EASA
European Union Aviation Safety Agency

ARISE+
Funded by the European Union and implemented by the European Union Aviation Safety Agency

# AEMS: a tool to scale up the environmental considerations and sensitiveness towards this theme at the airport level

Ms Monicaalessandra Bonfanti, ARISE+ Lead Environmental Expert

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# Introduction

- Current context to justify AEMS
- What, why AEMS? Risks and how to mitigate
- What was done under SEA APP
- What can be done under ARISE+

# Current context to justify AEMS

Flights & passengers to double by 2030

# Current context to justify AEMS

This implies an increase in the quantity of emissions generated by the aviation sector globally



# Current context to justify the need of environmental considerations in the airport

As a consequence of this environmental issue, there will be a strong impact on the operational capacity of the airport

This will affect the potential for the sustainable growth of airports

# What is AEMS?

"An Environmental Management System (EMS) provides a methodology and framework to systemically identify and cost-effectively manage significant environmental aspects of aviation organizations' operations and have proven effective across a wide range of organizations, including airports, air carriers, manufacturers and government agencies."

An Environmental Management System (EMS) is a set of management principles intended to identify, evaluate, monitor, and reduce the negative environmental impacts of an organization's activities.

# A definition in bullet points

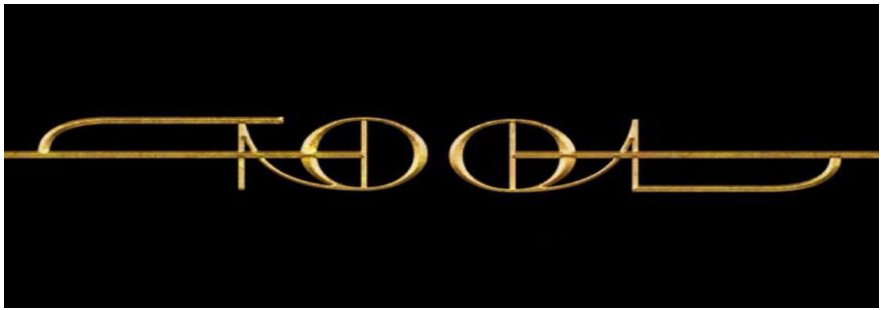
1. **What is it?** A system
2. **What is it used for?** To identify and estimate the costs of using and managing environmental aspects
3. **Where is it used?** In aviation organisations



# Why is AEMS important?

It benefits an organization by offering a systematic approach for assessing and controlling ongoing activities, increasing environmental awareness, and complying with relevant regulations.

An EMS provides many different and useful tools for detecting, understanding and managing those elements involved in its activities, products and services which have the potential to impact the environment.



# Why is AEMS important?

It helps to effectively **reduce the impacts** of an organization's activities on the environment through a systematic management practice.

# How to deal with AEMS?

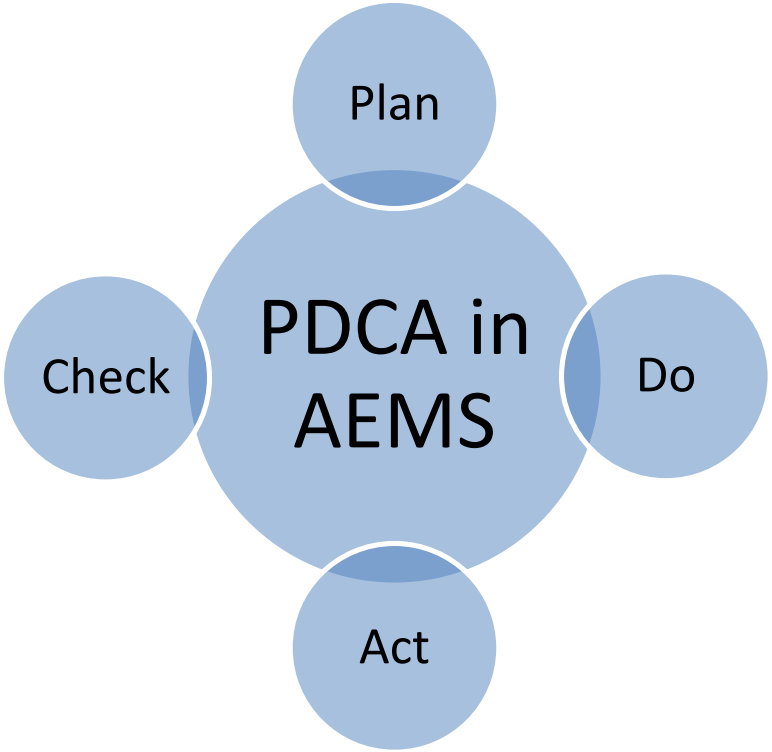
First assess your context in terms of: current environmental context, problems, challenges, how to cope with considering regulatory/legal framework in place at sectoral and/or national level, how to guarantee sustainability to the activity, how to monitor the results of the activities.

