

## HELICOPTERS IN COMBAT: METHODS FOR HELICOPTER USE IN SPECIAL OPERATIONS

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**Abstract:** *The world is now marked by conventional and unconventional military actions, from classical armed confrontations, counterinsurgency, counter-terrorism to counter-act trafficking in human beings and drugs. In this wide range of actions, special operations play a particularly important role, solving sensitive issues in order to facilitate the achievement of political goals. These operations always begin with the action of introducing troops into the action area to carry out their missions. Helicopters are, by their characteristics, the means of transportation commonly preferred by commanders who plan and conduct such operations for the purpose of introducing, re-supplying, and extracting troops from the area of action.*

**Keywords:** *special operations, helicopters, combat methods, high-value targets*

### 1. INTRODUCTION

Following World War II, lessons were learned, according to which the support of a classical war would have been costly, both economically and in terms of the loss of human lives, to resolve misunderstandings or confrontations between states, more emphasis has been put on the use of armed forces in atypical ways to carry out the armed struggle. In this way, it was intended to influence the opponent in order to impose its own goals, avoiding an open confrontation between states.

In this new type of war, unconventional actions, meant to discredit and isolate the enemy on the international arena, have become increasingly important. Their main purpose is to erode the role of representative state institutions, to undermine the existing political system by creating or activating rebel groups followed by their propulsion to power, influencing the behavior of the population, changing attitudes, and forming a mass opinion that serves the purposes by taking control over links or vital points in order to promote or impose their own interests.

According to *Joint Publication 3-05 - Special Operations*, special operations involve the use of specially selected and trained personnel with special, state-of-the-art equipment and using unique and particular techniques, tactics and procedures. They are also conducted in a hostile or sensitive environment in terms of political and diplomatic relations.

Special Air Operation (SAO) is an integral part of any conventional or unconventional war, of psychological or anti-terrorist actions. These operations can contribute to the penetration/extraction of a force into a politically sensitive area, without being discovered.

The main features of this type of operation are:

- it must be well coordinated with other types of actions: insurgency, political and diplomatic, economic;

- it has a clandestine nature, unfolding in secret, the staff involved being characterized, for example, as "green men" [1];
- as a result of the clandestine nature of these operations, they have little visibility but underlie future behaviors influences;
- accomplish their goals through the forces or staff existing in the respective states;
- are in correlation with regional guidelines or trends;
- involves a high degree of risk and uncertainty.

So we can say that special operations are meant to facilitate the achievement of strategic objectives where the use of conventional forces is impossible.

Due to its unique and uniquely recognized features, air power is called upon to support this type of operation. Its most used means in special operations are vertical take-off and landing aircraft, namely helicopters and V-22 Osprey aircraft.

Considering helicopter vulnerabilities in threatened environments, is this combat platform useful for special operations forces?

### **2. A DOCTRINAL AND HISTORICAL FRAME REGARDING THE USE OF HELICOPTERS IN SPECIAL OPERATIONS**

The helicopter technical-tactical characteristics, the ability to fly at very low heights (which makes it hard to be detected by the opponent) and the execution of the stationary flight above the target, as well as the unique capability to land in any place, regardless of the state and characteristics of the land, were immediately exploited by the armed forces. Thus, the helicopter has become the ideal platform for mobility and for supporting ground forces in general and Special Forces operations (SOF) in particular.

The helicopter was used for the first time on the battlefield during the First World War by the Austro-Hungarian Empire in observation mission. Later, during the Second World War, the Germans built several *FI-282 Colibri* helicopters, which they used on the eastern front, with the task of executing the artillery fire correction [2]. At the same time, observing the vulnerabilities of the helicopters, the Germans have made the first doctrinal conclusion, namely the need to obtain air space supremacy for the successful use of helicopters in military operations.

Towards the end of the war, the helicopter began to be used on a larger scale by several states. Thus, in Pacific operations, they were used to provide logistical support in shaken terrain and to carry out SAR and MEDEVAC missions.

As it was natural, the role of the helicopters on the battlefield increased, so on April 23, 1944, a helicopter was used for the first time in special operations by recovering, with a Sikorsky R-4 helicopter, from behind the Japanese lines, four US pilots [3].

The French were the ones who revolutionized, practically, the use of helicopter in combat operation doctrine. In July 1954, during the Vietnam conflict, Captain Puy-Montbrun proposed and carried out the first infiltration and exfiltration of a FOS detachment by helicopters.[4] It was the first time when helicopters were used in direct combat. This type of mission would be widely used later in the wars of Algeria and Vietnam.

