

Mauritius
Airspace Restructure
Inter-regional ATM
Coordination
Meeting -2021
28 June – 2 July 2021

Presented by:

Selvanaden AYASAMY

- Air Traffic Control Supervisor
 - 41 years experience in ATS
 - 28 years experience in Air Traffic Control

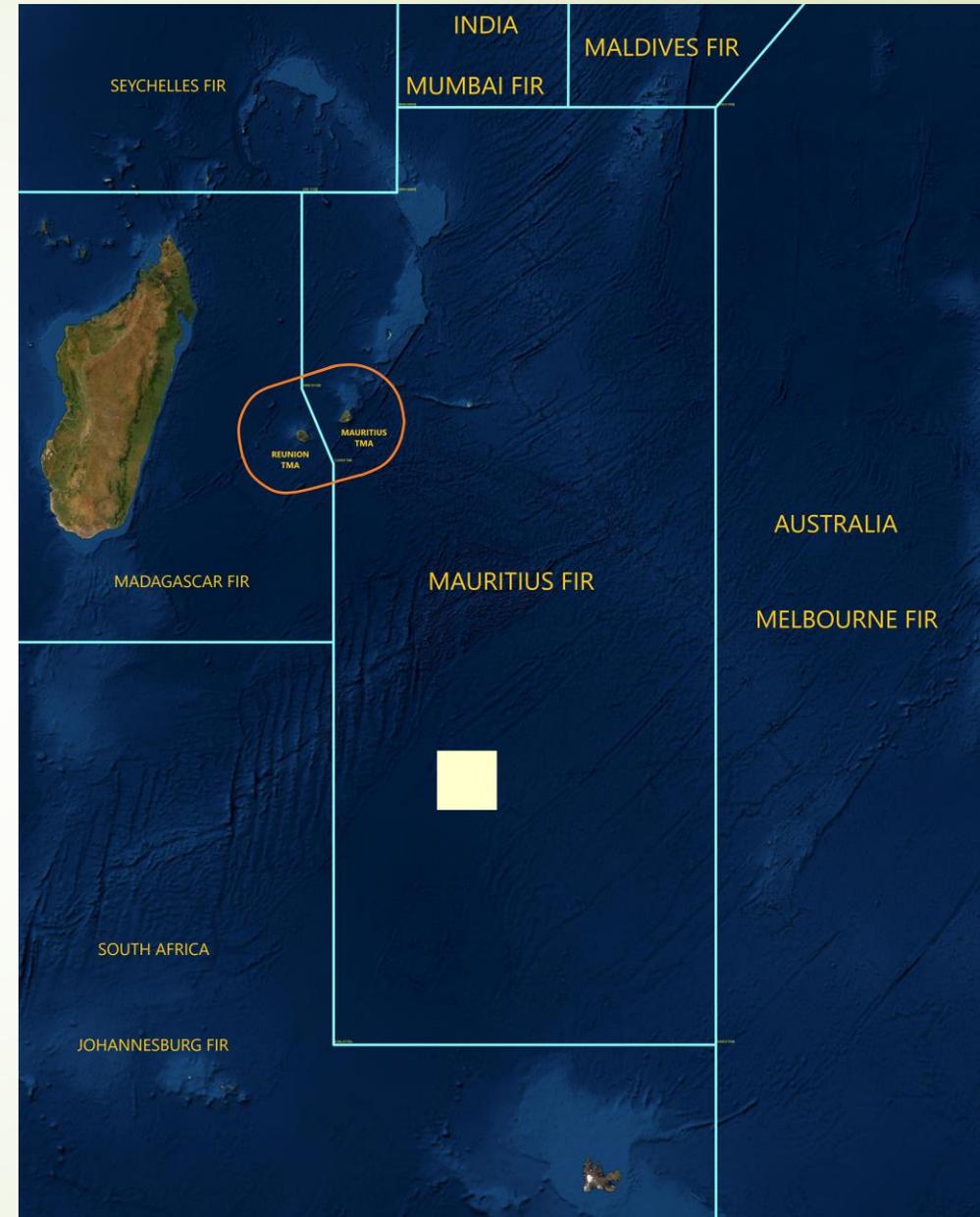
Mauritius Airspace Restructure

Location

Mauritius is situated around the point
20° 15 South and 057° 30 East

Mauritius FIR is bounded :
within AFI Region

Northwest	: Seychelles Is.
West	: Madagascar
Southwest and South	: South Africa
APAC Region	
East	: Australia
Northeast	: Maldives Is.
North	: India