This implies a **coordinated work inside of each institution/entity working with it where roles and responsibilities are clearly shared and manuals and procedures on how to deal with are available for all**

# How to deal with AEMS?

- **Planning**: Identify the required processes and practices to address environmental aspects and compliance obligations.
- **Doing:** Develop and design operation and implementation criteria: The criteria for required operational processes should be established, and required controls should be planned.
- **Checking and Monitoring**: A continuous work to evaluate environmental performance through monitoring and analysis and audit procedures to be first decided and then used.
- **Acting**: Take actions to continuously improve.

# Continuos work on AEMS:



# Why should you invest in AEMS?

- Clear framework to monitor and control the environmental performance
- Clear definition of management responsibility, ensure business continuity and consistency
- Guidance that encourage organization to improve the efficiency in terms of management and operational staff, as well as it's stakeholders (i.e. supply chain, service providers, contractors, etc.
- Improve working environment and productivity
- Reduce or minimize the environmental impacts throughout the operation without compromising the efficiency
- Identify any potential environmental issue, reduce risk of non-compliance with national and international regulation or hazardous incidents
- A standardized system that is globally recognized, can enhance reputation and trust from stakeholders (i.e. community, investor, regulators, etc.)

# Risks in investing in AEMS and mitigation options

→ **Limited data accessibility or data accuracy. How to mitigate?**

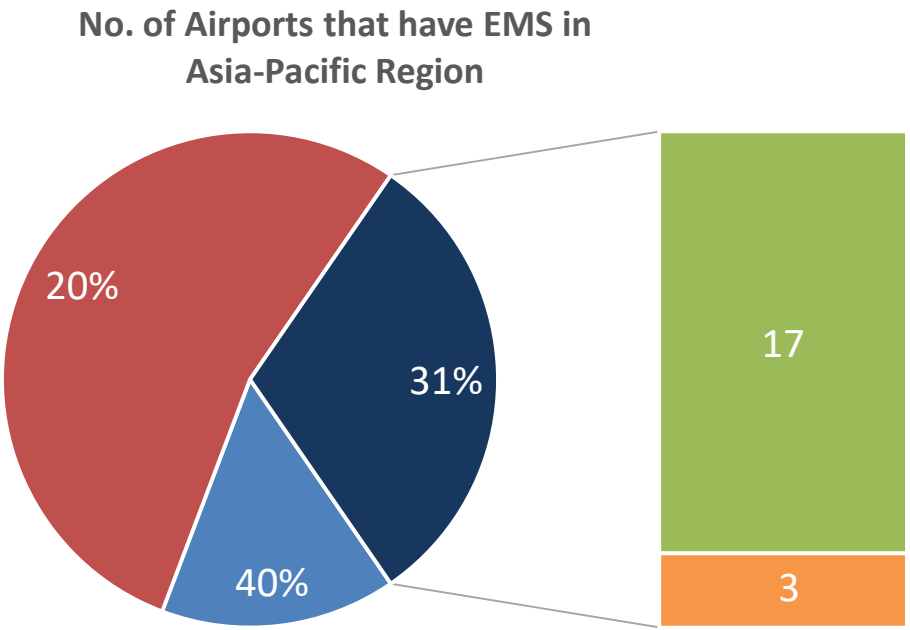
Database work will help. Coordinated approach with all the affected parties. Regional guidelines will guide you.

