

**57<sup>th</sup> CONFERENCE OF  
DIRECTORS GENERAL OF CIVIL AVIATION  
ASIA AND PACIFIC REGIONS**

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**AGENDA ITEM 3: AVIATION SAFETY**

**THAILAND AVIATION SAFETY ACTION PLAN**

Presented by the Civil Aviation Authority of Thailand (CAAT)

**SUMMARY**

This paper details the progress of Thailand in implementing its State Safety Programme as well as the results of the successful implementation of SSP activities.

We have established our national aviation safety strategy, which is set out in the Thailand Aviation Safety Action Plan (TASAP), this was done with key stakeholders of our aviation system and based on safety data and information collected in Thailand, also considering inputs from the international aviation community in APAC region and globally.

## THAILAND AVIATION SAFETY ACTION PLAN

### 1. INTRODUCTION

A safe aviation system protects our families and friends in Thailand and abroad as well as contributing to the economic development of Thailand.

Since 2015, we, the Civil Aviation Authority of Thailand, have been working on developing and implementing our State Safety Programme with our colleagues from the industry.

After years to develop and implement the programme we are seeing the first major results of the implementation of SSP activities. The implementation of our SSP involved the development of supporting regulations and guidance, implementation of the safety data collection and processing system (SDCPS), recruitment of staff in the safety management office (SMO) and training of our staff,

In September 2021, we published our first National Aviation Safety Plan which we have titled the Thailand Aviation Safety Action Plan (TASAP) which contains what needs to be done to improve aviation safety within Thailand in all domains and at all levels.

It was a long journey and this was only possible through active cooperation with our industry, through our National Civil Aviation Safety Board (SSP Coordination Group).

Today, we are proud to share with you how we successfully implemented our SSP activities and developed our strategy to enhance safety in Thailand as detailed in the Thailand Aviation Safety Action Plan (TASAP).

Aviation safety demands continuous improvement and all of us in the aviation system must play our part in improving aviation safety. We therefore recognise that we have to continue to evolve and mature our SSP and the Thai aviation safety culture.

### 2. DISCUSSION

#### 2.1 Background: SSP activities in Thailand

Our State Safety policy and our SSP document detailing our programme were initially issued in April 2019 and first revisions were approved in June 2022 to reflect the latest changes in ICAO SARPs.

Regulations to support the data collection were published in 2020 with corresponding guidance material:

- for reporting of safety occurrences,
- for safety data protection.

The main activities for our safety management office staff are to collect, process and analyse the safety data from our aviation system and to consider information from other sources such as ICAO, EASA, DGAC France, CAA Singapore, IATA, and many others.

Our aviation system provides us precious information in particular through the CAAT occurrence reporting system and through the surveillance of the industry.

The quality of the data from our industry can be variable and our staff are improving in how they categorise, process and analyse the data to make better sense of it and to identify trends.

We use the ECCAIRS system as our main database for occurrences and use the ARMS methodology 'Event Risk Classification' scheme to classify the risk of occurrences.

The analyse of the data is made at different levels:

- At SMO level with SMO staff being responsible for the initial analysis and categorisation of occurrences received from the industry. This initial review assesses the quality of the data and information in the occurrence report.
- At SMO and Safety oversight department level, with SMO staff continuously working with Safety Key Personnel (SKPs) from the safety oversight departments through a series of meetings to analyse each occurrence to define any necessary action.
- At CAAT management level through our Aviation Safety Action Group (ASAG) who meets on a regular basis, analyses the collated safety performance data and information to discuss any trends and decide on appropriate actions.

This group is composed of our DG, managers of the safety oversight departments and safety experts from the CAAT.

- At State level, with our National Civil Aviation Safety Board (NCASB) who reviews the trends and plans proposed by the CAAT before issuance and application.

This group includes our DG, CAAT SMO staff, CAAT oversight department managers and senior representatives from the AAIC, Thai Military and Police and from our industry.

As a result of the analysis work and CAAT occurrence investigations we were able to develop our TASAP and started to publish annual safety reports and safety bulletins to highlight safety issues and share best practices with our industry. Safety Management Office also issues safety recommendations to CAAT safety oversight departments, when areas of safety concerns are identified; to allow them to focus more on areas of greatest concern.

To encourage occurrence reporting, we promote the implementation of a just culture across the industry. We updated our enforcement policy to include just culture principles for assessing the culpability of individuals and also delivered a series of just culture training sessions and workshops for our CAAT inspectors and AAIC investigators.

To improve coordination, we have established a regular (6 monthly) liaison meeting with the Air Accident Investigation Committee. This will allow us to improve the communication between the accident investigators and staff in the Safety Management Office.

