IOS Partners

FINAL REPORT

Assessment of Cape Verde's Civil Aviation Legal Framework

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DISCLAIMERS

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GLOSSARY OF ABBREVIATIONS

AAC – *Agência de Aviação Civil*

ACI – Airport Council International

AERA – Airports Economic Regulatory Authority

AOC – Air Operator Certificate

AOG – Aircraft on Ground

ARME – *Agência Reguladora Multissetorial da Economia*

ASA – *Aeroportos e Segurança Aérea*

AWG – Aviation Working Group

BAG – Banjul Accord Group

BAGAIA – Banjul Accord Group Accident Incident Agency

BAGASOO – Banjul Accord Group Aviation Safety Oversight Organization

BASA – Bilateral Air Services Agreement

COVID-19 – Coronavirus disease

CV-CARs – Cape Verde Civil Aviation Regulations

DGCA – Directorate General of Civil Aviation

EASA – European Aviation Safety Agency

ESA – Equivalent Safety Assessment

EU – European Union

EU DCC – European Union Digital COVID Certificate

FAA – Federal Aviation Administration

FDP – Flight Duty Period

FRM – Fatigue Risk Management

FTL – Flight Time Limitation

HAA – Helicopter Air Ambulance

HEM/S or HEMS – Helicopter Emergency Medical Services

IATA – International Air Transport Association

ICAO – International Civil Aviation Organization

IOS – IOS Partners

MEDEVAC – Medical Evacuations

MTT – Ministry of Transport and Tourism

PSO – Public Service Obligation

RPAS – Remotely Piloted Aircraft Systems

RIA – Regulatory Impact Analysis

SAATM – Single African Air Transport Market

SARPs – Standards and Recommended Practices

SDSP – Sustainable Development Strategic Plan (2017/2021)

SRAN – National Aeronautical Registration Service

TCCA – Transport Canada Civil Aviation

TICV – *Transporte Interilhas de Cabo Verde*

USOAP – Universal Safety Oversight Audit Program

WTO – World Tourism Organization

EXECUTIVE SUMMARY

The Transport Sector Reform Project (TSRP) and the Ministry of Tourism and Transport (MTT) have engaged IOS Partners, Inc. to undertake an Assessment of Cape Verde's Civil Aviation Legal Framework.

The present *Final Report* is the third and final deliverable of this project, and it elaborates on a series of recommendations to strengthen the current civil aeronautics regulatory system.

The principal output of this effort consists of a comprehensive list of recommendations to revise/create legal and regulatory provisions that would facilitate air transport development in Cape Verde – which include among other things; amendments to the Aeronautical Code; the creation of Decrees or entirely new CV-CARs; fostering greater cooperation with other countries; and transferring some competences from the CAA to the government.

The areas of analysis include:

- Air Operating Licenses;
- Wet & Dry Lease;
- Aircraft Registration;
- Medical Evacuations;
- Crew Fatigue Management;
- RPAS;
- Helicopters and General Aviation;
- COVID-19 pandemic;
- Air Transport Economic Regulations; and
- Bilateral and Multilateral Agreements.

1. BACKGROUND

The focus of this project is to examine Cape Verde's legislative and regulatory framework with a view to determining whether it delivers on the Government's safety and security commitments without overwhelming or encumbering the sector such that it disincentivizes investment and growth.

This examination could not take place without an appreciation of Cape Verde's civil aviation legal and regulatory structure, and an analysis of how the regulatory program is being delivered.

1.1. CAPE VERDE'S LEGAL AND REGULATORY STRUCTURE OVERVIEW:

The Republic of Cabo Verde is an independent, unitary, and democratic constitutional State with a semi-presidential system of Government, where all power belongs to the people who exercise popular sovereignty through elected representatives.

As a constitutional government, power is separated among legislative, executive, and judicial branches – whereby the Executive power is exercised by the President and the Government, and the Legislative power is vested in both the Government and the National Assembly.

On the legal side, in Cape Verde the international treaties, conventions and agreements, duly approved or ratified by the government (Decrees) or National Assembly (Laws) enter into force upon its publication in the official journal and have prevalence on the internal legislative and normative acts (with infra-constitutional position).

EXECUTIVE BRANCH

The executive is made up of the President, the Prime Minister, and the members of the Cabinet. Cape Verde's President is elected by the citizens every five (5) years and can serve for a maximum of two (2) consecutive terms only. The President is in-charge of the State while the Prime Minister runs the Government. Cape Verde's Prime Minister is nominated by the members of Parliament and subsequently appointed by the President. The Prime Minister may pick the Cabinet members from the National Assembly, and the President appoints them into office.

- Head of State – President

  The President is the Head of State and is elected by direct universal suffrage.

  While there is a system of check and balances between the legislative and the executive powers, the President has some reserved powers which are prescribed in the Constitution, such as veto power, the power to promulgate laws made by the Parliament and the Government, or to even dissolve the Parliament upon hearing of the political parties.

- Head of Government – Prime Minister

  The Government is represented through a Council of Ministers and is headed by the Prime Minister – which is in turn the leader of the winning party.

The Government depends on the indirect support of the Parliament, expressed through a "vote of confidence" or "vote of no-confidence".

The Government possesses legislative powers, and it can issue **Decrees** (laws which approve international agreements of Government competence); **Legislative Decrees** (which are produced with the authorization of the Parliament, i.e.: "Aeronautical Code"); or **Decrees law** (remaining legislative acts , which often complement parliamentary laws.

The Government can also issue administrative rules, such as: **Decree Rule** (which often complements a Decree law); and **Inter-ministerial orders** (regulations developed by one or more Ministers).

The Government does also issue **Resolutions** (when they are none of the above and the law does not foresee a special form).

LEGISLATIVE BRANCH

Cape Verde has one legislative chamber which makes it a unicameral parliamentary system. The National Assembly is made up of seventy-two (72) members who are voted in as representatives for their different constituencies. They are elected to serve for periods of five (5) years. A revision of the constitution in 1992 gave the national assembly the oversight role over the executive arm of government.

- Parliament – National Assembly

Among its main functions, the Parliament is responsible for making **constitutional** and **national laws**, controlling the State's incomes and expenditures, and supervising the correct implementation of the laws and the decisions carried out by the Government.

*Note: It is important to note that **Laws, Legislative Decrees, and Decrees Law (the first made by the Parliament and the latter by the Government) have the same hierarchy** – without prejudice of the subordination of the Decree law to the law which it complements, and the Decree Legislative to the law which gives authorization to the Government to legislate certain matters.*

CIVIL AVIATION TECHNICAL REGULATIONS

The **Law nº 103/VIII/2016, 06/January** establishes the essential requirements to create public autonomous agencies in the context of the national public administration.

On the basis of **Decree Law nº 28/2004, 12/July** amended by **Decree Law nº 31/2009, 7/September**, the Government has established the Civil Aviation Authority (CAA) – *Agência de Aviação Civil* (AAC) – which is responsible for the supervision of all civil aeronautical activities and which Statute has been amended by Decree Law n° 70/2014, 22/December, Decree Law n° 1/2016, 11/January, Decree Law n° 51/2016, 10/October, and Decree Law n° 47/2019, 28/October.

The CAA is an autonomous entity that has legislative power to make technical and economic regulations for civil aviation activities, and it possesses a quasi-judicial function.

It does so in the premises to guarantee the fulfillment of the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs) of the Technical Annexes of the Chicago Convention of 1944 in all matters, and in accordance with the Aeronautical Code.

The CAA can issue, amend, revoke and publish regulations and essential publications in the exercise of its attributions, and all necessary arrangements for the appropriate application of the Aeronautical Code, as well as its successive amendments. These include:

- Normative Acts

These are legal instruments that allow the aeronautical authority to issue guidelines, procedures, and legal requirements with regulatory character. The different normative acts that the CAA produces are issued in accordance with ICAO SARPs, as well as best industry practices, and include:

a. **CV-CARs:** which aim at ensuring the implementation of the SARPs included in the technical annexes of the International Civil Aviation Convention or other ICAO documents, without prejudice to the provisions of legislative acts.
b. **Directives:** which aim to develop CV-CARs or other regulations, which imperatively define specifications, requirements or procedures, prescribed by the aeronautical authority.
c. **Instructions:** which aim at regulating procedures of internal nature for one or more categories of operators or service providers.
d. **Regulations**: which are issued by the aeronautical authority in the performance of its function and on matters within its competence, provided they do not take the form of a CV-CAR, Directive, or Instruction.

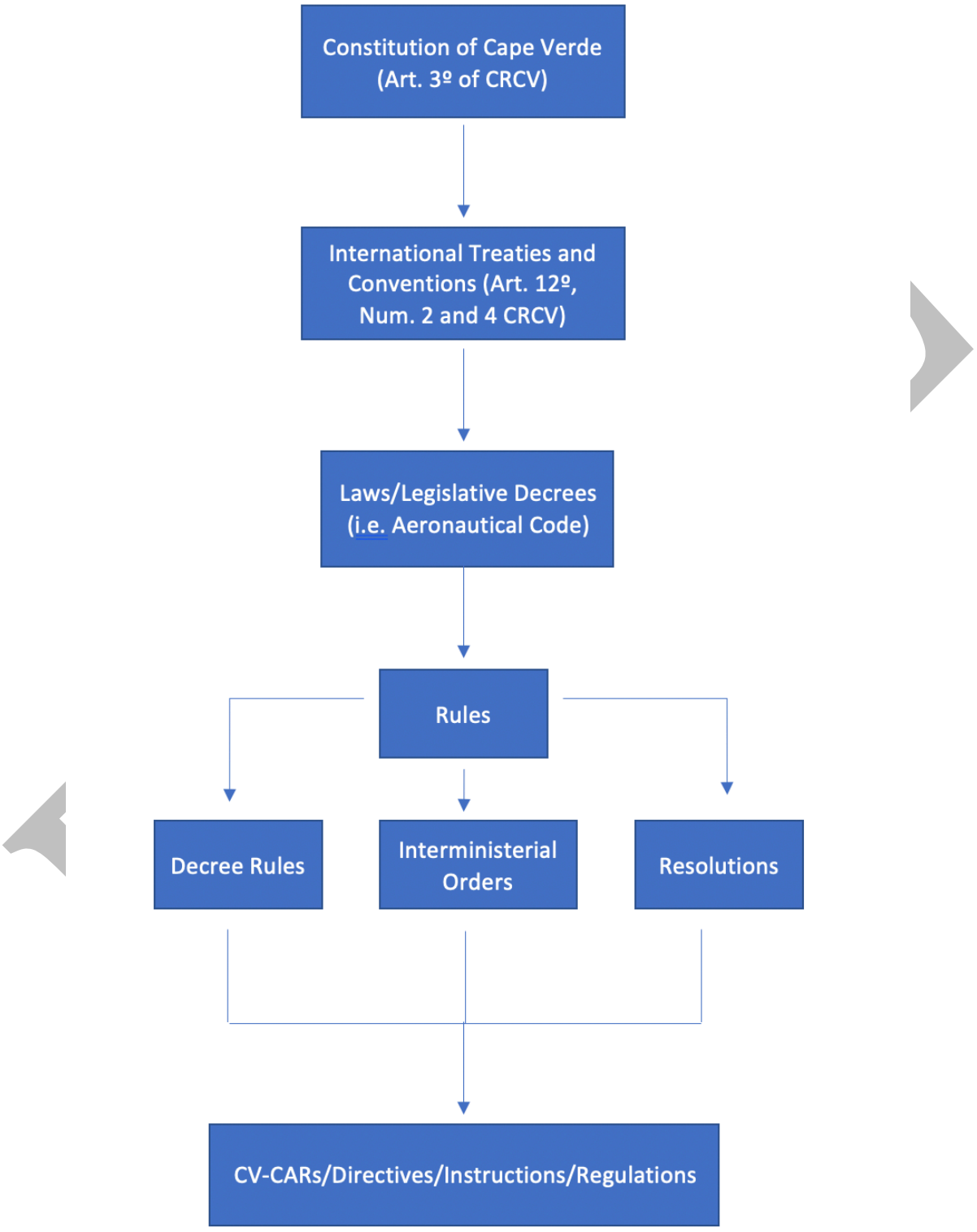
- Aeronautical Publications

The CAA may also issue publications of an explanatory nature, designed to promote compliance with the requirements established in the laws dealing with matters relating to civil aviation activity, in order to provide knowledge on the implementation of acceptable or advisable methods of certain normative requirements, or to disseminate safety alerts. The different publications issued by the CAA include:

a. **Security Alerts:** serve to notify the industry of non-mandatory information regarding safety or potential hazards or problems that may have an impact on civil aviation.
b. **Circulars:** publications of an informative nature, neither obligatory nor urgent, used to communicate to interested parties information on a given matter related or not to a normative act, and may provide an example of acceptable means, but not the only means of demonstrating compliance with the norm.

The below figure summarizes the hierarchy of Cape Verde's legal and regulatory framework:

Figure 1 – Hierarchy Civil Aviation Regulatory Framework



1.2. CAPE VERDE'S REGULATORY PROGRAM DELIVERY:

To perform an analysis of how the regulatory program was being delivered, the IOS' Team travelled to Cape Verde in January 2021 and conducted a stakeholders' consultation to discuss the institutional and regulatory improvements that would increase the capacity to develop the sector, including the identification of any impediments/gaps that need to be addressed in going forward.

The following key stakeholders were consulted:

Through this consultation, IOS found that the manner in which the CAA delivers the regulatory program is of concern and warrants commentary for context.

This exercise was paired with a case-by-case thorough assessment of Cape Verde's civil aviation regulatory instruments to shed light into the main gaps and constraints limiting air transport development.

A few general conclusions could be drawn from IOS' assessment of Cape Verde's civil aviation regulatory structure and the way the regulatory program is being delivered, which revealed the following:

- A **labyrinthine and heavy regulatory system** which is more appropriate for a country with a larger, and more complex aviation sector – and which is at odds with a government bent on simplifying requirements and removing any unnecessary obstacles to private sector development and participation.
- A **regulatory drafting style that often fails to articulate and prescribe** in simple terms mandatory requirements for industry application;
- A **regulator** (CAA) with anachronistic, cumbersome, and overly bureaucratic processes; **which is also rigid** – and at times – unresponsive to the country's and civil aviation operators' challenges; and
- An independent **CAA** that **executes its regulatory program with a high degree of autonomy from government interference** and is **divorced from socio-economic imperatives of the Government**.

2. FINAL RECOMMENDATIONS

Guided by the key findings of the assessment and diagnosis of Cape Verde's civil aviation regulatory framework, including the feedback received from the stakeholders' consultation, the IOS' Team elaborated a series of recommendations to address the main regulatory gaps and constraints to enable air transport development. These recommendations were done on the basis of seeking a balance between the requirements of technical and administrative regulations, on the one hand, and the dynamics of the market and the competitiveness of the business environment, on the other.

The following subsections of this report present a case-by-case list of IOS' recommendations to enhance Cape Verde's civil aviation regulatory framework.

2.1. AIR OPERATING LICENSES

An aircraft operator involved in commercial air transport must be a holder of a valid Air Operator Certificate (AOC) issued by the Civil Aviation Authority (CAA) and an operating license issued by a competent licensing authority, which may or not be the aeronautical authority.

In the case of Cape Verde, **Regulatory Decree No.02/2005, 11/April** is the legal tool that the CAA uses to regulate the granting of air operating license. This Decree is a copy of the European Regulation (CE) No. 1008/2008, which is applicable to all member states of the European Union (EU), which are regulated both by both, the national authority and the European Aviation Safety Agency (EASA) for the purpose of creating a truly integrated and uniform system to regulate civil aviation safety and environmental protection. This system is supposed to facilitate the free movement of goods, people and services; promote cost-effectiveness in certification and regulatory processes, and community standards within the European space.

It must be noted that the size and complexity of civil aviation in Cape Verde cannot be compared to the European – therefore, EASA regulations can serve as guidance, but they must be adapted according to the needs of the country as opposed to adopted in its entirety.

The following is a list of recommendations to enhance the rules, conditions, and mechanisms for contracting/operating concessions in air transport services in Cape Verde, based on best international practices observed in Malaysia and South Africa:

Recommendation #1: *Separate the responsibility for regulating economic and commercial matters related to civil aviation in the country, including air operating licenses.*

Purpose: The objective is to promote a commercially viable, consumer-oriented, and resilient civil aviation industry which supports the nation's economic growth. It is crucial for the country's economic development that the government is more involved in drafting regulations that enhance the expansion of civil aviation in Cape Verde. The area of air transport economic regulations is not audited by ICAO and therefore it does not have a dedicated CV-CAR, which leaves room for the introduction of policies established by the government in alignment with the goals for the development of the civil aviation sector. There are three alternative approaches that include:

1. Include air transportation among the sectors regulated by the *Agência Reguladora Multissetorial da Economia* (ARDE), currently responsible for the economic regulation of most public services in Cape Verde.
2. Create an independent Cape Verde Aviation Commission as an entity that regulates economic and commercial matters related to civil aviation in the country, including both public and private sector service providers.

3. Create a unit ascribed to the Ministry of Tourism and Transportation that carries out this function.

Each of these alternatives are analyzed in greater detail in Section 2.9 of this report on Economic Regulations.

Recommendation #2: *The CAA should acquire a digital system for processing applications for the issuance and renewal of operating licenses.*

Purpose: The manual paper-based application process is long, bureaucratic, and tedious. The applicant is required to obtain and fill a form, attach associated documents, and finally present the file to the CAA for manual processing. This system has already been used by countries such as Uganda, Singapore, UK, among others.

Form: Purchase an e- Air Service Licensing system portal which can be accessed through a website allow the following benefits:

a. pass-through check and interactions with other government agencies for applicant verification;
b. improving service delivery and cutting costs on the operators as compared to the old system of manual application and physical handing of documents; and
c. applications can be easily tracked from the moment of submission to final approval.

Recommendation #3: *Reform Regulatory Decree No.02/2005, 11/April in order to change the validity term of the operating licenses.*

Purpose: Operating licenses are issued for first time for a one (1) year period, being renewable for periods of five (5) years in Cape Verde. This timeframe is not an ICAO recommendation, and countries such as South Africa have decided to remove the validity period of the operating license certificate. This measure will allow financial and human resources' relief to airlines, thus ensuring the continuity of operations and avoiding having to comply with the 60 days for the renewal of the air operating license certificate – as it is the case for the current process in Cape Verde.

Form: New Law of the Government, amending the Regulatory Decree Article 6 (1) as follow:

"The exploration licenses granted by the first time are valid for one year from the date of issue, after this period the issued license shall be valid for an indefinite period as long as the conditions required by the present regulation are met."

2.2. WET & DRY LEASE

The rapid evolution of global aircraft leasing operations – both wet and dry – has increased the responsibilities of all parties. In the need for safe operations of leased aircrafts ICAO Member States and the aviation industry must keep up with established international requirements and the complexity of safety oversight obligations by all participants.

The practice of leasing aircraft with or without crew has come into wide usage, and many of these leases involve aircraft owned by individuals or companies which are registered in one State and leased to operators of another State. Unless suitable arrangements are made between the concerned States, a lease may create complex legal, safety, enforcement, and practical issues for both the State of Registry and/or the State of the Operator. Questions and conflicts may arise concerning the State

which is responsible for the safe operation and airworthiness of the aircraft, and the State which regulation is applicable.

It has been a frequent practice in Cape Verde to resort to the use of Wet and Dry lease for the operation of aircrafts. These matters are regulated through both **CV-CAR 9.B.310, 6/August** and ***Diretiva 001/DSV/2015, 6/August*** – which, as highlighted in the Progress Report, do not meet the goals to boost civil aviation and economic growth for the country.

The following is a list of recommendations to ease the issuance and extend the duration of wet and dry lease, based on best international practices observed in the Seychelles, Maldives, Mauritius, and Singapore.

Recommendation #1: *Amend CV-CAR 9.B.310 (on lease agreements) in order to extend the lease period and explore prospective markets.*

Purpose: The cases of replacement and temporary reinforcement of the fleet, which are found in CV CAR 9.B.310, do not satisfy the country's demand. This regulation does not allow operators to explore new routes, nor it facilitates airlines to start new operations or use a different type of aircraft, among others.

Form: CV-CAR issued by the CAA, amending the CV-CAR 9.B.310 as follow:

1. It is advisable to extend the leasing period referenced in CV-CAR 9.B.310 (C)(1)(2)(3)(4): Wet lease of foreign registered aircrafts will be considered for a maximum period of one (1) year only. Approval is renewable for further periods of up to one (1) year, provided that appropriate safety standards are met, and that the Cape Verde AOC holder can demonstrate within reason for supply their necessities.
2. It is advisable to introduce new scenarios that may be applicable for long term lease contracts such as:
   a. Unavailability or limited availability of aircraft for a Cape Verde operator which has just started operations (e.g.: delivery delays; initial lease purchase condition by specific financial, manufacturing, or other requirements).
   b. A Cape Verde operator with no experience on a certain type of aircraft who wishes to carry out a market feasibility study.
   c. To obtain experience from another operator, especially when operating a new airplane to gain technical knowledge on the new aircraft type being introduced to the fleet.
   d. Any other ways that the operator proposes to seek lease as an interim temporary measure and acceptable to the CAA such as performance limited aircraft. This lease has an approval duration of up to seven (7) months with the possibility of an extension for a further seven (7) months. No further extensions should then permitted.

Recommendation #2: *Amend Diretiva 001/DSV/2015 and introduce new guidance to assist the CAA in the evaluation of long-term leasing contracts in order to comply with operational safety measures.*

Purpose: With the extension of the wet leasing period, safety measures and precautions need to be guaranteed during the evaluation of the referred contract.