→ **Lack of transparency to ensure correct information is shared between management and employees. How to mitigate?**

Rules, procedures, checklists pointing out clearly roles and responsibilities of each involved and affected party. Regional procedures on how to draft guidelines will help you.

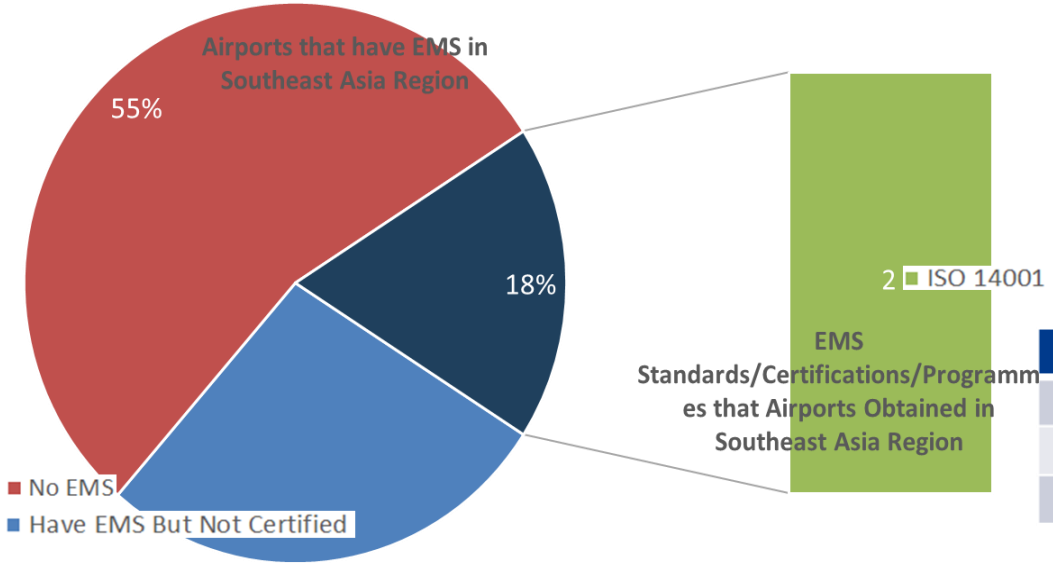
# AEMS in Europe

# AEMS in ASIA




| Total No. of Responded Airports | 50 |
|---|---|
| No. of Airports that have certified EMS | 20 |
| No. of Airports that have EMS, but not Certified | 20 |
| No. of Airports that do not have EMS | 10 |

