

The Several Legal Issues Exploration in Using Unmanned Aerial Vehicle

Hansheng Xu

Ph.D. Candidate, Faculty of International Law, China University of Political Science and Law, Beijing, China

Abstract

The unmanned aerial vehicles are developing rapidly in today's society, including the unmanned aerial vehicle of military and civil properties. Military unmanned aerial vehicles are widely used in the global anti-terrorism, but also produced great controversy. This paper analyzes the basis of international law in using military unmanned aerial vehicle, the provisions of the existing international law in this respect is not clear, therefore, legal use of unmanned aerial vehicle must be within the legal framework of the Charter of the United Nations. Civilian unmanned aerial vehicles are commonly used in a state field, this article has analyzed legislation status of unmanned aerial vehicle in our state, and the unmanned aerial vehicle cause the ground personnel and properties casualty, this article has made the analysis.

Keywords

Unmanned aerial vehicles, international law, compensation for damages.

1. Introduction

The field of unmanned aerial vehicle is rapidly developed currently, according to its category, which can be divided into military and civil unmanned aerial vehicle. Military unmanned aerial vehicles are mainly used for military purposes, such as armed reconnaissance and attack, and civil unmanned aerial vehicles are mainly used for daily commercial use, such as camera and surveying and mapping, etc. consumers directly can purchase and use unmanned aerial vehicles via the Internet. When the unmanned aerial vehicle in use, it will encounter a series of problems. Such as legitimate problem in the process of using military unmanned aerial vehicles, involves self-defense, sovereignty and human rights protection, and many other problems in the international law. And more widely used civil unmanned aerial vehicle will also involve the airspace use management, the filing and registration problems of unmanned aerial vehicles, the operation training and management of unmanned aerial vehicle, when the unmanned aerial vehicle flying, if it cause the ground personnel life and property damage, how to compensate and other issues? A series of issues need to be related laws to adjust, the article explores several legal issues involving the unmanned aerial vehicle.

2. The International Law Problems Of Military Unmanned Aerial Vehicles In The Counter-Terrorism Field

Military unmanned aerial vehicles are wider and wider applied in the global anti-terrorism operation, the use cost is lower than manned aircraft, the military risk is small, and so the military unmanned aerial vehicles are widely used in South Asia anti-terrorism. The United States as the world's first military power, which has massive military unmanned aerial vehicles team, which take the intelligence collection, armed attack, and many other tasks. The United States deployed a large number of unmanned aerial vehicles in outside of the United States, they generally does not lead to greater damage in the process of

reconnaissance, while using unmanned aerial vehicle for armed attack, it may result in ground personnel and property losses, it will cause the international law problems of military unmanned aerial vehicles using.

2.1 The national self-defense analysis of military unmanned aerial vehicles counter-terrorism

According to Oppenheim international law, national self-defense is: "according to the international customary law, if a state is attacked, if necessary, it has the right to use force to defend them against attack, repel the attacker and kicked the attacker out." The article 51 of the charter of the United Nations provides: "any member of the UN under force attack, the UN Security Council take necessary measures, before maintain international peace and security, this charter shall not prohibit the natural right of individual or collective self-defense. Member because take the right and take the way, it should immediately report to the security council, this measure shall not affect in any aspects in accordance with the charter take necessary action responsibilities at any time, in order to maintain or restore international peace and security." According to definition of self-defense in Oppenheim international law and the charter of the United Nations, the exercise of self-defense needs in the state under the armed attack circumstances. The United States as important countries in the international anti-terrorism, it passed legislation after 9.11, allows taking pre-emptive strike in the global anti-terrorism war. It involves whether meet the problems of self-defense to exercise, then countries use unmanned aerial vehicles in the global anti-terrorism war, whether it is a legal behavior or not. The attacks ground personnel and property losses caused by unmanned aerial vehicles, whether it need to take the corresponding state responsibility.