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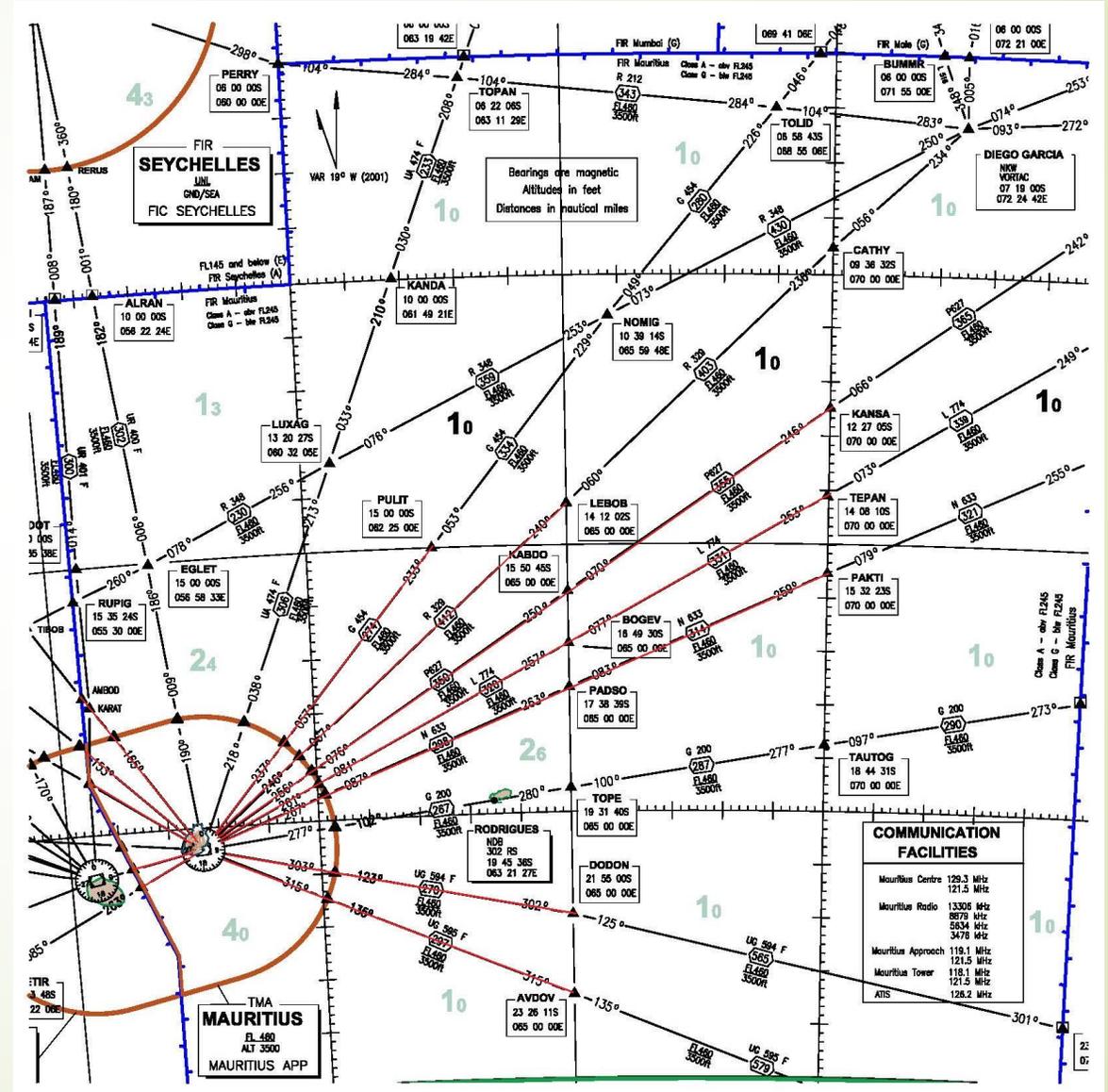
- Mauritius provides procedural control within its TMA and Oceanic airspace.
- In 2003 Mauritius introduced the EUROCAT System which provided ATC with HMI new tool to manage its air traffic. This enhances the situation awareness of our controllers.
- At the same time, we introduced ADS-C, CPDLC, RNP 10 and AIDC
- Through AIDC our system and that of Melbourne started communicating and handing over of traffic was done automatically at the boundary.
- RNP10 was also introduced for aircraft that were equipped.
- 2008 we introduced basic RNAV SIDs and STARS within the Mauritius TMA

