



ICAO

*International Civil Aviation Organization***Third Meeting of the Surveillance Study Group  
(SURSG/3)**

(Hong Kong China, 22– 24 March 2023)

**Agenda Item 8:** Review of SURSG ToR and work plan/programme**REVIEW ToR AND ACTION ITEMS LIST**

(Presented by the Secretariat)

**SUMMARY**

This paper presents current ToR and Action item list of Surveillance study Group for review and update by the meeting.

**1. INTRODUCTION**

1.1 The Twenty Fourth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/24) of APANPIRG was held from *30 November to 4 December 2020* via video teleconference, which adopted the **Decision CNS SG/24/16 (SURICG/5/1) - Establishment of Study Group under SURICG on Sharing of Surveillance Data in SWIM** and reviewed the proposed ToR.

1.2 The meeting recognized the need to revise ToR by adding chair role and function, frequency of the meeting of SURSG, and the mode of the various task lead meetings for effective progress update, decision making, work assignments as they arise and the need to update the list of contributing States as necessary. The meeting also discussed and agreed that the States who will not use SWIM or CRV may be considered in the study.

1.3 This paper presents the ToR and action item list of SURSG for the meeting review and updates.

**2. DISCUSSIONS**

2.1 The SURSG/1 meeting reviewed the draft ToR, which was further adopted by CNS SG/25 by the **Decision CNS SG/25/12 (SURICG/6/6)- Revised ToR of Surveillance Study Group (SURSG)**. The SURSG/2 Meeting sensed no need to revise the ToR. However, it was mentioned that ToR is a living document and it may be modified based on the need in future meetings. The current ToR of SURSG is provided in **Appendix A** to this paper.

2.2 The SURSG/2 Meeting updated the Action Items list for SURSG. The updated Action Items list for SURSG is provided in **Appendix B** to this paper.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) review the ToR of SURSG provided in **Appendix A** to this paper;
- b) review and update the Action Items list for SURSG provided in **Appendix B**; and
- c) discuss any relevant matter as appropriate.

-----

## TERMS OF REFERENCE

### STUDY GROUP UNDER SURICG ON SHARING OF SURVEILLANCE DATA IN SWIM

#### **Working Arrangement of the Study Group**

**Membership:** The Study Group under SURICG on Sharing of Surveillance Data in SWIM (“Study Group”, “SURSG” as acronym) shall be composed of subject matter experts from Member States involved in the provision of surveillance services and SWIM development as well representatives from Member States with an interest to contribute to the works of the SURSG. The SURSG may invite representatives of International Organizations recognized by the ICAO Council, Industry Partners or interested parties representing important civil aviation interests to participate in its work in consultative capacity.

#### **Participants of SURSG/1 (in alphabetical order):**

*Australia, China, Hong Kong - China, India, Indonesia, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Singapore, Thailand, United States, Viet Nam, CANSO, IATA, ICCAIA.*

The SURSG shall have one elected Chair.

The SURSG shall have Task Leads and Sub-Task Leads for tasks detailed in the “Deliverables to meet the Objectives”, which currently features 4 main Tasks together with their sub-tasks. Members may volunteer to subscribe to the tasks and sub-tasks. Task Leads and Sub-Task Leads are to be selected through coordination and agreement among the respective task or sub-task subscribers.

**Meetings:** While the SURSG is established in ad hoc nature, it shall convene face-to-face/web meeting to achieve its TOR. Outcome of its meetings shall be reported to and sought endorsement from the SURICG. Progress of the SURSG shall also be shared with SWIM TF and CRV OG via their nominated representatives joining the SURSG.

Task Leads and Sub-Task Leads shall convene meetings as necessary and in formats as appropriate to discuss and work on their tasks to achieve the scheduled deliverables making reference to Deliverables Template, a template of which is provided on the last page of this ToR.

Task Leads and Sub-Task Leads shall attend the SURSG meetings and in between SURSG meetings, ad-hoc or regular meetings to harmonize their work or resolve issues.