First of all, the provision of article 51 of the charter of the United Nations is the basis of national self-defense to exercise. The controversy is centered on self-defense interpretation aspect. The self-defense of international law has broad sense and narrow sense. The narrow sense self-defense is the rights derived by the state sovereignty; when state under armed attack, it has the right to exercise individual or collective self-defense. The broad self-defense is right that countries defend live and individual. Specifically speaking, national self-defense is a kind of natural right, when produce the countries, they have this right, the purpose is to defend the state's survival and independence, its essence is a kind of right to exist. This means that the state exercise the self-defense needs to meet certain conditions, and control in a reasonable scope, and can't borrow the name of the exercise of self-defense, and take armed aggression. Therefore, it must be combined with the provisions of article 51 in the charter of the United Nations, the state behavior are carried out the specific analysis and judgment. The application scope of national self-defense can be carried out as follows: first of all, time must be carried out self-defense for ongoing physical attack; they are the timeliness and urgency of the self-defense right to exercise. It is indirectly negate in advance and afterwards defense, as a result, the two defenses may become foreign aggression. Secondly, in terms of subject, the implementation subject of self-defense is countries and the union among countries, this kind of understanding basically dose not has controversy. While the attack source not only includes state, also includes non-state entities. Countries again exercise self-defense, it must conform to the requirements of the proportionality, which must be within a reasonable range, cannot be expanded self-defense. About the United States and other countries use military unmanned aerial vehicles in countries outside to carry on anti-terrorism action operations, whether it belong a self-defense exercise requires specific analysis,

There are two different points of view. Those in favor say terrorist groups belong to the non-state enemies of constitution, the terrorist attacks against the state can trigger the exercise of self-defense, and there is no clear regulation in charter that the countries under attack can only exercise self-defense within the boundaries, from the regulation and application of self-defense, these behaviors belongs to advance defense behavior in essence, the purpose is to curb terrorists may take action and attack in advance. The United States article expands explanation of 51 of the charter, which is an important legal basis of the unmanned aerial vehicle anti-terrorism, but some scholars have different views on this. Opponents argue that self-defense rules cannot be form legal basis unmanned aerial vehicle anti-terrorism. The reason is that the United States' expanding explanation does not has international law basis, because cross-border

fight terrorism broke the traditional self-defense exercise time, scope and scale, it is easy to cause infringement to another nation's territorial integrity and sovereignty, this is not in conformity with the requirements of the charter of the United Nations aim, and unmanned aerial vehicle anti-terrorism is easy to infringe other irrelevant personnel's life and property on the ground without involved countries' cooperation, resulting in a large number of civilian casualties, it violates international law.

Aiming at the above two kinds of different points of view, the author thinks that the legitimacy basis of unmanned aerial vehicle anti-terrorism is derived from the provisions of the Charter of the United Nations. But charter has a certain ambiguity for the regulation of self-defense, such as the scope of the right to exercise, the limits to exercise, the interpretation and application of the "under attack", these interpretation of specific provisions need combine with national practice and the common understanding of the international community, in terms of unmanned aerial vehicle anti-terrorism, if it is carried out in a reasonable scope and limits, it has certain positive meaning activity in the fight against terrorism, but advance defense obviously lack of effective legal basis and the consensus of the international community, therefore, these kinds of behavior are needed to limit, for example, it must obtain the consent of the relevant parties, and in consultation with relevant countries on combat range, under the condition that the relevant countries agreed, then attack behavior can be done, cannot arbitrarily do attacks across the border. If civilian body and property are damaged, the state that using unmanned aerial vehicle must bear corresponding responsibility, and compensate for it. Only international society get consensus and formulate relevant international laws and regulations, 1 unmanned aerial vehicle anti-terrorism can legally and effectively play a proper role.

