



ICAO

International Civil Aviation Organization
Asia and Pacific Office

Twelfth Meeting of the Regional Aviation Safety Group – Asia and Pacific Regions (RASG-APAC/12)

Bangkok, Thailand, 17-18 November 2022 (Hybrid Platform)

Agenda Item 4: ICAO / Member State / Industry Presentations

APAC ACTIVITIES ON ATM SAFETY MANAGEMENT

(Presented by the Secretariat)

SUMMARY

This paper presents the continued initiatives on ATM Safety Management to enhance the safety management performance in the APAC region and to invite the meeting to support for the activities on the themed workshop on a positive safety culture and safety management to meet the needs of the APAC aviation stakeholders.

1. INTRODUCTION

1.1 Safety is of paramount importance to all aviation community, particularly for ever-evolving ATM to navigate through changes to fulfil the needs and expectations from aviation community.

1.2 To support APAC aviation stakeholders' safety-ensured ANS modernization by the APAC Seamless ANS Plan and Global Air Navigation Plan (GANP), APAC Regional Sub-Office, as defined by the ICAO Council, has been continuing its efforts to support APAC States to achieve safe ATM implementations with capable performance in ATM Safety Management.

1.3 PIRG and RASG are complementary in fostering the implementation of the GANP and the GASP at regional level to achieve a sustainable growth and improve the safety of air transport system.

1.4 This paper invites the meeting to support the continued efforts on enhancing ATM Safety Management performance in the APAC region by providing the necessary resources to the upcoming regional workshop on Safety Culture and Safety Management to enhance regional implementation support mechanisms to assist States in accomplishing safety functions and activities for more effective implementation of a safety risk management to permit innovation in the APAC region.

2. DISCUSSION

Activities on ATM Safety Management

Workshops on Air Navigation and Safety

2.1 ICAO APAC Regional Sub-Office had took the initiative to support APAC States to achieve safety-ensured ATM implementation through conducting a series of workshops including hands-on exercise sessions on a) ATM Safety Risk Assessment in Change Management (3 – 5 Nov. 2020, VTC); b) ATM Safety Risk Assessment (23 – 25 Jun. 2021, VTC); and c) ATM Safety Culture (27 -28 Oct. 2021, VTC).

2.2 The challenges and difficulties were identified through the feedback from the surveys after 3 rounds of workshops. APAC member States indicated that hazard identification and safety risk mitigation in the process of safety risk assessment were challenging owing to lack of sufficient safety data and safety information for the effective analysis and safety risk assessment.

2.3 Furthermore, lack of resources was indicated as the most challenging factor, such as guidance on ‘HOWs’ and methodologies, and in particular availability of experts with experience, competency, relevant knowledge and capabilities. Hence, they demanded for more initiatives and activities by ICAO APAC regional office on ATM safety management to facilitate the sharing expertise and experiences amongst APAC aviation community including industry.

2.4 Responding to the needs and challenges regarding the safety data and safety information, the 3rd workshop on ATM Safety Culture promoted the awareness of importance of having a positive, non-punitive safety culture in ATM to have sufficient safety data and safety information through safety reporting systems for effective safety risk management.

Supports from the ATM SG and the DGCA/57

2.5 Stemmed from ATM SG Task List, Action Item 9/9, the APAC region-wide survey on ATM Safety Culture was inaugurated via State Letter AP069/22 to have better situation awareness of how APAC States and ANSPs are dealing with ATM safety-related behaviours and how they are managing changes derived from the global and regional ANS upgrade journey while fulfilling the overarching objective of safety.

2.6 With strong supports from multiple States and International Organizations and noting improvement areas identified through the survey results, the ATM SG/10 also strongly supported the continued initiatives on conducting a more tailored and themed workshop to promote a positive safety culture for the enhancement of the Safety Management performance in the region.

2.7 Three Discussion Papers from France, IATA and ICAO about Positive Safety Culture were presented and vigorously discussed at the Fifty Seventh Conference of the Directors General of Civil Aviation, APAC (DGCA/57, 4 – 8 July 2022, Incheon, Republic of Korea) with adoption of DGCA Action Item 57/5 as below:

DP/3/2 DP/3/3 DP/3/10	Action Item 57/5	The Conference urged States/Administrations to: a) continue efforts in promoting the right environment and a positive safety culture through the consistent high-level leadership commitment; b) Strengthen collaboration to share and exchange best practices in developing and promoting a positive safety culture; and c) Continue efforts with strong commitment from top management to cultivating trust and respect between personnel and management for effective safety management.
-----------------------------	------------------	--

Survey Results on ATM Safety Culture in the APAC region

2.8 13 responses from States/Administrations on regulatory aspects in promoting a positive safety culture and 1,268 responses from ANSPs in 22 different States/Administrations on how they were implementing and promoting a positive safety culture in the operational environment were collected, de-identified and aggregated into quantitative data for the analysis.

- 2.9 The conclusions were drawn based on key observations from the survey results;
- a) States need to put more efforts to narrow down the gap between regulatory framework and implementation effectiveness with a view to enhancing awareness and understanding of their established policies and procedures amongst people in the organization, maybe through national training programmes, tailored workshops and seminars, etc.;
 - b) States need to ensure that safety reporting system is non-punitive if no violation of any regulations or procedures, or if appropriate according to the received training experience, so that operational personnel feels protected, well-informed and report any safety concerns for the good of safety;
 - c) States need to review and assess their current maturity level of safety culture regularly to ensure continuously improving safety management performance in ATM by developing the improvement plans with supporting activities;
 - d) well-structured and well-purposed training are needed to raise operational personnel's awareness of safety reporting systems including policies and associated procedures as well as the fundamental principles of aviation safety management;
 - e) rewarding system and feedback procedures for voluntary safety reports could be a good enabler to boost safety reporting as recommended by Doc 9859; and
 - f) further promotional initiatives to support States' enhancement of ATM safety management capability are needed at regional level for the effective implementation of ANS upgrades.

2.10 The meeting is encouraged to note that the key observations and conclusions through the survey results (**Attachment A**) and call for strong support from all APC aviation community and regional collaboration to address the gaps identified through the survey.

APAC regional Workshop on Safety Culture

2.11 As the survey outcomes revealed gaps and potential areas of improvement that require attention of all aviation community, the ATM SG/10 strongly supported for the APAC regional workshop to promote and enhance a positive safety culture and ATM Safety Management performance in the region in the coming year 2023.

2.12 The meeting is also requested to support this initiative by providing expertise in aviation safety management and resources as necessary in pursuit of ICAO APAC's harmonized regional implementation support to facilitate experience sharing and collaboration among the APAC aviation communities.

