



สำนักงานการบินพลเรือนแห่งประเทศไทย
The Civil Aviation Authority of Thailand

The Approach of CAAT to Airport EMS

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RISK



Volcanic eruption



Cyclone



Flood



Draught



Earthquake/Tsunami

Prevent or eliminate?

Climate Change **ADAPTION**





ADAPTATION PROGRAM

ENVIRONMENTAL PROBLEMS

AIRPORT LEVEL



Operation of airport can bring negative impacts to environment

Such as noise pollution, air pollution, GHG emissions, energy consumption, land utilization and waste generation

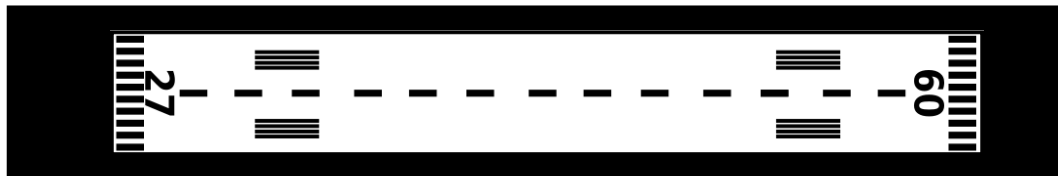


Thailand by CAAT uses **Environmental Impact Assessment (EIA)**, the report produced under the regulation of the Ministry of Environment, as tool to oversee airport in terms of environment.



EIA

Environmental Impact Assessment



Runway Length \geq 1,100 Meters

Mitigation Measures stated in the EIA → Appropriate? Feasible? Flexible ?

Project owner/Airport operator → Level of participation?

Environmental tool → Well-fit with Aviation / Airport?

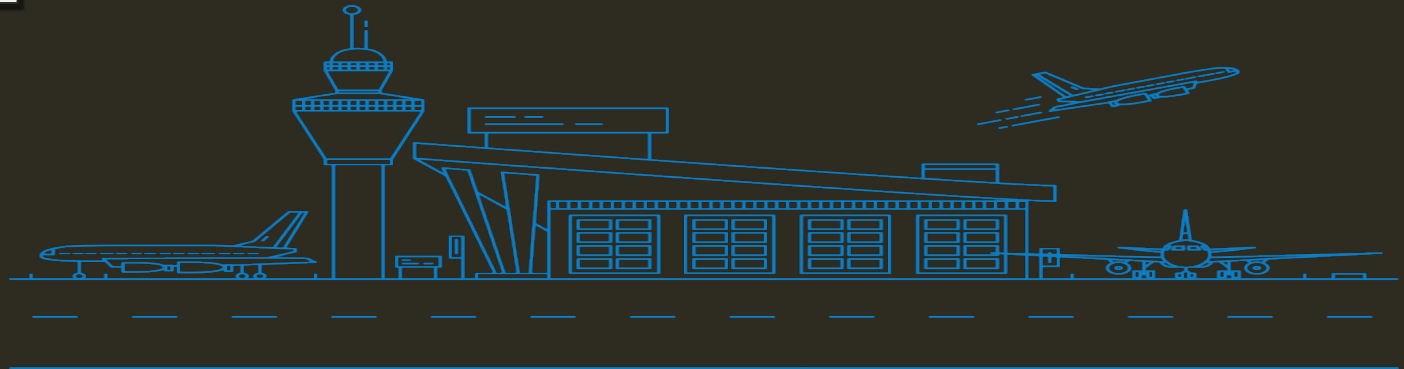
TOOLS

Support environmental oversight system for State Authority
Improve environmental performance of Airport Operator

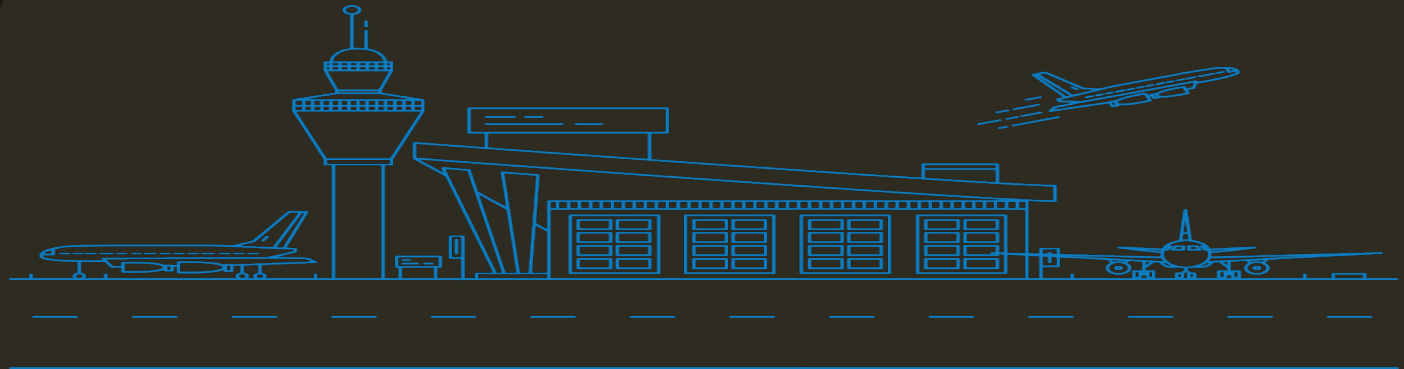
Preventive Approach
Systematic Approach
Customized to Airport



