



International Civil Aviation Organization

ICAO

**Tenth Meeting of the Air Traffic Management Sub-Group
(ATM/SG/10) of APANPIRG**

Video Teleconference, 17 – 21 October 2022

Agenda Item 9: Any other business

SURVEY RESULTS ON POSITIVE ATM SAFETY CULTURE IN THE APAC REGION

(Presented by the Secretariat)

SUMMARY

This paper presents an analysis of the feedback surveyed through the State letter AP069/22 (RSO). The detailed survey results and high-level observation will be used to support the development and prioritization of future initiatives in the region for safe and effective implementation of APAC Seamless ANS Plan.

1. INTRODUCTION

1.1 The Survey was launched on 06 May 2022 via the 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 – Conduct ATM Safety Management survey and workshop.

1.2 The purpose of the survey is to gauge and promote the implementation of positive safety culture in the APAC region, and to provide data supporting the planning of ATM Safety Management activities based on better understanding on the current status to ensure safe implementation of APAC Seamless ANS Plan.

1.3 13 States/Administrations¹ responses and 1,268 responses from ANSPs in 22 different States/Administrations were collected to be utilized to identify improvement areas and better support at regional level in ATM safety management and promoting a positive safety culture in the future work programme.

2. DISCUSSION

How the Survey was conducted

2.1 Two different questionnaires² developed by ICAO APAC Regional Sub-Office, were provided one for State' response to collect feedback on regulatory aspects in promoting a positive safety culture, and another for ANSP' response to collect information on how ANSPs are implementing and promoting a positive safety culture in operational environment.

¹ China, Hong Kong China, India, Macau China, Nepal, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, The United States of America, Viet Nam

² Questionnaire 1 for States: 7 questions, Questionnaire 2 for Service Providers: 23 questions (including general information and an open question)

2.2 Feedback from States was received by email and feedback from ANSPs through the online survey platform for easy and convenient response. The received was de-identified and aggregated into quantitative data, with no intention to compare the data and information State by State but to support the effective prioritization for better understanding and improvement area development.

Key observation from the survey results

2.3 Through the survey, the following was observed:

- a) the responses were influenced by characteristics of the State aviation systems, regulatory environment and implementation maturities of State safety management;
- b) the gap between what has been established in the regulatory system and how effectively it has been implemented needs to be narrowed down;
- c) 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;
- d) 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;
- e) operational personnel is lacking of expectations and trust in management's genuine commitment to safety and safety issue resolution;
- f) 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;
- g) operational personnel feels hazard reporting system is needed to be improved in efficiency and easiness to use; and
- h) 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.

2.4 The full content of the survey results with questionnaires is provided in **Attachment A**.

3. CONCLUSION

3.1 Based on the key observation, as listed under 2.3, the following conclusions were drawn:

- a) 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.;
- 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.

3.2 As the survey outcomes reveals gaps and potential areas of improvements that need for urgent attention of all, particularly in the course of recovery from the pandemic, the meeting is requested to call for strong support from all APAC aviation community and regional collaboration to address the gaps identified through the survey.

3.3 Therefore, the meeting is requested to encourage ICAO APAC regional office, as being itself a regional platform with diverse supporting means as per the purpose and APAC member States' needs, to provide a regional forum, in such forms as more tailored workshops, where all ATM stakeholders in the APAC region come together and share experience, lessons learned and best practices in developing a positive safety culture to enhance ATM safety management performance and facilitate safe and effective implementation of APAC Seamless ANS Plan.

3.4 The meeting is also invited to note that the conclusions above and further detailed survey results will be used to prioritize and develop future work plans in the spirit of ICAO APAC's regional implementation support provided to States to better serve the needs of APAC member States.

4. ACTION BY THE MEETING

4.1 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) support ICAO APAC regional office's initiatives in ATM safety promotional activities based on the outcomes of the survey to facilitate experience sharing and collaboration among the APAC aviation communities in a form of more tailored workshop;
- d) solicit for volunteering resources and provision of best practice and lesson learned in the journey of implementing ATM safety management systems and promoting a positive safety culture from States/Administrations and industry, in case of the event to come; and
- e) discuss any relevant matters as appropriate.

.....

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;
- operational personnel is lacking of expectations and trust in management’s genuine commitment to safety and safety issue resolution;

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

- 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

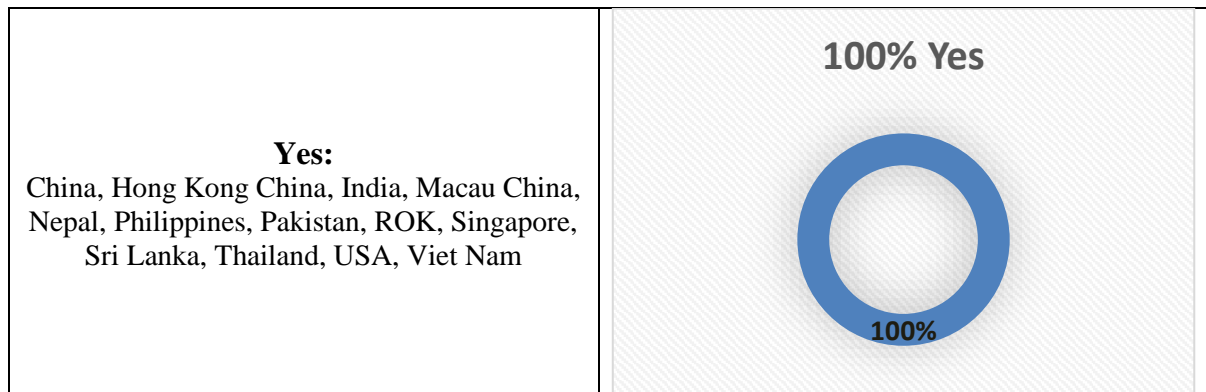
Based on the key observation above, the following conclusions were drawn:

- 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.