3. ACTION BY THE MEETING

- 3.1 The Meeting is invited to:
- a) note the information contained in this paper;
 - b) encourage APAC States/Administrations and industry to utilize the survey results in **Attachment A** for improvement planning to promote a positive safety culture and strengthen the safety management performance in ATM;
 - c) strengthen coordination with APANPIRG on ATM Safety Management to foster the implementation of the GANP and the GASP at regional level to achieve a sustainable growth and improve the safety and air navigation system;

- d) support the APAC regional workshop on Safety Culture by providing expertise in aviation safety management and resources as necessary in pursuit of ICAO APAC's harmonized regional implementation support; and
- e) discuss any relevant matters as appropriate.

— END —

SURVEY RESULTS ON ICAO APAC ATM SAFETY CULTURE

INTRODUCTION

ICAO Annex 19¹ – Safety Management requires that “States shall take necessary measures, including the promotion of a positive safety culture, to encourage safety reporting through both mandatory and voluntary safety reporting systems to collect safety data and safety information”. In addition, “the Service Provider shall define its safety policy reflecting organizational commitment regarding safety, including the promotion of a positive safety culture in accordance with international and national requirements”.

The Asia/Pacific Seamless ANS Plan emphasizes the importance of having optimal Aviation Culture by allocating Priority 1 to the regional element 7.43 (ANSP Human and Simulator Performance) to ensure safe implementation of modernization of Air Navigation Systems stemming from global and regional plans.

The purpose of this survey is to:

- establish better understanding of the current status of implementation of Safety Culture in States and Air Navigation Service Provider (ANSP) organizations in the Asia/Pacific (APAC) region; and
- identify improvement areas and needs requiring more attention in promoting an ATM Safety Culture in the APAC region.

HOW THE SURVEY WAS CONDUCTED

The ICAO APAC ATM Safety Culture Survey was launched on 06 May 2022 via State Letter AP069/22 (RSO), which was stemmed from a working paper submitted to ATM SG/9 meeting with proposals that was supported as ATM SG Task List Action Item 9/9.

States and Air Navigation Service Providers were requested to respond to two separately prepared questionnaires, through which States’ regulatory information was collected by email from Civil Aviation Authorities and feedback from Service providers were received through online survey.

13 States’ responses and 1,268 responses from ANSPs in 22 different States/Administrations were collected and aggregated until 24 June 2022.

OBSERVATIONS

The observations reflected do not aim to identify or reflect any State or group to preserve the anonymity of the recipient. A holistic analysis of the survey was out of the scope as the focus was on identifying implementation support initiatives for effective ATM safety management in APAC.

The following was observed:

- the responses were influenced by characteristics of the State aviation systems, regulatory environment and implementation maturities of State safety management;
- the gap between what is established in the regulatory system and how effectively it has been implemented needs to be narrowed down;
- the States and organizations’ policies and procedures to support Safety Culture, such as safety data/information protection, safety data sharing systems, disciplinary actions for what’s unacceptable behaviors and relevant training policy, and safety reporting system, are not sufficiently understood nor well communicated throughout the operational environment in ANSPs;
- there is common recognition among both States and operational personnel on the need for an improvement plan and periodic assessment of safety culture to enhance the effectiveness and maturity of safety management implementation;

¹ Annex 19 Sections 3.2, 3.5, 5.3, and Appendix 2 Section 1.1

Attachment A

- operational personnel is lacking of expectations and trust in management's genuine commitment to safety and safety issue resolution;
- despite the protection policy on safety data/information and its sources from external interference other than safety benefits, operational personnel feels no sufficient confidence and trust in fairness and protection when safety occurrence is reported in terms of post-consequences, legal accountability and job security;
- operational personnel feels hazard reporting system is needed to be improved in efficiency and easiness to use; and
- there is a strong interest among respondents from both States/Administrations and Service Providers in ICAO initiatives with a preference for pertinent workshops and trainings to share experience in fostering safety management capabilities and a positive safety culture in collaboration with other ATM stakeholders including industry.

CONCLUSIONS

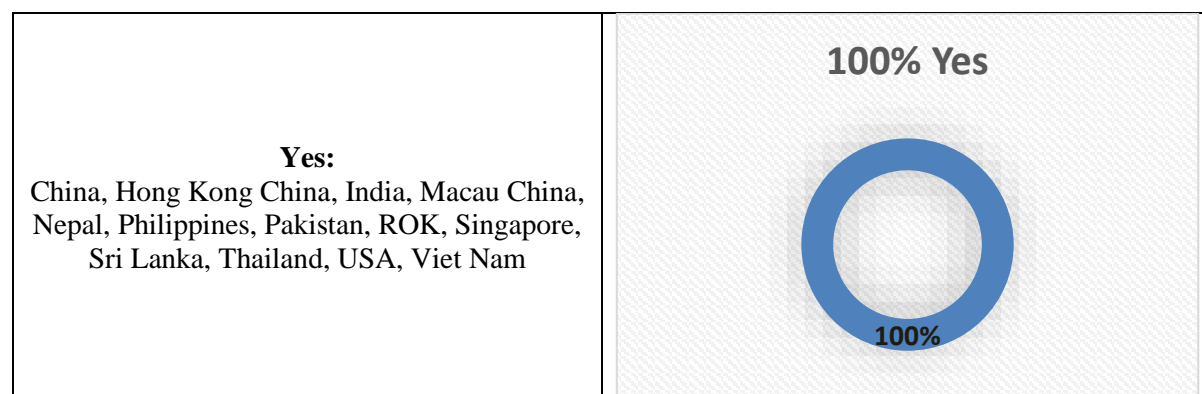
Based on the key observation above, the following conclusions were drawn:

- States need to put more efforts to narrow the gap between regulatory framework and implementation effectiveness with a view to enhancing awareness and understanding of their established policies and procedures amongst people in the organization, maybe through national training programmes, tailored workshops and seminars, etc.;
- States need to ensure that safety reporting system is non-punitive if no violation of any regulations or procedures, or if appropriate according to the received training experience, so that operational personnel feels protected, well-informed and report any safety concerns for the good of safety;
- States need to review and assess their current maturity level of safety culture regularly to ensure continuously improving safety management performance in ATM by developing the improvement plans with supporting activities;
- well-structured and well-purposed training is needed to raise operational personnel's awareness of safety reporting systems including policies and associated procedures as well as the fundamental principles of aviation safety management;
- rewarding system and feedback procedures for voluntary safety reports could be a good enabler to boost safety reporting as recommended by Doc 9859; and
- further promotional initiatives to support States' enhancement of ATM safety management capability are needed at regional level for the effective implementation of ANS upgrades.

