International Civil Aviation Organization
CAR/SAM REGIONAL PLANNING IMPLEMENTATION GROUP (GREPECAS)
Fifth Meeting of the CNS Committee of the GREPECAS ATM/CNS Subgroup (CNS/COMM/5)
Lima, Peru, 13 to 17 November 2006

Agenda Item 1: Communication systems developments
1.3 Review of the ATN regional implementation plan.

FOLLOW-UP TO THE REVIEW OF THE ATN REGIONAL IMPLEMENTATION PLAN AND ITS APPLICATIONS

(Presented by the Secretariat)

SUMMARY

This working paper presents the results of the follow-up to the review of the ATN Regional Implementation Plan and proposes actions to the Meeting in order to amend the ATN Regional Plan and its applications.

References:

- CAR/SAM Regional Air Navigation Plan, Doc 8733
- Annex 10, Volume III
- GREPECAS/13 Meeting Report
- Amendment 2 to the Global Air Navigation Plan (Doc 9750 – AN963)

1. Background

Work carried out on ATN by the GREPECAS Mechanism

1.1 The Fourth Meeting of the CNS Committee began to review the regional plan *ATN implementation Regional Plan*, and proposed amendments to Table CNS 1B from the CAR/SAM Regional Air Navigation Plan, Doc 8733, Volume II (FASID), which includes the ATN ground-ground and air-ground application requirements. In addition, it also proposed to GREPECAS several Draft Conclusions. Likewise, the CNS Committee adopted Decision CNS4/9 – *Development of Regional ATN Guidance Documents*.

1.2 Based on the work made by the CNS Committee, presented through the ATM/CNS Subgroup, regarding the review of the ATN Regional Implementation Plan, the GREPECAS/13 Meeting, held in Santiago, Chile from 14 to 18 November 2005, formulated Conclusion 13/74 – *Proposal of Amendment to ATN Regional Plan*, which proposes amendments to the Table CNS 1B of the FASID by replacing the table format by the format of Table CNS1Ba – *ATN routers CAR/SAM Regional Plan*, table CNS 1Bb – *Ground-ground applications CAR/SAM Regional Plan*, as well as Table CNS 1Bc – *Air-ground applications CAR/SAM Regional Plan*.

1.3 Likewise, the GREPECAS formulated Conclusion 13/75 – *Request for information on plans to implement ATN ground-ground applications*, through which it requested information from Aeronautical Administrations on the requirements and plans to implement ground-ground ATN applications, such as AMHS and AIDC.

1.4 Regarding the AMHS Addressing Plan, and considering that this global task was being carried out by ICAO Headquarters, considering that the early implementation had already begun in the CAR/SAM Regions, the GREPECAS adopted Decision 13/76 – *Preparation of the Regional AMHS addressing plan* ; through which it guides the CNS Committee in coordination with ICAO to prepare the AMHS Addressing Regional Plan.

1.5 In addition, GREPECAS adopted Decision 13/77 – *Development of a format-table for the regional air-ground applications plan* guiding the CNS Committee to perform this task.

1.6 Additionally, GREPECAS formulated Conclusion 13/78 – *Strategy and target dates for the deployment of ATN in the CAR/SAM Regions*, which guides the mentioned strategy contained in Appendix BA to the GREPECAS/13 Meeting Report. Also, the Meeting formulated Conclusion 13/79 – *Development of National Plans to prioritize the AMHS and AIDC implementation and contribute to ATM Automation* which urges Aeronautical Administrations to develop these plans.

1.7 Finally, the GREPECAS formulated Decision 13/80 – *Proposal for use of a data communications infrastructure between ATFM units in the SAM Region*, this Decision instructs the ATM and CNS Committees to analyse the proposal from Argentina to use their State's AMHS system and the REDDIG network as the initial communications infrastructure for ground-ground data communications between future ATFM units in the SAM Region, and it instructed both Committees to include this task in their respective work programmes.

