

# THE ROLE OF ICAO IN REGULATING AERIAL NAVIGATION

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## ABSTRACT

The International Civil Aviation is special agency of United Nations which focuses on regulating air navigation by securing civil aviation, by providing safety, legal regulations, operating procedures, technical standards and ensuring efficiency. This research paper focuses on the role of ICAO in regulating air navigation. The paper further focuses on the background and developments of ICAO in the area of aerial navigation. Also, it aims to deal with the statute which led to the establishment of ICAO, i.e., Convention on International Civil Aviation in detail. The relationship between ICAO and United Nations for the peaceful working and cooperation has been discussed. Aerial navigation aims at covering wide range of activities such as personnel licensing, units of measurement, rules of air, meteorological services, operation of aircraft, aeronautical charts, air worthiness of aircraft, air traffic services, rescue and search, efficiency, safety, security, environmental control, aeronautical information services and etc. All these activities require International Standard Recommended Practices for the smooth functioning and development of aerial navigation by framing laws and policies to deal with the challenges and issues. The paper discusses about the ISRP and its importance in regulating aerial navigation. Also, the framework of ICAO which includes Assembly, Council, Air Navigation Commission, Secretariat and various Committees which comes under purview of ICAO have been discussed in this paper. The paper mainly deals with the major role and importance of ICAO in regulating or maintaining air navigation, The primary role International Civil Aviation Organisation is to ensure the security, improve safety measures, increase capacity and to enhance the efficiency by regulating all the affairs related to civil aviation, this

also includes the development of infrastructure, operation and construction of airport., looking after aeronautical charts, traffic management, framing of policies, rules and regulation for regulating aerial navigation, check on obstruction lightning, to give certification for personnel and its aircraft, all the affairs related to rescue and search and etc. Also, paper concludes with the issues and challenges faced by the ICAO and further focuses on the necessary measures to curb such challenges. A few keywords in this paper can be seen as ‘aerial navigation’, ‘ISRP’, ‘ICAO’.

## **INTRODUCTION**

The International Civil Aviation Organization is an agency which is specialized in the United Nations in 1944. This agency has transformed the techniques and principles related to international air navigation. It is the most important and largest organization that deals with the safety of aviation sector, legal regulations, operating procedures and technical standards. It has nurtured the development and planning of international air transport to safeguard orderly growth and safety. The headquarters of ICAO is situated in Quartier International of Montreal, Canada. The total member states in ICAO are 193. The duty of ICAO is to recommend several practices and to adopt the standards related to air navigation, provides for prevention of unlawful interference, flight inspection and facilitating procedures of border crossing for international aviation. The protocol for investigation of air accident has been provided by the ICAO. These protocols are further followed by the transport safety authorities of only those countries which are signatory of the Chicago Convention on International Civil Aviation. There is a technical body within ICAO which deals with the aerial navigation i.e., Air Navigation Commission. The commission constitutes of 19 commissioners that are being chosen by the contracting states of ICAO and are finally appointed by the ICAO council. Commissioners are considered to be the independent experts as they do not serve any of the political or state representatives. The air navigation comprises of recording, planning and controlling the directions of an aircraft from one location to other location across the world<sup>i</sup>.

The main aim of the ICAO is to manage the governance and administration of Chicago Convention. For ensuring efficient, safe, environment friendly, economically sustainable, secure civil aviation sector, the policies and Civil Aviation and Recommended Practices need

to be followed by all the members states of the ICAO. The member states of ICAO use these policies and SARPs to check on their local aviation activities, operations and their compliance with the global norms. All these polices and SARPs helps in operating 100,00 daily flights reliably and safely across the world. ICAO helps various states in capacity building through fulfilling their developmental objective. ICAO also makes global plans for the states for air navigation and their safety. This organization reports and monitors on the sector of air transport and keep a check on states civil aviation capabilities in the field of security and safety.

The main objective of ICAO is given under Article 43 of the Chicago Convention is to manage the governance and administration related to international air transport and to fulfil the requirements of the people for secure, efficient, safe, economical and regular air transport. It also helps in designing the legal framework of aviation sector. The main fundamental objective of the ICAO is its safety. Efforts has been made by the ICAO to further collaborate with the air transport community on a global level for betterment of security and safety performance. The major roles of ICAO are to provide safety and security by regulation air navigation. It includes the administration of air traffic, operation and construction of various airports globally, the certification of aircraft, enforcing legal framework for rescue programmes, search, astronomical charts, rescue operations and other aspects relating to aerial navigation.