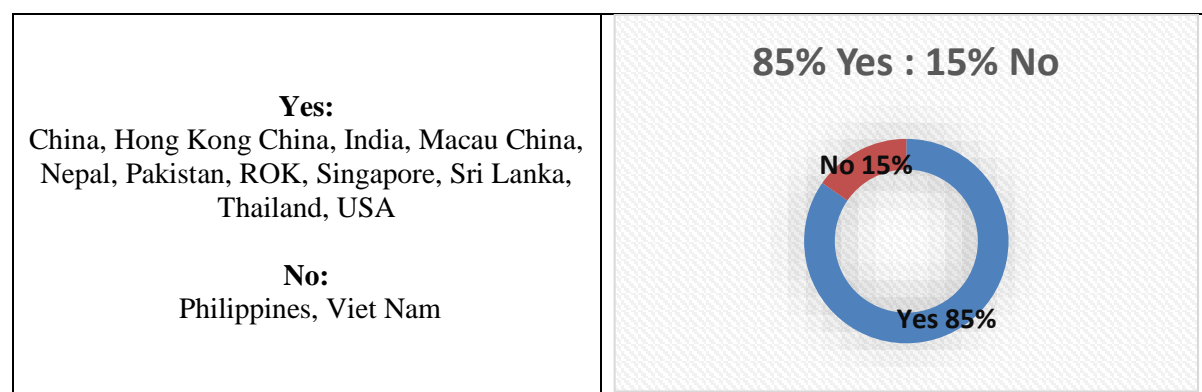
SURVEY RESULTS

QUESTIONNAIRE 1: FOR STATE

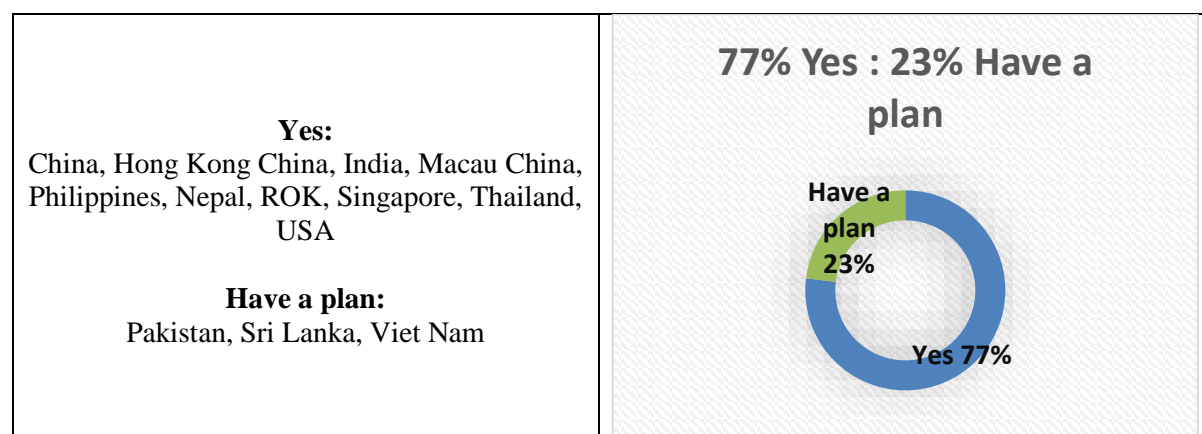
1. **13 State/Administration** responded: China, Hong Kong China, India, Macau China, Nepal, Philippines, Pakistan, ROK, Singapore, Sri Lanka, Thailand, USA, Viet Nam
2. Has your State established policies and procedures to support Safety Culture and Just Culture principles containing description of what's unacceptable behaviours and disciplinary actions thereon including relevant training policy, which is formally promulgated and made public?



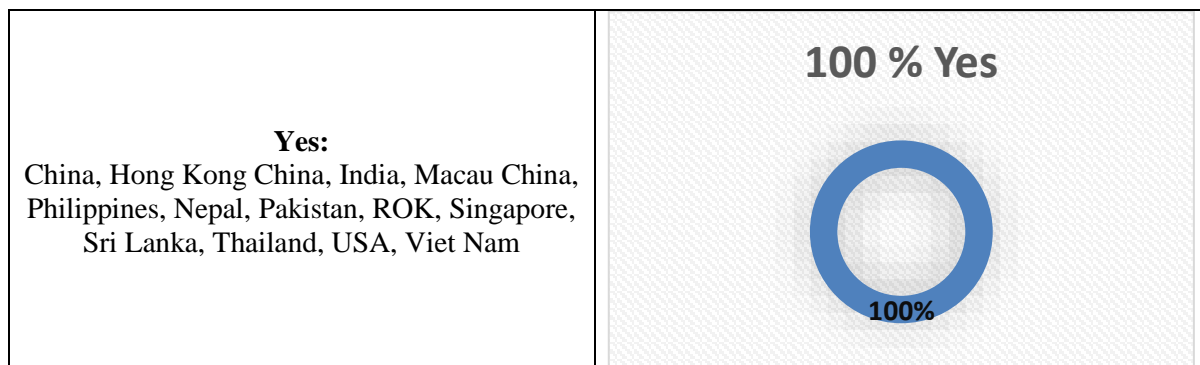
3. Within your State's legal/judiciary system, is safety data/information and the data/information sources sufficiently protected from external interference other than safety benefit?



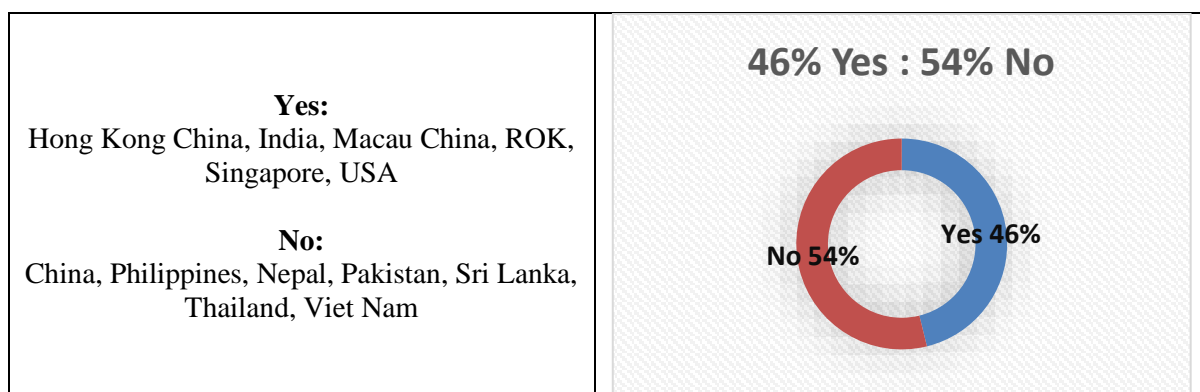
4. Is your State developing systems and processes to support safety data sharing and periodic publication to provide easy access to safety information gathered by the safety reporting programmes?



