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Final Report

Promotion of Regional and Remote Area Air Connectivity in India

Ministry of Civil Aviation

Submitted by

Deloitte Touche Tohmatsu India Private Limited

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1 Summary of Recommended Actions

Definitions

1. **Regional Air Connectivity** – Provision of Air Transport Services to under-served and un-served markets (towns / cities) with potential, providing connectivity both within a Region as well as between Regions.

   DGCA has identified 5 regions as part of Civil Aviation Requirement (CAR) laying down Minimum Requirements for Grant of Permit to operate Scheduled Regional Air Transport Service as North, South, East, West and North-East coinciding with Flight Information Regions (FIRs). It is recommenced that such already identified regional boundaries be continued with.

2. **Remote Area Air Connectivity** – Provision of Air Transport Services to areas not adequately connected through surface transportation – including parts of the country with difficult terrain (hilly), separated by large water bodies (islands) and areas with security (including Left Wing Extremists related) concerns, to enable reliable transportation to the rest of the country.

Towns for promoting Regional / Remote Air Connectivity

1. It is recommended to develop a mechanism, based on relevant parameters, to identify towns which are suitable for promotion of regional and remote area air connectivity. The parameters should ideally reflect such properties/profile of towns, which merit their consideration for connectivity or indicate a certain need of the area that can most suitably be met by air connectivity.
2. The following parameters are suggested for consideration (and categorized below) for identification of towns for promoting regional / remote area air connectivity:
   a. Population of the town / city signifying a market / base for travellers, or
   b. Tourism potential of the town / city signifying a market / demand, and
   c. Level of economic activity signifying the inherent potential of the town / city to be able to afford / sustain the requirement over time, and
   d. Requirement to connect remote areas.
3. The above would represent a superset of towns / cities where air connectivity could be possibly considered for promotion. However, in view of the requirement to focus initially at a smaller scale and then progressively consider more towns / cities for promoting air connectivity, a mechanism would be required to prioritise towns / cities. Two such factors for prioritising could pertain to:
   a. Towns and cities with more than 1 factor driving air connectivity requirement; and
   b. Towns and cities which are not connected by air transport services - neither directly nor indirectly.
4. In this context, the study has considered adequate access to an airport with adequate connectivity in terms of less than 3 hours driving time or 150 km distance to any identified major and minor hub airports (have at least 14 flights a week). Since

travel time through surface transport may vary depending upon the condition of the surface transport infrastructure, towns / cities which cannot access such airports on account of specific issues with surface transport facilities can be included.

5. Also, in the first instance, towns / cities satisfying both the parameters of Population and Economic Potential could be prioritised for promotion of air connectivity.
6. Identification of towns for promoting air connectivity should not be a one-time exercise and a periodic review should be undertaken once in at least every three (3) years so that experiences with policy initiatives and new developments can be factored.

Route Dispersal Guidelines

1. Existing Category III rotes and attendant requirement to provide services on such routes under 'Route Dispersal Guidelines' may be considered for discontinuing with immediate effect.
2. Category II and II-A routes provide connectivity to remote areas. 'Route Dispersal Guidelines' requirements for such routes may be continued on account of social obligations and national cohesion priorities for a transition period of 2 years.
    a. The importance of such Guidelines for this category of routes along with operational experience of the market-based mechanism is recommended to be reviewed after 2 years and a decision taken on discontinuing requirements to provide services on these routes by Airlines.
    b. Director General of Civil Aviation to notify that for rendering the prescribed minimum service on routes in Category II and II-A, an operator may at his option provide the service with aircraft in any other operator's fleet on mutually agreed terms (market based capacity trading) including through operators with permit to operate Scheduled Regional Air Transport Service.

Promotion of Regional and Remote Area Air Connectivity through a Regional Air Connectivity Fund (RACF)

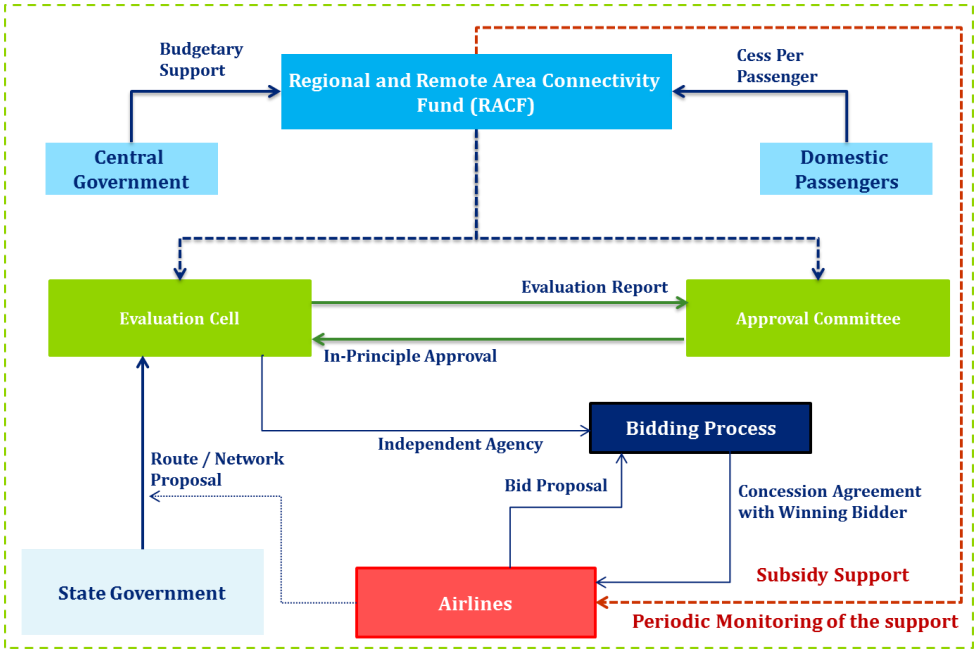
1. RACF to promote both regional as well as remote area air connectivity.
2. RACF should be a non-lapsable fund to be created for a period of at least 10 years in the first instance.
3. Fund to provide Direct or Indirect financial support to air transport service providers for operations on unviable routes:
    a. on the basis of a transparent competitive bidding process, and
    b. for a fixed period of time specified upfront.
4. RACF should have a strong legal and institutional framework with a sustainable and credible source of financing for the fund.

Institutional Framework of RACF

1. The fund should be set up as a separate institution with a provision to be temporarily create under an existing institution to ensure that the whole objective is not delayed substantially.

Implementation Mechanism of the RACF

1. Key Stakeholders include:
    a. An Approval Committee with mandate to grant final approval for sanction of funds for evaluated proposals, allocate funds and award contracts subsequent to transparent bidding process. The Minister of Civil Aviation could be designated as the Chairperson of the Approval Committee with other members including the Director General of Civil Aviation, Chairman AAI etc.
    b. An Evaluation Cell to function as the secretariat for the Approval Committee. The cell could have the mandate to evaluate proposals for air connectivity, implement awarded proposals and monitor & audit allocated funds. Secretary, MoCA could be designated as Chairperson of the Evaluation Cell with other officials including representatives from DGCA, BCAS and AAI and supported by independent professional experts with background in air transport services.
2. Funding Sources for RACF:
    a. Primary funding sources
        - Budgetary resources from the Government on a year to year basis linked with likely demand for disbursements during the year; and / or
        - Levying a fixed passenger charge / cess on each departing domestic passenger in the country.
    b. Supplementary funding sources
        - Route specific support from the State Government, local industry associations etc.
        - Revenue Share / Premium obtained from existing/ future airport infrastructure privatizations undertaken by the Ministry of Civil Aviation.
3. Ministry of Civil Aviation to issue guidelines for operation of the RACF. The Guidelines should cover:
    a. Detailing of formats for submission of proposals, and criteria for eligibility, of funding through the RACF.
    b. Criteria for prioritization of proposals for funding through the RACF.
    c. Identification of key provisions in the agreement to be signed with the airlines such as minimum connection requirements, penalty mechanisms, contribution from the State Governments, tenure of the subsidy etc.
4. The indicative process of consideration of Proposals by the Fund is presented in the diagram below



Central Government Actions

1. Reclassification of ATF as Declared Good to cover Aviation Turbine Fuel sold to an aircraft with a maximum take-off mass of less than forty thousand kilograms operated by non-scheduled air transport service providers (except for Business Jets) in addition to its present coverage of scheduled operations
2. ATF be brought under Petroleum and Natural Gas Regulatory Board, India
3. It is understood that the Fuel Throughput Charges are levied by the Airport Operators on the Oil Marketing Companies at the airports and this charge is passed on to the airlines by the Oil Marketing Companies. MoCA may consider exemption from the levy of such Fuel Throughput Charges at regional airports to benefit the airlines.
4. Consider encouraging / incentivizing development of 3rd Party MRO firms within India. Relaxation in Service Tax on labour charges (on the labour used by MRO firms) and in VAT on imported spares (required for replacement of parts of aircrafts) to be considered.
5. In order to bring down the cost of acquisition of aircraft, Withholding Tax on lease of Aircrafts – especially in respect of aircraft with a maximum take-off mass of less than forty thousand kilogram, to be rationalized.

State Government Actions

1. State Governments should form a dedicated agency for facilitation of civil aviation matters in the State
2. In view of the key role of State Governments in promoting regional air connectivity, the State Governments may be encouraged to provide support to regional / remote air transport services in terms of following measures:
    a. Reduction of VAT on Aviation Turbine Fuel sold to an aircraft with a maximum take-off mass of less than forty thousand kilograms operated by non-scheduled air transport service providers (except for Business Jets) (in

additional to the present provision with respect to scheduled air transport service providers).

b. Underwrite Seats on new routes between towns identified for promotion of regional / remote connectivity.

3. In order to support operation / creation of airport infrastructure in towns identified for promotion of regional / remote connectivity, the State Governments may be encouraged to provide support in terms of following measures:

   a. State Governments to bear cost of provision of security by CISF or take over provision of security by State Police in compliance with requirements specified by Bureau of Civil Aviation Security.

   b. Provision of land and extension of roads (access infrastructure) and utilities (power and water connections) for development of low-cost airports.

   c. Reduction of Property Tax rate.

   d. At airports with limited aircraft operations, Rescue and Fire Fighting services could be provided by the State Government provided that the services and vehicles comply with applicable sections of DGCA Civil Aviation Requirements.

Regulator (DGCA / BCAS) Actions

1. Relaxation of clauses in the Civil Aviation Requirement, Section 3 Air Transport, Series 'C' Part VIII, which lays down the Minimum Requirements for Grant of Permit to Operate Scheduled Regional Air Transport Service. The clauses where specific relaxation is sought by the industry are presented below:

   a. Clause 3.2.3 pertaining to the maximum certified takeoff mass of more than 5,700 kg for aircraft to be reviewed for revising it to a lower value of maximum certified takeoff mass

   b. Clause 3.2.1 which prescribes that the applicant will be permitted to operate with one aircraft to facilitate the start of operations and shall acquire a fleet of minimum three aircraft within a period of two years and minimum five aircrafts at the end of five years to be reviewed. It is recommended to continue minimum five aircrafts to be acquired by the end of five years while waving off the requirement to acquire three aircrafts within a period of two years.

   c. Definition of "Scheduled Regional Air Transport Service" should be reviewed to remove the restriction on the operation of a Scheduled Regional Air Transport Service to a designated region. Scheduled Regional Airlines should be permitted operation to other regions except to the metro airports of other regions.

   d. Scheduled Regional Airlines should be permitted to trade-off their Available Seat Kilometer (ASKM) on Category II and IIA routes with Scheduled Airlines (presently not permitted as per Note 3 in Clause 2).