## **DEVELOPMENTS BY THE INTERNATIONAL CIVIL AVIATION ORGANIZATION**

The France invited for the first major international conference related to air law code in 1910 in the Paris. In this international conference total eighteen European States. This international conference was organized for the purpose of laying down the basic principles that governs all the laws related to aviation. After World War I, it was noticed that there was development of technology in the field of aviation. The civil aviation was given importance for the transportation of the goods and for travelling purposes. All the matters related to the aviation was dealt in the Paris Conference which was in 1919, it was decided in the conference that all the matters dealing with aviation should be given to the Special Aeronautical Commission. This committee was specifically established in 1917 for dealing with aviation matters during World War. Also, there was development in civil aviation as lot of other civil aviation

enterprises was formed in the North America and Europe. There was a first cross channel flight that included round trip from New York to Scotland and back. The civil aviation got its importance because of the military emergency or necessity in the World War I, Special Committees was for formed for purpose of dealing with aviation matters but such matters were also dealt post war. The proposal for development of civil aviation internationally was taken into consideration by France and further it was passed on to allied powerful countries and thus this led to the formation of International Aerial Convention. The particular convention dealt with 43 articles altogether which includes organizational, operational and technical matters related to civil aviation.

Before International Civil Aviation Organization, there was commission for the purpose of regulating air navigation, such commission was known as International Commission for the Aerial Navigation, the first convention by this commission was held in Berlin, Germany in the year 1903, the eight countries attended the conference but they were not given agreements. Second convention was attended by the 27 countries in Berlin in 1906. In 1912, Third convention was conducted in London. In that there was allocation was callsigns which was first radio that was ever used by the aircraft. The International Commission for aerial navigation was in force until 1945.

After that fifty-two countries have signed the convention on International Civil aviation which was held in Chicago and also known as Chicago convention. Under the given provision of the convention it was held that there is a requirement of establishment of Provisional International Civil Aviation. Organization of provisional international civil aviation started operating in 1945. Then later twenty-six countries showed the dissatisfaction towards the establishment and working of PICAQ. There was then establishment of International Civil Aviation of Organization and this organization replaced PICAQ. It was established for the purpose of encouraging cooperation and preserve and create understanding and friendship among the other countries and their citizens. The Chicago convention dealt with main principles of giving permission to international air transport. In 1947, ICAO was considered as the UN agency under the Economic and the Social Council. In 2013, the Qatar has offered to join and serve as one of the permanent countries under ICAO. Also, it offered to build a headquarters at Doha and promised to pay all moving expenses. ICAO convention was signed by 193 members by agreeing upon 12,000 international recommended standards practices.

## CONVENTION ON INTERNATIONAL CIVIL AVIATION

During World war II, it was noticed that there was major development in air transport sector and which lead to the requirement of an international organization to manage all the affairs related to civil aviation. It was formed for the purpose of safety, enhancing capacity, to maintain traffic, and to improve efficiency. For all these purposes and objectives there was discussion with all the major allies which were involved in World War II and then accordingly the invites were sent to 55 natural and allied states and decided to conduct a conference in Chicago in 1944. All the delegates of these nations met at the International conference of Civil Aviation with an objective to plan for the cooperation of these nations in the affairs of air navigation after the war. This conference also led to the establishment of ICAO. The Chicago convention dealt with formation of ICAO for the purpose of regulating aerial navigation. Further the convention was ratified and signed by the 26 states. The two major questions were dealt in the conference that which navigation signals should be followed one which is universally agreed or other which has its own technical standard of navigation signal and can it be agreed upon by all the nations ratifying the convention. Second question was whether there can be any uniform rule related to economic related to air transport facility. There were two groups, one of the United States, they were of the opinion that there is a requirement of international organization which only has power to make standard recommendations in affairs of technical equipment and procedures. They were of the view that, economically there must be free and fair competition in air transport. According to them this will be benefit consumer by attaining satisfaction and of those nations which are deprived of any kind of international air transport. The other group which constituted of countries of United Kingdom, according to them there must be international organization which sets rules, regulations, policies, set out standard recommendation and practices, allocated routes to other airlines globally, maintain and manage frequency of aircraft and to fix rates. There was also a radical proposal by Australia and New Zealand for the purpose of providing operation to sir transport internationally and the international ownership<sup>ii</sup>.

