



## **OPERATIONAL SAFETY** is the **ENSURES** the sustainability of transport

Managing to change the way safety is perceived, valued and prioritized is one of the biggest challenges, transversal to both areas, insofar as it requires that it be considered an organizational priority and, with that, achieve results that are not restricted to the implementation of the safety management system, but which have an impact on the sustainability of air and maritime transport in Cape Verde.

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Since its creation, IPIAAM has been working visioning to position itself on a national level, as the civil aviation and marine investigation authority, founded in the accident prevention and safety promotion culture in air transport and maritime transport in Cabo Verde.

### **08 INVESTIGATION OF MARITIME ACCIDENTS AND INCIDENTS - FROM THE CREATION OF IPIAAM TO THE PRESENT**

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### **10 IPIAAM RECOMMENDS**

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# Message FROM THE BOARD OF DIRECTORS

The Board of Directors of the Institute for the Prevention and Investigation of Aeronautical and Maritime Accidents – IPIAAM, sends its warm regards to all appreciated readers of our Newsletter, especially to civil aviation and maritime professionals, hoping you may have a good reading and that the information presented here will contribute positively to the safe performance of your activities.

On December 12nd 2018 the IPIAAM was created through the merger of the Aircraft Accident Prevention and Investigation Commission – CPIAA with the Accidents and Incidents Prevention and Investigation Office – GPIAM and its effective installation occurred on May 28th, 2019, with its statutory bodies taking office.

The institute was set up to positively contribute to the prevention of maritime and aeronautical occurrences, through issuing safety recommendations arising from accident and incident investigations, but also by carrying out safety studies in these two important modes of transport.

During this short period of operation since the inauguration of its bodies, IPIAAM was able to establish itself as a credible organization, gaining recognition among the international community of civil aviation and the maritime area, not only for being the first multimodal research on the African continent, but also, and mainly, for the work carried out in favor of operational safety.

As a matter of fact, in these 3 years of IPIAAM effective operations, despite the pandemic context experienced, with substantial impacts at a social, economic and financial level, with a special focus on civil aviation, the institute, with the altruistic collaboration of its technicians, managed to materialize the established objectives, successfully concluding its installation, consolidating itself as the independent authority for the investigation of accidents in these two main means of transport in our country.

The institute, as a result of the investments made, currently has two fully functional facilities, equipped with all the necessary equipment for the efficient conduct of investigations of aeronautical and maritime occurrences. Its Headquarters, located in the City of Mindelo, São Vicente, works as the center for the maritime area and the Delegation in the City of Praia, as the center responsible for investigating incidents in the aviation sector.

As a result of the investments made in human resources and the acquisition of equipment, IPIAAM was able to successfully complete all the investigative processes under its responsibility in civil aviation and the maritime area.

In addition to the investigations carried out and, in compliance with its statutory obligations to promote a safety culture anchored in operations conducted by properly trained technicians, aware and aware of their roles and responsibilities, the IPIAAM performed with the support of important partners such as EASA and the World Bank, various training actions for national technicians, with emphasis on training in maritime accidents investigation, administered by the International

Maritime Safety and Environment Academy - IMSSEA, training in aeronautical accident investigation given by the former Director of the National Transportation Safety Board – NTSB, from the United States, seminar “Aviation Safety Week” and the first table exercise for the maritime sector.

These actions benefited more than 100 national professionals from all air and maritime institutions, which will contribute to the technical enrichment of operations, with a reflection in the increase of operational safety in the maritime and aerial transport.

It is our conviction that with the work carried out so far, all the conditions will be created for IPIAAM to continue to grow and contribute, in a systemic and structured way, to increasing safety, efficiency and predictability of transport in Cabo Verde.

We conclude wishing you a good reading,

The Board of Directors



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# OPERATIONAL SAFETY AS TRANSPORT SUSTAINABILITY FACTOR

Since its creation, IPIAAM has been working visioning to position itself on a national level, as the civil aviation and maritime investigation authority, founded in the accident prevention and safety promotion culture in air transport and maritime transport in Cabo Verde.