5. Is your State aware of the need for an improvement plan and periodic assessments of safety culture?



6. Does your State assess its safety culture and disseminate the results throughout the State at least once every 5 years to establish a shared understanding of State's safety culture and identify its strengths and weaknesses?

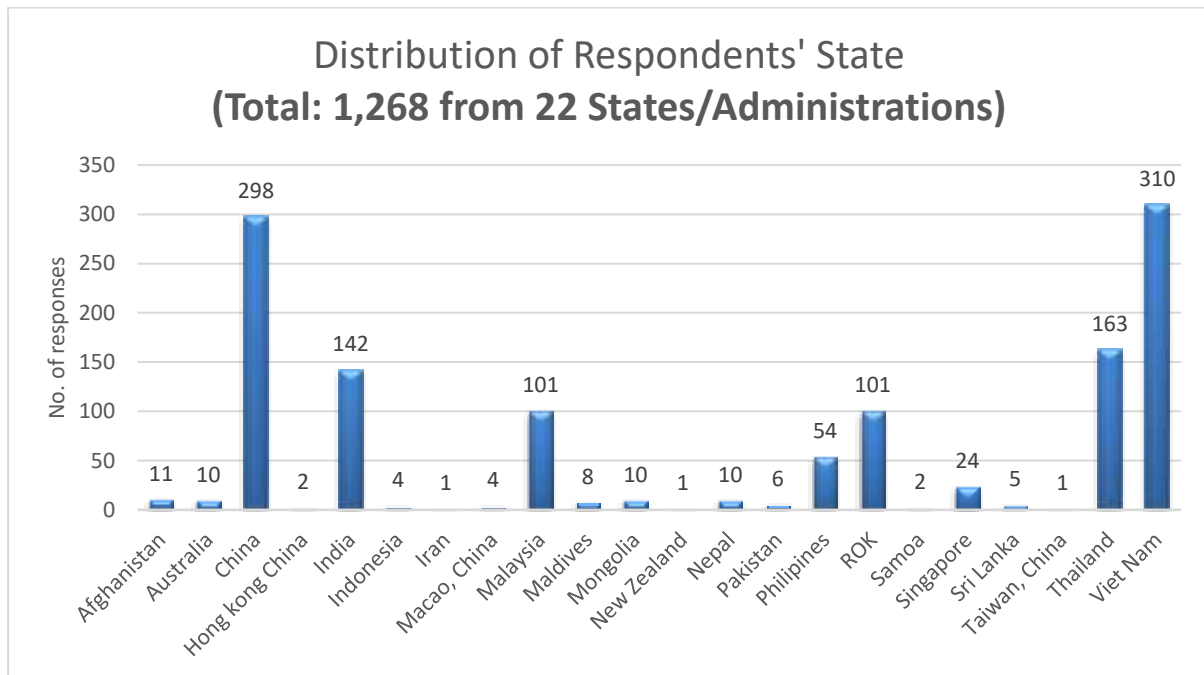


7. If you have any other suggestions or comments, please indicate here.

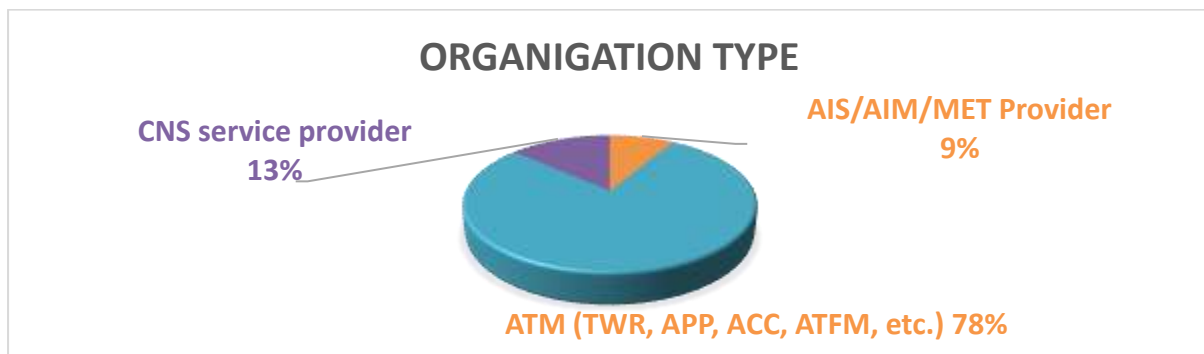
- ICAO may consider providing a validated checklist for safety culture survey.
- Evolvment and assessment of just culture/safety culture is not an easy task. Kindly share the best industry practices where the same has been implemented & prevailed.

QUESTIONNAIRE 2: ONLINE SURVEY FOR SERVICE PROVIDER

1. Please select your State.



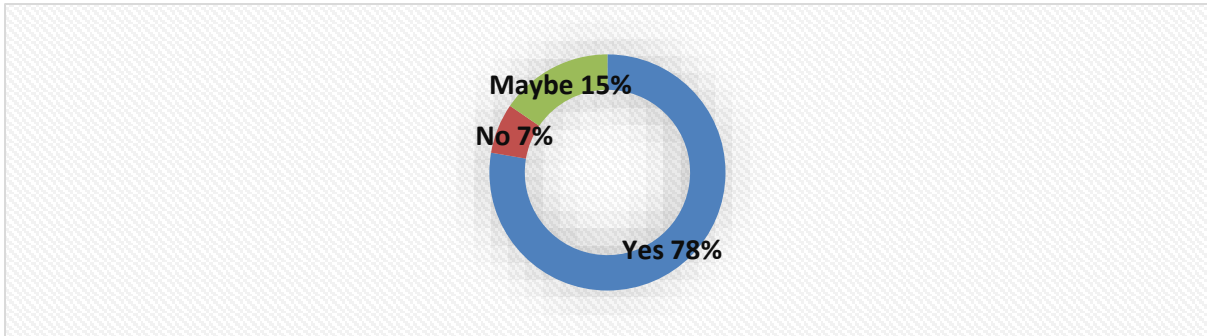
2. Please select your organization type.