2. MoCA in consultation with Bureau of Civil Aviation Security in India (BCAS) should consider reviewing the requirement for round-the-clock security service for small and low-activity airports in order to reduce the operating expenses of such smaller airports.

3. MoCA in consultation with the DGCA may consider relaxing the requirement (as provided in Rule 38B of The Aircrafts Rule 1937) to have one cabin crew for an aircraft having a seating capacity of not less than 10 and not more than 50 passengers. The same rule provides a helicopter having a seating capacity of not less than 20 and not more than 50 passengers to have one cabin crew. Similar requirement (to have one cabin crew for a seating capacity of not less than 20 and not more than 50 passengers) should be specified for fixed wing aircraft.
4. In case the restriction on Scheduled Regional Air Transport Service to operate to only one region is not considered to be removed, code-sharing should be allowed between Scheduled Regional Airlines as well as Scheduled Airlines, as code-sharing will allow the airlines to leverage each-other's network and marketing strengths
5. Need to provide more clarity on certain regulations in terms of compliance / mandatory requirements. For example, Clause 5.4 of Civil Aviation Requirement, Section 3 Air Transport, Series 'C' Part VIII mentions that *"For the import of unpressurised aircraft, the decision will be taken on a case-to-case basis depending on a complete examination of the records and, if required, inspection of the aircraft being procured. However, DGCA would normally not allow import of more than 20 years old aircraft"*. The Airlines under such cases are not sure of whether the aircraft intended by them to be acquired and imported in India will be cleared for import or not. It is recommended that the clauses should clearly indicate whether an aircraft with certain age will be allowed for import or not. Similar clarity would be desirable on other such cases.

Airports Authority of India (AAI)

1. AAI being the key provider of airport infrastructure in towns requiring regional / remote air connectivity, the following actions could be considered:
    a. Exemption for aircrafts with a maximum take-off mass of less than forty thousand kilograms (small/ regional) from payment of Route Navigation & Facilities Charges (RNFC) and Terminal Navigation & Landing Charges (TNLC) for a period of 5 years
    b. Exemption for private regional airports from payment of Air Navigation Services (ANS) cost recovery charges for a period of 5 years.
        i. RNFC and TNLC Charges to be computed for AAI at a 'system-level' i.e. taken across all airports and traffic handled at such airports
    c. Slots to be provided for flights on Remote and Regional air connectivity routes
    d. Waiving Landing and Parking charges for aircrafts with a maximum take-off mass of less than forty thousand kilograms being operated for non-scheduled air transport services (except for Business Jets) for a period of 5 years
        i. Charges at Major Airports are determined by the Airports Economic Regulatory Authority of India. Discussion / Policy Guidelines may be required for extending similar exemptions at such airports.
    e. Flexibility to regional operators to choose from services such as CUTE / GHS
    f. Evolve benchmark for construction of low-cost airports
    g. Preparation of plan to rehabilitate / create infrastructure in key towns for promotion of air connectivity

2 Coverage of the Study

The Ministry of Civil Aviation (hereinafter referred to as MoCA) decided to conduct a study to examine the issue of regional air connectivity and the steps required for promoting such connectivity. Deloitte Touche Tohmatsu India Private Limited (DTTIPL) was appointed to undertake the study on "Promotion of Regional and Remote Area Air Connectivity in India".

The Terms of Reference for the study specified by MoCA are presented at Annexure 1 – Study Terms of Reference.

DTTIPL reported progress on the study through interim reports. Subsequently, presentations were made to the Ministry of Civil Aviation on 16th January 2013 and 8th February 2013. Based on the discussions, and observations provided, this Final Report presents the study and the key recommended actions for promoting regional and remote area air connectivity in India.

In view of the inter-linkages of various issues studied, and to present the same in a logical sequence, this Final Report has been structured as presented in the following table.

Table 1: Structure of the Report

Section	Title	Coverage
1	Summary of Recommended Actions	Key recommendations for formulation of a policy framework have been summarized in this Section
2	Coverage of the Study	Introduction to the Study and the key areas covered
3	Regional and Remote Areas	Defines the terms Regional Air Connectivity and Remote Area Air Connectivity for the Study
4	Existing Status of Air Connectivity	Presents the existing structure and nature of air transport services in India
5	Imperative of Regional Air Connectivity	Discusses the various benefits and reasons to focus on regional air connectivity
6	Parameters for selection of towns for promoting Regional Air Connectivity	Presents the parameters for identification and prioritisation of towns for promoting air connectivity
7	Aircraft Sizes and Airport Infrastructure	Reviews the availability of aviation infrastructure in the identified towns / cities
8	Issues Impacting Regional Air Connectivity	Reviews factors constraining growth of regional air connectivity
9	International Experiences in Promoting Regional Air Connectivity	Presents mechanisms employed in other countries for promotion of air connectivity to selected regions
10	Strategic Options for Promoting Regional and Remote Area Air Connectivity	Key options for promotion of regional air connectivity are discussed
11	Review of Route Dispersal Guideline	Reviews Route Dispersal Guidelines

Table 1: Structure of the Report		
Section	**Title**	**Coverage**
12	Regional Air Connectivity Fund	Provides recommended policy framework for operationalizing a dedicated fund for promotion of regional and remote area air connectivity in India
13	Policy and Regulatory Initiatives	Ancillary policy mechanisms/recommendations are presented to complement operationalization of the Regional Air Connectivity Fund

3 Regional & Remote Areas

3.1 Contexts drive definitions

Review of international practices and experiences indicates that there is no standard definition of regional air connectivity.

A motion presented for European Parliament resolution on the future of regional airports and air services in the EU acknowledged the lack of such a definition and stated that *"……whereas there is currently no universally accepted definition for the term 'regional airport'…….and whereas the Commission is urged to set common criteria in order to facilitate a proper definition of 'regional airport' …….. whereas, however, 'regional air service' should be defined as a flight departing from and/or landing at a regional airport;……."* .

A note for the House of Commons in UK also noted that *"…The term regional airport is not a statutory or legislative one, although it is very widely used in writings about UK airports…."* and refers to an earlier categorization of airports in UK, which defined regional airports as those, *"which provide a network of short-haul scheduled international services, a significant range of charter services and domestic services including links with gateway airports;"*

Further there is no clear definition for "remoteness". International Transport Forum in its discussion paper on "Air Transport Services in Remote Regions" recognizes this and states that *"….There is no unambiguous definition of "remoteness"….. There is limited research within the area of air transport in remote regions…."* .

The terms regional air connectivity and remote area air connectivity have accordingly been defined by various countries in their specific contexts. For example, in Canada, regional airport is defined as *"….those airports that handle scheduled passenger traffic but are outside the criteria for the National Airports System (NAS)…."* and the NAS includes *"airports in all national, provincial and territorial capitals, as well as airports with annual traffic of 200,000 passengers or more"*.

As regards the definition for Remote Airports, Government of Canada defines Remote Airports as, *"Airports are considered to be remote if air transportation is the only reliable year round mode of transportation available to the community it serves."*

In the United States, *"underserved air transportation market means passenger air transportation market (as defined by the Secretary) that (A) is served (as determined by the Secretary) by a non-hub airport or a small hub airport; (B) is not within a 40-mile radius of an airport that each year has at least .25 percent of the total annual boardings in the United States"*.

3.2 Definition of Regional Air Connectivity for this study

In the Indian context, the DGCA has identified regions as part of its Civil Aviation Requirements (CAR), Section 3 Air Transport, Series 'C' Part VIII, which lays down the Minimum Requirements for Grant of Permit to operate Scheduled Regional Air

Transport Service. Under this CAR, Regions are identified as North, South, West, East/ North-East coinciding with the Flight Information Regions (FIRs) and the airports in a particular region are as defined by the Airports Authority of India (AAI) for the respective regions.

The imperatives of promoting and ensuring Regional Air Connectivity discussed in Section 5, clearly bring out that one of the key objectives could be to provide required fillip to economic development of various parts of the country through reliable and efficient transportation through air transport services.

In this context, Regional Air Connectivity, for the purpose of this study, is being defined as:

"*Provision of air transport services to under-served and un-served markets (towns / cities) with potential, providing connectivity both within a Region as well as between Regions.*"

3.3 Definition of Remote Area Air Connectivity for this study

In the Indian context, remote areas can be considered as parts of the country that cannot be connected reliably – either in terms of quality or time required for transportation, through surface transport on account of factors like terrain, contiguity of land mass as well as security issues.

While supporting economic development of such parts of the country would still be an imperative, Remote Area Air Connectivity would also have a critical imperative of ensuring and maintaining social cohesion between various parts of the country.

This would be especially true considering that geographical dimensions of India are such that travel from one part to the other through surface modes could take substantial time (more than a day at times) and impact movement and inter-linkages between different parts of the country and local populace for economic activity as well as social interactions.

For the purpose of this study, Remote Area Air Connectivity is being defined as:

"Provision of air transport services to areas not adequately connected through surface transportation – including parts of the country with difficult terrain (hilly), separated by large water bodies (islands) and areas with security (including Left Wing Extremists related) concerns, to enable reliable transportation to the rest of the country."

Under this study, the smallest unit of land mass for providing connectivity has been considered as town / city due to such units reflecting a certain level of spatially-bound congregation of people and concentrated occurrence of economic activity as well as availability of information for the purpose of analysis under the study.

The following Section presents the nature of air connectivity existing in the country as well as basis for categorization of towns / cities in terms of being 'well-served', 'under-served' and 'un-served' by air connectivity.

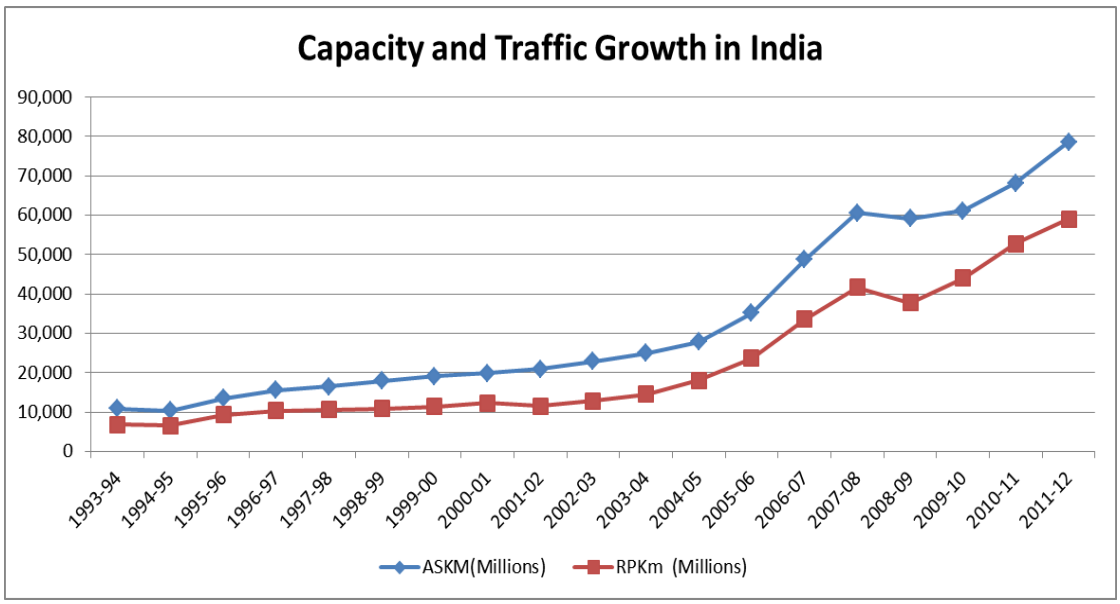
4 Existing Status of Air Connectivity in India

4.1 Growth in Air Traffic

Indian aviation sector has seen remarkable changes in the last two decades. Various policy measures in late 90s such as repeal of Air Corporation Act, Open Skies Policy & Foreign Direct Investment promotion in aviation and airport infrastructure allowed the flow of private investments in aviation in the form of the emergence and active participation of new airlines. Other factors such as economic growth and influx of foreign tourists also supported the aviation industry by keeping the demand buoyant.

