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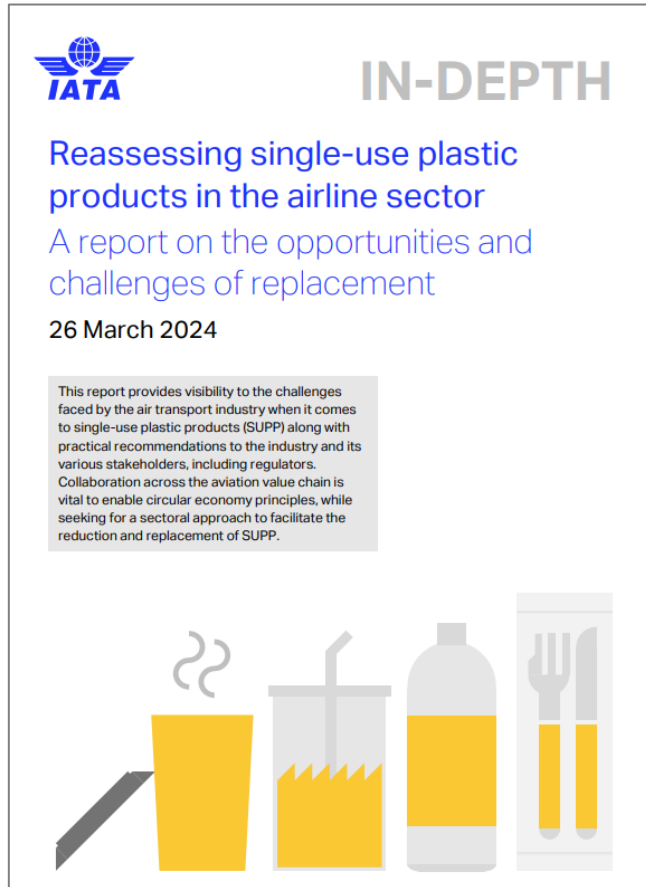
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International Air Transport Association (IATA)

“Reassessing single-use plastic products in the airline sector”
Opportunities and challenges of replacement

Session 3 – Part I: Addressing Plastic Usage Challenges in
Aviation

Making the report



Purpose

- To provide recommendations for airlines, regulators, and other aviation stakeholders to address some of the challenges that the air transport industry faces regarding the reduction and replacement of single-use plastic products.

Scope

- Focus on SUPP used in passenger and cargo operations.

Methodology

- Initial review of airlines' SUPP inventories, targets, and initiatives, an airline web survey, and a detailed review of LCAs and SUPP legislation.

Reassessing single-use plastic products in the airline sector

01 Background

02 Regulatory landscape

03 Operational challenges

04 Tools for decision-making

05 Actions and initiatives

06 Key findings and recommendations

01. Background of single-use plastic products in the airline sector

430 million metric tonnes of plastic produced each year

Over 1/3 are discarded after only one use.

63 main SUPP items identified

Including items required by civil aviation regulations due to safety and security.

Plastics account for **20%** by weight of cabin waste

According to audits conducted in 2013 and 2018.

75% of passengers find this topic highly important

And are willing to support less food and beverage to reduce SUPP.

