

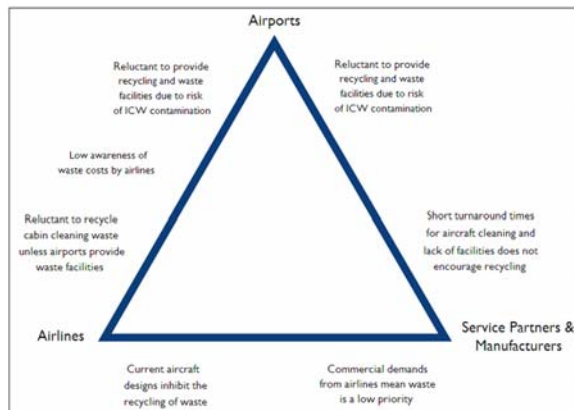
Airline/Airport: Environmental Management Cooperation

3rd ACI Airport Environmental Seminar
18 February 2014



Airline Cabin Waste Activities

- Cabin waste volumes & disposal costs increasing
- Restrictive legislation (Australia, Europe, NZ & N. America) based on protecting animal (not human) health
- Airlines criticised for low recycling rates
- In 2012, IATA undertook assessment & formed Working Grp
- Assessment indicated:
 - Lack of data & monitoring protocols
 - Legislation not risk-based
 - Low/No financial incentives
- IATA initiated 2 new projects in 2013



LHR Cabin Waste Audits



Project Objectives

- Determine set of data for all waste generated by International (non-EU) flights for multiple airlines
- Establish standard methodology for aircraft waste audits that will facilitate the generation of further comparable data
- Conduct a proof of concept for the recovery of recyclable materials within in-flight operations
- Create a pre-competitive arena within which to determine industry best practice

LHR Cabin Waste Audit: Key Data

- 17 Flights (3,721 Passengers) generating 5.3 tonnes
- Average weight Per Passenger = **1.43kg** (Low 0.82kg – High 2.50kg)
- Annual cabin waste volume = **4.43 million tonnes** (based on 3.1 billion Pax in 2013)
- Cabin & Toilet Waste represented 15.9% of total weight (removed by cleaners)
- Minimal ICW in the Cabin Waste stream (but presence of passenger derived ICW)
- Sealed (unused) Food & Beverages represented 18.5% of total weight
- Unopened bottled water (4.9%)
- Opportunity (UK) to recycle 17.3% of material by weight under current regulations

Multiple factors impact waste generation & composition (some tbc):

- Capacity
- Cabin configuration
- Load factor
- Duration of flight
- Meals served
- Delays to flight
- In-flight experience
- Packaging
- Catering provider
- Salvage policy (Airline)
- Salvage policy (Caterer)

LHR Waste Audit: Waste Avoidance



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LHR Waste Audit: Passenger ICW



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LHR Waste Audit: Some recycling has commenced



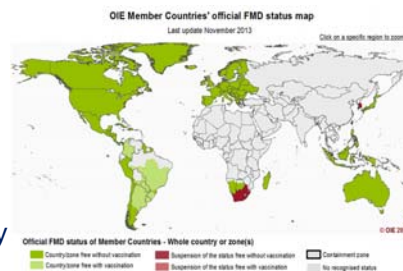
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Risk Assessment for Recycling of ICW

- ICW maybe risk to animal (& plant) health in destination countries & countries with high animal health status (EU, N.America, Australia, NZ) apply protective measures to ICW
- Based on Source-Pathway- Receptor model, risks can be minimized by:
 1. Source: ingredient sourcing controls
 2. Pathway: appropriate segregation of recyclables from food (on-board)
 3. Receptor: ensure controls on recycling industry & agricultural feed
- Regulators (Australia, EU, USA) moving to allow recycling on international flights but need:
 - Global SOP for cabin waste recycling (standard signage/labels)
 - Airport facilitation & incentivisation incl data
- Collaborating - ACI (APREC airline/airport cabin waste surveys) & HAL meeting



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IATA Environmental Assessment (IEnvA) Program

- IATA developed EMS program for airlines
- Compatible with other IATA Audit Programs with similar governance structure: stds & manual, independent assessment & registry
- Aimed to provide framework for managing airline environmental activities and performance improvement
- Based on EMS standards (14001/EMAS)
- Staged and modular approach:
 - CORE: flight ops (all destinations) & corporate activities
 - CORE+: ground ops, MRO, catering
- Airports can assist with legal/obligation compliance (S1.7)

IEnvA Model	IEnvA: Sub-Stages	Comment
Stage 1	1.1 Commitment	Stage 1: EMS Planning & Legal Compliance Assurance
	1.2 Scope and Boundary	
	1.3 Policy	
	1.4 Aspects and Impacts Register	
	1.5 Roles and Responsibilities	
	1.6 Documentation and Records	
	1.7 Legal and other Obligations	
Stage 2	2.1 Aspects and Impacts Significance	Stage 2: EMS Implementation & Review
	2.2 Objectives, targets & Impact Management	
	2.3 Monitoring and Measurement	
	2.4 Communication	
	2.5 Training, Competency & Awareness	
	2.6 Non conformity and corrective actions	
	2.7 Emergency Preparedness	
	2.8 Internal Assessment	
	2.9 Management Review	

Airport Environmental Web-survey

➤ 243 airports were sent web-survey with 32 completed

Airport Environmental Survey

General

1. General Airport Information

Airport Name: _____

IATA Code: _____

ICAO Code: _____

Airport Environmental Contact Person: _____

Type of Airport Environmental Contact: _____

Person: _____

Phone: _____

Person Completing the Survey: _____

Title of Person Completing the Survey: _____

Organization of Person Completing the Survey: _____

Email: _____

Phone: _____

Environmental Compliance

2. Has your airport issued any warnings, fines or other enforcement actions related to environmental issues against my airline within the last 12 months?

