



*International Civil Aviation Organization*

**Fourth Meeting of the Southeast Asia Route Review Task Force  
(SEA-RR/TF/4)**

Bangkok, Thailand, 22 – 26 November 2010

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**Agenda Item 6:   ATS Route Development**

**Implementation of Himalaya-2 Route**

(Presented by Nepal)

**SUMMARY**

Increasing fuel cost, air traffic congestions and increased emission are the most pressing issues being faced by international air transportation. Nepal is of the view that Himalaya Routes proposed during EMARSSH (Europe Middle East-Asia Route South of Himalaya) project are still valid as a solution to the congestion of westbound traffic flow across the Bay of Bengal. This paper outlines the significance and multiple benefits of proposed Himalaya 2 Routes via Nepal. Co-operation and support from all concerned to materialize the proposed air route is sought which will significantly contribute to enhance safety and efficiency of air transport within the region and beyond.

**1.    INTRODUCTION**

1.1    Growing air traffic congestion, increased emissions and unexpected fluctuation in fuel price are the key concerns and challenges of present international air transport industry. Initiatives taken by ICAO Asia Pacific Region, in the past to address the problems such as implementation of more efficient route structures including EMARSSH (Europe Middle East-Asia Route South of Himalaya) Route, implementation of Reduced Vertical Separation Minima (RVSM), introduction of Air Traffic Flow Management in the Bay of Bengal for the traffic transiting through Kabul FIR are few of the remarkable examples.

1.2    Apart from above achievements, IATA's campaign in the form of "Save a minute per flight" and its initiation to open up new short, direct and efficient ATS Route is also very much noteworthy.

1.3    In spite of all those efforts, problem remains as to how best and flexibly we can use the airspace. Because of the unexpected growth rate of air traffic, measures taken so far are outpacing the growth.

**2.    DISCUSSION**

**2.1   Himalaya Routes**

2.1.1   For many years, during EMARSSH project and in many other occasions, Nepal was proposing some new routes as Himalaya Route with the aim of shifting traffic from south to north and have better traffic management, reducing emission and saving fuel. ICAO's Strategic Objective: *Environmental Protection - minimize the adverse effect of global civil aviation on the environment* is

an instrumental phenomena emphasizing the need of working together and apply all sort of measures towards achieving it.

2.1.2 The Himalaya Routes that are documented in ICAO, Asia/Pacific Region ATS Route Catalogue as future requirements are:

- i. Himalaya 1: Bangkok - Kolkata - Nepalgunj (Nepal) – Indek (Pakistan) – Two Way (Bangkok – Kolkata existing route L507)
- ii. Himalaya 2: Kunming-Kathmandu (Two Way)

2.1.3 The importance of proposed Himalaya 2 Route has been further augmented in the context of fulfilling ICAO's strategic objectives on environmental protections and enhancing the efficiency of aviation operations by developing, coordinating and implementing air navigation plans that reduce operational unit cost and facilitate increased traffic. Expected benefits from the proposed Himalaya-2 Route is presented in the tables below.

#### **Himalaya-2 Route details and the expected benefit in Aviation**

Routing	Existing Route	Proposed Route	Distance saved	Reduced Emission, CO <sub>2</sub> (per flight)	Total Reduced Emission, CO <sub>2</sub> /Year	Fuel Saving (per flight)	Total Fuel Saving/year (Average)	Remarks
Kathmandu to Kunming, Hong Kong, Guangzhou	Kathmandu-R344-BRT-KH-RAJ-A201-LSO-A599-Kunming (1085NM)	1.Kathmandu-G348-BBD-W45-GGT-W53-KKU-W55-IIM-DCT-Kunming (971NM)	114NM	5700kg	5200 ton	1824kg	1660 ton	Average 2.5 ft/day from Kathmandu To Hong Kong, Kunming, Guangzhou

2.1.4 The proposed route not only reduces the emission by shortening the distance because of the direct routing, when connected to L626 (already established route from Kathmandu to Delhi), will significantly increases ATC efficiency by shifting the air traffic congestion from existing airspace. This route also helps to reduce flying time of flights from Hong Kong to Delhi, Middle East and Europe.