50% of cargo customers prioritize waste reduction

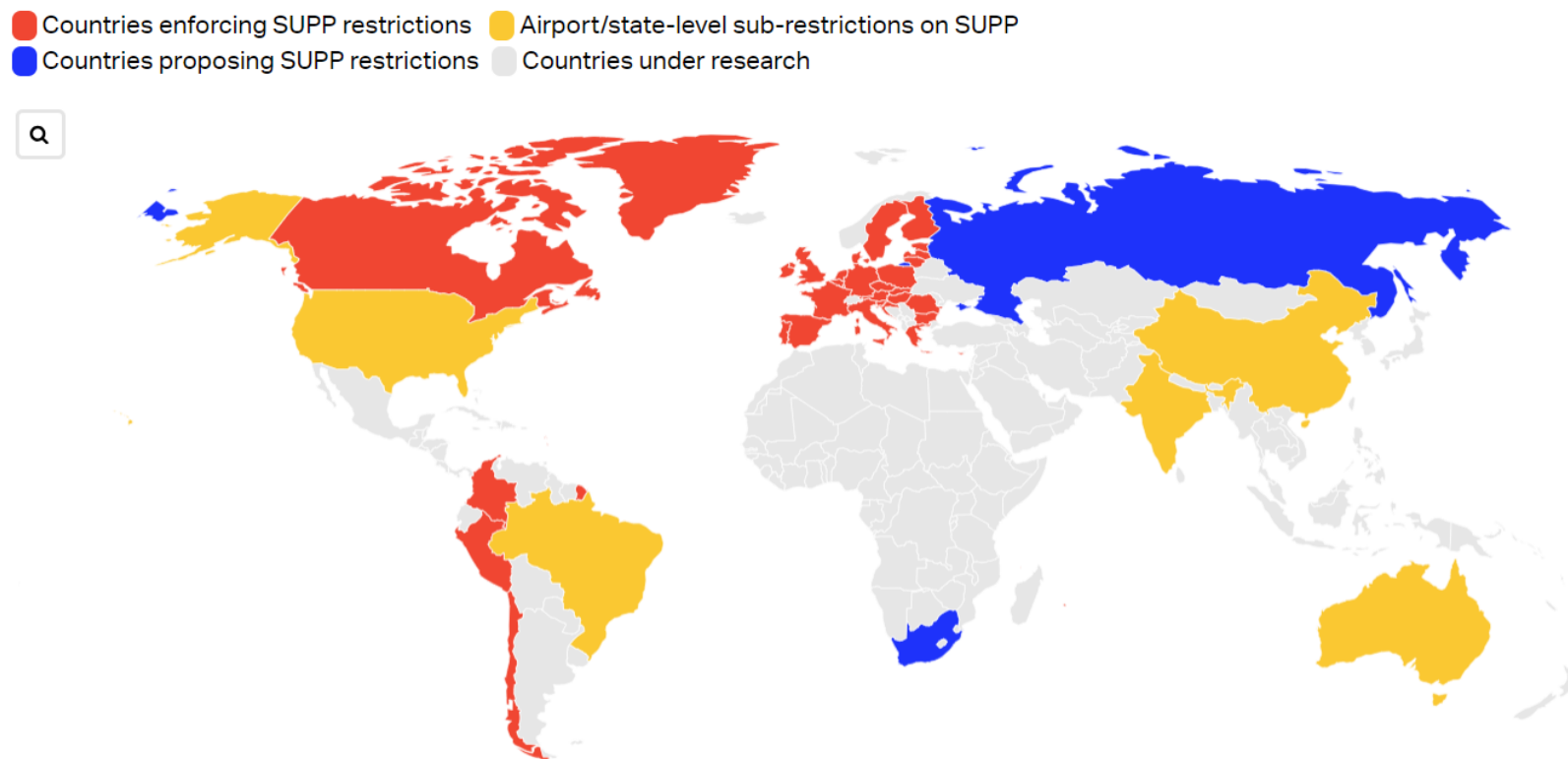
And 1/3 also prioritize the access to sustainable packaging.

Airlines have a **LOW RISK** of plastic leakage

In medium and high-income countries.

SUPP regulations in the world (excluding plastic bag bans)

SUPP regulations in the world (excluding plastic bag bans)



03. Operational challenges

Every alternative to SUPP will have a set of corresponding impacts, therefore is important to make informed decisions considering all potential consequences.

OPERATIONAL CHALLENGE	Definition	Recommendation
Cost and availability	Sustainable alternatives are not yet available at scale Reusable products incur additional procurement and operational costs	Re-invest waste reduction savings ROI calculations need to include additional fuel costs for heavier reusable items
Safety and security	Some SUPP are necessary for passenger and cargo operations based on regulations	Support alternatives with higher recycled content
End-of-life treatment	Biotreatment of alternative products requires segregation, appropriate treatment facilities, and regulatory change	Treatment facilities need to be in place Segregation and appropriate controls need to be standardized
Certification schemes	No harmonized system of product integrity and sustainability standards and certifications creates confusion for manufacturers and consumers	Globally recognized certifications that include labeling should be developed for single-use alternatives, including biobased alternatives

04. Tools for decision-making

Introduction of practices that inform and support decision-making processes

Life cycle assessments

A technique developed to better understand and address the results associated with the manufacture and use of different products.

