



ICAO



**Twenty Sixth Meeting of the Communications/
Navigation and Surveillance Sub-group (CNS SG/26) of
APANPIRG**

Video Tele-Conference, 5 – 9 September 2022

- Agenda Item 11: Human Factors and Air Traffic Safety Electronics Personnel (ATSEP) related training**
- 11.1 Review outcomes of small working group study on human factor issues of ATSEP**

WP 18

(Presented by Secretariat and IFATSEA)

SUMMARY



- ***This paper presents the regional ATSEP human factor guidance material for review and adoption*** and summarized the discussion and deliberations done in various Ad-hoc work group meetings held since last CNS SG/25 meeting in October 2021 for finding the left-out gaps and for preparing the regional ATSEP human factor guidance material. This paper also summarized the key concepts based on which the guidance material is prepared for assuring the mutual benefits to ANSP and ATSEP.

[Skip introduction and discussion point Roadmap, timeline, and tasks.](#)



Introduction

- 1.1 The Ad-hoc work group of experts from Eight (8) member states (China, Hong Kong China, India, Indonesia, Japan, Republic of Korea, Singapore, and Thailand) and One International Organization namely International Federation of Air Traffic Safety Electronics Associations (IFATSEA) was established in April 2021 in response to the Conclusion APANPIRG/31/15-Addressing Human Factor Issues of ATSEP recommended by CNS SG/24 meeting and subsequent to the action taken up by the ICAO APAC Office through the State Letter Ref.: T 3/9.9- AP022/21 (CNS) dated 26 January 2021 on subject Addressing Human Factor Issues of ATSEP.



Introduction

- 1.2 This Ad-hoc workgroup has so far conducted Twelve (12) meetings right from its establishment since April 2021. There has been a total of Seven (7) meetings conducted since the last CNS SG/25 meeting.



Introduction

- 1.3 IFATSEA has conducted Global Webinar on Human Performance on 12th November 2021 to deliberate the ATSEP human performance and organizational resilience. IFATSEA has also arranged series of mastermind sessions involving volunteers from the work group on deliberating the issues that affect the human performance and solutions to ensure the highest level of performance.

The icon features the word "DISCUSSION" in white capital letters inside a blue speech bubble. Below it is a row of colorful circles representing people's heads in shades of blue, grey, yellow, pink, and red.

DISCUSSION

Roadmap, timeline, and tasks 2.1

- Till November 2021, the Ad-hoc workgroup meetings and proceedings were consistent with the Roadmap and Timeline set initially. Later from December 2021 meeting onwards the tweaked timeline was followed yet the roadmap remained the same covering all the important deliberations and tasks planned to be carried out.

Roadmap, timeline, and tasks

2.2

- The Ad-hoc group has deliberated extensively for each agenda items (Human Factor Tables, Countermeasures, Stress Factor Mapping Document, Benefits, Priority Actions, Pandemic Situations like Covid-19, Best Practices and Structure and preparation of Regional ATSEP human factor guidance materials) in meetings.

Roadmap, timeline, and tasks

2.3

- The Ad-hoc work group has thoroughly discussed the factors that add Stress and Fatigue to ATSEP and deliberated on the effective counter measures to address those human factors and ANSPs' resilience through counter measures in the subsequent meetings. Based on this a Stress Factor Mapping Document (SFMD) was prepared.

Roadmap, timeline, and tasks

2.4

- Further the Ad-hoc group has deliberated on long term benefits to ANSP and ATSEP community on addressing the human factors, best practices to be adopted by the states to achieve highest level of resilience, and human performance process maturity levels. Deliberations on priority actions to be taken by ATSEP and ANSP during pandemic like Covid-19 were also done.

Roadmap, timeline, and tasks

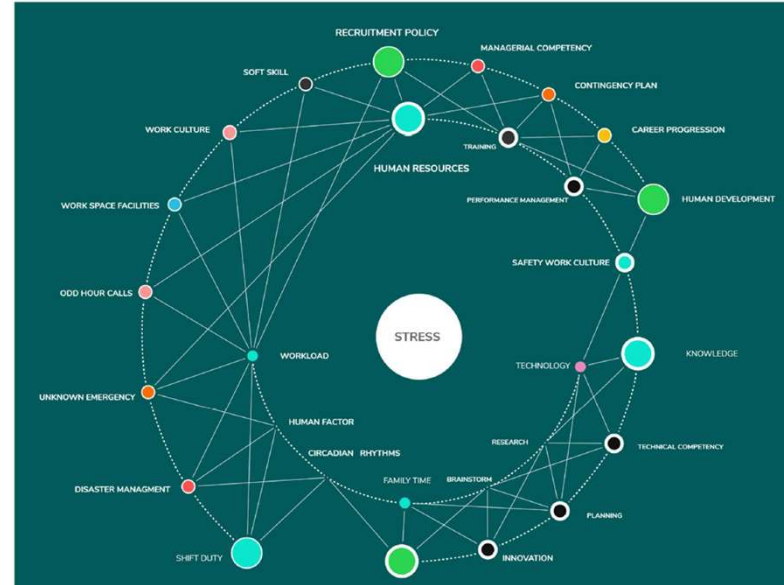
2.5

- Lastly the Ad-hoc group has worked on finalizing the structure and preparation of various modules of Regional ATSEP human factor guidance material.

