Republic of Korea

NATIONAL AVIATION SAFETY PLAN

2025 Edition

Korea Office of Civil Aviation(KOCA)
Ministry of Land,
Infrastructure and Transport

Republic of Korea

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State Safety Policy Statement

The Ministry of Land, Infrastructure and Transport, together with relevant aviation authorities, establishes safety policies and implements safety management systems in accordance with national laws and regulations, and in line with the Standards and Recommended Practices of the Convention on International Civil Aviation, in order to ensure an acceptable level of aviation safety.

For the continuous improvement of aviation safety, safety management activities shall be carried out in accordance with the following guiding principles:

1. We hold safety as our highest priority.
2. We establish safety management principles aligned with the State aviation system under relevant legislation, and develop specific operating regulations and procedures for their effective implementation.
3. We allocate qualified personnel and adequate financial resources necessary for timely safety management, and provide safety personnel with sufficient training opportunities to ensure continued competency.
4. We conduct safety management activities, including approval, authorization, and surveillance, in a fair and transparent manner.
5. We monitor the overall safety performance of the State aviation system through safety data and safety performance indicators, and apply a risk-based approach to address safety risks in a timely manner.
6. We adopt a performance-based approach in monitoring and assessing the Safety Management Systems of service providers, commensurate with their level of maturity.
7. We strive to foster a just culture, and use safety data and safety information solely for the purpose of maintaining and improving aviation safety, in accordance with Article 61-3 of the Aviation Safety Act.
8. We encourage the collection, sharing, and analysis of safety data and safety information, and actively cooperate with service providers to address safety issues.
9. We promote the importance of proactive safety management, and provide service providers with the necessary training to support its effective implementation.
10. We facilitate communication with service providers to promote a positive safety culture and create an environment in which essential safety information is openly shared.

Jongwan Joo
Deputy Minister
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Ministry of Land, Infrastructure and Transport

* Photo Credit : Korea Aerospace University

Introduction

The National Aviation Safety Plan (NASP) of the Republic of Korea is a State-level action plan developed to support the effective implementation of the State Safety Programme (SSP). It provides a structured framework for translating national aviation safety policies and objectives into coordinated actions aimed at managing safety risks and enhancing safety performance across the national aviation system.

As aviation activity continues to recover and grow, the operating environment is becoming increasingly complex. Higher traffic volumes, evolving operational concepts, rapid technological advancements, and changes in workforce composition are placing greater demands on the aviation system. These developments necessitate a more systematic, proactive, and risk-based approach to safety management at the State level. In this context, the NASP enables the State and aviation stakeholders to collectively identify safety challenges, prioritise safety risks, and implement targeted safety enhancement initiatives.

In line with international aviation safety frameworks, this NASP has been developed in alignment with the ICAO Global Aviation Safety Plan (GASP) and the relevant Regional Aviation Safety Plan (RASP).

The NASP is established under the leadership of the Ministry of Land, Infrastructure and Transport (MOLIT), as the State authority responsible for civil aviation safety. It is developed, implemented, and periodically reviewed in close collaboration with key aviation stakeholders, including air operators, airport operators, air navigation service providers, and other relevant industry partners. Through this collaborative approach, the NASP serves as a joint action plan for the State and industry to proactively identify safety risks, coordinate safety actions, and continuously enhance aviation safety across the national aviation system.

* Photo Credit : Incheon International Airport Corporation(IIAC)

Operational Context

The Republic of Korea operates an aviation system of increasing size and complexity, reflecting the recovery and continued growth of air traffic demand following the COVID-19 period. As of the end of 2024, the State Safety Programme (SSP) applies to the full scope of civil aviation activities within the national aviation system, encompassing international and domestic aerodromes, controlled airspace, air navigation services, and certificated service providers across all major aviation domains.

The Republic of Korea oversees 8 international airports and 7 domestic airports, supporting a total of 705,869 aircraft movements (commercial air transport) in 2024. The airspace of the Republic of Korea is classified into Class A, B, C, D, E and G. There are currently 11 Air Operator Certificate (AOC) holders, which conducts international commercial air transport operations with a combined fleet of 415 registered aircraft, and employing approximately 13,271 licensed aviation personnel, including flight crew and maintenance personnel.

