International Civil Aviation Organization

WORKING PAPER

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(Information paper)

ASSEMBLY — 38TH SESSION

TECHNICAL COMMISSION

Agenda Item 33: Air Navigation — Standardization

ON THE STATUS OF GLONASS

(Presented by the Russian Federation)

EXECUTIVE SUMMARY	
This information paper contains data about the status and development of GLONASS.	
Strategic Objectives:	This working paper relates to the Safety and the Environmental Protection and Sustainable Development of Air Transport Strategic Objectives.
Financial implications:	Not applicable
References:	Annex 10 — *Aeronautical Telecommunications*, Volume I — *Radio Navigation Aids* Doc 9849, *Global Navigation Satellite System (GNSS) Manual*

1. INTRODUCTION

1.1 In the Russian Federation, work is continuing on deploying and improving the Russian global navigation satellite system GLONASS, whose standard precision signal is designed for open use by all interested users, including aviation.

1.2 Initially, this work was done under the federal targeted programme "Global navigation satellite system" which operated from 2002 through 2011. Currently, all work is being done under the federal targeted programme "Support, development, and use of the GLONASS system in 2012-2020". The Government of the Russian Federation guarantees funding from the federal budget.

[1] Russian version provided by the Russian Federation.

(2 pages)

2. BACKGROUND

2.1 On 8 December 2011, the first of three GLONASS-M satellites went into service in Slot 3, Plane 1. The satellite was launched from Baikonur cosmodrome on 4 November 2011. Now the working constellation of the Russian global satellite navigation system is complete, in its nominal complement, including 24 GLONASS-M satellites.

2.2 The complement of the GLONASS orbital grouping continues to be supported as part of the group of 24 GLONASS-M satellites, which is the nominal number for the GLONASS system. In the future, each launch will occur as it becomes operationally necessary to replace satellites that have exhausted their service life or to replace satellites that have failed. By the end of this year, four GLONASS-M satellites are scheduled to be ready for launch. Next year, another seven GLONASS-M satellites and one third generation GLONASS-K satellite will be ready for launch. The latter satellite has full capacity, including broadcasting in the L3 band. After completion of flight tests, the satellite will be included in the orbital grouping, which in the future will be populated with satellites of only that modification.

2.3 The first geostationary SDCM satellite was launched in December 2011, in accordance with deployment plans for the Russian SBAS (System of Differential Correction and Monitoring) (SDCM). Currently it is located at 167° E. The geostationary satellite Luch-5B, launched in December 2012 has begun broadcasting in test mode. It is located at 16° W.

2.4 The SDCM system passed tests with satellite Luch-5B and is in preliminary operation. Currently 19 collection and processing stations are deployed in Russia and 4 such stations, abroad. There is a plan to expand the network of stations by 10 stations annually, up to 40 stations in Russia and 20 stations abroad. To increase the coverage and service zone, the plan is to launch the Luch-5V (which will be located at 95° E) satellite into orbit at the end of 2013. SDCM is scheduled to begin nominal operation in 2015.

3. CONCLUSION

3.1 The Assembly is invited to take under advisement the information presented in this document.

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