

THIRD MEETING OF THE ALLPIRG/ADVISORY GROUP

(Montreal, 6 – 8 April 1999)

Agenda Item 5.4: Interregional coordination and harmonization mechanism – Status of implementation of the World Geodetic System – 1984 (WGS–84)

(Presented by the Secretariat)

SUMMARY

States were expected to implement WGS–84 on 1 January 1998 but the progress of implementation was not satisfactory when ALLPIRG/2 examined it. This is a second report on implementation of WGS–84 which shows good progress has been made by States.

Action by the meeting is at paragraph 3.

1. INTRODUCTION

1.1 The second meeting of the ALLPIRG (Montreal, 16-18 February 1998) reviewed a status report on the implementation of WGS–84 and developed Conclusions 2/7 (Regular updates to show the regional picture of WGS–84 implementation) and 2/8 (Further assistance to States for WGS–84). ALLPIRG/2 report, page 2.3-1 shows the background. This paper provides a new update on the subject.

2. DISCUSSION

2.1 Action after ALLPIRG/2

2.1.1 As a result of ALLPIRG/2 Conclusion 2/7, the ICAO planning and implementation regional groups (PIRGs) continued to review the status of implementation of WGS–84 in their respective regions and reported the outcome to the ICAO Air Navigation Commission (ANC) and Council. The ANC and Council noted that increased attention by States was needed, therefore, States were urged to increase their efforts for implementation of WGS–84.

2.1.2 Furthermore, on 16 December 1998, the ANC reviewed the status of implementation of WGS–84 as of 1 November 1998. In this review, it was noted that good progress had been made by States in implementation of WGS–84 during the period between ALLPIRG/2 and 1 November 1998. The ICAO Secretariat has continued to monitor the situation in order to assist where possible.

2.2 Latest situation

2.2.1 The appendix to this paper shows the situation of implementation of WGS–84 as of 15 March 1999. The appendix is summarized below.

		At ALLPIRG/2 ¹	15 March 1999
1	Percentage of States that have fully implemented WGS–84	23%	28%
2	Percentage of States that have partially implemented WGS–84 and work is in progress	7%	28%
3	Percentage of States where implementation of WGS–84 is underway	30%	31%
4	Percentage of States that have a plan for implementing WGS–84 at a future date	17%	3%
5	Percentage of States that have no known plan or have not responded to the survey	23%	10%

2.2.2 As can be seen from the above table, noticeable progress has been made by States in full implementation, partial implementation or in proceeding with an implementation plan for WGS-84. Furthermore, a decrease of percentage against part 4 above indicates that many of the States that had plans to implement WGS–84 at a date in the future, have already commenced or completed their plans. The decrease of percentage in part 5 of the above table, also confirms that awareness of the importance of implementation of WGS-84 has increased.

2.3 Assistance to States

2.3.1 In response to Conclusion 2/8 of ALLPIRG/2 (Further assistance to States for WGS-84 implementation), ICAO conducted special implementation projects (SIPs) in the Africa-Indian Ocean Region, the Caribbean and South American Regions and in the eastern part of the European Region (CIS States) to promote the implementation of WGS-84.

2.3.2 Furthermore, the ICAO regional offices will continue to facilitate the work of those States which wish to provide assistance to other States. In this connection, the Kingdom of the Netherlands has been providing assistance to certain States of the AFI region, in some cases, with support from the United States.

2.4 Future work

2.4.1 The ICAO regional offices will continue to monitor the situation. They will continue to encourage and assist States as much as possible in the implementation of WGS–84 so as to facilitate the next

¹Information was current as of 29 January 1998

stages in the CNS/ATM implementation programme which are WGS-84 dependent. The ICAO regional offices will also inform their PIRG(s) of the result and will seek their advice for continued improvement of the situation. The ICAO Technical Co-operation Bureau (TCB) will continue to assist States particularly when a donor source [such as a United Nations Development Fund (UNDP) project] is available to assist a State.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the status of implementation of WGS-84 reported by this paper; and
- b) provide any advice it deems necessary to further improve implementation of WGS-84.

APPENDIX

STATUS OF IMPLEMENTATION OF WGS-84 AS OF 15 MARCH 1999					
STATE	IMPLEMEN TE D in FULL	IMPLEMEN TE D in PART	UNDER WAY (completion expected in 1999)	PLANNED DATE TO START	NO KNOWN PLAN (or no reply)
1	2	3	4	5	6
Afghanistan	No information available due to inability to contact authorities in Kabul				
Albania					
Algeria					
Angola			(1)		
Antigua and Barbuda					
Argentina					
Armenia					(2)
Australia					
Austria					
Azerbaijan					
Bahamas					
Bahrain					
Bangladesh			(1)		
Barbados					
Belarus			(3)		
Belgium	(4)				
Belize					
Benin					
Bhutan			(5)		
Bolivia					
Bosnia and Herzegovina					
Botswana			(1)		