In recent years, the operational environment has become increasingly complex due to the growth of commercial air transport operations and the entry of new air operators into the market. The expansion and diversification of airline business models, together with sustained increases in traffic volume at major hub airports, have led to higher operational density and increased demands on runway, airspace, and safety oversight systems.

In addition, external factors such as evolving adverse weather patterns and Global Navigation Satellite System (GNSS) radio frequency interference contribute to a dynamic and challenging risk environment. These conditions require the State to adopt a systematic, proactive, and risk-based approach to safety management. This National Aviation Safety Plan (NASP) is developed to reflect the current operational context of the Republic of Korea and to provide a structured framework for identifying, prioritising, and addressing safety risks in alignment with the State Safety Programme and ICAO global and regional aviation safety objectives.

* Photo Credit : Incheon International Airport Corporation(IIAC)

Safety Performance

Over the past five years, accidents involving Korean-registered commercial air transport aircraft occurred in a limited number; however, 2024 represented a significant turning point in aviation safety performance. In 2024, two accidents involving Korean air operators occurred, including the most severe fatal accident within the State, marking the first fatal accident involving Korean commercial air transport in the past 11 years. Furthermore, in January 2025, an accident resulted in the total loss of an aircraft, indicating the consecutive occurrence of new large-scale accident scenarios.

An analysis of accident types over the past five years shows that turbulence encounters were the most frequently observed accident type, followed by runway excursions and ground collisions associated with runway and airport movement area operations. During the same period, reported serious incidents predominantly involved aircraft system or component failures and runway safety-related occurrences. These accident and serious incident trends indicate areas that should be given priority consideration in the development of the National Aviation Safety Plan at the State level.

Accidents (2020-2024)

Date (yy-mm-dd)	Location	Operator	Aircraft Type	Highest Damange	Total Fatalities	Total Serious Injuries	Occurrence Category		Description
'24-12-29	RKJB	Jeju Air	B737	Destroyed	179	2	BIRD	ARC, RE, ADRM, F-POST	Sustained a bird strike during go-around, leading to a gear-up belly landing and runway overrun followed by a collision with an embankment and subsequent fire.
'24-05-19	Over Beijing, China	T-way Air	A330	-	-	2	TURB	-	Serious injuries occurred due to a turbulence encounter during the cruise phase
'23-03-22	Over high seas, south of Guam	Asiana Airlines	B777	-	-	1	TURB	-	A serious injury occurred due to a turbulence encounter during the cruise phase
'22-10-24	RPVM	Korean Air	A330	Destroyed	-	-	RE	USOS	a runway excursion following an undershoot during the landing phase
'22-09-29	EGLL	Korean Air	B777	Substantial (Other Aircraft Involved)	-	-	GCOL	-	Collided with the empennage of another aircraft during ground operations, resulting in substantial damage to the conflicting aircraft
'21-05-28	Over Yesan, ROK	Asiana Airlines	B767	-	-	1	TURB	-	A serious injury occurred due to a turbulence encounter during the cruise phase
'20-02-15	Over Kitakyushu, Japan	Jin Air	B737	-	-	1	TURB	-	A serious injury occurred due to a turbulence encounter during the initial climb
'20-01-12	Over Incheon, ROK	EastarJet	B737	-	-	1	TURB	-	A serious injury occurred due to a turbulence encounter during the approach phase.

