INTRODUCTION

This ACI EUROPE Recommended Practice is entirely and exclusively based on the Specification launched by EUROCONTROL at the 9th ACI Airport Exchange in Paris on 4 November 2014. It was adopted by the ACI EUROPE Environmental Strategy Committee on 17 October 2014 and approved by the Board of ACI EUROPE on 30 October 2014.

EUROCONTROL’s Specification on Collaborative Environmental Management (CEM) was developed over a number of years with the close involvement of ACI EUROPE and other industry stakeholders. It was produced to help airports and their operational partners - including airlines and ANSPs - manage an increasing stock of environmental regulations with a view to enable them to arrive at speedier and more effective joint solutions for the sustainable operation and development of airports.

Practically, it requires of CEM partners to put together monitoring processes to track key environmental parameters and support the work of competent authorities and each other in complying with environmental regulation. The content of these arrangements will vary from airport to airport, but the CEM Protocol developed by EUROCONTROL and endorsed by ACI EUROPE as an industry Recommended Practice foresees the establishment of a minimum frequency of meetings, agreed rules on confidentiality and the opening of dialogue with external stakeholders.

The way in which this Recommended Practice helps produce joint solutions is by promoting a better understanding of the business interdependencies between airports, airlines and ANSPs as well as their common environmental impact. The underlying working arrangements represent a natural step forward for environmental management at airports – which is why ACI EUROPE decided to actively promote the implementation of CEM by its airport members through its endorsement as an ACI EUROPE Recommended Practice. CEM addresses real-world needs building on real-world practices.

The issues to be addressed through CEM working arrangements include noise, local air quality and greenhouse gas emissions – arguably the three most critical environmental priorities for airport operators. By offering a general rubric for airport partners to address them in a collaborative manner, the CEM Protocol helps them to identify trade-offs between the objectives and to make informed decisions.

As such, CEM marks a valuable new addition to ACI EUROPE’s toolbox of Recommended Practices that will contribute to positioning airports at the forefront of sustainability in aviation.

On the conventions, applicability, background, scope, and references of Collaborative Environmental Management, the reader is referred to the CEM Specification document accessible on EUROCONTROL’s website: [https://www.eurocontrol.int/](https://www.eurocontrol.int/).
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**RECOMMENDED CEM PROTOCOL\(^1\)**

**INTERDEPENDENCIES**

**COMMUNICATION**

**COMMUNICATION**

**REVIEW**

**PRIORITY**

**IMPLEMENT**

**MANAGE**

**SOLUTIONS**

**COLLABORATION**

**TRADE-OFFS**

![Diagram](image-url)

**Figure 1 - High level CEM overview**

Figure 1 illustrates how the core operational stakeholders, by adopting a collaborative approach and understanding the interdependencies involved, can achieve sustainable solutions to their collective impacts through the CEM protocol’s working arrangements. It also highlights the need for the involvement of other stakeholders in order to make informed decisions and identify trade-offs.

**1 INTRODUCTION**

A number of critical factors influence the successful outcome of any collaborative process:

- Establishment of agreed working arrangements between the collaborating parties;
- Recognition of problems/issues and the contributing factors, including the involvement of each party;
- Awareness and understanding of interdependencies;
- Identification of the resources available to support the collaborative process; and
- An agreed outcome and delivery.

\(^1\) Figure and text reproduced with the kind permission of EUROCONTROL
The objective of this section is to list the requirements and recommended practices establishing the CEM protocol at airports, whose core operational stakeholders wish to take the voluntary decision to implement such a collaborative working arrangement to deal with environmental issues. Where similar arrangements already exist, the requirements in this section must be satisfied to claim compliance with this Specification.

2 GENERAL REQUIREMENTS

2.1 A CEM working arrangement shall be established to deal with environmental matters comprising of personnel drawn from the following core operational stakeholders:

- Airport Operator;
- Aircraft Operators;
- Air Traffic Service Provider.

2.2 Depending on specific circumstances, local, regional or national regulatory bodies may form part of the core CEM working arrangements and should be mentioned in the terms of reference.

2.3 These personnel shall possess the appropriate authority and understanding of the issues to represent their organisations on environmental matters and to take decisions that commit their organisations to act.