Form: Amend or elaborate a new Directive as follow:

1. Wet lease policies and arrangements. It is recommended to create a guidance describing the steps for the approval of long-term lease contract such as;
    a. The Authority shall not approve an agreement for a wet lease to a Cape Verde AOC holder unless safety standards equivalent to those required by the Cape Verde AOC holder are met. The following paragraphs indicate how the Authority will determine the equivalence of safety standards:
        - Where the Authority already possess sufficient information about the lessor and the level of supervision exercised by the lessor's regulatory authority to know that equivalent standards are met, it may be in a position to issue the Approval without additional work. Similarly, where it has sufficient knowledge that equivalent safety standards are not met, it will refuse an Approval without additional work.
        - Where the Authority's knowledge of the lessor and/or the lessor's regulatory authority is incomplete or not previously documented, the Authority will, before granting an Approval, carry out an Equivalent Safety Assessment (ESA) to assure itself that equivalent safety standards are met by the lessor. This cost shall be met by the Cape Verde AOC holder (lessee).
        - The framework ESA, in addition to the application, shall include a pre-audit questionnaire to be completed by the Cape Verde AOC holder in collaboration with the lessor and the lessor's regulatory authority. Following the receipt of the application, pre-audit questionnaire, and supporting documents, the Authority will conduct a desktop review prior to an ESA visit. The ESA visit will normally be for a period of 4-5 days and will include members from the Flight Operations and the Airworthiness Inspectorate. Should the application also include provision for the carriage of Dangerous Goods, the Authority may additionally include a Dangerous Goods Inspector. The visit on the first and last day will usually be to the lessor's regulatory authority and the remainder days to the lessor.
        - Where it has been established that an ESA visit is required as part of the assessment, the Authority may give consideration to granting an interim 10-week Approval thereby allowing the lease to commence before the audit is carried out. This interim Approval will not be granted where the Authority has no knowledge of the lessor or of the lessor's regulatory authority or such knowledge as it has suggests that equivalent safety standards are not met. Any continuation of the lease beyond ten (10) weeks will require the Authority's audit to determine that safety standards equivalent to Cape Verde national regulations and technical standards are met. Moreover, any interim Approval given for the 10-week lease will be revoked if, during those ten (10) weeks the audit reveals that equivalent safety standards are not being met by the lessor or the level of supervision exercised by the lessor's regulatory authority is deemed inadequate.
        - Once the determination has been made by the Authority that an Approval may be conveyed, the Approval will be valid for a maximum period of one year from the commencement of the lease. Should there subsequently be an application to extend the lease approval period, the Authority will give due consideration to continued validity and applicability of the criteria outlined in the new scenarios for long term lease, but may require that the lessor be re-audited, at the Cape Verde AOC holder's expense, to verify that equivalent safety standards are being maintained.
        - Where an applicant wishes to wet lease an aircraft for a period of ten (10) weeks or less, the Authority may grant an Approval without an audit for the duration of the lease, provided that the safety standards of the lessor are comparable to those set

by Cape Verde national regulations and technical standards. This provision will facilitate the one-off short lease, but it cannot be used by one applicant or a succession of applicants for a series of short leases. In this respect, the 10-week period starts from the first day of the initial approval and ends on the seventieth day thereafter.

- In view of the ESA process, Cape Verde AOC holders intending on utilizing such leasing mechanisms to cater for repeated short-term needs, such as unavailability of aircraft due to long term maintenance activity, should give due consideration to identifying one or two lessor's that have already undergone such assessments.

Observation: Cape Verde's **Decree Law No. 23/2018, 14/May** provides for the recognition and acceptance of transfer agreements made by third party States, pursuant to Article 83 bis of the Chicago Convention, as well as it defines the procedure for applying transfer agreements of functions and obligations of the State of registration.

Additional considerations for dry lease-in and wet lease-in operations: It should be noted that the fundamental premise of **CV-CAR 9** and that of the Chicago Convention is that aircrafts should be registered in the State responsible for issuing the AOC. This regulation ensures that the national civil aviation authority is able to exercise his jurisdiction as the State of Registry and the State of the Operator. The various forms of leases are intended and shall be viewed as controlled mechanism for *temporary alleviation* where it can be demonstrated within reason that such leases are required. Under no circumstances shall such leases be considered for initial applicants of an AOC, or subsequent continuous reliance based entirely on the premise of such leases being done when an operator does not qualify for an AOC, or that the discharge of responsibilities of the State or Registry and/or the State of Operator are diminished.

In the case of dry lease and wet lease applications, the operator shall perform a through due diligence process to understand and ensure meeting the lessor's safety regulatory. This shall include ensuring that: i) the Authority or the State does not have any significant safety concerns raised by ICAO as part of the USOAP (Universal Safety Oversight Audit Program); ii) the lessor or the State are not featured on any black list of the Federal Aviation Administration (FAA) or EU; iii) the lessor is not in possession of exemptions to local regulations in contravention to ICAO Annex 6, or that the State has not filled differences to ICAO Annex 6 or 8 critical standards.

Recommendation #3: *Amend Diretiva 001/DSV/2015 with the purpose of introducing a new definition of short-term leasing and to reduce and propose the documents required for short-term leasing.*

Purpose: In accordance with *Diretiva 001/DSV/2015*, prior approval of lease contracts may be waived in the case of short-term contracts, as long as the lessee notifies the CAA of the aircraft operation within a maximum period of twelve (12) hours from the start of the same, and that provided the requirements for contract approval are equal as for a planned lease. This type of contract arises in an AOG (Aircraft on Ground) situation and often lasts for a few days, so the documents necessary for its approval cannot have the same requirements as a scheduled leasing contract.

Form: Amend the *Diretiva 001/DSV/2015* as follow:

1. Definition of Short-term lease. It is advisable to modify the definition of short-term lease aircraft provided in paragraph 3 (*Definições*): "*A short-term lease is normally for an urgent and immediate unplanned event such as to cover an Aircraft on Ground (AOG). A short-term lease which is equated to an emergency leasing shall be defined as a lease for no longer than five (5) consecutive days. The operator may automatically use this provision without prior approval from the CAA, however, the CAA shall be immediately notified of the lease".*
2. Required documents. Considering the short duration of the lease, it is advisable to request at least the following valid documents for the approval of a short-term lease contract: i). a copy of his Air Operator Certificate; ii). a copy of his Operations Specifications; iii). A copy of the aircraft registration certificate; iv). a copy of the aircraft airworthiness certificate; v). a copy of the radio communication station license; vi). a copy of the aircraft noise certificate; vii). a copy of the aircraft insurance; viii). a copy of crew licenses; and ix). the wet lease agreement and the maintenance agreement.

Recommendation #4: *Amend Diretiva 001/DSV/2015 in order to stipulate a real timeframe for the conclusion of the dry lease process.*

Purpose: From an operational standpoint, dry lease of an aircraft by a Cape Verde AOC holder should not represent a significant problem. Operational control of any dry leased aircraft rests with the operator lessee and should cover the key AOC related responsibilities. The dry lease contract, as found in Directive 001/DSV/2015, it has become more time-consuming over the years due to the associated delivery and redelivery processes, due to the fact that there is no determined timeframe to complete the process.

Form: Amend *Diretiva 001/DSV/2015* as follow:

1. Establish a timeline of sixty (60) days for the completion of the Dry leasing processes by the Cape Verde AOC holder before the start of the operation of a foreign registered aircraft.
2. Define timeline for the approval decision to be made. Dry leasing of a foreign registered aircraft by a Cape Verde AOC holder can require, at least thirty (30) working days for aircraft of the same make, model, and series; and at least forty-five (45) working days for an aircraft of a make, model and series that has not previously been operated by the Cape Verde operator.

2.3. AIRCRAFT REGISTRATION

In accordance with Annex 7, the nationality mark is selected by States from the series of nationality symbols included in the radio call signs of the State of Registry. Once the nationality mark is selected, the State notifies ICAO, and the registration mark is assigned by the State of Registry. This mark is comprised of letters, numbers, or a combination of both.

As mentioned in the Progress Report, one of the greatest difficulties in addressing the issue of aircraft registration is the non-disassociation between **CV-CAR 4, 6/August/2015** (Aircraft Registration)

and (Airworthiness), as the CAA insists on maintaining this interdependence between one regulation and the other – which should be noted, it is not a recommendation of the ICAO Annex 7.

In most countries – including Singapore and Maldives – the registration process is separated from the requirements to gain a Certificate of Airworthiness, and new owners are reminded that once they become the owner of Singapore or Maldives Registered aircraft, they are now responsible for ensuring that the aircraft is fully maintained and operated in line with the requirements of the Certificate of Airworthiness issued by the country of register.

The following is a list of recommendations to ease aircraft registration, based on best international practices observed in Singapore and Maldives, among other counties:

Recommendation #1: *Amend the CV-CAR 4.B.105(b)(3) to allow the registration of aircraft without the condition that the aircraft needs to be eligible for the issuance of an airworthiness certificate.*

Purpose: the registration of an aircraft does not permit an aircraft to fly without a valid Certificate of Airworthiness.

Form: Amend CV-CAR 4.B.105 (B)(3) as follow:

1. It is advisable to remove in the above referenced regulation the requirement to qualify for the issuance of the airworthiness certificate to allow persons/owners to register their aircrafts in the National Aeronautical Registration Service (SRAN).
2. As mentioned previously – and although it is not a recommendation of ICAO Annex 7, nor an international practice to condition the attribution of the certificate of registration through the eligibility condition of the certificate of airworthiness – it is advisable that the CAA at least accepts a valid certificate of airworthiness of a member state of ICAO as a condition for eligibility.

Recommendation #2: *Amend the CV-CAR 5.B.115.C in order to allow the recognition of Brazil airworthiness code.*

Purpose: Brazil-based Embraer was the fourth largest aircraft manufacturer in the world behind Airbus, Boeing, and Bombardier Aerospace. Brazil's Embraer is at the forefront of global aviation technology, and its pioneering spirit and commitment to innovation and excellence have enabled it to become one of the world's leading aircraft manufacturers building jets for the commercial, executive, and military markets. Despite of this, Cape Verde does not recognize the Brazilian airworthiness code and consequently, it does not accept the type certificate neither it allows the registration of an aircraft manufactured in Brazil.

Observation: Recognized Airworthiness Code means "*standards relating to the design, materials, construction, equipment, performance and maintenance of aircraft or aircraft component issued by the States of Design*."

Type Certificate means "*a document issued by a Contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness code (requirements) of that State*".

Form: Amend CV-CAR 5.B.115.C as follow:

1. Introduce new paragraph (c)(4). It is advisable to introduce the following on paragraph (C)(4), "*Federative Republic of Brazil*".

Recommendation #3: *Amend CV-CAR 4.B.145 in order to allow the owner of the aircraft to cancel the registration certificate.*

Purpose: The cancellation of registration provided for in CV-CAR 4 is done automatically by the aeronautical authority.

Form: Amend CV-CAR 4.B.145 as follow:

1. Introduce new paragraph. In order to enable the owner of the aircraft to cancel its registration certificate and similar to what happens in the Maldives, it is recommended to include a "*Notification for Cancellation of a Certificate of Registration*" specifying the following:
   a. Notification for cancellation of a Certificate of Registration shall be made by the owner of the aircraft;
   b. An affidavit from the owner, duly authenticated by a notary confirming his ownership together with the statement that he has sold/transferred his aircraft to the new owner and has received the sale proceeds in full (if applicable); and
   c. Notification of cancellation of an aircraft registration by the Authority to a foreign authority will only be made if requested by the owner.

Recommendation #4: *Perform a crosscheck between CT-33-001 and CV-CAR 4 in order to align their procedures.*

Purpose: CT-33-001 was issued in 2009 and CV CAR-4 was produced in 2015.

Form: Issue a new Technical Circular in conformity with CV-CAR 4.

2.4. MEDICAL EVACUATIONS

As mentioned in the Progress Report, Cape Verde neither possesses a legal framework regulating medical evacuations (MEDEVAC), nor the domestic airline (TICV) is properly equipped to carry out such a type of operations.

IOS' assessment on standards and best international practices indicates that there is no dedicated ICAO Annex related to MEDEVAC flights/operations of aircraft. ICAO regards them as no different than any operation contemplated under Annex 6 "Operation of Aircraft Part I – Airplanes", or "Part II –Helicopters". Member States are required to ensure air crew are certified and qualified, the aircrafts are maintained in an airworthy condition, and that the operator is certified and managerially competent. The focus is aeronautical and not on the type of service i.e., air ambulance.

With the exception of Helicopter Emergency Medical Services (HEM or HEMS) of Helicopter Air Ambulance (HAA)[1], Transport Canada Civil Aviation (TCCA)[2], the FAA of the United States of America and EASA do not have regulations that address medical evacuation services by airplane. Their approach aligns with that of ICAO outlined above.

In Canada, the USA and the EU, medical evacuation flight services or air ambulance services are a health service that are statutorily enshrined in health not aeronautical laws. In Canada, the delivery of health services is a provincial matter. The Province of Ontario created Ornge (see figure 1), a not-for-profit corporation and registered charity that provides air ambulance and associated ground transportation services for the province of Ontario under the direction of the province's Ministry of Health. It is funded by the Government of Ontario, and it has a fleet of a variety of fixed and rotary-wing aircraft deployed to a number of areas throughout the province to ensure proper evacuation airlift capacity and capability.

Figure 2 – Ornge

The transport of patients for specialized care or tests is done through standing contracts with other air carriers in the province or by charter, as the case dictates.

Ornge is deemed a commercial operator under the federal Canadian Aviation Regulations. Therefore, like any other air operator, it must obtain an air operator certificate from the federal regulator (TCCA) and operate in accordance with the rules related to its certification.

In summary, the Provincial Ministry of Health mandates and supervises the medical service, Transport Canada Civil Aviation regulates the pilots, the aircraft, and the operator (aligned with ICAO). It has no say in how the medical services are to be governed or controlled.

This type of approach is used by many States in the USA and the EU. Many States in the USA favor contracting out rather than owning the means of service. In such cases, States procure services from FAA-certified carriers for the provision of MEDEVAC/air ambulance/HAA services for a number of years with associated performance criteria.

[1] The FAA uses HAA whereas Canada and Europe use HEM or HEMS.
[2] Specific regulations related to HAA/HEMS was in reaction to the high number of fatal accidents amidst increased growth in the industry.

The following is a list of recommendations/options on how to establish an appropriate inter-island medical evacuation system in Cape Verde:

Type of Services

The first question the Government of Cape Verde needs to answer is what kind of service does it want? Does it mean to provide:

- Patient medevac services;
- Patient transfer services;
- Organ transfer services;
- Patient transport services; or
- Any combination of the above.

Options

Once the decision on the levels of medical evacuation services is made, the Cape Verdean government can turn its attention on the method of delivery. Five (5) options are provided below. Hybrids are equally possible.

Recommendation #1: *Keep Status Quo*

Description	Pros (not exhaustive)	Cons (not exhaustive)
Continue using TICV equipped with 1 stretcher.	• Current practice - known • Known operator with track record • Demonstrated capability • Serves the archipelago	• Will incur significant delays for passengers and patients • Delays in responding due to repositioning may lead to the death of a patient • There may be issues related to emergency egress (demonstration with stretcher in place) • There may be issues with oxygen deployment to the stretcher patient in terms of lanyard length position, etc. • There may be issues in use of mattresses or other materials used in terms of meeting aviation flammability requirements; • There may be issues related to water egress; etc.

Recommendation #2: *Upgraded Status Quo*

Description	Pros (not exhaustive)	Cons (not exhaustive)
Supply or require TICV to purchase stretchers for every airport location it serves	• Will reduce delay in responding somewhat • May reduce likelihood of patient death	• Increase costs (if TICV purchase stretchers, expense will eventually be reflected in the ticket price); • Increase costs to have technicians at each base for a "just in case" scenario". • Will incur delays for time to reconfigure aircraft though less than above • All other previous cons apply

Recommendation #3: *Contract Out*

Description	Pros (not exhaustive)	Cons (not exhaustive)
Contract the services from an outside firm currently involved in the industry who holds a valid Operating Certificate from a reputable CAA under the auspices of a *83 bis* solution or other fast track solution the modalities of which to be enabled by the CAA.	• Cape Verde gets a dedicated medical evacuation service it needs more quickly than if it endeavored to do it itself; • No or less delays in responding; • Likely reduce likelihood of deaths.	Likely costlier than the above.

Recommendation #4: *Cape Verde to Own and Operate (Ornge Model)*

Description	Pros (not exhaustive)	Cons (not exhaustive)
The Cape Verdean government purchases or leases dedicated aircraft, sets up a firm to manage the operation in a similar way as Ornge.	• Cape Verde government has a say in all aspects of the operation of the service • All of the benefits in 3 above.	Cost.

Recommendation #4: *Provide MEDEVAC Configured Aircraft to TICV to Operate on Behalf of the State*

Description	Pros (not exhaustive)	Cons (not exhaustive)
The Cape Verdean government purchases or leases dedicated aircraft, gets TICV to manage the operation.	• The benefits of all of the above the above • Provide entry level pilot/aircrew positions for future deployment to other aircraft/operations.	Cost

Depending on the desired level of service, many of the above solutions may require the hiring of or the training and deployment of medical staff as in-flight EMS specialists. Also, decision makers may want to consider whether any services are to be international. This will have an impact on the type of aircraft chosen.

Unless the government of Cape Verde contracts a dedicated service (Option 3) under some emergency powers (likely in the form of a Presidential Decree), between now and the time the Cape Verdean Government decides what it wants to do and implements the desired solution, the current medevac situation will obviously continue to operate. To bridge the gap, the Government could consider:

- Educating the Cape Verdean population on the current situation and explain what it can expect;
- Purchase or rent stretchers and place them at all locations served by TICV;
- Instruct the CAA to provide training and certify more personnel at TICV to perform the seats/stretcher reconfiguration;
- Provide TICV with complete dispensation from any potential lawsuit that may face as a result of a death while attempting to perform, to the best of its abilities, a medical evacuation flight.

2.5. CREW FATIGUE MANAGEMENT

Cape Verde defines and regulates the working time of flight crew, particularly in regard to flight and rest service time limits through **Decree Law No. 66/2009, 28/November**. This decree also grants the CAA power to decide autonomously on some practices that determine the Flight Duty Period (FDP) and Flight Time Limitation (FTL) of the crew, which are accepted by EASA and the FAA.

As mentioned in the Progress Report, this legal instrument would likely garner ICAO approval but the manner in which the fatigue requirements are conveyed leave much to be desired.

Inasmuch as ICAO supports a prescriptive, a performance-based or a hybrid of both in the management of fatigue, IOS does not recommend proceeding with last two. The civil aviation situation in Cape Verde is such that a Fatigue Risk Management (FRM) approach would prove costly. Both options require the development and implementation of a FRM program. A FRM program is complex to design and implement and would require the services of highly qualified experts to evaluate fatigue risk management proposals. It is highly unlikely the CAA will have the scientific background or access to individuals with such background to make the necessary assessment.

IOS recommendation to introduce best crew management practices in order to improve the airlines' competitiveness, while safeguarding crew fatigue management, is to refresh the **Decree Law No. 66/2009, 29/December** in its entirety; so that it be rendered into a Civil Aviation Regulation (CV-CAR) and incorporated into the regulations germane to airline/air operations. The following are the most important considerations in refreshing this Decree-Law:

Recommendation #1: *In terms of principles, the CAA needs to prescribe, in as unequivocal terms and as simply as possible, what it wants airlines to do. It should define the envelop in which all operators need to see themselves with a view to crafting a fatigue management approach that makes sense for their operational contexts. The CAA should refrain from passing on this responsibility to the operator.*

Recommendation #2: *In crafting the regulation, the CAA should endeavor to simplify the structure and examine the use of tables and other methods to convey parameters.*

Recommendation #3: *The focus of the revision should be placed strictly on matters related to crew fatigue based on the latest science. IOS Recommends using the Canadian Aviation Fatigue Regulations (Annex A) as an exemplar and starting point for consultations with Cape Verde industry stakeholders. These regulations were promulgated at the beginning of 2021, and crafted based on the latest science, which can be easily applied to a variety of operations and conveys the intent clearly and in an understandable and useable way. This way both industry and the CAA could proceed from a common starting point.*

2.6. REMOTELY PILOTED AIRCRAFT SYSTEMS

As noted in the Progress Report, drone operations are becoming increasingly important, reason why having a regulatory and operational framework in place will help to drive many areas of Cape Verde's economy, technology, and labor.

The drone industry is made up of multiple players (owners, operators, marketers, technicians, etc.). Based on the wide range of possibilities, capabilities, and benefits that RPAS represent, the CAA has developed and submitted for public consultation a draft of standards and procedures to regulate and promote their use[3].

In 2010, ICAO issued circulars, documents, and revisions to its Annexes, recognizing Remotely Piloted Aircraft Systems (RAPS or drones) as new components of the aeronautical system that must be treated as such, in all its aspects. The objective was to achieve a regulatory framework and recommend methods, supported by procedures for integrated navigation services and guidance materials to achieve safe, harmonized, and comparable manned operations.

The Progress Report also highlighted the importance of the registration aspects, rights-guarantees, and public policies for the promotion of this industry. It also emphasized on the importance for Cape Verde to create a legal and regulatory framework, not only considering commercial, economic, and technical aspects, but also the integration of RPAS in airspace, telecommunications, and operational safety.

Note: the term drone used in this report refers the ICAO definition of "Remoted Pilots Aerial Systems" (RPAS), and not to the one contained on ANNEX XIII of the Chicago Convention.

The following is a list of legal recommendations and proposals for a regulatory framework in RPAS.

[3] CAA Drone Regulation - Public Consultation. https://aac.cv/documentos/regulamento-drones-aac-consulta-publica-1674

Legal Recommendation #1: *Reform the Primary Aviation Law to be able to design a modern and effective RPAS' Regulations.*

Form: New Law of the National Assembly, (or by Government, upon legislative authorization by the National Assembly, through a Decree Law), amending the Aeronautical Code of Cape Verde, as follows:

1. Aircraft. It is advisable to modify the definition of aircraft provided in the General Dispositions of Article 47°, Concept: "*Aircraft are apparatuses or machines capable of circulating through the airspace, using the reactions of the air and which are capable of transporting people or things, with the exception of hovercrafts*". Here it also advisable to incorporate the notion of "*manned*" and "*unmanned*".
2. Pilot on board. It is advisable to amend Article 97, concerning the Designation of Aircraft Commander, which states "*1. All aircraft must have a pilot on board who is qualified to fly it and is invested with the functions of commander.*" Here it is advisable to eliminate the notion of "*on board*".
3. Accident and incident. It is recommended to update TITLE XII, of Cape Verde's Aeronautical Code, called "*Aviation accident and incident investigation*" in its article 265° and following. This update should contemplate the amendments to Annex XIII to the International Civil Aviation Convention where the obligation to investigate manned and unmanned aircraft accidents is clearly reflected.

Legal Recommendation #2: *Enact a RPAS Regulation*

Form: New Law or Legislative Decree enacting a Drone Regulation.

1. It is suggested to enact a Decree Law, since the subject to be regulated exceeds the scope of the aeronautical legal system. It is also desirable to differentiate the categories of RPAS between those that are Registered aircrafts from those that are merely only recorded in a database.
2. The entire regulatory corpus of the aeronautical system applies to registered RPAS. Therefore, they are fully ruled by the current Cape Verde aeronautical system.
3. On the contrary, it is desirable that for RPAS which are not registered, a new and separate consolidated regulatory system should be developed. This is to provide more certainty on variable aspects such as data protection, insurance, private property protection, or the different assumptions of multiple source liabilities.

Legal Recommendation #3: *Improve draft Regulation No. 03/AAC/2021 issued by the CAA.*

The draft Regulation No. 03/AAC/2021 submitted by the CAA for public consultation presents several opportunities for improvement and has conceptual shortcomings such as the ones detailed below:

1. It does not apply the Registration regime of the Aeronautical Code, but rather projects a recorded and identification Drone regime. This avoids extending the benefits of the

aeronautical Registration system to certain types of RPAS. This affects the development of the RPAS' industry, which is not covered by all the guarantees of the aeronautical system. The registration determines the jurisdiction and applicable aeronautical law. The proposed is reflected in the most advanced legislations such as the Spanish or French.