Serious Incidents (2020-2024)

Date (yy-mm-dd)	Location	Operator	Aircraft Type	Occurrence Category		Description
'24-06-22	Over Northwest of Jeju, ROK	Korean Air	B737	SCF-NP	LOC-I	Diverted to the departure airport following a cabin pressurization failure
'24-04-29	Over East Sea, ROK	Air Premia	B787	SCF-NP	LOC-I	Diverted to the departure airport following a cabin pressurization failure
'22-12-22	RKPC	Hi Air	HR72	RE	-	Veered off and then re-entered the runway during the landing roll
'20-08-16	RKJJ	T-way Air	B737	RI		Landed on an unassigned runway

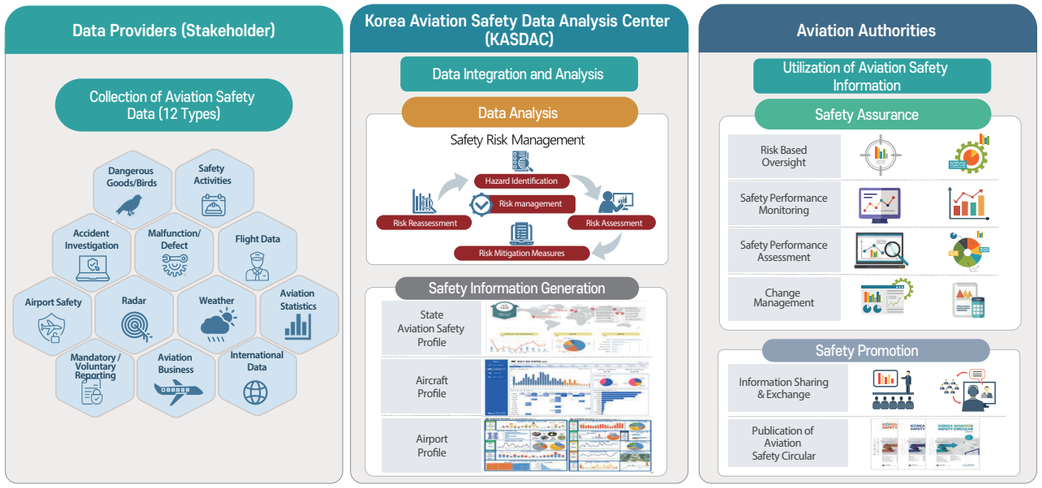
* Photo Credit : Incheon International Airport Corporation(IIAC)

Safety Data Collection and Processing System (SDCPS)

The Republic of Korea has established and operates a State Safety Data Collection and Processing System (SDCPS) in accordance with ICAO Annex 19 (Safety Management) and relevant provisions of the Aviation Safety Act. Under this legal and institutional framework, the Ministry of Land, Infrastructure and Transport (MOLIT) has entrusted the operation of the national SDCPS to the Korea Aviation Safety Technology Institute (KIAST), which operates the National Aviation Safety Data Analysis Center(KASDAC) as a dedicated, permanent organization. This arrangement ensures the systematic collection, integration, protection, and processing of aviation safety data in line with international standards.

Through the SDCPS, safety data collected from multiple sources are transformed into safety information and further analysed to generate safety intelligence that supports State-level safety decision-making. The system provides the analytical foundation for identifying state level key risks, monitoring safety performance, and supporting both reactive and proactive safety management activities under the State Safety Programme.

The safety intelligence produced by the SDCPS directly informs the identification and prioritisation of risks under this National Aviation Safety Plan, ensuring that risk selection and safety actions are evidence-based, risk-driven, and aligned with ICAO safety management principles.



Safety Risks

The Republic of Korea has identified its national operational safety risks based on a comprehensive analysis of recent accident and serious incident trends, relevant safety issues, and changes in the operating environment. In particular, the safety performance observed over the past five years, including recent major accidents, has highlighted recurring risk areas associated with specific phases of flight and operational activities. These findings, together with safety data and safety intelligence derived from the State Safety Programme, provide the primary basis for the identification and prioritisation of operational safety risks at the State level.

In addition, changes in the aviation operating environment have contributed to the emergence of new and evolving hazards. These include increasing traffic volume and operational density, the entry of new air operators, changes in fleet composition and operational practices, adverse and less predictable weather conditions, and growing reliance on complex technical systems. Taking these factors into account, the Republic of Korea has selected a set of highest and emerging operational safety risks that require focused and coordinated safety actions under the National Aviation Safety Plan.

