State Safety Programme (SSP)

Revision: 01, 2023

Record of amendments

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00	6 March 2019	New document.	Buntoeng Megchai
01	9 June 2022	Revised the document structure and content.	Kajonpat Maklin

Foreword

The main objective of the State Safety Programme (SSP) is to continuously improve civil aviation safety in Thailand through the proactive management of aviation safety risks to protect passengers and the public, promoting a positive safety culture.

This can only be achieved through cooperation, collaboration and communication between the government, its safety agencies (CAAT, AAIC and NSARC) and with the Thai aviation industry. The SSP is intended to ensure continuous improvement in aviation safety with appropriate governance supported by data driven decision making. This SSP document sets out the policies and processes to achieve this, including:

- The State Safety Policy that applies to all of the stakeholders in the Thai aviation system.
- The governance and safety regulatory framework including the coordination and collaboration of the main stakeholders in the aviation system.
- How risks are identified and managed at a national level as a result of all of the stakeholders including the aviation industry sharing safety data and information.
- How the safety performance of the Thai aviation system is monitored including the effectiveness of SMS implementation.
- How safety is promoted highlighting the importance of a just and positive safety culture across the whole of the aviation system.

The Civil Aviation Authority of Thailand (CAAT) has the responsibility to coordinate and administer the SSP and its documentation.

Announcement made on
(Athirat Rattanaseth)
Deputy Minister of Transport
Acting Minister of Transport
Chairman of Civil Aviation Board

Table of Contents

Page

Chapter 1 Glossary of terms

When the following terms are used in this SSP, they have the following meanings:

Safety risk management: Systematic process for identify the hazard in aviation system, risk assessment and measurement of controlling and managing the risk in acceptable level.

Surveillance: The CAAT's activities to inspections and audits that aviation license, certificate, authorization or approval holders continue to meet the established requirements and function at the level of competency and safety required by the CAAT.

Risk-based surveillance: Surveillance that using the safety risk data for surveillance prioritise by concerned the areas of greater risk.

Risk assessment: An evaluation of the potential for loss of life, serious injury, aircraft or equipment damage due to a hazard assessed in terms of likelihood and severity.

Hazard identification: The Process to ensure that hazards are identified and define the result of that hazards by using a combination of reactive and proactive methods of safety collection

Risk mitigation: The process to prevent, control or defined the measurement for reduce the severity and/or probability of consequence from hazard.

Primary aviation legislation: Air Navigation Act B.E. 2497 and Civil Aviation of Thailand Emergency Decree B.E. 2558

Specific operating regulations: Thailand civil aviation specific operating regulations are made under ANA B.E. 2497 and the Civil Aviation of Thailand Emergency Decree B.E. 2558

Safety data: A defined set of facts or set of safety values collected from various aviation-related sources, which is used to maintain or improve safety.

Safety risk: The predicted probability and severity of the consequences or outcomes of a hazard.

Safety database: Database that include the safety data and information which can be used to support safety data analysis

- accident investigation data;
- mandatory incident investigation data;
- voluntary reporting data;
- continuing airworthiness reporting data;
- safety risk assessment data;
- data from safety studies/reviews; and

- safety data from other States, regional safety oversight organizations (RSOOs) or regional accident and incident investigation organizations (RAIOs), etc.

Safety Performance Indicators – SPIs: The indicators that conform a data-based parameter used for monitoring and assessing safety performance.

Hazard register: Table format or register to collect the hazard information. It typically includes the hazard, potential consequences and assessment of associated risks, identification date, hazard category, short description, when or where it applies, who identified it and what measure have been out in place to mitigate the risk.

Enforcement Policy: Protection of safety data and safety information and related sources, especially if information provided is self-incriminating, including specifies the conditions and circumstances under which service providers with an SMS are allowed to deal with and resolve events involving certain safety issues internally, within the context of their SMS and to the satisfaction of the CAAT , provided that the SMS is in accordance with the SMS framework and shown to be effective and mature.

Safety issue: A manifestation of a hazard or combination of several hazards in a specific context. The Safety Issue has been identified through the systematic Hazard Identification process of the organisation.

Product: The aircraft, aircraft parts, approved parts

Safety performance: A State or a service provider's safety achievement as defined by its safety performance targets and safety performance indicators.

Safety Performance Targets – SPTs: State or service provider's planned or intended target for a safety performance indicator over a given period that aligns with the safety objectives.

Air operator: A business operator undertakes to engage in domestic or international Commercial Air Transport, whether directly or indirectly or by aircraft lease or any other arrangement;

General aviation operator: An aircraft operation other than Commercial Air Transport or Aerial Work

Approved maintenance organization – AMO: Organization which received the maintenance organization certification from CAAT

Airport operator: Organization which received the aerodrome certification from CAAT

Air Navigation Service Provider – ANSP: Organization of Air Traffic Management (ATM), Communications, Navigation and Surveillance Systems (CNS), Meteorological Services for Air Navigation (MET), Aeronautical Information Services/Aeronautical Information Management (AIS/AIM), Instrument Flight Procedure Design Service, and Search and Rescue Service (SAR)

Air Traffic Services Providers – ATSP: Organization that provide services related to Flight Information Service, Alerting Service, Air Traffic Advisory Service, Air Traffic Control Service-Area Control Service, Approach Control Service and Aerodrome Control Service

Aircraft/Product design and manufacturer: Organization which received the aircraft/ product design or/and manufacturer certification from CAAT

Global Aviation Safety Plan – GASP - The strategy plans and missions which define by ICAO to support the achievement of Global safety target by define an action plan and procedures,

State Safety Programme – SSP: The master plan for using to manage the civil aviation safety of Thailand.