There was a compromise between United States and United Kingdom and led to the formation of ICAO, it is an independent organization which controls order in the air, for the international aviation they have the capacity to obtain maximum technical standards and recommend standards practice to the member states of ICAO. There is no regulatory power that is given

to ICAO economically but it is their duty to prevent all the economic waste which is obtained because of the unreasonable competition as it is one of the constitutional objectives of ICAO. It is the responsibility of all the member states who have their own international airline to give financial statements, cost statistics and traffic reports to ICAO. All the sources or revenues and receipts for operations should be given to ICAO.

The convention further assures every nation of exclusive and complete sovereignty and right over the airspace that is above its territory. As under the airspace law, the non-schedule flights are subjected to certain limitations and restrictions on the civil airlines and its flights of one country over or into another territory. The schedule airlines are given authorization by taking permission from another country to operate the airlines in their nation. In regards to the commercial right in international aerial transportation, two agreements were adopted in the conference, these agreements or treaties are, Agreement on the International Aerial Service Transit and agreement of international air transport. These two agreements are only binding on the member nations of the ICAO.

The agreement of International Air Services Transit deals with freedom given to all the civil aircrafts to fly all around the territory and the foreign countries without landing, also freedom is given for the purpose of emergency landing for refuelling only in other countries. This agreement has laid down the basic principles of emergency landing and right of transit for the first time.

The agreement of International Air Transport that includes all the basic five freedoms of air : Freedom of flying in foreign countries without landing, Freedom of emergency landing for the purpose of refuelling only, Freedom to providing transport to cargo and passengers from the territory of their own to foreign countries and vice versa, Freedom to carry anything which includes air traffic between two countries excluding the airline of homeland. The ICAO convention was held in 1944 in Chicago, also was ratified by 26 nations. Chicago convention is therefore established before UN Charter. This is the reason that ICAO came into existence from April 4, 1947.

## **ICAO AND UNITED NATIONS**

During International Conference in Chicago, the drafters of ICAO had figured out that there is a need of organisation which is like United Nations. The convention included a provision which states that there is a possibility that such international organisation for civil aviation will become a part of United Nations. Article 64 which was inserted in the convention states that ICAO in regard to affairs of air which is in its competence and is therefore affecting the security of the world by assembly votes and thus in future for the welfare of the organization and people enter into any necessary arrangement with organizations that are further set up by United Nations with the objective of preserving world peace, ensuring security and providing safety to the people. ICAO was the independent and autonomy organization; it was major step when there was acquisition in the constituency of such status by the United Nations. There was relationship created when the general council of ICAO signed a protocol with the United Nations for its peaceful working and it was thus approved by the unanimous vote 32 member states of ICAO. After that ICAO was one of the very famous United Nations Agency which specialises in matters related to air. Also, many nations joined the ICAO because of the UN programme of technical assistance. ICAO works closely with United Nations and its other organisation as it is one of the specialised agencies, other international organisations such as for telecommunications (ITU), Maritime (IMO), health (WHO), tourism (UNWTO) and etc.

## **INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES (ISRP) AND AIR NAVIGATION**

Aerial navigation aims at covering wide range of activities such as personnel licensing, units of measurement, rules of air, meteorological services, operation of aircraft, aeronautical charts, air worthiness of aircraft, air traffic services, rescue and search, efficiency, safety, security, environmental control, aeronautical information services and etc. ICAO organised a program in 1968 related to environment control. This program aims on reducing the aircraft noises as the increases usage of jet engines has led to air traffic and noise in the air. The standards for noise certification of the flights and aircrafts resulted in a noise free generation of new jet aircrafts. Fuel venting and gaseous and smoke emissions was observed from the turbofan and turbojet, to control such issues, there was a development of such recommended standards. For