Highest Safety Risks
Runway Excursion
Fire – Non Implact
Loss of Control – in Flight
Runway Incursion
Mid Air Collision
System Component Failure
Ground Collision
Controlled Flight into Terrain

Emerging Safety Risks
M&A of Air Operators
GNSS RFI
Evolving Adverse Weather Conditions
Airmen Fatigue

* Photo Credit : Jeju Air

Organizational Challenges

In addition to operational safety risks, the Republic of Korea has identified organizational and process-related challenges that influence the State's ability to effectively manage aviation safety risks. As the size and complexity of the national aviation system continue to increase, the effectiveness of safety management is increasingly dependent on the capability of the State and aviation stakeholders to respond to emerging risks in a coordinated, systematic, and timely manner, including through collaborative decision-making mechanisms involving the State, air operators, academia, and other safety experts.

Firstly, the increasing scale and complexity of aviation operations present challenges in maintaining effective and risk-based safety oversight. Growth in traffic volume, diversification of operations, and the entry of new air operators require continuous adaptation of safety management processes to ensure that risks are appropriately identified, assessed, and mitigated across all sectors of the aviation system.

Secondly, the level of safety culture maturity across the aviation community remains a critical organizational factor. While safety management systems are widely implemented, variations in safety culture, reporting practices, and proactive risk management capabilities can limit the effectiveness of safety actions. Strengthening a positive safety culture based on trust, transparency, and shared responsibility is therefore essential to support consistent and effective safety performance.

Finally, the increasing availability of safety data presents both opportunities and challenges. The effective analysis, integration, and utilisation of safety data and safety intelligence are essential for informed decision-making at the State level. At the same time, the timely and consistent incorporation of ICAO Standards and Recommended Practices into national regulations and oversight activities remains a key organizational challenge. Addressing these issues is necessary to enhance the overall effectiveness of the State Safety Programme and to ensure continuous alignment with international aviation safety frameworks.

Safety Goal & Objectives

The Republic of Korea aims to maintain a decreasing trend in the national accident rate while achieving zero fatal accidents across commercial air transport operations. These goals reflect the State's commitment to proactively managing aviation safety risks and continuously enhancing safety performance across the national aviation system in alignment with the State Safety Programme.

To support the achievement of the national aviation safety goal, the following safety objectives are established to address both operational safety risks and process implementation safety risks.

Operational Safety Risks

The Republic of Korea seeks to reduce operational safety risks arising from day-to-day aviation activities across the national aviation system by focusing on the following objectives:

- Enhance Safety in Airport Movement Areas
- Reduce cabin related safety risk
- Reduce Runway Safety Risk
- Reduce Safety Risk related to system component failure
- Enhance safety in national airspaces

Process implementation Safety Risks

The Republic of Korea also seeks to reduce safety risks related to the implementation and effectiveness of safety management processes by pursuing the following objectives:

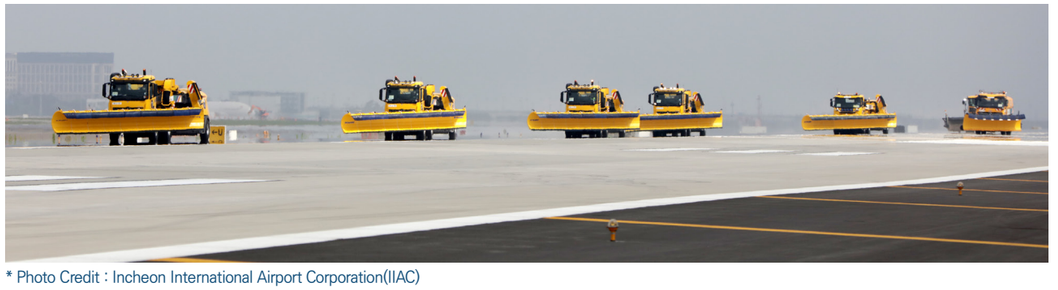
- Effectively manage the risks associated with the increasing size and complexity of the aviation industry
- Foster positive safety culture across the aviation community
- Enhance effectiveness of State Safety Programme through safety intelligence
- Ensure that State safety functions and activities are aligned with ICAO Standard and Recommended Practices.