Acceptable Level of Safety Performance – ALoSP: The minimum level of safety performance that are accepted and to be achieved for the civil aviation system in a State, as defined in its SSP, or the minimum level of safety performance of service providers agreed by authority, as defined in their SMS, expressed in terms of SPTs and SPIs.

Safety Management System – SMS: A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.

Aviation system: Civil aviation operation, flight training, type design of aircraft, manufacture of aircraft part, aircraft maintenance, aircraft operating area, air traffic management, navigation system, aerodrome, as well as information, service, law, policy, regulation, procedure, personnel and equipment related to the above activities

Safety Data Collection and Processing System – SDCPS: The system to capture, store, aggregate, and enable the analysis of safety data and safety information to support their safety performance management activities.

Mandatory reporting system: Reporting system that required by CAAT

Positive safety culture: The way safety is perceived, valued and prioritised in an organization. It reflects the real commitment to safety at all levels in the organization.

Safety objective: A brief, high-level statement of safety achievement or desired outcome to be accomplished

Approved Training Organization - ATO: Organization which received the approved training certification from CAAT

Service providers: An organization providing aviation products and/or services and is not a part of regulator

- Air operator
- Public aerodrome operator
- Air traffic management service provider
- Communication, navigation, and surveillance service provider
- Aeronautical information service provider
- Approved training organization with aircraft operations
- Approved maintenance organization
- Manufacture of aircraft, engines or propellers organization
- Type design of aircraft, engines or propellers organization
- Organization with commercial aerial work operation
- Organization with general aviation operation

Safety data sources: sources of safety data such as:

- Accident or incident investigations;
- Safety reporting (MOR and VOR);
- Continuing airworthiness reporting;
- Operational performance monitoring;
- Inspections, audits, surveys; or
- Safety studies and reviews.

Just Culture is an atmosphere of trust in which people are encouraged (even rewarded) for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.

Chapter 2 Distribution and Amendment of documents

2.1 Distribution of documents

The SSP shall be distributed to Civil Aviation Organisations, relevant stakeholders, safety agencies and government through copies of the document.

2.2 Amendment of documents

For any changes made to the current SSP document, CAAT will notify AAIC, NSARC, Civil Aviation Organisations, relevant stakeholders and government.

Civil Aviation Board is responsible for approving the SSP document. The decision to approve the SSP document revision will be taken by National Civil Aviation Safety Board.

Chapter 3 State safety policy

The Civil Aviation Board (CAB) considers that safety management at a national level is the most important driving force to strengthen the management of aviation safety risks across the Thai aviation system. This will improve safety oversight capabilities to maximise the level of aviation safety to meet and where appropriate to exceed the applicable international standards. It represents a commitment from the CAB and all of the government aviation Agencies towards a safer aviation system. The Aviation Safety Policy applies to every organisation and licence holder in the Thai Aviation system including the government, its agencies and the aviation industry and is detailed below.

3.1 State Safety Policy

Thailand is committed to:

(1) Establish an effective State Safety Programme that will identify and manage safety risks that will deliver a safe and efficient aviation system. This includes establishing a Safety Oversight system that ensures compliance with international standards that is targeted and proportionate based on the risk profile of service providers determined by safety data analysis.

(2) Develop civil aviation safety standards that align with standards and recommended practices of the International Civil Aviation Organization by taking into consideration appropriateness, transparency, and good governance.

(3) Ensure that there are sufficient financial and human resources in CAAT, AAIC and NSARC to ensure effective safety management and safety oversight of the state civil aviation system. Including the management of the competency of CAAT, AAIC and SAR personnel to perform their safety duties efficiently and effectively.

(4) Promote a positive safety culture across the whole of the aviation system that encourages the sharing of safety data and information between Service Providers and CAAT to facilitate improved safety analysis and proactive safety management.

(5) Promote a just culture across the aviation system to encourage individuals and organisations to report safety issues or concerns without fear of action against them, unless their actions are considered to be reckless or acts of gross negligence.

(6) Implement an enforcement policy that is aligned with just culture principles.

(7) Provide safety critical information and guidance to operational personnel in the aviation industry on safety management concepts and principles

(8) Collaborate with the Thai aviation industry on safety issues and risks and to agree suitable risk mitigation actions.

(9) Monitor the overall safety performance of the aviation system through the establishment of the Acceptable Level of Safety Performance, safety objectives, safety performance indicators and targets.

(10) Implement a safety data and information protection regulation to ensure that safety data and information is kept confidential and only used for the improvement of safety.

(11) Effectively resolve safety issues in cooperation and collaboration with service providers.

Chapter 4 Thailand aviation system description

There are many stakeholders involved in the safe operation of the aviation system. This includes Government agencies as well as an extensive aviation industry. It continuously reviews and updates its regulations to align itself with international standards and best practice. Its many interfaces include other CAA's in the region and working closely with the Asia Pacific Regional Aviation Safety Group.