the acts which involves unlawful interference, there was a formation of recommended standard and practices, also there was establishment of committee which deals with the affairs regarding unlawful interference. To improve the air safety the ICAO has adopted the standards for safe and secure navigation. Also, standards are adopted for the purpose of transferring dangerous materials by air safety<sup>iii</sup>. ICAO also examines the matters related to supersonic operations, weather operations, visual aids and data interchange system. ICAO guarantees uniformity in the framework and laws related to aerial navigation. One of the major duties of ICAO is to adopt all the practices and recommendations made by the member states, there is a requirement of amendments and modifications for the development of civil aviation. The Standards under ISRP means particular standards that are specific such as material used in flights, length of runways of airways, material for construction etc. Any recommendation related to infrastructure, safety, security, efficiency of air navigation is taken into consideration and which is thus binding on the member states.

## **STRUCTURE OF ICAO**

The structure of ICAO is such that it includes:

- *Assembly*

The member states of the ICAO meet once in the three years. Each member nation has one vote in the general assembly and all the major decisions are taken place by the majority votes unless there is some specific provision in Chicago convention then the convention should be given importance. Sessions are conducted in different cities for maintaining peace and building peaceful relations with other nations. The work of the assembly in the meeting includes framing of policy and recommendations, also keeps the review and checks on the ICAO, determines budget, gives guidance to other bodies of ICAO and also elects the council respectively. The constitution of the ICAO can be amended by the way of obtaining two-third votes from member states and it has also been happened previously. There are also certain amendments which should be applied on all the member states other than those who haven't ratified or given two-third votes, such amendments will be applicable on them if it is agreed upon by majority. If then also a particular amendment is not ratified by the member nation of ICAO within specific



period of time then further the assembly has been given the right to take away the membership of such country in ICAO<sup>iv</sup>.

- ***Council***

Council consists of the 36 member states or nations which are selected by the assembly for the period of three-year terms. The council of ICAO is a permanent body and helps in attaining aims and objectives of ICAO. While selecting the members or electing them the assembly should give attention to nations who have an air transport network, facilities in air navigation and also to all those nations whose geographical representation is broad and is necessary. The power of council is broad in comparison to other executive councils any other agency. For civil aerial transport and navigation, the council has adopted the international recommended and standard practices. Council also plays the role arbiter when there is any conflict between member states regarding any provision of the convention or on its application. It also has the authority to further investigate any matter that is creating obstacle in the development of aerial navigation. Also, it has responsibility of maintain safety and has to focus on operation of air transport internationally.

- ***Secretariat***

The Secretariat of ICAO is appointed by Secretary General who is headed by the council. The secretary general has the authority to appoint all the staffs of Secretariat of ICAO and directs and supervises the activities. ICAO has several regional offices such as in Cairo, Nairobi, Bangkok etc to give any kind of assistance related to aeronautical service to the member states.

- ***Committees of the Council***

The Committees that falls under ICAO are: Air transport committee, this committee looks after the management of air transport, its infrastructure, facilities and working of the aircraft. Legal Committee deals with all the conflicts that arising between the member states, all the legal formalities, policies, rules and framework is controlled by them. There is a finance committee which manages the finances related to aerial navigation. The technical cooperation committee deals with the technical programming. There is a committee on environmental control which deals with the protection of environment, pollution and sets the guidelines for the protection of environment.

- *Air Navigation Commission*

The Air Navigation Commission is given the responsibility of considering and recommending SARPs and the proper procedure for various services related to air navigation for the approval to the council of ICAO. The commission constitutes of 19 members who is well versed with technical knowledge, suitable qualification and has previous experience in the aeronautics. The Aerial Navigation Commissioner are selected by the member states and is then later appointed by the council of ICAO. They are body which doesn't have any particular interest in any region or state. The ANC is an individual body which uses their own skills and expertise in civil aviation. They also handle technical programming works and navigation programming works. They have the duty to improve and maintain air navigation and aviation safety, manage traffic, identifies risks, introduction of new advanced technology and system, infrastructure, with the help of GANP and GASP.

