



**WORKING PAPER**

**FOURTEENTH MEETING OF THE CAR/SAM REGIONAL PLANNING AND  
IMPLEMENTATION GROUP (GREPECAS/14)  
(San Jose, Costa Rica, 16 to 20 April 2007)**

**Agenda Item 2: Analysis of global, inter and intra regional activities**

**2.3 Fifth meeting of all planning and implementation regional groups (ALLPIRG/5)**

**RESULTS OF THE FIFTH MEETING OF THE ALLPIRG/ADVISORY GROUP (ALLPIRG/5)  
— FOLLOW-UP ACTION TO BE TAKEN BY GREPECAS/14**

(Presented by the Secretariat)

**SUMMARY**

This paper reports on the outcome of and action taken by the Council of ICAO on the fifth meeting of the ALLPIRG/Advisory Group. The ALLPIRG/5 meeting agreed to a number of conclusions that call for further follow-up actions by GREPECAS. These proposed actions, which are analysed in the Appendix to this paper, are presented with a view to seeking confirmation from GREPECAS that it will make appropriate contributions to these tasks.

Action by GREPECAS/14 is in paragraph 3.

**1. INTRODUCTION**

1.1 The fifth meeting of the ALLPIRG/Advisory Group (ALLPIRG/5) was held at ICAO Headquarters in Montreal from 23 to 24 March 2006, and was attended by 100 participants, including 51 observers. The report of the meeting is available at the website: [http://www.icao.int/cgi/goto\\_rao.pl?icao/en/ro/allpirg/allpirg5/index.html](http://www.icao.int/cgi/goto_rao.pl?icao/en/ro/allpirg/allpirg5/index.html). The meeting, while focusing its attention on interregional matters, developed eighteen conclusions enveloping a wide range of issues.

1.2 Taking into account the comments of the Air Navigation Commission, the Council of ICAO, on 13 June 2006, considered and approved the follow-up to the report of ALLPIRG/5. The Council, in confirming ICAO's role in the follow-up to conclusions, called upon all planning and implementation regional groups (PIRGs) to initiate follow-up action on specific conclusions, as detailed in the Appendix hereto.

**2. PROPOSED FOLLOW-UP TO THE CONCLUSIONS OF THE  
ALLPIRG/5 MEETING**

2.1 The scope of the follow-up action by PIRGs on the conclusions, in some cases, extends to States and other communications, navigation, and surveillance/air traffic management (CNS/ATM) partners. This

distinction becomes clear when the required follow-up to ALLPIRG/5's conclusions are examined in the attached Appendix. In those cases, it is clearly desirable that follow-up action be coordinated.

2.2 It is considered that one of the first coordination efforts required by GREPECAS will be to allocate the follow-up action of each of the conclusions to concerned sub-groups for their implementation. A progress report by sub-groups will need to be submitted to GREPECAS, as appropriate.

### 3. ACTION BY GREPECAS/14

3.1 In light of the above, the meeting, on the basis of its analysis of the Appendix, is invited to:

- a) note the outcome of the ALLPIRG/5;
- b) take action on the conclusions as proposed in the Appendix to this working paper; and
- c) approve the following:

#### **Decision 14/x – Implementation of ALLPIRG/5 conclusions by GREPECAS**

That the following conclusions of ALLPIRG/5 be studied by the concerned subgroups, that action be taken to implement them, and that the outcome be presented to ensuing GREPECAS meetings:

Conclusions 5/2 and 5/5: AGA/AOP/SG  
 Conclusions 5/2, 5/4, 5/5, 5/7, 5/8, 5/9, 5/11, 5/13, 5/16 and 5/17: ATM/CNS/SG  
 Conclusions 5/2 and 5/5: AIS/MAP/SG  
 Conclusions 5/2 and 5/5: AERMET/SG  
 Conclusions 5/14 and 5/15: ASB