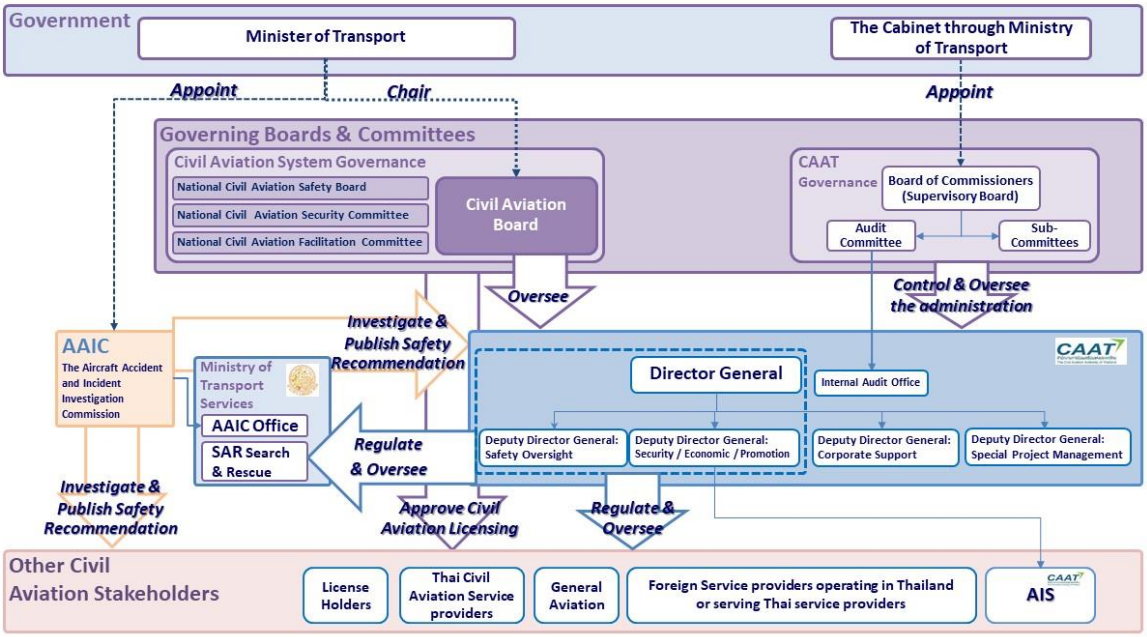

Figure 4-1: The Thai aviation stakeholders

Chapter 5 State safety governance

This chapter details how the SSP is governed including the role of the government and its agencies and how coordination between the different stakeholders is achieved. The strategic management of the State Safety Programme (SSP) is through the Civil Aviation Board (CAB) and National Civil Aviation Safety Board (NCASB). CAAT, AAIC, AAIC office, NSARC and NSARC office are responsible for implementing the SSP under the coordination of CAAT. The CAAT is also responsible for the oversight of the Thai aviation industry and for managing the collection and analysis of the available safety data and information.

5.1 State system and functions

5.1.1 Government bodies powers and duties in the SSP

The following authorities are involved in the management and maintenance of the State Safety Programme:

5.1.1.1 Minister of Transport

The Minister of Transport chairs the Civil Aviation Board that administers the state safety policy to ensure safe air transport operation and empowers the CAAT to regulate and carry out oversight in accordance with the policy and the SSP

5.1.1.2 Civil Aviation Board (CAB)

The CAB is responsible for defining the state safety policy and approving the State Safety Programme. In addition, the CAB has the power to oversee the CAAT activities to ensure that Thailand is meeting its international safety obligations and ensuring that the industry is compliant and safe.

5.1.1.3 The Civil Aviation Authority of Thailand (CAAT)

The CAAT, under Section 8 and 37 of the Civil Aviation of Thailand Emergency Decree B.E. 2558, has the responsibilities to prepare and coordinate the implementation of the SSP and present to the CAB for approval. Additionally, the CAAT shall monitor the SSP implementation to ensure its effectiveness. The key functions in support of the SSP are:

1) To collect, analyses and report on safety data and information gathered from the occurrence reporting scheme, the results of oversight and surveillance activities and from international bodies such as ICAO and neighboring CAAs.

2) To coordinate the CAB and NCASB meetings and any additional meetings that support the SSP.

3) To prepare the SSP document (also referred as the National Civil Aviation safety program in the Air Navigation Act) to be presented to the Civil Aviation Board for approval, as well as to regulate and control implementation of the program

4) To inspect, monitor, control and encourage those involved in the aviation industry and civil aviation activities to comply with laws, rules, procedures, and International Standards

5) To cooperate and coordinate with relevant organizations or agencies, both domestic and international on safety issues and mutual safety improvements. This includes the sharing of relevant safety issues related to foreign operators and foreign destinations.

6) To develop primary aviation legislation and specific operating regulations applicable to regulate aviation safety in Thailand. This includes the regular review of these regulations to ensure they remain current and compliant with international standards

5.1.1.4 CAAT Aviation Safety Management and Standards Assurance Office

CAAT is supported by the Aviation Safety Management and Standards Assurance Office, who is responsible to act as the coordinator and facilitator of the SSP. One of the main functions of Aviation Safety Management and Standards Assurance Office is for the analysis of the safety data and information collected through the SSP. This analysis is used for the identification and managing of aviation safety risks and the development of the TASAP. It is also used by the safety oversight departments for the safety oversight of the aviation industry to ensure it operates to the expected safety standards with public interest being the top priority.

5.1.1.5 The Aircraft Accident and Incident Investigation Commission

The AAIC acts as an independent accident and incident investigation authority with the sole objective being the prevention of accidents and incidents, and not the apportioning of blame or liability. It investigates accidents and incidents as defined in ICAO Annex 13. Its powers

and duties are defined in section 64/4 of the ANA. There is a MOU for the coordination and liaison between AAIC, CAAT and NSARC.

5.1.1.6 The Aircraft Accident and Incident Investigation Commission Office

Main role of AAIC Office also called Bureau is an administrative unit of the AAIC responsible for managing and supporting the AAIC in technical areas, conducting researches and studies, performing activities in relation to operations of the AAIC and sub commissions appointed by the AAIC.