Estimates the environmental effects of various products in a transparent and comparable manner.

For the airline sector:

- No comprehensive LCAs of SUPPs and their alternatives that include aviation transport emissions
- No harmonization of an LCA approach
- Recommendations for commissioning or interpreting the results of LCAs are needed

Decision trees

Used to make choices to eliminate, reduce, or replace different products.

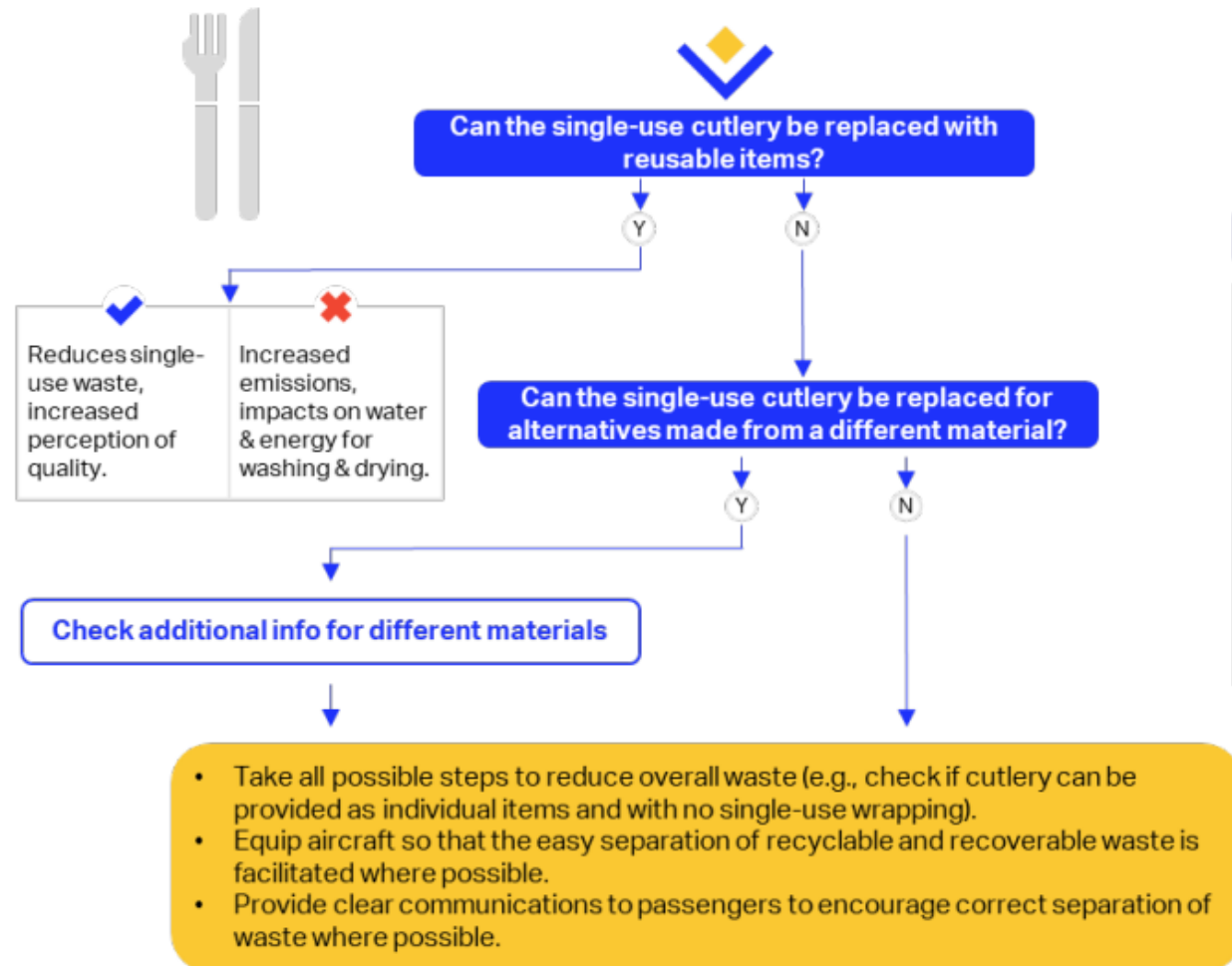
They support more informed decision-making and consider environmental and operational trade-offs.