SARPs development status and ICAO guidance material on ATN

1.8 In June 2005, the Aeronautical Communications Panel (ACP), concluded that the use of the Internet Protocols (IPS) set for the ATN ground-ground subnetwork is feasible and in July 2006, it concluded that it is also feasible to use IPS in the air-ground ATN subnetworks. Based on this and on the Air Navigation Commission's (ANC) requirement, the ACP is currently developing SARPs for ground-ground and air-ground ATN links based on IPS, and the main document will be presented for the review of the ANC in July 2007. The guidance material will be made into a Manual and it will be completed when the SARPs are effective (scheduled for November 2008).

1.9 The ACP is considering as the goal for the use of ATN, version 6 of the IPS (IPv6), taking into account that it provides several advantages: increase of Internet protocol address space, improvement of the service quality parameters, improvement of end-to-end safety, a more robust system management and other advantages. Also, ICAO is in the process of acquiring a bulk of IPv6 addresses for global implementation, both for the use of ground systems as well as airborne systems.

1.10 Also, the IP voice use (VoIP) is being developed to send discreet voice packages in digital format over the same ATN network, which encompasses economic benefits. The VoIP use within the new generation of air-ground datalinks is being considered in the studies of future communications.

1.11 The AIDC message applications on ATN are currently contained in Doc 9705. The updating of detailed technical specifications to allow AIDC transmissions over the ATN/OSI and the guidance material for AIDC applications over the ATN and for new applications are only using standards based on TCP/IP and are available in the standards developed by the Internet Engineering Task Force (IETF). However, the technical specifications detailed in the AIDC/OSI will be completed by the end of 2006 to be incorporated in Doc 9705. The technical specifications detailed for AIDC based on TCP/IP will be completed between 2008 and 2009.

2. Discussion

ATN Routers and ground-ground applications Implementation Plans

2.1 Taking the format of Table CNS 1Ba – ATN Routers Regional Plan into account, shown in **Appendix A** to this working paper, formulated by GREPECAS Conclusion 13/74, the Meeting is expected to develop, with the support of the ATN Task Force, the ATN Routers Plan.

2.2 As a result of the responses received and of the follow-up made by the ICAO NACC and SAM Regional Offices to GREPECAS Conclusion 13/75, **Appendix B** to this working paper presents an update to Table CNS 1Bb of the FASID, which contains information on ground-ground applications implementation plans in the CAR Region. **Appendix C** presents similar information from the SAM Region.

2.3 The Meeting should review the information contained in Appendices A and B, incorporating details in order to enhance the regional implementation plans of the ATN ground-ground routers and applications, such as AMHS and AIDC. When planning the AIDC, it should be considered that currently there are AIDC applications guidelines on ATN/OSI, as well as on ATN/TCP-IPN; however, detailed technical specifications will be available in 2009. Likewise, it should be kept in mind that the AIDC implementation is also subject to specific requirements, as established by involved States.

AMHS Addressing Regional Plan

2.4 As a follow-up to ICAO State Letter Ref. SP 54/1-03/39, dated 30 May 2003, and based on the responses given by some States, ICAO Headquarters is developing the AMHS Addressing Global Plan. However, in accordance with GREPECAS Decision 13/76, an AMHS Addressing plan for the SAM Region has been developed and is presented in **Appendix D** to this working paper. The AMHS Addressing Plan for the CAR Region is under development. Furthermore, the Secretariat is coordinating with ICAO Headquarters in order to harmonise these regional plans together with the global plan.

Table format for the ATN air-ground applications regional plan

2.5 According with the guidance given by GREPECAS Decision 13/77, the Secretariat has prepared a Table format proposal for the ATN air-ground applications regional plan, which is presented in **Appendix E** to this paper for the Meeting's review and consideration.

National plans to prioritise the AMHS and AIDC implementation contributing to ATM Automation

2.6 According with the information obtained by the Secretariat, some States, Territories and International Organizations from the CAR and SAM Regions have implemented or are in the process of implementing AMHS; others are setting plans for the AMHS and AIDC implementation. Considering this information, the implementation outlook in the CAR and SAM Regions is shown in **Appendix F** to this working paper.

