SE	SAR	Active			LO	C/APT				
EN	V02	Airport Collaborative Environmental Management								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

Subject matter and scope

Implement or identify existing formal working partnership arrangements between ANSP, Airport and Aircraft Operators at individual airports to address and assess the environmental challenges at and around the vicinity of the airport. These challenges can be a significant constraining factor to efficient and sustainable operations.

Topics include but are not limited to:

- minimising noise and atmospheric emissions in particular CO2 and NOx (including fuel burn);
- introduction of new operational changes such as airspace design to include new entrants such as UAM, Hybrid and or hydrogen aircraft, different approach or departure procedures including CDO/CCO and PBN implementation, new airport infrastructure
- Compliance with airport-related legislation and environmental certification requirements
- Management of aircraft and airfield de-icing resulting from combined aircraft operations at the terminal airspace and ground.
- Adaptation to Climate Change (risk to infrastructure, de-icing strategies, water);
- Facilitate implementation and uptake of Sustainable Aviation Fuels;
- Contribute to robust community engagement dialogue and relations with local authorities.

CEM working arrangements will enable a greater understanding and awareness of interdependencies and facilitate jointly agreed solutions for sustainable environmental operational performance improvements that can benefit joint operations as well as local community engagement and relationships with local authorities.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

NOTE: A CEM Online tool is available at the link below with the purpose of providing a common platform to assist key operational stakeholders at airports in setting up a CEM Working Arrangement and to demonstrate compliance with the CEM Specification's Requirements:

https://www.eurocontrol.int/portal/collaborative-environment-management-online

Applicability Area(s) & Timescale(s)

Applicability Area (Subject to local needs)				
Timescales:		From:	Ву:	Applicable to:
FOC used for Analytics functioning only - not planning	for implementation	31/05/2018		Applicability Area
FOC used for Analytics functioning only - not planning	for implementation		01/01/2030	Applicability Area

References

European ATM Master Plan

OI step -	[AO-0703]-Aircraft Environmental Impact Management and Mitigation at and around Airports								
	Enablers -	A/C-53	ENV-05	ENV-06	PRO-190	PRO-AC-53	PRO-ENV-12a	PRO-ENV-12b	PRO-ENV-13
		PRO-ENV-13b							
Ol step -	[AO-0705]-	Reduced Water F	Pollution						
	Enablers -	AIRPORT-34	ENV-06	PRO-075					
Ol step -	[AO-0706]-	(Local) Monitorin	g of Environme	ental Performan	<u>ce</u>				
	Enablers -	AIRPORT-34	ENV-06	ENV-07					

Lagand	: WXYZ-001	Covered by SLoA(s) in	WXYZ-002	Covered by SLoA(s) in another objective	WXYZ-	Not covered in the
Legend	. VVXYZ-001	this objective	zzz	Objective covering the enabler	003	Implementation Plan

Applicable legislation

ENV₀₂

Airport Collaborative Environmental Management

Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91: Annex VIII, paragraph 3.2'the EATMN, its systems and their constituents shall support, on a coordinated basis, new agreed and validated concepts of operation that improve the quality, sustainability and effectiveness of air navigation services' Regulation (EU) 598/2014 of the European Parliament and of the Council of 16 April 2014 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Union airports within a Balanced Approach and repealing Directive 2002/30/EC. EC Directive 2002/49/EC, dated 25.06.2002 relating to the assessment and management of environmental noise. EC Directive 2008/50/EC, dated 21.05.2008 on ambient air quality and cleaner air for Europe. Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS). Annexes I, II and III amended by Commission Regulation (EU) 2017/1505 of 28 August 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) Annex IV amended by Commission Regulation (EU) 2018/2026 of 19 December 2018 amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise. Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe.