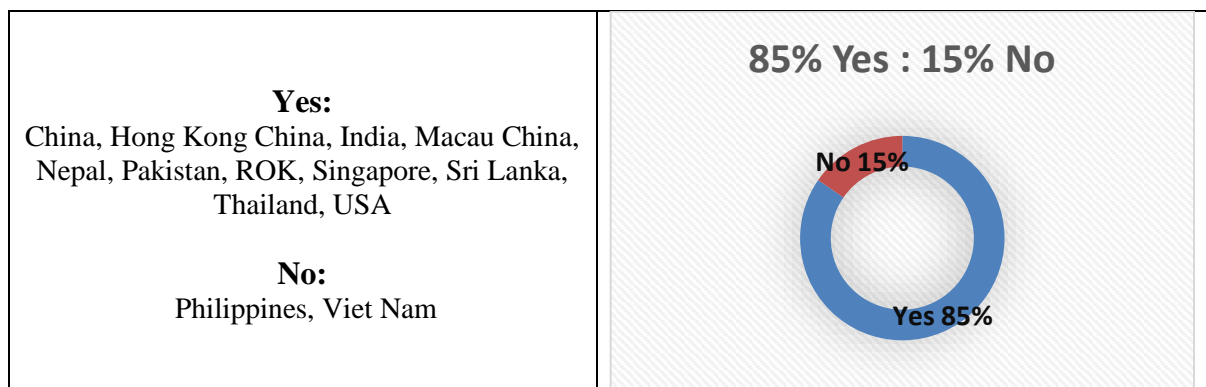
SURVEY RESULTS

QUESTIONNAIRE 1: FOR STATE

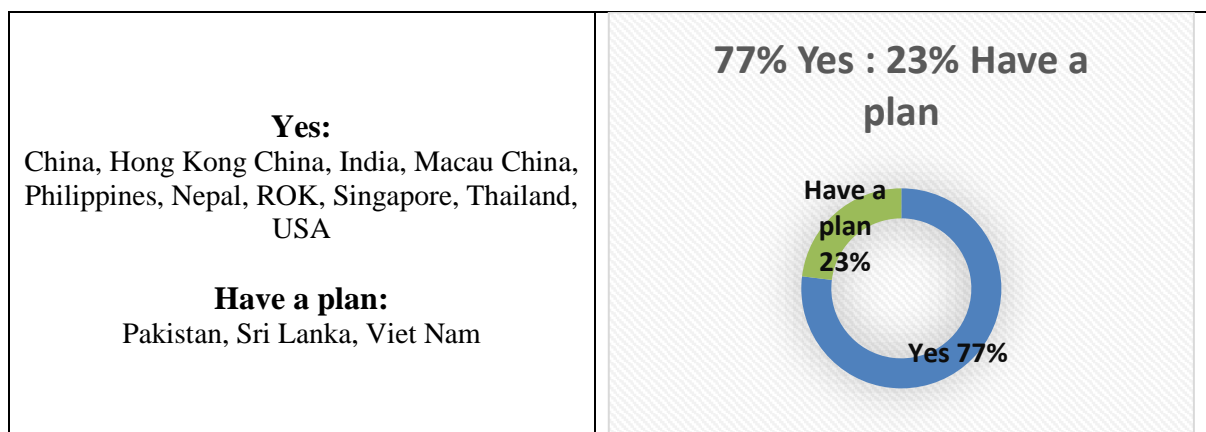
1. **13 State/Administration** responded: China, Hong Kong China, India, Macau China, Nepal, Philippines, Pakistan, ROK, Singapore, Sri Lanka, Thailand, USA, Viet Nam
2. Has your State established policies and procedures to support Safety Culture and Just Culture principles containing description of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



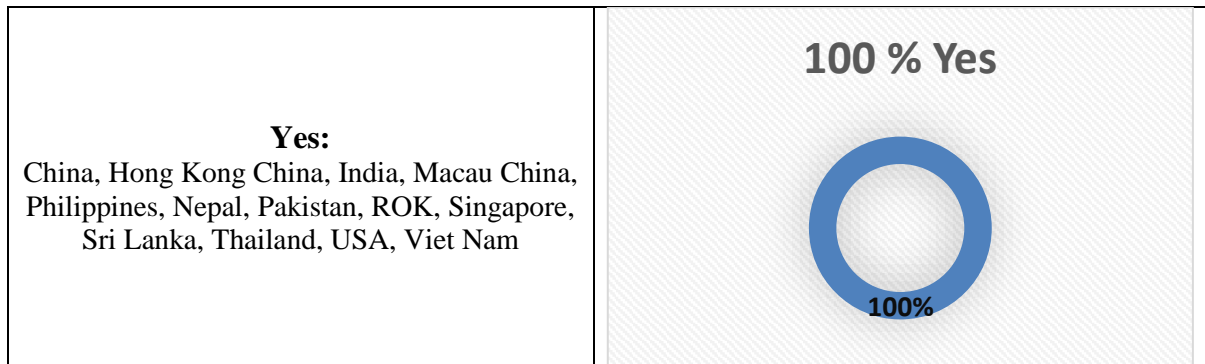
3. Within your State's legal/judiciary system, is safety data/information and the data/information sources sufficiently protected from external interference other than safety benefit?