#### **Conclusion 14/x – Implementation of ALLPIRG/5 conclusions by States**

That States of the CAR/SAM Region take action to implement the following nine conclusions of ALLPIRG/5:

5/1, 5/4, 5/5, 5/7, 5/8, 5/9, 5/11, 5/13 and 5/16

#### **Conclusion 14/x – Implementation of ALLPIRG/5 conclusions by international organizations**

That international organizations take action to implement the following six conclusions of ALLPIRG/5:

5/2, 5/4, 5/5, 5/7, 5/13 and 5/16

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**APPENDIX**  
**FOLLOW-UP BY GREPECAS ON CONCLUSIONS OF ALLPIRG/5**

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/1 — Workshops on the Global Plan for Regional Offices</b>			
That, in support of the Global Plan, ICAO conduct workshops in the Regional Offices to provide training on planning tools and methodologies as well as strengthening the interaction between technical officers at Headquarters and Regional Offices.	Increases efficiency (Strategic objective D) Relates to all GPIs	Conduct workshops in the Regional Offices to provide training on planning tools and methodologies through the SIP mechanism	ICAO Headquarters
<b>Conclusion 5.2 — Implementation of Global Plan Initiatives (GPIs)</b>			
That, recognizing that the evolution continues from a systems-based to a performance-based approach to planning and implementation of the air navigation infrastructure, the regional planning groups:  a) note that the Global Plan is a significant component in the development of regional and national plans and that, together with the global ATM operational concept, provide an effective architecture for achieving a harmonized and seamless Global ATM system;	Increases efficiency (Strategic objective D) Relates to all GPIs	Note that the Global Plan is a significant component in the development of regional and national plans	GREPECAS, States and international organizations
b) identify GPIs that most closely align with the well established implementation plans of their respective regions;		Identify GPIs that most closely align with the implementation plans of their respective regions	GREPECAS, States and international organizations
c) select GPIs that would be most effective in achieving the objectives of the region while ensuring continuation of the work already accomplished;		Select GPIs that would be most effective in achieving the objectives of the region	GREPECAS, States and international organizations
d) implement GPIs that take into account the Initiatives across regions, to align work programmes and to develop national and regional plans that facilitate achieving a Global ATM system;		Implement GPIs in the development of national and regional plans	GREPECAS, States and international organizations
e) utilize the planning tools as the common planning and implementation mechanism, thereby ensuring proper coordination and global integration; and		Utilize the planning tools as the common planning and implementation mechanism	GREPECAS, States and international organizations
f) review, at each PIRG meeting as a part of its regular agenda, the progress achieved and challenges identified in the implementation of GPIs using a common template.		Review, at each PIRG meeting as a part of its regular agenda, the progress achieved and challenges identified in the implementation of GPIs	GREPECAS

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/3 — Workshop on the business case model for communications, navigation, and surveillance/air traffic management (CNS/ATM) Systems</b>			
That, in support of the development of business cases for the implementation of CNS/ATM systems, ICAO convene a training workshop for States at the Regional Offices through an appropriate mechanism, such as Special Implementation Projects (SIPs).	Increases efficiency (Strategic objective D) Relates to all GPIs	ICAO to convene a training workshop for States at the Regional Offices through the SIPs mechanism	ICAO Headquarters
<b>Conclusion 5/4 — Application of the business case model for CNS/ATM systems implementation</b>			
That PIRGs, States and airspace users:  a) note that business cases for the implementation of CNS/ATM systems leading to a global ATM system is a key element in the development of regional, subregional and national plans;	Increases efficiency (Strategic objective D) Relates to all GPIs	Note that business cases for the implementation of CNS/ATM systems is a key element in the development of regional, subregional and national plans	GREPECAS, States and international organizations
b) consider the application of the model for the development of business cases in the formulation of national and subregional plans with a view to facilitating the achievement of a global ATM system; and		Apply the model for the development of business cases in the formulation of national and subregional plans	GREPECAS, States and international organizations
c) establish, with ICAO's assistance and within the limits of the programme budget, a network of experts on cost-effectiveness, cost-benefit analyses and business cases for the implementation of CNS/ATM systems in order to share expertise and to provide assistance to the Regional Offices.		Establish a network of experts on cost-effectiveness, cost-benefit analyses and business cases for the implementation of CNS/ATM systems	ICAO Headquarters