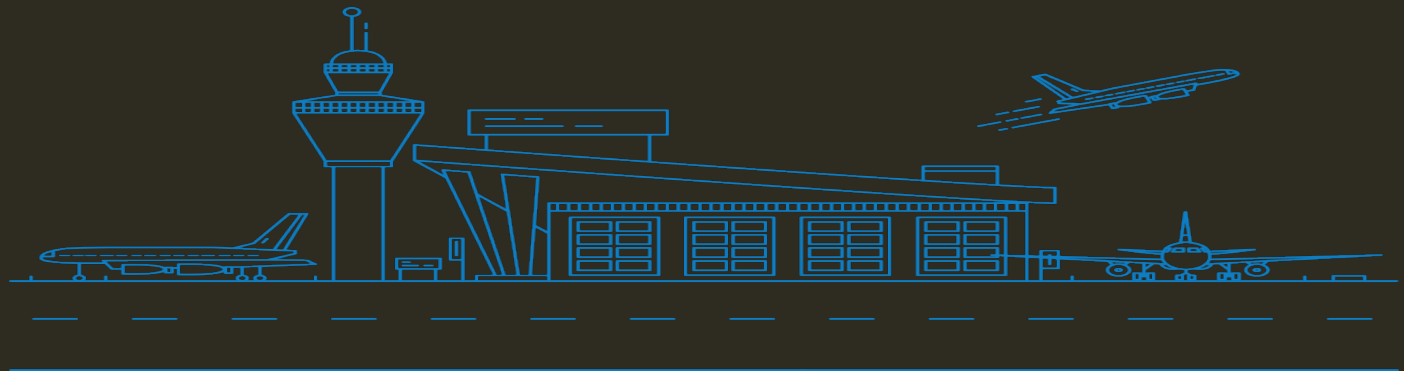
System Manage Environment Airport



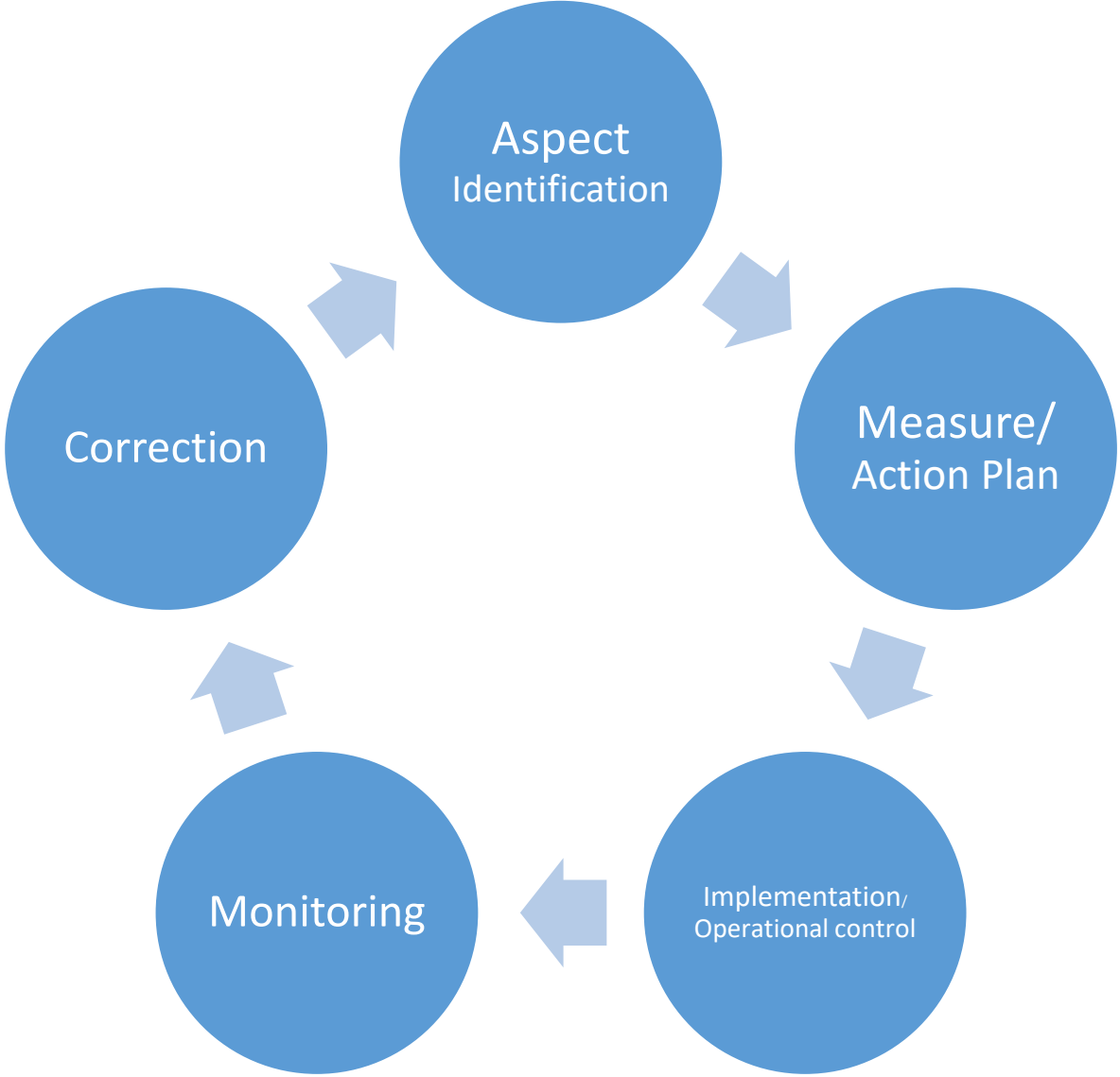
Airport Environmental Management System



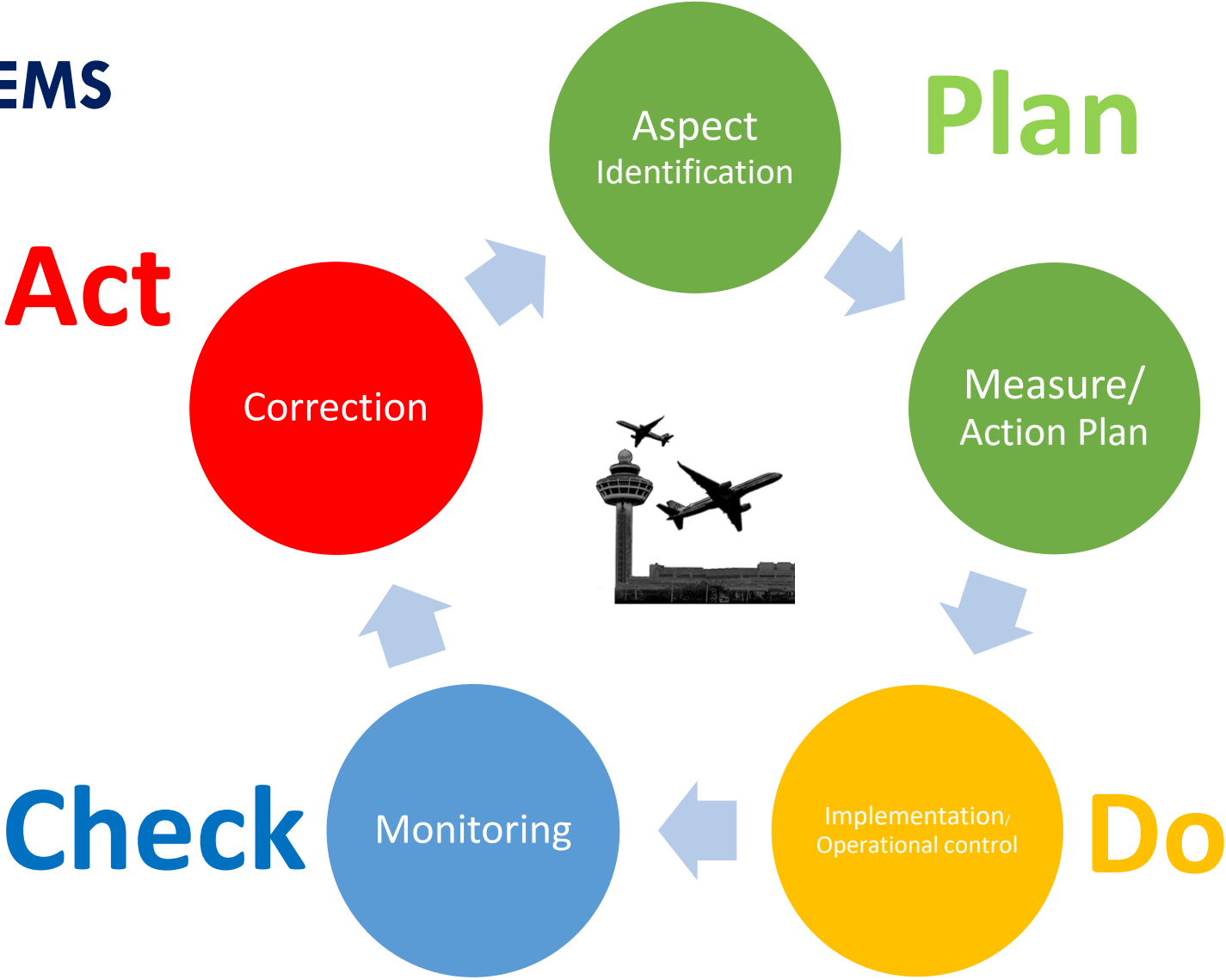
Airport EMS



Mechanism of Airport EMS

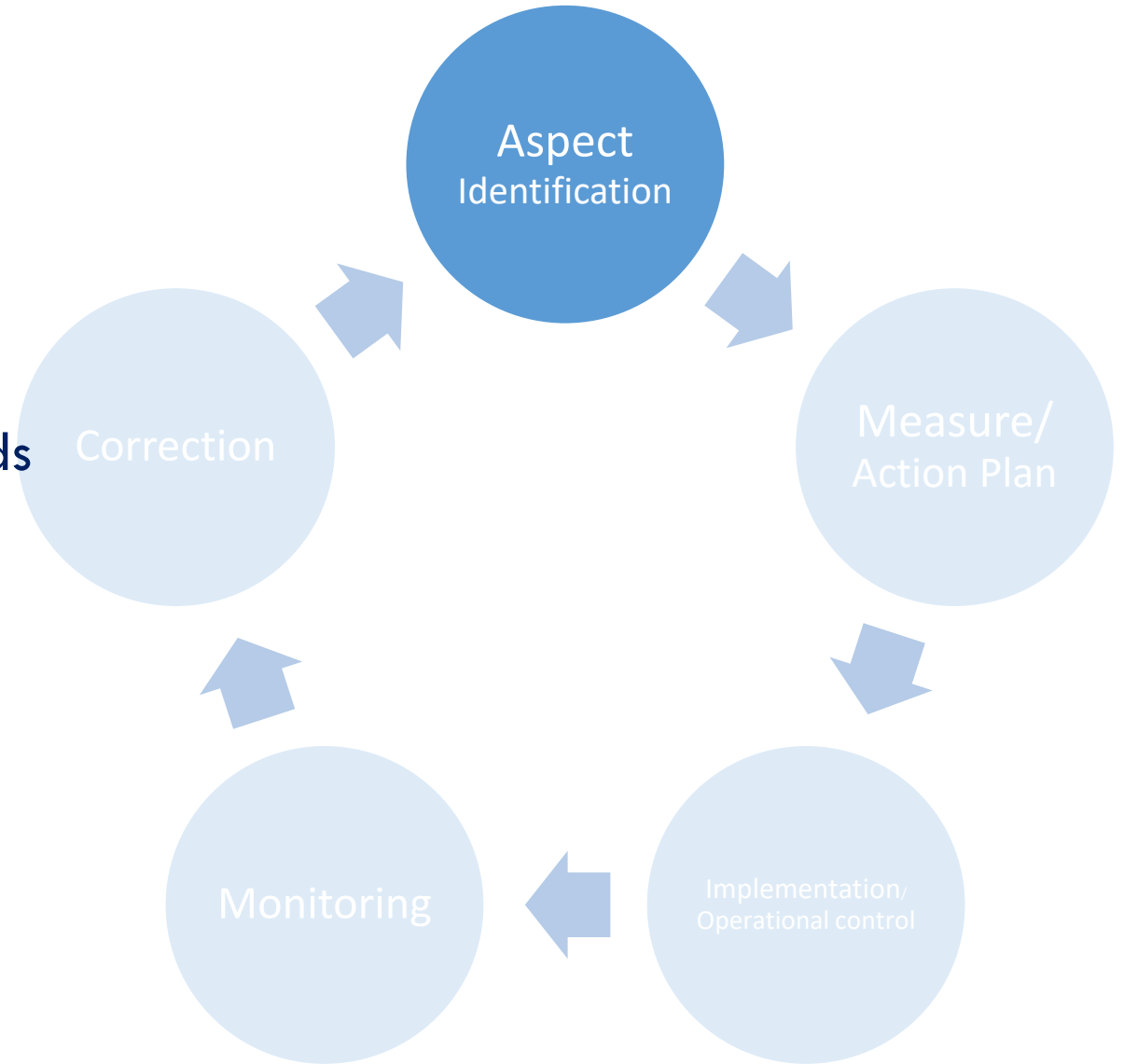


Mechanism of Airport EMS



Environmental Aspect Category

1. **Greenhouse Gases Emission**
2. Compliance with law or the standards
3. Adverse health impact
4. Environmental contamination
5. Natural resource depletion
6. Conflict with community



Airport EMS - A new solution

- Environmental issues will be identified and prioritized by airport operator.
- Appropriate mitigation measure and action plan will be proposed by airport operator.
