

ACTION List

GBAS SBAS Implementation TF

Last Updated: 3/4/2026

NUMB	ACTION ITEM	PRIORITY	OWNER	DUE	STATUS ITF	NOTES (ICAO Document ref)
1	Develop awareness and information sharing					
1.1	Organize a workshop with airspace users of the APAC region (expected benefits, comparison with ILS and Baro VNAV, operational concept, coverage of SBAS and GBAS, programmes in the region, fleet readiness, cockpit interface, business case, retrofit, mandates, inviting air operators already using SBAS or GBAS procedures)	HIGH	ICAO/IATA		Closed	Thanks to AAI for hosting the workshop in Bengaluru India 14-16 Oct 2025. All presentations are available here https://www.icao.int/APAC/meetingdocs?fid=572
1.2	Organize a specific meeting with APAC regulators interested in GBAS SBAS (update of regulation, certification of provider, certify pilot training and standard operating procedures., approval of procedures,...)	HIGH	ICAO and some States to conduct a survey first		Closed	Should be done at national level. ICAO could organize a regional meeting of regulators upon request.
1.3	Create a brochure to summarize main aspects of GBAS and SBAS systems	HIGH	1) ICAO to collect information already available and put on the website 2)See whether we do need a brochure		Closed	Information on ICAO APAC webpage : https://www.icao.int/APAC/GBAS-SBAS

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1.4	Make reference to existing information about benefits of GBAS and SBAS vs ILS and APV Baro	MEDIUM	ICAO		Closed	<p>What is already available from ICAO or from other regions ?</p> <p>From FAA :</p> <p>https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/</p> <p>https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/library/factsheets/media/RNAV_QFacts_final_06122012.pdf</p> <p>From ICAO EUR/NAT</p> <p>https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/025%20-%20EUR%20RNP%20APCH%20Guidance%20Material/EUD%20Doc%20025%20RNP%20APCH.pdf</p>
1.5	Develop a list of GBAS and/or SBAS focal points in each APAC State	HIGH	ICAO / Action of the GBAS SBAS ITF/2 for ICAO RO to send a State Letter		Closed	<p>https://www.icao.int/sites/default/files/APAC/GBAS-SBAS/Focal-Point-list-for-the-national-GBAS-SBAS-programmes-APAC-States.pdf</p>
1.6	Develop a synthetic list of the on going development of GBAS SBAS systems in the APAC region (coverage, date of entry into service)	HIGH	ICAO / Information to put on the website / Action Focal point to provide GBAS SBAS programme information to ICAO		Closed	<p>https://www.icao.int/APAC/GBAS-SBAS</p> <p>More could be done to present each programme</p>
1.7	Develop a synthetic list of GBAS and SBAS fleet readiness	MEDIUM	ICAO/IATA/Eurocontrol		Closed	<p>Information available from the last workshop in Bangaluru in Oct 2025 :</p> <p>https://www.icao.int/APAC/meetingdocs?fid=572</p> <p>Synthetic view could be added on the ICAO webpage for GBAS SBAS</p>

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1.8	Develop a list/map of published GBAS and SBAS procedures in the APAC region	MEDIUM	ICAO with input from focal points		Closed	https://www.icao.int/APAC/GBAS-SBAS-MAP The website (Airbus/Eurocontrol) lists the GBAS stations worldwide : https://pbnportal.eu/epbn/main/PBN-Tools/FlyGLS.html SBAS : FAA LPV approaches: https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/approaches/media/LPVs.xlsx EGNOS LPV https://egnos-user-support.esspas.eu/new_egnos_ops/resources-tools/lpv-procedures-map Europe through Eurocontrol access https://www.eurocontrol.int/platform/performance-based-navigation-map-tool
1.9	Develop a list of APAC States' mandates (existing and planned) related to GBAS and SBAS	MEDIUM	ICAO with input from focal points		Closed	Information from India : - NATIONAL CIVIL AVIATION POLICY 2016 https://www.civilaviation.gov.in/sites/default/files/2025-10/national-civil-aviation-policy-2016_1.pdf - Amendment to National Civil Aviation Policy 2016_0.pdf https://www.civilaviation.gov.in/sites/default/files/2023-07/Amendment%20to%20National%20Civil%20Aviation%20Policy%202016_0.pdf
2	Experience sharing					
2.1	Organize a discussion and a visit if possible of States/Airports who have already implemented Gbas or Sbas systems (all subjects including siting, performance demonstration, safety assessment..)	HIGH	ICAO / When possible		Closed	Visit of GBAS site at Tokyo Haneda airport Visit of GAGAN in Bangaluru during the workshop
3	Technical issues					