2.2 The national sovereignty analysis of military unmanned aerial vehicles counter-terrorism

Military unmanned aerial vehicles anti-terrorism involving another important issue is the national sovereignty problem. National sovereignty is that a country inherent power, it can independently deals with the internal and external affairs based on the international law. National sovereignty is the core, the most fundamental rights of state; a country has the highest rule right in internal, and has the independent rights to deal with foreign affairs. National sovereignty does not allow any other countries to intervene in their domestic affairs, armed attack is not allowed within the national territory. In the global war on terror, state sovereignty is the basic principle of the international anti-terrorism. Specifically speaking, the article 2 in Charter of United Nations specified the principle of national sovereignty, which is sovereign equality among countries; nations may not infringe any country's territorial integrity and political independence. Safeguarding state sovereignty, protecting the country's territorial integrity and political independence, maintaining domestic peace and security are important embody of the principle of national sovereignty. Terrorism seriously violated the national citizen's life and property rights, and seriously interferes with management of government. Therefore, safeguard national sovereignty and territorial integrity is the logical starting point of the fight against terrorism. National sovereignty principle encourages countries to actively establish international anti-terrorism alliance for protecting their own interests, jointly combat terrorism, but which caused a series of questions. Because terrorism has the transnational and sudden properties, the unmanned aerial vehicle counter-terrorism often leads to the encroachment of territory and sovereignty to the other country, it is necessity for all countries on the basis of mutual respect for sovereignty actively in international cooperation against terrorism, the assignment of the national sovereignty in a reasonable way, it make the fight against terrorism institutionalized and legalized, the fight against terrorism are done within the framework of international law.

The American anti-terrorist operations using unmanned aerial vehicles are more in Pakistan, it also caused many problems. American use unmanned aerial vehicles to do anti-terrorist, whether it infringes the sovereignty another countries or not, there are two different views. One idea is that this kind of behavior does not attack the country's sovereignty, the main reason is: first, country has obligation to stop their power to attack other countries, such as the UN Security Council's opinion, the "every country has the responsibility to stop threat or use force to carry out terrorist activities in other countries in its territory ". Second, unmanned aerial vehicles attacks are the exercise requirements of self-defense

within the territory of other countries, and other countries don't have the ability to stop or eliminate non-state armed entities within the territory of their own. Third, the American unmanned aerial vehicles attacks usually obtained the permission of the concerned country in common condition. The terrorism military force exist in concerned country, and it do not have the ability to completely eliminate it, in this case, the United States often reached an agreement with the country concerned, the country concerned allow the United States military unmanned aerial vehicles to carry out mission i. Another view is that armed aggression of unmanned aerial vehicles was an intrusion on other countries' territory and sovereignty. Its reason mainly is: first, from the meaning of national sovereignty, sovereign state has independent rights in their own affairs, it do not allow other countries independently to use armed forces within its own country. According to the provisions 4 of article 2 of the Charter of United Nations: "member states on their international relations cannot be threat or use force, or any other method not in conformity with the UN purpose, violate any member state or national territorial integrity or political independence." Therefore, from the perspective of international law, if without the consent of the other countries' permission, using armed forces within the territory of other countries is the interference of other countries' sovereignty and territorial integrity. Second, look from the scope and results of unmanned aerial vehicles attacks, unmanned aerial vehicles attacks often lead to personal and property losses of large numbers of civilians, cause unstable impact of the political situation in other countries, also violated the human rights of other national citizens. As a result, this unmanned aerial vehicles attacks often lead to strong opposition countries under attacks.

In summary, the legitimate source of the military unmanned aerial vehicles counter-terrorism lies in the national sovereignty and national self-defense two kinds of rights. Whether unmanned aerial vehicle anti-terrorism constitutes violations of other countries' sovereignty remains controversial. The focus of the controversy is that the two countries reached counter-terrorism agreement on terrorism within the territory of other countries'. If reach such agreement, the other one country can do unmanned aerial vehicles armed attack based on the regulation of self-defense cross-border, fight against terrorism, but such attacks must conform to the agreement between the two parties, inform and communicate on target and scope in advance, as much as possible in order to avoid other countries' citizens' personal and property damage.