- Implementation of the measures will be ensured by internal audit (monitoring program)

Participation

Flexibility

Specificity

- Applicable to every size of airport
- Specific to airport- Designed and tailored for airport
- Support Aerodrome Environmental Oversight program of State Authority.

Airport EMS pilot project

Airport EMS project launched in July 2019

Supported by EU SEA APP

Implemented by CAAT and EASA

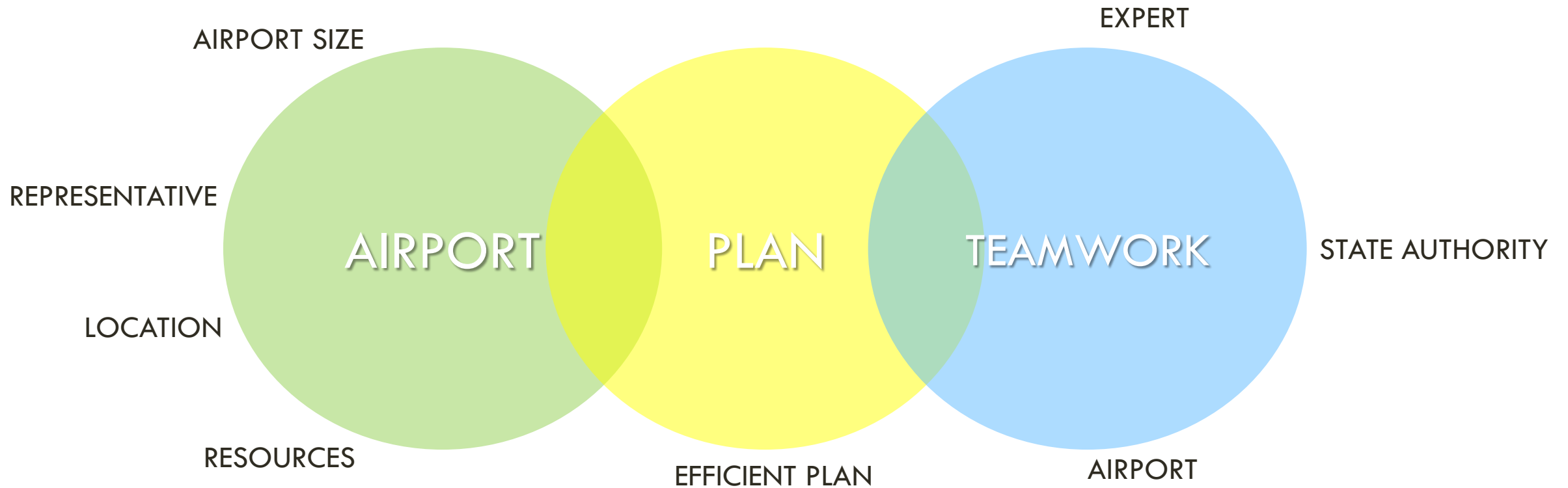
Timeline : AUG to OCT 2019 **(3 months)**

Objectives:

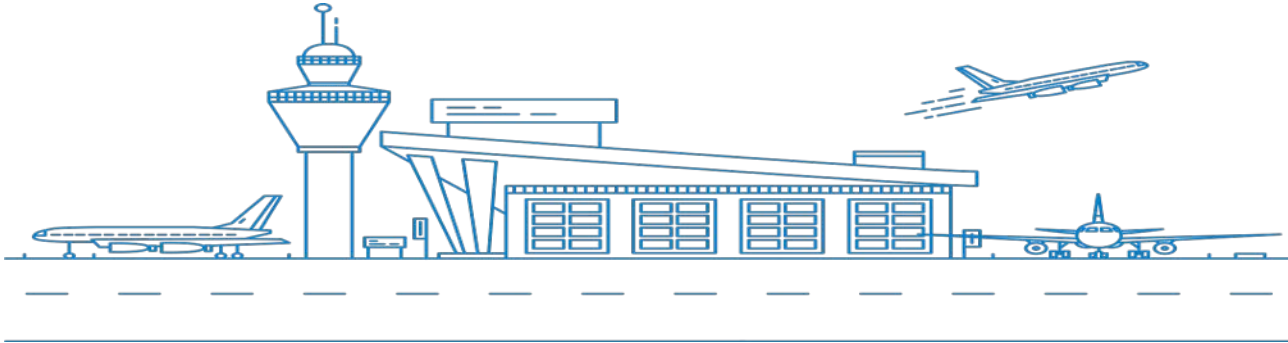
- To Establish the Standard (Airport REQUIREMENT and GUIDELINE)
- Also, test the applicability of that Airport EMS Package (Requirement, Guideline and Criteria)