As one of the first multi modular institution in the African continent, IPIAAM is the authority with independence to conduct civil aviation and maritime accident investigations as per ICAO (International Civil Aviation Organization) and IMO (International Maritime Organization) recommendations, having no regulatory, executive or supervision powers, which are responsibilities of the regulatory entities of both sectors, Civil Aviation Authority (CAA) and Maritime Administration.

With the emergence of the institute, accident and incident dossiers became IPIAAM responsibility, which investigates aerial and maritime occurrences, issuing safety recommendations and also emphasizing prevention, training and sensitize the technicians in these areas for the detection and notification of any anomalies that may occur in aeronautical and maritime industry.

Accident investigation consists of a process that is conducted in order to prevent the occurrence of accidents and incidents and/or their repetition, therefore the importance of stakeholders from both sectors be aware of the safety recommendations and ensure their implementation, in order to collaborate in the continuous improvement of the Cabo Verde's transport safety systems.

According to ICAO, operational safety is defined as “the state in which the risk of injury to persons or damage to property is reduced and maintained at an acceptable level through a continuous process of identifying and managing hazards”. This concept highlights that when analyzing the real operational context, there is the possibility of failures and operational errors, and therefore it is not possible to absolutely eliminate the occurrence of accidents or serious incidents, despite the continuous process of hazard identification and risk management.

Therefore, it's not a matter of eliminating hazards and errors, but it is a matter of identifying which mechanisms allow their formalization and outline the best responses, which allow to maintain an acceptable degree of control and management of operational processes.

**In this perspective, IPIAAM has been monitoring safety recommendations implementation and promoting actions in terms of accident prevention, in order to reinforce the degree of commitment to operational safety and privileging inter-institutional cooperation.**

**Monitoring has been done through the promotion of different activities, among which the following stand out:**



## AVIATION SAFETY WEEK

Integrated in the same event, the workshop evocative to the theme “Operational Safety in Civil Aviation” and the 7th Meeting of the BAGAIA Commission, which took place, from 11 to 15 April 2022, in the city of Santa Maria, Sal island.

The event, which involved the entire aeronautical sector, had the purpose to promote debate, dialogue and create synergies amongst the different stakeholders of the sector, on their role in civil aviation operational safety, through knowledge and experience sharing.

The workshop covered topics such as:

- i) Civil aviation authorities role, the implementation of the operational safety culture and its challenges;
- ii) The regional organizations importance in the operational safety system;
- iii) The contribution of investigation authorities in reducing the rate of aeronautical accidents; and
- iv) The role of education in civil aviation and the importance of operational safety in promoting tourism in Cape Verde.

During the Operational Safety in Civil Aviation Workshop, through the various panels presented and discussions generated, the importance of adopting a more comprehensive approach to operational safety and implementing an effective safety culture in civil aviation was revealed, focused on accident prevention.

This meeting brought together on the island of Sal renowned specialists in the aeronautical industry at regional and international level, with emphasis on the seven African countries that are members in the Investigation of Aeronautical Accidents Agency for the Banjul Group (BAGAIA), namely, Cabo Verde, Guinea, Gambia, Ghana, Liberia, Nigeria, Sierra Leone, as well as the European Aviation Safety Agency (EASA), the National Transportation Safety Board (NTSB) and the Transportation Security Administration (TSA), from the United States of America, ICAO (International Civil Aviation Organization) represented by the Office for





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Central and West Africa (WACAF), the Prevention and Investigation of Aircraft Accidents and Railway Accidents Office (GPIAAF), from Portugal, foreign and national educational institutions, namely, the University of Beira Interior (UBI) and the Technical University of the Atlantic (UTA), as well as all national players in the aeronautical sector.