Owing to these factors, the capacity deployed by various airlines over a number of routes (measured in Available Seat Kilometers (ASKMs)) as well as passenger traffic carried over such routes (measured in terms of Revenue Passenger Kilometers (RPKMs)) have grown at an impressive rate as depicted by the chart below:-

Exhibit 1: Growth of airline capacity deployment and passenger traffic in India[1]



The Indian aviation industry following the trend emerging in western countries and the Low Cost Carrier (LCC) model gained prominence in India after 2003. Entry of LCCs was an inflexion point for the industry as an already growing market expanded at a much faster rate, as depicted by the table below[2].

Table 2: Compounded Annual Growth Rate for Passenger Carried

#	Time Period	ASKM	Passenger Numbers
1.	1993-94 to 2003-04	8.7%	4.7%
2.	2004-05 to 2011-12	16.0%	17.4%

[1] Data provided as part of Annexure 4 – Capacity Growth and Traffic Growth
[2] Based on data available at DGCA website

While, the capacity deployment over a 10-year period starting 1993-94, increased at more than 8% per annum, the passenger traffic increased at less than 5% per annum. However, with the emergence of LCCs after 2003-04, over the period 2004-05 to 2011-12, passenger traffic grew at over 17% per annum – faster than even the growth rate in capacity deployment.

4.2 Nature of the Connectivity

4.2.1 Passenger Traffic Distribution

As per AAI data, total Domestic air passengers in the year 2011-12 were 121.5 million. Of these, the top 6 busiest airports in India – Delhi, Mumbai, Chennai, Bangalore, Kolkata and Hyderabad accounted for nearly 80 million passengers (~67% of total domestic passengers) and the remaining 69 airports accounted for the rest 40 million passengers (~33% of total domestic). If the next 12 busiest airports after the 6 metro airports are also excluded, the remaining 57 airports accounted for less than 14% of total domestic traffic.

Table 3: Distribution of Air Traffic

#	Type of Airport	Total Passenger Traffic	Total Aircraft Movement
1	Top 6 Airports (Metro)	~67%	~63%
2	Top 18 Airports	~86%	~80%

Based on the latest 2011 Census, India has a total of 4041 Statutory Towns. An analysis of the data available with DGCA indicates that presently 75 towns out of these have airports with scheduled air connectivity.

Also, presently one airline provides Scheduled Regional Air Transport Services vis-à-vis six that provide Scheduled Air Transport Service at a national level.

The above trends indicate that air connectivity is presently concentrated at select airports / centres in the country.

4.2.2 Capacity Deployment

Existing winter schedule of scheduled carriers in India, as available on the website of DGCA, was analysed to study the distribution of seat capacity over various parts of the country categorized as Metro, Tier-2 and Tier-3 towns / cities.

While, in common parlance cities are classified as Tier-1, Tier-2 and Tier-3, no standard definition of such tiers could be ascertained from any Government of India source[3]. For the purpose of the study and in the context of air connectivity in India, the below mentioned classification has been used for further analysis. This

[3] A somewhat similar classification followed by Government of India, pertains to classification of cities in groups named as X, Y and Z. This classification is as per the Sixth Pay Commission which distinguishes cities on the basis of House Rental Allowances as a percentage of income and divides the towns in three categories viz. X constituting 6 metros, Y with 54 cities and Z covering rest of the towns. There have been other research/ reports by various independent agencies which use their own definition of tiers based on a specific context. For example, one such report categorizes the country based on population viz. Tier 1 with population more than four million, Tier 2 with population between one million to four million and Tier 3 covering the rest.

classification is based on the degree of air connectivity with reference to data from the winter schedule.

- Six Metro Airport 'Hubs' or Metro / Tier-1 cities
- Twelve Minor Airport 'Hubs' or Tier 2 cities
- Rest of the country or Tier 3 cities

The degree of air connectivity has been reviewed in terms of number of destinations connected through air transport services from an airport in the city as well as the number of departing seats produced by airlines from that airport (with a minimum of 20,000 seats). Based on this classification, six metro and twelve minor 'hub' airports have been identified in the country as listed in the following table[4].

Table 4: Metro and Minor Hub Airports in India

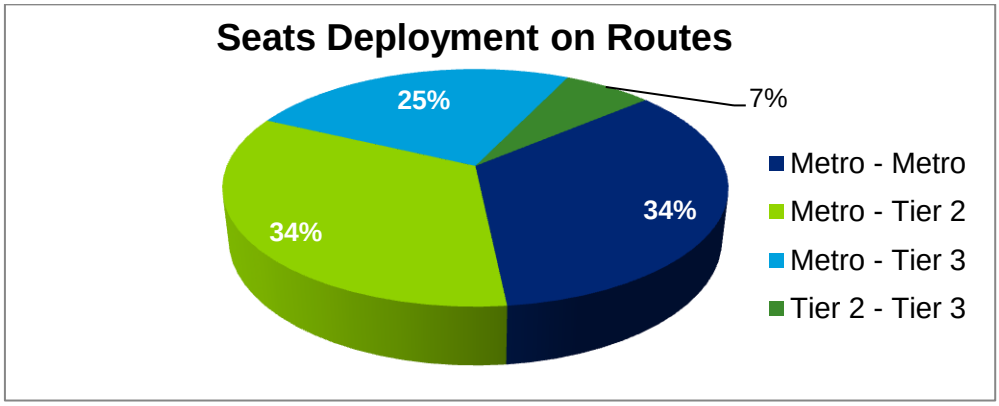
#	Metro Hub Airports	Minor Hub Airports
1.	Delhi	Pune
2.	Mumbai	Guwahati
3.	Kolkata	Ahmedabad
4.	Hyderabad	Cochin
5.	Bangalore	Nagpur
6.	Chennai	Jaipur
7.		Bhubaneswar
8.		Indore
9.		Goa
10.		Coimbatore
11.		Lucknow
12.		Srinagar

On analysing the Winter Schedule for airlines, filed with the DGCA for 2012-13, the presently concentrated nature of air connectivity at select airports / centres in the country is reinforced.

The chart below represents the seat deployment for scheduled airline operations on routes connecting Metros, Tier-2 and Tier-3 towns. While nearly 93% of the total seat deployment by scheduled airline operators is over routes between Metro and other towns / cities, seat deployment by these operators over routes connecting Tier-2 and Tier-3 towns / cities is only around 7%.

[4] Details provided in Annexure 5 – Existing Connectivity at top 18 airports

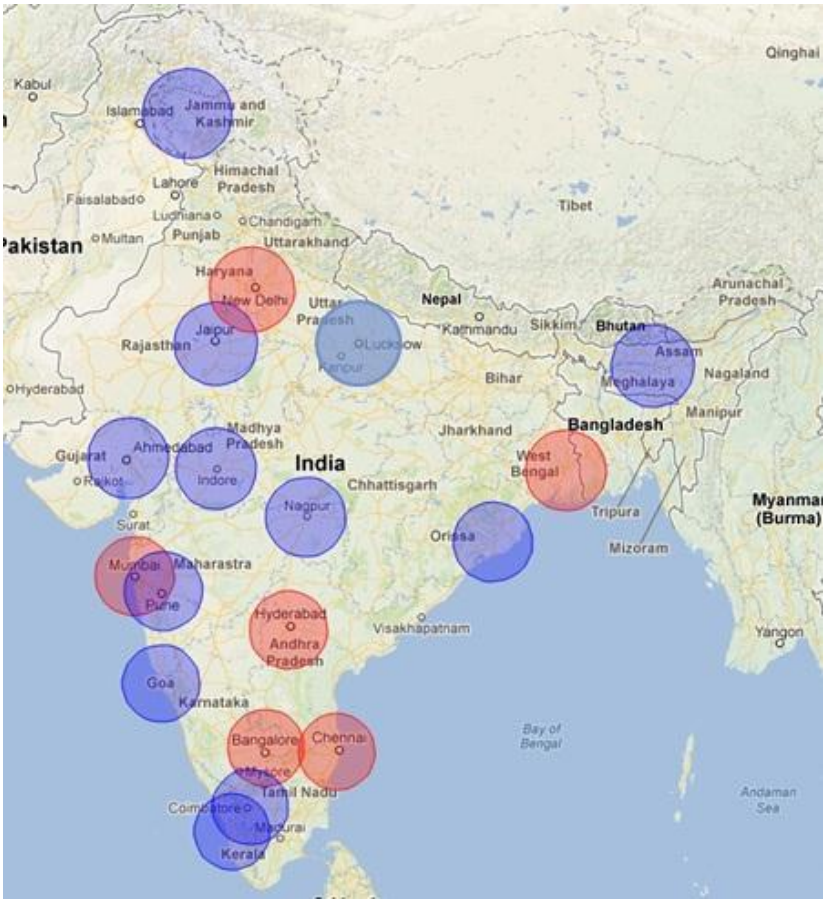
Exhibit 2: Deployment of Seats on Routes



4.2.3 Spatial Air Connectivity Pattern

The spatial distribution / location of metro and minor hub airports is depicted on the following map of India. On the map, the circles in red denote metro airports (and their immediate catchment areas) that are connected to more than 20 other airports in the country and the circles in blue indicate minor airports (and their immediate catchment areas) that are connected to at least more than 6 other airports in the country.

Exhibit 3: Air Connectivity Pattern across India



With reference to the above mentioned classification of towns / cities for the purpose of this study and the nature / pattern of air connectivity across the country, towns /

cities can be considered to be ‘well-served’, ‘under-served’ and ‘un-served’ depending upon the number of other towns / cities directly connected by air transport services from the town / city or the number of seats deployed on such routes by scheduled airlines.

- Well-served Town / City: A town / city which has direct air connectivity with 8 or more towns / cities in the country or with a seat deployment, by scheduled airlines, on routes connecting such town / city of more than 20,000 seats per week.
- Under-served Town / City: A town / city which has less than 14 flights per week by scheduled airlines.
- Un-served Town / City: A town / city with no scheduled flights.

5 Imperative of Regional Air Connectivity

Transportation services are a crucial element for the growth of a developing economy and an evolving society. A well developed and extensive network of transportation system allows for linkages between different parts of the country creating corridors for the flow of tangible benefits such as goods and services and intangible benefits such as culture, information and social interactions and cohesion.

Air transportation serves these objectives as well as creates additional value in terms of the advantages that it offers over surface transportation – essentially in terms of reduction of travel time, enhanced comfort as well as associated ability to channel savings in travel time to more productive uses.

As discussed in the earlier sections, air transportation has exhibited substantial growth in terms of volumes but the same has been largely concentrated on certain types of routes. This has implied that parts of the country are devoid of market generated supply of air services.

For the country, air connectivity to under-served and un-served regions could provide impetus to economic development / growth of such regions and contribute to a more uniform and equitable growth in economic activity across the country.

5.1 Multiplier Economic Benefits

While a high level of air transportation services reflects general economic prosperity and growth of a region in terms of the higher (disposable) income levels and a level of economic activity which creates a demand for such services, it has also been indicated by studies that air connectivity also contributes to economic growth.

For instance, as per an International Civil Aviation Organisation (ICAO) study, the output multiplier and employment multiplier of aviation is 3.25 and 6.10 respectively. This implies that every 100 Rupees spent on air transport contribute to 325 Rupees worth of benefits, and every 100 direct jobs in air transport result in 610 jobs in the economy as a whole. In fact, the study attributes over 4.5% of the global Gross Domestic Product (GDP) to civil air transport[5].