Essential	Operational	Changes
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Airport and TMA performance

SESAR Solution

ICAO GANP - ASBUs

- none -

Deployment Programme

- none -

European Plan for Aviation Safety

- none -

Operating Environments

Airport

Stakeholder Lines of Action (SLoAs)

SloA ref.	Title	From	Ву
ENV02-ASP01	Initiate and participate actively in formal collaborative working arrangements with the Airport and Aircraft Operators. Deliverable to identify and prioritise joint actions to minimise environmental impacts of air traffic procedures in and around the airport		
ENV02-ASP02	Train and raise awareness of controllers on the environmental impacts of aircraft operations and ways to improve performance		
ENV02-APO01	Initiate and participate actively in formal CEM working partnership arrangements with the ANSP and Aircraft Operators to minimise the environmental impact of air traffic procedures in and around the airport		
ENV02-APO02	Ensure appropriate and relevant performance data availability at Airports		
ENV02-APO03	Ensure appropriate Airport policy and procedures and, if required, relevant infrastructures needed to manage and mitigate pollution due to de-icing activities		
ENV02-APO04	Train and raise awareness of controllers on the environmental impacts of aircraft operations and ways to improve performance		
ENV02-USE01	Initiate and participate actively in formal working partnership arrangements with the ANSP and Airport to manage and minimise environmental impacts of air traffic procedures in and around the airport		
ENV02-AGY01	Provide assistance and guidelines to assist airports in setting up formal partnership arrangements between ATSP, Airport and Aircraft Operators for achieving control of environmental impact mitigation	FINALISED	
Description of finalise	d and deleted SLoAs is available on the eATM Portal @ https://www.eatmportal.eu/worki	ng/depl/essip_ol	<u>ojectives</u>

Expected Performance Benefits

Implementation Plan Edition 2022

ENV02	Airport Collaborative Environmental Management
Safety:	-
Capacity:	Airports may see a gain in capacity if noise restrictions are lowered
Operational Efficiency:	Reduction of noise, fuel burn and CO2. Contributing to cost and Noise/CO2 savings for airlines and airports. Airports may see a gain in capacity if noise restrictions are lowered.
Cost Efficiency:	-
Environment:	Reduction of fuel use, noise, emissions and de-icing water pollution resulting from a structured collaborative approach that jointly identifies effective sustainable operational solutions for implementation and monitoring.

	Detailed SLoA Descriptions						
ENV02-ASP01	Initiate and participate actively in formal collaborative working arrangements with the Airport and Aircraft Operators. Deliverable to identify and prioritise joint actions to minimise environmental impacts of air traffic procedures in and around the airport	From: -	By: -				
Action by:	ANS Providers						
Description & purpose:	Implement and or initiate formal CEM working arrangements. In parallel, environmental impact and secure or safeguard ATM capacity in supporti joint actions should be endorsed and supported by senior management. collaboration between the key operational stakeholders at airports to adunderstand interdependencies caused by their combined air traffic opera provide timely and accurate operational or environmental data that is relactions. These can include aircraft noise, introduction of new operational entrants such as UAM, hybrid and or hydrogen aircraft, different approact PBN implementation, new airport infrastructure, de-icing, fuel use and at environmental imperative that is locally important including Climate Charaviation Fuels	ing compliance to the r The purpose of CEM idess the environmentations. The CEM working evant to locally identified thanges such as airs changes ruch as airs changes ruch as airs changes emissions of the complete thanges in the complete thanges in the complete emissions of the	elevant legislation. CEM is to facilitate al impacts and impacts and arrangements can ed and jointly agreed pace design, new ures including CDO and or any other ATM-related				
	Note :Awareness and understanding of interdependencies. Jointly agree delivery plan, new procedures and trials, provision of data.	ote :Awareness and understanding of interdependencies. Jointly agreed environmental objectives, solutions and elivery plan, new procedures and trials, provision of data.					
Supporting material(s): EUROCONTROL - Environmental Awareness Training Package							
	Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?c						
	ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010						
	Url: https://store.icao.int/						
	ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995						
	Url: http://www.icao.int/publications/Pages/catalogue.aspx						
	EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - Edition 1.1 / 08/2018						
	Url: https://www.eurocontrol.int/publication/eurocontrol-specification-collaborative-environmental-management-cem						
	ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Nois	•	n 2 / 10/2010				
	Url: https://www.icao.int/environmental-protection/Pages/noise.aspx#No	<u>oiseAbatement</u>					
	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012						
	Url: https://www.icao.int/publications/Documents/9889_cons_en.pdf						
	EUROCONTROL - Collaborative Environmental Management (CEM) animation						
	Url: https://youtu.be/nUIMYw28mrQ						
	EUROCONTROL - CEM Online						
	Url: https://www.eurocontrol.int/portal/collaborative-environment-management-online						
	ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 4 / 01/2018 Url : https://store.icao.int/en/shop-by-areas/capacity-and-efficiency/aerodromes						
ATM Master Plan		<u>uromes</u>					
elationship:	[ENV-05]-Guidance for community relations at airports						
	[ENV-06]-Central environmental guidance web-portal [PRO-190]-ATC Procedures for Managing Environmental Noise Capacity						
	[PRO-190]-ATC Procedures for Managing Environmental Noise Capacity [PRO-ENV-12b]-Exploiting new ATM and aircraft capabilities to optimise the aircraft noise footprint at airports (Airports)						
	[PRO-ENV-12b]-Exploiting new ATM and aircraft capabilities to optimise the aircraft noise rootprint at airports (Airports) [PRO-ENV-13b]-Airport Procedures for exploiting new ATM and aircraft capabilities with a view to optimising atmospheric emissions from aircraft operations						
inalisation criteria:	1 - A Local Memorandum of Understanding (MoU) or Memorandum of Coperational stakeholders 2 - A Terms of Reference (TOR) document detailing the working arrange the implementation of CEM						
ENV02-ASP02	Train and raise awareness of controllers on the environmental	From:	Ву:				
LINVUZ-AGFUZ	impacts of aircraft operations and ways to improve performance	-	-				
Action by:	ANS Providers						