## **IMPORTANCE OF INTERNATIONAL CIVIL AVIATION ORGANIZATION IN REGULATING AIR NAVIGATION**

The International Civil Aviation Organization is that specialised agency which is formed for managing the governance and administration related to Convention on International Civil Aviation also known as Chicago Convention. International Civil Aviation Organization deals with the work of the member states of the conventions, the total member states of the convention are 193 states. ICAO deals with the all matters related to air navigation, safety, security, navigation, environment friendliness, economic sustainability and to secure civil aviation sector, the policies and Civil Aviation and Recommended Practices need to be followed by all the members states of the ICAO. The member states of ICAO use these policies and SARPs to check on their local aviation activities, operations and their compliance with the global norms. All these policies and SARPs helps in operating 100,00 daily flights reliably and safely across the world. The main purpose of the establishment of ICAO was for the development of civil aviation in regulating aerial navigation, for ensuring safety and development of civil aviation globally. It also encourages the arts and designs of aircraft for the better infrastructure of aircraft and for the expansion of airports, airways and the for all the facilities related to civil aviation. ICAO is important for meeting the requirements of people by

providing them with efficient, safe, economical, regular air transport facility. The focus of the ICAO is to protect all the rights of the member states and make laws and policies for governing the air transport system and aerial navigation. Every country of the ICAO is given the opportunity for the operation of all the international facilities and airlines, also it aims at avoiding the discrimination that has been made between the member state of ICAO and other countries, it should work for the welfare of all the countries and should encourage safety in air navigation internationally<sup>v</sup>. ICAO also regulates and assist other international airline and flights for the purpose of including all the matters related to flying such as economic, social, technical and also deals with the legal problems.

## **ROLE OF INTERNATIONAL CIVIL AVIATION ORGANIZATION**

The primary and main role International Civil Aviation Organisation is to ensure the security, improve safety measures, increase capacity and to enhance the efficiency by regulating all the affairs related to civil aviation, this also includes the development of infrastructure, operation and construction of airport., looking after aeronautical charts, traffic management, framing of policies, rules and regulation for regulating aerial navigation, check on obstruction lighting, to give certification for personnel and its aircraft, all the affairs related to rescue and search and etc.

The role of ICAO is not limited to safety, it further provides various rules and regulations related to registration, prevention of the economic waste, standardisation, air worthiness, fair competition and aviation law. The main objective behind the establishment of International Civil Aviation Organization was to attain the sustainable growth in the civil aviation system internationally or globally. ICAO works as the global forum for all the countries for the purpose of international civil aerial navigation. The ICAO has the responsibility to set off all the necessary standards and also to deal with the policy making for regulating aerial navigation. The various other works of ICAO includes analysis and studies regarding air navigation, to tackle all the compliance audits, develops the aviation capacity, provides necessary assistance, all these works can only be done by the organization with the cooperation of the member countries and all the stakeholders. The mission of ICAO is to enable and support air transport network globally which should surpass or meet the needs of broader connectivity and economic

and social development for the global passengers and business. Also, the aim is to anticipate, acknowledge, maintain and manage the air transport doubling capacity globally by 2030. There should not be any impact on the safety of system, environment, efficiency, performance, convenience. There are five major objectives for regulating the aerial navigation by the ICAO.

### 1. Air Navigation Efficiency and Capacity

The aim is to work on improving the efficiency and increasing the capacity for purpose of development of civil aviation system globally. It is organizationally and functionally interdependent on one of the major factors is safety, this objective of ICAO mainly focuses on developing the infrastructure, upgrading air navigation and for developing various other procedures for the purpose of optimizing the civil aviation system and its performance. The safety,, improve in efficiency and increase in capacity can be improved by the several developmental strategies and plans which is included in the Global Civil Aviation Safety and in the navigation plan, by monitoring all air navigation and safety trends, maintenance and development of recommended procedure and practices and standards which is only implied on the civil aviation activities globally. The development in safety, in efficient air network system and increase in capacity helps in the social and economic development.

### 2. Environmental Protection

Environment plays a major role in the air networking system or for aerial navigation. One of the objectives of ICAO is to protect environment by framing laws and policies. These laws and policies are binding on all the member states of the ICAO. The aim is to reduce the adverse impact on environment for all the civil aviation activities. The recommend practices and policies are made by the ICAO for controlling the conditions of the environment globally.

