



ICAO

International Civil Aviation Organization

First Meeting of the Surveillance Study Group (SURSG/1)

(Video Teleconference, 20– 22 April 2021)

Agenda Item 5: Discuss SURSG work plan/programme

WORK PLAN OF SURVEILLANCE STUDY GROUP

(Presented by Hong Kong China)

SUMMARY

This paper presents a draft work plan for consideration by the Surveillance Study Group (SURSG), to achieve its objectives defined by Terms of Reference (TOR) for a harmonized sharing of surveillance data in SWIM in the Asia and Pacific Regions (APAC).

1. INTRODUCTION

1.1 The establishment of the SURSG and its Terms of Reference (TOR) were endorsed by the CNS SG/24 on 4 December 2020 under the “*Decision CNS SG/24/16 (SURICG/5/1) - Establishment of Study Group under SURICG on Sharing of Surveillance Data in SWIM*”. Based on the TOR, the objectives of the Study Group are to:

- 1) *Study, provide expert views and recommendations:*
 - a) *to achieve harmonized sharing of surveillance data in SWIM in the Asia and Pacific Regions (APAC) according to Surveillance Strategy adopted by APANPIRG and in support of ICAO’s GANP and ASBU initiatives; and*
 - b) *on the possible models of sharing surveillance data in SWIM in the SWIM environment, in consideration of the SWIM technical infrastructure, SWIM information service, CRV infrastructure and any applicable governance, and technical requirements.*
- 2) *Review, identify and provide expert views and recommendations to address major issues, raised to the SURSG by ICAO APAC, in the technical, operational or regulatory aspects of surveillance data sharing to facilitate the implementation of surveillance from “departure to destination” in APAC.*

1.2 To facilitate the working arrangement of the SURSG, a draft work plan with proposed tasks, which is based on the deliverables of Study Group defined in TOR, is prepared and discussed in this paper for consideration by the Meeting.

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2. DISCUSSION**Deliverables and Work Plan**

2.1 According to the TOR, SURSG shall complete the following four deliverables within its term of office in order to meet the objectives of the Study Group.

- 1) *Submit not fewer than 1 Progress Report per year to SURICG and SWIM TF, with the latest report submitted at least 2 months prior to convening of the SURICG meeting on the SURSG deliverables.*
- 2) *Study, identify and make recommendations on the possible and practical models for surveillance data sharing in SWIM in APAC.*
- 3) *Prepare, based on its works in 2) above, a report on the possible implementation of surveillance data sharing in SWIM in APAC*
- 4) *Develop guidance materials to assist Members States participating in the sharing of surveillance data and Member States accessing the shared surveillance data*

2.2 For each of the deliverables, a list of sub-tasks are identified for elaborating its required work content and facilitate the work sharing by Member States. With the division of big deliverable into smaller sub-tasks, it would mean that the completion of all sub-tasks under a deliverable would lead to the completion of the corresponding deliverable. A draft work plan is given in **Attachment** for consideration by the Meeting.

Working Methods

2.3 To ensure on-time delivery of tasks according to the work plan, it is recommended that Member States, which possess knowledge or experience of a task, would take up the role as Task Owner or Co-owners and contribute to the preparation works of the deliverables. The arrangement of co-owners to a task is the preferred approach as far as practicable to ensure better sharing of the workload and allow wider consideration to the concerned topic.

2.4 Between SURSG meetings, it is suggested that Group Lead(s) would conduct teleconference(s) or web-meeting(s) with Task Owners to keep track of the tasks' progress for the report of relevant outcomes during the SURSG or SURICG meetings according to the work plan. For the coordination between Task Co-owners, it could be via any means of communications as appropriate. During the preparation process by owners, copying of relevant information/materials to Group Lead(s) is preferred.

Past Studies and Recommendations on Surveillance Data Sharing

2.5 Hong Kong China and Singapore had preliminarily studied some key considerations, in the context of SWIM TF, related to Task 2 of the draft work plan and presented working papers at SWIM TF/4 (WP/13) and CNS SG/24 (WP/22). Some further recommendations are given below.

Implementation Model

2.6 The philosophy and roadmap for APAC SWIM implementation, by using a bottom up, agile like approach, had been adopted by CNS SG/23 on 6 Sep 2019, which is an incremental approach to

start with identifying and selecting one particular operation for SWIM implementation (e.g. ATFM), the information services and infrastructure services required to support the operation can then be identified and implemented. It is recommended the same incremental approach should be adopted for surveillance data sharing in SWIM, to align with the philosophy and roadmap for APAC SWIM implementation.

