

- c) conduct an economic analysis of the financial impact of including international aviation in existing trading schemes and undertake literature review of cost-benefit analysis of existing trading systems with a special emphasis on how they have been applied to other sectors in order to draw some pertinent lessons learned for the aviation sector;
- c) Carbon offsets
 - 1) *Requests* the Council to examine the potential for carbon offset mechanisms as a further means of mitigating the effect of aviation emissions on local air quality and climate change; and
 - 2) *Requests* the Council to collect and disseminate information on the results of carbon-offset programmes implemented by States and other Organizations regarding aviation emissions;
- d) Clean Development Mechanism (CDM)
 - 1) *Invites* Contracting States to explore the use of the Clean Development Mechanism (CDM) related to international aviation.

A36-23: Performance based navigation global goals

Whereas a primary objective of ICAO is that of ensuring the safe and efficient performance of the global Air Navigation System;

Whereas the improvement of the performance of the Air Navigation System on a harmonized, worldwide basis requires the active collaboration of all stakeholders;

Whereas the Eleventh Air Navigation Conference recommended that ICAO, as a matter of urgency, address and progress the issues associated with the introduction of area navigation (RNAV) and required navigation performance (RNP);

Whereas the Eleventh Air Navigation Conference recommended that ICAO develop RNAV procedures supported by global navigation satellite system (GNSS) for fixed wing aircraft, providing high track and velocity-keeping accuracy to maintain separation through curves and enable flexible approach line-ups;

Whereas the Eleventh Air Navigation Conference recommended that ICAO develop RNAV procedures supported by GNSS for both fixed and rotary wing aircraft, enabling lower operating minima in obstacle rich or otherwise constrained environments;

Whereas Resolution A33-16 requested the Council to develop a programme to encourage States to implement approach procedures with vertical guidance (APV) utilizing such inputs as GNSS or distance measuring equipment (DME)/DME, in accordance with ICAO provisions;

Recognizing that implementation of approach with vertical guidance (APV) is still not widespread;

Recognizing that the Global Aviation Safety Plan has identified Global Safety Initiatives (GSIs) to concentrate on developing a safety strategy for the future that includes the effective use of technology to enhance safety, consistent adoption of industry best practices, alignment of global industry safety strategies and consistent regulatory oversight;

Recognizing that the Global Air Navigation Plan has identified Global Plan Initiatives (GPIs) to concentrate on the incorporation of advanced aircraft navigation capabilities into the air navigation system infrastructure, the optimization of the terminal control area through improved design and management techniques, the optimization of the terminal control area through implementation of RNP and RNAV SIDs and STARs and the optimization of terminal control area to provide for more fuel efficient aircraft operations through FMS-based arrival procedures; and

Recognizing that the continuing development of diverging navigation specifications would result in safety and efficiency impacts and penalties to States and industry;

The Assembly:

1. *Urges* all States to implement RNAV and RNP air traffic services (ATS) routes and approach procedures in accordance with the ICAO PBN concept laid down in the *Performance Based Navigation Manual* (Doc 9613);

2. *Resolves* that:

- a) States and planning and implementation regional groups (PIRGs) complete a PBN implementation plan by 2009 to achieve:
 - 1) implementation of RNAV and RNP operations (where required) for en route and terminal areas according to established timelines and intermediate milestones; and
 - 2) implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS) for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30 per cent by 2010, 70 per cent by 2014; and
- b) ICAO develop a coordinated action plan to assist States in the implementation of PBN and to ensure development and/or maintenance of globally harmonized SARPs, Procedures for Air Navigation Services (PANS) and guidance material including a global harmonized safety assessment methodology to keep pace with operational demands;

3. *Urges* that States include in their PBN implementation plan provisions for implementation of approach procedures with vertical guidance (APV) to all runway ends serving aircraft with a maximum certificated take-off mass of 5700 kg or more, according to established timelines and intermediate milestones.

4. *Instructs* the Council to provide a progress report on PBN implementation to the next ordinary session of the Assembly; and

5. *Requests* the Planning and Implementation Regional Groups (PIRG) to include in their work programme the review of status of implementation of PBN by States according to the defined implementation plans and report to ICAO any deficiencies that may occur.