**Schedule and delivery:** Subject to the extent of prioritized applications considered by the SURSG, the schedule for delivery of the SURSG shall be decided by the SURSG, which shall update the SURICG accordingly.

#### **The Objectives of 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.

**Deliverables to meet the Objectives:**

- 1) To 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 Study Group deliverables (listed in 2 to 4 below);
- 2) To study, identify and make recommendations on the **possible and practical** models for surveillance data sharing in SWIM in APAC with considerations of:
  - a) Concept of use/operation;
  - b) System design considerations of individual participant that shares surveillance data such as system robustness, data security and integrity, data latency, fallback arrangements and system recovery;
  - c) General requirements from perspective of collaborative sharing of surveillance data such as centralized/decentralized surveillance data processing, data repository, service registry, service resilience and service recovery;
  - d) Required commitments of data sharing participants such as commitment of resources and costs;
  - e) Implementation roadmap and time frames with consideration of
    - (i) An incremental approach/a comprehensive approach at the outset;
    - (ii) Type(s) of surveillance data to be shared; and
    - (iii) Information exchange model for surveillance data in SWIM;
  - f) SWIM technical infrastructure, SWIM information service, CRV infrastructure;
  - g) Other currently available or emerging technologies; and
  - h) ICAO Global Air Navigation Plan (GANP) and Aviation System Block Upgrades (ASBU) as well as APAC Seamless ANS Plan.
- 3) To prepare, based on its works in 2) above, a report on the possible implementation of surveillance data sharing in SWIM in APAC inclusive of the following:
  - a) Recommendations for:
    - (i) An incremental approach/a comprehensive approach at the outset in surveillance data sharing;
    - (ii) Type(s) of surveillance data to be shared; and
    - (iii) Exchange model of surveillance data in SWIM.
  - b) Pros and cons and cost effectiveness for the possible models that have been considered and a recommendation on the best approach or parallel approaches;
  - c) Concept(s) of Operations of the recommended approach(es);
  - d) Required commitments of participating Member States who share their surveillance data;
  - e) Required commitments of Member States who access the shared surveillance data; and
  - f) Draft multi-lateral agreement on surveillance data sharing and data consumption.
- 4) To develop guidance materials to assist Members States participating in the sharing of surveillance data and Member States accessing the shared surveillance data.

**Template of Deliverables**

|   |  | <b>Efforts thus far</b> |
|---|--|-------------------------|
| 1   | <p>Study, provide expert views and recommendations:</p> <ul style="list-style-type: none"> <li>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</li> <li>b) on the possible models of sharing surveillance data in SWIM environment, in consideration of the SWIM technical infrastructure, SWIM information service, CRV infrastructure, and any applicable governance, and technical requirement.</li> </ul>  |                         |
| 2   | <p>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 Mode S DAPs implementation in APAC.</p>   |                         |
| <b>Deliverables to meet the Objectives:</b> |  | <b>Efforts thus far</b> |
| 1   | <p>To 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 (listed in 2 to 4 below)</p>  |                         |
| 2   | <p>To study, identify and make recommendations on the possible and practical models for surveillance data in SWIM in APAC with considerations of :</p> <ul style="list-style-type: none"> <li>a) Concept of use/operation;</li> <li>b) System design considerations of individual participant that shares surveillance data such as system robustness, data security and integrity, fallback arrangements and system recovery;</li> <li>c) General requirements from perspective of collaborative sharing of surveillance data such as centralized/decentralized surveillance data processing, data repository, service registry, service resilience and service recovery;</li> <li>d) Required commitments of data sharing participants such as commitment of resources and costs;</li> <li>e) Implementation roadmap and time frames with consideration of: <ul style="list-style-type: none"> <li>(i) An incremental approach/a comprehensive approach at the outset;</li> <li>(ii) Type(s) of surveillance data to be shared; and</li> <li>(iii) Information exchange model for surveillance data in SWIM.</li> </ul> </li> <li>f) SWIM technical infrastructure, SWIM information service, and CRV infrastructure;</li> </ul> |                         |