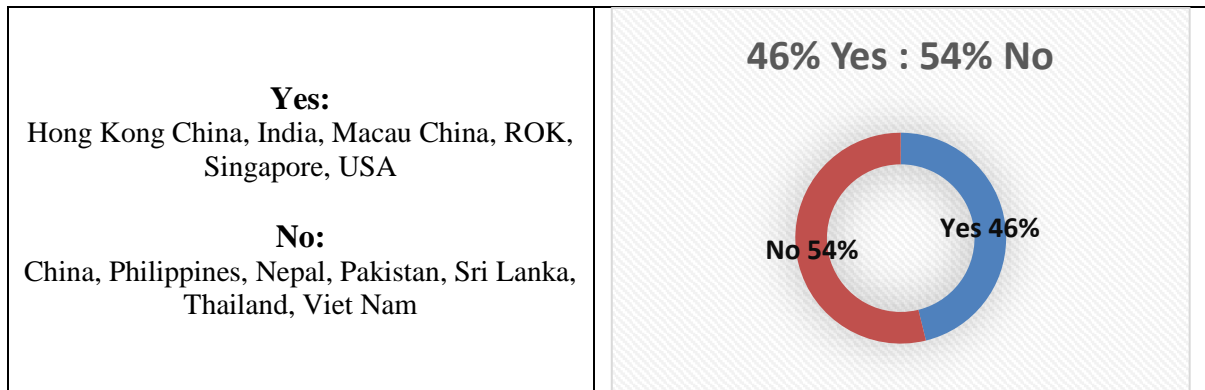
4. Is your State developing systems and processes to support safety data sharing and periodic publication to provide easy access to safety information gathered by the safety reporting programmes?



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?

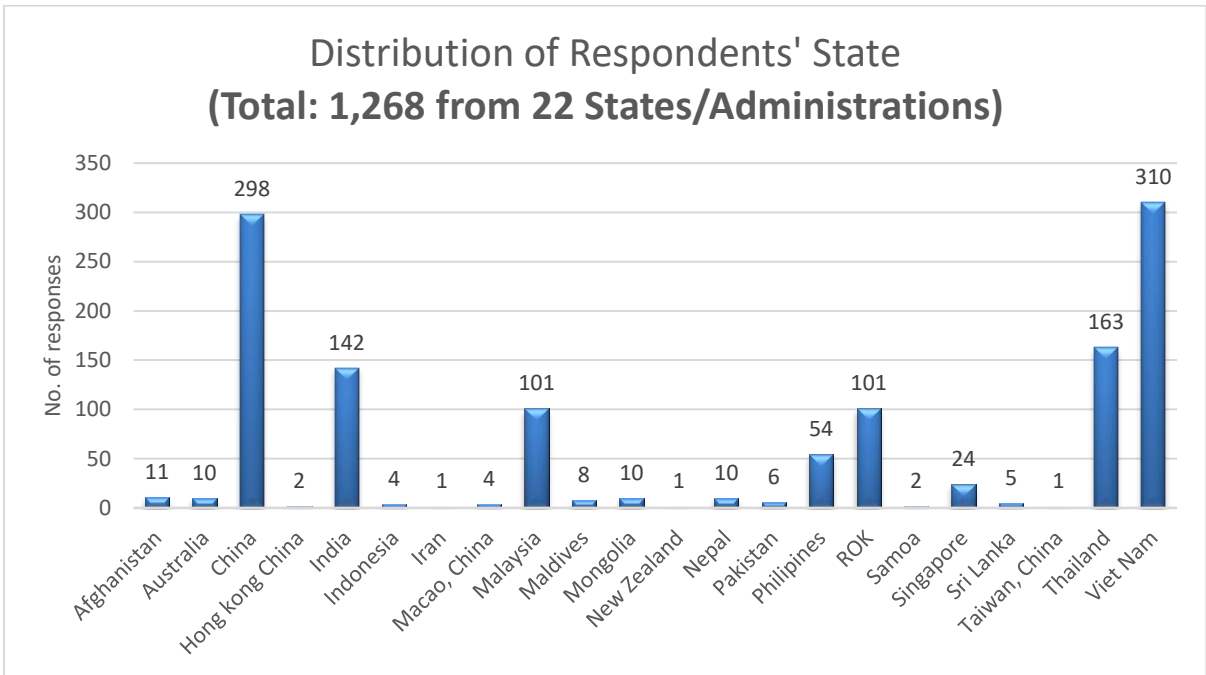


7. If you have any other suggestions or comments, please indicate here.

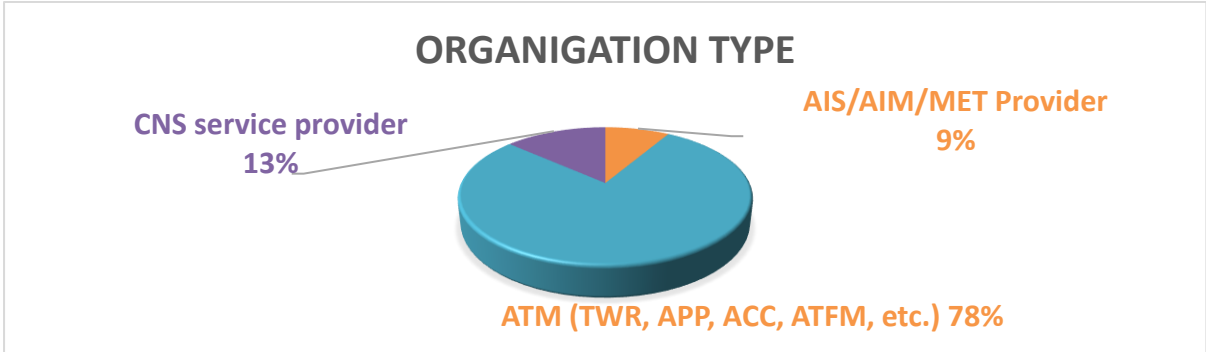
- ICAO may consider providing a validated checklist for safety culture survey.
- Evolvement and assessment of just culture/safety culture is not an easy task. Kindly share the best industry practices where the same has been implemented & prevailed.