KEY SUCCESS OF THE 1ST AIRPORT EMS IN THAILAND

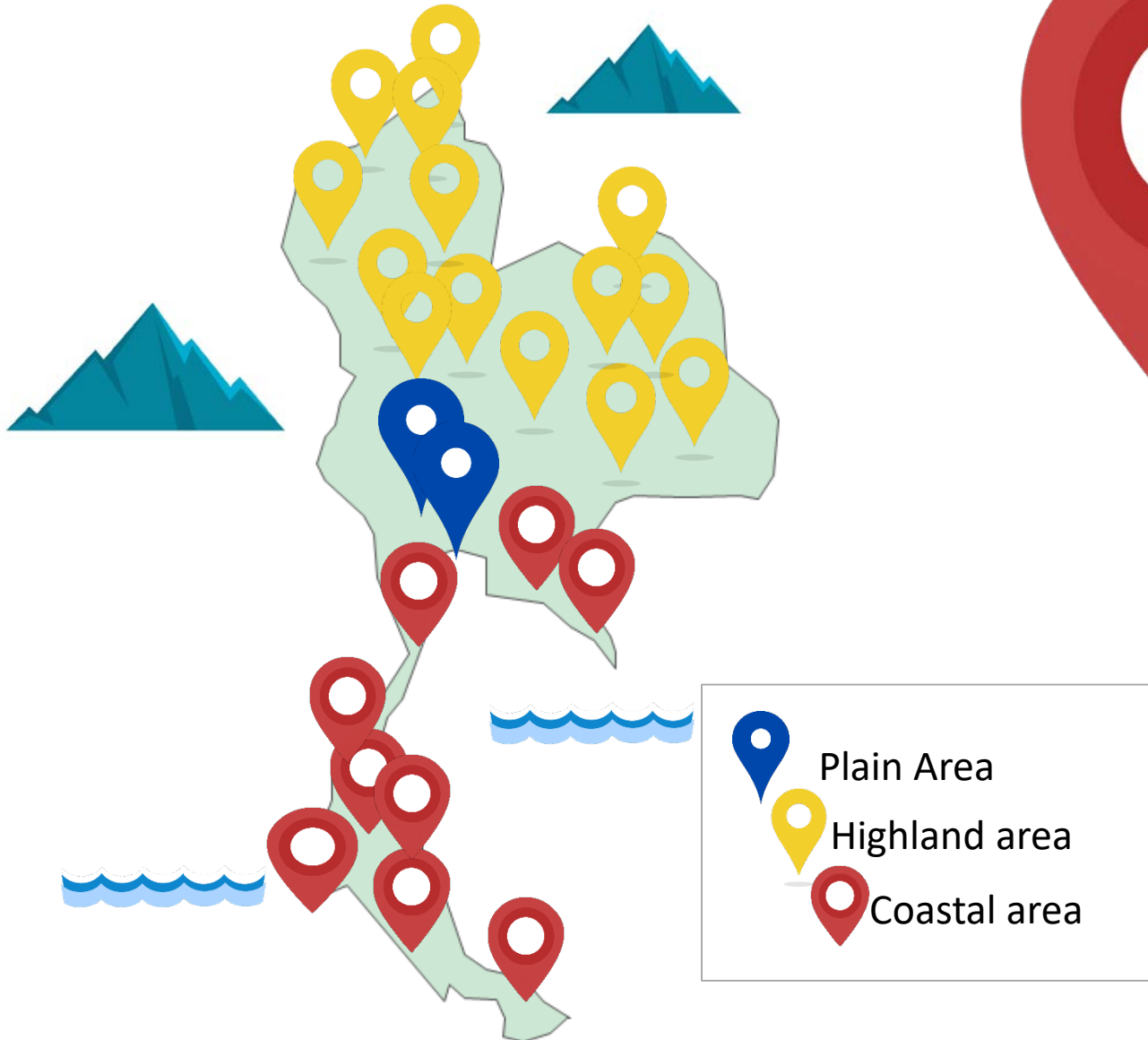


1. The Appropriate Airport



“ Selection Criteria ”

1. Size
 - Number of flights : >2 but <10 flights per day
2. Resources
 - Sufficient financial resource
 - Manpower/Team → in charge in Environment
3. Comply with the regulation
 - EIA
4. Representative in terms of location and weather condition
 - Represents THAILAND's / Tropical weather condition
 - Vulnerability in terms of climate change
 - Ex. “Coastal area”



Covering more than 40% of
Thailand 'public airport

High climate change vulnerability



2. Work Plan designed by CAAT and the expert

Activities		Month1				Month2				Month3			
		1	2	3	4	1	2	3	4	1	2	3	4
1.	Airport selection												
2.	Project briefing												
3.	Primary assessment (GAP analysis)												
4.	Drafting Airport EMS requirements												
5.	EMS training												
6.	The Airport environmental aspects assessing												
7.	Developing quality document (EMS manual and related documents)												
8.	Training on implementation of the system												
9.	Progress meeting												
10.	Training on internal audit												
11.	Internal audit												
12.	Management review												
13.	Conclusion and problem-solving meeting												
14.	Developing CAAT's Airport Environmental Assessment Manual												
15.	Training on Environmental Assessment technique for CAAT's staff												
16.	Finalizing Airport EMS requirements/guidelines for and project report												

Preparation

Training/Setting

Implementation

Post-Project

Preparation

Training/Setting

Implementation

Post-Project

3. Teamwork



1. Expert
2. Airport
3. State Authority

TRAT airport (TDX)

- ✓ Public airport overseen and managed under CAA
- ✓ Located near coastal area
- ✓ Staff in charge in environment
- ✓ Flight movements >2 flights per day
- ✓ Manage EIA and comply with the regulation
- ✓ Sufficient resources : man , time, budget



APPROACH-ENGAGEMENT-COMMITMENT

1. Announcement : by the letter
2. Meeting with the airport

CAAT: Deputy Director General, Aerodrome Standards Department Manager, Head of Aviation Environment Division

Bangkok Airways : TRAT Airport Manager and Airport Standard Supervisor

2.1 Project Briefing

- Work plan vs Timeline
- Details of support and sponsorship

2.2 Project Discussion

- Benefits from the project

3. Commitment

- Reply from the airport



7 July 2019



Benefit

For airport operator in the project

1. The first airport to be applied Airport EMS standard “ Prototype”
2. Consulting fee which is the major cost of the project → No need
3. Work closely with State Authority and experts from international organization.
4. IMAGE→ Environmental Friendly Airport

Expected result

Requirement, Guideline Standard

of Airport EMS (1st draft)

On how to manage environment of
Thailand's Airport

- Operating condition for airport operator
 - Facilitating oversight system of CAAT
- Environmental Management Tool for Thailand's Aviation Sector