3. The Emerging Domestic Law Problems Of Civil Unmanned Aerial Vehicles Using In The Domestic

3.1 the current legislative situation of our country's civil unmanned aerial vehicles management

Currently our country civil legislation in the field of civil unmanned aerial vehicles management mainly include 'the civil aviation law of the People's Republic of China' in 1996, 'control regulations on general aviation flight' in 2003, 'civil unmanned aerial vehicles air traffic management method" in 2009, 'civil unmanned aerial vehicles airworthiness management meeting summary' in 2012, 'civil unmanned aircraft system driver management interim provisions' in 2013 ", "low-altitude use airspace management regulation draft" in 2014. Our civil unmanned aerial vehicles legislation is more dispersed, lack of systematic property, the department rules and regulations is prior at the legislative level, it is not as good as laws and regulations in legal effect, its content is simple, and lack detailed provisions of civil unmanned aerial vehicle management, resulting in civil unmanned aerial vehicle control absent, it seriously influence development of civil unmanned aerial vehicle field and the protection of the citizens' personal and property rights.

3.2 The damages compensation problem caused by civil unmanned aerial vehicles flight

In July 2015, an unmanned aerial vehicle crashed in Shenzhen, smashing cars parked by the road, cause vehicle a certain degree of damage. With the development of modern express industry, and part of the delivery try to unmanned aerial vehicle (uav) express business, unmanned aerial vehicle photo is also developing rapidly. In the process of unmanned aerial vehicle flight, if itself causes of plane or improper

operation, or because weather or other force majeure causes unmanned aerial vehicles crashed and cause ground personnel and property damage, how to define the nature of damage, how to recover? This question is analyzed in the following.

In our country, the 'civil aviation law' defines the civil aircraft in 1996, the provisions 5 of article 2 provides: "aircraft that this law civil mentioned expect flight that perform missions of military, customs and police". According to this definition, civil unmanned aerial vehicle should belong to the category of civil aircraft. Therefore, civil unmanned aerial vehicle flight should be adjusted by the civil aviation act in our country. The provisions of the civil aviation act in our country mainly aimed at manned aircraft, and civil unmanned aerial vehicle flight is not suitable for our country civil aviation law on ordinary aircraft adjustment rules. Our country civil aviation law adjusts air transport legal relationship, the main bodies of this relationship are the carrier and the passengers, and flight of civil unmanned aerial vehicle did not involve the passenger and the carrier. Civil unmanned aerial vehicle flight lead to personal and property damage in the process of flight should belong to civil infringement. Our country in 1996, the chapter 12 in civil aviation act rules provides compensation liability on third parties damage on the ground, although the provisions of this chapter is mainly aimed at the manned aircraft, but the author thinks that ground personnel and property damage caused by unmanned aerial vehicle can refer the provisions of this chapter.

In summary, the ground personnel and property damage in the process of civil unmanned aerial vehicle flight should be adjusted by the civil aviation act, the civil law, the infringement liability act in our country. Combining with the using characteristics of civil aircraft, and civil unmanned aerial vehicle flight cause ground personnel and property damage, which mainly are the following reasons: the first is that civil unmanned aerial vehicle itself quality problems leading to the occurrence of damage; The second is civil unmanned aerial vehicle caused by user's improper operation and result in damage; The third is due to human factors that lead to the damage occurred. According to the cause of the damage occurred, the main responsibility causing the damage occurred can be summed up the operation people, of the civil unmanned aerial vehicle users, manufacturers and sellers of unmanned aerial vehicle, etc.