QUESTIONNAIRE 2: ONLINE SURVEY FOR SERVICE PROVIDER

1. Please select your State.



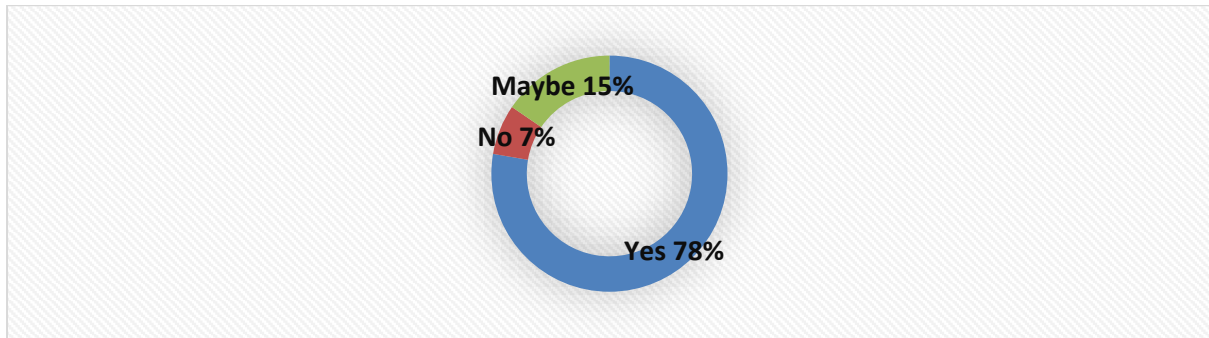
2. Please select your organization type.



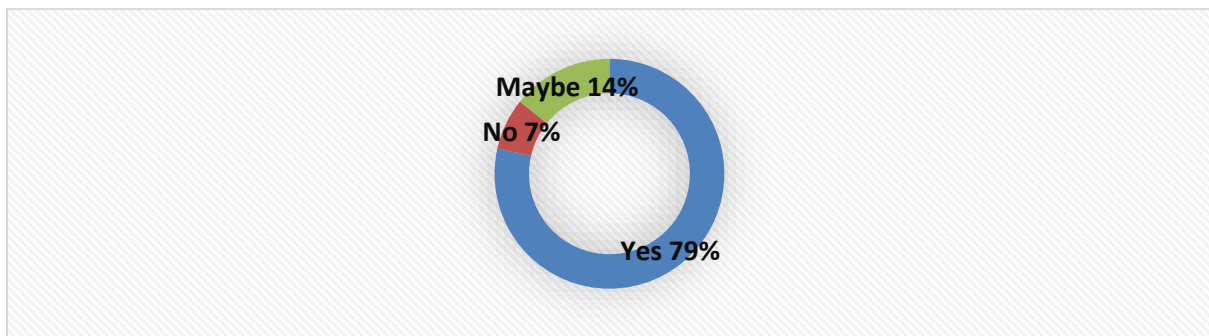
3. Please describe your current work position.



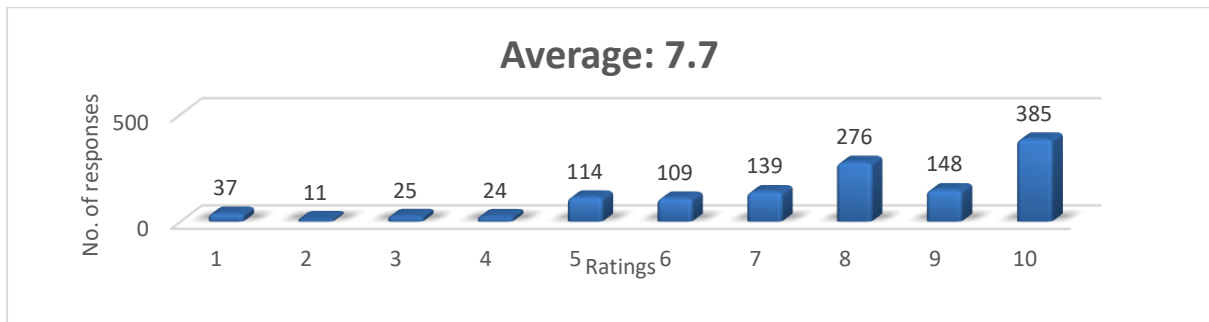
4. Has your State established policies and procedures to support Safety Culture and Just Culture principles containing description of what's unacceptable behaviours and disciplinary actions thereon including relevant training policy, which if formally promulgated in a public domain?



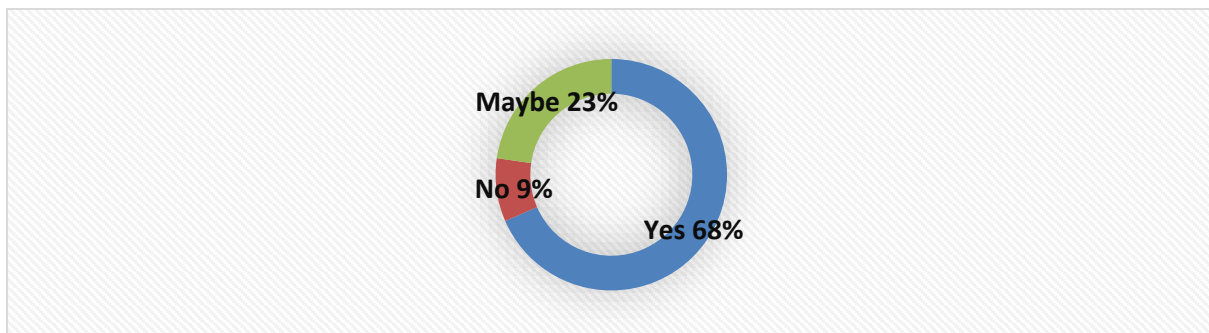
5. Are policies and procedures in place that define safety culture i.e. a Vision/Mission Statement with a description of what effective safety looks like in your organization?