2. It seeks to operate RPAS in a segregated airspace, avoiding integration or operation in UTM space. UTM integration is recommended, as recently stated by the industry and the ICAO Expert Panel at the Drones Enable Symposium for those categories of RPAS that, for operational and safety reasons, can be integrated into controlled airspace[4]
3. Article 23 of this draft Regulation related to aerial work is not in accordance with the principles of legal logic. It is advisable to previously assign a registration number to the RPAS that provide this type of work, instead of just listing them in a record.

Ground: The aeronautical activity is systemic. Within the system, the guarantees and certainties that will allow the development of the drone industry are contemplated.

Purpose: The purpose of these recommendations is to, on one hand, increase legal certainty and adapt the Cape Verdean legislation to the international public order in place; and, on the other hand, to seek alignment with the best international practices the most successful regulations in the field. These regulations have been the ground framework for the development of drone design, manufacturing, and operations.

As a matter of exemplification with comparative law, one can find the Commission Implementing Regulation (EU) 2019/947 of 24 May 2019 on rules and procedures applicable to the use of RPAS. Article 14 defines the Registration of UAS operators and certified UAS, and in its paragraph 7 states that "The owner of an unmanned aircraft whose design is subject to certification shall register it. The nationality and registration markings of an RPAS shall be established in accordance with Annex 7 of the International Civil Aviation Organization (ICAO). A UAS operator may not be registered in more than one Member State at a time". Similarly, in Annex 7 to the Chicago Convention the principle of single registration is applied. In national jurisdiction, each State, (such as the case of Spain, France or Germany) directly applies its civil aviation laws and grants registration certificates.

Finally, the aeronautical industry presents a dynamism resulting from technical and technological factors. Therefore, the law must provide a clear response to contain and encourage such evolution.

The listing of regulatory shortcomings and the making of recommendations for changes or amendments to this draft Regulation were made in order to obtain a legal framework that allows the desired development.

Technical Regulatory Recommendations and Proposals

The following is a list of technical considerations for the development of a RPAS' regulatory framework:

[4] https://www.icao.int/Meetings/droneenable4/Documents/Drone2021_VirtualEventDirectory.pdf

Technical Recommendation #1: *Cosmovision. To invite the non-aeronautical sectors interested in the activity (operational and industrial), to participate in the development of operational rules.*

Technical Recommendation #2: *Risk Analysis. To plan the implementation of the RPAS Regulation based on an Operational Risk Analysis.*

Technical Recommendation #3: *Classification. To incorporate the following RPAS classification in order to regulate the particularities of each one, such as the type of license to operate them, fees for licensing and registration, Airworthiness Certificate, and operating authorizations:*

Table 1 – Drone's classification

Condition	Flight type	Max. take-off weight with load	Technical characteristics
• State • Private	• Commercial • Scientific • Security • Recreative	• Class A up to 500gr. • Class B up to 5 kg. • Class C up to 25 kg. • Class D up to 150 kg. • Class E up to 150kg.	• Rotative wings • Fix wings • Captive/tethered

Technical Recommendation #4: *Minimum control level. To establish a control threshold, below which operations do not require authorizations or monitoring.*

Technical Recommendation #5: *Surveillance. To conduct surveillance policy planning by the aviation authority.*

Technical Recommendation #6: *Airspace. To conduct controlled airspace activity insertion planning.*

Technical Recommendation #7: *Regulatory flexibility. To define exceptions to the regulation based on the needs of the public sectors who serve the community.*

Technical Recommendation #8: *Technological sovereignty. To create technical careers to achieve technological sovereignty in operational services, design and manufacturing.*

Technical Recommendation #9: *Access to Financing. To encourage the growth of the industry with flexible and accessible financing tools.*

Technical Recommendation #10: *Expert Aeronautical Authority. To train the Aeronautical Authority's Inspectors in the operation of each type of Drone.*

Technical Recommendation#11: *Certification. To design a certification framework for instruction centers that provide competency-based training through qualified instructors, for each type of drone.*

Technical Recommendation #12: *Airworthiness Office. To create a continuous airworthiness/ Airworthiness Certification Office within the CAA, dedicated to the airworthiness control of regulated minimum risk and regulated acceptable risk operations.*

Technical Recommendation #13: *To allow multi-drone operations with a ground station, under the CAA's approval of risk analysis.*

Recommendation #14: *To not allow fully autonomous operations.*

Technical Recommendation #15: *To allow cargo transport.*

Technical Recommendation #16: *To regulate the rules for RPAS (Drones + ground stations) maintenance under an aeronautical philosophy of airworthiness certificate, for the heaviest categories of RPAS that represent operational risks.*

Technical Recommendation #17: *To issue RPAS Operational Certificate "RPAS-OC", for all those public and private sectors that comply with regulatory requirements and operate under the same risk matrix defined in a permanent manner.*

Technical Recommendation #18: *To issue RPAS Cargo Operational Certificate "RPAS-COC", for all those public and private sectors that comply with regulatory requirements and operate under the same risk matrix defined in a permanent manner.*

Technical Recommendation #19: *To define a "No Drone Zone " policy for state and private operators.*

Technical Recommendation #20: *To define the required positioning warning equipment for those RPAS that share controlled airspace with manned aircraft.*

Grounds

The operation of RPAS involves not only people who are familiar with the operational culture of aviation, but also people who are not, and who generally are not professionals in this field. This means that, in part of the population related to the activity, it is necessary to generate the awareness of operational safety, as a fundamental pillar for the development of the activity. Moreover, from the aeronautical authority point of view, it should be applied an organizational design that allows the correct integration of operation management of RPAS, together with other aviation areas.

In order to meet the needs of these non-aeronautical sectors and to understand their expectations of development in the activity, it is appropriate to provide the participation of this non-professionalized part of the population in the aeronautical field, from the beginning of the drafting of operational regulations. This way, the authority ensures that the regulations are an operational tool generating the impulse of the activity.

Challenges

The technological progress in all aspects related to RPAS' operation generates the challenge of responding to needs and expectations of the population who find endless applications to increase the efficiency of certain operations, reduce operation times, and reduce human risks. That is precisely why it is necessary to regulate operations that encourage not only these types of activities, but also to promote research and development for the growth of the industry. This could be achieved taking measures such as facilitating the use of testing areas for RPAS and their systems, generating didactic

texts, training public and private sectors, and designing and implementing policies and procedures, so that public agencies can exercise the necessary controls, and manage large volume of operators.

Risk Management

In order to achieve a gradual and uninterrupted growth of the sector, it is necessary to establish operational guidelines and requirements for the operators. In this sense, the State should consider the operation of RPAS as a transversal development tools, as long as the risks assumed in the operations are controlled, and public and private sectors find a containment framework for the design and operation of each of the activities – including the support of an authority that acts as guide and not as an impediment to its development.

To this end, it is necessary for Cape Verde to develop and implement a risk management policy that integrates the analysis and planning for the development of RPAS' activity, both in terms of operations, as well as the internal organization of the sectors involved, to pursue an adequate level of operational safety. In the planning task, it is necessary to internally evaluate the repercussions that the proposed regulatory requirements for RPAS' activity would have on the civil aviation program.

In this sense, it is advisable that the operational regulations for RPAS in Cape Verde reflects the procedures, standard practices, and management of conventional aviation, and does not contradict existing aeronautical regulations. In this regard, when the activity reaches the necessary maturity, certain low-risk operations could be integrated into the controlled airspace simultaneously, adopting the use of appropriate technologies.

As a first step, after conducting a risk analysis, the aeronautical authority should implement a regulatory framework for each category of RPAS, taking into account their size, technical and constructive characteristics, use and purpose defined in each case, and the risks involved in each situation.

It should also be noted that in terms of operational safety, such regulations could be designed planning a progressive decrease of the limits/restrictions of the operation. This should be based on the compliance of the standards for each operator and type of operation, and as a result of the verification of management indicators defined in the regulations themselves – in addition to the authority's inspections during the certification process. This will allow the industry to achieve the expected operational efficiency by professionalizing and generating a safety aeronautical culture.

In this context of technical/operational definitions to be implemented by the authority, it is appropriate to define regulatory exceptions for the operations of the public sector, such as police, surveillance, health, firefighting, and search and rescue agencies. In a similar vein, Cape Verde could determine within its regulations activities/operations that could be carried on without requiring a direct permit issued by the regulatory authority.

Lastly, the design of the regulation should contemplate the surveillance, compliance and enforcement of operational safety requirements, financial implications of certifications (e.g. remote pilot licenses, operating certificates) and database management (aircraft markings and registration).

Scope of the Regulation

As a first step, the regulation must determine which RPAS' activities will be covered, and which will be not. This should take into consideration indoor drone operations, tethered drone operations, multi-drone operations with a single ground station, autonomous or non-autonomous (automated) operations, cargo transportation operations, and drone categories based on weight, operational environment, and operational risk (visual vs. non-visual operations) on populated or non-populated areas.

It should be noted that operations considered completely autonomous are those in which once an automated flight is programmed (program of a defined flight path in space for a given time), the pilot at the remote control cannot intervene in it. Therefore, due to the state of maturity of the industry in Cape Verde, it is recommended that drone operating regulations prohibits this type of operation.

In terms of categorization, it is important to highlight that, based on a risk analysis, it is possible to determine that not all drone operations involve high operational risk to airspace users and third parties on the surface, regardless of the size of the drone. In that sense, attempting an exhaustive regulation for a broad "low risk" sector could lead to the authority being overloaded with requests, which would not allow it to regulate effectively and, consequently, this could lead to a greater number of unauthorized operations.

For this reason, Cape Verde should establish and specify strict and predetermined conditions under which these operations will be allowed, without the need to require operational authorizations that would generate an instance of surveillance of such operations by the aeronautical authority.

It is also advisable for Cape Verde to develop a certification policy for commercial and cargo operations, using the airworthiness criteria developed for manned aviation, in terms of operational and airworthiness limitations.

Based on the above, Cape Verde should define a categorization plan to create a regulatory model, depending on the risk involved in the operations.

Risk Categories

a. Low Risk:

When operations are conducted within specified conditions, and a malpractice in the operation does not endanger the safety of self or third parties, they could be carried out without the need for an authorization issued by the regulatory authority and could be limited to the following:

- Daytime operations only, in visual flight conditions.
- At a specified minimum distance from outsiders, buildings, and airfields.
- At a maximum height above ground level.
- In uncontrolled, unrestricted airspace.
- Only for recreational purposes.
- Carried out with RPAS of the lowest weight category.

b. Minimal regulated risk:

One could consider drone operations within this category for:

- Visual operations.
- Carried out with RPAS of low weight and a low payload capacity.

In these cases, certain operational restrictions could be required to protect other airspace users, e.g. altitude restrictions, flying in line of sight either by the pilot in command or remote observer, requiring remote pilots to possess basic aviation knowledge acquired at certified instruction centers by the CAA, and requiring the drone to be subject to simple identification and reporting requirements, especially before entering controlled airspace. In addition, it should be required for operators to have operational insurance in case of incidents or accidents.

c. Regulated Acceptable Risk:

This category of operations could contemplate, for example, visual operations using larger and/or heavier aircraft, with higher payload capacity, and with the potential to cause fatalities or injuries to people on the ground or other airspace users.

In these cases, more stringent regulatory requirements should be required focusing on operational limitations such as establishing restrictions on airspace, altitudes, speed, proximity to airfields, and congested/densely populated areas. Remote pilots could be required to possess basic aviation knowledge and RPAS could be subject to simple identification and reporting requirements.

This category could include beyond line-of-sight operations – if appropriate risk mitigations are considered – in order to operate in more complex environments, such as within controlled airspace, flights over densely populated areas and/or near airfields, as well as cargo transport operations and multiple RPAS operated within the same station These operations would require considerable risk mitigation measures, for example:

- Operators must have an adequate risk management structure in place to ensure safe operations, for which the authority must issue drone operating certificates under these circumstances.
- Issue licenses (operating authorizations as defined by the Aeronautical Code) to remote pilots, for which they should, among other things, have successfully completed practical training, possess knowledge tests, specific medical examinations and meet minimum age requirements.
- RPAS will need to be maintained in a safe flying condition. To this end, they could be subject to maintenance corroboration based on their design features and limitations imposed by the manufacturers themselves, or other airworthiness certifications.
- RPAS could be required to have a registry and a registration certificate that could be issued to the owner.

- This category of operations could be subject to numerous operational rules either visual or out of line of sight.
- Depending on the type of drone and its operational capabilities, the remote pilot may be required to undergo specific training in flight simulators in the same way as required in the manned aviation sector.
- To have an operation insurance in case of incidents or accidents.
- Analyze the robustness of a management software for multi drone operations with the same ground base, which is approved by the manufacturer for such operation.
- Design (operator) and approve (authority) a cargo transport program, from which the flexibility of the operation – as a result of the demonstration of operational safety – allows to expand the spectrum of operation in more populated areas, greater distances and/or greater amount of cargo moved per flight.

Regulation as a State Management Tool

a. Creation of industries

Advances in manufacturing drone technologies and the complete system that make up the operation of RPAS are increasingly complex and robust in terms of reliability.

Furthermore, RPAS in all their categories are made up of different sub-systems that require not only technical assistance, but also professional educational, operational, and design skills that are constantly improving as technology advances and is put at the service of the activity.

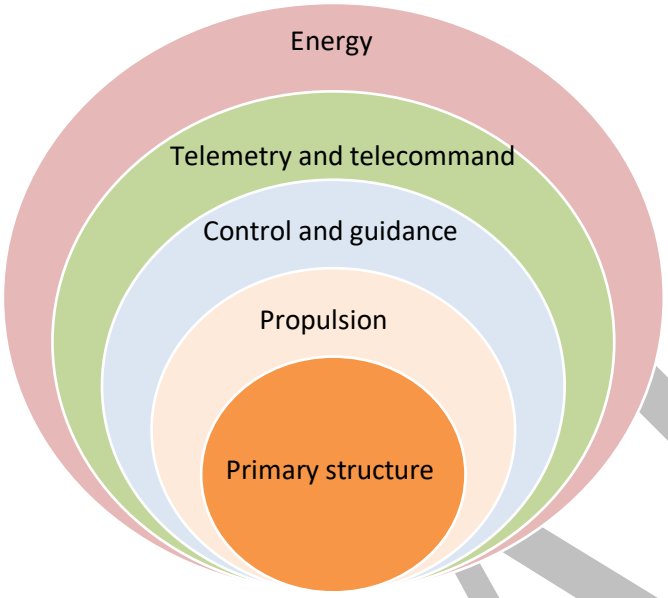
Therefore, it would be appropriate for Cape Verde to develop a training system and industry policies that accompany technological progress.

b. Educational matters:

In an RPAS, both the drone and the ground operating station, require predictive and preventive maintenance interventions, as well as improvements in their performance to optimize the quality of the mission, and the efficiency in terms of operational safety.

Therefore, it is recommended that Cape Verde develops technical career paths where graduates obtain the necessary skills to perform preventive and predictive maintenance of all the sub-systems that make up an RPAS, detailed in figure 3:

Figure 3 – RPAS technical development areas



The areas of consideration should be at least materials and structures, propulsion systems, electronics and control and guidance systems, communications, software development, as well as environmental impact and renewable energies applied to the activity.

These career paths could be transformed into undergraduate or postgraduate university careers, depending on the growth of the industry.

Furthermore, it should be noted that most of the RPAS are made up of RPAS of great autonomy, weight, payload capacity and speed, and are usually operated under particular procedures, approved by the enforcement authority, and out of the line of sight. In most of these cases, maintenance considerations play a fundamental role in ensuring the highest levels of operational safety, for which is key to demonstrate that the airworthiness conditions are appropriate. In a similar vein, during the operational certification process, the required levels of training must be in accordance with the type of RPAS being operated.

Therefore, it is necessary to develop competency-based trainings not only for pilots in command and support crews, but also for instructors of training centers approved by the control authority, and for authority officials (inspectors) involved in the certification processes of competency-based training centers and operators.

c. Productive capacity and employment generation:

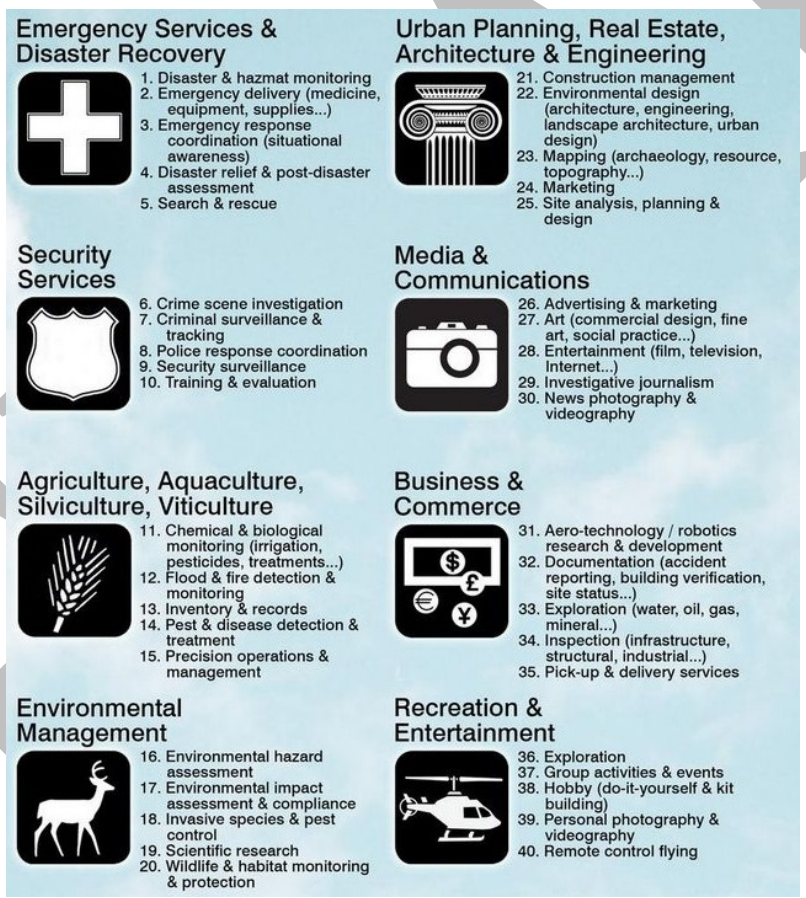
RPAS are currently considered as tools for different productive sectors, being that for each one of them different features are required and, by extension, different configurations of RPAS and radio link systems.

Therefore, a policy that promotes training, research and development in the areas described in figure 3 will be useful for the growth of the system, either from the design and manufacturing of structures of different type of materials (fiberglass, carbon fiber, fabrics, wood, or aluminum alloys and appropriate steels) antennas, electronic control and guidance circuits, autopilots, navigation systems, and sensors of all kinds.

A State policy that promotes industrial development in all areas that make up a RPAS will bring not only technological and industrial sovereignty, but it will also expand the scope of vocational training of the inhabitants of Cape Verde, triggering employment generation and resulting in economic benefits for the country and its inhabitants.

Beyond the generation of employment by having a regulatory framework, the applications of RPAS in the industry will increasingly broad thanks to the diversity of types of RPAS and their technical performance. As an example, the most basic applications can be as follows:

Figure 4 – RPAS' applications



Therefore, having a regulation that allows operations in different sectors while safeguarding the highest safety levels will result in the generation of direct employment in all sectors of society.

d. Exports:

Based on the previous information, Cape Verde could become a reference in terms of technological developments and an exporter of RPAS to the African continent and beyond.

2.7. HELICOPTERS & GENERAL AVIATION

As noted in the Progress Report, Cape Verde's civil aviation stakeholders manifested discontent with some aeronautical policies – in particular, the lack of technical policies within State policies – which could result in difficulties achieving the Sustainable Development Strategic Plan (SDSP) 2017/2021.

The following summarizes the main international instruments and standards, including Cape Verde's existing regulations in the areas of helicopters and General Aviation (GA):

- Cape Verde Aeronautical Code
- Cape Town Treaty on Mobile Equipment and its Aeronautical Protocol
- CV-CAR 5 Aeronavegabilidade. Item 5.d.210 Inspecções de aeronaves utilizadas na Aviação Geral
- *Projecto de Regulamento n° 01/AAC/ 2021 Aviação geral - voos privados internos - Consulta Publica 2021-03-25*: https://www.aac.cv/documentos/aviacao-geral-voos-privados-internos-consulta-publica-1672
- *Projecto de Regulamento n° 02/AAC/ 2021 Regulamento AAC Trabalho Aéreo 2021-03-25* https://www.aac.cv/documentos/regulamento-aac-trabalho-aereo-consulta-publica-1673

The flexibility and stimulus measures adopted in the different States to boost the helicopter and GA industry can be summarized in as follows:

Table 2 – Stimulus measures adopted by States to boost GA

Regulatory	Areas
• Industry compliant Civil Aviation regulations; • Firm and ratification of the 1948 Geneva Convention on Aircraft Reconnaissance; • Aeronautic Regulation reform.	• Tourism • Manufacturing • Transport • Aerial work • Infrastructure (heliports/Fixed Based Operator) • Executive flights • Charters • Medical flights

The following is a list of recommendations and proposals to develop a regulatory framework in the area of helicopters and GA:

Recommendation #1: *Reform the Primary Aviation Law (Aeronautical Code) to design a modern and effective GA (helicopter/airplane) regulation in Cape Verde.*

Form: New Legislative Decree by the Government , upon authorization of the National Assembly, amending the Aeronautical Code of Cape Verde:

1. New aeronautical contracts should be included to improve and complement the classic utilization contracts, such as Security Agreements or Aeronautical Trusts, among others. IOS' assessment noted that Aeronautical Code has both, defaults and omissions deficits:
    a. it limits Wet Lease possibilities according to current industry parameters;
    b. it imposes registrations of certain types of charters, thus creating unnecessary bureaucracy; and
    c. defines "*interchange*" in the same way as in the 50's, omitting to consider that global interchange contracts (helicopter/airplane) have taken other forms.
2. 1.b. Art. 83 bis of the Chicago Convention of 1944. The applicability of 83 bis of the 1944 Chicago Convention is considered rigid according to article 121 of the Aeronautical Code.

It is recommended that its application should be render more flexible, for example, by means of double vigilance agreements accompanying a reform.

Ground: The legal security of the local public order is indispensable for the development of this industry. This security is strengthened through an effective primary law and regulations that respond to modern legal criteria, reflecting the reality of the industry.

Purpose: To achieve a friendly local public order for the development of the GA industry (helicopter/ airplane), promoting the operation of modern equipment that develops Fixed Base Operator (FBO), aerial work, pax transportation, heliport construction, cargo transportation and tourism development. This, in line with the strengthening of civil aviation, it is one of the objectives of the SDSP.