Note: The CEM Specification’s requirements, if implemented, must work within the context of national legislation and measures.

2.4 The Airport Operator should initiate the establishment of the CEM working arrangement.

2.5 The CEM working arrangement may be convened by any one of the core operational stakeholders at any time.

2.6 The CEM working arrangement shall have:

- Approved rules of procedure;
- Agreed roles and responsibilities of each participating stakeholder;
- Agreed rules on confidentiality – providing for specific arrangements amongst the CEM stakeholders that would allow disclosure of commercially sensitive information e.g. fuel burn;
- Agreed terms of reference focusing on environmental challenges generated by air traffic operations at and in the vicinity of the airport;
- A minimum frequency of meetings – depending on the topics to be dealt with;
- Documented meeting reports (recording decisions and the status of actions).

2.7 Additional airport stakeholders such as ‘Ground Handling Agents’ should be invited to the CEM working arrangement when appropriate.

2.8 The following topics shall be part of the terms of reference of the CEM working arrangements where relevant:
Noise;
Local Air Quality (LAQ);
Greenhouse gas emissions;
Identification of applicable local, national and European legislation;
The review and coordination of the introduction of new concepts of operations
to improve the environmental sustainability of the airport;
Identification of interdependencies between impacts and between their potential
solutions;
Modifications to airport and CNS/ATM infrastructure;
Interaction with external stakeholders;
Communication;
Any other environmental issue that impacts on operations, capacity or both.

2.9 The following topics\(^2\) should be part of the terms of reference of the CEM working arrangement where relevant:

- De-icing;
- Waste management and refuse management in general;
- Wildlife hazard management;
- Protection of biodiversity;
- Areas of Special Scientific Interest or their equivalent;
- Renewable energy possibilities such as:
  - wind turbines;
  - bio-mass;
  - solar panels, etc.

2.10 Given their potential impacts on operational and environmental performance, the following topics may be part of the terms of reference of the CEM working arrangement where relevant:

- Land use in the vicinity of the airport;
- Third Party Risk.

2.11 The CEM working arrangement shall put in place specific processes to monitor and assess the following key environmental parameters where relevant:

- Noise;
- Local Air Quality:
  - \(\text{NO}_x\) emissions;
  - Particulate Matter (PM) including Ultra-fine Particles (UFPs);
  - Black Carbon;
- Fuel burn;
- \(\text{CO}_2\) emissions.

Note: The Performance Plans\(^3\), at FAB (Functional Airspace Block) or National level may set additional KPIs (Key Performance Indicators) to address the specific airport ANS-related environmental issues. In

\(^2\) This list of topics is non-exhaustive – local conditions will determine what should be added or deleted at any one time

\(^3\) Commission Implementing Regulation (EU) No 390/2013 of 3 May 2013 laying down a performance scheme for air navigation
In this context, the CEM working arrangement provides a platform upon which the core operational stakeholders can take a proactive approach to consider potential processes for monitoring and assessment purposes.

2.12 The CEM working arrangement should make use of recognised models and tools to monitor and assess key environmental parameters at and around airports. *Note: Annex D lists selected implementation support models and tools.*

2.13 Operational stakeholders within the CEM working arrangement shall provide mutual support to each other to facilitate successful compliance with the environmental legislation to which each is subject.

2.14 The CEM working arrangement shall identify and monitor compliance with all environmental regulations applicable to the airport and those with the potential to influence air traffic operations.

2.15 Core operational stakeholders shall communicate the status of their compliance with relevant environmental regulations to the CEM working arrangement.

2.16 Core operational stakeholders should bring forward any environment-related issues and identify potential conflicts within the CEM working arrangement to determine collaborative solutions.

2.17 The CEM working arrangement may propose the development of an Environmental Charter or similar document that describes the core operational stakeholders’ collective commitment to dealing with environmental issues at and around the airport. This may include, for example, wider commitments to sustainable development and corporate social responsibility. This can serve to demonstrate these stakeholders’ collaborative efforts to engage with the concerns of the airport’s neighbours and regulators.

2.18 Long term environmental issues should be addressed by the CEM working arrangement to develop a strategic plan which may be part of the Environmental Charter or any other relevant document.