These economic benefits from air connectivity can be seen to be a result of a multiplier effect in terms of the following:-

a. Direct Effect – This pertains to the employment generated by airline and airport operations, aircraft maintenance, air traffic management and activities that directly serve the passengers such as baggage handling and ground-handling services.

b. Indirect Effect – These benefits arise from the supply chain that is necessitated by airline operation in a region. This includes presence and economic activity of air fuel suppliers, construction companies for airport construction, inter-modal

[5] Source: “Economic benefits of civil aviation: ripples of prosperity” by ICAO

transport services such as taxis and buses from airports, goods sold in airport retail outlets, etc.

c. Induced Effect – These benefits accrue from spending of people employed by airlines and airports, through indirect and direct effect, and impacts generated thereof are referred to as induced effect.

d. Catalytic Effect – The contribution of air connectivity to economics of other industries, in terms of the ability to more efficiently channel factors of production (labor) and move / make available products (to the market / leisure or tourism services within the market), is characterized as catalytic or spin-off effect. It is this effect which creates significant additional value to the economy of a region over and above the investments required for establishing air connectivity to a town / city / region. The most prominent example of catalytic effect is the impact that is witnessed by the local hospitality industry due to higher inflow of tourists.

The aggregate effect of these impacts generates the additional economic benefits reported from air connectivity / aviation activity.

As the Indian economy grows, consumption-led growth in populated metros is expected to spill over to hinterland areas. This is also expected to be on account of factors of production (land, labor, etc.) becoming costlier in the densely populated metro cities. In this scenario, it is imperative that required impetus be provided to the economic growth of such towns / cities, for instance through promotion of air connectivity.

Moreover, with a threshold population base as well as economic activity in some of these towns / cities, the environment required for strong multiplier effect is already present. The next Section of the Report reviews these parameters and their importance for selection of towns for promoting such connectivity.

5.1.1 Movement of Cargo

As one of the examples of multiplier effects of air connectivity, it can also spur growth in production and trade of certain commodities like perishable goods – fruits, flowers, etc. Growth in production and trade of such commodities is based on comparative advantage in the market in terms of prices and quality. Air connectivity, can potentially provide such comparative advantage creating scope for focusing on trade in such produce in certain parts of the country.

For instance, this is most apparent in the trade emanating from Africa to European nations, particularly UK. As African nations are situated in the tropical zone, they have a comparative advantage for production of perishables. Air connectivity allows this advantage to be realized as the produce can be transported effectively. As per one estimate, around 1.5 million livelihoods depend on the trade between Africa and UK alone[6]. Movement of perishable cargo can provide similar (if not equivalent) advantage to producers in different parts of India.

[6] Source: “Aviation: Benefits Beyond Borders”, March 2012 by Air Transport Action Group

5.1.2 Connectivity to Urbanising Centers

India's transformation from an agrarian economy to an urbanized one is an inevitable consequence of GDP growth led by service sector and saturation of agricultural productivity.

Air connectivity can ensure integration of such urbanising areas with the rest of the country and national economy. Development of appropriate connectivity between robust urban agglomerations could check the influx of migrants to large metro and provide for more balance regional development.

5.2 Social Cohesion

Another purpose that regional air connectivity serves most efficiently is time-effective movement of people between regions separated by large distances, difficult terrains or other factors (including areas with security concerns like the Left Wing Extremists related).

Easy movement of masses between regions promotes social cohesion. This aspect is keenly focused on in various parts of the world. For instance, Alaska which is separated from mainland United States of America (USA) is provided sufficient connectivity throughout the year through various measures. This allows for the indigenous people of the region to feel camaraderie with the rest of the nation. In Australia as well, where towns are separated by large distances / deserts, aviation serves a crucial purpose for assimilation of the nation, and is supported by certain measures. Brazil, which has a vast land area and large swaths of forests, also looks at air transportation as a means of connecting certain areas.

In India, with its geographical spread interspersed with deserts, seas, forests and hilly terrain, regional and remote area air connectivity can play a crucial role in this context. Establishing or relying on railway / road networks for connecting such parts of the country may not be time-effective or even viable (technically / financially).

Also, while railway and road networks may be viable connectivity options to other parts of the country (not impacted by issues of terrain, security, etc.), air connectivity provides a key advantage in terms of time saving.

6 Parameters for selection of towns for promoting Regional Air Connectivity

Prior to being able to consider measures for promoting regional air connectivity, it would be important to identify parameters that can be used for selection of towns / cities for promoting such connectivity.

6.1 Drivers for Air Connectivity

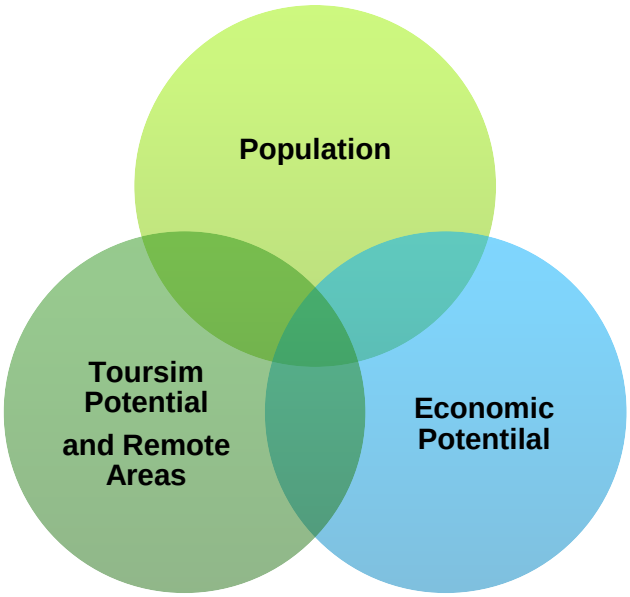
The primary requirements for travel in India in general, as well as air travel in particular, are understood to be social obligations, business requirements and tourism. The extent of air travel itself is impacted by the distances required to be travelled and associated modal options / time requirements, ability to pay vis-à-vis the relatives fares for other modes of transport, nature of travel requirements (business / social / tourism), etc.

Broadly put, the key factors contributing to potential demand / requirement for air travel from a town / city would pertain to (1) population of the town / city signifying a market / base for travellers, or (2) tourism potential of the town / city signifying a market / demand, and (3) the level of economic activity signifying the inherent potential of the town / city to be able to afford / sustain the requirement over time, and (4) requirement to connect remote areas.

While the first 3 factors drive potential demand / requirement for 'regional air connectivity', the fourth pertains to 'remote area connectivity'.

The following sub-sections discuss first the regional air connectivity drivers and basis for prioritising towns / cities so identified for initially promoting air connectivity and then the mechanism for identifying remote areas for providing air connectivity.

Exhibit 4: Factors driving regional air connectivity requirement



The above would represent a superset of towns / cities where regional air connectivity could be possibly considered for promotion. However, in view of the requirement to focus initially at a smaller scale and then progressively consider more towns / cities for promoting air connectivity, a mechanism would be required to prioritise such towns / cities.

Two such factors for prioritising could pertain to:

1. Towns and cities with more than 1 factor driving air connectivity requirement; and
2. Towns and cities which are not connected by air transport services – neither directly nor indirectly.

Accordingly, from the superset of eligible towns and cities, certain towns / cities could be identified where promotion of regional air connectivity could be prioritised.

These factors are discussed in further detail in the sub-sections below.

6.2 Population

As mentioned earlier, population of a town / city signifies a market / base for air connectivity. From a policy perspective, promotion of air connectivity to towns / cities with a certain threshold population would mean supporting and contributing to economic growth of a town / city that would potentially impact a larger number of people. Further, the potential economic growth of such towns / cities can make growth more equitable across the country.

As mentioned earlier, the output and employment multipliers of aviation are 3.25 and 6.10, respectively[7]. As multiplier effects also work through higher consumption and spending propensity of the economic actors, population of a town / city being beyond a certain threshold, provides an appropriate environment for witnessing the benefits of air connectivity. A town / city with a certain threshold population would have networks of inter-dependence among inhabitants such that demand originating in one sub-section would be transmitted much more easily across the network to other inhabitants and beyond the region as well.

6.2.1 Threshold Population

For the purpose of the study, the latest population figures as per 2011 Census were used. Based on the same, India has a total of 4041 Statutory Towns. These towns are further categorized as Class I Towns, having population more than 1 Lakhs. As per Census of India 2011, there are 468 such towns.

These towns (Class-I) are further classified as:

- towns having population greater than 10 Lakhs (53 in number),
- towns having population between 5 and 10 lakhs (46 in number),
- towns having population between 2 and 5 lakhs (129 in number) and
- towns having population more than 2 Lakhs (230 in number).

[7] Economic Contribution of Civil Aviation, ICAO

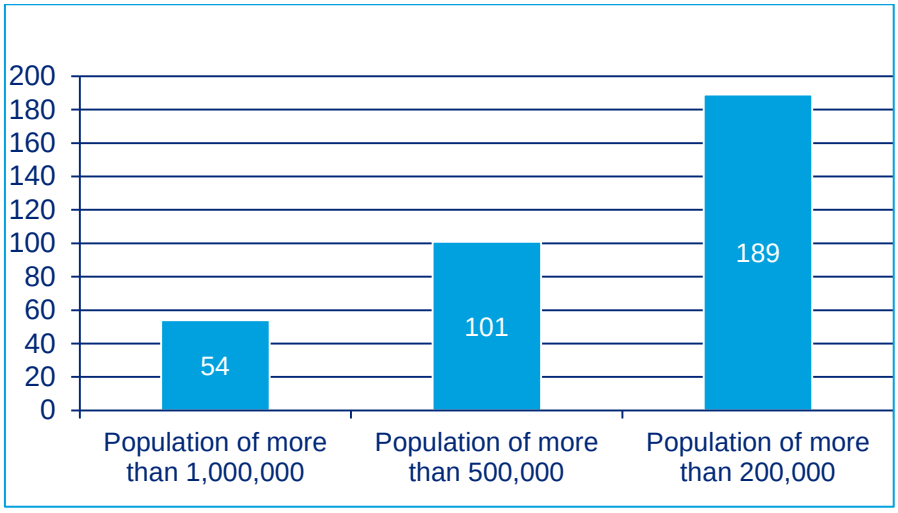
It was observed that towns with population of more than 1,000,000 already possess high connectivity and have witnessed high economic growth rates.

Further, the towns in the lower population bands are being considered as the new growth centres in the country. As per one estimate, towns with population of 0.5 million and above would be the ones which would be able to absorb large population growth rates in the future.[8]

From a policy perspective, towns / cities with population in the band of 2 lakhs and above (top 50 percentile) would be ideal candidates for promoting air connectivity so that such connectivity could contribute to the economic growth of such towns / cities.

On account of better availability of information pertaining to economic activity (factor discussed in the next Sub-Section) at the district level (in terms of Gross District Domestic Product - GDDP) than at the town level, for the purpose of further analysis, towns with population of more than 2 lakhs have been mapped to their respective districts. Some districts have more than 1 town with population more than 2 lakhs. The total number of districts in the country with towns having population corresponding to the identified threshold (more than 2 lakhs) is 189.

Exhibit 5: Number of Districts with different population bands



6.3 Economic Potential

As per Boeing's long-term assessment of aviation market, as illustrated in Current Market Outlook 2021-2031[9], economic growth rate is the best explanatory variable for air transport demand and around 60-80% of air transport demand is attributed to economic growth. Further, the report also states that air travel revenues consistently average about 1% of GDP in countries around the world, regardless of the size of the national economy.