Infrastructure Model

2.7 With the successful conduct of the SWIM in ASEAN Demonstration on the 12th and 15th of November 2019, in Bangkok, Thailand and Singapore, respectively, a hybrid model combining with private (ANSP) and public (Commercial) architecture was considered to be the most suitable infrastructure model makes a good balance between maximum efficiency and the geopolitical concerns of the participating States. This hybrid model can provide the flexibility for participating States to choose their desired implementation strategy, i.e. adopting either a centralized SCDP approach or an individual SCDP approach, which is recommended for surveillance data sharing in SWIM.

Business Model

2.8 As mentioned in para 2.4, a private and public infrastructure model is preferred. A commercial-ANSP collaboration scheme, which can further offset each ANSP's setup cost in serving as a centralized SCDP is proposed for deliberation by States. This would be the immediate concerns of the SURSG, as a more concrete direction on the business model, the faster the implementation of the surveillance data sharing can be achieved.

Participation Model

2.9 Availability of data is of utmost importance to the successful implementation of the surveillance data sharing, as the more data we have, the more attractive for States to join. As mentioned in para. 2.3, an incremental approach is preferred for the SWIM implementation. As a start, it is recommended to line up a few core members that are already capable to serve as an data contributor over SWIM (i.e. Level 4 participants, as customized Enterprise Messaging Service (EMS) developer and native-SWIM-format data producer and consumer in SWIM in ASEAN Demonstration could be the potential candidates) and a trial can be quickly setup to demonstrate the benefits brought by surveillance data sharing in the APAC region. Other States, if they wish, can then participate as data consumer, with minimal effort, through the centralized SCDP. The number of participating States will gradually increase.

A SWIM Demonstration on CRV

2.10 A SWIM Demonstration on CRV, mainly focusing on ATFM operation and to be hosted by Hong Kong China scheduled for March 2020 has been postponed due to the pandemic. It is worth exploring if this demonstration could be further enriched to include surveillance data sharing capability once the type(s) of surveillance data to be shared and information exchange model are identified, to support the idea mentioned in para 2.6 above.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review the draft work plan provided in **Attachment** and propose any changes as appropriate;
- b) encourage Member States to join the preparation work as Task Owners and contribute to the identified tasks under the work plan;

- c) note the past studies and recommendations on the surveillance data sharing; and
- d) discuss any relevant matter as appropriate.

Work Plan of Surveillance Study Group

Group	Task	Description	Start	End	Task Owner(s)
Feasibility Study Stage	1	Preparation of Progress Report on the SURSG deliverables	-	Before every SURSG Meeting	Study Group Lead(s)
	2	Study, identification and recommendation of possible and practical models for surveillance data sharing in SWIM	SURSG/1	SURSG/2	TBD
	2-1	Preparation of Concept of Use/Operation	SURSG/1	SURSG/2	TBD
	2-2	Study, identify and recommend on Implementation Model including the consideration of system design and collaboration model on sharing of surveillance data.	SURSG/1	SURSG/2	TBD
	2-3	Study, identify and recommend on an Infrastructure Model based on SWIM and CRV infrastructure	SURSG/1	SURSG/2	TBD
	2-4	Study, identify and recommend on a Business Model including commitments by data sharing participants as well as incurred resource and cost	SURSG/1	SURSG/2	TBD
	2-5	Study, identification and recommendation of Participation Model in consideration of commitments by data consumers and multi-lateral agreement on surveillance data sharing	SURSG/1	SURSG/2	TBD
	2-6	Preparation of implementation roadmap and time frames with consideration of approach, types of surveillance data and information exchange model	SURSG/1	SURSG/2	TBD
Recommendation Stage	3	Report on the possible implementation of surveillance data sharing in SWIM	SURSG/2	SURICG/7	TBD
	3-1	Consolidation of all the outcomes of Task 2 into a report according to the contents defined in TOR for submission to SURICG	SURSG/2	SURICG/7	TBD
	3-2	Preparation of draft multi-lateral agreement on surveillance data sharing and data consumption	SURSG/2	SURICG/7	TBD
	4	Guidance materials for the sharing and access of surveillance data	SURICG/7	SURICG/9	TBD
	4-1	Preparation of the framework and 1 st draft of guidance material	SURICG/7	SURSG/3	TBD
	4-2	Further development of the working draft of guidance material for endorsement by SURICG and CNS SG	SURSG/3	SURICG/9	TBD