### 3. Safety

One of the main roles of ICAO is to enhance the safety in aerial navigation. Also, for the purpose of same there is establishment of the Global Aviation Safety Plan, which lays down the necessary outlines all the main activities for the triennium. GASP supports the continuous and prioritization of the aerial safety. The strategy for global aviation safety along with the plan of global air navigation deals with the necessary framework of national and regional civil aviation safety strategies and plans which will be implemented and developed. This will ensure

coordination and harmonization for all the efforts that are planned and build with the aim of improving the civil aviation capacity, safety and efficiency globally.

The motive of Global Aviation Safety Plan is to reduce the risk of all fatalities by making a strategy for the harmonized civil aviation safety, national and regional civil aviation safety plans.

#### 4. Economic Development of Civil Aviation System

The role of ICAO is to encourage and promote the development of civil aviation system economically. The leadership of ICAO is required for the purpose of harmonizing the aerial transport which specifically focuses on the economic policies of all the air activities. The economic viability helps in the funding for the infrastructure of the air transport and helps in improving the air network system. It can also be helpful of building capacity, technology transfer, investment needs to support the development of air transport system.

#### 5. Security and its Facilitation

The role of ICAO is to enhance the facilitation and security of civil aviation system. The leadership of ICAO is required for the purpose of harmonizing the civil air transport and its framework which focuses on facilitation, security and any other matter related to border security.

The role of ICAO in regulating aerial navigation is of the great importance in air transport sector and hence provides the uniformity amongst the member states of ICAO.

## CONCLUSION

The conclusion that can be drawn from this research is International Civil Aviation Organization plays a major role in the development and regulating the air transport sector. ICAO helps to provide safety and security by regulating air navigation. It includes the administration of air traffic, operation and construction of various airports globally, the certification of aircraft, enforcing legal framework for rescue programmes, search, astronomical charts, rescue operations and other aspects relating to aerial navigation. The air navigation includes recording, planning, managing and controlling the directions of an aircraft

from one location to other location across the world. The management of an aircraft is done by the crew which connects with the stations on ground. This communication prevents collision, necessary information is taken from the experts and is then transferred to the crew. Other important updates related to weather, visibility, navigation of the route or destination and other queries are also a significant part of the communication. In between taking off and landing of an aircraft numerous times information is communicated from ground station to aircraft and within ground staffs as well. For an efficient operation of an aircraft various on ground facilities and other services are required to be prepared in advance and every single thing has to be on point for an aircraft function properly. And for better functioning and for providing uniform facilities to all the aircrafts an international standardisation is required which can help in smooth functioning of the aviation sector. This will not only bring uniformity but will also have a central authority to regulate the safety measures and other necessary developments in the world.

The development of ICAO will benefit in preserving and creating understanding and friendship among the other nations of the world. One of the fundamentals of ICAO is to provide security and safety in air. The requirement for maintaining international standardisation is to ensure regularity, efficiency of aviation operations. There is a need for the member states of ICAO to have better understanding of all the matters related to telecommunications, aerodromes, aeronautical information services, meteorology, navigation aids, traffic service, rescue, search and aeronautical charts. The ICAO has adopted the Standards Recommendations Practices and all rules and regulations are based on these practices. The final adoption of these standards is in the hands of the council for approval of the procedure made on the security, safety, regularity and efficiency in aerial navigation. The final body behind the development is Air Navigation Commission of ICAO. The special expertise of commissioner is required for the technical assistance. ICAO also deals with the route planning, IFR planning, communication on flight, navigation aids and about flight navigators. The role of ICAO in regulating aerial navigation is of the great importance in air transport sector and hence provides the uniformity amongst the member states of ICAO.

## ENDNOTES

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<sup>i</sup> International Organization, “International Civil Aviation Organization”, JSTOR, vol. 2, no. 2, 1948, pp. 356-359.

<sup>ii</sup> International Organization, “International Civil Aviation Organization”, JSTOR, vol. 1, no.3, 1947, pp. 521-523.

<sup>iii</sup> Abeyrante and Ruwantissa, “Air Navigation Law”, International Organization, “International Civil Aviation Organization”, JSTOR, 2012

<sup>iv</sup> Michael Milde, “International Air Law and ICAO, Eleven International Publishing, Netherlands, 2008.

<sup>v</sup> John N. Bradbury, “International Civil Aviation Organization and Future Air Navigation Systems”, Springer, Berlin, Heidelberg, vol. 73, 1991.