DISCUSSION

Principles adopted in the guidance material 2.6

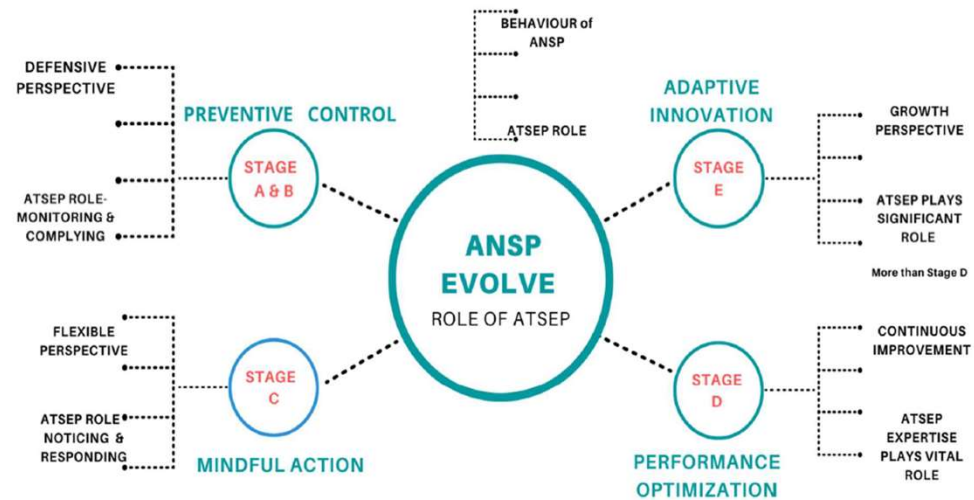
- Systems approach was adopted to arrive at solutions through improvisation of existing human resource management process so that these improvisation address not only the factors listed but also the similar factors that may arise in future.



Principles adopted in the guidance material

2.7

- With the recent experience with Covid – 19, and essential requirements of organizational resilience to bounce back and progress forward in similar situations were also correlated with the human performance and measures to be taken by ANSP and ATSEP.



Principles adopted in the guidance material 2.8, 2.9, 2.10

- On each measure suggested the mutual benefits to ANSP and ATSEP are analyzed. At the end of each measure, resilience, and cost benefits to ANSP are listed.
- Actions to be taken by ANSP and ATSEP to achieve the mutual benefits are listed along with the self-evaluation check lists of ANSP and ATSEP.
- Self-evaluation checklists for ANSP is designed to evaluate their human performance process maturity levels as well as the organizational resilience level.

Principles adopted in the guidance material

2.11

- Out of all the counter measures, the guidance material has emphasized only the counter measures that are most influential and related to the process that are very essential for any ANSP to improve upon their organizational resilience. This way by following Pareto rule, 20% of the most influential counter measures that can address over 80% of the factors that affect the job performance and add stress and fatigue to ATSEP are highlighted.

Principles adopted in the guidance material

2.12

- Self-evaluation checklists are proposed for ANSP and ATSEP based on the above principle for five chapters. The self-evaluation checklists are kept simple for encouraging the ANSPs for the evaluation and improvement.

Introduction to the guidance material

2.13

- The guidance material has the following five chapters with evaluation check lists
- (3) People Resourcing,
- (4) Job, Role And Skills Analysis And Competency Modelling,
- (5) Knowledge Management, Talent Management, Learning And Development,
- (6) Induction Of New Systems And Maintenance Philosophy, and
- (7) Work Environment, Well-Being, Performance, And Reward.

Introduction to the guidance material

2.14

- In addition, the guidance material has the following three chapters without evaluation check lists
- (8) Motivation, Commitment, And Engagement,
- (9) Behavioural And Role Specific Competencies, And
- (10) Safety Culture Promotion.

Introduction to the guidance material

2.15

The following eight appendices are added in the guidance material

- (1) Stress factor mapping
- (2) Stress factors,
- (3) Counter measures,
- (4) ATSEP duty time limitation,
- (5) Measures during Pandemic,
- (6) Progressive Training,
- (7) Stress management and
- (8) Safety culture.

Introduction to the guidance material

2.16

- With aforementioned, the ad-hoc group completed the task for the preparation of ICAO ATSEP human factor guidance material. The Guidance Material is provided in Appendix A to the paper for meeting adoption.

ACTION BY THE MEETING

3.1

- The meeting is invited to:
 - a) note the information on the progress of the ad-hoc group and its collaborative efforts
 - b) review and adopt the guidance material.
 - c) discuss any other matter as appropriate