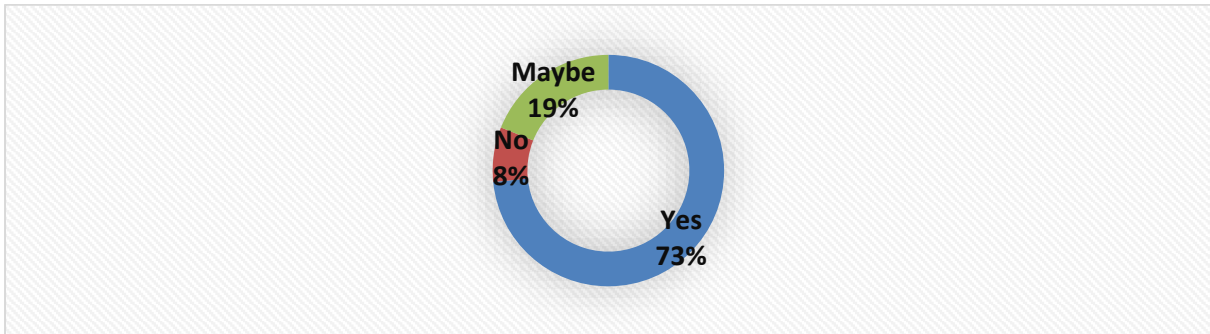
6. Is safety an organization priority and a core value of your organization?



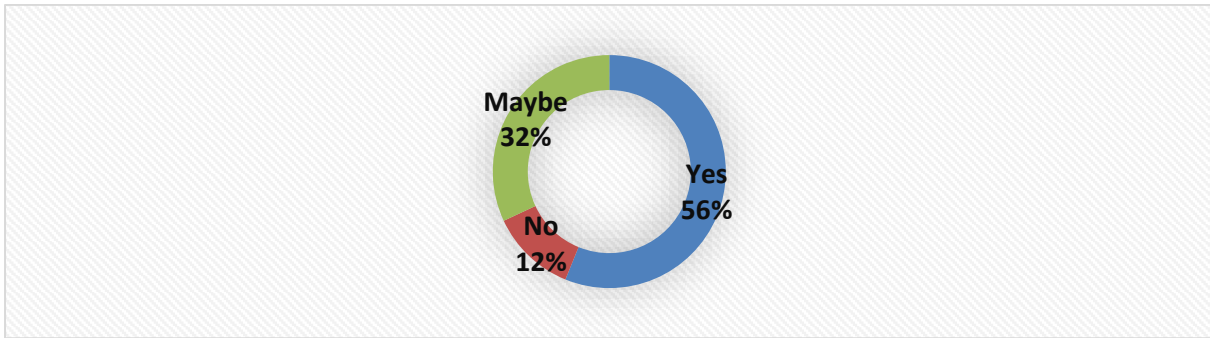
7. Are systems and processes in place to support safety data sharing and periodic publication to provide easy access to safety information gathered by the safety reporting programmes?



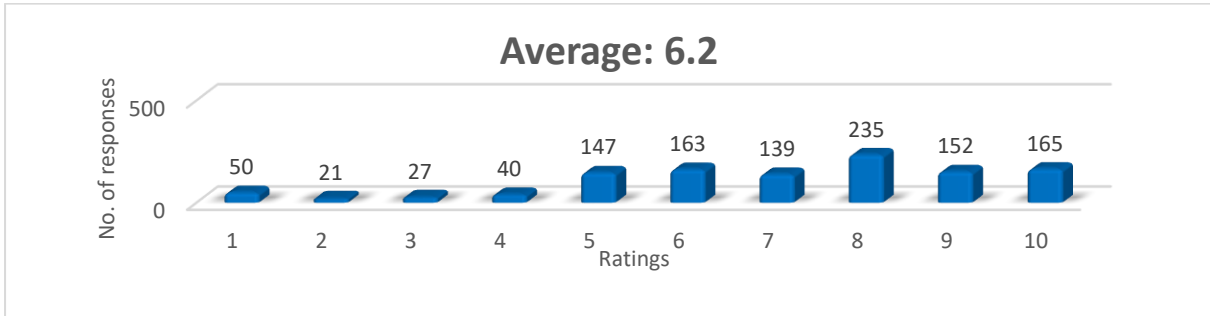
8. Is your organization aware of the need for an improvement plan and periodic assessments of safety culture?



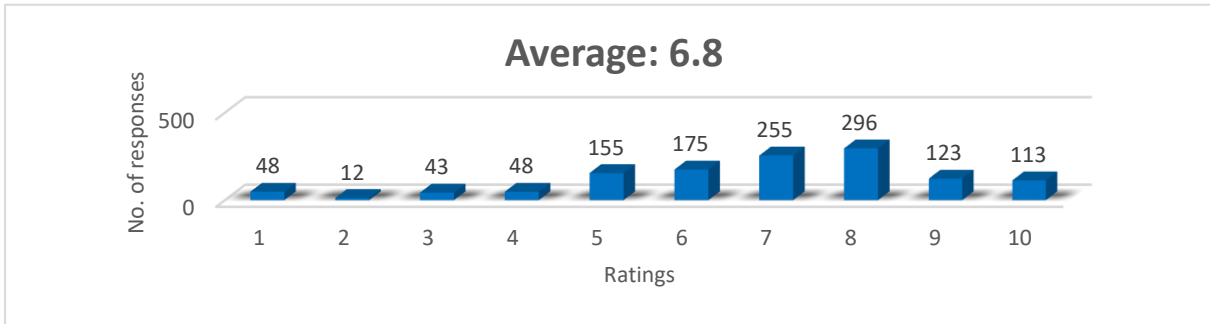
9. Does your organization assess its safety culture and disseminate the results throughout the nation at least once every 5 years to establish a shared understanding of organization's safety culture and identify its strengths and weaknesses?