5.1.1.7 The National Search and Rescue Committee

The NSARC is responsible to formulate the policy, guidance, measures and define the Search and Rescue Region (SSR) of Thailand and to endorse the National Search and Rescue Plan [National SAR Plan] with consideration for standards and recommended practices of the International Civil Aviation Organization (ICAO). Its powers and duties are defined in section 64/22 of the ANA.

The MOU between CAAT, AAIC and NSARC describes the coordination and the sharing of information between these bodies to manage an accident investigation. It details their powers and duties including the activities to facilitate the effectiveness of missions as well as for managing the civil aviation safety in state level.

5.1.1.8 The Office of the National Search and Rescue Committee

Search and Rescue operations in Thailand are managed and overseen by the Office of the National Search and Rescue Committee. The Office acts as the Rescue Coordination Centre and coordinates with other agencies to rescue an aircraft in distress or a missing aircraft. Search and Rescue operations are managed and delivered through the National SAR Plan.

5.1.1.9 Military and Police Aviation

The Military and Police Aviation is involved in Thailand aviation safety as they operate in civil airspace and use civil airports for their operations. This consists of Royal Thai Air Force, Royal Thai Army, Royal Thai Navy, and Police Aviation Division. All of these bodies are represented on the NCASB to provide inputs and to share safety issues with civil counterparts.

5.1.2 SSP Coordination bodies powers and duties

The National Civil Aviation Safety Board (NCASB) and the Aviation Safety Action Group are the 2 main bodies that support CAAT and CAB in the delivery of the SSP. These bodies provide collaboration between the key stakeholders involved in managing the State Safety Program.

This includes developing the Thai Aviation Safety Action Plan and implementing the actions to achieve the safety objectives and improve aviation safety in Thailand:

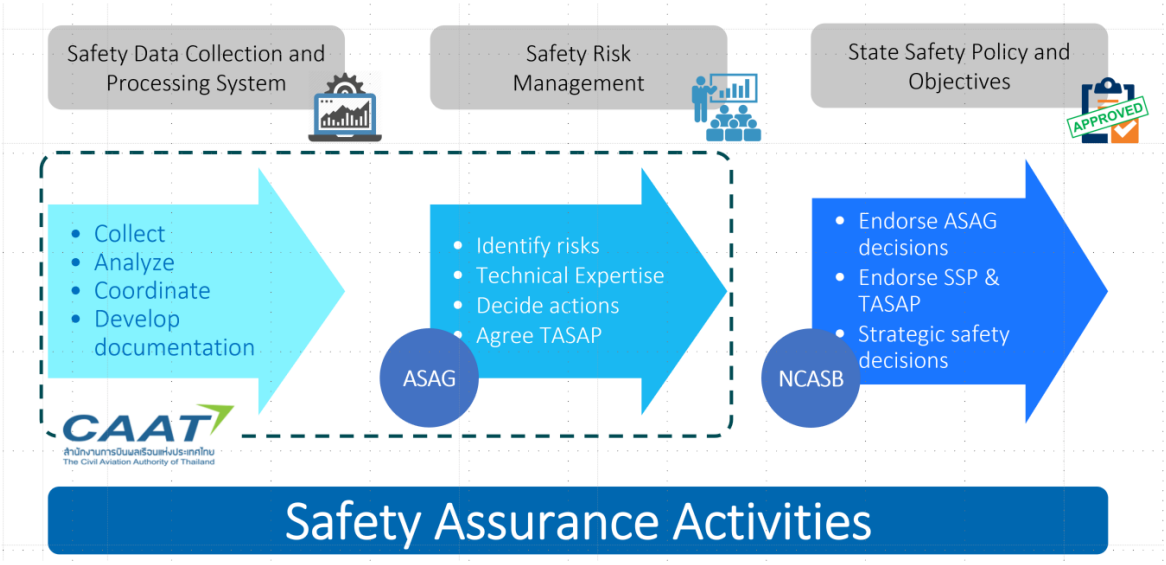

Figure 5-1: Aviation safety assurance

5.1.2.1 The National Civil Aviation Safety Board: NCASB

The National Civil Aviation Safety Board (NCASB) fulfils the role of the SSP coordination group. It provides coordination and decision making on the safety management strategy for Thailand in accordance with the State Safety policy set by CAB.

NCASB brings together the main stakeholders of the SSP including representation from industry. It is chaired by the CAAT DG and the Aviation Safety Management and Standards Assurance Office Manager acts as the secretariat for the Board. The Board meets at least twice a year and additional meetings may be called for specific safety issues.

The powers and duties include the following:

1. Review and propose revisions of the State Safety Policy and objectives to reflect the aviation situation in Thailand.
2. Review the risks identified in the TASAP and agree the detailed actions and approve the TASAP.
3. Review the performance of the SSP and the TASAP to ensure it remains current and to identify where it can be improved.
4. Review and agree the acceptable level of safety performance (ALoSP) for Thailand and corresponding Safety Performance Indicators and Targets (SPIs and SPTs).

To support the work of the NCASB the following actions are applied:

1. Review the results of the analysis carried out by Aviation Safety Management and Standards Assurance Office and the Aviation Safety Action Group and make recommendations to ASAG.
2. Appoint a working group to carry out activities that are within the scope of the powers and duties of the National Civil Aviation Safety Board.
3. Identify safety issues that may have not been identified through the Occurrence Reporting System

5.1.2.2 Aviation Safety Action Group: ASAG

The ASAG is the CAAT operational committee that manages the implementation of the Thailand Aviation Safety Action Plan (TASAP), with respect to all the CAAT actions, duties and responsibilities.