Civil unmanned aerial vehicle product liability analysis, China's " general rule of the civil law " provisions 3 of chapter 6 provides the infringement civil liability, the 122th provides: "because of the unqualified quality, the product causes property damage or personal injury to others, the manufacturer or seller shall bear civil liability according to law. The transporter or storekeeper is responsible for the matter, the manufacturer or sellers have the right to demand compensation for its losses." Under the situation that civil unmanned aerial vehicle causes personnel and property loss, it can according to the accident investigation report confirmed whether civil unmanned aerial vehicle had any quality problem, if quality problems exists, the victim shall have the right to demand the product manufacturer and seller undertake corresponding civil liabilities.

The 123th regulation "general rule of the civil law provides "high-risk items and behavior causes damage to others should bear civil liability. Civil unmanned aerial vehicle according to its own flight status in some cases belong to high dangerous behavior, if it cause damage happen in accordance with the constitutive requirements of provisions, need to bear civil liability, but there are exceptions, it is that the victim cause damage occurs, the doer can escape. Chapter 5 of the 'infringement liability law of the People's Republic of China' provides the product liability system; the article 41-43 provides that the defects liability subject is manufacturer and seller of the products.

And assumption of responsibility must be because the product itself defect and cause damage consequences, it involves the decision for product defects, whether there is a defect in civil unmanned aerial vehicle, there is a design flaw or manufacturing defect, it need to state quality inspection institutions make professional judgment, and this decision is the important legal basis to determine the responsibility. This chapter also states in addition to the compensation, liability manner is to eliminate the obstruction to eliminate risk, etc. Article 46 also stipulated the defects warning and recalls system after the product in circulation field, if the damage caused by lack of remedies and recall, it also need to take responsibility. In terms of civil unmanned aerial vehicle aviation products, the quality of the

products is especially important, because flight range of civil unmanned aerial vehicle has arbitrariness, protection consciousness and protection ability of ground personnel and property is bad, in the event of accident, it often can cause serious damage, if find defect must be timely and effective to recall products in order to avoid the occurrence of the damage.

And the article 47 'infringement liability law' also provides if not timely perform the recall liability of the defective product; the victim have the right to demand the punitive compensation measures. Punitive compensation measures are particularly important in the field of product infringement; this provision encourages production of manufacturer and pursuant attaches great importance to product quality problems, fix defects in time. In the 'infringement liability law' of our country, article 71 chapter 9 provides law and infringement liability of aircraft, operators responsibility of civil aircraft that cause person damage, this provision can be extended civil unmanned aerial vehicle, that is manager responsibility of civil unmanned aerial vehicle that cause people injure, and in the case that the unmanned aerial vehicle cause damage, the company also need to take responsibility.

Use civil unmanned aerial vehicle for operation and other man-made factor which cause damage, assumption of responsibility need follow the general rules of infringement responsibility. The article 106 chapter 6 of the 'general principles of the civil law' provides citizens and legal persons who because of their fault and infringes on another person's personal and property rights should bear civil liability, provides force majeure exemption at the same time. The chapter 2 article 6 'infringement liability law' in our country also provides the fault liability principle of infringement liability. In conclusion, civil unmanned aerial vehicle because of fault of operator or user and result in occurrence of damage, doers need to undertake the fault liability. And article 157 of the 'civil aviation act' in our country provides strict responsibility imputation principle, that is, as long as the occurrence of damage is caused by aircraft, liable for damages need to undertake, the doers' subjective fault will not be considered. Damage scope of this provision includes ground, surface personal and property damage. Article 158 of this law provides that the responsibility main body is the operator of the civil aircraft, namely when the damage occurred, the user of civil aircraft. In the case that the force majeure causes damage occurred, China's "general principles of the civil law" and "infringement liability law" stipulate the strict liability principle in the situation of work high, only when the victim has fault, the liability can be reduced or exempted from, the 'civil aviation act' also provides that strict liability damage principle under damaged condition that third parties on the surface, so the force majeure factor only as a consideration factor reduce responsibility, the doers' responsibility cannot be completely exempted from due to force majeure.