Security:

ENV02	Airport Collaborative Environmer	ntal Managem	nent			
Description & purpose:	Provide a regular training and awareness course in accordance with der aircraft noise, aircraft and airfield de-icing, aircraft fuel use and atmosph environment imperative locally planned including new entrants.					
Supporting material(s):	ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010					
	Url: https://store.icao.int/					
	ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Editio	n 1 / 11/2013				
	Url: https://cfapp.icao.int/tools/ATMiKIT/story_content/external_files/102	260008117raft_er	n_CCO.pdf			
	ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition /	12/1995				
	Url: http://www.icao.int/publications/Pages/catalogue.aspx					
	EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Colla Edition 1.1 / 08/2018	aborative Environ	mental Management (CEM) -			
	Url: https://www.eurocontrol.int/publication/eurocontrol-specification-col	laborative-enviror	nmental-management-cem			
	EUROCONTROL - European CCO/CDO Action Plan					
	Url: https://www.eurocontrol.int/publication/european-continuous-climb-and-descent-operations-action-plan					
	ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013					
	Url: https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613					
	ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010					
	Url: https://www.icao.int/environmental-protection/Pages/noise.aspx#NoiseAbatement					
	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012					
	Url: https://www.icao.int/publications/Documents/9889_cons_en.pdf					
	EUROCONTROL - CDO refresher course for ATCs					
	Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?courseld=8117329&catalogId=232380					
	EUROCONTROL - European CCO / CDO Task Force web pages					
	Url: https://www.eurocontrol.int/concept/continuous-climb-and-descent-operations					
	EUROCONTROL - CEM Online					
	Url: https://www.eurocontrol.int/portal/collaborative-environment-management-online					
	ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 4 / 01/2018					
	Url: https://store.icao.int/en/shop-by-areas/capacity-and-efficiency/aeror					
Finalisation criteria:	 Continuous or refresher controller awareness training on the environ implemented. 	mental impacts of	f aircraft operations has been			
	Initiate and participate actively in formal CEM working	From:	Ву:			
ENV02-APO01	partnership arrangements with the ANSP and Aircraft Operators to minimise the environmental impact of air traffic procedures in and around the airport	-	-			
Action by:	Airport Operators					
Description & purpose:	Initiate and promulgate formal CEM partnership working arrangements of manage and minimise environmental impacts of combined air traffic profacilitate understanding and awareness of interdependencies and enable practical mutual support to each other to ensure sustainable operations facilitating compliance to relevant legislation. This can include aircraft no such as airspace design, different approach or departure procedures incairport infrastructure, de-icing, fuel use and atmospheric emissions or ar identified locally as important including Climate Change adaptation and working arrangements should be endorsed and supported by senior managements.	cedures in and are joint collaborative and secure or sale is, introduction cluding CDO and by other ATM-relaprovision of susta	ound the airport. CEM can ve actions. Provide proactive feguard ATM capacity whilst of new operational changes PBN implementation, new sted environment impact that is			
	Note: Awareness and understanding of interdependencies. Jointly agree delivery plan, new procedures and trials, provision of data.	ed environmental	objectives, solutions and			