Development of regional documents to assist the ATN planning and implementation

2.7 In accordance with Decision CNS4/9 of the CNS Committee, it is expected that the ATN Task Force develops regional documents to assist the ATN planning and implementation, among these are: ATN Evolutional Development Transition Plan; Guidelines for ATN Management and Safety Functions, and others.

Analysis of the proposal to use the Argentinean AMHS and REDDIG network as the initial data communications infrastructure between ATFM units in the SAM Region

2.8 In accordance with GREPECAS Decision 13/80, as shown in Appendix B to WP/15 of this Meeting, it is proposed to include in the CNS Committee Work Programme, the following task: *"Study the use of the Argentinean AMHS and REDDIG network as the initial data communications infrastructure between ATFM units in the SAM Region"*.

3. Suggested actions

3.1 The Meeting is invited to:

a) take note of the information contained in this working paper;

b) review and develop the implementation of ATN routers and ground-ground applications, based on the considerations expressed in paragraphs 2.1 to 2.3, as well as in Appendices A, B and C of this working paper;

c) review the follow-up to the AMHS addressing Regional Plan, considering paragraph 2.4 and Appendix D to this paper;

d) review and recommend the adoption of the Table format for the ATN air-ground applications regional plan considering paragraph 2.5 and Appendix E to this working paper;

e) review the national plans for the AMHS and AIDC implementation, contributing to ATM automation, considering paragraph 2.6 and Appendix F to this working paper;

f) take note that the task indicated by GREPECAS Decision 13/80 would be included in the Work Programme of the CNS Committee;

g) develop regional documents to assist the planning and implementation; and

h) review and propose any other actions deemed appropriate

- - - - - - - - - - - - - - - - - - - -

TABLE/TABLA CNS 1Ba – ATN ROUTERS REGIONAL PLAN / PLAN REGIONAL DE ENCAMINADORES ATN

Administration and Location/ Administración y Localidad	Type of Router / Tipo de Encaminador	Type of Interconnection/ Tipo de interconexión	Connected Router- Encaminador Conectado	Link Speed- Velocidad del enlace	Link Protocol- Protocolo del Enlace	Via Vía	Target Date / Fecha Meta	Remarks Observaciones
1	2	3	4	5	6	7	8	9

TABLE CNS 1BB – ATN GROUND-GROUND APPLICATIONS PLAN / TABLA CNS1 BB – PLAN DE APLICACIONES TIERRA-TIERRA ATN (CAR REGION / REGIÓN CAR)

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
ARUBA, Aruba	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
BAHAMAS, Nassau,	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
CAYMAN ISLANDS, Grand Cayman ISLAS CAIMANES , Gran Caimán	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
CUBA, Havana CUBA, La Habana	AMHS	FAA-Atlanta	ATN	2008	
	AIDC	TBD/Por determinar	ATN	TBD/Por determinar	
DOMINICAN REPUBLIC, Santo Domingo/ REPÚBLICA DOMINICANA, Santo Domingo	AMHS	FAA-Atlanta	ATN	2008	
	AIDC	TBD/Por determinar	ATN	TBD/Por determinar	
HAITI, Port-au-Prince/ HAITÍ, Puerto Príncipe,	AMHS	FAA-Atlanta	ATN	2008	
HONDURAS, Tegucigalpa (COCESNA)	AMHS	FAA-Atlanta	ATN	2007	
	AIDC	TBD/Por determinar	ATN	TBD/Por determinar	
JAMAICA, Kingston	AMHS	FAA-Atlanta	ATN	2008	
	AIDC	TBD/Por determinar	ATN	TBD/Por determinar	
MEXICO, Mexico City MÉXICO, Ciudad de México	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
	AIDC	FAA- TBD/Por determinar	ATN	TBD/Por determinar	