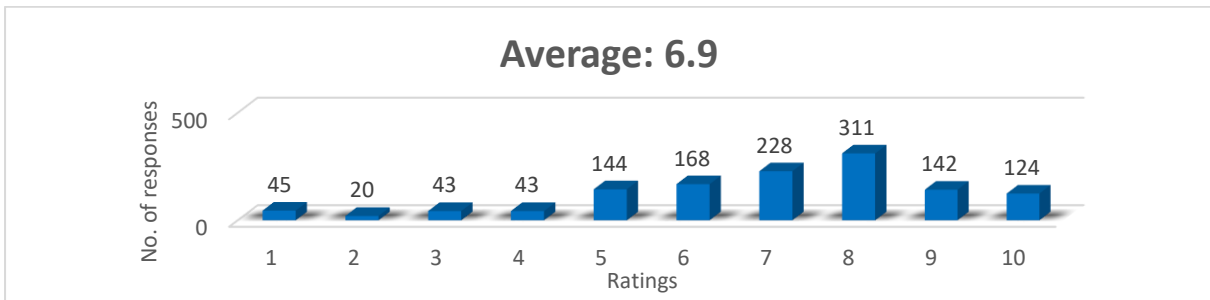
10. Does management's approach to safety demonstrate a genuine commitment to addressing safety issues by visibly endorsing and executing safety initiatives i.e. do they lead by example?



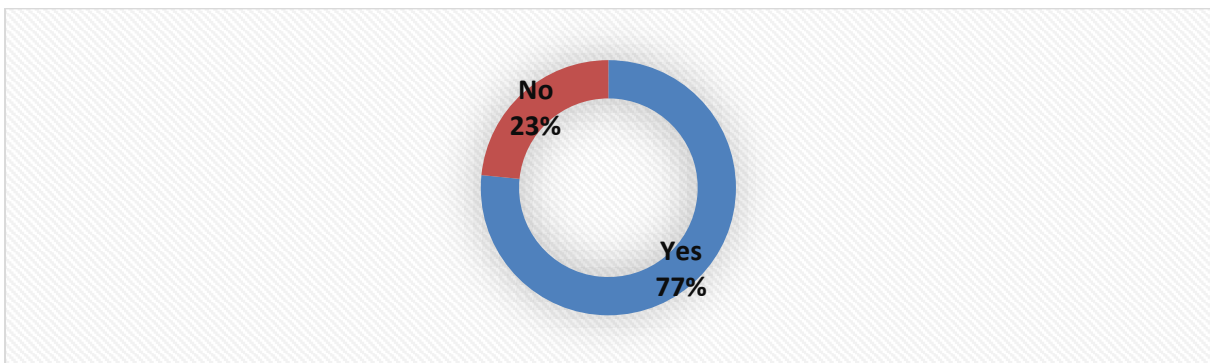
11. To what extent do you think all levels of your organization clearly understands and accepts the difference between acceptable and unacceptable behaviours, and disciplinary actions?



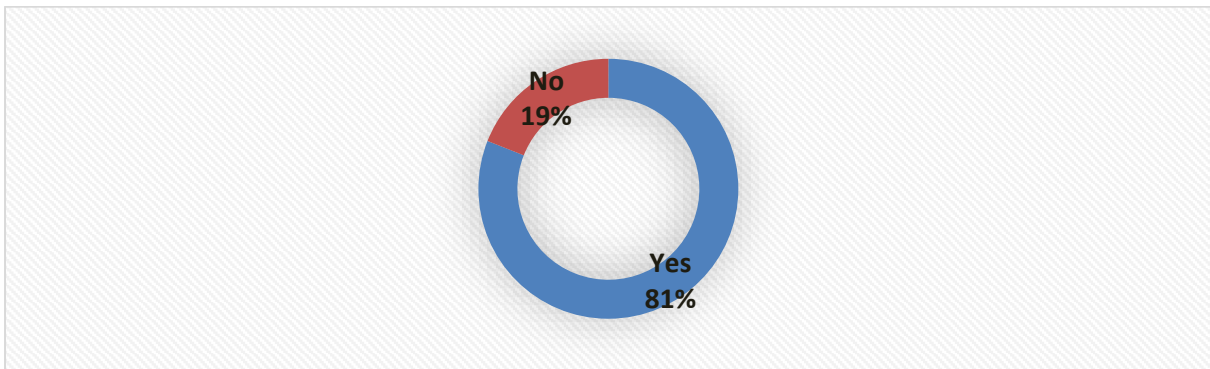
12. Are safety risks and hazards faced by the organization properly well understood at all levels (up to and including senior managers)? (1 being Not likely/Never, 10 being Very likely/Always)