ENV02	Airport Collaborative Environmental Management					
Supporting material(s):	EUROCONTROL - Environmental Awareness Training Package					
supporting material(3).	Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?c	ourseld=6220451&cata	logId=896425			
	ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statemer related to environmental protection - General provisions, noise and local	nt of continuing ICAO po				
	Url: https://store.icao.int/	40/400E				
	ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / Url : http://www.icao.int/publications/Pages/catalogue.aspx	12/1995				
	EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - Edition 1.1 / 08/2018					
	: https://www.eurocontrol.int/publication/eurocontrol-specification-collaborative-environmental-management-cem					
	ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise	•	2 / 10/2010			
	Url: https://www.icao.int/environmental-protection/Pages/noise.aspx#NoiseAbatement					
	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012 Url : https://www.icao.int/publications/Documents/9889_cons_en.pdf					
Url: https://www.icao.int/publications/Documents/9889_cons_en.pdf EUROCONTROL - Collaborative Environmental Management (CEM) animation						
	Url : https://youtu.be/nUIMYw28mrQ	imation				
	EUROCONTROL - CEM Online					
	Url: https://www.eurocontrol.int/portal/collaborative-environment-manage	ement-online				
	CAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 4 / 01/20					
	Url: https://store.icao.int/en/shop-by-areas/capacity-and-efficiency/aeroc	dromes				
ATM Master Plan elationship:	[PRO-ENV-12b]-Exploiting new ATM and aircraft capabilities to optimise	the aircraft noise footp	rint at airports (Airports)			
Finalisation criteria:	 1 - A Local Memorandum of Understanding (MoU) or Memorandum of Cooperation (MoC) officially signed by the key operational stakeholders. 2 - A Terms of Reference (TOR) document detailing the working arrangement or document of similar authority covering the implementation of CEM. 					
		From:	By:			
ENV02-APO02	Ensure appropriate and relevant performance data availability at Airports	-	-			
Action by:	Airport Operators	-	-			
Action by:	Airports	of timely, accurate and initoring or modelling sy t could include noise, ir arture procedures includis data availability is ess	relevant environmental stems at Airports in troduction of new ding CDO and PBN sential in support of the			
ENV02-APO02 Action by: Description & purpose: Supporting material(s):	Airports Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be	of timely, accurate and initoring or modelling sy t could include noise, ir arture procedures includis data availability is ess	relevant environmental stems at Airports in troduction of new ding CDO and PBN sential in support of the			
Action by: Description & purpose:	Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be related versus external pollution.	of timely, accurate and initoring or modelling sy to could include noise, in arture procedures include is data availability is essentially possible to determine to the country of the cou	relevant environmental stems at Airports in attroduction of new ding CDO and PBN sential in support of the the amount of airport			
Action by: Description & purpose:	Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be related versus external pollution. EUROCONTROL - Environmental Awareness Training Package	of timely, accurate and initoring or modelling sy t could include noise, in arture procedures includes data availability is essent to determine to ourseld=6220451&cata at of continuing ICAO po	relevant environmental stems at Airports in ntroduction of new ding CDO and PBN sential in support of the the amount of airport			
action by: Description & purpose:	Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be related versus external pollution. EUROCONTROL - Environmental Awareness Training Package Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?ce ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statements.	of timely, accurate and initoring or modelling sy t could include noise, in arture procedures includes data availability is essent to determine to ourseld=6220451&cata at of continuing ICAO po	relevant environmental stems at Airports in ntroduction of new ding CDO and PBN sential in support of the the amount of airport			
Action by: Description & purpose:	Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be related versus external pollution. EUROCONTROL - Environmental Awareness Training Package Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?collated to environmental protection - General provisions, noise and local Url: https://store.icao.int/ ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition /	of timely, accurate and initoring or modelling sy toculd include noise, in arture procedures included is data availability is essent to determine to courseld=6220451&cata and of continuing ICAO positive in quality 10/2010	relevant environmental stems at Airports in ntroduction of new ding CDO and PBN sential in support of the the amount of airport			