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
	AIDC	TBD/Por determinar	ATN	TBD/Por determinar	
NETHERLANDS ANTILLES (Curacao) / ANTILLAS NEERLANDESAS (Curazao)	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
PANAMA, Panama City/ PANAMÁ, Ciudad de Panamá	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
TRINIDAD AND TOBAGO, Piarco	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
	AIDC	TBD/Por determinar	ATN	TBD/Por determinar	
UNITED STATES, Atlanta ESTADOS UNIDOS, Atlanta	AMHS	Aruba	ATN	TBD/Por determinar	03 2007 - USA Availability to connect to the CAR/SAM Regions/ Disponibilidad de conectar con las Regiones CAR/SAM
	AMHS	Bahamas Nassau,		TBD/Por determinar	
	AMHS	Cayman Islands, Grand Cayman Islas Caimanes , Gran Caimán		TBD/Por determinar	
	AMHS	Cuba, Havana Cuba, La Habana		2008	
	AMHS	Dominican Republic, Santo Domingo/ República Dominicana, Santo Domingo		2008	
	AMHS	Haiti, Port-au-Prince/ Haití, Puerto Príncipe,		2008	
	AMHS	Honduras, Tegucigalpa (COCESNA)		2007	
	AMHS	Jamaica, Kingston		2008	
	AMHS	Mexico, Mexico		TBD/Por determinar	
	AMHS	Netherlands Antilles (Curacao) / Antillas Neerlandesas (Curazao)		TBD/Por determinar	

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
	AMHS	Panama, Panama City/ Panamá, Ciudad de Panamá		TBD/Por determinar	
	AMHS	Peru, Lima		TBD/Por determinar	
	AMHS	Trinidad and Tobago, Piarco		TBD/Por determinar	
	AMHS	Venezuela, Maiquetía		2009	
UNITED STATES, TBD ESTADOS UNIDOS, Por determinar	AIDC	MEXICO, Por determinar		TBD/Por determinar	
	AIDC	TBD/Por determinar		TBD/Por determinar	

- - - - - - - -

TABLE CNS 1BB – ATN GROUND-GROUND APPLICATIONS PLAN / TABLA CNS1 BB – PLAN DE APLICACIONES TIERRA-TIERRA ATN (SAM REGION / REGIÓN SAM)

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de.**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
Argentina, Buenos Aires	AMHS	Bolivia, Brasil, Chile, Paraguay Perú, Uruguay y AFI	ATN	2005	
	AIDC	Bolivia, Brasil, Chile, Paraguay Perú, Uruguay y AFI	ATN	TBD /Por determinar	
Bolivia , La Paz	AMHS	Argentina , Perú	ATN	2008	
	AIDC	Argentina , Perú	ATN	TBD /Por determinar	
Brasil, Brasilia	AMHS	Argentina, Guyana Francesa,Paraguay, Peru,Uruguay, NAM,EUR,AFI	ATN	2008	
	AIDC	Argentina, Guyana Francesa,Paraguay, Peru,Uruguay, NAM,EUR,AFI	ATN	TBD/ Por determinar	
Chile, Santiago	AMHS	Argentina,Perú y PAC.	ATN	2007	
	AIDC	Argentina,Perú y PAC.	ATN	TBD/Por determinar	
Colombia , Bogotá	AMHS	Ecuador,Perú y Venezuela	ATN	2008	
	AIDC	Ecuador,Perú y Venezuela	ATN	TBD/Por determinar	
Ecuador,Quito	AMHS	Colombia y Perú	ATN	2009	
	AIDC	Colombia y Perú	ATN	TBD/Por determinar	
French Guyana ,Cayenne	AMHS	Brasil, Surinam	ATN	2009	
	AIDC	Brasil, Surinam	ATN	TBD/Por determinar	
Guyana,Georgetown	AMHS	Brasil, Trinidad Tobago y Venezuela	ATN	2009	
	AIDC	Brasil, Trinidad Tobago y Venezuela	ATN	TBD/Por determinar	
Paraguay,Asunción	AMHS	Argentina, Brasil	ATN	2007	
	AIDC	Argentina, Brasil	ATN	TBD/Por determinar	
Perú	AMHS	Argentina,Bolivia,Brasil,Chile Colombia,Ecuador,Venezuela y NAM	ATN	2007	
	AIDC	Argentina,Bolivia,Brasil,Chile Colombia,Ecuador,Venezuela y NAM	ATN	TBD/Por determinar	
Surinam	AMHS	Brasil,French Guyana y Venezuela	ATN	2009	
	AIDC	Brasil,French Guyana y Venezuela	ATN	TBD/Por determinar	
Uruguay	AMHS	Argentina, Brasil	ATN	2008	
	AIDC	Argentina, Brasil	ATN	TBD/Por determinar	
Venezuela	AMHS	Brasil,Colombia,Perú,Suriname,NAM,CAR y EUR	ATN	2008	
	AIDC	Brasil,Colombia,Perú,Suriname,NAM,CAR y EUR	ATN	TBD/Por determinar	