ASAG is made up of the Aviation Safety Management and Standards Assurance Office Manager and representatives from the safety oversight departments of CAAT. It is chaired by the Director General of CAAT and shall meet on a quarterly basis.

The powers, duties and responsibilities include the following:

1. To agree the contents of the TASAP and the specific actions to manage and mitigate the identified risks.
2. To propose Safety Enhancement Improvements (SEIs) to the NCASB for inclusion in the TASAP.
3. To propose safety recommendations and actions to NCASB that supports the continuous improvement of the SSP

5.1.2.3 Safety Data Verification Sub Group: SDV/SG

The SDV/SG is an internal CAAT group with representatives from Aviation Safety Management and Standards Assurance Office and the safety oversight departments. Its role is to verify the quality of safety data in the occurrence reporting system. It is responsible for carrying out the initial risk assessment and determining what actions are needed to mitigate risks and propose actions to the ASAG.

SDV/SG shall normally meet once a month and is chaired by the Aviation Safety Management and Standards Assurance Office Manager.

Aviation Safety Management and Standards Assurance Office will provide the initial safety analysis and the SDV/SG will review the analysis and provide subject matter expertise so that decisions, actions and recommendations can be proposed to ASAG to manage identified risks.

The powers, duties and responsibilities include the following:

1. Review of occurrence reports for quality and completeness and determine the need for further actions.
2. Take decisions where there is a need for collaboration between safety oversight departments to conduct internal investigation or safety analysis.
3. Identify hazards and safety risks from safety oversight activities that may require further analysis or investigation by SMD. This should include the assessment of the risk to facilitate effective risk mitigation.
4. Review any Accident and Significant Incidents reports to determine whether any corrective and preventative actions are needed

5.1.2.4 Aviation Safety Focus Group: ASFG

ASFG is a joint CAAT and industry working group to support the activities of the NCASB. It provides a forum for industry to contribute to the SSP activities by raising safety issues as well as reviewing the CAAT safety analysis. Thai industry roles and responsibilities in the SSP

Thailand supports a cooperative and collaborative approach between the CAAT and its industry. This includes the sharing of safety information between the industry and CAAT through the occurrence reporting scheme. This includes identifying and reporting safety issues that need to be addressed at a national level. This enables a better understanding of the overall risk picture for Thailand.

The industry also participates in the NCASB and the ASFG in the development and endorsement of the TASAP. This ensures that industry is able to provide an input and influence how safety is managed through the SSP.

Many of the actions needed to reduce the operational safety risks identified through the implementation of SSP activities are detailed in the TASAP and have to be implemented by industry. Therefore, there is a high expectation that the industry takes into consideration the SSP and TASAP as part of its activities and in its SMS implementation.

5.2 State safety legislative framework

5.2.1 Enforcement policy

The ANA provides the necessary powers for the CAAT to enforce the regulations and take actions when the regulations are not being followed.

These breaches in the regulations may be for many different reasons from a misunderstanding of the regulations to a deliberate disregard for aviation safety. Therefore, it is important for a commensurate range of enforcement actions to be available, including:

- The issuing of a non-compliance finding to the offender to address the action within a specified time period.
- Limiting, suspending and revocation of a licence or an approval certificate.
- Prosecution action

Further details can be found in the Enforcement Policy and Procedures Manual available on the CAAT website.

5.2.2 Primary aviation legislation

Thailand's primary aviation legislative documents are Air Navigation Act B.E. 2497 and Civil Aviation of Thailand Emergency Decree B.E. 2558 which empower the various State aviation agencies (CAAT, AAIC, AAIC office, NSARC and NSARC office) to perform their roles.

5.2.2.1 Air Navigation Act B.E. 2497 (ANA)

Air Navigation Act B.E. 2497 is the primary aviation legislation which implements the Chicago Convention and its Annexes to meet international standards.

The scope of the ANA excludes aviation operations in military, police, customs, and any other as specified in Ministerial Regulation except the flight planning in accordance with Section 18/1, and the Air Traffic requirement compliance in accordance with Section 18/2 and 18/3.

This ANA provides standards, requirements, procedures, conditions, and limitations for all aviation activities including penalties and punishments. Nonetheless, the regulatory requirements for various aviation activities are prescribed by subsidiary legislation in the forms of Ministerial Regulations, Rules, Requirements, Announcements, Bylaws and Orders.

5.2.2.2 Civil Aviation Authority of Thailand Emergency Decree B.E. 2558

Civil Aviation Authority of Thailand Emergency Decree empowers the CAAT to ensure that Thailand achieves the international standards by developing the SSP on behalf of the CAB and to monitor the effectiveness of the SSP.

As an integral part of the SSP, CAAT is responsible for the safety system oversight to regulate civil aviation to proactively manage safety and to maintain international standards. This is achieved through the issue of Rules, Requirements and Orders regarding safety management.

It also empowers the CAB to monitor the CAAT operations to effectively and efficiently achieve its objectives.

5.2.3 Specific operating regulations

Thailand civil aviation specific operating regulations are made under ANA B.E. 2497 and the Civil Aviation of Thailand Emergency Decree B.E. 2558. The Specific Operating Regulations are available on www.caat.or.th.

5.2.4 Acceptable Means of Compliance: AMCs

To improve the implementation and understanding of the regulations CAAT develops Acceptable Means of Compliance and guidance material.