Thus, it is hoped that Aviation Safety Week represents a historic moment for the materialization of several objectives set for the aeronautical sector and, since the Headquarters country of the Accident Investigation Agency of the Banjul Agreement Group (BAGAIA) is Cape Verde, hosting the 7th Meeting during the event, contributed positively to the international recognition of national civil aviation.



Organized by IPIAAM in partnership with Enapor, Enacol and Vivo Energy, within the institutional cooperation protocols signed between them, the exercise took place on October 11th and 12th of 2022, in the city of Mindelo, island of São Vicente.

Performed in two phases, the first relating to the analysis of the legal basis applicable in the sector and the clarification of the specific and shared competences of the institutions that build the national maritime sector, and the second concerning the carrying out of a Tabletop exercise, where the scenario of a fuel ship adrift in Porto Grande Bay, with the possibility of being stranded, the EMEX-22 had the participation of fifteen (15) national institutions.

There were two days of intense sharing and debate around each institution competences, synergies between public and private sectors, where the need to establish procedures in cases of emergency and the endless search for solutions to possible situations that may occur in maritime areas under national jurisdiction was identified.



Preventing an accident from occurring or from happening again, reinforces even more the need to continuously promote a safety culture, either by changing processes, procedures, or even by raising awareness and changing mindsets among professionals who integrate the sectors of civil aviation and maritime sectors.

Sustainability in these sectors, analyzed wider, comprises aspects related to the safety of operations and the provision of services, which must receive the same attention within organizations, so as not to compromise the balance that is essential for the proper functioning of the systems in question. In this line, operational safety emerges as a product arising from the need to carry out activities related to the provision of services, which are decisive for good performance and obtaining results and ensuring the sustainability of the enterprises that make up both sectors.

Thus, if organizations privileges the allocation of resources that favor the provision of services, to the detriment of operational safety, this will lead to a greater occurrence of errors and, consequently, an increase in the probability of accidents and incidents occurring.

On the other hand, successive failures related to the activities of service providers, which contribute to the malfunctioning of the system, can lead to the bankruptcy of organizations and generate unpredictable consequences for the image of sectors.

Managing to change the way safety is perceived, valued and prioritized is one of the biggest challenges, transversal to both areas, taking in account it requires that it be considered an organizational priority and, with that, achieve results that are not restricted to the implementation of the safety management system, but which have an impact on the sustainability of air and maritime transport in Cape Verde.

Operational safety guarantees the sustainability of transport, as the success of this activity is based on the trust of passengers, entities and the community in general. For operational safety to be the pillar of the transport system, it is necessary to implement a transversal safety culture throughout the companies. A permanent search for points of improvement and excellence. Only then can we guarantee an efficient and sustainable system.