8 India's Urban Awakening: Building Inclusive cities; sustaining economic growth, MGI

9 The current edition of CMO 2012-2031 has the following methodology.

Revenue Passenger KM (growth)= GDP (growth) + f(t), where f(t) is a time varying function independent of income but dependent on behavioural economics, i.e. premium on time saved and idiosyncratic value attached to perks of air services etc.

It should also be noted that service sector industries, such as banking and finance, government etc. have a higher propensity to use air transport services[10], and the presence of such industries or indicators thereof signifies adequate demand for aviation services.

An appropriate economic measure for selection of towns / cities can be considered to be their income levels. Higher income levels would, inter alia, indicate higher propensity / ability to pay for such services. As per one study, estimated income elasticity for developing economies for short-haul services was calculated to be 2.0[11], which suggests that a town / city with growing income levels would witness growth in air travel. Also, consumption-led growth (that is being witnessed in India) would mostly occur in towns with higher income levels. Moreover, higher income levels in agglomerations of over 2 lakh people are likely to mostly be contributed from the services/tertiary sector. Given this segment's propensity to use air transport services, towns / cities with higher income would accordingly be more appropriate for promoting air connectivity.

6.3.1 Threshold Economic Potential

For the study, Gross District Domestic Product (GDDP) at current prices for 2010-11[12] has been used to proxy income levels of the corresponding towns / cities.

Further, in order to enable identification of towns / cities for promotion of air connectivity from across the country in an equitable manner, the threshold applied was that the GDDP of the district (with the particular town/city) should be more than the average GDDP[13] of the corresponding state; meaning that districts with GDDP greater than the average GDDP of the corresponding state would be considered under this parameter for promotion of regional air connectivity.

Out of the 189 districts identified (having towns with population of more than 2 lakhs), the chart below depicts the districts satisfying the identified GDDP threshold.

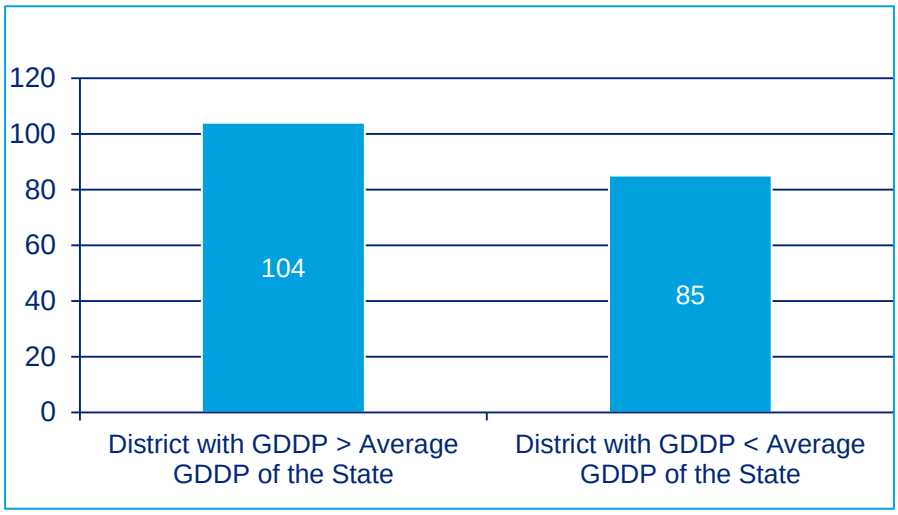
[10] European Regional Airport Study, Helios

[11] Air Transport Demand, IATA

[12] For districts for which the corresponding figures were not available, the latest available figures were projected to 2010-11 using inflation index of Consumer Price Index (CPI) (based on year-wise CPI data published by the RBI) as the growth factor.

[13] Average GDDP for a state ascertained in terms of Gross State Domestic Product (GSDP) divided by the number of districts in the State

Exhibit 6: Number of Districts with different GDDP levels



6.4 Tourism Potential

Tourism is a key demand-driver for air transport services to a town / city with the demand in this case focusing on incoming tourists to the identified towns / cities and not the native population or their income levels.

While, rail and road networks extend across the country, some tourist sites such as national wildlife parks and sanctuaries are still beyond the reach of surface connectivity and are time-taking and inconvenient for tourists to reach. Some of the tourist destinations could witness more tourist numbers if properly connected by air.

While there would be different segments of tourists (international, premium domestic, budget, etc.), in general they would be contributing to the local economy through use of services – a multiplier effect of providing air connectivity to a tourist destination.

Also, in view of their propensity to spend on leisure, tourists are more likely to have specific choices on more convenient and time-effective modes of travel.

The Table below lists the places identified by the Ministry of Tourism which are important from the perspective of pilgrimage and tourism as provided in the Report on Air Connectivity prepared by a committee constituted by the Ministry of Civil Aviation under the Chairmanship of Shri Rohit Nandan, Joint Secretary in 2011 (hereinafter referred to as the Rohit Nandan Committee Report).

Table 5: Towns considered for Tourism Potential in the Rohit Nandan Committee Report

#	States	Sites
1.	Andhra Pradesh	Tirupati, Hyderabad, Vizag
2.	Assam	Guwahati
3.	Bihar	Gaya, Rajgir
4.	Chhattisgarh	Jagdalpur,
5.	Haryana	Ambala, Yamunanagar, Kurukshetra, Panipat
6.	Himachal Pradesh	Kullu, Dharamshala, Manali
7.	Jammu & Kashmir	Leh
8.	Karnataka	Hospet, Hampi, Mysore
9.	Kerala	Trivandrum, Kovalam

Table 5: Towns considered for Tourism Potential in the Rohit Nandan Committee Report		
#	States	Sites
10.	Maharashtra	Aurangabad, Nanded, Nasik, Shirdi
11.	Madhya Pradesh	Khajuraho, Indore, Ujjain
12.	Orissa	Bhubaneswar, Puri, Konark
13.	Punjab	Amritsar, Anandpur Sahib
14.	Rajasthan	Jaipur
15.	Sikkim	Gangtok
16.	Tamil Nadu	Madurai, Rameshwaram, Kanyakumari, Mahabalipuram, Chettinad
17.	Uttar Pradesh	Agra, Rae Bareilly, Varanasi, Sarnath, Mathura
18.	Uttarakhand	Haridwar, Rishikesh, Nainital
19.	West Bengal	Murshidabad, Darjeeling, Kalimpong

The towns / cities identified by the Ministry of Tourism for their tourism potential and presented in the table above have been analysed from the perspective of lack of existing air connectivity (criterion discussed in Section 6.5.1). For example, the table above includes towns / cities such as Hyderabad and Trivandrum with tourism potential. However, it can be observed that these towns / cities are well-connected by air and hence are not proposed to be considered as candidates for promotion of regional air connectivity. The towns / cities shortlisted for promoting air connectivity based on this analysis, are included in Annexure 8 – List of towns / cities based on Tourism potential and lack of Existing Connectivity.

6.5 Prioritisation Parameters

As mentioned earlier in this Section, the key factors contributing to potential demand / requirement for regional air connectivity pertaining to population, economic activity and tourism, would result in identification of a superset of towns / cities where regional air connectivity could be possibly considered for promotion.

However, in view of the requirement to focus initially at a smaller scale and then progressively consider more towns for promoting regional air connectivity, a mechanism would be required to prioritise towns / cities.

One such prioritisation factor could be lack of existing connectivity. Essentially, towns / cities which are not connected by air transport services – either directly or indirectly, would be priority candidates for promotion of air connectivity.

Another prioritisation factor could be towns / cities satisfying more than 1 identification parameter discussed in the earlier sub-sections vis-à-vis towns / cities satisfying only 1 such identification parameter.

6.5.1 Lack of Existing Connectivity

Lack of existing connectivity as a prioritisation parameter for identification of towns / cities for promoting regional air connectivity would imply filtering the superset of eligible towns / cities on the basis of whether or not they have access to an existing airport through which they can avail air transport services. Essentially, it would not be

feasible to promote air connectivity to towns / cities which have access to airports which can provide adequate connectivity.

In this context, it would be important to define as to what would constitute access to an airport with adequate connectivity. This would essentially need to be defined in terms of:

- The nature of services / connectivity at the airport that could be deemed adequate; and
- The access to such airport for a town / city that could be deemed adequate.

6.5.1.1 Adequate connectivity at an airport

For the purpose of this study (essentially for identification of towns / cities to which air connectivity needs to be promoted), frequency of air transport services at an airport would be considered as a proxy for determining sufficiency / adequacy of connectivity.

The existing winter schedule for scheduled air services as available on the website of DGCA was analysed to consider the issue of frequency of air services at airports in India. The analysis shows that almost 70% of the airports have departure frequencies of more than 14 flights a week, which is equivalent to almost 2 departing flights every day. 14 flights a week has accordingly been considered as the threshold frequency for determining sufficiency / adequacy of connectivity. Essentially, if an airport has at least 14 flights a week, it would be considered adequately connected.

6.5.1.2 Adequate access to adequately connected airports

Adequacy / sufficiency of access to adequately connected airports (as determined pursuant to Section 6.5.1.1) for towns / cities has been considered in terms of:

a. Direct Air Connectivity – Location of such airports in the towns / cities themselves, or

b. Indirect Air Connectivity – Ability to travel to such airports within a certain distance through surface transport within a certain time.

Having an airport within a certain distance can also fulfil the requirements for air connectivity for a town / city. In general, the total time taken for a passenger to take a short-haul/ regional flight would be around 3 hours including flying time, time required to check-in and comply with processes at the airport, travel to / from the airports in both the cities, etc.

Within this time period, if a passenger can reach an adequately connected airport, he can take advantage of the existing network / connections at the existing airport rather than require extension of new services to such towns / cities which may anyway not be economically / financially viable. In terms of distance to a well-connected airport, a distance of 150 km is being considered to define catchment areas for such airports on the basis that such a distance can be covered in around 3 hours (while appreciating that the travel time through surface transport may vary across regions in India depending upon the condition of the surface transport infrastructure).

Essentially, towns / cities which are within 3 hours driving time or 150 km of any of the identified major and minor hub airports shall not be considered in the first instance for promotion of air connectivity. Since travel time through surface transport may vary depending upon the condition of the surface transport infrastructure, congestion in major cities, etc., towns / cities which cannot access such airports on account of such specific issues can be included in the priority list.

6.5.2 Towns / cities satisfying more than 1 identification parameter

While population, economic activity and tourism, have been identified as key factors contributing to potential demand / requirement for regional air connectivity, in the first instance, towns / cities that meet both - the identified threshold population criteria as well as the identified threshold economic potential criteria are proposed to be considered.

Based on the above discussed identification as well as prioritisation parameters, the list of towns / cities that meet each of the below mentioned criteria are identified in the table below:

a. Meet the identified threshold population criteria (>200,000);
b. Meet the identified economic potential criteria (GDDP of the district of the particular town / city > Average GDDP of the corresponding state); and
c. Lack Existing Connectivity.