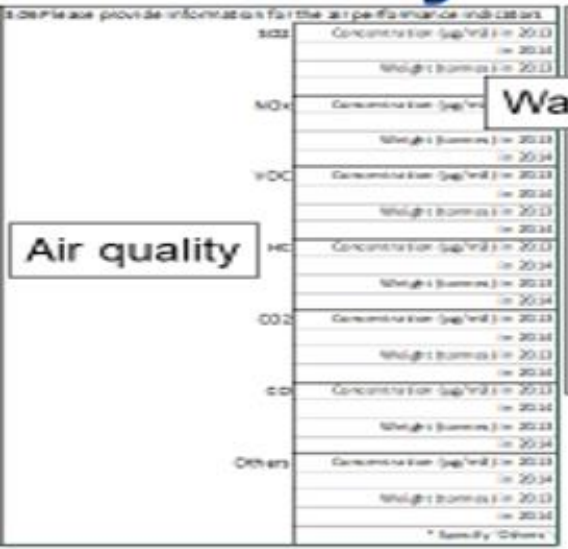
# AEMS in ASIA



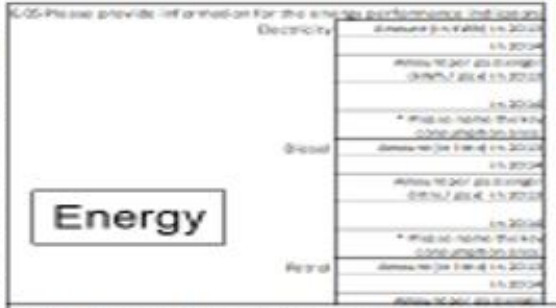

| Total No. of Responded Airports in SEA Region | 11 |
|---|---|
| No. of Airports that have certified EMS | 2 |
| No. of Airports that have EMS, but not Certified | 3 |
| No. of Airports that do not have EMS | 6 |

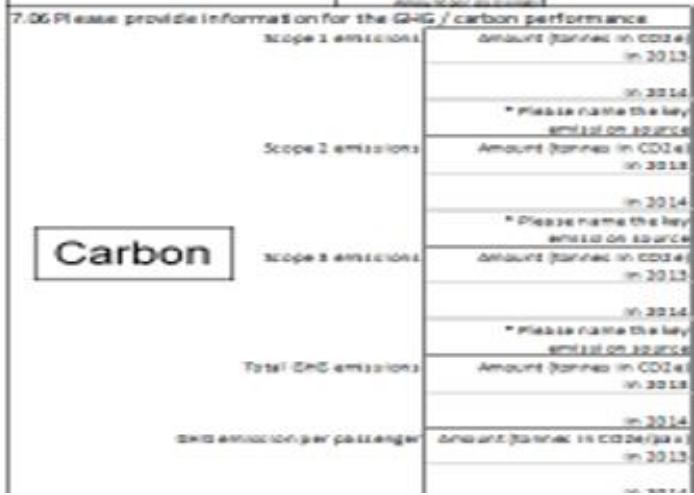
# ACI Asia-Pacific Environmental Survey → Database











**Lists of surveys for performance indicators**

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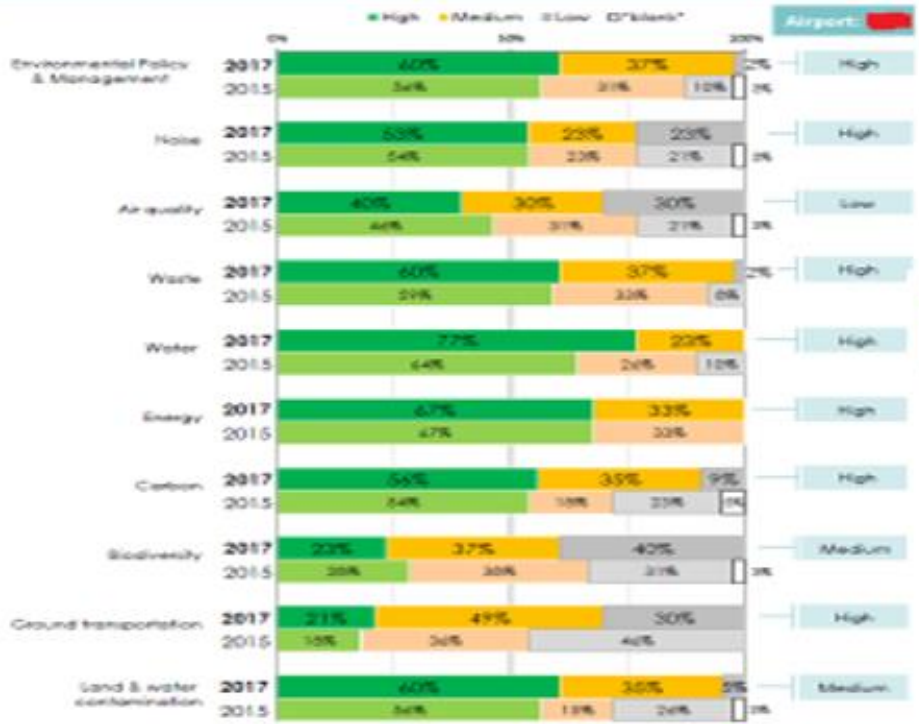
# ACI Asia-Pacific Environmental Survey → Database



