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Updates on Safety Reporting System
(Presented by Republic of Korea)

EXECUTIVE SUMMARY
The Republic of Korea (ROK) is striving to improve its safety reporting system, as a part of implementation of its Safety Data Collection and Processing systems (SCDPS). The requirements, standards and processes related to safety reporting system are reviewed and amended for further improvement. This information paper introduces the efforts and future plan for improvement of safety reporting system of ROK, to ensure continued availability of safety data and safety information to support safety management activities.

1. **INTRODUCTION**

1.1   In 2016, ICAO Council adopted the first amendment of the Annex 19 – Safety Management, which included a major change to Standard and Recommended Practices (SARPs) for safety data and safety information collection, analysis, protection, sharing and exchange. The object of this major change in SARPs is to encourage the Member States to ensure continued availability of safety data and safety information to support safety management activities.

1.2   In line with the amendment, ROK is making efforts to improve its regulation not simply to comply with the new SARPs but also to enhance the quality of the existing regulations. Among those issues, ROK is with a view that effective implementation of a safety reporting system plays a significant role for proactive safety management. Because in most cases, it is the sole data source that includes information on "why" the safety event occurred, while the others such as flight data or radar data simply indicate "what" type of occurrence had happened. This information paper shares the experience and future plan of ROK for improvement of the safety reporting system.

2. **BACKGROUND**

2.1   Having started with the Captain Reporting System for accidents and serious incidents, ROK has established its first Incident Reporting System in 2006. In total sixteen different types of occurrences for incident, except serious incidents, were encouraged to be reported voluntarily.

The Korea Transportation Safety Board, a third-party body independent from the government, is operating this voluntary incident reporting system for the purpose of safety data protection.

2.2   In 2009, the first mandatory incident reporting system was established. By reviewing safety records, ICAO SARPS and case studies from foreign countries, forty five different kinds of occurrences were determined to be reported to the Office of Civil Aviation.

2.3   At the same time, unfortunately, the scope of reporting for voluntary incident reporting was reduced, from sixteen to nine types, namely minor incident. However, this major change to the safety reporting system affects the voluntary incident reporting adversely. The number of the voluntary reports has been continuously decreasing, even though the traffic volume has increased by 7 percent each year. A survey showed that, the narrowed reporting scope is assumed to be one of the main reasons of this phenomenon. For airmen, that change means protection for limited safety data by the government, which could have negative impacts on safety culture promotion.

3.   **NEW SAFETY REPORTING SYSTEM**

3.1   Recognizing the problems in the national safety reporting system and striving to comply with the evolving SARPs, ROK is on way to improve its safety reporting system. Rearrangement of the scope of reporting, using standardized taxonomy and protection safety data information is the main area to closely look at.

3.2   *Scope of reporting*

3.2.1 ROK believes that clear requirements for safety reporting are the basis for collecting valuable safety data and safety information. In this context, regulators are required to continuously review their own requirements, whether they are appropriate or not. ROK reviewed its reporting requirements and has rearranged the scope of reporting for both voluntary and mandatory reporting system.

3.2.2 The scope of voluntary reporting was expanded from nine to infinity. Any safety issue can be reported to the voluntary safety reporting system, including accident, incident, observation of an inappropriate facilitation and bad practices related to safety.

3.2.3 Activities to refine the scope of reporting for mandatory incident reporting system were also conducted. Safety records, foreign case studies, news articles were reviewed to update the reporting items and to catch up with the emerging safety issues. ICAO Annexes, PANS and Documents (see Table 1) were also reviewed to ensure full compliance with the SARPs and its guidance materials.

3.2.4 Unnecessary or duplicated reporting items in terms of their meanings were omitted or integrated. Indicators for new safety issues, including Drone Strikes, Pilots' Fatigue issues, packing issues for Dangerous Goods, were added to the reporting items in the first quarter of this year.

Table 1. Provisions for safety reporting system in ICAO Annexes, PANS and Documents

Name of Reporting System	Annex/PANS/ Document	For State/Service Provider
Service Difficulty Reporting	Annex 8 – Airworthiness of Aircraft	State
	Doc 9760 – Airworthiness Manual	State
Air *Traffic Incident Reporting*	Doc 4444 – PANS Air Traffic Management	State, Service Provider
	Doc 9426 – Air Traffic Services Planning Manual, Part2	Service Provider
Wild-life/bird strike reporting	Annex 14, Volume I – Aerodromes	State, Service Provider
	Doc 9137 – Airport Service Manual, Part 3	State, Service Provider
Laser Emission Reporting	Doc 9815 – Manual on Laser Emitters and Flight Safety	State
Aerodrome safety reporting	Doc 9981 – PANS Aerodromes	Service Provider
Dangerous goods accident and incident reporting	Annex 18 – Safe Transport of Dangerous Goods by Air	State
Fatigue Reporting	Annex 6 – Operation of Aircraft, Part 1	Service Provider
	Doc 9966 – Manual for the Oversight of the Fatigue Management Approach	Service Provider
Mandatory Safety Reporting System	Annex 19 – Safety Management	State, Service Provider
	Doc 9859 – Safety Management Manual, 3rd Edition	State, Service Provider
Voluntary Safety Reporting System	Annex 19 – Safety Management	State, Service Provider
	Doc 9859 – Safety Management Manual, 3rd Edition	State, Service Provider

3.3   ***Standardized Taxonomy***

3.3.1 The following provision is included in the first Amendment of the Annex 19 – Safety management.

5.1.5   Recommendation. – The safety database should use standardized taxonomy to facilitate safety information sharing and exchange.

3.3.2   Complying with the provision, every safety occurrences collected by the Office of Civil Aviation of ROK, has been coded in standardized format, since mid-2016. Guidance material for data analysis was developed for each occurrence type and phase of flight. Guidance material released by CAST and ICAO Common taxonomy team (CICTT) and BOEING Company (ATA chapters) were the sources for our own guidance. The ROK is still pushing forward to develop standardized formats for other data fields, such as type of aircraft and occurrences for air traffic management events and aerodrome events.

3.4   **Safety data and Safety Information protection**

3.4.1 Safety data and safety information protection is a prerequisite to encourage airmen and service providers to participate actively in safety reporting. The recent amendment of Annex 19 has strengthened the SARPs for safety data and safety information protection. The availability of data protection was expanded to all safety data and safety information, including mandatory safety reports, while the previous SARPs were only applicable to voluntary safety reports.

3.4.2 The Aviation Safety Act of the ROK ensures safety data protection only for the voluntary reports. However, the government recognises the need for expansion of the scope of protection, through

the suggestion from the service providers related to enforcement actions by the regulator. ROK has started reviewing the new SARPs for data protection and is studying research cases from other states and other fields of ROK such as nuclear energy, medical and finance. We are expecting to complete this study by September this year and are looking forward to developing an amendment by the first quarter of 2018.

4.   **CONCLUSION**

4.1   Continuous review and efforts for improvement are needed to implement safety reporting system in an effective manner. Moreover, for implementing State Safety Programme, the Member States are required to collect and process more various kinds of safety data for informed decision-making. In the current Annex 19, the term "incident reporting system" has been replaced by "safety reporting system" which also emphasise the importance of variety of safety data types. Starting with the safety reporting system, ROK bends additional efforts to collect and process various kinds of safety data for its SSP.

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