With a view to ensuring uniformity in the application of common requirements, it is essential that common standards be applied by the industry. Consequently, CAAT, when necessary and practicable, will develop Acceptable Means of Compliance and Guidance Material for each specific operating regulation to facilitate the necessary regulatory uniformity. These AMCs may be used to demonstrate compliance with the provisions of the regulation.

Acceptable means of compliance (AMC) are non-binding standards adopted by the CAAT to illustrate means to establish compliance with requirements of the Regulation. When the acceptable means of compliance are followed, the related requirements shall be considered met without further demonstration.

Alternative means of compliance (AMoC) are those means that propose an alternative to an existing AMC or those that propose new means to establish compliance with requirements of the Regulation for which no associated AMC have been adopted by the CAAT.

When an organisation, wishes to use an AMoC to the AMCs, it shall, prior to implementing it, provide the CAAT with a full description of the proposed AMoC.

In order to demonstrate that an AMoC guarantees that the corresponding requirement is met, a risk assessment shall be completed and documented by the organisation and provided to CAAT.

When an AMoC is proposed to the existing AMCs, the result of the risk assessment of the AMoC shall demonstrate that an equivalent level of safety to that established by the existing AMC(s) is reached.

When no AMCs have been published for a regulatory requirement, the result of the risk assessment of the AMoC shall demonstrate that a level of safety acceptable to CAAT is reached.

The organisation may implement these AMoCs subject to prior formal approval by the CAAT and upon receipt of the notification of approval.

5.2.5 Guidance material

In addition to the AMC CAAT will also produce guidance material that supports the regulation. This is non-binding explanatory and interpretation material on how to achieve the requirements. It contains information, including examples and templates, to assist the user in the interpretation and application of the regulations, requirements and AMCs.

5.3 SSP document management

The SSP Document is developed by the CAAT Aviation Safety Management and Standards Assurance Office. This is submitted to the DG CAAT and the NCASB for their review and to recommend its endorsement to the CAB. The CAB is responsible for endorsing the SSP document.

The SSP Document should be kept up to date to reflect the safety management activities in Thailand. This should include an annual review to ensure it is current and up to date. When necessary an updated SSP document will be revised and published.

5.4 Thailand aviation safety action plan management

The development of the TASAP is one of the main outputs of the SSP and is approved by the NCASB. The TASAP contains actions that are monitored regularly by Aviation Safety Management and Standards Assurance Office. The TASAP will be reissued at least every 3 years. Within this 3 years' period, additional actions may be included in the TASAP through addendums to address new and emerging safe ty issues.

The SSP document and the TASAP are available on the CAAT website. All the relevant Stakeholders will be notified when the SSP document or TASAP are amended or updated.

5.5 State safety policy governance

The State Safety Policy is a declaration of the intentions and strategic direction for safety at a State level and is endorsed by the CAB. The State safety policy will be made in the form of a Civil Aviation Board announcement, which is signed by Minister of transport as a Chairman of the Civil Aviation Board.

The State safety policy is published as part of the SSP Document, so it is available to the relevant aviation organizations. The policy will be reviewed annually and if necessary updated to improve and keep it current.

5.6 State safety objectives governance

State safety objectives provides strategic direction for safety performance management at a national level. These are initially developed by CAAT and agreed and endorsed by the NCASB. These will be published in the TASAP and will be reviewed annually to ensure that they remain current and appropriate. Safety Objectives will include objectives related to organizational and process improvements and to specific operational risks that have been identified through the SSP activities.

Chapter 6 State safety risk management

Thailand's safety risk management activities include the following;

- Licensing, certification, authorization and approval obligations
- Safety management system obligations
- Accident and incident investigation
- Hazard identification and safety risk assessment
- Management of safety risks

6.1 Licensing, certification, authorization and approval obligations

Licensing, certification, authorization and approval of individuals and organisations is the foundation for managing the state safety risk. It ensures that the service providers and other aviation organizations meet the appropriate safety standards.

CAAT has the power to suspend, revoke or limit the operation of an organisation if it is not in compliance with the relevant aviation standards. The procedures are detailed in the CAAT corporate manual and CAAT procedures.

6.2 Safety management system obligations

6.2.1 Regulatory requirements

CAAT is responsible for establishing the SMS regulations, AMC and supporting guidance material for the aviation industry. CAAT safety oversight departments are responsible for assessing and accepting an organisations SMS in accordance with CAAT procedures.

The following the civil aviation organisation shall implement an SMS.:

1) Air Operator
2) Public Aerodrome Operator
3) Air Traffic Management Service Provider
4) Communication, Navigation, and Surveillance Service Provider
5) Aeronautical Meteorological Service Providers
6) Aeronautical Information Service Provider
7) Approved Training Organization with Aircraft Operations
8) Approved Maintenance Organization
9) Manufacture of Aircraft, Engines or Propellers Organization
10) The Type Design of Aircraft, Engines or Propellers Organization

11) Organization with General Aviation Operation

SMS requirements are detailed in the respective Specific Operating Regulations.

6.2.2 SMS acceptance and continued oversight)

SMS acceptance is part of certification whereas continued oversight is part of surveillance activities and are covered by safety assurance.

6.3 Accident and incident investigation

The accident investigation process has a pivotal role in the SSP. It enables the State to identify contributing factors and any possible failure within the aviation system, and to generate the necessary countermeasures to prevent recurrence. Investigations are carried out at 3 different levels and this can be done in parallel although AAIC has primacy in Annex 13 accidents and serious incidents.

6.3.1 Role of AAIC for Accident and serious incident investigations

The AAIC is independent from CAAT and the aviation industry to ensure there are no conflicts of interest. The AAIC has the responsibility to investigate the aircraft accident and serious incidents in accordance with ICAO Annex 13.