SURSG/3  
Appendix A to WP/04

|   |   |  |
|---|---|--|
|   | <p>g) Other currently available or emerging technologies; and<br/>h) ICAO Global Air Navigation Plan (GANP) and Aviation System Block Upgrades (ASBU).</p>  |  |
| 3 | <p>To prepare, based on its works in 2) above, a report on the possible implementation of surveillance data sharing in SWIM in APAC inclusive of the following:</p> <p>a) Recommendations for:</p> <ul style="list-style-type: none"> <li>(i) An incremental approach/a comprehensive approach at the outset in surveillance data sharing;</li> <li>(ii) Type(s) of surveillance data to be shared; and</li> <li>(iii) Information Exchange model for surveillance data in SWIM.</li> </ul> <p>b) Pros and cons and cost effectiveness for the possible models that have been considered and a recommendation on the best approach or parallel approaches;</p> <p>c) Concept(s) of Operations of the recommended approach(es);</p> <p>d) Required commitments of participating Member States who share their surveillance data;</p> <p>e) Required commitments of Member States who access the shared surveillance data; and</p> <p>f) Draft multi-lateral agreement on surveillance data sharing and data consumption.</p> |  |
| 4 | <p>To develop guidance materials to assist Members States participating in the sharing of surveillance data and Member States accessing the shared surveillance data.</p>   |  |

-----

## **TERMS OF REFERENCE**

### **Surveillance Sharing in SWIM (System Wide Information Management) Trial Implementation Ad-hoc Group (S3TIG)**

#### **Objectives:**

The Surveillance Sharing in SWIM (System Wide Information Management) Trial Implementation Ad-hoc Group (S3TIG) is established to:

1. support and promote the trial implementation of surveillance data sharing based on System Wide Information Management (SWIM) concept; and
2. demonstrate technically, operationally, and economically viable model options for surveillance data sharing in SWIM environment for reference through implementation trial(s).

#### **Responsibilities:**

The S3TIG shall:

1. Promote collaboration between States, international organisations, aviation stakeholders and service providers to:
  - a. quickly build up a sizable participant base with reasonable breadth of shared surveillance data, and
  - b. cooperatively conduct demonstrations and operate trials.
2. Through collaboration of trial participants, propose governance arrangements, protocols as well as performance measures and objectives necessary to achieve efficient sharing of surveillance data in support of flight operation safety.
3. Produce a safety assessment for surveillance data sharing in SWIM environment based on the outcome of trial implementation.
4. Produce an economic assessment for the establishment and operation of surveillance data sharing through SWIM based on the outcome of trial implementation.
5. In undertaking its activities, the S3TIG shall consider diversity of States in the Asia Pacific Region in terms of complexity and volume of air operations, sophistication of air traffic management services and economic capacity.
6. Drafting and proposing surveillance data exchange model.

**Composition:**

Group Lead - One Group Lead and One Deputy Group Lead to be elected at first meeting of S3TIG from members who are States/Administrations of ICAO APAC.

Members - S3TIG members can be:

1. States/Administrations of ICAO APAC
2. International organizations recognized by ICAO.

**Liaison:**

SWIM TF, CRV OG, ATFM SG

**Conduct of the work:**

The S3TIG will conduct its work through web conferences, teleconferences, and other electronic means of communications and/or Face-to-Face meetings if necessary.

**Reporting:**

The group will report at least annually to SURSG.

-----

SURSG/3  
Appendix C to WP/04

---

**ACTION ITEMS SURSG**

| Action ID | Task   | Responsible Person                | Due Date  | Deliverables                    | Status | Remarks                |
|-----------|--|-----------------------------------|-----------|---------------------------------|--------|------------------------|
| 1-1       | To provide the mapping for each task with terms of reference of SURSG for detailed technical description of each task            | Hong Kong China                   | SURSG/2   | WP                              | Close  |                        |
| 2-1       | To prepare a draft ToR of S3TIG by mid-April 2022 and send to all registered delegates of SURSG/2 for their feedback by an email | Hong Kong China, ICAO Secretariat | 15-Apr-22 | Draft ToR for SURICG/7 adoption | Open   | Done, Propose to close |