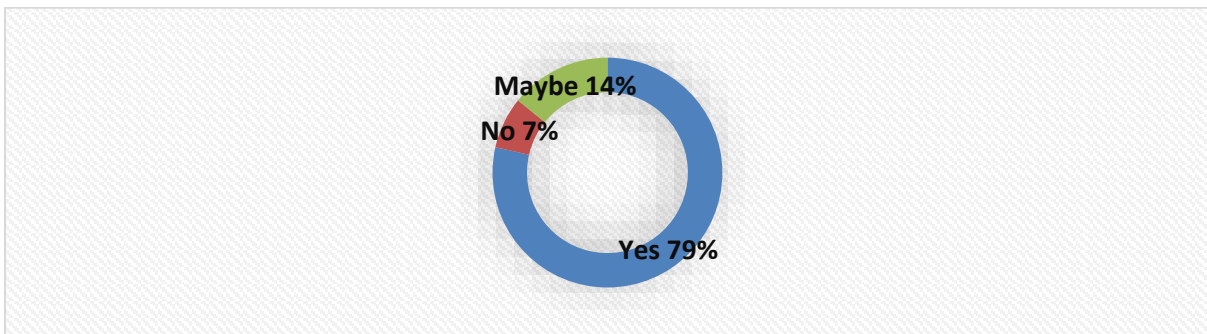
3. Please describe your current work position.



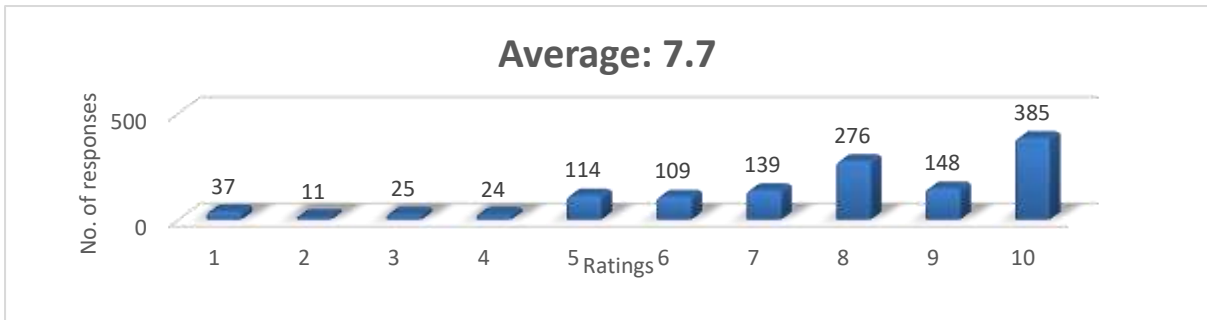
4. Has your State established policies and procedures to support Safety Culture and Just Culture principles containing description of what's unacceptable behaviours and disciplinary actions thereon including relevant training policy, which if formally promulgated in a public domain?



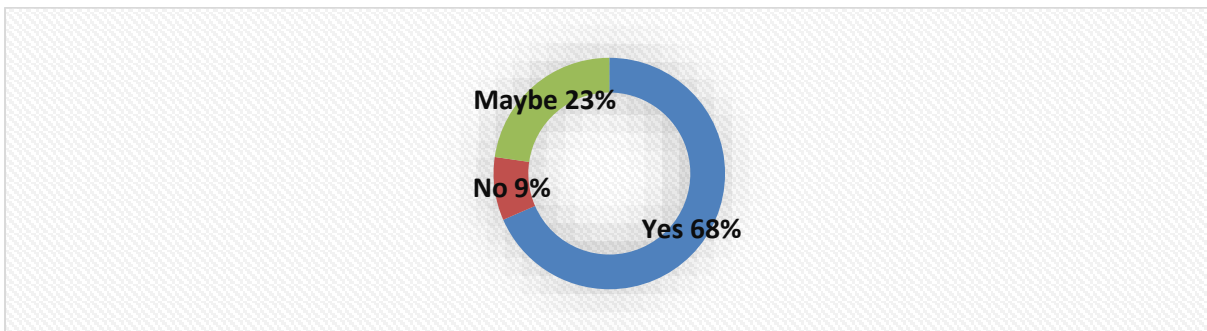
5. Are policies and procedures in place that define safety culture i.e. a Vision/Mission Statement with a description of what effective safety looks like in your organization?



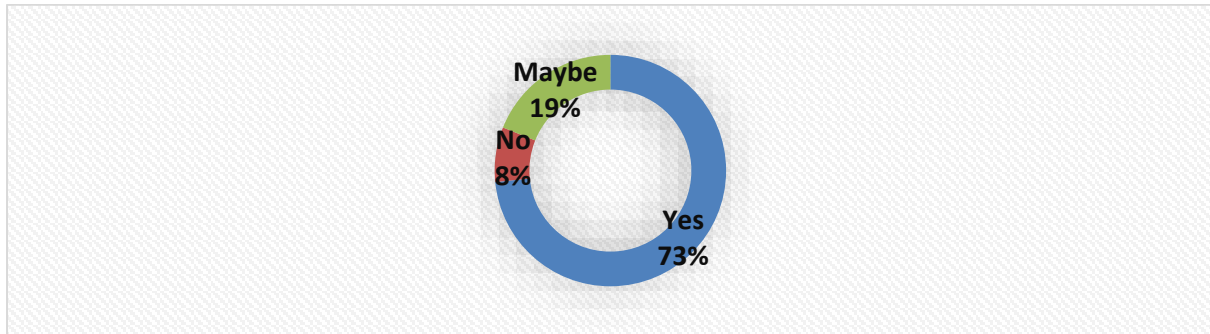
6. Is safety an organization priority and a core value of your organization?



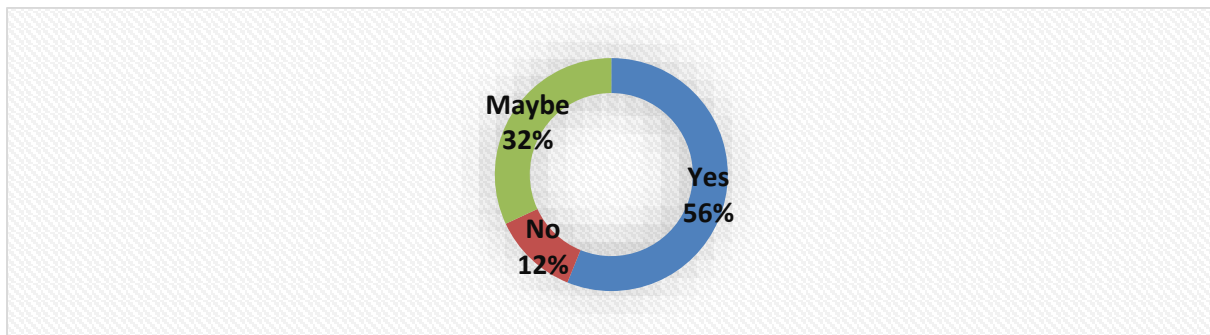
7. Are systems and processes in place to support safety data sharing and periodic publication to provide easy access to safety information gathered by the safety reporting programmes?