The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability. The AAIC shall give the recommendation to relevant organization such as CAAT for improvement the aviation safety including monitoring the corrective actions. The AAIC may also investigate an incident that affects or may affect safety of aircraft operations significantly.

AAIC shall maintain a database of the accident and serious incidents and shall exchange that data with CAAT by sharing the investigation report.

6.3.2 Role of CAAT for Accident and incident investigations

CAAT oversight departments will carry out investigations on accidents, incidents and events that have been reported through the occurrence reporting system. The objective of the investigation is to identify causal and contributing factors so that actions can be taken to prevent reoccurrence. Where an accident or serious incident is being investigated by the AAIC this shall not prevent CAAT from carrying out their own investigation and, in particular, from accessing the necessary data.

6.3.3 Role of Industry for Accident and incident investigations

Civil Aviation Organisations, as part of their SMS activities carry out safety investigations on events that have been reported through the safety and occurrence reporting system. These investigations should identify causal and contributing factors so that actions can be taken to prevent reoccurrence. The outcomes of the investigation shall be reported to CAAT in a disidentified manner so that this can be used in the safety analysis.

6.4 Hazard identification and safety risk assessment

Hazard identification utilises multiple sources of safety data and safety information. This is collected and analysed by CAAT Aviation Safety Management and Standards Assurance Office from occurrence reports, accident reports, regional and global aviation safety data. Assessing the risk is a collaborative process between Aviation Safety Management and Standards Assurance Office and the safety oversight departments with CAAT that collects and analyses safety data from surveillance audits.

6.4.1 Safety data collection and processing system: SDCPS

CAAT Aviation Safety Management and Standards Assurance Office are responsible for managing the available safety data through ECCAIRS. This collects and categorises mandatory and voluntary occurrence reports. Occurrence reporting is the primary source of safety data from service providers. In addition, Aviation Safety Management and Standards Assurance Office receives investigation reports from AAIC and other Accident Investigation Organisations from other States.

The AAIC investigators have access to the CAAT's ECCAIRS safety database for supporting their operation according to MOU.

CAAT also gather safety data from the results of oversight and surveillance activities.

6.4.2 Safety data analysis

Aviation Safety Management and Standards Assurance Office will carry out the initial assessment of safety data to ensure that the data is correct and complete. This is then analysed by the SDV/SG involving the Safety Key Persons (technical specialists) from the oversight departments. SDV/SG will analyse the data and information provided by Aviation Safety Management and Standards Assurance Office to identify hazards, root cause and assess risk to determine the corrective actions. A summary of the analysis and actions are provided to the CAAT Safety oversight departments, NCASB and ASAG meetings. Hazard and safety data are stored in ECAAIRS.

The risk analysis will consider both quantitative and qualitative data using the appropriate subject matter experts from the relevant department. This will consider any trends, contributing factors, precursor events and audit findings. This may require coordination with service providers to gain a better understanding of the safety issue.

6.4.3 Risk assessment

Aviation Safety Management and Standards Assurance Office will initially assess the risk using the Event Risk Classification Scheme. This approach considers the most credible accident outcome and the effectiveness of the remaining barriers between the event and the most credible accident outcome. By combining these two factors a corresponding risk score will be calculated. The risk score will be used to decide whether the risk is acceptable or requires the implementation of additional risk mitigations. SDV/SG will validate the initial risk assessment.

When it is determined by the SDV/SG that an investigation is needed a further risk assessment should be carried out once the investigation has been completed.

6.4.4 Management of safety risks

When an unacceptable risk has been identified, mitigation actions need to be agreed and implemented in order to reduce the risk to an acceptable level.

At the State level, these actions are detailed in the TASAP.

To manage some safety risks CAAT may implement new or change existing regulations to mitigate the risk. This is for longer term solutions as regulatory changes must go through a legal process that takes time.

In some situations, risks can be managed through safety promotional activities that influence rather than mandate actions. This can be applied while the regulatory changes are being developed.

Many of the risk mitigations require actions by service providers. CAAT will provide guidance for the service providers to implement the action effectively.

In some circumstances requiring rapid action to address an immediate safety issue to restore safety levels this will be achieved by the publication of orders and directives.

CAAT will monitor the effectiveness of the mitigation and TASAP actions related to the Service Providers as part of the oversight and surveillance activities.

Chapter 7 State safety assurance

Thailand's safety assurance activities monitor the overall safety performance of the Thai aviation system. This is achieved through:

— Surveillance obligations
— State safety performance

It aims to assure that the functions of the SSP are achieving the ALoSP and the safety objectives through the collaborative efforts of CAAT and the Thai aviation industry.

7.1 Surveillance obligations

CAAT is responsible for the surveillance of Service Providers and in particular, their compliance with the regulations. This also includes the assessment of the SMS of Operators and Service Providers.

Each safety oversight department shall have procedures and plans for the inspectors to follow including:

— surveillance plans
— audit procedures and checklists
— SMS assessment procedures and tools
— non-compliances management procedures
— enforcement procedures

SMS and safety performance will be evaluated using an SMS assessment tool. This tool will enable the different SMS elements to be assessed to ensure that they are operating and effective. This will include the assessment of the Service Provider's SPIs and SPTs to verify that they remain relevant, suitable and acceptable to CAAT.

CAAT will establish procedures to prioritize inspections and audits targeting those organisations and areas of greater safety concern as part of a Risk Based Surveillance strategy.

7.2 State safety performance

The CAAT will continuously monitor the indicators (ALoSP and SPIs) against the targets (SPTs) set as detailed in the TASAP.