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- However, in 2015 through Mauritius ATS planning, a rate of 10% of increase in Air Traffic was forecasted and it became evident that management of our airspace would have reached saturation by 2025.
- As all ATS Routes end or start at PLS VOR and with the location of their entry or exit points at the FIR boundary on the East, even with the implementation of RNP10, they were not laterally separated.(P627, L774 and N633)
- As Traffic flow started to increase, controllers were finding it very difficult to clear aircraft at its optimum level. On several occasion aircraft have to maintain a lower or higher level for more than two hours.
- Our Enroutes ATS routes were becoming less performant.

Mauritius Airspace current

As Traffic flow started to increase controller were finding it very difficult to clear aircraft at its optimum level. On several occasion aircraft have to maintain a lower or higher level for more than two hours.



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Project was launched in September 2018

Following Changes:-

1. New Control Zone Configuration.
2. RNP1 SIDs and STARs within Mauritius TMA with CDOs and CCOs.
3. Parallel unidirectional RNP4 Routes within Mauritius FIR with new Waypoints at equidistance along the TMA.
4. Realignment of existing Approaches
5. RNP4 approaches

Proposal for amendments was sent to our neighbours for comments and approval.

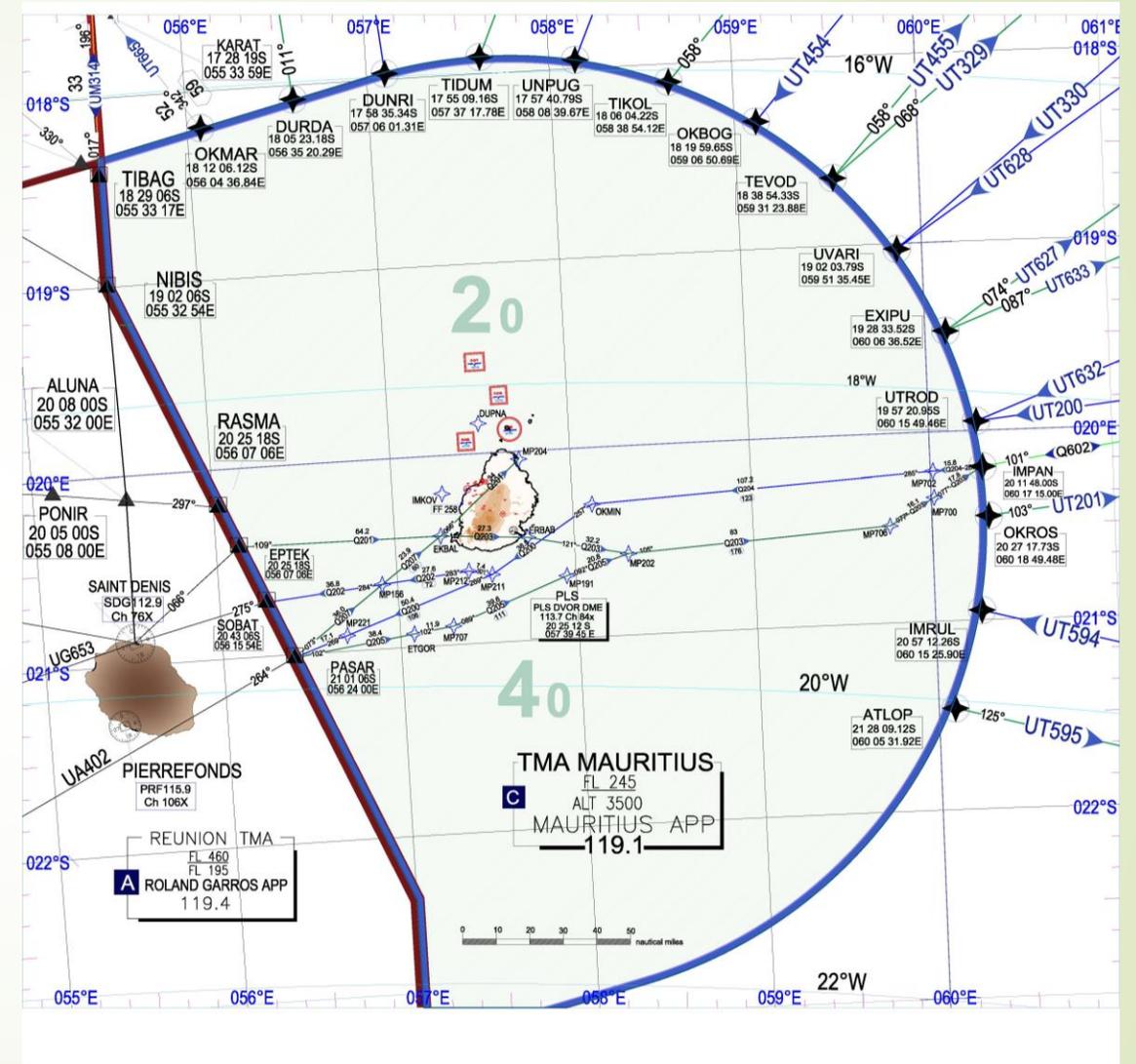
Same will be sent to ICAO Regional Office for approval.

Implementation January 2022 (tentative)

