# OVERVIEW OF ICAO CAEP WG2-TG3 OPERATIONAL MEASURES WORK PROGRAM

JPDO EWG

OPERATIONS STANDING COMMITTEE

NOVEMBER 18, 2008

ATLANTA

# OUTLINE

- CAEP COMMITTEE/WG STRUCTURE
- WORKING GROUP 2 (OPERATIONS) TASK GROUPS
- WG2 – TASK GROUP 3 (OPERATIONAL MEASURES)

# CAEP COMMITTEE/WG STRUCTURE

- FESG – Forecasting and Economic Analysis Sub Group
- MODTF – Modeling and Database Task Force
- MBMTF – Market Based Measures Task Force
- Working Group 1 – Noise
- Working Group 2 – Operations
- Working Group 3 - Emissions

3 year cycle – Detailed Work Program

Steering Group Oversight

# CAEP WG2-OPERATIONS

- Task Group 1 - Land Use Planning and Noise Management
- Task Group 2 – Air Traffic Management
- Task Group 3 – Operational Measures
- Task Group 4 – Air Quality

# WG 2 TG 3 Work Items

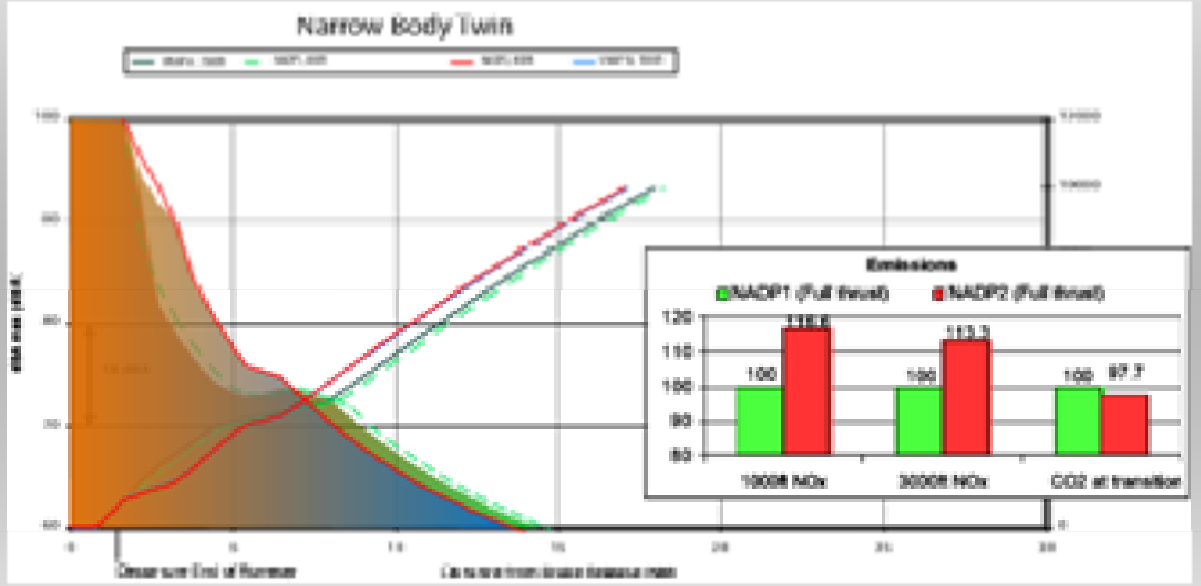
0.11 Assess the effect of takeoff thrust and deeper climb thrust cutback on noise and emissions, fuel consumption (constant weight) and climb-out time.

This is an extension of previous task on NADP noise and emissions effects.

Output of this work will show the impact on GHG of the studied operational procedures and these may be reflected in an update to Chapter 9 of Circular 303

Reduced takeoff thrust case has been extended to a maximum of 24% for some aircraft

# Lower Noise may mean Higher Emissions




For this aircraft,

NADP1 is minimum emission profile for NOx

NADP2 is minimum emission profile for $CO_2$

# WG 2 TG 3 Work Items

0.12 Assess and validate noise and emissions reductions accrued from the use of continuous descent arrival techniques (e.g. CDA). This item will require definition of continuous descent techniques with other ICAO groups (IFPP, OPSP) and is conditional on availability of assessment methods and supporting data.

# WG 2 TG 3 Work Items

## 0.12 (continued)

- $CO_2$ will be assessed from top of descent
- NOx will be assessed below 3000 feet
- Noise will be assessed below 10,000 feet
- TG3 will liaise with OPS Panel and other groups as appropriate for a definition of CDAs and to consider the possibility of defining a generic non-CDA base case.
- Local assessment will be required for any decision to implement CDA at an airport and no commonly agreed guidance is presently available.

# WG 2 TG 3 Work Items

0.13 Review of Noise Abatement Procedure R&D and Implementation Projects, including advanced noise abatement departure procedures.

- TG3 will monitor NAP R&D/implementation projects, including the progress on prior projects and new projects such as AIRE, and will report the results.
- The reporting of the results of the projects would be in keeping with the task performed for CAEP7: a Circular (Doc 9888) Review of Noise Abatement Procedure Research and Development and Implementation Results , which is available on the ICAO web site at:
- http://www.icao.int/icao/en/env/ReviewNADRD.pdf

# WG 2 TG 3 Work Items

0.14 Assess benefits of steeper approach. This item should include review of present practice and review of implications for assessment methodologies. Operational and technological feasibility are also considered as part of the assessment.

- TG3 notes that steeper approach is the final approach phase and configuration.
- Preliminary assessments have identified many operational issues that need investigating. In particular, it should be noted that PANS-OPS precludes the use of approach angles greater than 3.0 degrees for purely noise abatement reasons.
- TG3 will liaise with OPSP regarding the operational and safety impacts of steeper approaches.

# WG 2 TG 3 Work Items

## 0.14 (Continued)

- There is considerable concern within TG3 about the available mechanisms and rationale for assessing the environmental benefits and the operational and safety concerns and technical feasibility of steeper approaches. As a first step, it was agreed to limit the assessment to glide slopes of less than 4.5 degrees.
- TG3 will investigate existing research, including SOURDINE II, NLR, etc., and will provide analysis of a trial case to investigate feasibility and environmental benefit.

# WG 2 TG 3 Work Items

0.15 Study the noise arising from departing and arriving aircraft at locations 9 to 12 km away from the airport, and if appropriate further away, and investigate whether operational means rather than a change to the certification scheme would be the best way to address problems in these wider areas.

- TG3 notes that the area of influence will be airport specific (i.e., coastal versus inland airports, etc.).

# OTHER ISSUES/TASKS

- Update Circular 303 – *Operational Opportunities to Minimize Fuel Use and Reduce Emissions*
- Engine Out Taxi Procedures and Benefits
- ICAO CDA (OPD?) Manual