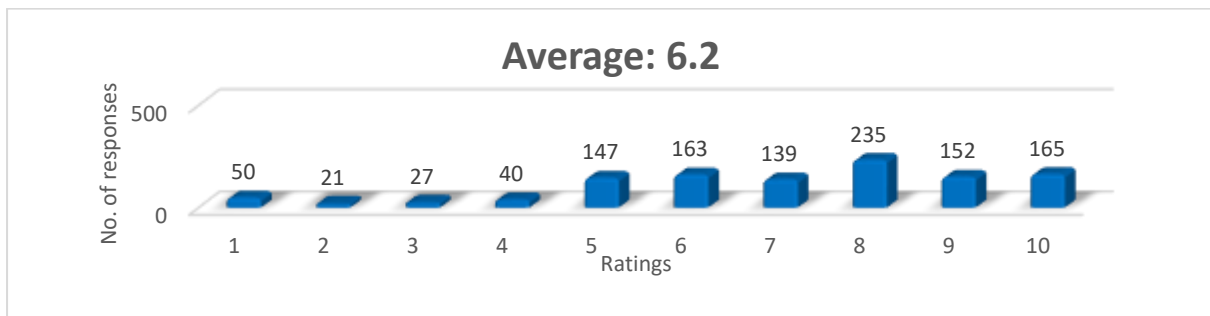
8. Is your organization aware of the need for an improvement plan and periodic assessments of safety culture?



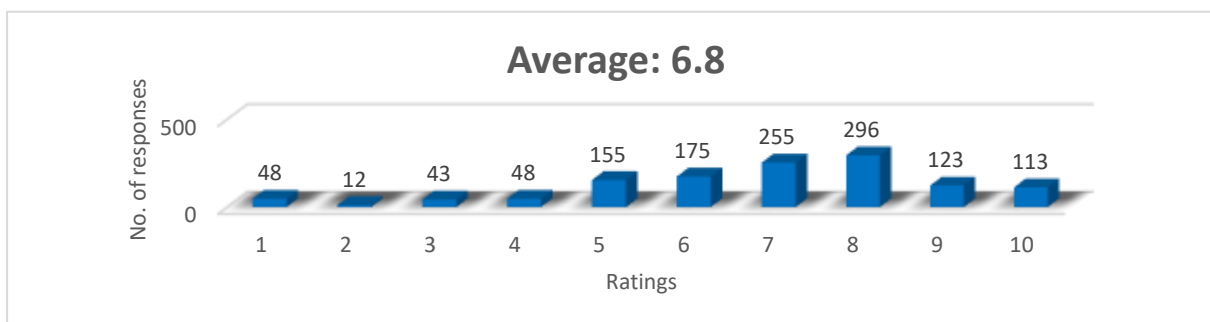
9. Does your organization assess its safety culture and disseminate the results throughout the nation at least once every 5 years to establish a shared understanding of organization's safety culture and identify its strengths and weaknesses?



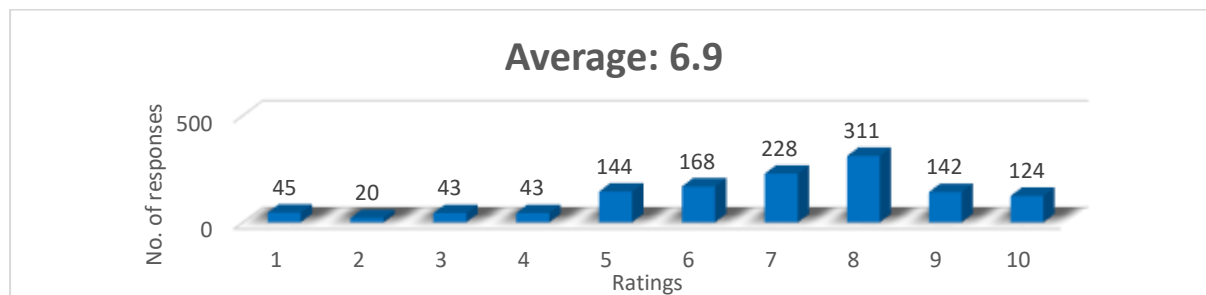
10. Does management's approach to safety demonstrate a genuine commitment to addressing safety issues by visibly endorsing and executing safety initiatives i.e. do they lead by example?



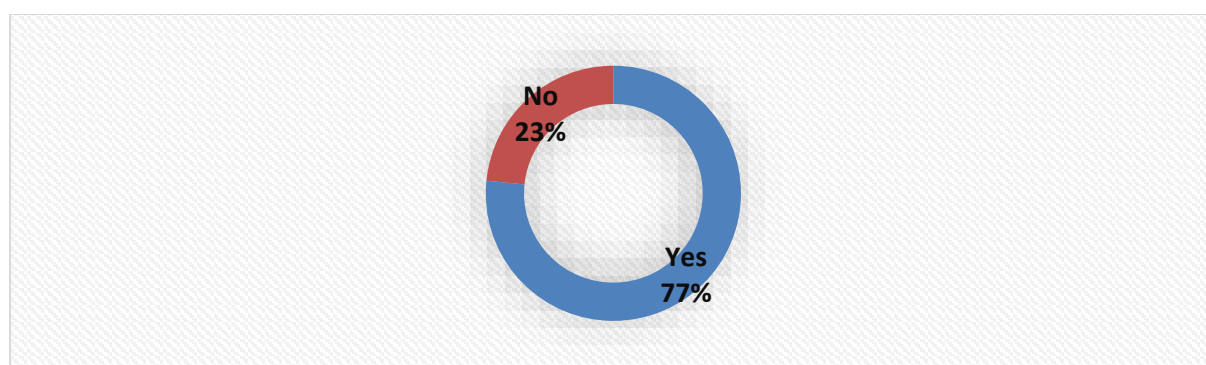
11. To what extent do you think all levels of your organization clearly understands and accepts the difference between acceptable and unacceptable behaviours, and disciplinary actions?