- - - - - - - -

APPENDIX D

AMHS ADDRESSING

The AMHS addressing scheme is presented in two formats: XF (transfer addressing) and CAAS (AMHS common addressing). Both formats identify the manager domain (MD) and the AMHS user identifier (UI).

The domain identifier (MD) specifies the name of the State, the name of the manager domain and the name of the private domain (PMRD). The AMHS user identifier specifies the name of the organization (O), the name of the organizational unit (OUI) and the common name (CN).

In the XF addressing, in the domain identifier (MD), the name of the State is XX, the name for the administration of the domain is ICAO, and the PRMD name is represented with the two nationality identification letters specified in ICAO Doc. 7910 (SA, SB, SC, SE, SO, SK, SM, SO, SF, SU, SY, SV, MP). For the AMHS user identifier, the name of the organization (O) is AFTN, the name for the OUI is represented by the same 8-letter address used in the AFTN. The XS mode does not use the CN.

In the CAAS addressing, in the domain identifier (MD), the name of the Sate is XX, the name for the administration of the domain is ICAO and the name of the PRMD takes a value declared by the State. It can use the same as that indicated in the XS addressing, two letters different to those indicated in 7910, or the full name of the State (Argentina, Bolivia, Brazil, etc.). For the AMHS user identifier, the slot for the organization (O) is to be filled with the name of the organization or a geographical unit in alphanumeric characters it is composed of four letter , the name for the Organization Unit (OUI) is represented by four AFTN alphanumeric characters associated with the organization or geographical unit and which can have any value, for the CN (Common Name or user name) the same AFTN addresses can be used (8 AFTN letter).

Appendix 1 presents the AMHS addressing registered in ICAO as result of the survey sent to Status through the ICAO Secretary General letter SP 54/1-03/39 of May 2003. Seven SAM States answered this survey; two of these, Argentina and Brazil, indicated that their AMHS addressing will be CAAS. Bolivia, Chile, Panama and Uruguay indicated that theirs would be XF. Colombia indicated that the information would be sent at a later date. ICAO assigned XF to all Status who did not reply the letter, as indicated therein.

Appendix 2 presents a CAAS AHMS addressing proposal for the SAM Region for the identifier of the administrator of the domain and AMHS user identifier.

APPENDIX 1

NAMES REGISTERED AT ICAO OF CAR/SAM AMHS MD PRD

STATE	AMHS ADDRESSING SPECIFICATIONS			
	NATIONALITY DESIGNATORS	NAME STATES	NAME ADM	NAME PRMD*
ARGENTINA	**SA**	**XX**	**ICAO**	**Argentina**
BOLIVIA	SL	XX	ICAO	SL
BRAZIL	*SB*	*AX*	*ICA 0*	*BR*
CHILE	SC	XX	ICAO	SC
COLOMBIA	SK	XX	ICAO	SK
ECUADOR	SE	XX	ICAO	SE
FRENCH GUIANA	SO	XX	ICAO	SO
GUYANA	SY	XX	ICAO	SY
PANAMA	MP	XX	ICAO	MP
PARAGUAY	SO	XX	ICAO	SO
PERU	SP	XX	ICAO	SP
SURINAME	SM	XX	ICAO	SM
URUGUAY	SU	XX	ICAO	SU
VENEZUELA	SV	XX	ICAO	SV

* **Note:**

The items in **bold** identify the values specified by SAM States which are different to the nationality indicators.
The items in ***italic*** identify the values specified by SAM States which are equal to the nationality indicators.
The remaining items for States were assigned by ICAO.