Routing	Existing Route	Proposed Route	Distance saved	Reduced Emission, CO <sub>2</sub> (per flight)	Total Reduced Emission, CO <sub>2</sub> /Year	Fuel Saving (per flight)	Total Fuel Saving/year (Average)	Remarks
Delhi to Kunming, Hong Kong, Guangzhou	Delhi-R460E-LLK-A201-SALOR-RAJ-LSO-A599-Kunming (1488NM)	1.Delhi-L626-Kathmandu-G348-BBD-W45-GGT-W53-KKU-W55-IIM-DCT-Kunming (1431NM)	57NM	2850kg	15600 ton	912kg	4990 ton	Average 15 ft/day from Delhi To Hong Kong, Kunming, Guangzhou

**3. ACTION REQUIRED BY THE MEETING**

3.1 The meeting is invited to note :

- a) the enormous benefits and potentials of the proposed route in terms of cost and time saving and its contribution towards the increased safety and efficiency ,
- b) its contribution towards reducing carbon (CO<sub>2</sub>) emission and shifting air traffic congestion in the region.

3.2 Nepal would like to request the co-operation from all stakeholders especially from China for the implementation of the proposed route which will be of great benefit to civil aviation and airline industry of the region.

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## APPENDIX

### Beneficiary airlines of the proposed Himalaya-2 Routes (source: published flight schedule and internet information)

#### Flights to/from Kathmandu

- |      |                |                                 |                    |
|------|----------------|---------------------------------|--------------------|
| i.   | Nepal Airlines | - Kathmandu-Hong Kong-Kathmandu | - 3 flights a week |
| ii.  | Dragon Air     | - Hong Kong-Kathmandu-Hong Kong | - 4 flights a week |
| iii. | China Southern | - Guangzhou-Kathmandu-Guangzhou | - 4 flights a week |
| iv.  | China Eastern  | - Kunming-Kathmandu-Kunming     | - 3 flights a week |

#### Flights to/from Delhi

- |       |                        |                             |                     |
|-------|------------------------|-----------------------------|---------------------|
| i.    | Air India              | - Delhi-Hong Kong-Delhi     | - 5 flights a week  |
| ii.   | Cathay Pacific         | - Hong Kong-Delhi-Hong Kong | - 14 flights a week |
| iii.  | Qatar Airways          | - Doha-Hong Kong-Doha       | - 7 flights a week  |
| iv.   | Saudi Arabian Airlines | - Riyadh-Hong Kong-Riyadh   | - 6 flights a week  |
| v.    | KingFisher Air         | - Delhi-Hong Kong-Delhi     | - 5 flights a week  |
| vi.   | Jet Airways            | - Delhi-Hong Kong-Delhi     | - 5 flights a week  |
| vii.  | Japan Airlines (JAL)   | - Delhi-Hong Kong-Delhi     | - 5 flights a week  |
| viii. | Virgin Atlantic        | - Delhi-Hong Kong-Delhi     | - 7 flights a week  |
| ix.   | Oasis Hong Kong        | - Delhi-Hong Kong-Delhi     |                     |
| x.    | Singapore Airlines     | - Delhi-Hong Kong-Delhi     |                     |

#### Cargo Airlines

- |      |                       |   |
|------|-----------------------|---|
| i.   | Air France            | - Abu Dhabi – Hong Kong – Abudhabi<br>- Baharain  |
| ii.  | Alitalia              | - Delhi – Hong Kong – Delhi                       |
| iii. | British Airways       | - Delhi - Hong Kong – Delhi                       |
| iv.  | Cargolux              | - Abudhabi – Hong Kong – Abudhabi<br>Dubai Kuwait |
| v.   | Lufthansa Cargo       | - Baharain – Hong Kong – Bahrain<br>Sarjahan -    |
| vi.  | Martin Air            | - Sarjahan – Hong Kong – Sarjahan                 |
| vii. | United Parcel Service | - Dubai – Hong Kong - Dubai                       |