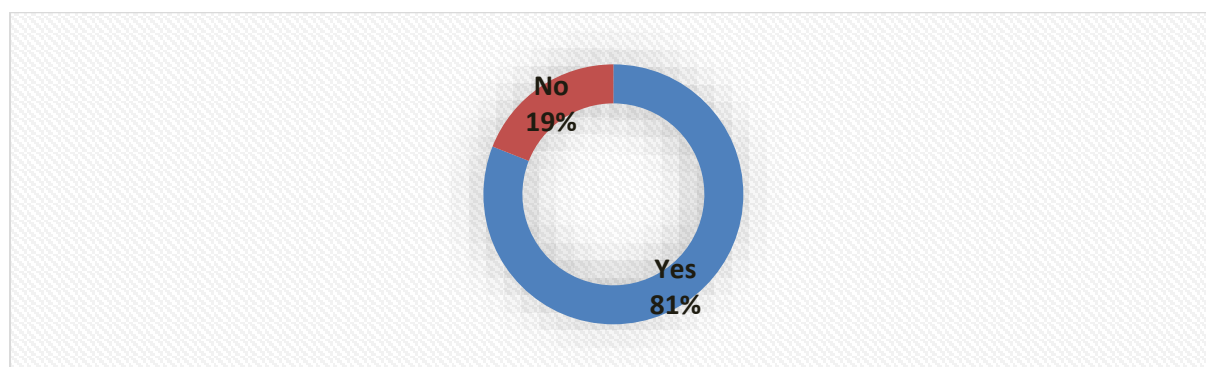
12. Are safety risks and hazards faced by the organization properly well understood at all levels (up to and including senior managers)? (1 being Not likely/Never, 10 being Very likely/Always)



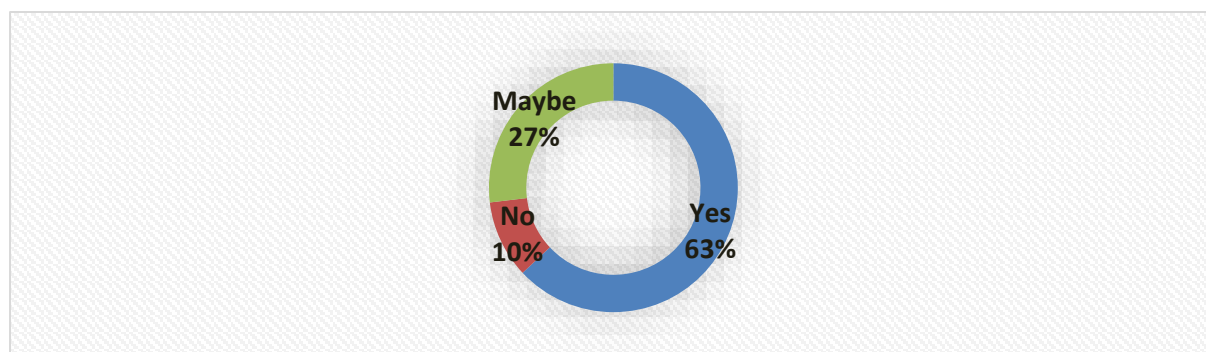
13. Does your organization encourage staff to challenge procedures, practices and people to improve safety performance?



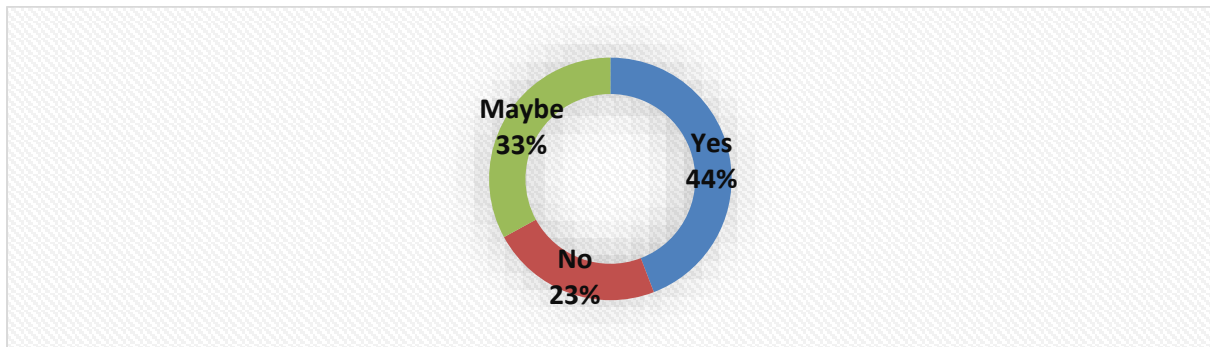
14. Does your organization provide regular feedback to staff based on safety occurrence reports?



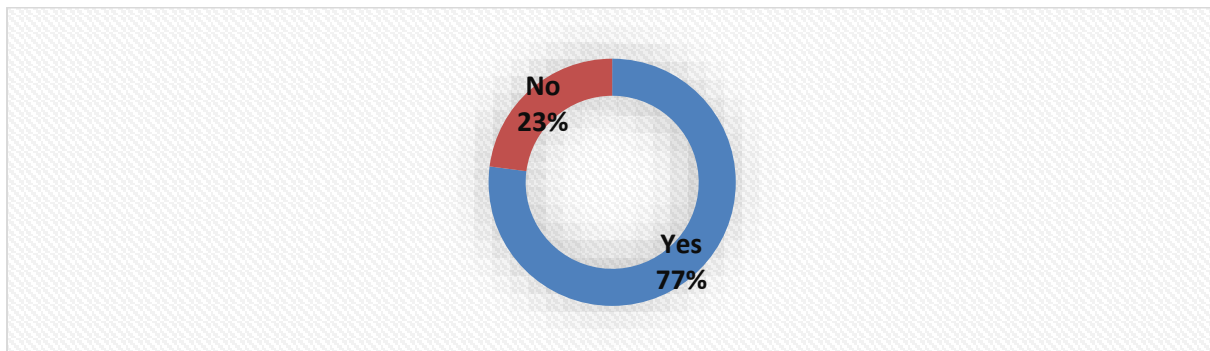
15. Is there a formal process to inform staff who have reported a safety occurrence of the progress of the investigation?



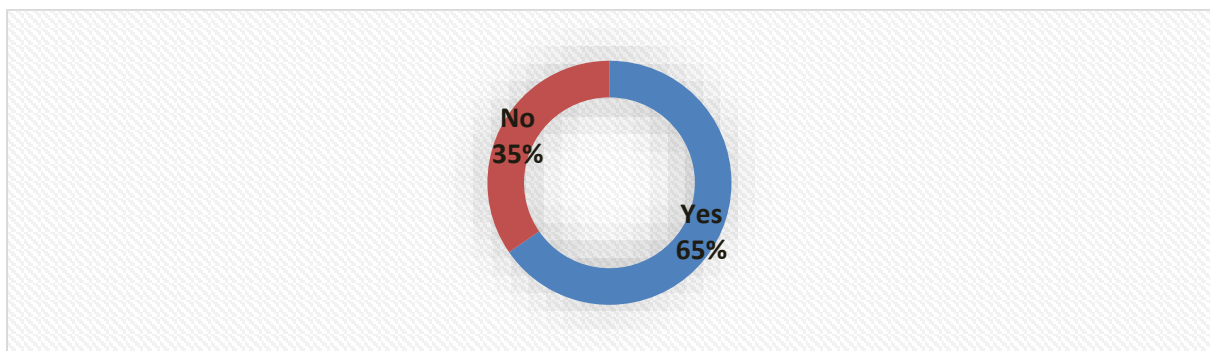
16. Are high safety issue reporters formally praised and recognized/rewarded by your colleagues and organization?