Brazil					
Brunei Darussalam					
Bulgaria					
Burkina Faso					
Burundi					
Cambodia					
Cameroon					
Canada					
Cape Verde					
Central African					
Chad					
Chile					
China					(6)
Colombia					
Comoros					
Congo (Brazzaville)					
Cook Islands					
Costa Rica					
Cote d'Ivoire					
Croatia					
Cuba					
Cyprus					
Czech Republic					
Democratic People's Republic of Korea				to be advised	
Democratic Republic of the Congo					
Denmark					
Djibouti					
Dominican Republic					
Ecuador					
Egypt					
El Salvador					
Equatorial Guinea					

Eritrea					
Estonia					
Ethiopia				April 1999	
Fiji					
Finland					
France					
Gabon					
Gambia					
Georgia					
Germany					
Ghana					
Greece					
Grenada					
Guatemala					
Guinea					
Guinea - Bissau					(7)
Guyana					
Haiti					
Honduras					
Hungary					
Iceland					
India					
Indonesia					
Iran, Islamic Republic					
Iraq					
Ireland	(4)				
Israel					
Italy					
Jamaica					
Japan					
Jordan					
Kazakhstan					(12)
Kenya			(1)		

Kiribati					
Kuwait					
Kyrgyzstan					
Lao People's Democratic Republic					
Latvia					
Lebanon					
Lesotho			(1)		
Liberia					
Libyan Arab					
Lithuania					
Luxembourg					
Madagascar				July 1999	
Malawi			(1)		
Malaysia					
Maldives					
Mali					
Malta					
Marshall Islands					
Mauritania					
Mauritius			(1)		
Mexico			(8)		
Micronesia, Federated States of					
Monaco					
Mongolia					
Morocco					
Mozambique			(1)		
Myanmar					
Namibia					
Nauru					
Nepal					
Netherlands, Kingdom of the	(13)				

New Zealand					
Nicaragua					
Niger					
Nigeria			(5)		
Norway					
Oman					
Pakistan				30/6/2000	
Palau					
Panama					
Papua New Guinea					
Paraguay					
Peru					
Philippines					
Poland					
Portugal	(9)				
Qatar					
Republic of Korea					
Republic of Moldova					
Romania			(14)		
Russian Federation					
Rwanda			(1)		
Saint Lucia					
Saint Vincent and the Grenadines					
Samoa					
San Marino					
Sao Tome and Principe			(10)		
Saudi Arabia					
Senegal					
Seychelles					
Sierra Leone					
Singapore					
Slovakia					

Slovenia			(15)		
Solomon Islands					
Somalia				1999(11)	
South Africa					
Spain					
Sri Lanka					
Sudan					No reply
Suriname					
Swaziland				1999(11)	
Sweden	(16)				
Switzerland	(17)				
Syrian Arab Republic					
Tajikistan					
Thailand					
The former Yugoslav Republic of Macedonia					
Togo					
Tonga					
Trinidad and Tobago					
Tunisia					
Turkey					
Turkmenistan					
Uganda			(1)		
Ukraine					
United Arab Emirates					
United Kingdom			(18)		
United Republic of Tanzania			(1)		
United States					
Uruguay					
Uzbekistan					
Vanuatu					
Venezuela					

Viet Nam					
Western Samoa					
Yemen					
Zambia			(1)		
Zimbabwe			(1)		

- 1) Survey completed, results to be published early in 1999.
- 2) Consultation with Eurocontrol is underway for assistance.
- 3) Completion date is to be determined.
- 4) Only charts to be updated to WGS-84 and this is scheduled for completion during 1999.
- 5) Survey completed, data publication to be decided.
- 6) In Hong Kong, China, WGS-84 fully implemented.
- 7) Survey was to start in June 1998 but prevailing situation in the State stopped the process.
- 8) Survey will be carried out in 31 main aerodromes and results will be published by December 1999. Thirty-one more aerodromes will be surveyed during the year 2000.
- 9) In Macau, also fully implemented.
- 10) Survey completed under ASECNA project, date of publication of results unknown.
- 11) To be surveyed by the Netherlands.
- 12) At present, we are unable to implement WGS-84 because we work in close co-ordination with the Russian Federation and most of our documents, including charts, are published by them. Therefore, the date of implementation of WGS-84 within our territory depends on the Russian one and is not defined yet.
- 13) WGS-84 fully implemented since 1996 except for vertical component.
- 14) A significant amount of work has been done and the result published in the AIP. Completion of the work in progress, to some degree, depends on completion of field work in Bulgaria, Moldova and Ukraine.
- 15) Vertical elements at 3 aerodromes still not completed.
- 16) It has been found difficult to publish the aircraft stands with an accuracy of hundredths of seconds, as one stand may host several different aircraft types. It would be useful if ICAO make available recommendations about which position shall be surveyed.
- 17) Switzerland has achieved a full two dimensional (2D) WGS-84 implementation in June 1997. No vertical elements have been published yet. This will be published when 3D-GNSS or 3D-RNAV instrument approach procedures will be implemented.
- 18) Facilities still to be published in accordance with WGS-84:
10% of significant points on ATS routes (await publication of adjacent States' navigation aids)
20% of aerodrome navigation aids, runway thresholds, etc. (await completion of aerodrome surveys)

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