The minimum desired outcome is to divert recyclables and recoverable waste

For the airline sector:

- 5 decision trees have been tailored considering SUPP items that are hard to replace
- Prior to using the trees, it is important to question procedures and processes already in place

Example of a Decision Tree: Single-Use Cutlery



Additional information for different materials					
Recycled plastic content in cutlery		Bio-based plastic single-use cutlery		Wooden single-use cutlery	
✓	✗	✓	✗	✓	✗
Available on market, lightweight, drives demand for recycled materials, product integrity.	Does not reduce overall waste, may be prohibited in certain countries due to regulations.	Increasingly available on market, lightweight, drives demand for alternative materials, product integrity.	Does not reduce overall waste, more expensive per unit, can contaminate recycling streams, lack of facilities to process bioplastic.	Increasingly available on market, lightweight, drives demand for alternative materials, plastic free, product integrity, compostable.	Does not reduce overall waste, more expensive per unit, origin of material needs to be assessed.

05. Actions and initiatives

Over 40 airlines have already implemented SUPP reduction and replacement initiatives

- Passengers can submit inflight meal selections up to one hour before departure
- Re-introduction of reusable items for inflight catering services
- Test for different inflight service procedures, including piloting reusable cups or only handing certain items on request
- Recycling of onboard SUPP to be remade into meal service products
- Use of a new thinner plastic wrap that also contains recycled content in cargo operations
- Use of biodegradable materials for inflight catering and merchandise
- Introduction of recycled plastic content in other products (e.g., blankets)
- Removal of SUPP in airport lounges

06. Key findings

That need to be addressed by airlines, the airline sector value chain, and policymakers

Reducing SUPP at source

- Replacement of SUPP is problematic as alternatives are not highly available or they do not provide the same properties as the item to replace (e.g., integrity or hygiene).

Driving circularity

- Implementing circular economy principles will require considerable changes to processes and procedures, and it will not be possible without public/private sector collaboration and significant investment.

Waste segregation and recycling

- Animal health rules in many global territories undermine the ability of the airline sector value chain to make a positive contribution to the circular economy through reuse, recycling, and biotreatment initiatives.

06. Recommendations

Strategic and practical solutions for airlines, the airline sector value chain, and policymakers.

- Reducing SUPP waste at source by undertaking SUPP analysis, introducing waste reduction techniques and reviewing need/demand for SUPP.
- Setting clear targets for elimination, measure, and track implementation, and disclose progress.
- Introduction of reusable items as a strategy to drive circularity, where LCA demonstrates a clear environmental benefit over alternative disposable options
- Create the infrastructure and frameworks that will make reuse models possible, while being aware of and responsive to the characteristics of international airline operations.
- Ensure that appropriate treatment or recycling infrastructure is available for alternative disposable items
- Take part in or organize solution-focused discussions involving key stakeholders, to help identify and implement process changes that prioritize end-to-end solutions that ensure best practices and promote regulatory change.
- Public/private sector collaboration and significant investments to implementing circular economy principles into the airline sector value chain.

Conclusions

Airlines are willing to eliminate, reduce, and replace SUPP, with sustainable alternatives but further supporting action needs to be taken

- Need for simple harmonized SUPP regulations that include common definitions and standards for alternative products that include labelling, integrity, certifications, etc.
- Review of existing and future legislation to ensure they are based on LCAS that take transport emissions into account.
- Advocate for supply chain standardization of products and sending strong market signals to develop new alternatives.
- Engagement with alternative partners in the Food & Beverage industry to assess scales of economy.
- Collaboration across the value chain so aviation stakeholders ensure that new processes and procedures are embedded in their operations (e.g., composting at airports, recycling at catering stations).

Develop a sectoral approach that considers the characteristics of aviation and include a LCA approach is key to achieving a circular economy for the sector.

Thank You