These indicators will be used to measure the overall safety performance and provide useful information to CAAT, CAB and NCASB to take actions to address any safety performance shortfalls.

All of the indicators will be reviewed periodically to ensure they remain suitable and providing useful management information. As a result, should any Indicators and targets need to be updated this will be achieved through an addendum to the TASAP.

7.3 Management of change

Changes occur at a State level that can have an impact on safety within the aviation system by introducing hazards or impacting on existing risk controls. CAAT, AAIC and NSARC office will ensure that any significant changes do not have an impact on aviation safety or create new risks.

This will include operational and organisational changes such as:

- Restructuring of the organisation
- Significant changes in the operational environment, such as the introduction of new technologies, equipment and activities.
- Changes in the regulatory environment such as changes to oversight methodologies and restructuring of regulations.
- Rapid changes in industry and its potential impact on State oversight capabilities.

Chapter 8 State safety promotion

It is important that safety information is shared and disseminated internally and externally. This will promote a positive safety culture for the Thai aviation community and improve the effectiveness of safety management at all levels.

8.1 Just Culture

A significant component of a positive safety culture is a just culture.

Just Culture is defined as an atmosphere of trust in which people are encouraged (even rewarded) for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.

This enables a greater sharing of safety information between Service providers and CAAT. This will improve the quantity and quality of safety data and information available for safety analysis within CAAT.

CAAT applies a just culture approach as part of its mandatory occurrence reporting system as well as during surveillance activities. This provides protection and confidentiality to anyone that reports a safety issue unless there is evidence of gross negligence or recklessness.

8.2 Safety communication

8.2.1 Collaboration and communication within the Thai aviation system

CAAT will communicate internally and externally using various methods. The CAAT website will include all the publications that need to be communicated externally. This includes the publication of;

- Rules, regulations, AMC and guidance material
- Annual Safety Report
- SSP Document and TASAP
- Safety bulletins and safety information notices

In addition, safety information is shared through the NCASB meetings and industry safety conferences and workshops.

CAAT Staff are also expected to disseminate safety information during their routine oversight activities with industry.

Safety communication should be 2-way to support the cooperation and collaboration needed for an effective SSP. This requires industry to communicate and share safety issues and occurrences with other organisations and the CAAT. Sharing of safety information will also lead to a more positive safety culture and lead to improved safety performance.

8.2.2 Collaboration and Communication with other States

CAAT shares safety information with other CAAs in respect of occurrences involving foreign operators and Service Providers. CAAT also collaborates with other CAAs when it receives occurrence reports related to a Thai Service Provider.

CAAT participates in ICAO regional safety meetings and other meetings with foreign Civil Aviation Authorities (CAAs) or foreign aviation organizations to exchange knowledge and experience in safety management.

8.3 Qualified technical personnel and training

CAAT, AAIC office and NSARC office determine the basic qualifications and experience necessary for technical personnel who perform functions related to safety in each of these organization. Each organization will provide Initial and Recurrent training to their technical personnel to maintain their competencies and maintain training records.

Technical personnel involved in the SSP are mainly:

1. CAAT Managers involved in the NCASB and ASAG
2. Aviation Safety inspectors (ASI)
3. CAAT staff working in Aviation Safety Management and Standards Assurance Office including the safety key personnel (SKPs)
4. The AAIC and personnel in AAIC office involved in management, coordination and investigations
5. The NSARC and personnel in NSARC office involved in SAR management, coordination and operations

8.3.1 Qualification, training and experience requirements for technical personnel

For inspectors and all other technical personnel involved in safety, the detailed training requirements are contained in the training programmes of CAAT.

For AAIC personnel, the qualification, training and experience requirements are detailed in AAIC work manual.

For SAR personnel, the qualification, training and experience are detailed in SAR organization and procedures manuals.

Training of technical personnel to ensure that technical personnel receive the required training in an effective manner and maintain their competency. CAAT, AAIC office and NSARC office:

1. Develop an internal training programme (s). This should give priority for training of technical personnel including initial training, on-the-job training and recurrent training.
2. Implement training need analysis to determine the development of the training programme (s).
3. Determine and implement the most suitable Initial and recurrent training programme for their personnel according to their duties, powers and responsibilities in the organization.

The training programme(s) should include:

- For senior managers across the aviation system (Government bodies and industry), familiarization training on SSP, SMS, safety policy and objectives and the ALoSP;
- Training for all personnel should include the awareness of their powers, duties and responsibilities in particular those related to safety management.
- For inspectors, training on:
    - SSP principles;
    - SMS implementation;
    - Safety and Compliance performance assessment including how to carry out SMS assessment in their domain and how to evaluate a service provider's SPIs for acceptance;
    - Regulations and procedures to oversee the service provider in a safety management environment.
- Non-technical skills related training (communication, negotiation, conflict resolution, etc.) to enable inspectors to work collaboratively with service providers to improve safety performance whilst ensuring continued compliance with established regulations.
- Specific training for personnel responsible for analysing safety data, and for proposing safety objectives, SPIs and SPTs.
- Specific training on protection of safety data, safety information and related sources;

— Specific training on enforcement policy and procedures training for inspectors and legal personnel within government bodies involved in the SSP;

Safety training programmes for personnel involved in SSP-related duties should be coordinated amongst State organizations, as appropriate. The scope of SSP and SMS training or familiarization should reflect the individual's roles and powers in respect of the SSP.

The appropriate implementation of the training programme should be closely monitored as it intends to provide staff with the necessary knowledge and skills to perform their duties effectively.