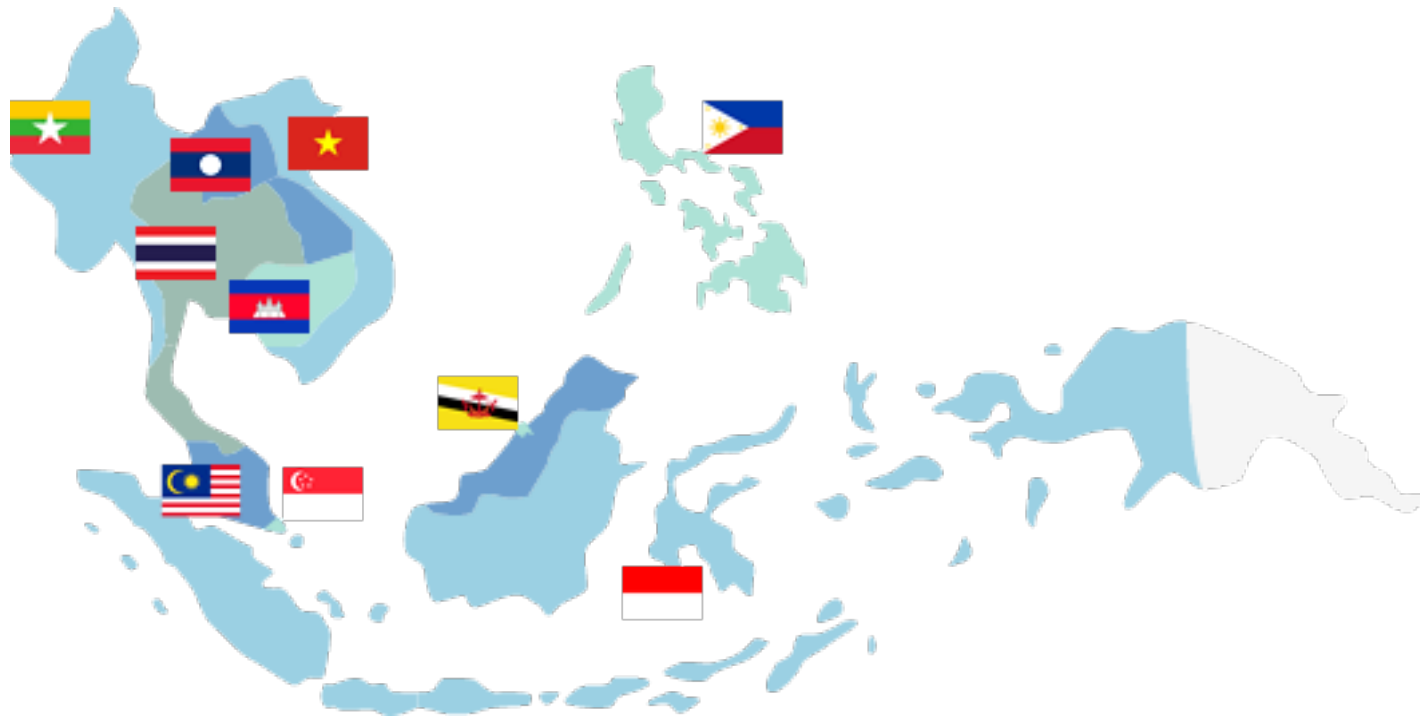
Airport EMS

Moving forward to



REGIONAL APPROACH

How this activity will affect the modus operandi of the ASEAN region?