Recommendation #2: *Redesign the regulatory matrix of international conventions to favor the development of the GA industry (helicopter/ airplane) in Cape Verde, namely the Geneva Treaty on the Recognition of Rights over Aircraft of 1948, and Cape Town Convention on Warranties for Mobile Equipment and its Aeronautical Protocol.*

Form:

1. New Act of the National Assembly, approving and ratifying the Geneva Treaty on the Recognition of Rights over Aircraft of 1948.
    a. The ratification of this international treaty will allow to broaden the threshold or basis of rights to be recognized and may be a source for the incorporation of Anglo-Saxon legal institutions such as the "mortgage" which, at present, are alien to recognition. This treaty can also be applied to all types of equipment (helicopters/airplane) with no limit on maximum take-off weight or number of passengers – as it is the case in the Cape Town Treaty – and therefore benefit certain tourism activities and the development of private aviation.
2. New Act of National Assembly or Decree Law of the Government (as appropriate) - regulating the options of the Cape Town Convention on Mobile Equipment Warranties and its Aeronautical Protocol.
    a. Although Cape Verde acceded to the treaty, it deposited declarations on Articles 39 (1) (a), 40, 53 and 54 (2). These actions by Cape Verde limit the benefits of accession and it means a loss of opportunities that could be resolved by the country's CAA decision. It is recommended to review these declarations and harmonized them with the ICAO Aviation Working Group (AWG), composed of industry stakeholders.

b. It is suggested that Cape Verde takes active participation in the AWG, which would allow for the renewal of the Compliance Index Annual Update and to respond to industry changes.

Ground: The legal certainty of the international order is key to the operation of this global industry. From this point on, Cape Verde will be offering vital tools to the industry that will be able to boost economic development.

Purpose: This recommendation is intended to have an impact on the short, medium, and long term by:

- lowering interest rates in borrowing for operations in Cape Verde;
- incorporating new aircraft to the fleet available in the country; and
- expanding the aeronautical park and making it one of the most modern in the region.

Recommendation #3: *Design and implementation of a Specific Public Policy.*

Form: Legislative Decree or Decree Law (as appropriate).

This may implement actions and tools that contemplate GA (airplanes and helicopters), as a direct and indirect instrument for the promotion of tourism, with the consequent generation of foreign exchange. These public policies are of an economic, tourism, and labor nature, so that the public and general interest that inspires and defines them exceeds the competence of the CAA. Therefore, they should be framed as State policy at the level of the National Congress or the MTT.

Ground: Tourism development is strategically referenced in the SDSP with the objective of guaranteeing economic and environmental sustainability for the consolidation of current tourism activities and the self-sustainability of their growth. The civil aviation industry, focused on GA (airplanes and helicopters), will contribute greatly to this regard.

Purpose: The purpose of this recommendation is to have an immediate impact on the growth of tourism in Cape Verde. According to the World Tourism Organization (WTO), green tourism – for instance, developed through helicopter sightseeing – will be among the first to recover in the post-pandemic period.

Recommendation #4: *Make air policy more flexible by allowing the use of foreign-registered airplane and helicopter with full guarantees of operational safety standards. Validate licenses for flight and maintenance personnel. Validate Registries.*

Form: New Legislative Decree amending the Aeronautical Code.

1. Aircraft Registration and Ownership: In this regard, it is suggested to incorporate in the Aeronautical Code the operator's registration to allow flying in Cape Verde with foreign registration. To this end, the current regulations governing aircraft registration and ownership must be modified. The concept of ownership of a Cape Verdean aircraft is rather conservative, since Article 53 of the Aeronautical Code imposes the habitual residence of the owner or national incorporation as a requirement for ownership. This limitation prevents the

country from operating as an aircraft flag attraction (e.g., it prevents individuals or legal entities from other States to register an aircraft in the country, regardless of their domicile). It is suggested to repeal this article and replace it with a more liberalizing one.

2. Aircraft classification: The aircraft classification of the Aeronautical Code deviates from the Chicago Convention of 1944 in its article 3. It is suggested to adapt it to the third article of that international standard.
3. CV-CAR amendments. It is recommended that Cape Verde provide a regulatory framework that allows the operation of airplanes and helicopters with foreign registration. For this purpose, it will be necessary to amend the following CV-CARs:

CV-CAR	**Topic**
CV CAR 1	Políticas, Procedimentos e Definições Gerais do Modelo de Regulação para a Aviação Civil em Cabo Verde -
CV-CAR 2.1	Licenciamento da tripulação de voo, da tripulação de cabina e do oficial de operações de voo -
CV-CAR 2.2	Licenciamento de técnicos de manutenção de aeronaves -
CV-CAR 2.4	Disposições médicas para o licenciamento de pessoal aeronáutico
CV-CAR 4	Registo e Marcas de Aeronaves em Cabo Verde -
CV-CAR 5	Aeronavegabilidade das aeronaves que operam em Cabo Verde - de Agosto de 2015;
CV-CAR 6	Organizações de Manutenção Aprovadas (Approved Maintenance Organizations – AMO) - 015;
CV-CAR 9	Certificação e Administração do Operador Aéreo em Cabo Verde - 6 de Agosto de 2015;
CV-CAR 12	Segurança da Aviação Civil -
CV-CAR 13	Investigação de Acidentes e Incidentes com Aeronaves -

However, it is recommended that Cape Verde maintains the medical certification standards of its personnel based on the requirements of CV-CAR 2.4.

Ground: The development of civil aviation is accelerated by virtue of liberalization processes. These processes are implemented through decisions that exceed the scope of competence of the civil aviation authorities.

The current legal regime – Aeronautical Code - is a consequence of a backward aviation policy that is reflected in the Cape Verde Aircraft Registry. It is a restrictive air policy that, for example, imposes the need to have Cape Verdean registered aircraft for executive air transport, charter, or scheduled aviation, except for exceptions granted exclusively by the CAA (Conf. Article 134 of the Aeronautical Code).

Purpose: The purpose of this recommendation is to achieve a marked growth and development of GA (airplanes & helicopters) in Cape Verde. It seeks to move away from the current conservative and exceptional mechanism to a more liberal one, where foreign and Cape Verdean registration can

coexist, creating a friendlier regime for the entry, availability and movement of aircraft, people, and cargo in the country. Thus, this will benefit the development of the economy, industry, tourism, and employment sectors, as well as the investment of foreign operators who see in Cape Verde a business opportunity accompanied by an adequate regulatory framework for the development of the activity.

Recommendation #5: *Helicopter Operational regulatory framework.*

In relation to helicopter operations, and in order to achieve the desired growth of the industry, it is important not only to generate the corresponding regulatory framework for Cape Verde-registered operations, but also to allow the operation of foreign-registered helicopters – aspect which will be addressed in recommendation #3.

Furthermore, it is necessary to define procedures for:

- validation of licenses for personnel, both flight crews and maintenance personnel;
- airworthiness forms for the registration of helicopter technical data;
- certification policies for maintenance organizations that intend to perform work and releases to service on helicopters;
- minimum equipment policies for the different types of operations (VFR - IFR);
- instrument flight procedure design;
- heliport design;
- helipad operation services; and
- operational obstacle control.

The following are the CV-CARs that should be modified for this purpose:

CV-CAR	Topic
CV CAR 1	Políticas, Procedimentos e Definições Gerais do Modelo de Regulação para a Aviação Civil em Cabo Verde -
CV-CAR 2.1	Licenciamento da tripulação de voo, da tripulação de cabina e do oficial de operações de voo -
CV-CAR 2.2	Licenciamento de técnicos de manutenção de aeronaves -
CV-CAR 2.4	Disposições médicas para o licenciamento de pessoal aeronáutico
CV-CAR 5	Aeronavegabilidade - Retificação n.º 60/2018 -
CV-CAR 6	Organizações de Manutenção Aprovadas (Approved Maintenance Organizations – AMO) - 015;
CV-CAR 7	Instrumentos e Equipamentos - ;
CV-CAR 8	Operações -
CV-CAR 11	Serviços de desenhos de procedimentos de voo por instrumentos -
CV-CAR 14	Construção, Certificação e Operação de Aeródromos -
CV-CAR 14.1	Serviços operacionais de aeródromo -
CV-CAR 14.2	Projeto de aeródromo -
CV-CAR 14.3	Controlo de obstáculos -

Conclusions

As mentioned in the Progress Report, the manufacturing and use of helicopters and airplanes for GA activities, aerial works, transport, and special operations such as search, assistance and rescue, or exploitation of offshore oil platforms becomes essential for island geographies such as Cape Verde. An example of this can be seen in operations in the Canary Islands (Spain), the Malvinas Islands (Argentina) or Tierra del Fuego Island (Argentina), the northern archipelagos of Canada, Hong Kong and the North Sea islands of the United Kingdom.

In Cape Verde's aeronautical documentation and regulations there is no evidence of operational standards for GA (airplanes & helicopters), nor joint regulation with other transport and tourism authorities as is the case in the countries mentioned above.

Therefore, it is recommended to develop a comprehensive and systemic vision for this industry with recommendations on how to implement them and enable development.

2.8. COVID-19 PANDEMIC

The following table outlines the main Instructions and Determinations issued by the CAA to address the COVID-19 pandemic.

Table 3 – COVID-19 Instructions and Determinations issued by the CAA

Instructions	Determinations	Exemption/Derogation
• Instruction No. 01/AAC/2020 – Transport of Cargo in the Passenger Compartment • Instruction No. 02/AAC/2020 – Operation of Air Navigation Facilities-COVID-19 • Instruction No. 03/AAC/2020 – Management of Passengers, Crew and Airport Personnel in the Context of Pandemic Caused by COVID-19-Return of Air Operations • Instruction No. 04/AAC/2020 – Measures to Avoid Contagion and Dissemination of COVID-19 during Flight (Public Health Corridor): • Instruction Nº 05/AAC/2020 – Health Security Measures Applied to Air Cargo Operations in a COVID-19 Context.	• Determination No. 03/AAC/2020 – Extension of Aerodrome Certificates • Determination No. 04/AAC/2020 – Extension of validity of licenses, ratings, permits and certificates of Aeronautical Personnel and the licenses, certificates, permits, approvals, of Air Operators, Approved Maintenance Organizations, Approved Training Organizations, Air Navigation and Ground Handling Services Providers • Determination No. 05/AAC/2020 – Extension of screener certification validity • Revision of Determination No. 01/AAC/2020 – Authorization for Transportation of Biological Samples on Aircraft (TICV)	• Determination of Derogation No. 01/APO/2020 – Determination of Derogation to Decree-Law No. 66/2009, in the part that regulates the maximum working hours of seafaring personnel. • Exemption Determination No. 01/PEL/2020 – Determination of Exemption to paragraph (b), (5), (iv) of subsection 2.1.B.310 of CV-CAR 2.1 • Exemption Determination No. 01/OPS/2020 – Determination of Exemption to subsections 9.B.325 and 9.B.330 of CV-CAR 9.

	• Determination No. 02/AAC/2020 – Technical guidance on the transport of suspect samples from COVID19.	

The easing and relief measures adopted in different States around the world, in accordance with the evolution of restrictions and the reopening of international and domestic air transportation, can also be summarized in this table.

Table 4 – COVID-19 measures adopted in different States around the world

Operational	Regulatory	Financial	Market Stimulation
• Extend the validity of licenses for pilots, dispatchers, and flight attendants in the range of 90 to 180 days. • Extension of dangerous goods certifications, medical certificates, aircraft airworthiness certificates, among others • Extension to complete recurrent training and qualification requirements to retain licenses and certifications • Extension of the validity of medical licenses and flight crew training times. • Six-month extension for certificates and authorizations related to AVSEC (DGR,	• Slots' waivers • Charter regulations • Medical cargo standards • Cargo adaptations • Passenger rights • Provisional labor reforms • Allow temporary suspension of labor contracts when employees cannot comply with teleworking • Modify existing rules on the insurance (performance guarantee) that airlines must provide. • Deactivate Full Flight Risks (FFR) insurance and activate Ground Risks Only (GRO). • Consumer Protection Agencies have temporarily suspended any legal proceedings against airlines, except for urgent investigations.	• Charges & fees (airports/ ANSP) • Taxation (industry/corporate) • Government aid • Fuel cost • Wage Subsidies	• Relaxation of travel recommendations • Travel bubbles

airport access, security licenses and certificates)			

The Progress Report of this project reflected the dissatisfaction of the stakeholders with the CAA's Instructions and Determinations during the pandemic. This is largely due to the lack of decisions that favored the air transport development, but above all, due to the lack of flexibility and of adequate response to the changing environment caused by this unforeseen global circumstance.

This opinion of the stakeholders is linked with the vision of Cape Verde's Government in regard to the new health security protocols and the loss of air competitiveness of the country, which may derive from inadequate economic regulation, protocols, and criteria when facing this emergency.

It is undeniable that the COVID-19 crisis opened a new window of opportunity to re-design the administrative/political organization matrix of air transport and the aeronautical industry.

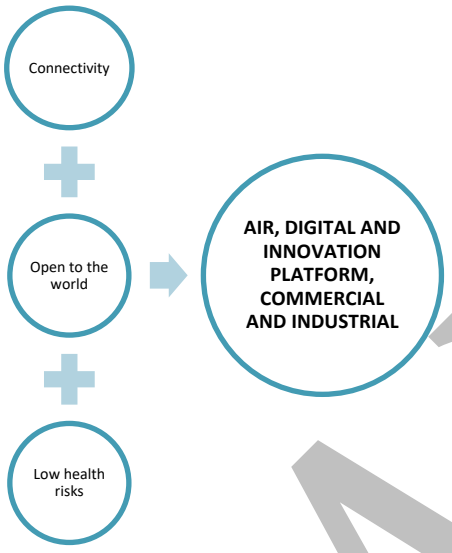
From the legal analysis that the IOS' team performed, it can be concluded that the focus of the change should be on the extraordinary regulatory powers in extraordinary times, which are of high impact for the country and may threaten its competitiveness and connectivity.

An efficient legal mechanism is needed to restore the balance of regulatory power between the MTT and the CAA, given the new configuration and dynamics of the sector. This should make it easier for the Government of Cape Verde to:

- Effectively deal with future extraordinary situations that disrupt air transport, such as another pandemic or a cyberattack;
- To reinforce the MTT's policy of seeking to sustain competitiveness and promote the development of air transportation, so that even in the most adverse circumstances, the objectives of the SDSP are not frustrated.

One of the four structural objectives of the SDSP is to make Cape Verde a circulation economy in the Atlantic. Many of these elements are directly linked to Air Transport and the Aeronautical Industry as summarized in the following figure:

Figure 5 – SDSP and Aeronautical Industry linkages



The following table summarizes the current structure of Cape Verde's legal framework for civil aviation:

Table 5 – Cape Verde's civil aviation legal framework structure

CAA **Decree-Law nº 47/2019** **TECHNICAL & ECONOMIC REGULATION**	**SDSP (2017-2021)** **COUNTRY'S OBJECTIVES**	**MTT** **Decree-Law nº 18/2018** **POLITICAL MANAGEMENT**
• Independent administrative authority. It is not subject to superintendence or tutelage. • National Aeronautic Authority responsible for the regulation of the entire aviation sector • Performs administrative activity of technical and economic regulation, supervision and regulation • Follows the development of civil aviation regulation at the international level • Cooperation or association with other public entities	• Making Cape Verde an economy of circulation in the Middle Atlantic • Strong commitment to building a knowledge and innovation economy, to function as an air, maritime, digital and financial, commercial and industrial innovation platform • Air platform	• Conceive, propose, coordinate and execute strategic policies • Encourage and support national entrepreneurship • Guide and promote the training and specialization of human resources • Provide assistance and support to all entities interested in promoting • Foreign affairs regarding policy measures, actions and programs for planning and managing Cape Verde's relations with countries and international organizations (ICAO)

This legal policy scheme would not be efficient for pursuing Cape Verde's public interests, in times of emergencies such as the COVID-19 pandemic. Therefore, it is recommended that the assignment of roles needs more flexibility, so that during emergencies and crises affecting air transport and connectivity, those high public interests of Cape Verde can be protected.

The following is a list of recommendations for a COVID-19 contingency with proposals for regulatory exemptions in case of events of *force majeur*.

Recommendation #1: *Re-design the current legal matrix to improve coordination between the MTT and the CAA.*

Form: This can be achieved by creating a new specific law of the National Assembly, authorizing the Government to:

1. Declare an emergency in the air transport sector in order to give response to extraordinary and serious events with a high impact on the aeronautical system and air connectivity, as is the case of COVID-19.
2. Authorize the MTT within the framework of Decree-Law No. 18/2018 and during the emergency, to exercise certain powers of the CAA assigned to it by Decree-Law No. 47/2019. This authorization should extend to the regulatory and economic aspects of air transport – Article 12 of Decree-law nº 47/2019- (*Competência quanto a regulação económica*) – and in no case should operational safety be compromised.
3. Establish the possibility for the MTT to exercise during the emergency the regulatory powers assigns to the CAA with regards to "*grant, without prejudice to the provisions of the previous item, exemptions to regulations, safeguarding safety and public interest*" (Article 15 of Decree Law 47/2019 part b).

Grounds: The variety of public and private matters and interests involved in the emergency, the need for agility of processes in times of crisis, the greater flexibility in making certain decisions that may be more political than technical in nature, and the capacity for action required to achieve the State's objectives.

Purpose: The purpose of this recommendation is to achieve a more direct and effective participation of the MTT in the decision-making process during extraordinary and serious events. The impact of COVID-19 on all sectors (economy, health, security, transportation, tourism, etc.) exceeds the technical performance of the CAA. This "weakness" of the system may be a barrier to decisions based on the sustainability of Cape Verde's economy, connectivity, and development for which air transport is key.

Indeed, COVID-19 opens a new era. New needs have emerged and therefore new public policies are necessary. Therefore, new regulatory challenges are emerging and among them is the reconfiguration of civil aviation institutions during times of emergency. This is more relevant in countries such as Cape Verde, since it has initiated a transcendental development process, which include civil aviation among the objectives of the SDSP.

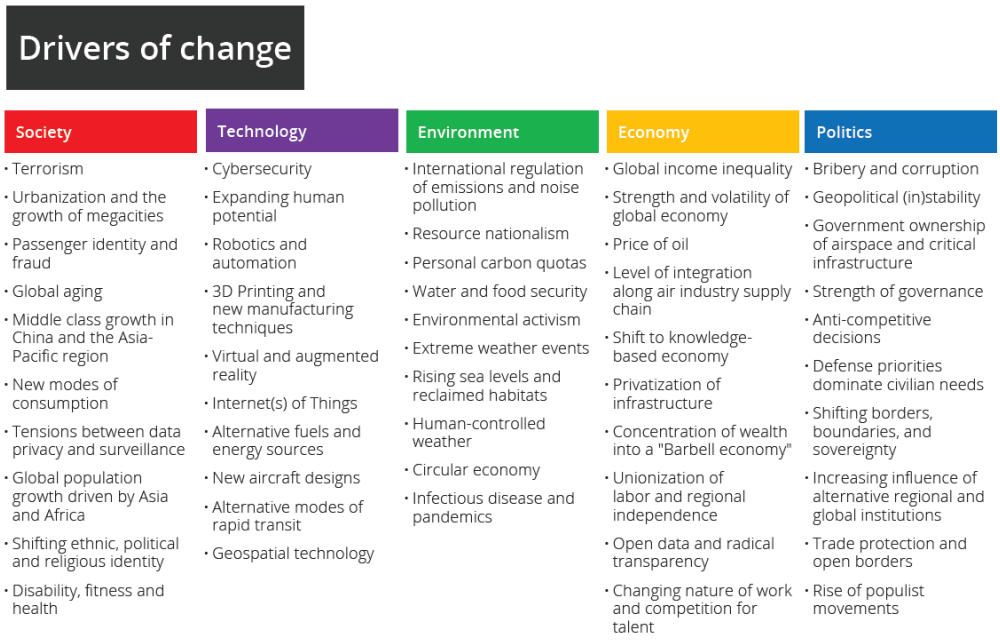
Under situations of extreme severity and impact for the national economy, the MTT should have a saying in country's decisions, such as those related to air transportation and tourism. Neither the own attributions assigned by Decree-Law No. 18/2018, nor the power to establish "general guidelines" are sufficient legal tools to assign to the MTT a scope of action that commensurate with the serious effects of an emergency situation, such as COVID-19.

We are referring specifically to those regulatory and administrative aspects which have a direct economic impact on the business and activities of regulated carriers and airport operators. This excludes the areas directly linked to safety and/or security, which should, by no means, be compromised.

Connectivity being a key pillar for the development of Cape Verde, and having the country set as a State Objective the construction of a "*knowledge and innovation economy, to function as an air, maritime, digital and financial, commercial and industrial innovation platform*", it must be emphasized that the SDSP is in line with the drivers of change that will impact the industry from now until 2035, as described in 2018 by IATA.

These drivers highlight relevant trends, as well as weaknesses, lifestyles and threats that may affect the external functioning of the industry's operating environment, including those related to pandemics and cyber-attacks.

Figure 6 – Aviation Industry drivers of change, IATA



Each of these drivers are of great importance for Cape Verde's national interest, and the problems they involved are extremely complex, so they exceed the technical and regulatory scope of the functions of any civil aviation authority.

It is worth advising that in the strategic, economic, and political decisions to be adopted by the Government of Cape Verde, it should consider a greater scope of interference for the MTT than currently in force under Decree Law 18/2018.

The world is facing new challenges in the civil aviation industry. Each country does so based on its own geographic, economic, social, and environmental reality, as well as on the robustness of the role played by air transportation, the aeronautical industry and tourism in that country, or the role that they are expected to play. The right balance between air safety, public health, and economic development policy is completely altered in such extraordinary times as those of COVID-19.

IOS' assessment of Cape Verde's response to the pandemic indicates that the regulation in the Civil Aviation field should be reaffirmed with an independent CAA as this represents values of legal certainty, confidence, and stability for the industry, among other things. However, it is equality true that in extraordinary circumstances, the MTT should not be limited to the possibility of having certain tools of interpretation and application of rules that today the law only assigns to the CAA.

Recommendation #2: Create the following General Principle of Aviation Law: "*The continuity of the air transport system is a priority for the economic and national development. In case that the Government declares epidemiological emergency, cyber emergency, or an emergency alike, which seriously affects civil aviation, all measures adopted by the competent authorities related to the emergency should consider that priority and try to affect the continuity of the air transport system in the least way possible*".

Form: Legislative Decree – include as a new paragraph to the Article 11 of the Aeronautical Code.

Ground: Given the characteristics of the economy of Cape Verde and its reliance on air connectivity and tourism, air transport in the country requires a formal and explicit regulation that considers this matter as a high national public interest, as it is the case for public health and public safety.