During the war in Indochina, the French sought solutions to increase the mobility of land troops, especially those for special operations, during the guerrilla war. The helicopter seemed to be the means of fighting that can solve this problem. Thus, in view of their own use of helicopter experience and the success of the SOF infiltration/exfiltration mission, they decided to set up a helicopters force to support tactical action.

The model was taken over by the most powerful states from the military point of view and reached its peak during the Vietnam conflict.

This conflict has stimulated the emergence and development of new types of helicopters, with transport and attack role and specific technologies. It were used on large scale, for supporting FOS, UH-1 helicopters, known as Huey, AH-1 Cobra – Attack, for escort and fire support, OH-6 and OH-58 – research and observation and CH- 47 – medium troop and cargo transport. In 1959, the army’s inventory included 2489 helicopters. Beginning with 1969, as a direct result of Vietnam’s rising action, the US Army had reached 9528 helicopters. In total, about 12,000 helicopters were used in Vietnam, of which about 5,000 were lost because of their vulnerability [5].

After this period, it was the turn of the Russians to make their contribution to the development of the doctrine of the use of helicopters in operations during the Afghan War (1979-1989). After the defeat of the Afghan Army in 1985, each Red Army district deployed in Afghanistan received a FOS (Spetsnaz) detachment and an attack helicopter (Mi-24) and transport (Mi-6, Mi-8) detachment to support operations [6].

After this period, practically all doctrinal principles have been established regarding the use of helicopters in support of the FOS. Later wasn’t important doctrinal changes, the developments occurring only at the technological level with regard to the helicopters used. Night vision devices have been widely implemented, which has allowed these actions to be conduct during the night.

Also, due to modern avionics systems combined with operational status awareness systems, they can fly in all weather conditions, providing surprise for opponents.

The *Special Operations Forces Reference Manual*, fourth edition, specifies the basic activities of special operations, as follows [7]:

- direct actions;
- special recognitions;
- counter-terrorism;
- unconventional war;
- internal defense of foreign states;
- assistance to security forces;
- saving and recovering hostages;
- counterinsurgency;
- humanitarian assistance;
- information support of military operations;
- civil affairs;
- the fight against weapons of mass destruction.

Also, lately, V-22 Osprey aircraft have been introduced to support SOF, replacing traditional UH-1N, MH-53, MH-60 helicopters, due to their transport capacity, tactical radius and higher speed [8]. Currently, the US Army is already modernizing these aircrafts to deal with new threats and doctrinal changes in their use in the War On Terror.

The use of helicopters to support SOF requires detailed planning and coordination. Air support for SOF that does not have its own helicopters is provided by JFACC (Joint Force Air Component Commander) or AFCC (Air Force Component Commander). They will have an SOF liaison officer at the Air Operations Center to help coordinate the requirements for aviation support in special operations.

### **3. SPECIFIC METHODS FOR HELICOPTER USE IN COMBAT**

During the Operation ENDURING FREEDOM (OEF) and IRAQI FREEDOM, Army Special Operations Aviation (ARSOA) units were used for the first time as constituents of the Joint Special Air Operations Component (JSOAC).

At the beginning of the operations, when the risks were very high, these units performed many missions in the form of raids against high-value targets placed in the depth of the enemy territory [9].

Helicopters use a wide range of methods in combat, depending on the specifics of the mission and the forces it supports. The most common methods used to support special operations are:

a) *Insertion.*

This method is used to introduce SOF groups into the tactical field for executing specific missions. It can be executed with a multitude of means (terrestrial, naval, aerial) but the helicopters are most suitable due to the advantages that they offer:

- relatively high speed comparing with land and naval means, but less than airplanes;
- short time to reach the target due to the fact that the air means do not have to follow certain land or naval access ways to the objective area;
- the ability to carry, in a single wave, a large number of fighters and necessary equipment with a small number of helicopters compared to other land or naval means;
- the unique ability to perform the insertion, through landing or various means (rappel, fast rope) within the stationary flight above the specific point, regardless of the physical nature of the land chosen by the SOF;
- the ability to run the mulled flight, following the features of the terrain, in the daytime and nighttime, by using night vision devices at very low meteorological conditions, making them practically undetectable to radar stations;
- by the way of action and the ones presented above, they are surprised and have a demoralizing effect on the opponent.