Exhibit 7: Prioritisation of towns / cities for promoting regional air connectivity

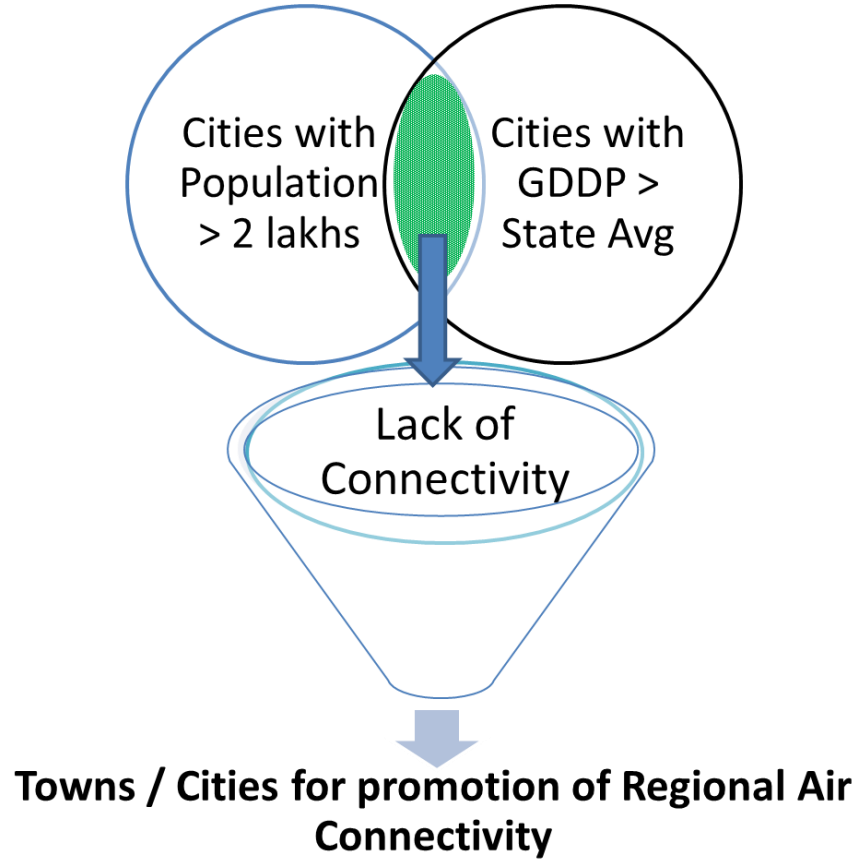


Table 6: Priority list of towns / cities for promoting regional air connectivity*					
#	Town / City	State	#	Town / City	State
1.	Vijayawada	Andhra Pradesh	27.	Kolhapur	Maharashtra
2.	Guntur	Andhra Pradesh	28.	Jalgaon	Maharashtra
3.	Kakinada	Andhra Pradesh	29.	Imphal	Manipur
4.	Muzaffarpur	Bihar	30.	Rourkela	Orissa
5.	Durg	Chhattisgarh	31.	Pondicherry	Pondicherry
6.	Korba	Chhattisgarh	32.	Ludhiana	Punjab
7.	Bilaspur	Chhattisgarh	33.	Jalandhar	Punjab
8.	Bhavnagar	Gujarat	34.	Patiala	Punjab
9.	Jamnagar	Gujarat	35.	Ajmer	Rajasthan
10.	Junagadh	Gujarat	36.	Kota	Rajasthan
11.	Gandhidham	Gujarat	37.	Bhilwada	Rajasthan
12.	Hisar	Haryana	38.	Alwar	Rajasthan
13.	Dhanbad	Jharkhand	39.	Ganganagar	Rajasthan
14.	Jamshedpur	Jharkhand	40.	Salem	Tamil Nadu
15.	Bokaro	Jharkhand	41.	Agartala	Tripura
16.	Belgaum	Karnataka	42.	Agra	Uttar Pradesh
17.	Mangalore	Karnataka	43.	Allahabad	Uttar Pradesh
18.	Bellary	Karnataka	44.	Moradabad	Uttar Pradesh
19.	Mysore	Karnataka	45.	Saharanpur	Uttar Pradesh
20.	Gwalior	Madhya Pradesh	46.	Sambhal	Uttar Pradesh
21.	Singrauli	Madhya Pradesh	47.	Meerut	Uttar Pradesh
22.	Burhanpur	Madhya Pradesh	48.	Aligarh	Uttar Pradesh
23.	Khandwa	Madhya Pradesh	49.	Muzaffarnagar	Uttar Pradesh
24.	Jabalpur	Madhya Pradesh	50.	Haridwar	Uttarakhand
25.	Nashik	Maharashtra	51.	Malda	West Bengal
26.	Brahmapur	Orissa	52.	Haldia	West Bengal

**Identified based on parameters of Population, Economic Potential and lack of Existing Connectivity*

It is important to note that the above list has been identified based on certain parameters and towns / cities can witness varying levels of growth in future that can change their populations, economic potential as well as access to existing connectivity.

Accordingly, such parameters and the list of towns / cities that meet the threshold values need to be reviewed and revised periodically - ideally once every 3 years, to provide for a framework for implementation of measures as well as to keep the list relevant.

The towns / cities identified in Table 6 above have been depicted in Exhibit 8. As can be seen, promotion of connectivity across these towns / cities would complement the existing pattern of air connectivity in the country.

Exhibit 8: Priority towns / cities for promoting regional air connectivity

6.5.3 Additional centers of economic activity

The towns / cities identified in Table 6 above merit inclusion for promotion of regional air connectivity on account of population and economic potential parameters as well as the fact that these towns / cities lack existing air connectivity. Thus, promoting regional air connectivity to these towns / cities would serve both social and economic objectives.

However, there could also be towns / cities which may not have the threshold population of 2 lakh but merit consideration for promotion of regional connectivity purely on account of their economic potential and lack of existing connectivity (for example, industrial towns with mining potential).

A further identification of towns / cities has been undertaken, beyond the 189 towns / cities identified on the basis of population earlier, based on their economic potential and lack of existing air connectivity.

While recognising the possibility of some of these additionally identified towns / cities being within proximity of 150 km from earlier identified towns / cities (refer Table 6 above), a proximity based approach was adopted to shortlist only such towns / cities which have economic potential, lack existing connectivity and are at a distance of more than 150 km from towns / cities identified in Table 6. The towns / cities thus identified are presented at Annexure 7 – Additional list of towns / cities identified based on criteria of Economic potential and lack of Existing Connectivity.

6.5.4 Towns / Cities having Tourism Potential

As discussed earlier in Section 6.4 above, towns identified by the Ministry of Tourism for their tourism potential have been analysed from the perspective of lack of existing air connectivity. Towns / cities, not having well-connected airports or not having access to such (well-connected) airports within a travel time of 3 hours (distance of 150 km), have been considered as candidates for promotion of regional air connectivity.

However, there are some towns under this list, which are either already included in the list of towns / cities identified in Table 6 or are within 150 km of such towns / cities and need not be considered separately. The remaining towns / cities (candidates for promotion of regional air connectivity) are presented in Annexure 8 as well as in Table below.

Table 7: Additional list of towns / cities for promoting air connectivity based on Tourism Potential

#	Town / City	State
1.	Gaya	Bihar
2.	Jagdalpur	Chhattisgarh
3.	Yamunanagar	Haryana
4.	Dharamshala	Himachal Pradesh
5.	Khajuraho	Madhya Pradesh
6.	Nanded	Maharashtra
7.	Anandpur Sahib	Punjab
8.	Gangatok (East Sikkim)	Sikkim
9.	Kanyakumari	Tamil Nadu
10.	Rameshwaram	Tamil Nadu
11.	Darjeeling	West Bengal
12.	Murshidabad	West Bengal

6.6 Remoteness of Areas

As discussed earlier, air connectivity most efficiently provides time-effective movement of people between regions separated by large distances, difficult terrains or other factors (including areas with security concerns like the Left Wing Extremists related) promoting social cohesion.

While Remote Area Air Connectivity is defined under Section 3, a relevant reference for a list of Remote Areas is the one provided under an Annexure to the Civil Aviation Requirement (CAR), Section 3 - Air Transport Series ‘C’ Part II (also generally referred to as the Route Dispersal Guidelines or RDG).

In the above CAR, the Government of India in exercise of powers conferred by sub-rule (1A) of rule 134 of the Aircraft Rules, 1937, with a view to achieving better regulation of air transport services and provision of air transport services to different regions in the country, directed operators of scheduled air transport service within the country to provide a certain minimum of scheduled air transport service on routes indicated in categories II and III with respect to their schedule operations under category – I.

Category II of the RDG includes routes connecting stations that can be considered as remote areas –

a. North-Eastern region,

b. Jammu and Kashmir,

c. Andaman & Nicobar and

d. Lakshadweep.

For the purpose of this study, remote areas can be considered to also include –

e. any other areas that the Government of India may specify including areas with security (including Left Wing Extremists related) concerns.

Accordingly, the list of remote areas deserving promotion of air connectivity would need to be specified periodically by the Government of India in consultation with other stakeholders (including State Governments).

7 Aircraft Sizes and Airport Infrastructure

A key aspect to be considered for the promotion of regional/ remote air connectivity is the provision of the adequate capacity and required infrastructure.

7.1 Aircraft deployment over Regional Routes

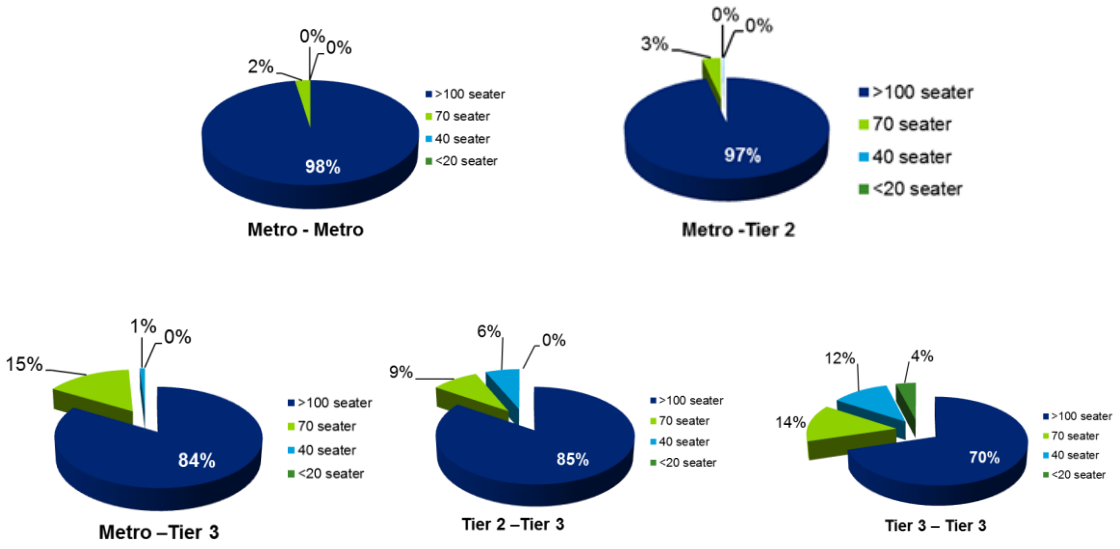
The deployment of various aircraft types by airlines over domestic routes was analysed under the study. One of the objectives was to identify aircraft sizes being deployed by various airlines over different categories of routes and identify any relevant patterns that would need to be considered while considering measures for promoting air connectivity over certain categories of routes.

For the purpose of this analysis, aircraft currently being deployed in India are categorized into the following four categories:

- More than 100-seater aircrafts,
- 70-seater aircrafts,
- 40-seater aircrafts and
- Less than 20-seater aircrafts.

Based on the analysis of existing winter schedule of scheduled carriers in India, the nature of aircraft deployment across various categories of routes is presented below:

Exhibit 9: Aircraft Deployment over Regional Routes



As can be observed, air transport services are being predominantly provided in India by aircrafts with more than 100 seats (narrow body aircrafts) across all categories of routes. Especially for routes connecting a Metro city to another Metro city as well as

a Metro city with a Tier 2 town / city, narrow body aircraft deployment constitutes more than 97% of the seats deployed.

However, size of the aircraft deployed tends to change on routes connecting Tier 3 towns / cities. For routes connecting a Tier 3 town / city with a Metro city or a Tier 2 town / city or another Tier 3 town / city, increasingly aircraft with seating capacity of 70 seats or less are being deployed.

7.2 Aircraft Size for Regional Air Connectivity

As was mentioned earlier, routes connecting Tier-2 towns / cities to Tier-3 towns / cities, only constitute about 7% of the air transport market in India in terms of seat deployment.

