



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY FIFTH MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/25)**

Kuala Lumpur, Malaysia, 8 – 11 September 2014

Agenda Item 3: Performance Framework for Regional Air Navigation Planning and Implementation

3.2: ATM

**IMPLEMENTATION OF HIMALAYAN AND TRANS HIMALAYAN ROUTES
VIA KATHMANDU FIR**

(Presented by Nepal)

SUMMARY

This paper outlines the significance and multiple benefits of the development of Himalayan routes overflying Kathmandu FIR. Co-operation and support from the concerned States, ICAO and IATA is essential to materialize the proposed air routes, which will constitute a leap in enhancing safety and efficiency of air transportation, as well as, foster the harmonized and economically viable air route that contribute a lot in the reduction of CO₂ emissions.

Action: The meeting is invited to:

- a) Note the proposal as a continuation of past efforts for the implementation of Himalayan Route joining Middle-East and Europe to the West and Far-East to the East overflying Kathmandu FIR:
- b) Note the proposal for establishment of Trans Himalayan Route linking Indian sub-continent and Mainland China.
- c) Consider this proposal as an applicable concept to effectively address the issues of carbon emissions and environmental protection.

Strategic Objectives:

This information paper relates to:

A: **Safety** – Enhance global civil aviation safety

E: **Environmental Protection and Sustainable Development of Air Transport:**
Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment.

1. INTRODUCTION

1.1 Nepal is geographically located between India and China on the southern slope of the Himalayas and has diverse landscapes ranging from flat plains to the highest mountain of the world, the Mt. Everest. The development of long haul air routes along the southern slope of elegant Himalayan stretches was envisaged during EMARSSH project in 2002 and since then has been kept in ICAO ATS route catalogue as future requirement.

1.2 ICAO data reveals that Asia Pacific Region has the highest growth in air traffic movement. Nepal is of the view that with the implementation of Himalaya Routes, there will be enhancement of safety and efficiency of air navigation in the Asia Pacific Region. Nepal hereby would like to draw the attention of this forum to the establishment of Trans-himalayan Route that connects China and India, North- South through Nepal and also implementation of Himalaya 2 route that connects Asia to the east and Europe and Middle East to the west. This will constitute a leap in enhancing safety and efficiency of air transportation within the region and beyond, as well as, foster the harmonized and economically viable shorter air route that significantly contribute in reducing the CO2 emissions. Nepal appeal this forum for the constructive support on this.

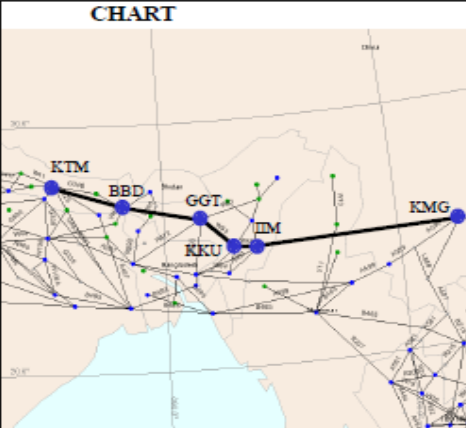
2. ANALYSIS

2.1 Details of Himalayan Routes

| Routing | Existing Route | Proposed Route | Distance saved, Time saving | Reduced Emission, CO ₂ (per flight) | Fuel Saving (per flight) | Remarks |
|---|--|--|-----------------------------|--|--------------------------|-----------------------|
| Kathmandu to Kunming, Hong Kong, Guanzhou | Kathmandu-R344-BRT-KH-RAJ-A201-LSO-A599-Kunming (1085NM) | 1.Kathmandu-G348-BBD-W45-GGT-W53-KKU-W55-IIM-DCT-Kunming (971NM) | 114NM/ 15 min | 1640 kg | 520 kg | Himalaya-2 Route |
| Kathmandu to Shanghai/ Beijing | Kathmandu-B345-Lhasa | Kathmandu-B345-Lhasa -Chengdu-Shanghai/ Beijing | | | | Trans-Himalayan Route |

ATS ROUTE NAME: Himalaya 2

Requested by : Nepal

| | |
|--|--|
| <p>ENTRY/EXIT POINT XXXXX</p> <p>ROUTE DESCRIPTION Kathmandu (KTM) .. Baghdogra (BBD) .. Guwahati (GGT) .. Silchar (KKU) .. Imphal (IIM) .. Kunming (KTM)</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY: HIGH/MED/LOW</p> | <p style="text-align: center;">CHART</p>  |
|--|--|

Source: ICAO APAC Region ATS Route Catalogue, Version 12, 26 June 2013

Note:

1. China has agreed the opening up the Trans-himalayan and Himalaya 2 route during the Air Service agreement between the two countries in March 2014. Civil Aviation Authority of Nepal plans for an ATS Agreement in 2014/2015 before the operation on these routes.
2. India has agreed Himalaya-2 Route in principle for high level flights in 2010. Further discussions will be held in near future at the DGCA level of the two countries. Nepal is further Proposing to the extension of Himalaya 2 from Kathmandu to the west linking ATS Route L626 for direct routing to India and beyond.
3. Nepal will have full VHF Coverage in Kathmandu FIR by the end of 2014 as second Remote Control Air Ground (RCAG) will be installed to the eastern part of the country and enroute surveillance up to 200 nm by MSSR, which will be completed by 2015.

3. BENEFITS

3.1 Reduce congestion of air traffic flows across Bay of Bengal allowing airlines alternate and more direct route to and from Europe and Middle East to Far East and vice versa, enhancing the regional as well as global aviation safety.

3.2 Direct flights from Indian Sub-continent to Mainland China crossing the Himalayas will open the shortest possible north south route reducing flying time significantly and enhancing multiple benefits.

3.3 Reducing the consumption of fuel, contribute in reducing CO₂ emissions thereby addressing the global concern of environmental protection.

3.4 Enhance harmonized and balanced use of airspace thereby reducing the ATC workload and increasing the ATC efficiency.

4. CONCLUSION

4.1 Considering over the enormous benefits and potentials which Himalaya 2 route and Trans-Himalayan Route, Nepal urges better understanding and co-operation among concerned States, ICAO, IATA and the Industries for the implementation of the proposed Routes.

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