A special type of insertion is the one carried out by air assault, where the SOF and the helicopters secure each other with fire until the troops reach the ground and the helicopter can release the area. Very important in this type of insertion is the finalization of the attack scheme and the ground tactical plan. These must be the result of a collaborative process between all the forces involved and must be completed before the actual planning of the mission begins.

The most eloquent example in this way is the BARRAS operation, carried out by the British SOF on September 10, 2000 in Sierra Leone. In this mission a number of 3 CH-47 Chinook helicopters, 2 Lynx Mk-7 helicopters and 1 Mi-24 helicopter executed the insertion of approximately 130 soldiers, making fire support and annihilation of targets by attack helicopters and fire support to the SOF during by descending from helicopter [10].

As it results from this operation, infiltration can be accomplished either by landing or by rappelling, and rarely by parachuting.

b) *Extraction.*

This is the method by which SOF are removed from the tactical field after fulfilling the mission. As with the insertion, helicopters are the most used means, due to the same advantages.

Regarding the alternative means of extraction execution, I remember:

- Special Patrol Extraction System (SPES) – which consists of a rope with meshes in which the soldiers catch their specific hooks, the helicopter taking off with people on the rope. However, after extracting the troops from the dangerous area, the helicopter must land to allow access of troops inside of it, otherwise the speed restrictions will make it very vulnerable.

- Winch – which is an electric or hydraulic device through loads can be lifted or lowered on vertical from limited terrain. As a disadvantage is that the helicopter must stay in hover flight until the soldiers are on board.

c) *Fire support.*

This can be done using a wide range of means (planes, drones, cruise missiles, artillery, etc.), depending on the distance to which the SOF mission takes place.

Both attack helicopters and armed helicopters can provide fire support on request by the SOF. The main purpose of this type of support is the suppression or fixing of threats, distributed by SOF staff, in order to favor the maneuver of forces involved in ground fighting. At the same time, it is possible to accomplish, if necessary, the extraction of their own forces when their mission can no longer be accomplished due to the unfavorable tactical situation.

Within this method a very important role is played by air-to-air and air-to-air communication systems, which must be interoperable with those of the SOF. Also, these missions are usually pre-planned in order to be able to have a quick and precise response in support of troops operating in a hostile, non-permissive or politically sensitive environment.

In any military action, “time is a critical factor” [11] in integrating fire support, depending on the outcome or the level of its own losses. In this case, the time factor is even more important, because we are dealing with not so many quantitative fighters as the commanders of the joint operations want, but of inestimable qualitative value.

d) *Vertical replenishment.*

This method is specific to helicopters and is used when the intended place for replenishment, for tactical reasons to act in hiding, has obstacles (like forests) that do not allow for replenishment by other methods (parachuting, deletion). By means of on-board capabilities (e.g. winch, nets), helicopters are the most appropriate means to execute this method.

#### 4. CONCLUSIONS

Due to the advantages that they offer, helicopters are critical aviation means for commanders’ missions in achieving combat support. They are used throughout the range of missions, from airborne mobility to the support of forces for special operations, or the combat recovery of individuals who have been isolated behind enemy lines.

Special operations forces – small, well-trained and specially equipped units need, for the fulfillment of their specific missions, terrestrial, aerial or naval means to enter the area of action, re-supply them if necessary, support them with fire and, after completing the mission, recover them. Considering the unique capabilities of helicopters, namely landing in unplanned terrain or making insertion / extraction anywhere, regardless of obstacles, these are the most commonly used air forces for special operations.

The four methods of helicopter use in operations are specific to the support of troops for special operations, with much more support for ground forces.

I considered it necessary to present them because of the confusion created between the missions, methods and methods of helicopter combat use.

Currently, most SOF have their own helicopters in the organic or are supported with such capabilities by the other branches of the army who has helicopters. This is how Special Operations Air Task Group (SOATG) has been formed, where several Special Operations Air Task Units (SOATU) operate.

Helicopter Air mobility missions, in which are used SOF insertion/extraction methods are the most dangerous because they take place in sensitive areas, usually controlled by the opponent.

It should be noted, however, that in the USA the trend is to replace helicopters within the SOATG with CV-22 aircraft because it has long range capability and it can take-off and landing on vertical, like helicopters.

However, due to the high costs and the fact that these aircraft are at the beginning, most countries in the world will use helicopters as a preferred means of supporting special operations for a long time in the future.

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