(Information taken from ACP Panel Work Group N (Networking) WP/11

APPENDIX 2
AMHS CAAS ADDRESSING SUGGESTED VALUES, TAKING INTO CONSIDERATION ONLY ONE MTA PER STATE

STATE	AMHS ADDRESSING SPECIFICATIONS					
	ATTRIBUTION NAME STATES (C)	ATTRIBUTION NAME ADM (A)	NAME PRMD (P)	ORGANIZATION NAME (O) *	ORGANIZATIONAL UNIT NAME (OUI)	COMMON NAME (CN)
ARGENTINA	XX	ICAO	ARGENTINA	SAEZ	All four letters indicated in ICAO Doc 7910	AFTN address 8 letter
BOLIVIA	XX	ICAO	BOLIVIA	SLLF	Id	Id
BRAZIL	XX	ICAO	BRAZIL	SBBF	Id	Id
CHILE	XX	ICAO	CHILE	SCEZ	Id	Id
COLOMBIA	XX	ICAO	COLOMBIA	SKED	Id	Id
ECUADOR	XX	ICAO	ECUADOR	SEGU	Id	Id
FRENCH GUIANA	XX	ICAO	FRENCH GUIANA	SOCA	Id	Id
GUYANA	XX	ICAO	GUYANA	SYCJ	Id	Id
PANAMA	XX	ICAO	PANAMA	MPTO	Id	Id
PARAGUAY	XX	ICAO	PARAGUAY	SGAS	Id	Id
PERU	XX	ICAO	PERU	SPLI	Id	Id
SURINAME	XX	ICAO	SURINAME	SMPM	Id	Id
URUGUAY	XX	ICAO	URUGUAY	SUEO	Id	Id
VENEZUELA	XX	ICAO	VENEZUELA	SVZM	Id	

* Can be more than one four letters address for an Organization unit (O). For each assigned Organization name address (O), there is associated various four letters addresses for the Organization Unit (OUI)

Example of an AMHS CAAS address for an Argentinean unit (CN) that is part of Ezeiza Organization or Region:

C = XX
A = ICAO
P = ARGENTINA
O = SAEZ
OUI = SAAA
CN = SAAAZPZX

The complete address will be: **XXICAOARGENTINASAEZSAAASAAAZPZX**

- - - - - - - - - - - - - - - - - - - -

Table CNS 1Ba – ATN AIR-GROUND APPLICATIONS PLAN / Tabla CNS1 Ba – PLAN DE APLICACIONES AIRE-TIERRA ATN

ATN AIR-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES AIRE-TIERRA						
Administration and Center/ Administración y Centro	Application Type/ Tipo de Aplicación	Served air space / Espacio aéreo servidos	COM Infrastructure / Infraestructura COM	Used Standard / Norma usada	Implementation Date/ Fecha de Implementación	Remarks/ Observaciones
1	2	3	4	5	6	7

APPENDIX F

AMHS IMPLEMENTATION PLANS IN THE CAR AND SAM REGIONS

AMHS Implementation Plans in the CAR Region	
Date	**Management**
Implemented	COCESNA and Central American States
2007	Atlanta (United States), Puerto Rico and Trinidad and Tobago
2008	Cuba, Jamaica, Haiti and Dominican Republic
2009	Others

AMHS Implementation Plans in th e SAM Region	
Date	**Management**
Implemented	Argentina
2007	Chile, Paraguay and Peru
2008	Bolivia, Brazil, Colombia, Uruguay y Venezuela
2009	Ecuador, Guyana, French Guiana, Suriname, Uruguay and Panama

- END -