While routes can be configured in numerous ways in terms of combination of frequencies, timing of the flights and aircraft sizes, a number of these routes are likely to witness traffic that can be better serviced using small aircraft such that the aircraft could be optimally utilised over the day as well as achieve viable PLFs.

The following sub-section presents and compares the cost structures of different aircraft for the purpose of providing regional air connectivity.

7.2.1 Cost structures of smaller aircraft

An important consideration for selecting a particular aircraft for a route is the cost of operating the aircraft. Operating costs can vary significantly from one aircraft type to another. The main factors which determine the cost of operating an aircraft includes fuel efficiency of an aircraft, the network of an airline (aircraft utilization, average stage length), crew costs and maintenance costs. Maintenance costs are further impacted by the cost of labour as well as material cost.

The three main elements which impact the productivity of an aircraft are described below:

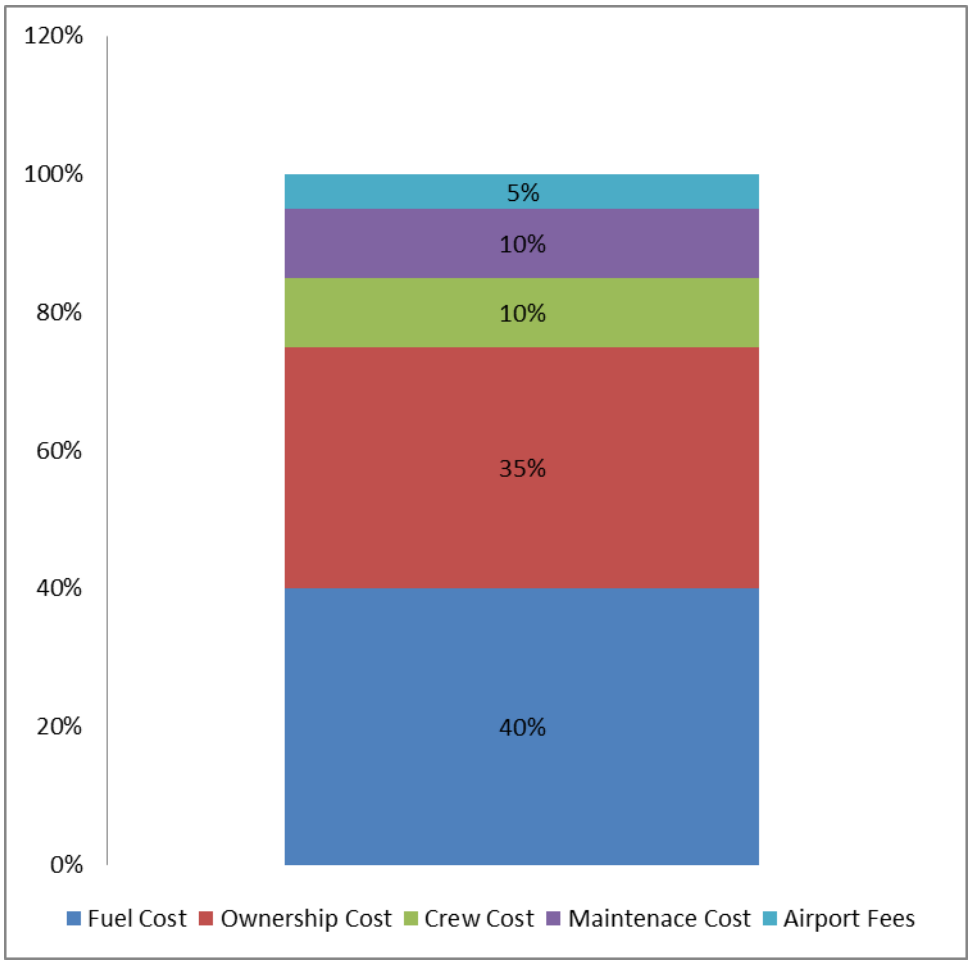
- Fuel Efficiency – Fuel costs constitute around 40-50% of an airline's total cost of operations on a per unit basis (per hour). Thus it becomes imperative for an airline to go for aircraft which offer better fuel efficiency. The fuel efficiency is in turn determined by various factors such as the cruising speed of the aircraft, the fuel burn of the aircraft etc.
- Aircraft Utilisation – Airlines incur high fixed capital costs in purchasing or leasing an aircraft. Higher aircraft utilization means that such fixed costs are spread over a larger base of per seat kilometre. Based on interactions with industry experts, an average 6 hour per day utilization is considered minimum for a 20-seater or a 40-seater aircraft. The desirable utilization for a 70-seater aircraft is considered to be at least 8 hours per day.
- Average Stage Length – This is a factor of aircraft's range as well as the airline's flight schedule. The longer the average stage length of an airline, the lower would be the total operating cost per seat kilometre.

Based on interactions with various industry stakeholders, aircraft lease rentals may constitute around 15%, maintenance costs and airport charges around 20% and the

cost of the crew may constitute another 10% of the cost of operations of an aircraft on a per unit basis (per hour).

A breakup of various direct operating costs for a 250 nautical mile sector in Indian environment, based on the data provided by industry stakeholders is presented below:

Exhibit 10: Break-up of direct operating costs for a typical route



The costs have been estimated assuming a 2700 Block Hour Utilization Per year, Fuel Price $4.2/Gallon and Airport Fees as per Airport Authority of India charges.

Based on certain broad assumptions and information based on industry interactions, the cost of operations of a 20-seat aircraft, a 50-seat aircraft and a 70-seat aircraft are estimated to be as per the table below:

Table 8: Approximate Costs per hour of operating the aircraft		
20 seat aircraft	**50 seat aircraft**	**70 seat aircraft**
INR 95,000	INR 155,000	INR 195,000

As can be observed from the above table, per seat cost of operations would be smaller for a larger aircraft for the same Passenger Load Factor.

7.2.2 Selection of an aircraft for a particular route

The selection of an aircraft by an airline for a particular route will depend upon a number of factors such as:

- Level of demand – the estimated average per day passenger numbers;
- Nature of Demand – the frequency of services and schedule of flights will depend upon the spread of demand during the day. For example, for a town with where travel is more for economic activity / business, passengers are likely to prefer travelling either early morning or during late evenings. However, for a tourist place, demand may be more be as sensitive to business timings but more flexible depending upon check-in and check-out times of local hotels.
- Network planning of an airline – If an airline decides to develop a route which is an extension to one of its existing routes, the airline may decide to extend the already operational route by one more leg through the same aircraft, in spite of the quantum and nature of demand being different for the extended leg.

As an illustration, for an average passenger demand of around 60 per day, airline may prefer to have:

- 10/20 seater operation with multiple frequencies for a spread out demand.
- 40/50 seater operation with single frequency for concentrated demand.
- 70 seater operation to feed / extend an existing route and develop a network.

As can be seen from the above, deployment of aircraft is a complex business decision and would need to be taken by airlines based up on their market assessment and route development strategies.
A detailed discussion is presented subsequently in Section 8 in terms of various demand side and supply side factors which impact the selection of an aircraft by an airline.

7.3 Airport Infrastructure

The following aspects need to be considered with respect to availability of airport infrastructure while promoting regional air connectivity:

- Infrastructure availability would need to precede provision of air transport services;
- Infrastructure for regional/ remote areas should be low cost in view of potentially lower affordability of passengers; and
- Infrastructure creation and operation should be viable to ensure proper operations and maintenance of the infrastructure for air transport services.

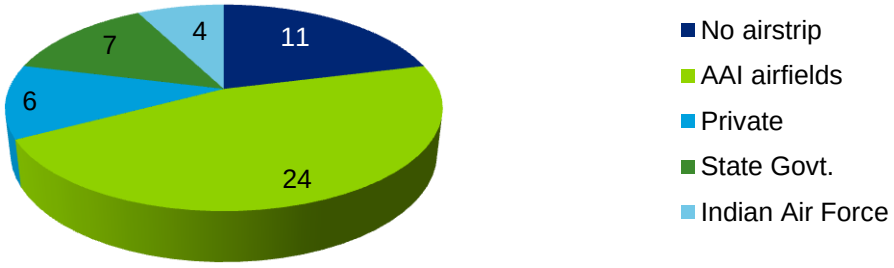
7.3.1 Availability of Infrastructure

There are currently 463 airports and airstrips in India (as on March 2012)[14] out of which only 75 airports will have scheduled connectivity as per the Winter Schedule of airlines filed with DGCA. Majority of airport infrastructure in the country – especially required for regional / remote area air connectivity, is owned by the Airports Authority of India. The rest is being owned by state governments, private entities, etc. There are also a number of non-operational air strips in the country.

Provision of airport infrastructure being capital intensive, the focus initially would need to be on optimally utilising existing infrastructure as well as potentially operationalizing unused air strips.

A quick review of the existing infrastructure at towns / cities identified for promoting air connectivity in the first phase suggests that out of the 52 towns and cities, 11 do not have any kind of airport infrastructure. The rest of the locations at least have an airstrip. Twenty four of the remaining forty one airports are under AAI's operation, seven are under state government, and others are under Indian armed forces or private operation.

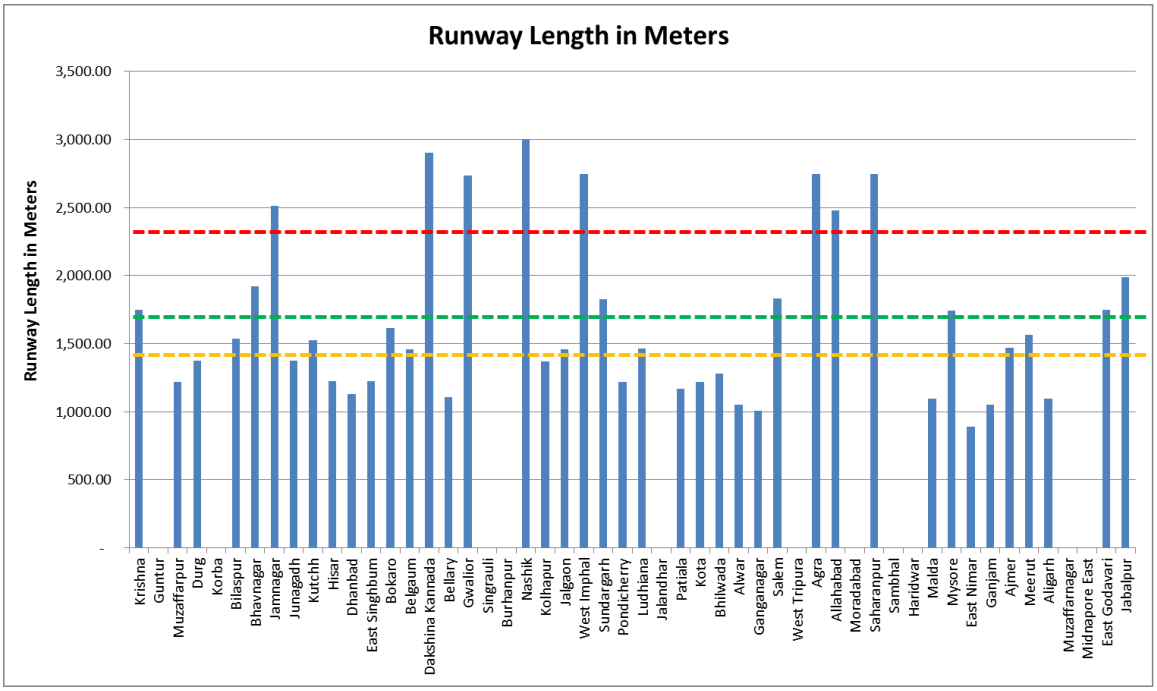
Exhibit 11: Nature of ownership of existing airport infrastructure in identified towns / cities



Based on data obtained from AAI, it is observed that most of the locations having an airstrip have a runway length (minimum ~1400 mt.) sufficient to handle up to a 40 seat plane. About fifteen of them have runway length (~1700 mt.) with a capacity to handle up to 70 seat aircraft and only about eight of these have a minimum runway length of 2300 mt. to handle narrow body aircrafts of the likes of Airbus 320 which have a seating capacity greater than 100 seats. About 10 of these locations have Night Landing facility.