Purpose: To provide legal certainty and security to the SDSP in the specific aspects of the industry embodied in the Air Platform. This will allow the MTT's authorities to strengthen their participation in the decision-making process when the government faces circumstances that seriously affect air transportation, such as the COVID-19 pandemic or a cyberattack. This is without prejudice to certain decisions to be taken, which need to consider the seriousness of the situation on a case-by-case basis, and which may lead to the complete shutdown of Air Transport.

Recommendation # 3: *Once the President, upon proposal of the Government and authorization or ratification by the National Assembly, declares an epidemiological emergency, cyber emergency, or an event alike which seriously affects civil aviation, all national planning and risk management for public health and security shall give priority to the primary care of civil aviation and the continuity of the Air Transport System, in accordance with the criteria established by the MTT.*

Form: Legislative Decree – include a new final clause in Article 157 of the Aeronautical Code.

Ground: As air transport is key to Cape Verde's economy and society, the MTT should have a prominent role in the strategy to overcome the emergency, whether related to public health or public

safety. This means given MTT room for effective participation in the design of strategies for the imposition and/or removal of restrictions placed on air transport.

Purpose: To ensure the participation of the MTT in promoting the reduction of risk mitigation measures imposed on the sector during an emergency.

Recommendation # 4: *Once the government declares an epidemiological emergency, cyber emergency, or an event alike that seriously affects civil aviation, the MTT may suggest and coordinate with the CAA temporary exemptions to the standards and recommended practices in the Technical Annexes of the Chicago Convention. Such exemptions shall be based exclusively on the continuity of domestic and international air transportation to ensure air connectivity during the time of the emergency. In no case may these suggestions jeopardize the safety of air operations.*

Form: Legislative decree – add a new paragraph to Article 173 of the Aeronautical Code.

Purpose: To provide the MTT with explicit legal tools to facilitate the performance of certain actions during an emergency, that in normal times correspond to the Aeronautical Authority, and which are related to the connectivity or continuity of air transport. During a crisis or emergency, carriers and airport operators often require greater flexibility on certain aspects of the technical regulations. The following is a list of those indicated by the consulted stakeholders:

- Rigidity in the processes and requirements for the selection of personnel at the highest operational management level;
- Rigidity of formal requirements for training activities, e.g. physical attendance;
- Information processing and procedures are extremely bureaucratic and continue to be paper based; and
- Rigidity in the level of detail of certain mandatory documentation.

On certain occasions, providing such support to air operators and airports exceeds the power of the Aeronautical Authority, or is not compatible with the conservative vision regarding the possibility of certain changes on technical requirements.

Since the public interest and the common good are at stake, it seems reasonable that the MTT is the one to promote such exemptions that benefit air transportation continuity during the emergency, and that do not compromise the safety of the operations.

Recommendation #5: *Design and approve a Contingency Plan to face extraordinary situations that seriously affect or paralyze civil aviation, such as COVID-19.*

Form: Decree Law - create a work commission between the MTT, CAA and the Ministry of Health, led by the MTT.

The Contingency Plan should be designed and prepared by the CAA and approved by the MTT. This Plan should be elaborated taking in consideration Cape Verde's special local circumstances and be guided by best international practices and the work done/lessons learned from ICAO (CART), the WHO, the EU/EASA, and other industry stakeholders. The following is a list of some of the most relevant references and best international practices to be considered:

ICAO

- Airworthiness
  - Doc 10144 – ICAO Handbook for CAAs on the Management of Aviation Safety Risks related to COVID-19
  - ICAO requirements on Operators' continuing airworthiness responsibilities
  - ICAO requirements on Continued validity of maintenance organization approvals
  - Risk-based prioritization for conducting on-site inspections /surveillance
  - Aircraft parking and storage
  - Aircraft and equipment disinfection
  - Safety considerations for use of alcohol-based hand sanitizers in aircraft
  - Repurposing aircraft passenger cabins for the transport of cargo
  - On-site inspection and surveillance
- Security
  - ICAO guidelines for aviation security contingency measures during the COVID-19 pandemic.
- Air Traffic Services
  - ICAO air traffic services guidance material for operation in a covid-19 context.
  - COVID-19 Outbreak - Simplified Procedure for Air Traffic Management Collaborative Decision Making and Sharing of Information
  - Review of potential hazards associated with recovery to normal air traffic services (ATS) following disruptions resulting from the COVID-19 pandemic

EU / EASA

- COM (2021) 380 final -15.6.2021- Drawing the early lessons from the COVID-19 pandemic
- Guidelines on the progressive restoration of transport services and connectivity – COVID-19 (2020/C 169/02) IATA
- COVID-19 Aviation Health Safety Protocol Guidance for the management of airline passengers in relation to the COVID-19 pandemic
- Safety Information Bulletin Operations SIB No.: 2021-06 Issued: 25 March 2021 Subject: Vaccination of aircrew - Operational Recommendations
- Safety Information Bulletin Aerodromes – Operations SIB No.: 2020-02R5 Issued: 30 June 2020 Subject: Coronavirus COVID-19 Pandemic — Operational recommendations

IATA

- IATA and IFALPA Joint safety statement - Managing crew fatigue during recovery from pandemic
- Guidance for managing crew fatigue during a crisis
- Guidance for cabin operations during and post pandemic
- Guidance for managing aircraft airworthiness during and post pandemic
- Guidance for flight operations during and post pandemic
- Guidance for the transport of cargo and mail on aircraft configured for the carriage of passengers

- Guidance for crew health precautions during pandemic

ACI

- Guidelines for Passenger Services at European Airports
- COVID-19: Relief measures to ensure the survival of the airport industry
- Guidance for African Airports Restart

Ground: The diversity of circumstances surrounding contingency situations make it impossible to establish exact procedures to be followed. Crises such as COVID-19 present a threat of a different nature than those which normally occur in the different areas of civil aviation. The State's perspectives and decisions depend on many variables, but especially on factors that are not directly controlled by its decisions, such as the travel confidence of the public.

Therefore, contingency plans or procedures are key to respond to different scenarios. Developing and testing contingency plans makes it possible to significantly improve the response.

Purpose: Contingency plans seek to identify organizational, operational, and emerging security issues. They have different levels, seek to detail the appropriate interactions, contain preventive and reactive measures, and contain procedures for dealing with compromised operations, even in situations of total or partial interruption.

Such plans are internal to the State – and developed in coordination with national, intra-regional and/or international stakeholders.

In a future contingency plan for extraordinary situations the key is the safety and continuity of air operations, which ensures:

1. Basic measures for each of the sectors;
2. Multiplicity of possible operating scenarios, and
3. Conduct air operations taking care not to affect the established sectorial basic measures.

In any case, contingency planning for the successful management of extraordinary situations requires the assessment and management of risks that are not limited to aviation safety risks (airworthiness).

The CAA's decisions may affect risks managed by other state authorities, which are also dealing with events that may have an impact on aviation. In other words, risk management in the COVID-19 pandemic is cross-cutting and its effects are not limited to a specific area.

In countries such as Cape Verde, aviation serves as the primary mean of national and international connectivity and is a fundamental tool of the national economy.

This places the authorities at the highest political level in a decision-making role and hierarchy when it comes to contingency planning. These high authorities must maintain close contact with the CAA and the service providers to advise them on the impact of the proposed measures, and to plan and

keep the operational response to the crisis up to date. In this case, coordinated and joint work and information sharing are essential.

Recommendation #6: *Discuss closer cooperation with the EU on the recognition of COVID certificates for international travelers, in order to facilitate travel to Cape Verde.*

In July 2021, an EU system for issuing, verifying, and accepting certificates proving vaccination, a negative SARS-CoV-2 test result, or COVID-19 recovery has been successfully implemented. Together with the successful vaccination campaign, the EU Digital COVID Certificate ("EU DCC") will have a significant positive impact on the daily lives of EU citizens and residents.

Although air travel to and from third countries remains scarce, and the fact that the EU DCC was developed primarily to facilitate travel within the EU, it has the potential to become the global standard for facilitating international travel. The EU is actively engaged in multilateral work on digital certificates, notably with ICAO and the WHO to ensure interoperability. In addition, many countries have approached the EU for a secure verification system for COVID-19 digital certificates and to use the EU DCC

In summary, the EU is making efforts to expand recognition of EU DCC and similar health credentials to and from third countries, as a basis for reopening reciprocal international travel when the epidemiological situation permits. This is an opportunity for Cape Verde to reestablish European tourism as soon as possible.

Recommendation #7: Support ICAO's action on cybersecurity and adopt the measures set forth in *Assembly Resolution A40-10: Addressing Cybersecurity in Civil Aviation*.

It is recommended to create a new Act of the National Assembly, adapting, and implementing the Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation (Beijing Convention) and Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of aircraft (Beijing Protocol).

This would enhance the global legal framework dealing with cyberattacks on international civil aviation while ensuring that such attacks are deterred and punished wherever in the world they occur.

In particular, it is recommended that the Government of Cape Verde and its aviation stakeholders adopt the measures suggested by ICAO Assembly to counter cyber threats to civil aviation, some of which are to:

1. Implement the Cybersecurity Strategy;
2. Identify the threats and risks from possible cyber incidents on civil aviation operations and critical systems, and the serious consequences that can arise from such incidents;
3. Define the responsibilities of national agencies and industry stakeholders with regard to cybersecurity in civil aviation;
4. Encourage the development of a common understanding among Member States of cyber threats and risks, and of common criteria to determine the criticality of the assets and systems that need to be protected;

5. Encourage government/industry coordination with regard to aviation cybersecurity strategies, policies, and plans, as well as sharing of information to help identify critical vulnerabilities that need to be addressed;
6. Develop and participate in government/industry partnerships and mechanisms, nationally and internationally, for the systematic sharing of information on cyber threats, incidents, trends and mitigation efforts;
7. Based on a common understanding of cyber threats and risks, adopt a flexible, risk-based approach to protecting critical aviation systems through the implementation of cybersecurity management systems;

Conclusions

The ways in which governments provide real and effective support to airlines and airports and other stakeholders vary significantly from country to country.

IOS' analysis suggests that most governments place a high priority on maintaining air transport connectivity to protect economic activity and employment, in aviation itself and in other related sectors such as tourism.

In the coming months, scientific and technological advances in air transport, especially those related to vaccination, will be decisive. If the epidemiological reality allows it, it is very important to incorporate the WHO and ICAO guidelines, as well as to echo the recommendations of IATA and Airport Council International (ACI) into national air transport public policy decisions.

COVID-19 is reshaping economies and societies, and with it, civil and commercial aviation. Issues related to personal health and sanitation throughout the travel process, new aspects of public safety and security, and digitalization are accelerating this transformation of the air and airport business.

Among the lessons learned we highlight that, in case of an air transport crisis such as the one caused by COVID-19, or in situations of paralysis and chaos that may be caused by cyberattacks, the existing legal authority of Cape Verde must be immediately reconfigured in order to better meet the needs of the affected sector. At the same time, the authority would have the possibility to guarantee connectivity as a fundamental asset prevent economic deterioration.

Extraordinary times require extraordinary decisions and political will. The current Cape Verde legislative scheme is designed for times of normality. This needs to be re-design to ensure an effective and efficient participation of the MTT, in accordance with the seriousness of the threat to public interest and the decreed sectorial emergency. This is reflected in legal mechanisms that grant the political body with competence in Air Transport – in this case the MTT – interference in certain competencies that today the laws only assign to the Aeronautical Authority.

The emergency implies a transitory scenario of maximum cooperation and alignment, in which the MTT must play a central role until the crisis is over. The seriousness of the situation may require political definitions, in which the MTT should not play a secondary and subordinate role to the Aeronautical Authority as an independent agency.

Our recommendations for changes in Cape Verde's aviation legislation provide the basis for a rational policy response for the post-pandemic era and are aimed at preparing the country to better face potential future crises that may arise. The economic, political, geographic, and operational reasons that led to the current situation of air transport in Cape Verde make government intervention inevitable, in particular for the recovery of air connectivity.

Government support requires new legal instruments with mechanisms, such as those recommended in the previous sections, to make the country attractive for private investments, for which the aeronautical and aero commercial legality must be able to show predictability to the investor, even when facing crisis situations that may occur in the future.

The reorientation of public policies in the wake of the pandemic is also necessary to promote the political priorities that were already determining the evolution of the Cape Verde air transport sector before the crisis, in particular those of the SDSP. The role of government and public authorities at all levels – especially the type and duration of measures affecting transport operations – will be crucial for the future development of the country's air transport.

2.9. AIR TRANSPORT ECONOMIC REGULATIONS

Economic regulation in general is comprised of regulations, schemes and procedures that define the economic structure of an entity providing a service (i.e. the fee/charge structure and the form in which it is imposed).

In the case of the aviation sector in Cape Verde, the Aeronautical Code and the Statutes of the CAA attribute to this entity the power to regulate, supervise and exercise the regulatory function over the air transport sector, issues including the competences to grant license to the operators of air transport services, as well as to approve the tariffs and fees to be charged by airlines, the establishment of airport and air navigation fees, while also protecting the economic-financial equilibrium of these regulated service providers.

This assessment of the economic regulation of the aviation sector in Cape Verde takes into account the objective that the country become a hub for the redistribution of passengers and goods in the region. Therefore, it is important that the regulatory system reflect two essential aspects:

- Regulation of the domestic market, considering the archipelagic nature of Cape Verde and the small size and lack of competition in the market.
- The need to liberalize the international air market, allowing the offering of attractive aviation fees and tax incentives and making the exercise of air business more flexible.

This requires a synergy between the regulatory function and the willingness of the Government to pursue these objectives.

Key recommendations related to bilateral and multi-lateral agreements are presented below. These have been divided between general recommendations concerning the economic regulation of the sector and those pertaining specifically to the airport concession law.

General Recommendations

The following recommendations are focused on improving the overall economic regulatory function of the aviation sector in Cape Verde.

Recommendation #1: *Consider removing the responsibility for economic regulation from the CAA.*

One of the issues identified in this study is that the CAA is currently responsible for a wide range of governmental functions related to the Aviation Sector that in many countries are distributed between different institutions.

The current system does not meet the ICAO requirement that there be a clear separation of functions between the regulator and service providers. The CAA issues both the air operator's certificates (safety) and the air transport licenses, establishes air navigation and airport fees, and regulates the domestic air transportation tariffs (economic).

Given that some of these fees, taxes and tariffs also help finance the CAA's own activities, their economic regulatory oversight powers could represent a conflict with its primary safety and technical regulatory oversight responsibilities in creating the potential for a situation in which the later could dilute safety of air operations in the country.

In a broader sense, it is important for the country's economic development that the government is more involved in drafting regulations that enhance the expansion of civil aviation in Cape Verde. Economic Regulation is not audited by ICAO and therefore it does not have a dedicated CV-CAR, which leaves room for the introduction of policies established by the government in alignment with the goals for the development of the civil aviation sector.

There have been many different approaches taken to achieving this separation of functions between economic regulation and technical/safety regulation. Some of the more successful cases are described below.

India is an example of a country with a clear institutional separation between the responsibility for the formulation of civil aviation policy, the technical and safety regulation, and the economic regulation. The *Ministry of Civil Aviation* is responsible for formulation of national policies and programs for the development and regulation of the Civil Aviation sector in the country. The *Directorate General of Civil Aviation (DGCA)* is a separate statutory body of the Indian Central Government to implement the regulation of civil aviation, and the *Airports Economic Regulatory Authority (AERA)* is responsible for the economic regulation of the sector. AERA is a statutory body constituted in 2008 with the specific function of determining tariffs for aeronautical services, passenger services, and airport development fees. But India is also a large country with well over two dozen medium to large commercial airports, which is not really applicable to the Cape Verde case.

A system that has worked well in a smaller country with only two international airports like **Costa Rica** has been to incorporate the economic regulation of the aviation sector into an authority (ARESEP) with responsibility for the economic regulation of all public services, including water, electricity, ports, land transport services, etc. ARESEP has a clear mandate to balance the affordability of services to users with the financial sustainability of service providers in such a way

as to further the economic development goals of the country. In the case of the airports, a primary consideration has been to maintain airport fees competitive so as further the attraction of tourism to the country.

An alternative that has been increasingly applied in other smaller countries is to give responsibility for the economic regulation of the aviation sector to the primary Ministry responsible for developing policy for that sector. For example, **Ireland** has adopted the creation of an independent public body under the tutelage of the Ministry of Transport, guided in its actions by the legislation governing the areas that it regulates, including the attribution of the air operating licenses and other economic regulation activities.

In regard to other public and transportation services, Cape Verde, is following an approach similar to that described for Costa Rica with the creation through *Decreto-lei nº 50/2018* of the *Agência Reguladora Multissetorial da Economia* (ARME), responsible for the economic regulation of the communications, energy, water, as well as the urban and inter-urban bus transportation sectors. But unlike the ARESEP in Costa Rica, aviation has not been included in the sectors regulated by the agency.

In sum, these examples offer threee possible approaches.

1. Assign the responsibility for regulating economic and commercial matters related to civil aviation in the country to ARME, including both public and private sector service providers. ARME already enjoys administrative, financial, and patrimonial autonomy, assuring the seperation of technical and economic regulation functions for the aviation sector. This approach is also consistent with the Government's desire to integrate the economic regulation function into one agency.
2. Create a separate independent Cape Verde Aviation Commission as an entity that regulates economic and commercial activities. The goal of this Commission should be established as one to promote a commercially viable, consumer-oriented, and resilient civil aviation industry which supports the nation's economic growth.
3. An alternative that avoids the complexities of creating a new institution might be something similar to Ireland, where the economic regulatory oversight of the Aviation sector should be housed in a unit that responds to the Ministry of Tourism and Transportation. While this fails to entirely separate policy formulation from economic regulation, the technical and safety regulatory oversight of services to be assumed by the private sector should remain under the purview of the CAA. Moving the responsibility for economic regulation to the Ministry would require adjustments to a series of laws and regulations that currently ascribe those functions to the CAA.

The role of either the ARDE or of a new Commission would differ from those of the Ministry of Transport and Tourism (MTT) and the CAA. The MTT is responsible for industry policymaking and government-to-government relations (including the promotion of bilateral or multilateral negotiations on traffic rights); while the CAA is mandated with the regulation of technical and safety matters of Cape Verde's civil aviation industry.

A new law may be required from the Government for either of the first two options, creating a Legislative Decree or Decree Law, to the extent that this Commission is to regulate issues that are of the competency of the National Assembly.

Functions of the economic regulator under any of these three options should include:

a) To improve connectivity, both globally and locally; and to promote economic ties, integration and growth, trade, and investment and tourism;
b) To encourage effective development of the civil aviation industry by promoting an economic environment which allows Cape Verde's carriers to maintain their ability to compete effectively in international markets in a sustainable, profitable, efficient, and fair manner; and
c) To promote timely investment in the civil aviation industry to meet Cape Verde's evolving demand and developmental needs.

It is important to recognize that the economic regulation of air transport is quite complex, covering the regulation of access to the air transport market, the issuance of licenses, the defense of consumer rights, and tariff regulation, among others. Given this complexity, any of these three options will require substantial technical assistance. For instance, while ARME has ample experience in the areas of tariff regulation and consumer protection that is transferrable to the aviation sector, it would need more support to develop the capabilities to carry out some of the other regulatory activities for the sector.

But the critical point is that to further the country's economic development, the government should be allowed to give a higher priority to drafting and implementing regulations that enhance the expansion of civil aviation in Cape Verde, at least those regulations that are not strictly technical or safety related and subject to audit by ICAO.

Recommendation #2: *Carry out an assessment of the basis on which airport and air navigation fees are calculated.*

Irrespective of who is given the function for the economic regulation of the sector, there is a need to assess the methodologies currently being utilized to establish air navigation and airport fees.

Current airport and air navigation fees were established in *Regulamento No. 01/AAC/2018*, which redefined airport and air navigation charges. Fee levels were established through studies carried out by the CAA and were based on the principle of recovering the operational and investment costs associated with the services provided by ASA, while also considering the financial burden on users.

This approach would seem generally consistent with ICAO Document 9082 (Policies on Charges for Airports and Air Navigation Services), which states the following:

> *"The cost to be allocated in determining the cost basis for airport charges is the full cost of providing the airport and its essential ancillary services, including appropriate amounts for cost of capital and depreciation of assets, as well as the costs of maintenance, operation, management and administration. Consistent with the form of economic oversight adopted, these costs may be offset by non-aeronautical revenues." (Section II, para 2 of Doc 90)*

These guidelines have often led to the development of complex regulatory regimes to establish and approve airport charges in many countries. The stated objective of these regulatory frameworks is to assure that airports only charge the costs of the services they offer without overburdening users.

Cost-based regulation sets prices that are based directly on the costs of the regulated firm and have complex information requirements. The regulator must set fair tariffs based on information provided by the airport operator regarding operating expenses, capital expenditure, volume projections and the asset base. It must also assess whether the tariffs are efficient and appropriate. In the case of a private-sector airport operator, a Rate of Return regulation is also required, which involves a mechanism whereby prices are adjusted to assure a target rate of return, based on the level of throughput.

The problems with purely cost based regimes such as this one includes the fact that there is little incentive to improve efficiency since the regulated airport or air navigation service provider will not benefit from cost-reduction efforts as any savings will be passed through to customers. The airport is given an incentive to exaggerate both operating and capital costs. Thus, under a cost-based regulation, all the risk of any investment is borne by the users since the airport is allowed to "pass through" excessive costs.

Conversely, the airport (or government) is left with little flexibility to adjust charges to reflect commercial and market considerations. It is more difficult to use the rate structure to offer incentives to increase the efficiency of operations (such as preferred times of operation, etc.)

As an alternative, some countries are exploring more market-based regimes. Though these are more often introduced where airports have been concessioned to private operators, as will be discussed in the following recommendations.

In the case of Cape Verde, a review of the specific costs assigned to each fee, as established in *Regulamento No. 01/AAC/2018*, seems appropriate and generally congruent with ICAO guidelines. But the benchmark analysis carried out in the previous phase of the study comparing air navigation and airport fees in 11 African countries would seem to indicate some significant differences in the manner in which the CAA calculated fees in Cape Verde in comparison to the rest of the countries. While landing and take-off fees were very significantly higher in Cape Verde than in the rest of the sample, overflight and international passenger service fees were lower than most of the sample.

But as the CAA was not able to provide any of the rate studies used to establish the fees set out in this *regulamento*, it was not possible to confirm the reasons for these sharp differences.

Therefore, we recommend that the Government carryout an assessment of the methodologies utilized to estimate air navigation and airport tariffs.

Regardless of the methodologies used to estimate tariffs, it is noteworthy that, at the time of the bidding, the draft of the concession contract (part of the bidding documents) must define the tariffs for air navigation and airport as well as their annual adjustment mechanisms applicable throughout the concession. Both the tariffs and the annual adjustment mechanisms must be pre-defined, as they are an essential economic aspect of the concession.