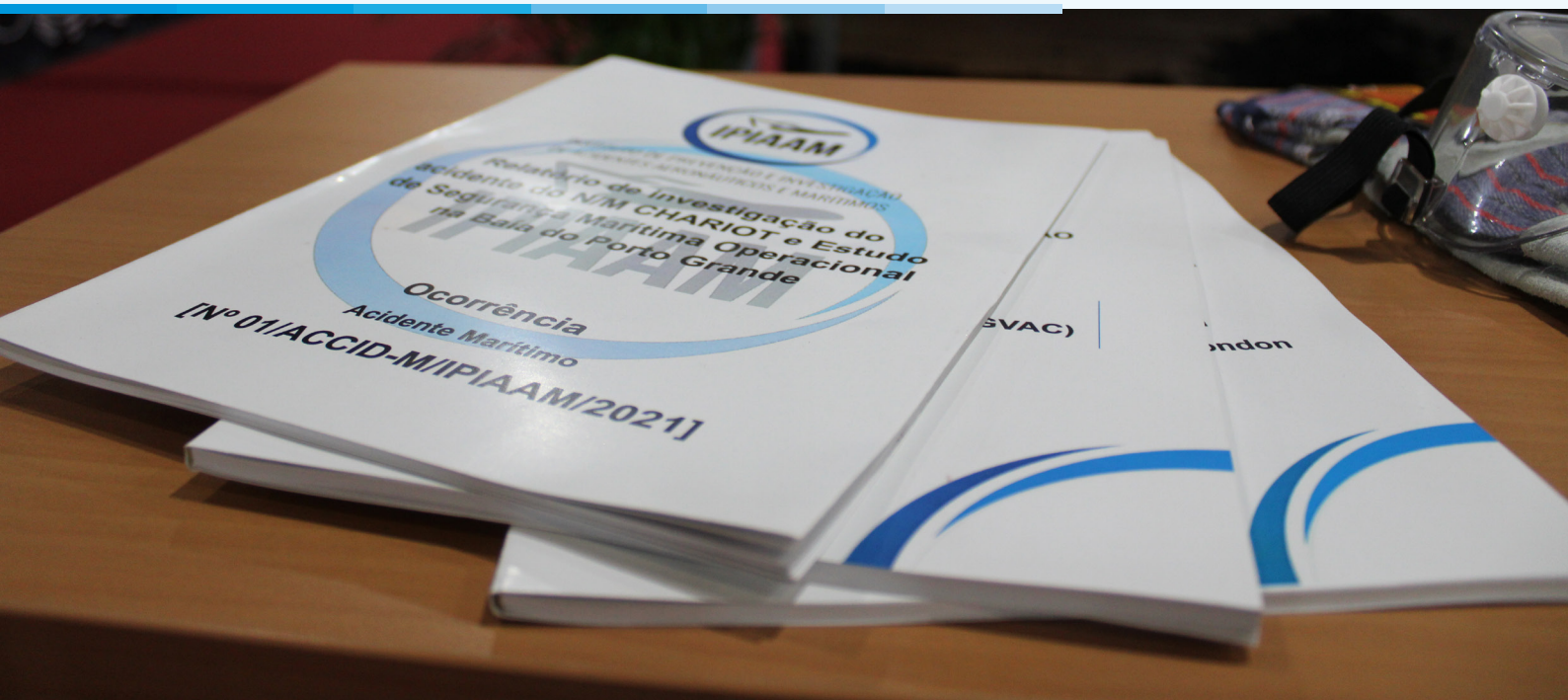


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# INVESTIGATION OF MARITIME ACCIDENTS AND INCIDENTS - FROM THE CREATION OF IPIAAM TO THE PRESENT

The investigation process of accidents and incidents is triggered from the receipt of a notification by IPIAAM, which may determine, within the scope of its statutory attributions and in accordance with the applicable regulations, by opening an investigation to identify the contributing factors and the causes of the accident or incident.

The investigation proceeds with the elaboration of a Preliminary Report, which includes the safety recommendations, resulting from an investigation of an accident and/or incident in the aeronautical or maritime sector, which is forwarded to the substantially interested parties, so that these can be pronounced. Upon receipt of the comments, IPIAAM analyzes these same comments and, if justified, introduces the necessary and relevant changes, followed by the approval and dissemination of the Final Report.

The investigation reports and the respective safety recommendations, issued by IPIAAM, are made public through their publication on the Institute's website, and, to date, IPIAAM has carried out 14 safety investigations, 4 in the aeronautical sector and 10 in the maritime sector, and issued 43 safety recommendations, 36 for the maritime sector and 7 for the aeronautical sector.

Safety recommendations are the result of the interaction of many factors, subject to in-depth analysis during the investigation process and although IPIAAM does not have the power to force their implementation, they are key elements for the periodic updating of procedures, with a view to accident prevention, ensuring the continuous improvement of aeronautical and maritime operations.