## Management priority

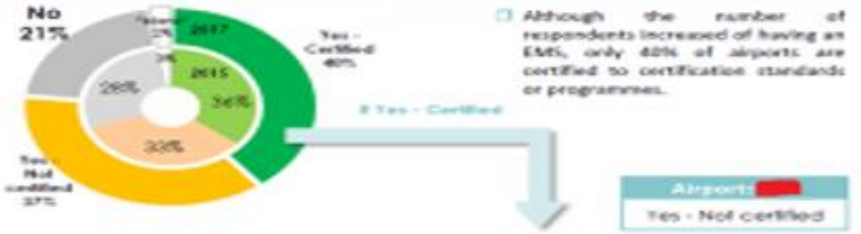
Please indicate the management priority of your airport for the 10 environmental aspects covered in this survey.




## Customized report for Each participating airports

## Environmental Management System (EMS)

Does your airport have an Environmental Management System (EMS)?

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# AEMS in the ASEAN region

- A regional workshop on this specific topic was organized in ICAO premises in February 2019 to sensitize the ASEAN States on the importance of this topic for ICAO
- At the end of the workshop, all ASEAN states agreed to start discussing on this specific theme
- During the ATWG in April 2019 Thailand decided to take the lead on this activity to showcase the importance of using EMS and including ISO considerations in how airports deal with environment