Recommendation #3: *Consider alternate mechanisms to support unprofitable domestic routes*

In practice, domestic tariffs are currently tightly regulated through **Decree Law n° 54/2019, 10/December**. This decree requires all domestic operators to provide an Annual Declaration of Accounting Information. A formula is established for using this information to establish a Base Reference Tariff for each route. The decree then allows carriers to propose promotional, social, and flexible tariffs as a percentage of the reference tariff.

A possible issue with this route-by-route calculation of domestic tariffs is that it can make it difficult for the airline to cover the costs of operating unprofitable routes with a reasonable tariff that is affordable for the population dependent on this service.

Article 10 of **Decreto-lei 54/2019** does allow the government to provide financial support for routes with less than 20,000 annual passengers for which the airlines cannot cover the full costs. But this is left at the discretion of the Government. According to the CAA, this mechanism has yet to be applied despite the difficulties that have been faced by airlines providing domestic service.

Given the importance of domestic air service to the economic and social development of an island nation, the Government may want to consider introducing an alternate scheme for supporting domestic carriers. There are many different systems used for this in the industry.

For instance, many countries within the EU provide Public Service Obligation (PSO) grants for air services for a contacted period up to 4 years after which the air service arrangements are then reviewed. PSO air services are a permitted class of aviation aid provided by government that addresses defined socio-economic needs. In the case of Norway, the criteria for PSO imposition are set out, but not precisely defined, in the Regulation. There are essentially three main criteria:

1. The service must be to a "peripheral region", or a "development region", or on a "thin route to any airport".[5] (only one of these three requirements must be met).
2. The service must be "vital for the economic and social development of the region".
3. The imposition of a PSO must be necessary to ensure the "minimum" provision of scheduled air services which air carriers would not assume if they were solely considering their commercial interest. In assessing the “necessity and adequacy” of a proposed public service obligation the proportionality between it and the economic needs of the region, the availability of other modes of transport to meet transport needs, airfares and conditions, and the combined effect of all carriers operating or intending to operate on the route must be taken into consideration.

PSO contracts usually cover:

- The minimum service level in terms of capacity, frequency, and scheduling which an air carrier would need to satisfy;
- Any limits on fare levels of or specific fare types and rules, which must be adhered to; and
- Rules concerning any amendments, in particular termination of a contract as a result of unforeseeable changes in costs and demand.

[5] In this case, “Thin routes” are those operated with 50-seat or smaller aircraft that have less than 50,000 annual passengers.

There are many other schemes that are used to support these types of air services both in Europe and around the world. An example of an alternate scheme pursued by governments with less resources to provide direct grants to the airlines is to provide tax incentives. For instance, a scheme currently being implemented by some state governments in Brazil is to subsidize low-traffic routes within their respective states by providing a deep discount on the tax applied to air fuel in exchange for the airlines agreeing to provide a specific level of service to those specific destinations.

One advantage of having the Ministry assume the regulatory function is that can establish a system that directly reflects policy priorities and decisions on the domestic air transportation system. As a technical body, specialized on air navigation and airport services, the CAA may, at Ministry's convenience, assist in the subject matter. Any recommendation from CAA needs to be accepted by the Ministry, which is responsible for establishing sector policies.

Recommendation #4: *Provide for the appointment of CAA officers by a body or committee of the Legislative Branch*

Among the previous recommendations is the one concerning the separation of competencies of CAA. Even if this recommendation is accepted by the government of Cape Verde, and CAA has its competence limited to the regulation of civil aviation safety, the following suggestion should be considered as an improvement of the institutional and regulatory capacity of aviation in the country.

Created by Decree-Law No. 28/2004, the CAA is an independent administrative authority, institutionally based, with its own legal personality, organs, services, personnel, and assets, and with administrative and financial autonomy (Article 3). Its functional independence, at least from a formal point of view, guarantees it decision-making autonomy in the performance of its regulatory functions (Article 5 of Decree-Law No. 28/2004). The caveat is only regarding the powers attributed to the Government in sectorial public policy matters.

The CAA's Board of Directors is the collegial body responsible for defining CAA's performance, as well as for directing its services (Article 5 of the CAA Statute). It is composed of a president and two directors for alternating 5-year terms of office, extendable for five (5) more years (Article 8 of the CAA Statute). The president and directors are appointed by resolution of the Council of Ministers, upon the proposal of the member of the Government responsible for transport and civil aviation (Article 35 of the CAA's Statute). According to Article 35 of the CAA's Statute and Article 42 of Law 103/VII/2016. The professionals must (i) have recognized good standing and independence; (ii) have technical and professional competence in any field of civil aviation; and (iii) have more than 5 years of professional experience, which is in line with international standards.

Although it is a legal provision, it does not guarantee an effective trial by a body or commission of the Legislative Branch. In pursuit of an effective trial, it is highly recommended that the Legislative Branch become interested and, even more importantly, become well informed. One should bear in mind that politicians tend to have superficial knowledge on specific economic sectors and strong ideological views on concessions and forms of privatizations. An effective trial aims to guarantee professional independence, benefiting the regulation with the use of a check and balance mechanism.

Recommendations on the Regulation of Airport Concessions

Though Cape Verde's airports are currently operated by ASA, the government has made a policy decision to pursue the concession of airports to private operators and investors. As an initial step in this direction, the government promulgated **Law No. 64/IX/2019, 12/August** to provide a framework for the concession process.

An analysis of this law in the context of international best practice would indicate that there are adjustments that can be made that are likely to improve the airport concession process. These are detailed in the following recommendations.

Recommendation #5: *Specify that the airport managing body will be responsible only for airport operation services*

The legal regime for the concession of public service to support civil aviation (Annex to **Law No. 64/IX/2019**) provides the general legal framework for the concession of airport public service to support civil aviation in the country's airports and aerodromes. Number 1 of Article 1 (Object) specifies that included in the definition of this public airport service is the operation, maintenance, financing and expansion of airports.

In order to make the legislative text even clearer, paragraph 2 distinguishes the public service of supporting civil aviation in the country's airports and aerodromes (the object of the Act) from those public services relating to the operation and development of infrastructure and navigation support services. The latter are, according to the Law, "air traffic management, in all its aspects and the development, installation, management and operation of the inherent communication, navigation, surveillance and airspace control systems and associated infrastructures and related activities".

The distinction is important because these air navigation support services are not the responsibility of the airport managing entity as a result of the concession contract. The Law establishes that these services are kept within the sphere of the National Company of Airports and Air Safety, S.A. or in a company resulting from a spin-off from the latter, to which will be transferred all rights and obligations, of whatever source and nature, including contractual positions currently held by ASA, S.A. in the area of the aforementioned attributions.

International experience suggests that the airport managing entity should not be granted the operation of services intrinsically linked to the operation of air navigation. In African countries, which have undergone extensive processes of privatization of their airport activities, such as South Africa, Cameroon, Ivory Coast and Madagascar, typically navigation services have been kept under government control or subcontracted service providers, not linked to the activity of the airport managing entity:

> *"Airports usually have some quasi-independent operating agency, whether government owned or not. Even the company that owns South Africa's nine most important airports, including Johannesburg, is only partially privatized, with majority ownership still held by the state. Cameroon, Côte d'Ivoire, and Madagascar have concessioned their major airport groups, although in Madagascar, the government has a majority shareholding in the concessionaire. Kenya has concessioned the development of the cargo terminal at Nairobi's international airport. South Africa has divested some smaller airports*

> *completely. Even without full airport concessions, the range of airport service providers is wide. In Tanzania's Dar es Salaam International Airport, passenger services are performed by Swissport, and at Nairobi's Jomo Kenyatta International Airport, a broad range of competition exists for landside services. Navigation and air traffic control still typically fall directly under governmental agencies, with some services subcontracted".*[6]

The separation of Airport operation services from air navigation services under the Annex to **Law No. 64/IX/2019** is welcome. However, so that there is no doubt on the part of the airport managing entity as to what may be exploited, it is recommended that the concession contract expressly state (a) which public services will be the object of the concession, and (b) the risks that the airport managing entity will bear in the event of operational infeasibility arising from failure to provide air navigation services. The Law may require these points to be mandatory clauses of airport concession contracts.

Recommendation #6: *Provide for selection of the airport management entity by public tender, a method that ensures greater competitiveness in the market*

Law No. 64/IX/2019 provides for the possibility of the State of Cape Verde to operate under a concession regime, through a public or private entity, the public airport service to support civil aviation. Especially if the legal nature of the entity is private, the airport managing entity will have, on the one hand, the responsibility for operation, maintenance and expansion of airports, and, on the other, the right to earn revenue and profit on the economic exploitation of this public service, as well as economic activities in the strict sense accessory to the public service.

For the selection of the airport managing entity, it is recommended that a competitive selection process always be carried out so that it is possible to encourage competition for the market, since, in matters of natural monopoly, competition in the market is hindered. In this sense, is the guidance of the Organization for Economic Cooperation and Development (Competition Policy and Concessions, 2017):

> *"Concessions often occur in situations where competition in the market is not feasible or not likely to flourish, because of natural monopoly or related structural conditions. Concessions are a way of providing competition for the market - there is competition for the contract - which provides many of the same benefits for consumers."*[7]

Thus, it is recommended to reduce the number of procedures foreseen in Article 3, number 2 and keep the one that guarantees the greatest competition among the participants, as is the case of the public tender. According to article 29, number 3 of the Public Procurement Code, any interested party who meets the requirements foreseen by law and in the documents of the procedure may present a proposal. The public tender thus guarantees ample competition, making it possible to choose the best proposal.

[6] The International Bank for Reconstruction and Development. Africa's infrastructure: a time for transformation. Airports and Air Transport: The Sky's the Limit. Washington: The World Bank, 2010.

[7] OCDE, Competition Policy and Concessions, 2017. https://www.oecd.org/daf/competition/sectors/38706036.pdf

Recommendation #7: *Make it possible for the absence of the licensing regime or for most licenses to be granted by the airport managing entity through the direct adjustment procedure*

The degree of freedom granted to the airport managing entity by Law No. 64/IX/2019 with respect to the management of the concession should be better sized. One of the reasons for developed and developing economies to adopt the concession as a model for exploiting public services is the private presence. With it, governments legitimately benefit from the economic efficiencies that the public legal regime often prevents. Besides the scarcity of public resources to make the necessary investments for airport expansion, private management can make it possible to provide the service more efficiently (value for money), to rapidly adopt technological solutions aimed at economy and quality in service, and to attract and train professionals specialized in the sector.

In this sense, the World Bank's toolkit, prepared in partnership with the Inter-American Development Bank, brings this recommendation:

> *"to the extent that the type of service required can be precisely defined, it is generally much better to fully tap the private sector's creativity and know-how, and leave the operator free to decide how to organize the supply of the service. Even if the awarding authorities themselves do not overly restrict the autonomy of the operator, there is a risk that the regulator might do so."*[8]

For these objectives to be achieved, it is indispensable that the concessionaire has wide freedom in how to carry out the management of the airport. The activity of the Ministry of Tourism and Transportation (or the CAA) would be to oversee the concession activity in order to ensure that service levels are maintained and that the private decisions of the airport managing entity do not impair the continuity of airport and air transport service provision. As long as the standards imposed by the regulator are met, there is no reason to limit the management capacity of the airport operator.

One of the ways the airport management entity manages the airport is through the granting of licenses. The occupation of land, buildings or other facilities and the exercise of any activity and service in the area of national public airports and aerodromes depend on a license from the airport managing entity (Article 7). The granting of licenses is based on selection procedures, namely: a) public tender; b) limited tender with prior qualification; c) restricted tender; d) direct award, "which prove to be more adequate, in each case, to the public interest, the economy, efficiency and the operationality of airport exploitation.

It does not seem to be free, however, the choice of the direct adjustment procedure. This is because Article 8, in numbers 3 and 4, lists which licenses may be granted by direct adjustment, which makes the assumption that all other licenses must be granted from the selective processes of public tender, limited tender with prior qualification and restricted tender. Thus, by the systematic interpretation of the rule, it is understood that the use of the direct adjustment procedure is restricted to the objects listed in numbers 3 and 4 of article 8, and cannot be used for the granting of any other licenses.

[8] KERF, Michel. Concessions for infrastructure: a guide to their design and award (World Bank Technical paper n. 399 Finance, Private Sector, and Infrastructure Network), World Bank and Inter-American Development Bank, 2021, p. 73.

The logic should be different. Either the managing entity should not grant licenses, but simple contracts between private entities, or the direct adjustment should be the procedure to be used. Direct award is the least bureaucratic, least costly and most consistent with the eminently private management of a conceded airport. According to Article 29, number 6 of the Public Contracts Code, in direct award the invitation may be made to only one economic operator. With this system, the airport management freedom granted to the airport managing body is preserved, so that it can make the decisions it believes will best serve the operation of the public service concession to support civil aviation, aiming for profit and, at the same time, to achieve the quality standards previously defined.

It is recommended that a licensing regime should not be imposed. If a licensing regime is chosen, direct award should be the rule, not the exception. The other selection procedures (public tender; limited tender with prior qualification; restricted tender) should be required only for occupations, services or activities which, due to their nature or the norms issued by the regulator, justify the need for such competitiveness and complexity.

Recommendation #8: *Provide for compensation in case of license revocation when there are still amortized investments*

In the license regime provided for in **Law No. 64/IX/2019**, licenses may be revoked at any time, in whole or in part, by the airport managing entities. There are two hypotheses that authorize license revocation: a) "non-compliance by the holders with any of the obligations provided for therein"; and b) "public interest of airport operation or safety" (Article 17). It is only in the event of revocation based on the public interest of airport operation or safety that the holder is entitled to compensation for investments not yet amortized, in assets inseparable from the land, buildings or facilities, licensed and occupied, as a rule (Article 17, number 3).

Investments not yet amortized must be subject to indemnification, even when the revocation is motivated by the holders' failure to comply with the obligations set forth in the license. Otherwise, illicit enrichment occurs at the expense of the license holder: the realization of unamortized investments certainly benefits the asset managed by the airport management entity and also the public assets to the detriment of the license holder, without there being a legally undue cause. Note that the non-fulfillment of obligations by the holder is a legally valid cause to allow the revocation of its license, but it is not a justification to legitimize patrimonial losses resulting from the non-amortization of investments, which with the end of the license will benefit the managing entity and the public assets at the end of the concession.

Especially in the case of unrecoverable unamortized investments, the importance of indemnification is stressed by the World Bank (Investment in Air Transport Infrastructure Guidance for developing private participation, 2010):

> *"Termination triggers and payments: Triggers of contract termination might include, for example, a decision by the government to renationalize or an event of force majeure that makes execution of the contract virtually impossible. In such cases, termination payments that compensate the operator are important, especially when the contract involved sunk*

investments. Compensation might include liability for debts, equity, loss of future profits, and third-party liability from the cancellation of subcontracts."[9]

It is recommended, therefore, to foresee indemnity due to license revocation motivated by the holders' failure to comply with any of the obligations foreseen therein, in case there are unamortized investments. The provision for indemnity on account of unamortized investments does not prevent the airport managing body from establishing, within the scope of the license, penalty fines for failure to comply with certain obligations, or, alternatively, to take legal action to be indemnified on account of damages eventually caused due to failure to comply with certain obligations by the licensees.

Recommendation #9: *Adopt the regulatory impact analysis when issuing regulations that affect airport operation service*

Considering the effects that regulation can have on airport operations, it is important that the authority responsible for exercising this regulation adopt a kind of regulatory tool aimed at analyzing the effects that a given regulation may have on the sector even before its adoption - the so-called regulatory impact analysis (RIA).

RIA is widely adopted by regulators in OECD countries and recommended by the World Bank, among other multilateral agencies. The OECD defines RIA as "a systematic process of identification and quantification of benefits and costs likely to flow from regulatory and non-regulatory options for a policy under consideration"[10]. In this sense, RIA is both a tool and a decision-making process with the objective of informing decision makers about whether and how they should regulate to achieve public policy goals[11]. The purpose is to improve the empirical basis of regulation through an *ex ante* (prospective) assessment of the impact of the new regulation. For this reason, RIA is one of the most important regulatory tools available to governments.

In an effort to identify the minimum required for developing countries to adopt a RIA, the IFC (2010, 17)[12] lists the following major components: (i) formally establishing RIA policy, with support from the highest political level; (ii) integration of RIA into agency decision-making; (iii) consistent application of RIA; (iv) appropriate methodological requirements; (v) focused application of RIA efforts to make its use more efficient; (vi) use of public consultation mechanisms; (vii) data collection strategies to enable empirically based analysis; (viii) existence of an oversight of RIA entity; (ix) development of adequate institutional capacity to adopt RIA; and (x) adoption of the AIR rationale into existing regulations (*ex post* RIA).

Examples of costs that can be measured within a RIA with an approach specifically aimed at increasing the competitiveness of a given sector are[13]:

[9] HUSSAIN, Mustafa Zakir. Investment in Air Transport Infrastructure Guidance for developing private participation. Washington: The World Bank, 2010. p. 103.

[10] Regulatory Policy Outlook (2018, p. 250)

[11] OECD (2012), Recommendation of the Council on Regulatory Policy and Governance, OECD Publishing, Paris, p. 25 (cf. https://dx.doi.org/10.1787/9789264209022-en)

[12] cf. "International Finance Corporation; Multilateral Investment Guarantee Agency; World Bank (2010). Making It Work: 'RIA Light' for Developing Countries. Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/27878 License: CC BY 3.0 IGO.

[13] DAVIDSON, Paul; KAUFFMANN, Céline; LIEDEKERKE, Marie-Gabrielle de (2021), How Do Laws and Regulations Affect Competitiveness: The Role for RIA, Publishing, Paris, OECD Regulatory Policy Working Paper No. 15, pp. 31-32 (cf. https://dx.doi.org/10.1787/7c11f5d5-en).

a. administrative burdens: administrative burdens are the costs of complying with information obligations that arise from regulation. Regulatory agencies sometimes require the submission of large amounts of information and data to the public sector or to third parties. This duty also includes the amount of information that must be available for inspection or supply on request.
b. substantive compliance costs: these are the direct incremental costs to the target group of complying with a regulation, excluding administrative costs.
c. administration and enforcement costs: these are the costs incurred by the government in creating and enforcing regulatory requirements. It is the portion of compliance costs to be borne by the regulatory agency. One might imagine that the creation and enforcement of a given regulatory standard would generate costs only for the individual, however, regulatory agencies also bear high costs in the development and enforcement of their own regulation. For example, the CAA must carry out public consultation before issuing regulations, and must carry out inspection and bring administrative proceedings to impose sanctions on private parties.

Given the recommendation of this Final Report that economic regulation be exercised by the Ministry of Tourism and Transport (and not by the CAA), RIA should be adopted as an ancillary process for the issue of regulation on economic aspects of airport concessions. It is true, however, that its benefits could also be felt for other competencies of the CAA such as regulation of technical safety aspects.

Even countries that are not yet members of the OECD are already making efforts to adopt RIA in the decision-making process of regulatory agencies and Ministries. This is the case of Brazil. The adoption of RIA was optional until the edition of Decree No. 10,411/2020 on December 18, 2019. The decree regulates the Economic Freedom Law (Law No. 13,874/2019) and the General Law of Regulatory Agencies (Law 13,848/2019), which in turn imposed the requirement to conduct RIA prior to the edition of normative acts of general interest to economic agents, consumers or users of the services provided, including acts of the Ministry of Infrastructure to which the National Civil Aviation Agency is linked.

If the recommendation to exclude economic regulation from CAA's performance is not heeded, the recommendation to adopt RIA gains even more relevance. The exercise of regulation by CAA is based on three competencies, namely, to issue regulations (Articles 15 and 16 of Decree-Law No. 47/2019), to inspect the sector and apply sanctions (Article 19 of Decree-Law No. 47/2019), and to decide on conflicts between operators subject to its jurisdiction (Article 21 of Decree-Law No. 47/2019) .

Regarding the regulatory procedure of CAA, Decree-Law No. 28/2004 determines that the regulations must obey the principles of legality, necessity, clarity, participation and publicity (art. 20). In addition, its regulatory procedure presents important elements of stakeholder participation and transparency. Before approving or changing any regulation of external effectiveness, the CAA must hold some sort of public consultation to gather contributions from the sector's business entities and relevant consumer associations, with the text made available at least 30 days in advance. The CAA must publish the suggestions received, as well as substantiate the decisions taken, making reference to the criticisms and suggestions received. This procedure is not replicated in the case of internal regulations of one or more categories of service operators (instructions).

In summary, it is recommended that, in an eventual revision of Law No. 64/IX/2019, the obligation to adopt the RIA prior to the issue of a regulation on the economic operation of airport services should be imposed on the Ministry of Tourism and Transport and, if the recommendation to remove the competence of the CAA to exercise economic regulation is not acted upon, on the CAA. Thus, when issuing a regulation, the Ministry or the Agency should make available the respective RIA report at the time of public consultation, in addition to the draft regulation and its rationale. The adoption of a decision-making process based on evidence and aware of the costs and benefits that a regulation can generate for the market and users may mitigate the negative assessment presented about the established tariff regime and the level of detail on the subject provided in Law No. 64/IX/2019.

Recommendation #10: *Include in Law No. 64/IX/2019 the principles of economic regulation contained in Decree-Law No. 47/2019*

A regulation is "*the set of rules, procedures and institutions introduced by government for the express purpose of developing, administering and reviewing regulation*"[14]. When the concept is applied to economic regulation, one can say that it aims to establish rules to govern economic activities in a broad sense, which includes economic activities in the strict sense and public services, always with the pre-established purpose of generating results specified in public policies. In the case of Cape Verde, the objectives of the Cape Verdean State.

According to Chapter IV of the annex of **Law No. 64/IX/2019**, there are two main objects of economic regulation, namely:

a. "defining the common principles, rules and criteria of economic regulation applicable to the fees to be charged to airport or aerodrome users for the use of the facilities made available and the services provided by the airport managing body related to the landing, take-off, lighting and parking of aircraft and the processing of passengers, cargo and mail under this article and the concession contract"; and
b. "fixing the service quality levels and indicators to be observed in airports and aerodromes as a result of negotiation between the airport managing body and the users of each airport" (Article 21).

Such regulation is guided, primarily, by the application of the principles listed in Article 21:

a. "Non-discrimination between users, in compliance with the provisions contained in Article 15 of the Chicago Convention;
b. Modulation of charges is possible provided that the criteria used for modulation are relevant, objective and transparent;
c. Promotion of airport competitiveness, as well as of airport charges;
d. Definition of the prices of the charges, to evolve annually in line with local inflation, under the terms to be defined in the concession contract, with a view to clarity and predictability of the regime applicable to airport charges;
e. Transparency, through user consultation on the proposals for charges and investment in new infrastructures;
f. Ensuring the economic and financial viability of the Concessionaire;
g. Encouraging the promotion of air traffic growth, commercial supply and service quality".

[14] OECD, Better Regulation Practices across the European Union, 2018., p. 250.