Action by: Description & purpose:	Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be related versus external pollution. EUROCONTROL - Environmental Awareness Training Package Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?ce ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement related to environmental protection - General provisions, noise and local Url: https://store.icao.int/ ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / Url: https://www.icao.int/publications/Pages/catalogue.aspx	of timely, accurate and initoring or modelling sy to could include noise, in arture procedures include is data availability is essent to determine the courseld=6220451&cata and of continuing ICAO positive quality 10/2010	relevant environmental stems at Airports in atroduction of new ding CDO and PBN sential in support of the the amount of airport			
Action by: Description & purpose:	Airport Operators In accordance with locally agreed CEM priorities, ensure the availability information. This may entail investment in appropriate environmental moorder to record and monitor locally significant environmental impacts that operational changes such as airspace design, different approach or deprimplementation, new airport infrastructure, emissions, air quality, etc. The continuous performance improvement process. In particular, it should be related versus external pollution. EUROCONTROL - Environmental Awareness Training Package Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?co">https://trainingzone.	of timely, accurate and initoring or modelling sy to could include noise, in arture procedures include is data availability is essent to determine the courseld=6220451&cata and of continuing ICAO positive quality 10/2010	relevant environmental stems at Airports in atroduction of new ding CDO and PBN sential in support of the the amount of airport			
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ENV02	Airport Collaborative Environmental Management					
Finalisation criteria:	1 - If relevant environmental monitoring or information systems have been accurate performance data on time.	en implemented and de	liver relevant and			
ENV02-APO03	Ensure appropriate Airport policy and procedures and, if required, relevant infrastructures needed to manage and mitigate	From:	By: -			
A stien bur	pollution due to de-icing activities					
Action by: Description & purpose:	Airport Operators Develop policy, procedures and technical applications in collaboration w	ith airlings and ANSDs	to manage and central			
bescription & purpose.	the pollution of ground and surface water coming from de-icing activities relevant mitigation infrastructure for collection, disposal and possible tre-	. When required, ensur				
Supporting material(s):	ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statemer related to environmental protection - General provisions, noise and local Url : https://store.icao.int/		olicies and practices			
	ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition /	12/1995				
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	Url: https://www.icao.int/environmental-protection/Pages/noise.aspx#No	•	112 / 10/2010			
	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012					
	Url : https://www.icao.int/publications/Documents/9889_cons_en.pdf					
	EUROCONTROL - Collaborative Environmental Management (CEM) animation					
	Url : https://youtu.be/nUIMYw28mrQ					
	EUROCONTROL - CEM Online					
	Url: https://www.eurocontrol.int/portal/collaborative-environment-management-online ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 4 / 01/2018					
	Url: https://store.icao.int/en/shop-by-areas/capacity-and-efficiency/aerod		101 - Edition 4 / 01/2016			
ATM Master Plan	[PRO-075]-Airport infrastructure and procedures governing de-icing to is		stems, collect and			
relationship:	dispose of run-off, use the least harmful chemical, reduce the quantities					
Finalisation criteria:	volumes of fluid 1 - Information and procedures on de-icing pollution mitigation has been 2 - Relevant infrastructure has been implemented, when and where requ		ed locally and accessible			
ENV02-APO04	Train and raise awareness of controllers on the environmental impacts of aircraft operations and ways to improve performance	From:	By:			
Action by:	Airport Operators	I				
Description & purpose:	Provide regular training and awareness course. Identify and ensure that course should include where relevant aircraft noise, aircraft and airfield of					
	emissions or any other locally identified environmental impact.	do loilig, allorait raoi ac	e and annospheric			
Supporting material(s):		ac long, anotale racinati	e and aunospheric			
Supporting material(s):	emissions or any other locally identified environmental impact.		·			
Supporting material(s):	emissions or any other locally identified environmental impact. EUROCONTROL - Environmental Awareness Training Package Url : https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?ci ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement	courseId=6220451&cat	alogId=896425			