In summary, the infringement damage compensation of civil unmanned aerial vehicle has a certain particularity. First, civilian unmanned aerial vehicle does not belong to manned aircraft, so the manned aircraft civil damage compensation liability law in our countries' law aviation legislation cannot be fully applicable, law combined the imputation principle with the limitation of liability cannot be applied in the field of civil unmanned aerial vehicle, but only in accordance with general aviation regulations in the civil aviation act in our country to define the nature of civil unmanned aerial vehicle, namely civil unmanned aerial vehicles are engaged in civil aviation activities except public air transport, including homework flight of industry, agriculture, forestry, fisheries and the construction industry and medical and health, rescue and relief work, meteorological observation, ocean monitoring, scientific experiment, education training and sports activities and so on, While this definition is consistent with practical use of civil unmanned aerial vehicle. As a result, civil unmanned aerial vehicles belong to the adjustment scope of China's general aviation laws and regulations. According to the legislation of the civil aircraft in our country, civil unmanned aerial vehicles are part of the civil aircraft, so it leads to the ground and property damage liability, which belongs to the adjustment scope of third party's claim for compensation on the ground in civil aviation act. But such legislation of our country adopted a mixed legislation model. First, the "general principles of the civil law" provides liability for damages in general condition, and then separately provides aircraft t infringement in infringement liability act; finally, the special civil aviation legislation provides damage compensation liability for third parties on the ground. This dispersive legislation mode that was conducive to fully protect the interests of the ground personnel and property.

But there are certain problems, the civil aviation law of our country has a history of nearly 20 years, and the civilian unmanned aerial vehicles are not widely used in the beginning of legislation, so the aviation basic law in our country have made no special provisions, for example, specific definition and categories of civil unmanned aerial vehicles, they are not made special provisions for damage caused by civil unmanned aerial vehicles, the principle of imputation and the scope of damage compensation. Therefore, if such damages occurred that can only apply to the existing law lack of target to do relief on damage. Therefore, how to legislate on our country civil unmanned aerial vehicles using becomes a problem urgently to be solved.

4. Conclusion

The use of unmanned aerial vehicle in international scope mainly involves the counter-terrorism problems of military unmanned aerial vehicle. This behavior involves a country's reasonable use of defense right and a country's sovereignty and territorial integrity. Military unmanned aerial vehicle on terror must first in the framework of the Charter of UN and relevant international law, a country not casually use military unmanned aerial vehicle in the name of the anti-terrorism invade other countries' sovereignty, it must be in the case that the relevant nation reach consensus and fight terrorism within reasonable limits. Second, terrorism is spreading in the global scope, fight against terrorism can't rely on the strength of a nation, the international community must establish a unified anti-terrorism alliance, Formulate corresponding international law, define the name the number and the position and the concrete position of terrorist organization, so as to establish the consensus of the international community on terrorism attack, fight terrorism with global cooperation. Unmanned aerial vehicle in domestic use is mainly is to do photography and video and surveying and mapping work on their borders with a large number of civilian unmanned aerial vehicle, so it has nothing to do with international law, and mainly adjust the country's domestic law. Because the kinds of unmanned aerial vehicle are various, number is huge and generally flying in low altitude, the operator level is uneven, so it will often cause damage to ground personnel's life and property, and the legislation of various countries around the world in these aspects is not perfect, so special legislation need to be made to adjust. In terms of our country, the civil aviation act in 1996 has not been revised nearly 20 years, civil unmanned aerial vehicle legislation is almost blank, the federal aviation administration in February 2015 release operation certificate of small unmanned aircraft, but also just stay in the proposal stage, it did not rise to the national laws, the United States as air power, federal and state legislative level will set unmanned aerial vehicle regulation in this year, so this aspect in China cannot draw many lessons from other countries' regulation. So how to sort and integrate the relevant law involving civil unmanned aerial vehicle under the existing legal system in our country, and special provisions in the legislation is problem that urgently needs to be solved.

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