However, the application of such principles is not enough. **Decree Law No. 47/2019** determines that the regulations, issued by CAA, must obey the "*principles of legality, necessity, clarity, participation and publicity*" (art. 20). So that there is no doubt about the applicability of these in cases of regulation of aeronautical services and in view of the omission to them in **Law No. 64/IX/2019**, if there is an amendment to **Law No. 64/IX/2019**, it is recommended that the aforementioned principles be included. Thus, there will be no doubt that especially the principle of necessity will be respected when exercising economic regulation over the market. Allied to RIA, the application of the principle of necessity will ensure that the economic regulation of airport public services will take place to the exact extent that the correction of market failures requires, no more and no less.

Recommendation #11: *Adopt less excessive regulation regarding non-aeronautical fees*

Chapter V of the Annex to **Law No. 64/IX/2019** establishes the fees[15] that will be due by reason of the exercise of any activity and service in the area of national public airports and aerodromes, and also for the use of the respective services and equipment. These are aeronautical and non-aeronautical fees, according to the classification adopted by article 25.

Aeronautical charges are regulated in Section III, and are as follows: "a) Traffic charges, namely landing and take-off fee (Article 27); parking fee (Article 28); shelter fee (Article 29); service and passenger fee (Article 30); aerodrome opening fee (Article 31); beaconing fee (Article 32); signaling fee (Article 33); cargo fee (Article 34); removal fee (Article 35); b) ground handling fees, which are: ground handling fee (Article 36); refueling fee with passengers on board (Article 39); passenger processing fee (Article 40); c) Airport security fees (Article 41); d) Terminal navigation fees (Article 42); and e) Other fees that may be created." Non-aeronautical fees, on the other hand, are regulated in Section IV, and are as follows a) fees for occupying spaces, areas, and basements (Article 44); b) other fees of a commercial nature, namely: equipment fees (Article 45); service provision fees (Article 46); consumption fees (Article 47); operating fees (Article 48); car parking fees (Article 50); and advertising fees (Article 51).

Aeronautical fees and non-aeronautical fees are over-regulated. In Chapter V, hypotheses of incidence, quantitative criteria and tax exemptions are set forth for both types of fees. However, this is not what good regulation dictates.

The regulation on aeronautical fees should be much more detailed than the regulation on non-aeronautical fees. Such differentiated treatment is even justified by the "nature of the services and activities developed" (Article 25), a criterion that motivated the classification adopted by the Annex to Law No. 64/IX/2019. The aeronautical fees are revenues related to the operation of the public service itself, and, therefore, it is justifiable to have a more incisive regulation, which brings details about the hypothesis of incidence and quantitative criteria, for example. The situation is different for non-aeronautical fees, which result from the exploration of essentially commercial activities: although the exploration may occur within the airport area, they are not directly related to the granted service, which does not advise the State of Cape Verde to regulate in detail such fees.

It can be said that the exploitation of commercial activities, which are not directly related to the granted service, is inserted in the field of private initiative, protected by Article 67 of the Constitution

[15] It is suggested that the term "fee" has a meaning of tariff, with no relation to a tax regime.

of the State of Cape Verde. The not overly regulated provision, regarding non-aeronautical fees, allows the airport managing entity to create and implement different ways to monetize the airport through the exploitation of commercial activities, including those not provided for in the Annex of Law No. 64/IX/2019, without requiring any legislative change. Such exploitation reverts to tariff modicity to users, which is in line with the need to envision the general interest when exploiting the country's economic wealth and resources (Article 90, number 1, Constitution of the State of Cape Verde).

The regulation considering the differences between aeronautical and non-aeronautical tariffs was reflected in the 6th Round of Airport Concessions in Brazil, where a flexible regime was adopted regarding non-aeronautical tariffs. In relation to airfares, Annex 4 of the Concession Agreement governed the regime in detail, including: i) specification of the regulatory restrictions applicable to the determination of the tariff values; ii) information regarding the remuneration of airport fees to be provided by the airport management entity to Agência Nacional de Aviacão Civil - ANAC; iii) collection system; and iv) transfer of certain collected values. Already in relation to non-aeronautical tariffs, the provision was simplistic in the sense of indicating that it may be exploited by the airport management entity, provided that it guarantees some free essential services to users[16]. This is the best practice that can be observed in international benchmarking.

Specifically with regard to the provision on fee exemption, it is recommended to maintain it in relation to aeronautical fees and, if the discipline is maintained, for non-aeronautical fees. The express provision of activities excluded from the collection of fees by the airport managing body is positive, as it occurs in the following provisions: Article 27, number 4; Article 30, number 3; Article 31, number 5; Article 44, number 2; Article 45, number 2; Article 46, number 2.

This provision allows the airport management entity to foresee the activities that will not generate fees, which allows it to prepare its business plan with more predictability and legal certainty.

Thus, the recommendation is that there is significant flexibility regarding the regime applicable to non-aeronautical charges, with the provisions that expressly establish the hypotheses of fee exemption being maintained.

2.10. BILATERAL AND MULTILATERAL AGREEMENTS

International air services typically comprise one of the following:

[16] ***Brasil**: "Seção II – Das Receitas Não Tarifárias 4.9. A Concessionária poderá explorar atividades econômicas que gerem Receitas Não Tarifárias, diretamente ou mediante a celebração de contratos com terceiros, em regime de direito privado. 4.9.1. A Concessionária deverá observar as normas vigentes que exijam, restrinjam ou condicionem a exploração de determinadas atividades. 4.9.2. Os seguintes itens básicos deverão estar disponíveis sem qualquer ônus para o Usuário: água potável, sanitários; fraldários; carrinhos de bagagem; transporte gratuito entre terminais não adjacentes (lado terra); equipamentos, acesso e auxílio a PNAE; posto de primeiros socorros e outros previstos pela regulamentação vigente. 4.10. A exploração de atividades econômicas que envolva a utilização de espaços no Complexo Aeroportuário seguirá o regime previsto no Capítulo XI – Da Utilização de Espaços no Complexo Aeroportuário. 4.11. A prestação de serviços de que trata o item 11.5 poderá ser realizada diretamente pela Concessionária, adotando contabilidade separada para cada uma das atividades exploradas, segundo as normas contábeis vigentes. 4.11.1. A ANAC poderá, a qualquer tempo, por motivos concorrenciais, exigir a criação de subsidiária integral para a execução dos serviços de que trata o item 11.5. 4.11.2. Fica vedada a participação de subsidiária integral da Concessionária em outras sociedades."*

- A Bilateral Air Service Agreement (BASA), which is regarded as an international treaty and is ultimately enforceable under international law,
- A Memorandum of Understanding, and/or
- An exchange of letters.

BASAs are part of the international framework of air transport that has developed from the Chicago Convention. BASAs will set out the access between two states, and might also stipulate the number of carriers, provisions for freight traffic and a range of other aviation related business.

The primary objective of our recommendations in this area are to propose mechanisms that stimulate air freedom, bilateral and multilateral cooperation, making Cape Verde more attractive to the civil aviation industry. These agreements are particularly important to the extent they can represent an important tool to resolve several of the other issues in these areas identified in this report, including facilitating crew licenses and accelerating the registration and issue of certificates of the aircrafts in Cape Verde.

According to the CAA database, Cape Verde has negotiated 47 bilateral agreements with 42 countries, but most of these have not yet resulted in signed MOU's or BASA's approved by the legislatures of both countries. The breakdown is as follows:

- 22 bilateral agreements that have been negotiated and a provisional MOU drafted but have not yet been signed or approved.
- 16 agreements for which agreements have been signed by the executive branch of each country but have not yet approved by their respective legislatures.
- 9 agreements have been fully approved by the respective legislatures.

This includes several agreements with countries that have since been superseded by newly negotiated updated agreements.

Cape Verde has also signed the following three multi-lateral agreements, none of which have yet been approved by the legislative assembly.

- Cape Verde is one of the 34 States in the African Union which have committed to implementing the SAATM, under the Yamoussoukro agreement, with the objective of contributing to improve air connectivity on the African continent, supporting regional integration as well as economic development.
- The Banjul Accord Group is an aviation safety agreement signed by Cape Verde, Gambia, Ghana, Guinea, Liberia, Nigeria, and Sierra Leone. The accord creates and aviation safety oversight organization (BAGASOO) with the objective of promoting the highest aviation safety standards in the member states.
- The horizontal agreement with the European Union is intended to serve as a basis for bilateral agreements with EU states.

Key recommendations related to bilateral and multi-lateral agreements are presented below.

Recommendation #1: *Prioritize the signing of negotiated bilateral agreements with the civil aviation authorities of other countries.*

Almost half the BASA's negotiated by Cape Verde have yet to be signed. Negotiations on most of these agreements were concluded during the 2012-2016 period, with little progress over the past 5 years in getting them signed by both parties. This should be a priority for the Government as it is entirely in the hands for the Executive Branch.

Recommendation #2: *There is a need to streamline the process of obtaining legislative approval of signed bilateral and multilateral agreements.*

Only 20% of the negotiated bilateral agreements and none of the multilateral agreements have been approved by the legislature. Though the CAA reports that it currently fully implements signed MOU's, these do not have the status of international treaties that are fully enforceable under international law.

The CAA notes the following constraints on obtaining the approval of signed BASA's:

- This is more a political issue in establishing priorities of the legislative agenda, something over which the authority has limited influence.
- Bilateral agreements also need to be approved by the legislature of the other country to take effect, which can often be equally slow.

But the CAA should continue to have a role in preparing these agreements for legislative action, as established in paragraph (h) of article 11 of Decree Law No. 47/2019. The CAA identifies the air agreements to be established, contacts the counterpart entity of the interested party and prepares the document to be initialed for subsequent signature by the Government. After the formalization stage of the air agreement between the two civil aviation entities, the process is submitted to the Ministry of Foreign Affairs for the purpose of referral to the Government for its signature and other steps for approval. It would be up to the government to prioritize the approval of these agreements as part of the legislative agenda. It is proposed that the CAA develop and propose an action plan with a schedule for bringing signed agreements before the legislature.

Recommendation #3: *Establish Guidelines on Content of Agreements*

Based on the sample of 10 BASA provided to the IOS' team, there is a lack of consistency in the extent to which existing agreements cover key aspects, such as the acceptance of certifications and licenses, the exchange of data, the approval of routes and frequencies, and the economic regulation of international airfares. This is important because bilateral agreements can represent an important tool to resolve several of the other issues in these areas identified in this report.

The primary difference between the existing agreements is that the earlier agreements impose a significantly greater regulatory burden on the airlines, while the agreements signed during the current century tend to rely more on market forces. This is particularly the case when it comes to the determination of frequencies, capacities, and air fares offered by the airlines on the routes covered by the agreements.

Another difference is that the earlier agreements signed in the 1970's (with Portugal and the USSR) do not contain clauses requiring the acceptance of certifications and licenses emitted other state's civil aviation authorities. These important clauses have reportedly been added to update agreements with those countries and to the other more recent agreements, though with some caveats in the case

of the UK. These clauses should help minimize the processes of aircraft registration and certifications, while improving competitiveness.

The agreement with Brazil is the only one of the samples provided to the IOS' team that requires the exchange of relevant statistics and information, something that has reportedly been a problem for the CAA.

According to the ACC, the BASA negotiated in recent times are essentially harmonized with respect the procedures provided for in ICAO Doc. 9626, in the ICAN's negotiating procedures, and generally observe a model previously agreed with the MNEC, which is in turn inspired by the principles of aero commercial policy enshrined in article 157 of the CA.

It is also important to note that according to the Continental Study On Benefits of the Single African Air Transport Market[17], Cape Verde is at the top of their classification of 15 countries in terms of having the highest proportion (76%) of Yamoussoukro Decision compliant BASAs.

Despite this, it is recommended that the CAA reviews its general guidelines for the negotiation of the coverage of the agreements to assure that they incorporate the conditions for each of the following items:

- Definition of the preferred Freedom of the Air to be included in the agreements. Preferably sufficient to avoid the need for approval of each individual flight between the two countries.
- The acceptance and validation of crew licenses issued by the other party to the agreement.
- The acceptance and validation of aircraft certifications issued by the other party to the agreement.
- The acceptance and validation of airworthiness certificates issued by the other party.
- The regular exchange of relevant data, statistics, and information.
- Any permitted limitations on the authorization of schedules, frequencies, and capacity
- Non-discrimination and free competition clauses in the application of tariffs, fees and taxes charged to users.
- The economic regulation of tariffs charged by the airlines, which preferably should be limited to:
    a) Protection of consumers from tariffs due to abuse of market power
    b) Prevention of tariffs that are anti-competitive behavior.

Among the most important guidelines to reduce the regulatory burden and delays is the possibility of including clauses that allow avoiding or reducing the need for approval of each individual flight between the two countries. An example of one approach towards this objective can be found in Cabo Verde's current BASA with the United Kingdom (16 July 2007), which does this by establishing:

1. Each Contracting Party is allowed to designate the airlines to which the BASA applies, while the other Contracting Party "*shall grant the appropriate authorisations and permissions with minimum procedural delay*". (Art. 3)

[17] Prepared by IATA Consulting for the African Union Commission (AUC), June 25, 2021, pg. 8.

2. Those airlines are then allowed to operate any routes that meet the conditions established in Annex 1, without any requirement that each individual route be pre-approved, though authorization can later be revoked should it be found that the airline is violating conditions in the agreement.

Any process to pre-approve routes to and from the UK would come from each country's own internal regulations and operational practices rather than as a requirement of the BASA. If this were the case, then it is recommended that those regulations or practices should be modified to allow taking advantage of the more flexible approval process permitted by the BASA.

This BASA with the UK contrasts with some of Cabo Verde's agreements with other countries that require that each individual route go through a detailed approval process.

In cases where existing agreements do not meet these guidelines, consideration should be given to renegotiating those agreements.

3. CONCLUSIONS

This report revisits the areas within Cape Verde's civil aviation legal framework which were identified as an impediment to the industry's development in previous phases of this project.

By keeping in mind the goals of the Sustainable Development Strategic Plan (SDSP) 2017/2021, and the government's objective to foster a commercially viable, consumer-oriented, and resilient civil aviation industry which supports the nation's economic growth, a series of recommendations were made.

These recommendations include, among other things, amendments to the Aeronautical Code, the creation of Decrees or entirely new CV-CARs, fostering greater cooperation with other countries, and transferring some competences from the CAA to the government. In general terms, a few conclusions can be drawn from the different sections of this report:

1. **FAA Category 1 rating:** This is a very important milestone for the aviation industry of a Small Island Developing State like Cape Verde, and key facilitator for the sector's development. These recommendations by no means intend to deteriorate this status, on the contrary, its highly recommended that Cape Verde proactively works in maintaining this category.

2. **Synergies between the regulatory function and the ability of the Government to pursue development objectives:** While the regulation in the civil aviation field is to be overseen by an independent CAA due to the highly technical nature of aviation and the importance of achieving high levels of safety and security – it is equally important for the country's economic development that the government/MTT is more involved in drafting regulations and making decisions that enhance the expansion of the industry and guarantee business continuity. It is recommended to consider a greater scope of interference for the government/MTT so that even in the most adverse circumstances, the policy of seeking to sustain competitiveness and promote the development of air transportation is not frustrated.

3. **Regulatory overreach**: Stakeholders' feedback and IOS' assessment indicates that the regulatory system is labyrinthine and heavy, and more appropriate for a country with a larger, and more complex aviation sector. While best international practices are and should serve as guidance to draft Cape Verde's regulations, they must be adapted to the country's local characteristics and development objectives. Therefore, the CAA should endeavour in further contextualizing regulations, filing differences with ICAO where and as needed – and in some cases – prescribing mandatory requirements in more unequivocal and simple terms for industry application. It is also recommended that the CAA provides a framework for greater flexibility – particularly during extraordinary circumstances – by defining and grating exemptions to the regulation when safety and security measures are not compromised.

   An example of overreach can be observed in the strictness in which ICAO Recommended Practises are enforced, which is an issue a number of stakeholders commented on.

   It is not unusual for a State to "statutorily" enable the making of regulations to address both the Standards and Recommended Practices in the Annexes. In fact, Article 37 of the Convention requires a member state to "*collaborate in securing the highest practicable degree of uniformity...in all matters in which such uniformity will facilitate and improve air navigation*."

What leads to confusion is the use of the words "practice and procedure". The Title of Chapter VI of the Convention under which Article 37 appears, is: "*International Standards and Recommended Practices*''. Immediately below that is article 37 the title of which is "*Adoption of international standards and procedures*".

The key is whether the Council "adopted" or "approved" certain texts. “Adopted” means compliance by a member State is necessary, unless it files a difference under the auspices of Article 38. “Approved” means adoption by a State is optional. The SARPs of the Annexes are "adopted" by Council ergo compliance is necessary. This does not, however, preclude ICAO from auditing for the adoption of "optional texts" and hold States to their adoption regardless of the intent of Article 37.

The Forewords of most, if not all, Annexes explain the "Status of Annex Components" let there be any confusion as to their "legal applicability". In addition to this, the Forewords in ICAO Guidance material typically explain that the material contained is not "regulatory" in nature and that adoption by a Member State is optional.

In summary, IOS’ assessment indicates that the CAA often oversteps its bounds and establishes by Statute an adopted text under which ICAO does not impose adoption/compliance by the State.

4. ANNEXES

4.1. Exemplar Fatigue Regulations (Canadian Aviation Regulations Part 700)

(a) DEFINITIONS:

Fit for duty, in respect of a person, means that their ability to act as a flight crew member of an aircraft is not impaired by fatigue, the consumption of alcohol or drugs or any mental or physical condition,

Flight attendant means a crew member, other than a flight crew member, who has been assigned duties to be performed in the interest of the passengers in a passenger-carrying aircraft;

Flight crew member means a crew member assigned to act as pilot or flight engineer of an aircraft during flight time;

Flight crew member on call means a flight crew member who has been designated by an air operator to be available to report for flight duty on notice of one hour or less;

Flight crew member on standby means a flight crew member who has been designated by an air operator or private operator to remain at a specified location in order to be available to report for flight duty on notice of one hour or less;

Flight duty period means the period that begins when the earliest of the following events occurs and ends at engines off or rotors stopped at the end of a flight:

(a) the flight crew member carries out any duties assigned by the private operator or the air operator or delegated by the Minister before reporting for a flight,
(b) the member reports for a flight or, if there is more than one flight during the flight duty period, reports for the first flight,
(c) the member reports for positioning, and
(d) the member reports as a flight crew member on standby;

Flight relief facility — bunk means a bunk that meets the requirements of Aerospace Recommended Practice ARP4101/3, Crew Rest Facilities, published by the Society of Automotive Engineers (SAE), and is configured in accordance with the requirements of section 3.2.9 of Aerospace Recommended Practice ARP4101, Flight Deck Layout and Facilities, published by the SAE;

Flight relief facility — seat means a fully reclining seat that is separated and screened off from the passengers and flight deck, that is equipped with a call device, a restraint system designed to restrain a sleeping person and portable oxygen equipment, and that is not subject to distraction from noise generated in the cabin;

(b) REGULATIONS

Non-application and Interpretation

700.19

(1) This Division does not apply

(a) to an air operator who operates an aircraft under Subpart 2 of this Part or to a flight crew member who operates an aircraft under that Subpart; or
(b) to an air operator who conducts a medical evacuation flight or to a flight crew member who operates an aircraft to conduct such a flight.

(2) For the purposes of this Division, references to a time of day are

(a) if a flight crew member is acclimatized, references to the local time at their location; or
(b) if a flight crew member is not acclimatized, references to the local time at the last location where the member was acclimatized.

Monitoring System and Records

700.20

(1) An air operator shall have a system that monitors the flight times, flight duty periods, hours of work and rest periods of each of its flight crew members and shall include in its company operations manual the details of that system.

(2) An air operator shall, for each flight crew member, keep a record of

(a) all flight times;

(b) the start and end times as well as the duration of each flight duty period;

(c) the start and end times as well as the duration of each duty period;

(d) the start and end times as well as the duration of each rest period; and

(e) all time free from duty.

(3) An air operator shall keep a record of all notifications provided to it by a pilot-in-command under subsection 700.63(4).

(4) An air operator shall keep the records referred to in this section for a period of 24 months after the day on which they are made.

Air Operator Obligations — Scheduling

700.21

(1) An air operator shall provide a flight crew member with their schedule sufficiently in advance for them to plan for adequate rest.

(2) An air operator shall, on a monthly basis, determine if a flight crew member's maximum flight duty period with respect to a flight is exceeded more than 10% of the time in a period of 90 consecutive days.

(3) If an air operator determines that more than 10% of a flight crew member's maximum flight duty periods are exceeded as a result of an unforeseen operational circumstance, the air operator shall change the schedule or the flight crew member pairing for the flight not later than 28 days after the day on which the determination is made.

(4) If the air operator sets schedules on a seasonal basis, the changes referred to in subsection (3) may be delayed until the beginning of the same season in the following year.

Fitness for Duty

700.26

(1) An air operator shall not allow a flight crew member to begin a flight duty period if, before the beginning of the period, the member advises the air operator that they are fatigued to the extent that they are not fit for duty.

(2) A flight crew member shall advise every other flight crew member and the air operator as soon as the member becomes aware that they have become fatigued during a flight duty period to the extent that they are not fit for duty.

(3) If there is only one flight crew member on board the aircraft, and the member becomes aware during a flight duty period that they have become fatigued to the extent that they are not fit for duty, they shall advise the air operator immediately or, if the aircraft is in flight, as soon as possible after the aircraft has landed.

(4) If a person who is assigned by an air operator to act as a flight crew member, or any other person, becomes aware that the assignment would result in the maximum flight time, maximum flight duty period or maximum number of hours of work being exceeded, the member or other person shall advise the air operator as soon as possible.

(5) If a flight crew member or any other person becomes aware that the member was not granted their rest period or time free from duty, the member or other person shall advise the air operator as soon as possible.

Maximum Flight Time

700.27

(1) An air operator shall not assign flight time to a flight crew member, and a flight crew member shall not accept such an assignment, if the member's total flight time will, as a result, exceed

(a) 112 hours in any 28 consecutive days;

(b) 300 hours in any 90 consecutive days;

(c) 1,000 hours in any 365 consecutive days; or

(d) in the case of a single-pilot operation, 8 hours in any 24 consecutive hours.

(2) For the purpose of subsection (1), a flight crew member's flight time includes

(a)the flight time accumulated from other flight operations; and

(b)the total flight time of a flight with an augmented flight crew.

Maximum Flight Duty Period

700.28

(1) An air operator shall not assign a flight duty period to a flight crew member, and a flight crew member shall not accept such an assignment, if the flight duty period exceeds the maximum flight duty period set out in this section.

(2) If the average duration of all scheduled flights is less than 30 minutes, the maximum period of a flight duty period that begins during a period set out in column 1 of the table to this subsection is the number of hours set out in column 2, 3 or 4, according to the number of flights scheduled during the flight duty period.