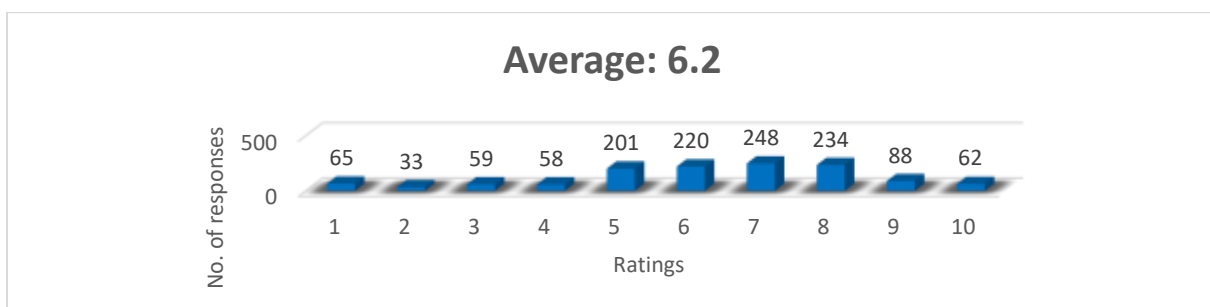
17. If you report your own safety occurrences, do you expect you will be treated fairly in accordance with the principles of the Just Culture definition?



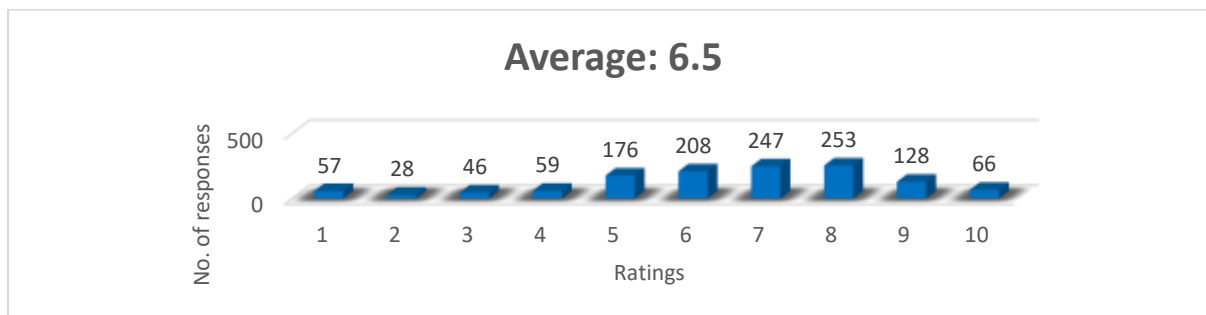
18. Do you feel your organization's hazard reporting system is efficient enough and easy to use?



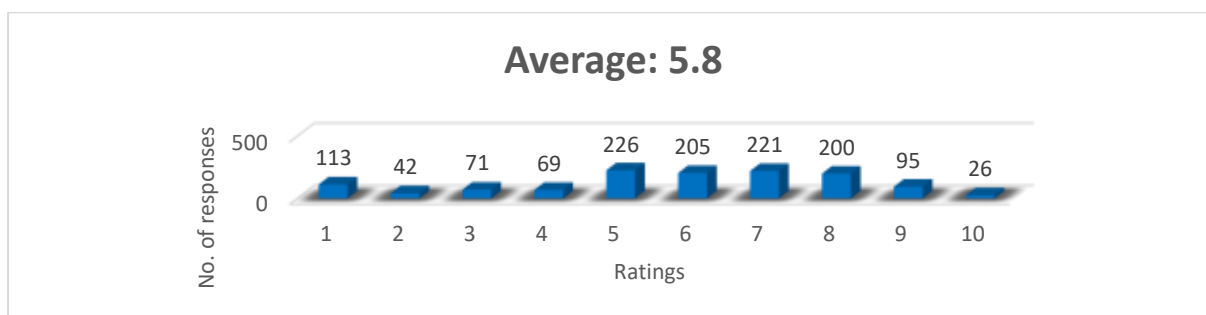
19. Is voluntary reporting of hazard/safety issue valued and appreciated among colleagues and management level in your organization? (1 being Not likely/Never, 10 being Very likely/Always)



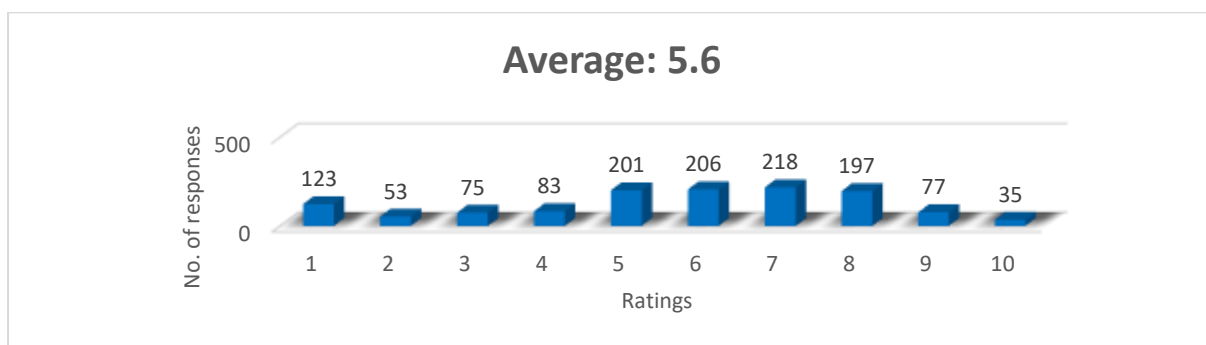
20. Do you feel the safety issue will be resolved and corrected when you report? (1 being Not likely/Never, 10 being Very likely/Always)



21. Are you comfortable with subsequent consequences when you report your own errors and/or mistakes? (1 being Not likely/Never, 10 being Very likely/Always)



22. Do you feel that you are protected in legal accountability and job security when you report your own errors and/or mistakes? (1 being Not likely/Never, 10 being Very likely/Always)



23. If you have any other suggestions or comments, please indicate here.

Feedback from written-in responses will be further analysed to be utilised for identifying and prioritizing support activities in promoting development of a positive safety culture and enhancement of ATM safety management performance to better support safe and effective implementation of APAC Seamless ANS Plan.

— END —