All this work, and in particular, the analysis of the safety occurrences was possible as a result of appropriate recruitment of experts and active cooperation and sharing of experience with our friends from other Civil Aviation Authorities. As of today, our team includes competent staff in air operations, aircraft maintenance and airworthiness management and safety data analysis. For the other domains, our SMO still relies on expertise in the safety oversight departments.

With our action plan, processes and SMO team established, we now enter a new cycle to implement the actions contained in the plan. This includes a change in regulations towards a performance-based environment that will progressively become effective in Thailand within the coming years. This includes an effective implementation of our SSP that started with the TASAP implementation and a more effective safety oversight system.

Again, this could not have been achieved without a strong cooperation with our industry.

## 2.2 Our challenges in implementing the SSP activities

### **The involvement of the whole aviation community**

As we needed to involve all the stakeholders in our SSP, we had to implement the appropriate policies, processes and procedures to share the safety information at an appropriate level.

The breakdown of the roles and responsibilities between the different stakeholders in the SSP was a challenge.

We started by establishing our ASAG to ensure that CAAT oversight managers were involved and engaged with the Safety Management Office for the development of the TASAP. We then established the NCASB that includes our industry and who is responsible for agreeing the contents of the TASAP. This included establishing a smaller Aviation Safety Focus Group (ASFG) that reviewed the initial safety data and information to identify our top operational safety risks, precursor events and contributing factors.

We also prepared a Memorandum of Understanding with the Search and Rescue (SAR) Services and AAIC (AIG) to clarify the way the CAAT will interact with them.

To save time in the SSP implementation, a strong focus should be put on the nomination of the different bodies and on their roles and responsibilities. These bodies should be involved at the very early stages of the SSP development.

Despite the efforts made, the roles and responsibilities of the CAAT and of the AAIC (AIG) for accident and serious incidents investigations are still unclear for some industry stakeholders and we are still working on a safety bulletin to clarify this for the industry. This bulletin explains the different levels of safety investigations that are run in parallel by the operator, CAAT and AAIC.

### **The difference between the SSP and the NASP**

There was a confusion at the beginning of the SSP development between the terms programme and plan, as only one word exists to describe both in Thai language.

It was helped when we defined our plan as an action plan (TASAP) which made it more clear to everyone.

### **The attempt to recover the past occurrences**

At the beginning of ECCAIRS implementation, the CAAT attempted to enter historic occurrences into ECCAIRS. This was not successful as the quality of the data received in the past was poor and the missing data could not be retrieved. We then decided to focus on the most recent occurrences reports received which allowed us to perform appropriate analysis.

Since we have published an occurrence reporting regulation with supporting guidance material we have seen an improvement in the quality of the data and an increase in the number of occurrence reports.

### **The Quality of the data**

Even though we, now, have appropriate regulations and guidance for occurrence reporting we still have to review every report received to ensure the necessary data is contained to perform the analysis of the event.

This data quality check is performed as soon as the report is received to identify any missing data so that the originator can be contacted to provide the necessary data.

### **The availability of operational data**

Initially, our analysis of the data was limited to the number of occurrences only and we were not able to assess the data against the volume of activity (number of aircraft movements, flight hours).

In addition, we were unable to compare the issues between different aircraft and engine types.

Today, we have identified and collected the necessary operational data to improve our analysis and to identify trends and safety issues.

### **Recruitment**

At the very early stages of the SSP implementation, it was difficult to identify the appropriate profiles to support the SSP implementation in particular for the safety data analysis.

At first, SMO staff were generalists and were mostly relying on the safety oversight departments for technical expertise.

We found later, that this may not be the best way to proceed to react quickly enough to significant safety events. For this reason, we decided to develop the technical expertise of existing SMO staff and to recruit some technical experts in some specific areas.

We now have, in our SMO team, experts with experience in industry for air operations, continuing airworthiness and Flight Data Analysis. This is improving the analysis, initial risk assessment and risk classification of occurrences.

This allows us improve our understanding of occurrences so we can categorise them more accurately and react more effectively when a significant event is reported.

### **Just culture**

The number of occurrences reported to the CAAT has increased but we believe that it can be further improved, even though it will require an improvement in the reporting culture that will take time.

The implementation of a just culture across the industry is key to increasing reporting levels as people in our industry will know that they would not be blamed for errors or mistakes they may have made. We extend just culture principles to how CAAT deals with organisations in our industry through our enforcement policy.

In the early days of our SSP implementation, the principles of a just culture were not perceived well at a CAAT and state level with confusion between a non-punitive culture and a just or fair culture.

We managed to clarify that a Just culture is not a non-punitive culture but is more of a fair culture to guarantee that people who do not deserve to be punished will not be. We also reinforced the fact that a punitive culture will not enhance the overall safety culture in the system as punishment tends to focus on front line personnel even when there were casual and contributing factors sometimes management related.