Geographical Configuration

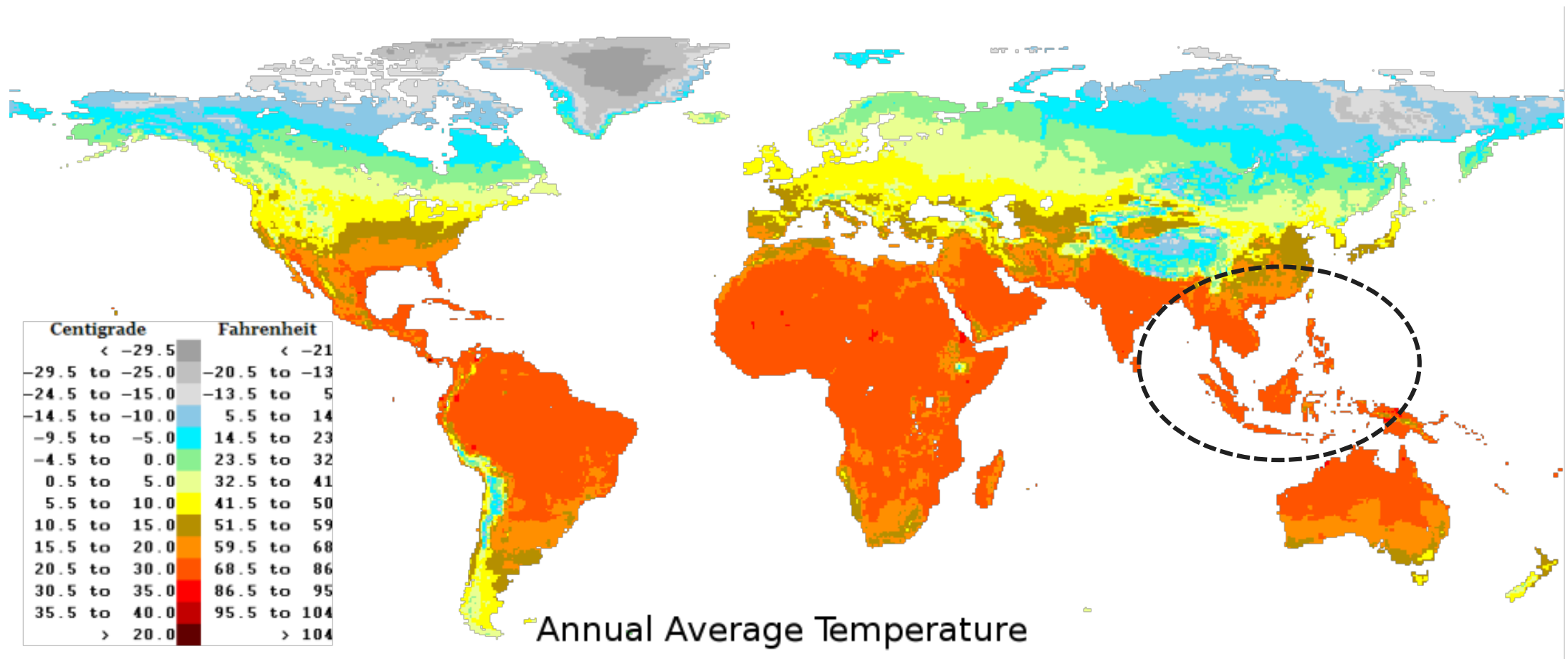
Climate and Weather condition

Life-style

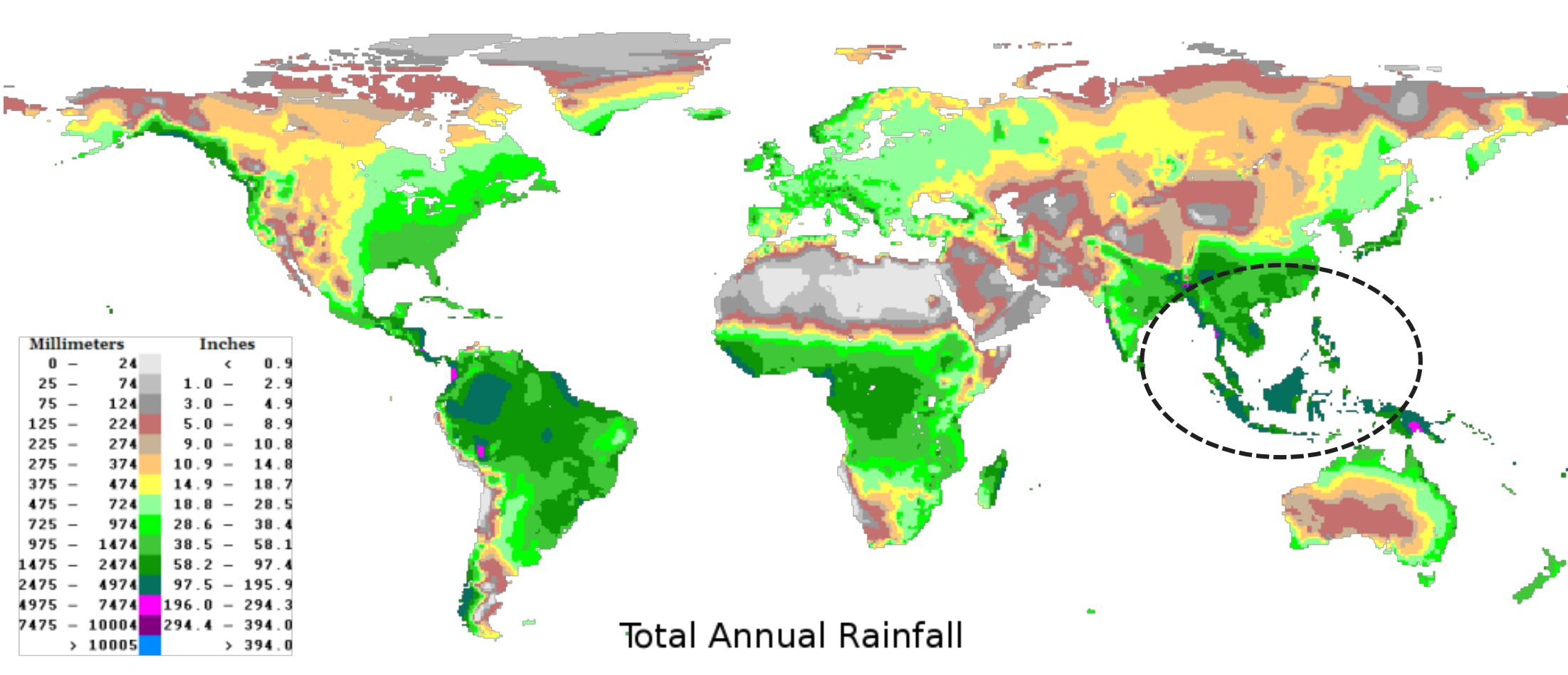
Biodiversity and natural
resources

**Environmental
Problem**

Annual Average Temperature

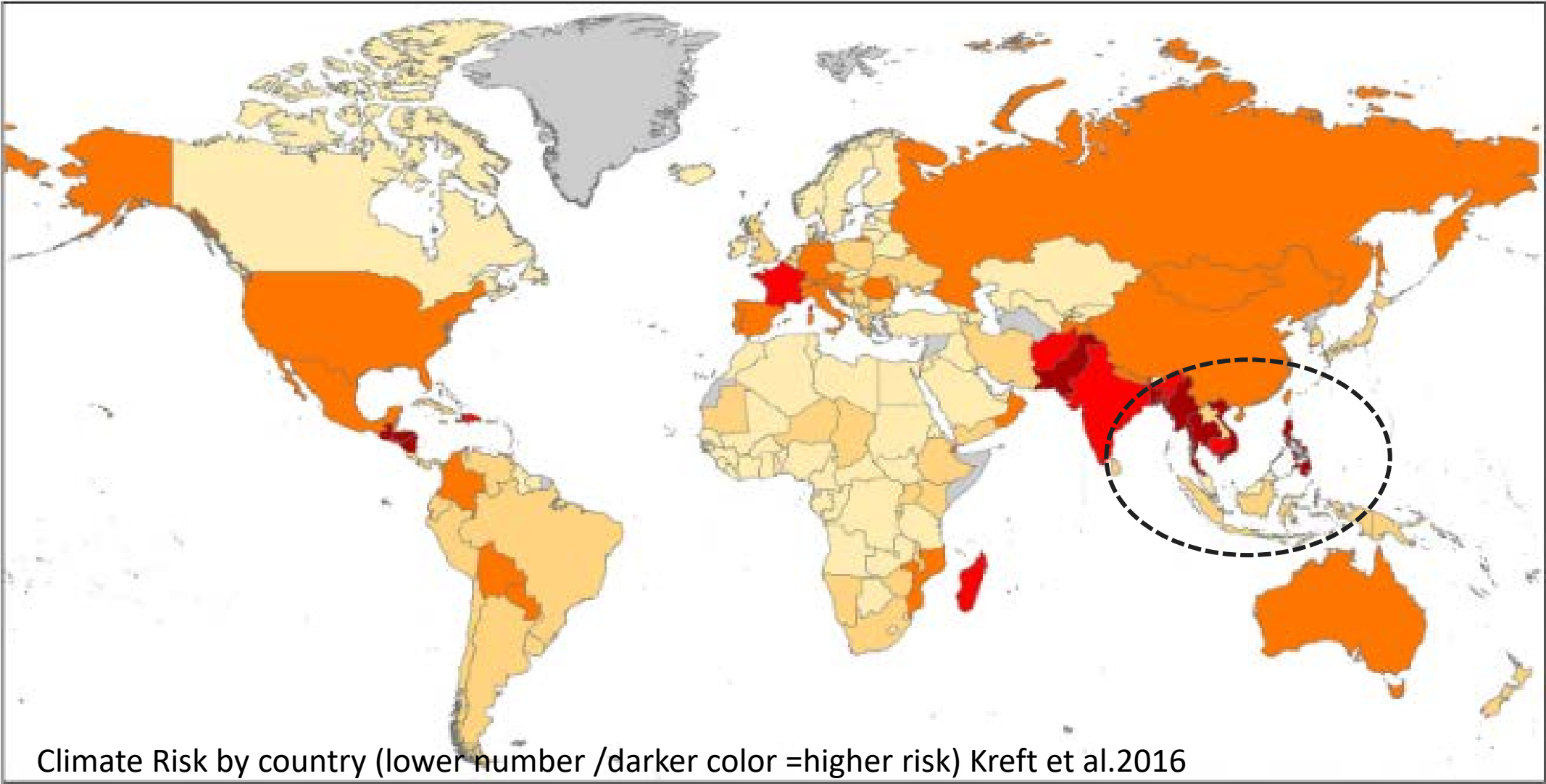


Total Annual Rainfall



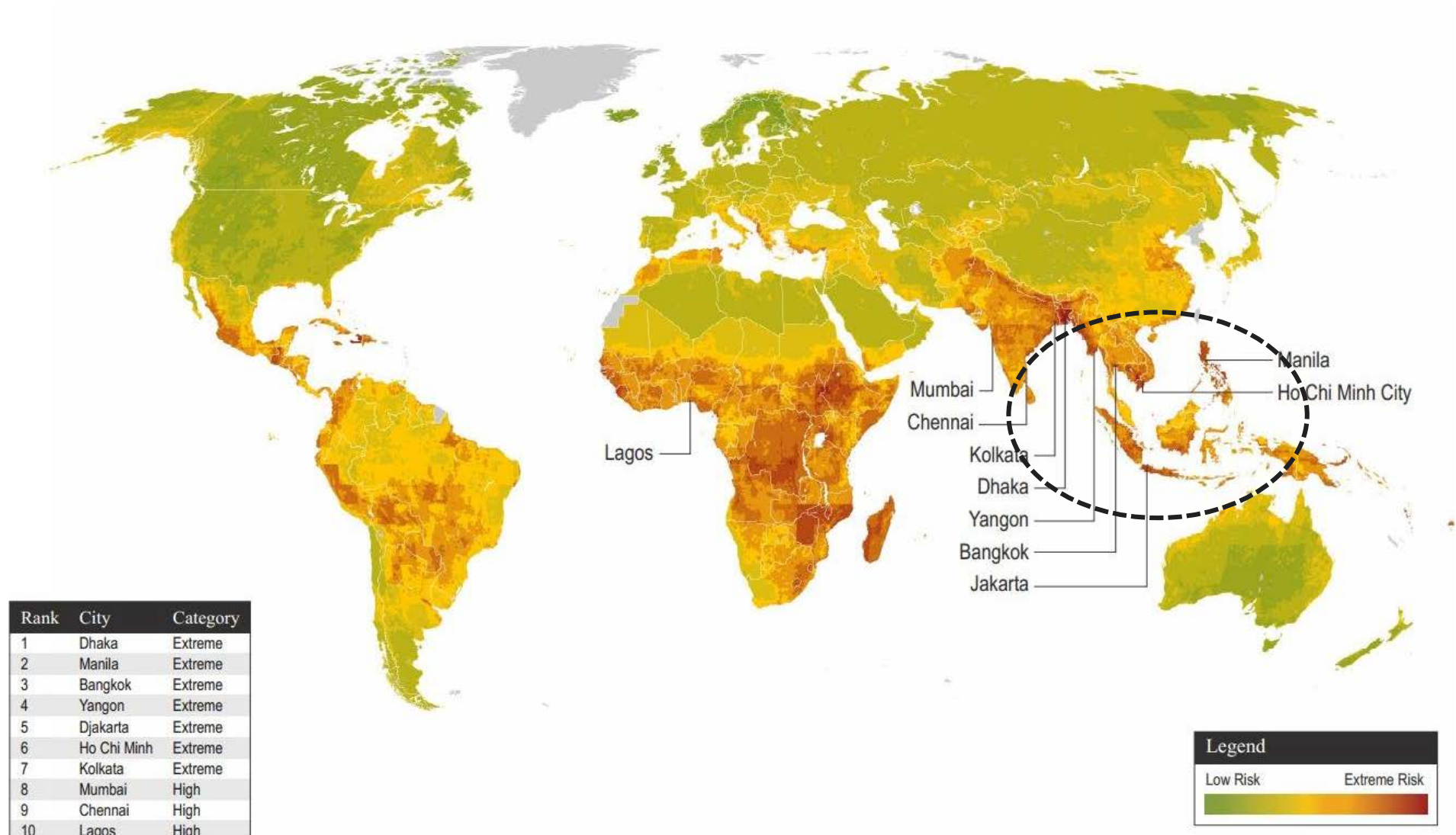
Impact of Climate Change on ASEAN International Affairs: Risk and Opportunity Multiplier


Published by the Norwegian Institute of International Affairs and Myanmar Institute of Strategic and International Studies



Climate Risk Index: Ranking 1996–2015 1–10 11–20 21–50 51–100 >100 No data

Climate change Vulnerability Index 2013



- 
- Thailand by CAAT attempted to develop a new tool to manage ENVIRONMENT at airport level.
 - Currently, we are improving Airport EMS requirement (1st DRAFT) to be best fit with THAILAND's context.