TABLE 1: Maximum Flight Duty Period — Average Flight Duration of Less Than 30 Minutes

	Column 1	**Column 2**	**Column 3**	**Column 4**
Item	Start Time of Flight Duty Period	1 to 11 Flights	12 to 17 Flights	18 or More Flights
1	24:00 to 03:59	9 hours	9 hours	9 hours
2	04:00 to 04:59	10 hours	9 hours	9 hours

	Column 1	Column 2	Column 3	Column 4
Item	Start Time of Flight Duty Period	1 to 11 Flights	12 to 17 Flights	18 or More Flights
3	05:00 to 05:59	11 hours	10 hours	9 hours
4	06:00 to 06:59	12 hours	11 hours	10 hours
5	07:00 to 12:59	13 hours	12 hours	11 hours
6	13:00 to 16:59	12.5 hours	11.5 hours	10.5 hours
7	17:00 to 21:59	12 hours	11 hours	10 hours
8	22:00 to 22:59	11 hours	10 hours	9 hours
9	23:00 to 23:59	10 hours	9 hours	9 hours

(3) If the average duration of all scheduled flights is 30 minutes or more but less than 50 minutes, the maximum period of a flight duty period that begins during a period set out in column 1 of the table to this subsection shall not exceed the number of hours set out in column 2, 3 or 4, according to the number of flights scheduled during the flight duty period.

TABLE 2: Maximum Flight Duty Period — Average Flight Duration of 30 ><50 Minutes

	Column 1	Column 2	Column 3	Column 4
Item	Start Time of Flight Duty Period	1 to 7 Flights	8 to 11 Flights	12 or More Flights
1	24:00 to 03:59	9 hours	9 hours	9 hours
2	04:00 to 04:59	10 hours	9 hours	9 hours
3	05:00 to 05:59	11 hours	10 hours	9 hours
4	06:00 to 06:59	12 hours	11 hours	10 hours
5	07:00 to 12:59	13 hours	12 hours	11 hours

	Column 1	Column 2	Column 3	Column 4
Item	Start Time of Flight Duty Period	1 to 7 Flights	8 to 11 Flights	12 or More Flights
6	13:00 to 16:59	12.5 hours	11.5 hours	10.5 hours
7	17:00 to 21:59	12 hours	11 hours	10 hours
8	22:00 to 22:59	11 hours	10 hours	9 hours
9	23:00 to 23:59	10 hours	9 hours	9 hours

(4) If the average duration of all scheduled flights is 50 minutes or more, the maximum period of a flight duty period that begins during a period set out in column 1 of the table to this subsection shall not exceed the number of hours set out in column 2, 3 or 4, according to the number of flights scheduled during the flight duty period.

TABLE 3: Maximum Flight Duty Period — Average Flight Duration of 50+ Minutes

	Column 1	Column 2	Column 3	Column 4
Item	Start Time of Flight Duty Period	1 to 4 Flights	5 or 6 Flights	7 or More Flights
1	24:00 to 03:59	9 hours	9 hours	9 hours
2	04:00 to 04:59	10 hours	9 hours	9 hours
3	05:00 to 05:59	11 hours	10 hours	9 hours
4	06:00 to 06:59	12 hours	11 hours	10 hours
5	07:00 to 12:59	13 hours	12 hours	11 hours
6	13:00 to 16:59	12.5 hours	11.5 hours	10.5 hours
7	17:00 to 21:59	12 hours	11 hours	10 hours
8	22:00 to 22:59	11 hours	10 hours	9 hours
9	23:00 to 23:59	10 hours	9 hours	9 hours

(5) For the purposes of subsections (2) to (4), a flight crew member is considered to be acclimatized if

(a) in the case of a time zone difference of less than four hours between local time and the time at the last location where the member was acclimatized, any rest periods required under these Regulations have been provided and the member has spent 72 hours in the same time zone;

(b) in the case of a time zone difference of four hours or more between local time and the time at the last location where the member was acclimatized, any rest periods required under these Regulations have been provided and the member has spent 96 hours in the same time zone; or

(c) the member has spent 24 hours in the same time zone for each hour of difference between local time and the time at the last location where the member was acclimatized.

(6) For the purposes of subsections (2) to (4), positioning is not to be considered a flight.

(7) For the purposes of subsection (5), the Canadian time zones are Pacific, Mountain, Central, Eastern, and the Atlantic time zone, which includes Newfoundland and Labrador.

(8) The flight duty period for a flight crew member on standby begins at the time at which they report for duty at the location designated by the air operator.

(9) When all flights are conducted under day VFR, the maximum period of a flight duty period that begins during a period set out in column 1 of the table to this subsection shall not exceed the number of hours set out in column 2.

TABLE 4: Maximum Flight Duty Period — Flights Conducted Under Day VFR

	Column 1	**Column 2**
Item	Start Time of Flight Duty Period	Maximum Flight Duty Period
1	24:00 to 03:59	9 hours
2	04:00 to 04:59	10 hours
3	05:00 to 05:59	11 hours
4	06:00 to 06:59	12 hours
5	07:00 to 12:59	13 hours
6	13:00 to 16:59	12.5 hours
7	17:00 to 21:59	12 hours

	Column 1	Column 2
Item	Start Time of Flight Duty Period	Maximum Flight Duty Period
8	22:00 to 22:59	11 hours
9	23:00 to 23:59	10 hours

Maximum Number of Hours of Work

700.29

(1) An air operator shall not assign a flight duty period to a flight crew member, and a flight crew member shall not accept such an assignment, if, as a result, the member's number of hours of work will exceed

(a) 2,200 hours in any 365 consecutive days;
(b) 192 hours in any 28 consecutive days;
(c) 60 hours in any 7 consecutive days if the air operator has provided the member with the following time free from duty:
    i. 1 single day free from duty in any 168 consecutive hours, and
    ii. 4 single days free from duty in any 672 consecutive hours; or
(d) 70 hours in any 7 consecutive days if the air operator has provided 120 consecutive hours free from duty, including 5 consecutive local nights' rest, in any 504 consecutive hours and if
(e) the member is not assigned early duty, late duty or night duty,
(f) the member is not assigned a flight duty period greater than 12 hours, and
(g) the member's maximum number of hours of work is 24 hours in any consecutive 48 hours.

(2) An air operator who has assigned to a flight crew member a flight duty period that will result in the member's number of hours of work exceeding those referred to in paragraph (1)(d) shall ensure that the member has 120 consecutive hours free from duty, including 5 consecutive local nights' rest, before assigning a flight duty period that will result in the member's number of hours of work exceeding those referred to in paragraph (1)(c).

(3) A flight crew member's hours of work are to include

(a) in the case of a flight crew member on reserve, 33% of the time that they are in a reserve availability period; and
(b) in the case of a flight crew member on standby, 100% of the time that they are on standby.

Home Base

700.36

An air operator shall assign a home base for each of its flight crew members.

Nutrition Break

700.37

An air operator shall provide a flight crew member with not less than 15 minutes every 6 hours within a flight duty period to eat and drink.

[700.38 and 700.39 reserved]

Rest Periods — General

700.40

(1) An air operator shall provide a flight crew member with the following rest periods at the end of a flight duty period:

(a) if the flight duty period ends at home base,
   a. either 12 hours, or 11 hours plus the travel time to and from the place where the rest period is taken, or
   b. if the air operator provides suitable accommodation, 10 hours in that suitable accommodation; and
(b) if the flight duty period ends away from home base, 10 hours in suitable accommodation.

(2) If an air operator assigns a duty to a flight crew member for a period — excluding the time required for positioning — that exceeds by one hour or more the maximum flight duty period referred to in section 700.28, the rest period shall be the longer of

(a)the maximum flight duty period plus the amount of time worked beyond the maximum flight duty period, and

(b)the rest period referred to in subsection (1).

(3) An air operator shall have a means to determine the travel time referred to in subparagraph (1)(a)(i).

(4) An air operator shall provide a flight crew member with advance notice of the member's rest period and its duration.

Disruptive Schedules

700.41

(1) In addition to the rest periods required under section 700.40, an air operator shall provide a flight crew member with one local night's rest between

(a) the time at which late duty or night duty ends and the time at which the following early duty begins; or

(b) the time at which early duty ends and the time at which the following late duty or night duty begins.

(2) Subsection (1) does not apply when a flight crew member is at a location where local time differs by more than four hours from the local time at the last location where the member was acclimatized.

Rest Periods — Time Zone Differences

700.42

(1) Despite section 700.40, an air operator shall provide a flight crew member with the following rest periods when their flight duty period ends away from home base:

(a) 11 consecutive hours in suitable accommodation, if the local time at the location where the flight duty period began differs by four hours from the local time at the location where the flight duty period ends; and

(b) 14 consecutive hours in suitable accommodation, if the local time at the location where the flight duty period began differs by more than four hours from the local time at the location where the flight duty period ends.

(2) Despite section 700.40, an air operator shall provide a flight crew member with the following rest periods when their flight duty period begins at a location that is in a time zone other than the time zone in which home base is located and ends at home base:

(a) 13 consecutive hours, if the local time at the location where the flight duty period began differs by four hours from the local time at home base and the member has been away from home base for more than 36 consecutive hours;

(b) if the local time at the location where the flight duty period began differs by more than 4 but not more than 10 hours from the local time at home base, and

(i) the member has been away from home base for 60 consecutive hours or less and no part of the flight duty period occurs during any part of the member's window of circadian low, one local night's rest before the beginning of the next flight duty period, or

(ii) the member has been away from home base for more than 60 consecutive hours, or any part of the flight duty period occurs within any part of the member's window of circadian low, two local nights' rest before the beginning of the next flight duty period; or

(c) if the local time at the location where the flight duty period began differs by more than 10 hours from the local time at home base and

(i) the member has been away from home base for 60 consecutive hours or less, two local nights' rest before the beginning of the next flight duty period, or

(ii)the member has been away from home base for more than 60 consecutive hours, three local nights' rest before the beginning of the next flight duty period.

Rest Period — Positioning

700.43

(1) If a flight crew member is required by the air operator to travel for the purpose of positioning immediately after the completion of a flight duty period and the flight duty period plus the travel time required for positioning exceed the maximum flight duty period set out in section 700.28, the air operator shall provide the member with a rest period before the beginning of the next flight duty period that is equal to the duration of

(a) the number of hours of work, if the maximum flight duty period is exceeded by three hours or less; or

(b) the number of hours of work plus the amount of time by which the maximum flight duty period is exceeded, if the maximum flight duty period is exceeded by more than three hours.

(2) Despite subsection (1), the rest period provided to the member by the air operator before the beginning of the next flight duty period shall not be shorter than the rest period required under subsection 700.40(1).

(3) An air operator shall not require the positioning of a flight crew member if it would result in the member's maximum flight duty period being exceeded by more than three hours unless

(a) the member agrees to the positioning; and

(b)the member's flight duty period is not exceeded by more than seven hours.

(4) An air operator shall consider the time required for the positioning of a flight crew member, that is not immediately followed by the assignment of a flight duty period, as a flight duty period for the purpose of determining the duration of the rest periods in accordance with section 700.40.

[700.44 to 700.49 reserved]

Split Flight Duty

700.50

(1) A flight crew member's flight duty period may exceed the maximum flight duty period set out in section 700.28 by the following amount of time, if the air operator provides the member with a break, in suitable accommodation, of at least 60 consecutive minutes during the flight duty period:

(a) 100% of the duration of the break that is provided to the member during the period beginning at 24:00 and ending at 05:59;

(b) 50% of the duration of the break that is provided to the member during the period beginning at 06:00 and ending at 23:59; and

(c) in the case of an unforeseen operational circumstance, 50% of the duration of the break that is provided to the member in the case of the replanning of a flight duty period after it has begun.

(2) For the purposes of subsection (1), the duration of the break provided to the flight crew member is reduced by 45 minutes before the calculation is made.

(3) If a flight crew member is assigned to night duty, their flight duty period may only be extended under subsection (1) for three consecutive nights.

(4) The time referred to in paragraphs (1)(a) and (b) is the time at the location where the flight crew member is acclimatized.

(5) If a flight crew member on reserve is assigned to flight duty that includes split duty, the air operator may extend the reserve duty period by two hours if a break in accordance with this section is provided. There shall not be more than two flights during the flight duty period following the break.

Consecutive Flight Duty Periods

700.51

(1) An air operator shall not assign to a flight crew member more than three consecutive flight duty periods if any part of those periods falls between 02:00 and 05:59, unless the air operator provides the member with one local night's rest at the end of the third flight duty period.

(2) However, an air operator may assign to a flight crew member up to five consecutive flight duty periods even if any part of those periods falls between 02:00 and 05:59 if the member is provided with

(a) a rest period of three hours in suitable accommodation during each flight duty period; and

(b) 56 consecutive hours free from duty at the end of the last consecutive flight duty period.

Delayed Reporting Time

700.52

(1) If an air operator advises a flight crew member of a delay in the member's reporting time before the member leaves their suitable accommodation to report for duty, the duration of the flight duty period shall, for the purposes of determining the maximum flight duty period in accordance with section 700.28, be calculated starting from either the initial reporting time or the delayed reporting time, whichever results in the shorter period.

(2) Despite subsection (1), the flight duty period shall begin, if the delay in the reporting time

(a) is less than four hours, at the delayed reporting time; or

(b) is four hours or more but less than 10 hours, four hours after the initial reporting time.

(3) If the delay in the reporting time is 10 hours or more, the duration of the delay is considered to be a rest period if the air operator advises the flight crew member of the delay before they leave the suitable accommodation and does not disturb their rest period before an agreed time.

(4) Unless the air operator and flight crew member agree on a time when the air operator may disturb the member's rest period referred to in subsection (3), the air operator shall not interrupt the member's rest period other than

(a) during the 30-minute period before the time the member was initially scheduled to leave the suitable accommodation; or

(b) during the 60-minute period before the initial reporting time.

[700.53 to 700.59 reserved]

Maximum Flight Duty Period — Augmented Flight Crew and Rest Facilities

700.60

(1) Despite section 700.28, if the air operator assigns for a flight the number of additional flight crew members set out in column 2 of the table to this subsection and provides, for each additional member, the corresponding rest facility set out in column 3, the maximum flight duty period is the period set out in column 1.

TABLE 5: Maximum Flight Duty Period — Augmented Flight Crew and Rest Facility

	Column 1	**Column 2**	**Column 3**
Item	Maximum Flight Duty Period (Hours)	Additional Flight Crew Members	Rest Facility
1	14	1	class 3
2	15	1	class 1 or class 2
3	15.25	2	class 3
4	16.50	2	class 2
5	18	2	class 1

(2) The maximum flight duty period set out in subsection (1) applies only to a flight duty period during which there are three or fewer flights if

(a) for a flight duty period during which there is one flight, all flight crew members are provided with in-flight rest in a rest facility; and
(b) for a flight duty period during which there are two or three flights,
    a. the flight crew member who will be at the controls for the final landing is provided with two consecutive hours of in-flight rest in a rest facility; and

b. all other flight crew members are provided with 90 consecutive minutes of in-flight rest in a rest facility.

(3) A flight crew member's flight duty period shall include all of the time spent in the rest facility.

(4) The flight duty period for all flight crew members shall begin and end at the same location. However, for a period during which there is more than one flight and the first flight is scheduled to be less than 105 minutes long, an air operator may assign additional flight crew members to join a flight after the first flight, but all flight crew members shall end their flight duty period at the same location.

(5) At least one additional flight crew member shall be on the flight deck during all take-offs and landings, other than for the first flight, if additional flight crew members join the flight after the first flight in the case referred to in subsection (4).

(6) In-flight rest shall occur between the time at which the aircraft reaches 3 048 m (10,000 feet) above aerodrome elevation and 15 minutes before the scheduled beginning of the descent.

(7) If a flight duty period has been extended, an air operator shall provide each flight crew member with a rest period that is the longer of

(a) the duration of the duty period just completed, and

(b) 14 hours in suitable accommodation, or 16 hours when the member's duty period ends at home base.

Long-range Flights

700.61

An air operator shall not assign a flight duty period to a flight crew member, and a flight crew member shall not accept such an assignment, if the flight duty period occurs within the member's window of circadian low and includes a flight that follows a scheduled flight of more than seven hours.

Ultra Long-range Flights

700.62

(1) An air operator shall not assign a flight duty period of more than 18 hours to a flight crew member and a member shall not accept such an assignment.

(2) An air operator shall not assign a flight crew member to a flight with a scheduled flight time of more than 16 hours, and a member shall not accept such an assignment.

Unforeseen Operational Circumstances — Flight Duty Period and Rest Period

700.63

(1) If the pilot-in-command is of the opinion that an unforeseen operational circumstance that occurs within 60 minutes of the beginning of the flight duty period could lead to a level of fatigue that may adversely affect the safety of the flight, the pilot-in-command may, after consulting with all crew members on their level of fatigue,

(a) reduce a flight crew member's flight duty period;

(b) extend a flight crew member's flight duty period by the following number of hours in excess of the maximum flight duty period set out in section 700.28 or subsection 700.60(1) by

(i) one hour for a single-pilot operation,

(ii) two hours, if the flight crew is not augmented,

(iii) three hours, if the flight crew is augmented and there is one flight during the scheduled flight duty period, and

(iv) two hours, if the flight crew is augmented and there are two or three flights during the scheduled flight duty period; or

(c) extend a flight crew member's rest period.

(2) If a further unforeseen operational circumstance arises after take-off on the final flight for which the maximum flight duty period was extended under subsection (1), the pilot-in-command may, despite that subsection, continue the flight to the destination aerodrome or to an alternate aerodrome.

(3) An air operator shall extend the rest period after a flight duty period is extended under this section by an amount of time that is at least equal to the extension of the flight duty period.

(4) At the end of a flight duty period, the pilot-in-command shall notify the air operator of any change to a flight duty period made under this section.

Unforeseen Operational Circumstances — Split Flight Duty

700.64

(1) In the event of an unforeseen operational circumstance that occurs after the beginning of the flight duty period, an air operator may change a flight crew member's flight duty period to include a split flight duty in accordance with section 700.50 if the pilot-in-command agrees and the change is made before the scheduled break on the ground.

(2) The pilot-in-command shall not agree to the change if they are of the opinion, after consulting with all other crew members, that a split flight duty period could lead to a level of fatigue that may adversely affect the safety of the flight.

[700.65 to 700.69 reserved]

Flight Crew Member on Reserve

700.70

(1) An air operator shall notify a flight crew member on reserve of the start and end times of the reserve availability period and the location where it will take place no later than

(a) 12 hours before the start time of the reserve availability period, if no part of that period falls during the member's window of circadian low; or

(b) 32 hours before the start time of the reserve availability period, if any part of that period falls during the member's window of circadian low.

(2) An air operator shall not change the start time of a reserve availability period of a flight crew member by

(a) more than two hours before, or four hours after, the start time that was communicated to the flight crew member under subsection (1); or

(b) more than eight hours before or after the start time that was communicated to the member under subsection (1) in any period of 168 consecutive hours, unless the member is provided with two consecutive days free from duty within that period.

(3) If the start time of a reserve availability period is changed to a time after 02:00, the air operator shall not assign another reserve availability period to the flight crew member unless the member is provided with two consecutive days free from duty before the start time of that period.

(4) An air operator shall not change the start time of a reserve availability period so that it falls in a flight crew member's window of circadian low unless the air operator notifies the member of the change at least 24 hours before the revised start time.

(5) An air operator shall not assign to a flight crew member a reserve availability period that exceeds 14 consecutive hours.

(6) An air operator shall provide a flight crew member with a rest period of at least 10 consecutive hours between reserve availability periods.

(7) An air operator shall not assign to a flight crew member a reserve duty period that exceeds

(a) 18 consecutive hours, if the period begins between 02:00 and 17:59;

(b) 17 consecutive hours, if the period begins between 18:00 and 18:59;

(c) 16 consecutive hours, if the period begins between 19:00 and 20:59;

(d) 15 consecutive hours, if the period begins between 21:00 and 22:59; and

(e) 14 consecutive hours, if the period begins between 23:00 and 01:59.

(8) Despite subsection (7), an air operator may assign to a flight crew member a reserve duty period of

(a) no more than 20 hours, if the flight crew is augmented by one additional flight crew member and a class 1 rest facility or a class 2 rest facility is provided for the member;

(b) no more than 22 hours, when the reserve availability period begins between 21:00 and 03:00 at the location where the flight crew member is acclimatized, if the flight crew is augmented by two additional flight crew members and a class 1 rest facility or a class 2 rest facility is provided for each of the members; or

(c) no more than 26 hours, when the reserve availability period begins before 21:00 or after 03:00 at the location where the flight crew member is acclimatized, if the flight crew is augmented by two additional flight crew members and a class 1 rest facility is provided for each of the members.

(9) If the reserve availability period begins between 02:00 and 05:59 at the location where the flight crew member is acclimatized and the member is not contacted by the air operator during that period, the air operator may extend the reserve availability period by two hours or 50% of the reserve availability period that falls between 02:00 and 05:59, whichever is shorter.

(10) An air operator shall not assign to a flight crew member a flight duty period that exceeds the maximum reserve duty period set out in subsection (7) or (8) or the maximum flight duty period set out in section

700.28, whichever is shorter, unless the air operator

(a) provides the member with at least 24 hours' notice of the assignment before the beginning of the flight duty period;

(b) does not provide the notice during the period that begins at 22:30 and ends at 7:30; and

(c) assigns no duties to the member between the time the notice is provided and the beginning of the flight duty period.

Flight Crew Member on Standby

700.71

(1) The air operator shall provide a flight crew member on standby with a place that provides adequate protection from the elements, where it is possible to sit and to access food and drink and, if possible, that is not accessible to the public.

(2) If the flight crew member on standby is not assigned to flight duty, the air operator shall provide them with the following rest periods:

(a) if the member is at home base,

(i) 12 hours, or 11 hours plus the travel time to or from the member's lodging, or

(ii) if the air operator provides suitable accommodation, 10 hours in that suitable accommodation; or

(b) if the member is away from home base, 10 hours.

Controlled Rest on Flight Deck

700.72

(1) A flight crew member shall not take a controlled rest on the flight deck of an aircraft that is operated by an air operator unless

(a) the rest is 45 minutes or less, is taken during the cruise portion of the flight and is completed at least 30 minutes before the scheduled beginning of the descent;

(b) no other flight crew member is taking a rest at that time; and

(c) at least two flight crew members remain on the flight deck.

(2) Before taking a controlled rest on the flight deck, a flight crew member shall

(a) transfer their duties to a flight crew member who is not taking a rest;

(b) review the status of the flight, including any specific duties to be performed during the rest;

(c) review the wake-up criteria; and

(d) advise the flight attendants of the start and end times of the rest.

(3) A flight crew member who takes a controlled rest on the flight deck shall not assume any duties, and no other flight crew member shall transfer any duties to them, until 15 minutes after the end of the rest.

(4) When a flight crew member returns to duty, another flight crew member shall provide them with an operational briefing.