We may have saved some time if the concept of a just culture and the reason for its necessity had been better explained to our leaders from the beginning.

This initiative to promote a just culture was supported by our friends and colleagues from the French Civil Aviation Authority (DGAC France) and Airbus.

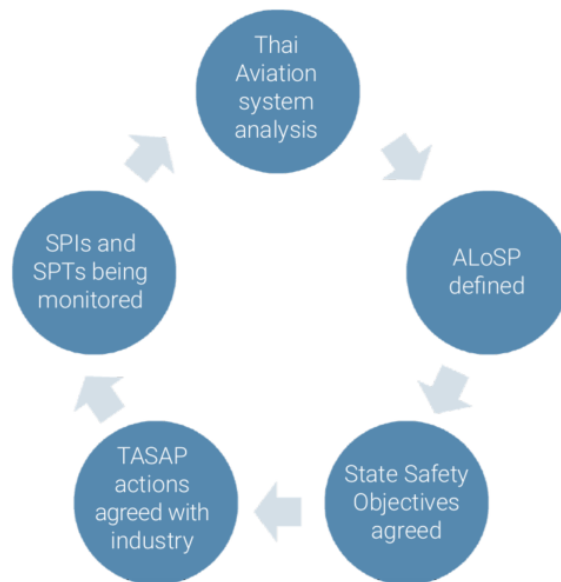
### 2.3 Development of the National Aviation Safety Plan with the industry

Once the first SSP document was published in 2019 and the ECCAIRS system functional, the CAAT has put a great effort on analysing the data collected and to prepare a strategy to enhance aviation safety in Thailand.

A fundamental part of the SSP – and underpinning the TASAP - was for Thailand to set out its Acceptable Level of Safety Performance (ALoSP).

Our ALoSP defines how safe our aviation system must be to remain acceptable to the government, the CAAT, the aviation industry and the travelling public. Our ALoSP is a series of high-level objectives with supporting indicators.

To meet the target ALoSP, we analysed our aviation system and considered regional and global aviation safety plans to develop a range of State Safety Objectives, each with corresponding actions.



The State Safety Objectives and actions fall into two categories:

1. Generic organisational objectives (GEN)  
GEN objectives focus on implementing and improving safety management at every level of the system.  
This includes driving the work of the CAAT and other stakeholders to develop the necessary structural and organisational capabilities to improve aviation safety.  
Although CAAT plays a key role in most GEN objectives, Thai industry also plays a critical role in supporting the CAAT.
2. Specific operational objectives (OPR)  
OPR objectives focus on safety outcomes to reduce the number and severity of safety events. OPR objectives intend to address identified safety issues in Thailand. These need to deal with the High-Risk Category (HRC) occurrences defined in the GASP and AP-RASP and are, by nature, outcome oriented.  
The Thai industry plays a leading role in achieving these objectives with support from the CAAT.

The implementation of the actions contained in our TASAP will be monitored on a regular basis through safety performance indicators and actions will be considered as achieved only when corresponding safety performance targets are reached.

Even though we are proud and satisfied with the first version of our plan, we are already working with our industry on a first revision to enhance and revise some contents.

To that purpose, the CAAT is organising with the assistance of the French authority and industry a workshop on safety hazards and risks identification.

This important event will involve staff from AOC holders, Approved Maintenance Organisations, Approved Training Organisations, Air Navigation Service providers, Airport operators, ground handling organisations; both at management and at operational level.

Our objectives for this workshop are:

- To enhance our understanding of the aviation hazards and risks in Thailand
- To serve the future update of Thailand Aviation Safety Action Plan (TASAP)
- To Strengthen information sharing within the Thai Air Transport System

In parallel, the TASAP implementation leads us to work more and more with our industry for the transition to new regulations (aligned with EASA regulations). This also requires a considerable amount of industry engagement through training sessions for industry managers on the new regulations.

We will reach our ALoSP only through active collaboration with our industry, and the CAAT has a leading role to gather the Thai Aviation community together.

### **3. ACTION BY THE CONFERENCE**

3.1 The Conference is invited to note the information contained in this Paper

- a) Access the Thai SSP document and TASAP on CAAT website;

Thai SSP: <https://www.caat.or.th/th/archives/category/data-research-th/safety-th/1-ssp-documents>

TASAP: <https://www.caat.or.th/th/archives/43538>

- b) Consider the successes and challenges for Thailand and how they may help your SSP and NASP implementation.
- c) Share their own experiences and challenges in SSP and NASP implementation.
- d) Contact [inter\\_focalpoint@caat.or.th](mailto:inter_focalpoint@caat.or.th) to obtain more information.

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