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/5 — ICAO Global air navigation plan (ANP) database and geographic information system (GIS) portal</b>			
<p>Recognizing that access to an ICAO Global ANP database and associated planning services through an web-based ICAO GIS portal would constitute an invaluable tool in supporting, integrating and monitoring the planning and implementation of harmonized regional, interregional and global air navigation infrastructures, the regional planning groups:</p> <p>a) note the progress made by the Secretariat in accordance with Recommendation 1/14 of AN-Conf/11 and the ICAO Global ANP database;</p>	<p>Increases efficiency (Strategic objective D) Relates to all GPIs</p>	<p>Note the progress made in the development of ICAO Global ANP database</p>	<p>GREPECAS, States and international organizations</p>
<p>b) note the ongoing efforts by the Secretariat in harmonizing formats of all the ANP tables together with the inclusion of temporal information in the tables that would assist the regional planning groups in monitoring and analysing the implementation progress;</p>		<p>Harmonize formats of all the ANP tables</p>	<p>ICAO Headquarters</p>
<p>c) note the intent to expand the ANP tables to include Global Plan Initiatives (GPIs), as appropriate; and</p>		<p>Include GPIs in the ANP tables</p>	<p>ICAO Headquarters</p>
<p>d) utilize, through the ICAO GIS portal, the ICAO Global ANP database and associated planning services so as to ensure the currency, coordination and implementation of regional air navigation planning and to contribute to the further development of air navigation plans as the framework for the efficient implementation of new air navigation systems and services at the national, regional, interregional and global levels.</p>		<p>Utilize the ICAO Global ANP database and associated planning service</p>	<p>GREPECAS, States and international organizations</p>
<b>Conclusion 5/6 — Development of planning tools</b>			
<p>That ICAO, in the development of planning tools and services, should accommodate requirements established by the Regional Offices, as well as to take into account similar tools developed by other organizations such as EUROCONTROL.</p>	<p>Increases efficiency (Strategic objective D) Relates to all GPIs</p>	<p>Develop planning tools by taking into account regional requirements and experience gained by other organizations</p>	<p>ICAO Headquarters</p>

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/7 — Environmental benefits of CNS/ATM systems</b>			
That PIRGs and States: a) use the Committee on Aviation Environmental Protection (CAEP) provided CO <sub>2</sub> conversion factor in the analysis of environmental benefits of implementing CNS/ATM systems;	Minimizes environmental impact (Strategic objective C)	Use the CAEP provided CO <sub>2</sub> conversion factor in the analysis of environmental benefits of implementing CNS/ATM systems	GREPECAS, States and international organizations
b) prioritize the implementation of voluntary, operationally-based improvements in their air traffic management systems, with emphasis on fuel savings, emissions reductions and noise benefits, and also to mitigate costs to the industry;		Prioritize the implementation of voluntary, operationally-based improvements in their air traffic management systems	GREPECAS and States
c) provide feedback to ICAO on studies conducted on the environmental benefits of implementing CNS/ATM systems; and		Provide feedback to ICAO on studies conducted on the environmental benefits of implementing CNS/ATM systems	GREPECAS, States and international organizations
d) share air traffic data to improve future CAEP assessments, in line with State letter AN 1/17-03/86.		Share traffic data with CAEP	GREPECAS, States and international organizations
<b>Conclusion 5/8 — Globally coordinated air traffic services (ATS) routes</b>			
That PIRGs: a) establish a global consolidated, prioritized list of routes and terminal area (TMA) improvements in close coordination with airspace users; and	Increases efficiency (Strategic objective D) Relates to GPI 7	Establish a global consolidated, prioritized list of routes and terminal area (TMA) improvements	GREPECAS and States
b) work with neighbouring PIRGs/States/air navigation service providers (ANSPs) to accelerate international route improvements.		Work with neighbouring PIRGs/States/ANSPs to accelerate international route improvements	GREPECAS and States