**After completing three years of existence and IPIAAM being in the consolidation phase, some of the accident investigations, of a maritime nature, carried out are highlighted:**

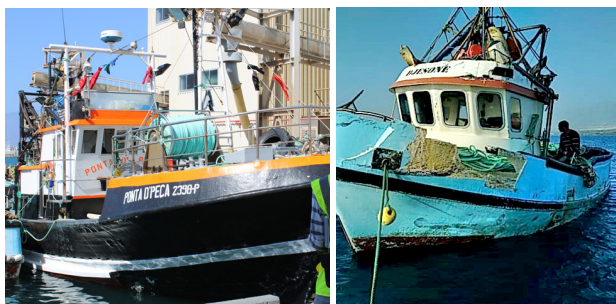
#### **Accident Investigation with N/M DEIMOS**



The accident with the multi-purpose vessel N/M DEIMOS, flying the flag of Panama, occurred on November 13, 2020, while leaving the Port of Vale de Cavaleiros, Fogo Island, resulting in its running aground in the vicinity of the mentioned port.

This accident resulted in the total loss of the ship, however there was no record of any injuries and in the case of a foreign flag ship, the investigation had the collaboration of the Flag State – Panama.

#### **Investigation of the Accident between fishing vessels “PONTA DE PEÇA” and “DJESONE”**



The accident between the fishing vessels “PONTA DE PEÇA” and “DJESONE”, on February 7, 2022, in the São Vicente Channel, more specifically in the area of the São Pedro lighthouse, resulted in considerable material damage and one fatality, fisherman on board the vessel “DJESONE”, being for this reason classified as a very serious accident and, consequently, of mandatory investigation by the national investigation authority.

#### **Accident Investigation with the “N/M CHARIOT” and safety study in Porto Grande Bay**



On September 21, 2021, in Porto Grande Bay, São Vicente island, the N/M “CHARIOT” ran aground on the beach of “Cova de Inglesa”.

The accident occurred after the chain broke and the vessel was adrift with no one on board. The N/M “CHARIOT” was anchored in Porto Grande Bay, with the MPP inoperative, since January 2018, and without a minimum crew since May of the same year, when it started to have on board, only one day guard and one night guard.

IPIAAM decided to open an investigation into this accident, as well as to carry out an operational maritime safety study in Porto Grande Bay, given the repetition of this type of occurrence in what is considered one of the most beautiful bays in the world.

***Link to the investigation report of the “N/M CHARIOT” accident and safety study in Porto Grande Bay in “Leitura em Dia”***



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# IPIAAM RECOMMENDS

- Birds are the main responsible for aircraft collisions with animals (a phenomenon known as Bird Strike), mainly during take-off and landing, which are the moments with the highest incidence of this type of incident.
- The increase registered in recent years, particularly at Praia International Airport, Nelson Mandela, poses a significant threat to flight safety and endangers animal life and the lives of all passengers.
- In Cape Verde, one of the main factors is the presence of garbage, cattle and pigeon breeding in the vicinity of airports.
- Aware of the bird strike phenomenon and its consequences, IPIAAM, together with several partner institutions, launched on March 11, 2022, Bird Safe, the flight safety and life protection program.
- The Bird Safe Working Group, which includes institutions from the civil aviation sector, municipal and state entities, non-governmental organizations (Biosfera), associations and social and community activists, joined in this initiative, with the common purpose of preventing, alerting and sensitize the general population on this issue and, above all, promote a change in behavior within the communities surrounding national airports.
- IPIAAM then suggests preventive measures that are ensured by the responsible entities, whose specialized professionals and inserted in the Bird Safe program (Flight Safety and Life Protection Program) ensure compliance with the defined rules and try to guarantee everyone's safety.

**Bird Safe, for safer airports, and for the lives of all of us.**



## YOUR ROLE IS FUNDAMENTAL



Do not deposit waste in the surrounding areas of the airport. Concentrations of urban, organic and other waste are harmful. Use the areas properly designed for this purpose.



Do not herd livestock in the vicinity of the airport. Cattle are one of the main bird attractions. Use alternative areas for grazing your cattle.