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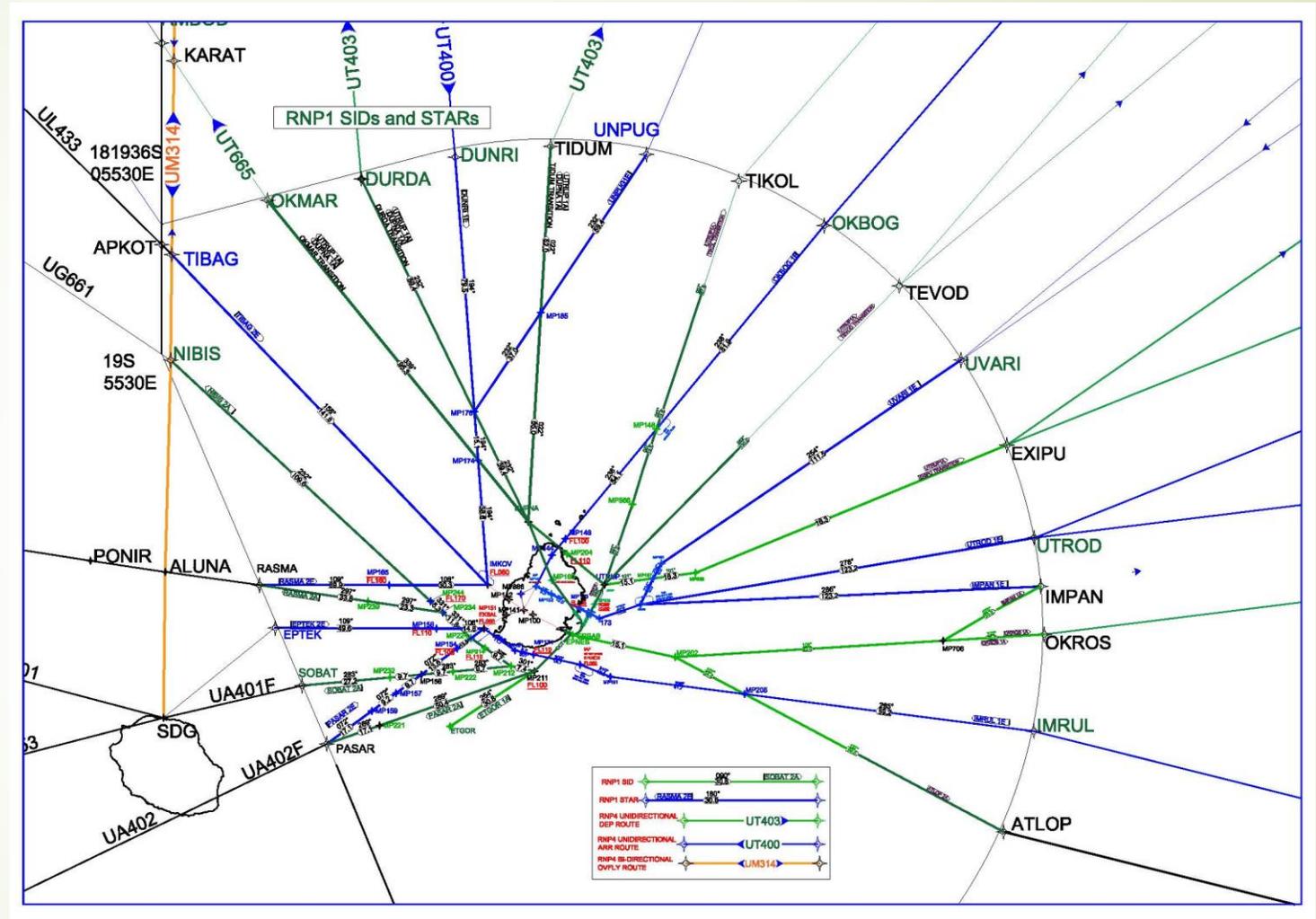
In order to have a harmonious airspace,

- Whole airspace needs to be redesigned.
- To accommodate RNP1 SIDs and STARs within the TMA all the waypoints along the TMA boundary except on the western side had to be removed and new equidistant points 30 nm apart were introduced



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➔ [RNP1 SIDs and STARs AFI region 2.pdf](#)



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In this context we are submitting Proposal for Amendments for these ATS routes which start or stop at the PLS VOR:

- to be deleted at the FIR Boundary.
- Be replaced by new parallel unidirectional RNP4 routes within the FIR but linked to the corresponding entry or exit waypoint at the FIR
- The Regional ATS routes UM314, R348 and R212 remained bidirectional route with new waypoints as they crossed the new RNP4 routes.
- Proposing that the conventional routes UR348 and R212 be upgraded as RNAV routes.

Mauritius Airspace Restructure

In this context we are submitting Proposal for amendments for these ATS routes which stop at the PLS VOR:

- ▶ to be deleted at the FIR Boundary.
- ▶ To be replaced by new unidirectional RNP4 routes within the FIR but linked to the corresponding entry or exit waypoint at the FIR
- ▶ The Regional ATS routes UM 318, R348 and R212 remained bidirectional route with new waypoints as they crossed the new RNP4 routes.
- ▶ Proposing that conventional ATS routes R348 and R212 be upgraded as RNAV routes.
- ▶ Removal of ATS Routes UG652, A333, G451 and B585 as they are only within Mauritius Boundaries. They have been deleted within Melbourne and Johannesburg FIR.

We have also created a Free Route Airspace (FRA) south of Lat 25° S and will be implemented in the coming months awaiting the approval of ICAO regional office.



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Questions?



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Thank you

