo Force” (KFOR) to enter Kosovo.*
- › *Allow the immediate return of refugees to their homes without disturbing them.*
- › *Authorize the creation of an independent political regime for the Albanian majority that resides in Kosovo<sup>14</sup>.*

On June 12, the Kosovo Force entered Kosovo from the former Yugoslav Republic of Macedonia with a group of 20,000 divided into six Brigades directed through France, Germany, Italy, United States and two from the United Kingdom<sup>15</sup>.

The Kosovo Force faced important challenges when they arrived. The

Serbian military forces were present, the armed presence of the Kosovo Liberation Army was also habitual and the fight had not ended. Almost a million people took refuge outside Kosovo and those who stayed in the territory feared for their lives.

The most immediate priority was to prevent the Kosovo Liberation Army or any other armed group to take any empty place that may exist while some forces left the territory and others left. In 11 days, the operation reached the goal: the withdrawal of Serbian forces from Kosovo and their replacement with the Kosovo Force as the only legitimate military force pursuant to Resolution No. 1244<sup>16</sup> of the UN Security Council.

Apart from the deployment of this NATO military force (Kosovo Force) that guaranteed security of the province and the execution of agreements, Milosevic accepted

the creation of a UN Provisional Administration Mission (UNMIK) which would be responsible for the administrative reconstruction of the province<sup>17</sup>.

This Resolution is very complete and is detailed in the mandate for the military mission and civil administration. Also, it establishes that the province of Kosovo is part of Serbia but, although it is detailed in most of the text, it is ambiguous as regards its final status and leaves the decision for future negotiations<sup>18</sup>.

### **Lessons learned during the Operation Allied Force**

Once the conflict has ended, we can make a balance between the purposes set before the beginning of air operations and those that were finally reached.

After 78 days, air power could not stop the ethnic cleaning in Kosovo, the bombing did not force Milosevic



*If a nation or Alliance decides to intervene in military terms in a conflict, it is necessary to use the Military Instrument as a whole in a decisive and rapid way so as to destroy the enemy's fight will.*

to sign the agreements previously drafted by NATO. And it did not reduce or defeat the Serbian Army on the field but air attacks caused little damage to the Serbian forces in Kosovo<sup>19</sup>.

This situation may be seen in the ordered withdrawal from the Kosovar territory once the conflict had finished and the condition of the troops and military means was not highly damaged.

The characteristics of current and future wars make it necessary to have not only joint operation, but also the balanced participation of the most capable forces for each situation, moment and convenience. Deciding a priori as to the intervention of a force that may be powerful without analyzing circumstances of each specific situation and requirements imposed by it makes it possible to see mistakes that may be made and that can change the result of the conflict<sup>20</sup>.

At operational level, the commander of the Theater of

Operations, General Wesley Clark, had to deal with a great number of political restrictions from the political level that limited his freedom of action to reach the goals set. These restrictions had an effect on the Aerospace Component conditioning its concept of use and effectiveness and unnecessarily extending the conflict without stopping the killing of Kosovar- Albanian people.

The chain of command was one of the areas with most problems during the whole operation. Although it was agreed by all countries in the North Atlantic Council during the conduction of operations, the US chain of command was a total priority<sup>21</sup>.

This situation was due to the quality and quantity of means deployed by the members of this Alliance, for which the United States provided more resources and had better technology that was exclusively owned by this military power.

The most serious question that the UN Security Council has suffered was a consequence of this war. NATO made an intervention outside the authority of said institution and was applied to a country that was not part of the Alliance.

NATO action ignored the Security Council due to a simple reason: not all of its members agreed to it, especially Russia and China. Apart from the fact that the lives of thousands of Kosovar- Albanian people were at stake, this was not the first civil population threatened by genocidal practices nor western powers have always had the

same concern as to similar situations<sup>22</sup>.

This situation is a very important precedent because, based on humanitarian reasons, a country or Alliance may make a military intervention without the authorization of the United Nations, being one of the countries willing to make an intervention to a member of the permanent group of the Security Council.

The situation in Syria is a clear example as there was an intention to validate a military intervention based on humanitarian reasons (using chemical reasons against the Syrian civil population) as the United States did not get the support of the other permanent members of the Security Council (Russia and China).

## CONCLUSIONS

Air Power is a military instrument of short existence but which has acquired, throughout the years, a decisive importance in war conflicts due to technological advance and the characteristics it has thanks to the environment in which it operates, such as speed, scope, versatility, penetration and flexibility.