Avoid keeping, feeding or releasing birds, such as homing pigeons, in areas adjacent to airports. The escape of one of them, or a release at a time of possible encounter with the departure or arrival of an aircraft, can cause an accident with fatal consequences.



# QUOTES ABOUT IPIAAM AND SECTORS



## MARITIME ACCIDENT INVESTIGATION TRAINING

### IMSSEA TRAINERS

Prof. Francic and Capt. Haidar

"A big Thanks! To all the Team of IPIAAM for the consistent and persistent approach to this training course devoted to its own Officers and shipping Stakeholders, well involved in this experience, and for having strongly believed in this skills improvement design."

## AERONAUTICAL ACCIDENT INVESTIGATION TRAINING RETIRED SENIOR NTSB INVESTIGATOR

Mr Dennis Jones

How do you see the aviation industry in Cabo Verde?

"My first trip to Cabo Verde was in September 2013, and I was only in the country for less than 48 hours. However, during this visit of nearly 2 weeks, I have had the opportunity to tour Santiago during which I was moved to express frequently to colleagues that the potential of aviation in the country is enormous for a variety of economic sectors, including trade, tourism, and transport. Medical emergency service (Medevac), seaplane, and helicopter operations are just a few areas of the aviation segments that would benefit the nation."

## AVIATION SAFETY WEEK

### ICAO - WACAF REGIONAL DIRECTOR

Mr Prosper Zo'o Minto'o

"So the organization of Aviation Safety Week will help countries diplomatically and technically to realize an exceptionally fast and reliable network of global air mobility, connecting families, cultures and businesses around the world and promoting sustainable growth and prosperity wherever aircraft fly".







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## BIRD SAFE

### Minister of Tourism and Transport

Dr. Carlos Santos

"Launching this campaign is yet another step taken to consolidate, transform and reaffirm the responsibility that the Government and institutions, namely IPIAAM, ASA, AAC have in this matter, which is to have an increasingly safe Civil Aviation in order to continue to consolidate this intangible asset that we cannot renounce, which is air safety and consequently the recognition that we have abroad".

## EMEX-22

### Minister of the Sea

Dr. Abraão Vicente

"These are the exercises that demonstrate, somehow, the public utility of the institutional design that we are doing and have done together in recent years in Cape Verde. This exercise should not be seen as something ordinary, but a preparation for what is to come and it will come".



# REFERENCES

[https://www.ipiaam.cv/documento/pendoc/1666099308\\_pt.pdf](https://www.ipiaam.cv/documento/pendoc/1666099308_pt.pdf)

Following the accident that occurred with the multi-purpose vessel N/M "CHARIOT", while anchored in Porto Grande Bay, São Vicente Island, IPIAAM determined, within the scope of its statutory attributions, investigate the circumstances and causes in which the accident occurred, as well as prepare a safety study in the same bay, with the purpose of prevention and avoid accidents with the same causes happening again.

<https://unitingaviation.com/news/economic-development/states-at-icaos-assembly-recognize-the-critical-role-of-air-transport/>

States at ICAO's Assembly recognize the critical role of air transport - Uniting Aviation

During the 41st ICAO Assembly, Member States recognized the critical role of air transport for sustainable political-economic development at a global level and for strengthening the existing legal framework.

The ICAO Assembly is the organization's sovereign body, and the Forum where Member States define the organization's guidelines for the next three years and take decisions that will impact the commercial civil aviation sector worldwide.

<https://safety4sea.com/cm-el-faro-sinking-poor-seamanship-on-the-spotlight/>

El Faro sinking: Poor seamanship in the spotlight - SAFETY4SEA

The sinking of the container ship 'El Faro' in October 2015, is considered one of the greatest maritime tragedies in the recent US history. The ship had sailed directly into the path of Hurricane Joaquin.

This article describes the accident investigation process and highlights the main conclusions and respective safety recommendations.

# TEAM OF IPIAAM



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DE ACIDENTES AERONÁUTICOS E MARÍTIMOS



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