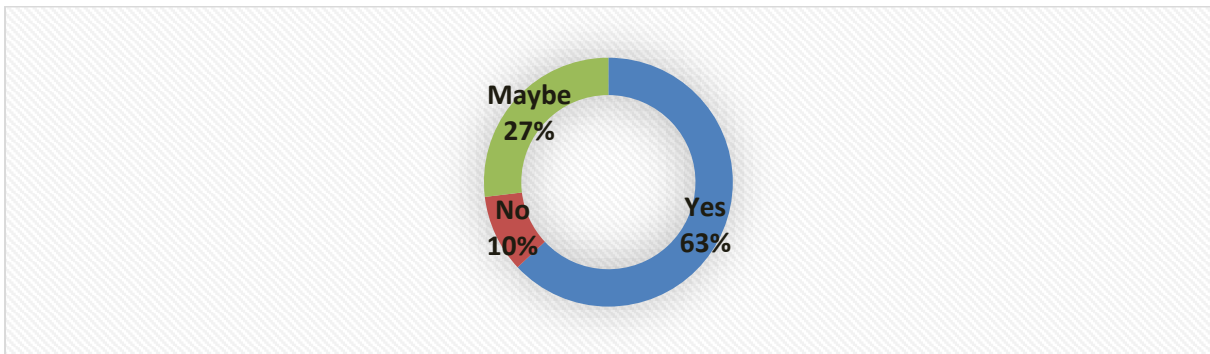
13. Does your organization encourage staff to challenge procedures, practices and people to improve safety performance?



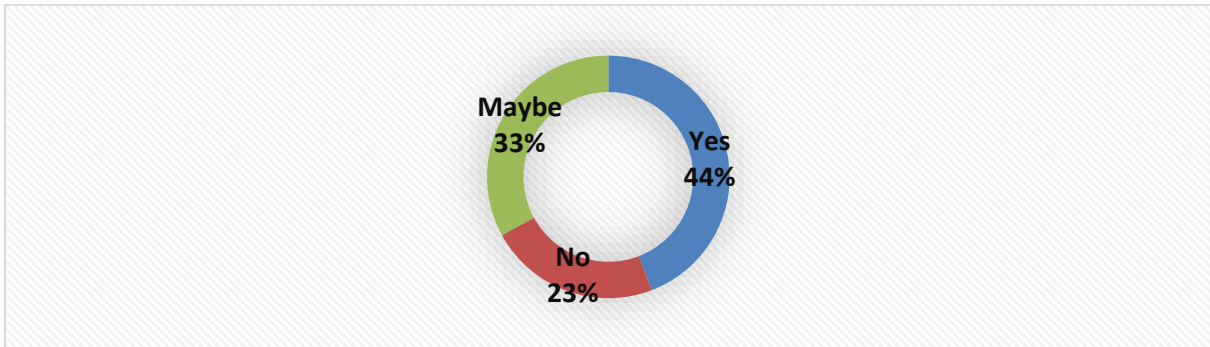
14. Does your organization provide regular feedback to staff based on safety occurrence reports?



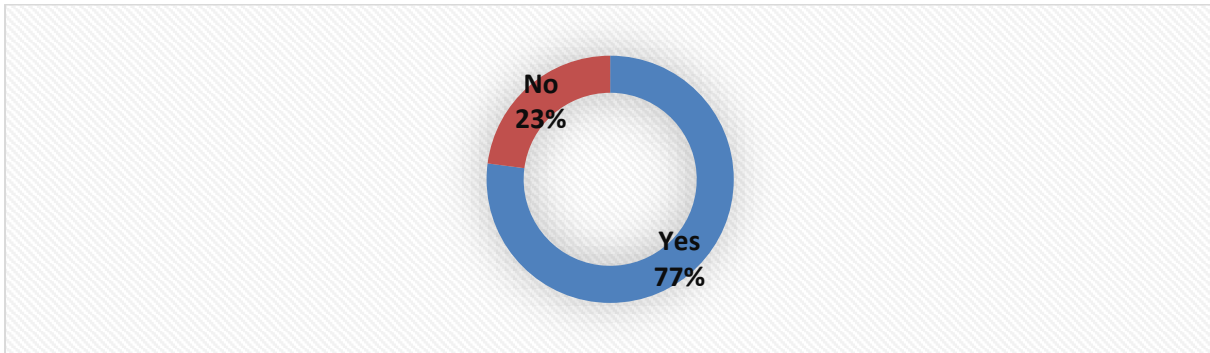
15. Is there a formal process to inform staff who have reported a safety occurrence of the progress of the investigation?



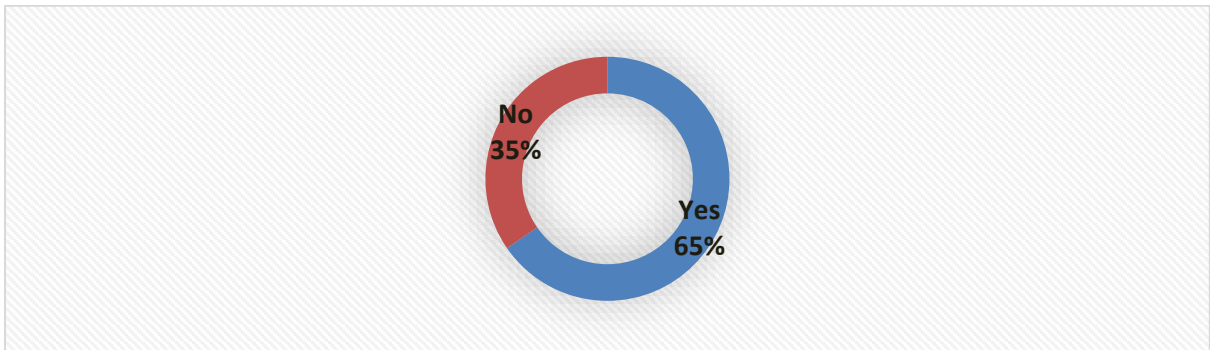
16. Are high safety issue reporters formally praised and recognized/rewarded by your colleagues and organization?