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/9 — Terminal area (TMA) structure and area navigation</b>			
<p>That States:</p> <p>a) employ area navigation in all TMAs, including appropriate arrival and departure procedures, to improve efficiency and reduce emissions in the vicinity of airports; and that, in special cases where there are particularly challenging obstacles and where air traffic density is very high and additional approach paths are possible, the more precise and contained required navigation performance (RNP) procedures be employed; and</p>	<p>Increases efficiency (Strategic objective D) Relates to GPI 5</p>	<p>Employ area navigation in all TMAs, including appropriate arrival and departure procedures</p>	<p>States</p>
<p>b) review operations, procedures and training of controllers to ensure the optimum management of air traffic services.</p>		<p>Review operations, procedures and training of controllers to ensure the optimum management of air traffic services</p>	<p>States</p>
<b>Conclusion 5/10 — Environmental benefits of RVSM introduction and regional expertise</b>			
<p>That ICAO:</p> <p>a) undertake a study on the environmental benefits of the introduction of RVSM and to ensure that this information is transmitted to policy makers; and</p>	<p>Minimizes environmental impact (Strategic objective C) Relates to GPI 2</p>	<p>Study the environmental benefits of the introduction of RVSM</p>	<p>ICAO Headquarters</p>
<p>b) seek appropriate support from recognized expert organizations in its work on quantifying the environmental benefits of RVSM, noting the support offered by EUROCONTROL in this regard.</p>		<p>Seek support from recognized expert organizations in its work on quantifying the environmental benefits of RVSM</p>	<p>ICAO Headquarters</p>

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/11 — Air traffic management (ATM) safety management</b>			
That ICAO:  a) urge States to give priority to the establishment and effective operation of their ATM safety management and safety regulatory functions;	Increases safety (Strategic objective A)	Give priority to the establishment and effective operation of their ATM safety management and safety regulatory functions	States
b) support the development of sufficient expertise levels in the industry through formal training in ATM safety issues and, by cooperation through regional bodies, promote collective means to optimize the effectiveness of training provision; and		Develop formal training in ATM safety issues	States
c) develop further measures to enable the implementation of a “just-culture” reporting environment to facilitate the reporting of ATM occurrences.		Implement a “just-culture” reporting environment to facilitate the reporting of ATM occurrences	States
<b>Conclusion 5/12 — Coordination between regional monitoring agencies (RMAs)</b>			
That the ICAO EUR/NAT Office act as the initial focal point for the required coordination between RMAs in order to:  a) facilitate the exchange of monitoring and operational data between RMAs;	Increases efficiency (Strategic objective D) Relates to GPI 2	Facilitate the exchange of monitoring and operational data between RMAs	ICAO EUR/NAT Office
b) facilitate the exchange information about best practices between RMAs;		Facilitate the exchange information about best practices between RMAs	ICAO EUR/NAT Office
c) ensure that incident reports are correctly disseminated to the appropriate RMA;		Ensure that incident reports are correctly disseminated to the appropriate RMA	ICAO EUR/NAT Office
d) provide a forum to manage changes to monitoring requirements; and		Provide a forum to manage changes to monitoring requirements	ICAO EUR/NAT Office
e) ensure the maintenance of the RMA Handbook.		Ensure the maintenance of the RMA Handbook	ICAO EUR/NAT Office