PROVEN

- ASEAN countries have quite similar characteristic
- Airport EMS has been proposed in ATWG 2019, 40th in Kuala Lumpur and agreed by the meeting.

ATWG/ATTC 2019



- **AGENDA ITEM 7: SUSTAINABLE AIR TRANSPORT**

- 26. The Meeting noted the discussion paper and presentation on **“Airport Environmental Management System (EMS)”** which collectively appear as **ANNEX 14**.
- The Meeting also noted that Thailand deployed the first pilot project to formulate and implement Thailand’s Airport EMS Guideline, the finding was that the implementation of Airport EMS could improve environmental performances of the Airport Operator, facilitate the oversight program of State Authority, and promote the communication between the parties. Recognising that the Airport EMS is an effective environment tool in achieving a sustainable aviation, the Meeting supported and agreed for Thailand to spearhead the **development of a draft Airport EMS Guideline for AMS**’ consideration at the next ATTC.
- **Action by: Thailand**
- 27. The Meeting discussed a possible expansion of studies and cooperation after the Airport EMS in order to optimize **carbon emission reduction** efforts in aviation sector. The efforts may include CORSIA and other efforts in line with the ICAO basket of measures. The meeting also noted that this would be formalized under the ATTC Work Plan, and possibly included as part of the KLTSP review to be conducted in 2020.
- **Action by: Indonesia and Thailand**