2.19 The CEM working arrangement may propose that the core operational stakeholders participate in voluntary initiatives to reduce the airport’s environmental impact and it should provide appropriate support.

2.20 Individual core operational stakeholders’ management systems should be modified to implement processes contributing to commonly agreed solutions that mitigate environmental impact(s).

3  RELATIONSHIPS WITH EXTERNAL STAKEHOLDERS

3.1 The CEM working arrangement shall identify all of its external stakeholders concerned by the environmental impacts resulting from their combined operations at and around the airport. These should include:

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services and network functions
Airport neighbours and communities (e.g. Resident Associations, local businesses, schools, hospitals);
- Local, Regional and National Authorities;
- State-designated competent authorities and bodies responsible for environmental legislation;
- Other airports (for example those in close proximity and/or in the same operating group if relevant).

3.2 The CEM working arrangement shall establish a dialogue with representatives of external stakeholders when appropriate.

3.3 Prior to any formal dialogue with such representatives the CEM working arrangement shall agree on the purpose, form and content of any subject matter to be communicated.

3.4 Such subject matters should include:
- a pro-active approach/policy to operational procedures that will affect local communities in both the short and long term;
- land use and spatial planning in the vicinity of the airport;
- the early involvement of external stakeholders in the planning of operational changes that may affect them;
- the sharing of operational environmental data;
- the establishment of communication channels with external stakeholders; and
- the need for regular meetings with external stakeholders.

3.5 CEM working arrangement communication material shall be clearly identified, whenever possible, as having been jointly prepared by the core stakeholders.

3.6 The CEM working arrangement should nominate focal points to liaise with authorities and other designated bodies responsible for environmental legislation.

3.7 The CEM working arrangement shall support the relevant authorities and bodies to assist in describing, compiling and/or assessing environmental information as needed to support compliance with both current and future legislative requirements and/or national arrangements.

4 RELATIONS WITH COMPETENT AUTHORITIES

Under EU legislation, States have responsibility for nominating Competent Authorities on a variety of issues including air transport and the environment. Given the applicability of environmentally-related legislation to airports and air traffic operations, and the fact that different Competent Authorities may be involved, it is likely that a collaborative approach will facilitate working with them.

4.1 The CEM working arrangement shall support the Competent Authorities and bodies as designated in EU Directive 2002/30/EU in implementing the ‘Balanced Approach’ to assist in describing, compiling and/or assessing environmental information as needed to support compliance for the purposes of:

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4 Concerned authorities will vary according to each State
5 Authorities as designated by Member States in the relevant legislative requirements and/or national measures
take into account likely costs and benefits of the various measures available;
contributing to the description of the environmental objectives of the airport;
contributing to the description of measures already taken to reduce aircraft noise;
contributing to the assessment of the cost/effectiveness or cost/benefit of specific measures taking into account the socio-economic effects on airport users and local communities;
contributing to an overview of the possible environmental effects of the proposed measures on other airports etc.;
taking into account the relationship of the Directive 2002/49/EU on the assessment and management of environmental noise and any noise maps or action plans that may have been prepared.

4.2 The CEM working arrangement shall support the Competent Authorities and bodies as designated in EU Directive 2002/49/EC in describing, compiling and/or assessing environmental information as needed to support compliance for the purposes of:

- the preparation of the strategic noise map of the airport;
- the review every five years of the strategic noise map of the airport;
- the preparation of the noise action plan of the airport;
- the preparation of proposals for the noise action plan taking into account the concerns of external stakeholders;
- the review, every five years, of the noise action plan of the airport.

4.3 The CEM working arrangement shall support the Competent Authorities and bodies as designated in EU Directive 2008/50/EC in describing, compiling and/or assessing environmental information/data as needed to support compliance for the purposes of:

- the monitoring and assessment of ambient air quality data;
- the preparation of the local, regional or national air quality plans for improvement in ambient air quality;
- Public Information made available by Member States to the general public on ambient concentrations of the pollutants covered by this directive.

5 INFORMATION SHARING

5.1 Core operational stakeholders who, through existing collaborative working arrangements at airports, already meet or surpass the requirements of this Specification should contribute to pan-European harmonisation by sharing relevant case studies and practical information which may be documented in future editions of this Specification.