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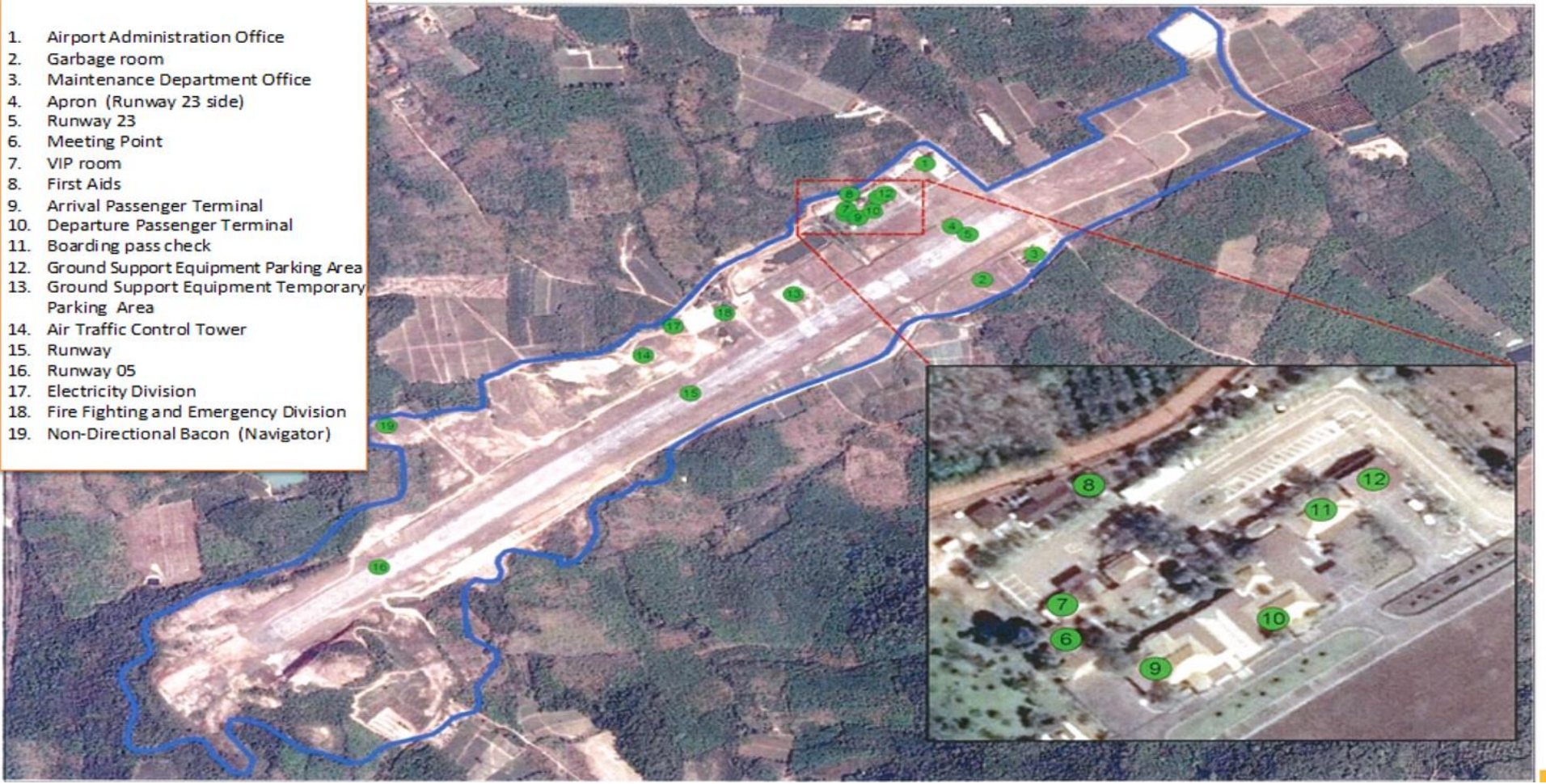
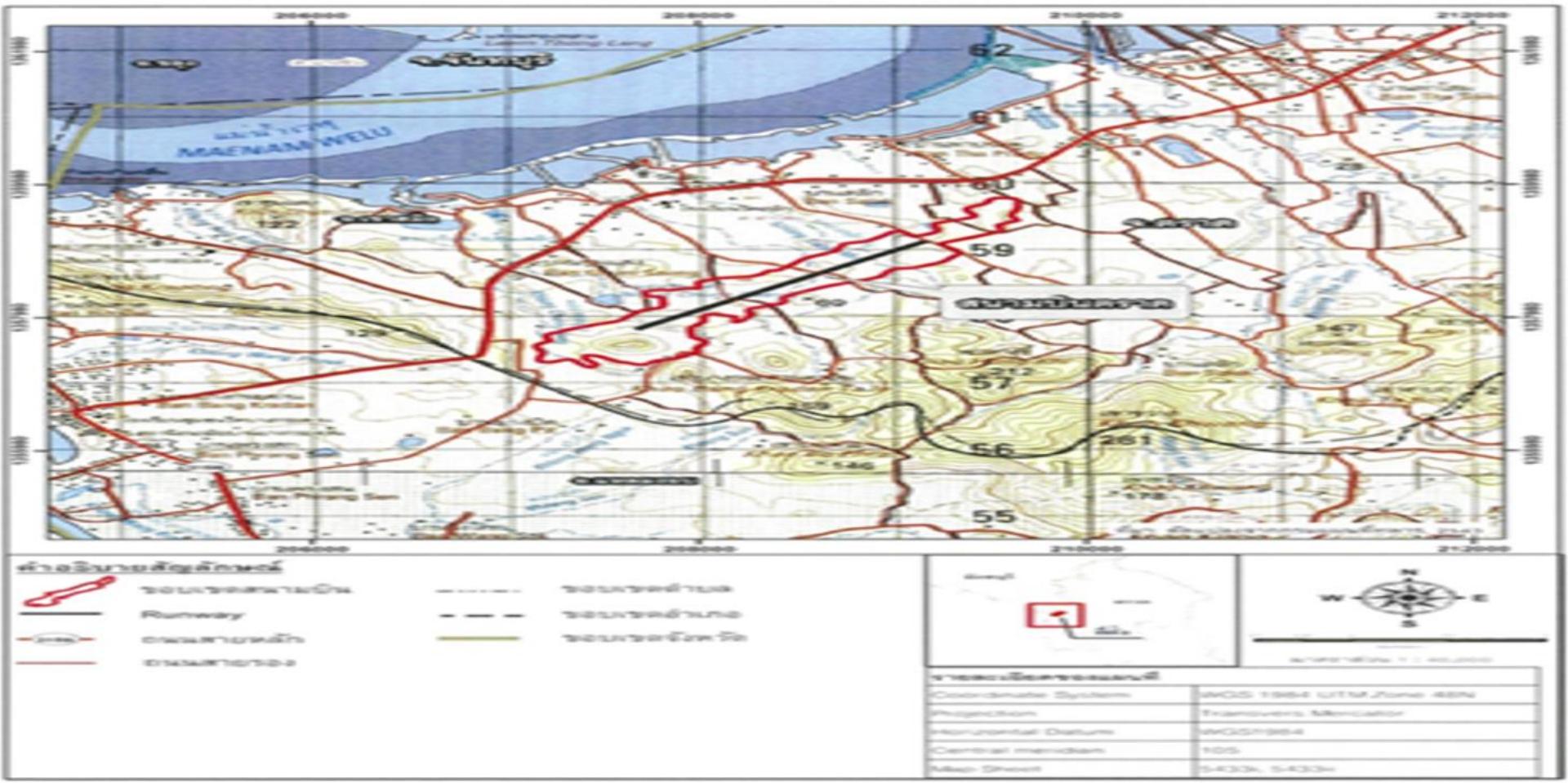
ICAO COSCAP SEA
EASA – ICAO COSCAP SEA Workshop:
Airport Environmental Management Systems (EMS)
ICAO Asia and Pacific Regional Office, Bangkok, Thailand
25 – 26 February 2019
ICAO
Mr. Peter Dunda
ICAO Asia and Pacific Office
ICAO COSCAP-SEA
Mr. Michiel Vreedenburgh
ICAO COSCAP-SEA