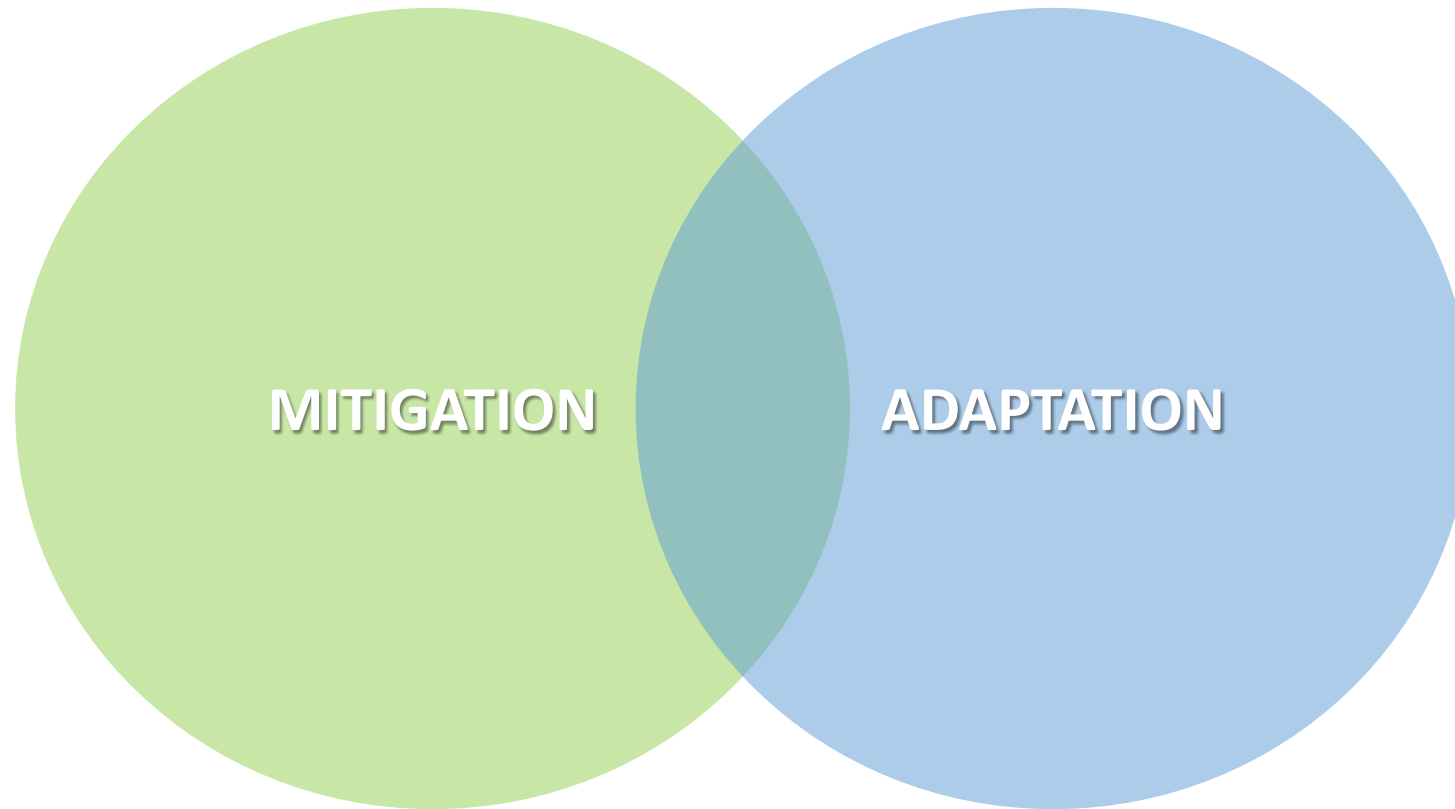


**AIRPORT EMS
ASEAN
GUIDELINE**

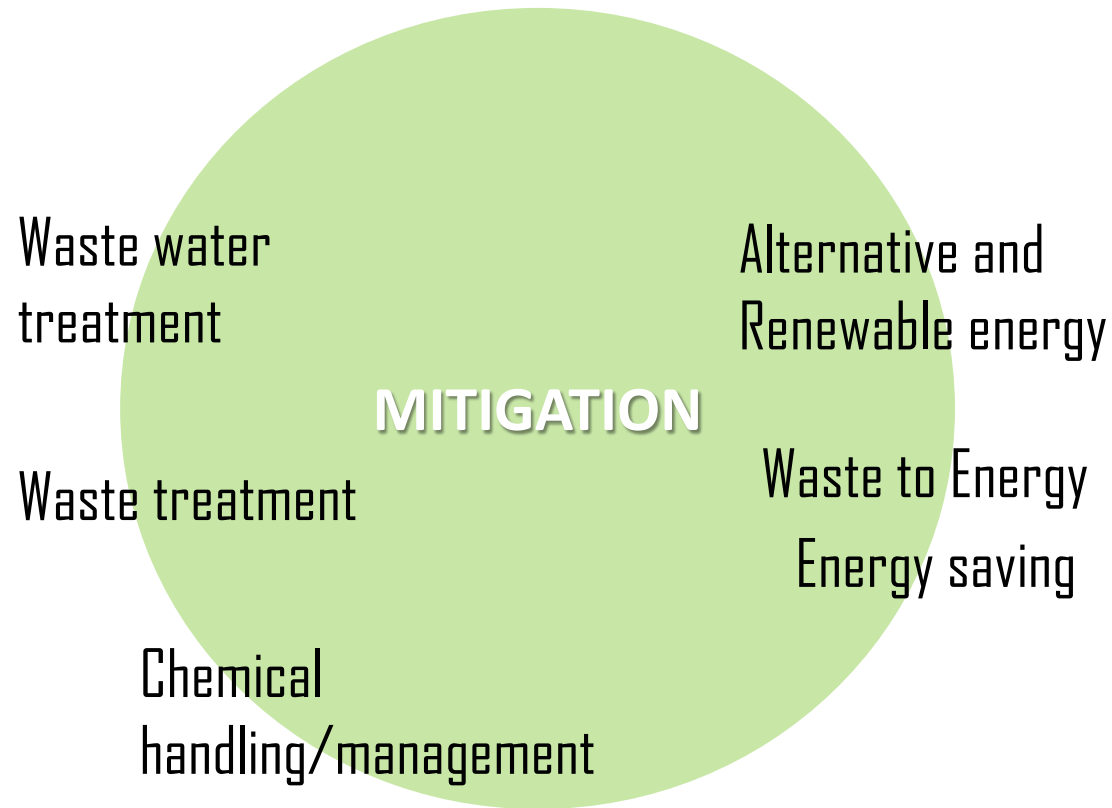


AIRPORT EMS ASEAN GUIDELINE

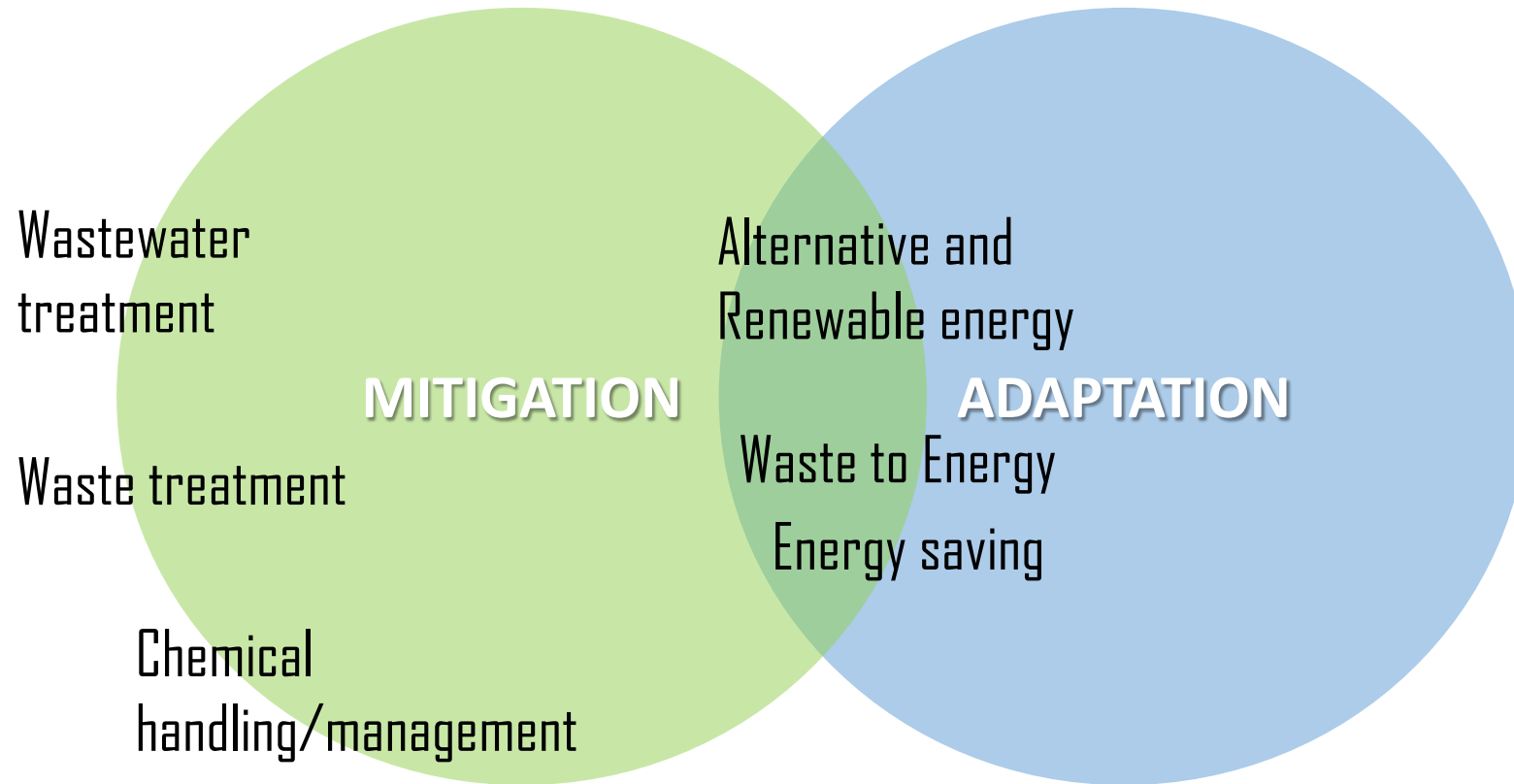
Coping Climate Change with Airport EMS



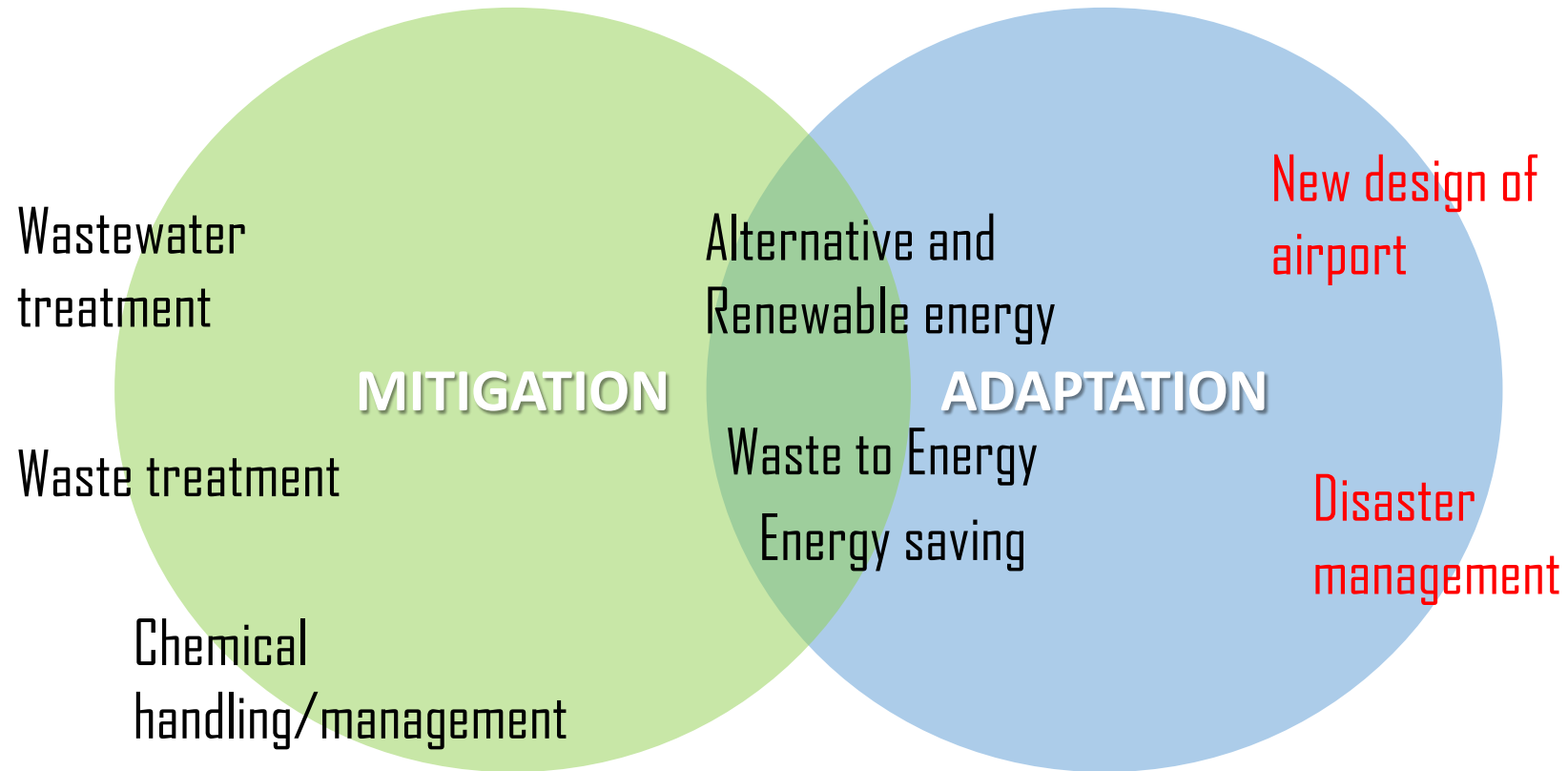
Coping Climate Change with Airport EMS



Coping Climate Change with Airport EMS



Coping Climate Change with Airport EMS



Coping Climate Change with Airport EMS

Environmental Friendly

Resilience to Climate Change

MITIGATION

ADAPTATION



Thank you



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