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3.1	Review of the previous ionosphere studies published in 2016 (also look at how to use SBAS coverage for GBAS)	HIGH	Expert Subgroup 3-1		Closed	Coordination/harmonization with the ad hoc group of ICAO NSP GWG (GBAS Working Group) working on iono guidance for GBAS in low latitude regions.
3.2	Management of SBAS Channel	MEDIUM	States to contact ICAO to get the SBAS channel numbers as per SL 2019/87		Closed	Handled by ICAO HQ SL 2019/87 from ICAO to States to nominate contact point and then can access the ICAO tool
3.3	VDB frequency assignment and coordination in APAC	HIGH	Hong Kong China to coordinate with other States and ICAO		Closed	ICAO Doc 9718 Vol.II (Second Edition, 2022) includes VDB frequency compatibility criteria.
3.4	ATC interface and NOTAM matters (both for GBAS and SBAS) (Ref essential navigation means in Annex 10 ??)	MEDIUM	ICAO/ WP and discussion for a future meeting	ITF/8	Closed???	Presentation by ICAO at ITF8 in May 2026 EUROCAE ED-114B Change 1 includes requirements for status monitoring and control of GBAS by ATC.
3.5	SBAS coverage extension to neighboring States (simulation, adding ground station and associated costs, certification,Service Level Agreement)	HIGH	States operating SBAS should present WP		Closed	Continuous discussion among interested parties Was discussed at the workshop in Bengaluru
3.6	GBAS and SBAS safety assessment	HIGH	States to share their experience		Closed	Presented by Australia on GBAS in ITF/3
3.7	GBAS SBAS performance demonstration (acc,int,avail,cont,time to alarm, data collection, simulation,...)	HIGH	States to share their experience		Closed	Presentations by States through WPs in different ITF meetings and at workshops
3.8	GNSS signal monitoring (legal recording,...)	MEDIUM	States to share their experience		Closed	Ref ICAO GNSS Manual

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3.9	GBAS siting criteria	MEDIUM			Closed	EUROCAE ED114B and FAA Order 6884.1 (http://www.faa.gov/documentLibrary/media/Order/6884_1.pdf)
3.10-	Information to be provided in the flight plan and information into AIP	MEDIUM			Closed	ICAO DOC 4444
3.11	Final Approach Segment Data Block : 1) Tool to elaborate the FAS DB ; 2) How to validate FAS DB during the ground and flight inspection	MEDIUM	States to share their experience		Closed	Same for SBAS and GBAS? Ref Eurocontrol tool to create FAS DB : EUROCAE ED114B for GBAS
3.12	Phraseology	LOW			Closed	ICAO DOC 4444
3.13	Lack of PRN numbers for SBAS Geo Satellites	MEDIUM	Mainly for new SBAS providers		Closed	Annex 10 / NSP and receiver standards RTCA DO229F
3.14	Interference management (but this is not only specific to GBAS SBAS)	MEDIUM	States to share their experience		Closed	
4	Quick guides and references					
4.1	ICAO and others document review (Top Down)	HIGH	ICAO / Website		Closed	Source : ICAO presentation given at the first workshop in ROK in 2019
4.2	Develop High Level guide on Implementation Process for GBAS and SBAS	HIGH	Expert Sub group 3-2		Closed	Documents published on ICAO APAC website Edocument : - GBAS Implementation Guidance - SBAS Implementation Guidance
4.3	Technical support for system certification and operation certification	TBD			Closed??	To be decided after meeting with regulators Linked with 1.2 and 3.6 above. Some experiences shared: - Australia (WP02, GBAS/SBAS ITF/3 - China (Presentation 1-2-4, SBAS/GBAS Workshop in India) - ...

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4.4	Complement the "PBN in a page"	LOW	ICAO to assess what could be done		Closed	https://www.icao.int/APAC/Documents/edocs/PBN-in-a-page%20V2.pdf GBAS is not part of PBN but rather comparable with ILS
5	Training					
5.1	To share syllabus for ATCOs	MEDIUM	To be confirmed		??	
5.2	Develop one day/two day training workshop for ATCOs (Use of GBAS/SBAS for approach and landing : mixity of traffic, ATC interface, Notam,...)	MEDIUM	To be confirmed		Closed	??
5.3	Deliver a training module on GBAS and SBAS instrument flight procedure design	MEDIUM	ICAO CDI APAC Flight Procedure Programme (FPP)		Closed	Courses provided by APAC Flight Procedure Programme : PBN Procedure Design course and Procedure Design Refresher Course. https://www.icao.int/APAC/APAC-FPP/default