# The case of Thailand

- A small airport with 3 flights per day was selected to test this modus operandi.
- A local expert was engaged and working in direct contact with CAA Thailand and the airport staff to assess their needs and challenges.
- After 5 missions and 40 wds: the work was officially finalized and Trat airport is now implementing the AEMS in their premises.
- From a voluntary decision, they committed to be audited by CAAT as they understood the benefits of this approach despite the costs to tackle it.


1. Airport Administration Office
2. Garbage room
3. Maintenance Department Office
4. Apron (Runway 23 side)
5. Runway 23
6. Meeting Point
7. VIP room
8. First Aids
9. Arrival Passenger Terminal
10. Departure Passenger Terminal
11. Boarding pass check
12. Ground Support Equipment Parking Area
13. Ground Support Equipment Temporary Parking Area
14. Air Traffic Control Tower
15. Runway
16. Runway 05
17. Electricity Division
18. Fire Fighting and Emergency Division
19. Non-Directional Bacon (Navigator)


MAENAM WEILU
62
61
60
59
57
56
55
Runway

# What was delivered?

- → Desk study on environmental management and risk assessment
- → Training and capacity building activities
- → Training on audit and simulation of audit
- → Checklists
- → AEMS guidelines
- → AEMS manual
- → Manual audit for CAAT already integrated into the aerodrome procedures of CAAT

# AEMS under ARISE+

- During the last meeting of the ATWG, sub working group env, ASEAN states expressed the interests of being supported in designing an AEMS for their airports.
- This will be developed under the ARISE+ event.
- By the end of the ARISE+ project, the ambition is to be able to use the pilot activities designed for the selected airport as the guidelines to draft regional procedures on AEMS to be then implemented in the ASEAN region.

# What's next? - Conclusions

- → It is important to raise the ambitions on AEMS as Thailand did (i.e. from a small airport to a medium size airport with stronger environmental problems impacting the residential areas and the tourists as well).
- → It is important to express your interest in being supported by ARISE+ in the design of the AEMS in your selected airport.
- → It is important to be committed in scaling up the ambitions towards environmental considerations in each state to gather different experiences and challenges to be included into regional guidelines.

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# Thank you for your attention!

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