Safety Enhancement Initiatives

Based on the identified operational safety risks and organizational and process-related challenges, the Republic of Korea has established targeted safety enhancement initiatives under this National Aviation Safety Plan. These actions include both short-term and medium- to long-term measures, translating national safety objectives into concrete steps to be implemented by the State and aviation stakeholders, in alignment with the State Safety Programme.

OPS Roadmap

Action	Completion
1. Enhance safety in airport movement areas	
Improve azimuth guidance facilities at six airports (including Muan)	Dec-25
Secure runway end safety areas (RESA) and introduce EMAS by airport	Dec-27
Expand personnel for bird-strike prevention	Dec-25
Expand advanced equipment for bird-strike prevention	Dec-25
Conduct joint airport operation inspections with private sector experts	Dec-25
Strengthen training for ground handling personnel	Dec-25
2. Reduce cabin related safety risk	
Actively implement battery safety measures	Dec-25
Actively promote and implement turbulence encounter prevention measures	Sep-25
Enhance operation of a public-private consultative body for sharing severe weather information	Nov-25
3. Reduce runway safety risk	
Develop improvement measures for designation criteria of contracted aviation training organizations for national carriers	Dec-25
Amend relevant legislations to revise designation criteria for contracted aviation training organizations of national carriers	Dec-26
Improve Air Traffic Control Communication Errors Between Controllers And Pilots / Vehicle Operators	Dec-25
Install Runway Safety Facilities And Conduct Pilot Operations	Dec-25
Commence Full-Scale Operation Of Runway Safety Facilities	Jun-26
Conduct Pilot Implementation Of Advanced Tower Technologies For Atc Communication Error Detection	Dec-25
Develop Measures To Improve Operational And Maintenance Management Of University-Based Flight Training Atos	Dec-25
4. Reduce safety risk related to system componet failure	
Strengthen aircraft maintenance obligations for national carriers	Oct-25
Improve the training and licensing framework for aircraft maintenance personnel	Dec-25
Enhance aging aircraft management for national carriers	Jun-25
Conduct targeted safety oversight of high-utilization aircraft through enhanced operational monitoring	Aug-25
5. Enhance safety in national airpaces	
Strengthen risk management for the southern jeju airspace	Dec-25
Implement focused monitoring and operational support for high-risk air routes	Sep-25
Establish a systematic response framework to gnss radio frequency interference	Dec-25
6. Effectively manage the risks associated with the increasing size and complexity of the aviation industry	
Introduce a re-evaluation system for air operator certificates	Dec-25
Expand safety oversight personnel in response to increased operational scale	Dec-25
Enhance flight crew fatigue risk management systems	Dec-25
Develop measures to strengthen the practical implementation of safety management systems	Dec-25
7. Foster positive safety culture across the aviation community	
Implement a National Aviation Safety Day	Dec-25
Establish a Public Private Consultative Body to Promote Just Culture	Oct-25
Strengthen Protection of Safety Reporters' Information through Legislative Measures	Dec-25
Enhance Education and Promotion to Encourage Voluntary Safety Reporting	Jun-25
Expand the Public Private Voluntary Safety Reporting Consultative Framework	Dec-25
8. Enhance effectiveness of state safety programme through safety intelligence	
Monitor Safety Risk Levels through the National Aviation Safety Risk Map	Dec-25
Operate the State Safety Risk Panel as an SSP Working-Level Consultative Body	Quarterly, 2025
Publish and Disseminate the National Aviation Safety Brief on a Regular Basis	Montly, 2025
Establish Platforms and Fora for Aviation Safety Information Sharing	Dec-25
9. Ensure that state safety functions and activities are aligned with ICAO Standard and Recommended Practices	
Manage the Implementation of Newly Adopted and Amended International Aviation Standards, Including Responses to ICAO State Letters	Dec-25
Develop and Consult on Amendments to Aerodrome Use Agreements	Dec-25



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