Yes

No

Environmental Compliance

3. Please provide details of the warning, fine or enforcement action.

Noise from Aircraft (Landing and Takeoff)

4. Does your airport have restrictions in place regarding aircraft noise (e.g. take-off and landing) for my airline?

Yes

No

Noise from Aircraft (Landing and Takeoff)

Airport Environmental Survey

8. Which of the following noise restrictions are applied at your airport? (Please select all that apply)

Noise abatement departure or arrival procedures

Continuous descent approach requirement

Low power, low drag requirement

Reverse thrust on landing

Preferred runways

Restricted operational hours (curfew) for all aircraft types

Restricted operational hours (curfew) for certain aircraft types

Restriction of aircraft type due to noise abatement certification (ICAO Annex 16, Edn. Protection Volume 1)

Noise budget allocation or noise model system

Other (please specify): _____

Noise from Aircraft (Landing and Takeoff)

6. Please provide details of the restriction or provide a hyper-link to relevant web page in text box below. Alternatively email relevant document(s) back to my email address referencing the relevant restriction(s).

Noise from Aircraft

7. Is my airline required to supply or provide evidence to your airport of an aircraft's noise certificate?

Yes

No

8. Does your airport impose fines, surcharges or other financial penalties for breaches of noise regulations?

Yes

No

9. Does your airport have a noise monitoring system (either managed by the airport or by a local authority)?

Yes

No



IEnvA Best Practice & Airline Implementation

- IATA Env Best Practice Manual (IEBPM): advice on impacts management (air, noise, water/waste management, etc.) using 4 phase approach: identify; assess; mitigate; &, monitor
- Stage 1 Airlines: 6 airlines awarded Certificates at IATA AGM (2 June 2013) with 4 more currently implementing



Home » Programs » Environment » IEnvA Registry

IATA Environmental Assessment (IEnvA) Registry

The IATA Environmental Assessment (IEA) program is an aviation specific environmental program designed to improve the environmental management and performance of an airline through independent evaluation. IEA is a voluntary program based on principles in compliance with environmental obligations and a commitment to continuously improve environmental management. The IEnvA Registry is a list of those airlines that have successfully completed an independent IEnvA Assessment (Stage 1 (Stage 2)).

Current list of IEnvA registered airlines:

View by Region

Search by Name

See all IEnvA registered airlines

All IEnvA Registered Airlines

- IEnvA (Stage 1)
- South Atlantic Airlines



Water Management

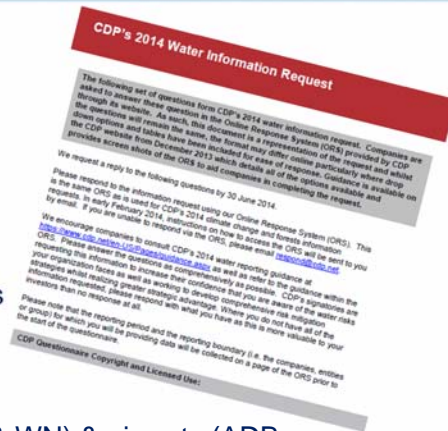
- Water could become the “new carbon” & availability could limit airport expansion
- 20% world’s population (1.2 billion) live in water scarce regions (<1700m³p.a) & increasing
- Airports/airlines may have financial resources to access water in water-scarce areas but do we have the social license ?
- Impacting airports even in “abundant areas” (LHR drought orders; BA Terminal 5 – bh’s & rainwater harvesting provides 70% of water)
- Euro. Water Partnership Conference on *Airports as Water Stewards* (April 2013), called for increased collaboration on water issues & highlighted challenge of de-icing fluid recovery





Water Disclosure

- Airlines (& airports) beginning to report water consumption without clear definition of scope (flight ops, MRO, catering, laundry, gardening, etc.) or benchmarking
- Water Disclosure Project (“daughter” of CDP) approached over 1000 companies in 2013 with 70% of respondents identifying water as a “substantive business risk”
- Feb 2014, 1st airlines (DL, JL, NH, QF & WN) & airports (ADB, HND & SYD) captured, with request to submit response by end of June (complex – 21 pages/52 questions)



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Airline & Airport: Environmental Cooperation

- **Cabin Waste:**
 1. Facilitate cabin waste recycling inc on-site facilities, standard SOP's, regulator lobbying, monitoring & financial incentivisation
 2. Host/support additional cabin waste audits (data used to develop airport business case)
 3. Support APREC airline and airport cabin waste surveys
- **IEnvA:**
 1. Publish airport env regulations and characteristics (noise, waste, APU restrictions, etc.) and/or complete IEnvA Airport web-survey
- **Water Management:**
 1. Develop airport water management program incl risk assessment & data collection (with defined boundaries)
- **Other Collaborative Issues:** FEGP; air emission standards for ground ops equipment; hosting of airport 'Environment Forums'

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THANK YOU

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