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
<b>Conclusion 5/13 — Implementation of performance-based navigation concept</b>			
<p>That, to increase awareness and understanding of the performance-based navigation concept and its elements:</p> <p>a) ICAO organize workshops and training activities; and</p>	<p>Increases efficiency (Strategic Objective D) Relates to GPI 5</p>	<p>Organize workshops and training activities through the SIP mechanism</p>	<p>ICAO Headquarters</p>
<p>b) where area navigation (RNAV) or required navigation performance (RNP) implementations are required, these will be implemented by PIRGs and States according to the performance-based navigation concept.</p>		<p>Implement performance-based navigation concept</p>	<p>GREPECAS, States and international organizations</p>
<b>Conclusion 5/14 — A regional online database of air navigation deficiencies</b>			
<p>That, PIRGs consider establishing and maintaining a regional online database of air navigation deficiencies that ensures transparency and provides a secure access to authorized users.</p>	<p>Increases safety (Strategic objective A)</p>	<p>Establish and maintain a regional online database of air navigation deficiencies</p>	<p>GREPECAS</p>
<b>Conclusion 5/15 — Last resort action to resolve regional air navigation deficiencies</b>			
<p>That, when efforts to eliminate deficiencies prove unsuccessful after exhausting all alternatives, PIRGs adopt the following last resort action, which consists of the two parts:</p> <p>a) propose the inclusion of an alternate facility/procedure in the air navigation plan (ANP); or</p> <p>b) when a corrective action as a) above cannot be recommended, provide the State(s)/Territory(ies)/users and ICAO with an analysis concerning risk associated with such a deficiency.</p>	<p>Increases safety (Strategic objective A)</p>	<p>Implement last resort action when efforts to eliminate deficiencies prove unsuccessful after exhausting all alternatives</p> <p>Indicate the safety impact for every deficiency as soon as it is identified and publish in the table of deficiencies as well as in the regional on-line database</p>	<p>GREPECAS</p>
<b>Conclusion 5/16 — Implementation of very small aperture terminals (VSATs)</b>			
<p>That PIRGs:</p> <p>a) discourage the proliferation of VSAT networks where one/some of the existing ones can be expanded to serve the new areas of interest;</p>	<p>Increases efficiency (Strategic Objective D) Relates to GPI 22</p>	<p>Discourage the proliferation of VSAT networks</p>	<p>GREPECAS, States and international organizations</p>

ALLPIRG/5 Conclusions	Relationship with Strategic Objective & Global Plan Initiatives (GPIs)	Follow-up task	Follow-up to be initiated by
b) work towards integrated regional/interregional digital communication networks with a single (centralized) operational control and preferably based on the Internet Protocol (IP); and		Work towards integrated regional/interregional digital communication networks	GREPECAS, States and international organizations
c) give due consideration to managed network services (e.g. a virtual private network (VPN)), subject to availability and cost-effectiveness.		Give due consideration to managed network services	GREPECAS, States and international organizations
<b>Conclusion 5/17 — Provisions for digital communication networks</b>			
That ICAO:  a) expedite the development of provisions relating to the use of the Internet Protocol Suite (IPS) in the aeronautical telecommunication infrastructure; and	Increases efficiency (Strategic Objective D) Relates to GPI 22	Expedite the development of provisions relating to the IPS in the aeronautical telecommunication infrastructure	ICAO Headquarters
b) initiate the development of provisions governing the end-to-end performance of digital communication networks, irrespective of the technologies and protocols utilized therein.		Develop provisions governing the end-to-end performance of digital communication networks	ICAO Headquarters
<b>Conclusion 5/18 — Changes to the Regional Supplementary Procedures (SUPPs) (Doc 7030)</b>			
That ICAO  a) restructure the SUPPs (Doc 7030) by the complete reordering and reorganization of the material;	Increases efficiency (Strategic Objective D) Relates to all GPIs	Restructure the SUPPs by the complete reordering and reorganization of the material	ICAO Headquarters
b) align the area of application of the SUPPs with the area of application of the regional air navigation plans (ANPs); and		Align the area of application of the SUPPs with the area of application of the ANPs	ICAO Headquarters
c) make SUPPs available on a CD as well as on the ICAO website.		Make SUPPs available on ICAO website	ICAO Headquarters