Supporting material(s):	emissions or any other locally identified environmental impact. EUROCONTROL - Environmental Awareness Training Package Url : <a coursedescription.jsf?color="https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.gov." href="https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?color=" https:="" ilp="" pages="" trainingzone.eurocontrol.int="">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?color="https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.gov.">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?color="https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.gov.">https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.gov.	courseId=6220451&cat	alogId=896425			
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	Initiate and participate actively in formal working partnership	From:	By:			
ENV02-USE01	arrangements with the ANSP and Airport to manage and minimise environmental impacts of air traffic procedures in and around the airport	-	-			
Action by:	Airspace Users		·			
Description & purpose:	Enter into formal CEM partnership working arrangements with key opera minimise environmental impacts of combined air traffic procedures in an understanding and awareness of interdependencies and enable joint co mutual support to each other to ensure sustainable operations and secu compliance to relevant legislation. This can include aircraft noise, introd airspace design, new entrants, different approach or departure procedu new airport infrastructure, de-icing, fuel use and atmospheric emissions that is identified locally as important including Climate Change adaptatic CEM working arrangements should be endorsed and supported by senior	nd around the air llaborative action are or safeguard auction of new op res including CD or any other ATI on and provision	port. CEM can facilitate ns. Provide proactive practical ATM capacity whilst facilitating erational changes such as O and PBN implementation, M-related environment impact of sustainable Aviation Fuels.			
	Note :Awareness and understanding of interdependencies. Jointly agreed environmental objectives, sustainable solutions and delivery plan, new procedures and trials, provision of robust data.					
Supporting material(s):	EUROCONTROL - Environmental Awareness Training Package					
	Url: https://trainingzone.eurocontrol.int/ilp/pages/coursedescription.jsf?d	courseld=622045	51&catalogId=896425			
	ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statemer related to environmental protection - General provisions, noise and local					
	Url: https://store.icao.int/					
	ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition /	12/1995				
	Url: http://www.icao.int/publications/Pages/catalogue.aspx					
	EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - Edition 1.1 / 08/2018					
	Url: https://www.eurocontrol.int/publication/eurocontrol-specification-collaborative-environmental-management-cem EUROCONTROL - European CCO/CDO Action Plan					
	Url: https://www.eurocontrol.int/publication/european-continuous-climb-and-descent-operations-action-plan					
	ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010					
	Url: https://www.icao.int/environmental-protection/Pages/noise.aspx#No	<u>oiseAbatement</u>				
	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012					
	Url: https://www.icao.int/publications/Documents/9889 cons en.pdf					
	EUROCONTROL - Collaborative Environmental Management (CEM) ar	nimation				
	Url: https://youtu.be/nUIMYw28mrQ					
	EUROCONTROL - CEM Online					
	Url: https://www.eurocontrol.int/portal/collaborative-environment-management-online					
	ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 4 / 01/2018					
	Url: https://store.icao.int/en/shop-by-areas/capacity-and-efficiency/aero	<u>dromes</u>				
TM Master Plan	[ENV-05]-Guidance for community relations at airports					
elationship:	[PRO-AC-53]-Cockpit Procedure for Noise Abatement Departure Procedure	<u>dure</u>				
	[PRO-ENV-12a]-Exploiting new ATM and aircraft capabilities to optimise	e the aircraft nois	se footprint at airports (Airlines			
	[PRO-ENV-13a]-Airline Procedures for exploiting new ATM and aircraft capabilities with a view to optimising atmospheric emissions from aircraft operations					
Finalisation criteria:	1 - A Local Memorandum of Understanding (MoU) or Memorandum of Coperational stakeholders. 2 - A Terms of Reference (TOR) document detailing the working arrangement.		, , , ,			
	the implementation of CEM					
ENV02-AGY01	Provide assistance and guidelines to assist airports in setting up formal partnership arrangements between ATSP, Airport and Aircraft Operators for achieving control of environmental impact mitigation	From:	By:			
action by:	CND					
Description & purpose:	To develop and promulgate the practical support needed to ensure that airports.	airport stakeholo	ders introduce effective CEM a			
	Note :Tools and interactive functionalities are available via the Eurocont	rol web site.				
	1 - Endorsement of the document 'Airport Environmental Partnership E					

Airport Collaborative Environmental Management

ENV02