In this conflict, in particular, Air Power was used without exploiting its main strengths and is subject to political level interventions that forced it to be used in a limited and gradual way but without reaching the goals that gave place to the military intervention in a short term.

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13. Vázquez, Hernán; op. cit.; Article 6; page 17.

14. Tilford, Earl; "Operation Allied Force and the Role of Air Power"; Military Review; N° 4; July – August; Fort Leavenworth, Kansas; 2000; page 21.

15. Jackson, Mike (Kosovo Force Commander); "La KFOR: providing security to build a better future in Kosovo"; NATO Review; N° 3; fall 1999; quarterly; Brussels; page 16.

16. "Kosovo Force". Rescatado de: <http://www.aco.nato.int/kfor/about-us/history/kfor-objectives.aspx>

17. Gómez Puentes, Juliana; op. cit.; page 29.

18. Chort, Pablo Eugenio; "Peace Support Operations"; Revista de la Escuela Superior de Guerra "Tte. Grl. Luis María Campos"; N° 546; July – September 2002; Buenos Aires; page 98.

19. Tilford, Earl; op. cit.; page 30.

20. Strikland, Paul C.; op. cit.; Article 15; page 150

21. López, Ángel; "Lecciones aprendidas en el conflicto de los Balcanes". Available at: <http://arbor.revistas.csic.es/index.php/arbor/article/download/1032/1039>

22. Gaspar, Gabriel; "Las lecciones de Kosovo". Available at: <http://www.fasoc.cl/files/articulo/ART41125dad8d821.pdf>



Only a series of air attacks was authorized to be carried out and it was necessary to wait to see if they were enough to make the Serbian leader, Milosevic, change his attitude.

This wrong expectation reduced the list of material targets that could be attacked basically focusing on Kosovo instead of the real gravity center that the Serbian power had in its capital, Belgrade.

Using Air Power in a coercive way, that is, to carry out a military action and waiting for a response have extended the conflict without making a massive use of the Air Force over Serbia.

Only during the end of the Campaign was the list of material targets to be attacked extended and the number of aircrafts available to do that increased, taking the power of fire to the interior of the Serbian territory and involving the Serbian population

### ***NATO decided to carry out military operations over Serbia only using the Air Force resources.***

in the war. This event had an effect on the political situation of Milosevic as it took the horrors of war to their territory and, knowing about the possibility of a land invasion, he was forced to accept the conditions of the cease fire imposed by the coalition.

We can then understand that the fact that US and European interests were not in danger led to the exclusive use of Air Power. However, it was not possible to stop the killing of Kosovar Albanian civilians just because there were not land forces that could consolidate the achievements of the air weapon created by means of bombing.

The Serbian exercise did not have a significant opposition on the field.

Therefore, from this analysis, we can see the need and importance of joint military action without disregarding any element (land, air, navy) before operations. If a nation or alliance decides to make a military intervention in a conflict, it is necessary to use the Military Instrument as a whole in a decisive and rapid way to destroy the enemy's fight will.

The Commander of a Theater of Operations that is appointed to reach the Desired Final Political Status must be able to conduct the Campaign without excessive interference from the political level. In this way, it will be possible to use available forces exploiting the maximum capacity of the resources assigned.

The chain of command must be simple in order to allow the Commander and his subordinate commanders to plan and conduct operations in a rapid way and to have the possibility to increase success probabilities in light of the achievements made during prior attacks.

In war, our own casualties and collateral damage cannot be avoided in order to reach the Operational End State which, for this conflict, was to stop the forced displacement and killing of Kosovar Albanian civilians by the Serbian army. Therefore, these two factors cannot be decisive to plan and conduct military operations in order to reach a new goal.

The fact that in the Operation Allied Force not even an American aviator or ally died in combat after 78 days has decisively influenced future military actions to be carried out by NATO. This was the case of the Unified Protector operation which took place in Libya during 2011, where, once again, political goals could not be totally reached.

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In the center, there is the emblem of the Estado Mayor Conjunto de las Fuerzas Armadas.

The background has a chess that shows the Military Art in white and light blue, the colours of the Argentine flag. Blue means justice, enthusiasm, loyalty and truth; and white means purity, integrity, obedience, firmness, surveillance and eloquence.



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*“To train students in the exercise of conducting at Operational Strategic level and in the development of the functions of the Chiefs of Staff at the Operational Strategic and Military Strategic levels in the framework of joint and joint- combined actions in order to optimize the use of military instrument of the Nation and to train professionals interested in National Defense through the development of post-degree education courses, research projects and outreach activities”.*

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