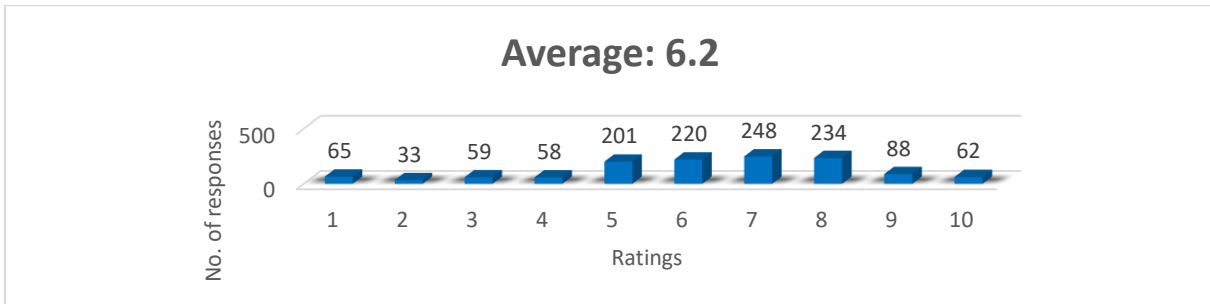
17. If you report your own safety occurrences, do you expect you will be treated fairly in accordance with the principles of the Just Culture definition?



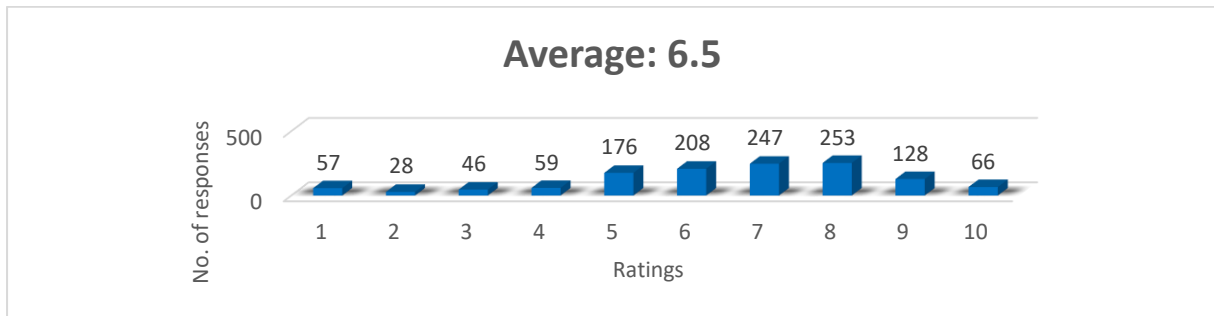
18. Do you feel your organization's hazard reporting system is efficient enough and easy to use?



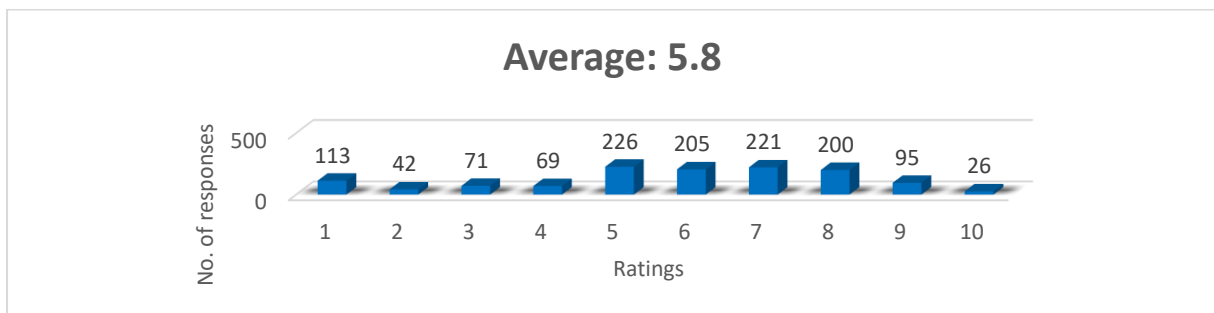
19. Is voluntary reporting of hazard/safety issue valued and appreciated among colleagues and management level in your organization? (1 being Not likely/Never, 10 being Very likely/Always)



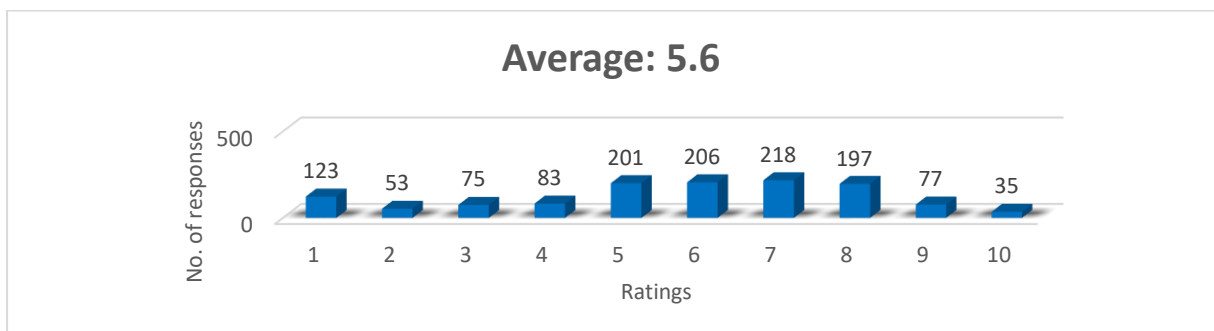
20. Do you feel the safety issue will be resolved and corrected when you report? (1 being Not likely/Never, 10 being Very likely/Always)



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.