[14] Data provided by AAI in its Expressions of Interest for appointment of Consultant for preparation of a national register to Make a comprehensive records of all Airports/airstrips in India

Exhibit 12: Status of existing airport infrastructure in identified towns / cities[15]



As can be seen from the exhibit above, in most of the towns / cities, provision of air transport services will not require creation of green-field airport infrastructure. Also, 20 seat aircraft can operate at most of the airports / airstrips.

7.3.2 Low cost and viable airports

While, provision of airport infrastructure is capital intensive, for promoting regional / remote area air connectivity, the capital costs of the airports should be kept low so as to make the functioning of the airports viable without high airport / user charges. Accordingly, low-cost airports with minimal airside as well as landside infrastructure should be developed in towns / cities where air connectivity is desired to be promoted.

Apart from a number of non-operational airstrips of AAI, there are around 160 airports owned by the state government[16] in India most of which remain in an inactive/dormant state. One of the priorities of the Ministry of Civil Aviation could be to get active operations at these AAI and State Government airstrips which can release significant untapped infrastructure capacity in the industry, targeted specifically for promotion of regional airlines.

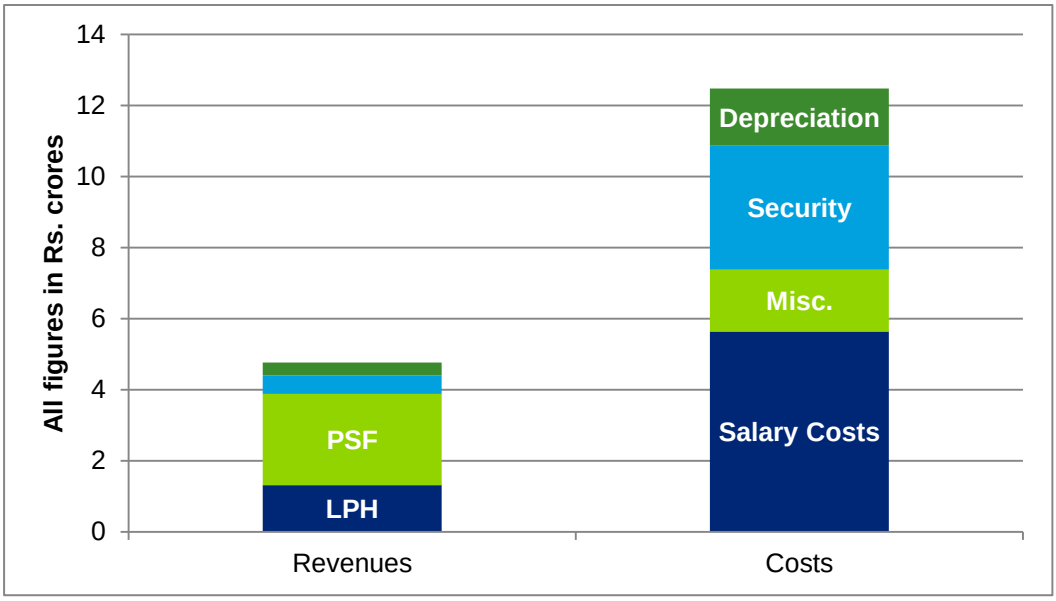
It is understood that, recently, the Ministry of Civil Aviation approved the development of 15 low cost airports in the country.

However, while low cost airports may contribute to reducing the airport charge component of airline cost structure (which is estimated to be in the range of 5% of airline cost structure – as discussed earlier in this Section), it would be important to ensure that provision, operation & maintenance of such airports would be viable.

[15] Some of the towns in the Graph do not have an air-field and hence there is no bar in the bar chart against these towns.
[16] Report on Air Connectivity in India by the Rohit Nandan Committee

Even if capital costs associated with an airport are reduced, various prevalent policy and regulatory guidelines significantly increase operational costs for airports. The chart below presents the revenue and cost structure for a typical regional airport in India. The same clearly indicates that at regional airports, airport / user charges are not likely to be sufficient to cover costs related to even operations at the airport and that Security related costs can be a huge drain on the financial viability of such airports.

Exhibit 13: Revenue and Cost structure for a typical regional airport in India



In order to promote regional and remote area air connectivity in the country, it would be important to analyse a number of these issues presently impacting regional connectivity.

Further, while the Airports Authority of India may presently be operating and maintaining a number of these airports without requirement for stand-alone financial viability, measures may need to be considered to ensure that creation as well as operation & maintenance of airport infrastructure is also viable for private sector. The same may especially be relevant in the context of further privatisation of airport infrastructure in the country.

Also, in view of the key role that State Governments can play in creation of airport infrastructure, promoting regional / remote area air connectivity may also critically hinge upon the State Governments agreed to certain key measures. These measures are discussed further in Section 13.

Further, before identifying measures for promoting regional / remote area air connectivity, it would be important to also analyse other key issues impacting such connectivity. The following section presents a review of certain such key issues.

8 Issues impacting Regional Air Connectivity

As observed in the previous Section, the availability of aviation infrastructure (both the airport infrastructure as well as right capacity of aircrafts) is important for enhancement of air connectivity to the regional and remote areas. However, even at many airports having reasonable infrastructural facilities, the extent of passenger traffic generation is quite low. This could be due to higher preponderance of Tier 3 towns which are less densely populated sub-regions and have low income levels resulting in inherent low demand for air travel in those regions.

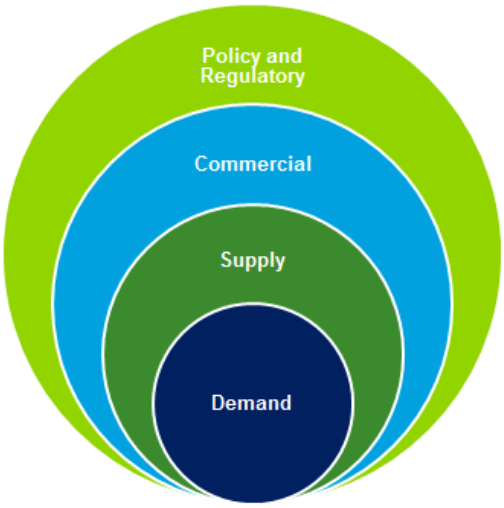
The Ministry of Civil Aviation conducted a stakeholder consultation in 2012 on various issues relating to Air Connectivity in regional, remote and inaccessible areas of the country. Apart from seeking queries regarding the overall framework of supporting regional and remote areas through RDG or an EASF fund, the Ministry also invited comments from the stakeholder on following 2 aspects:

"5. In the context of expanding regional air connectivity and in the background of the experience so far with respect to performance of regional airlines, should MoCA liberalize the licensing conditions such as number of aircrafts, its capacity, choice of destinations etc.

6. Should the exemptions presently granted for aircrafts with less than eighty seater capacity and the helicopter of all types from the RNFC / Landing Charges be made applicable only in respect of flights to identified regional, remote and inaccessible areas? Give justifications for the reply."

It is important to note that the issues related to licensing conditions, choice of destinations, exemptions on various costs, as highlighted in the consultation paper floated by the Ministry have a significant impact on the growth of airlines network, their operations and at a larger scale their business model and the air connectivity.

The airlines are currently unable to address regional and remote markets due to multiple issues ranging from the low demand, lack of adequate size of aircrafts, high operating costs as well as other policy and regulatory constraints. For promoting air connectivity to regional and remote areas, it is imperative to explore and address such issues in details, which adversely impact the commercial feasibility of airlines, particularly serving these regions.



The issues related to air connectivity have been categorized as presented in the adjoining diagram and are discussed in details below:

8.1 Demand of air transport services

In economics parlance, the factors creating or facilitating demand and supply side for a product can originate either due to the characteristics of the industry itself or from extraneous dimensions which pose as direct competition to the industry.

In the aviation industry, the Demand side factors are the ones which impact the decision of the consumers to opt for air transportation. While air services provide benefits of convenience and time effective travelling, it comes at a higher price as compared to the other competing modes of transportation, largely due to high capital intensive nature of airline operations. The balance of these two opposing factors determines the demand for air services.

8.1.1 Economics of Air Transport vis-à-vis other modes of transport

Nature of Market

In India's context, the demand for air transport services can be considered to originate from two blocs of consumers. The first one pertains to the high income individuals who assigns a premium to their time and thus have inelastic demand for air transportation even at higher prices. The other consumer bloc belongs to the middle and lower-middle income class group for whom optimal value of trade-off between time and price is more skewed towards price; i.e. they are willing to opt for air transportation but have elastic demand and high prices deter them from opting for such services.

As one moves away from urban centers of metros and towards the hinterland of Tier 2 and Tier 3 towns, the proportion of high income-low elasticity individuals decreases in comparison to middle income-high elasticity population. This implies that the interplay of consumer forces determines that equilibrium demand for air service in Tier 2 and Tier 3 towns will be smaller, which sometimes renders the market unviable from an airline perspective.

Source of Demand

There are mainly 2 types of travelers generating the demand for air travel in the country, people traveling for business purposes and people travelling to religious/ tourist places or for meeting family relatives and friends.

The business travelers, which generally travel alone, can in turn be categorized into 2 categories, the small and medium-size entrepreneurs and employees working in various multi-national companies. Based on the interactions with various industry stakeholders it has been noted that both these categories of business travelers are primarily travelling between major trunk routes of the country. The business ventures of small and medium-sized entrepreneurs, situated in small towns in India, have potentially not acquired the commercial scale and geographical scope which renders the need for air services essential. The employees working in multinational enterprises are again concentrated in the metros and other major centers of India and a sustained movement of these travelers towards smaller towns is not envisaged in a short time frame.

The travelers for religious/ tourist locations or for meeting relatives and friends are

mainly families which travel in a group of at least 4-5 members. Due to the higher number of travelers in one group, the demand of air transport services is more elastic to the variations in ticket prices.

Substitute Mode of Transportation

Competition from other modes of transportation is an extra systemic factor which creates an additional demand constraint for air transport services. While air transportation provides an advantage of less travel time over other modes such as road, sea and rail, it also proves to be more expensive against these modes. Hence people tend to make a comparison of cost and time before choosing a mode of transportation.

It has been observed that for distances of 150 kms, surface transport would generally take around 3 – 4 hours depending upon condition of the road / rail. The cost for surface transport over such distance in India can be approximated in the range of INR 1,500/- considering Rs 10/- per km cost for a taxi. In case of air travel over the same distance, while the air travel time would be less than 30 mins, but the elapsed time of travel, which includes time of travel to airport of origin (usually located outside the city), waiting time at airport and time of travel from destination airport (usually located outside the city) to desired destination in the city, would work out to around 2 – 2.50 hours. The air fares for such distances as currently being charged by various scheduled airlines in India, unless booked much in advance, range from Rs 2,500/- above. Thus on a comparative basis, the cost of air travel might be nearly double the cost of travel by surface transport and hence it may not be preferred by the traveler on pure economic basis. Additional factor to be considered would be flexibility of choosing the time to commence the journey. While flights would be available only at certain schedules / hours of the day, a road transport would be available more frequently and would also not require any prior booking of seat. Similar analysis can be done for distances like 300 kms and 500 kms. It would appear that larger the distances or larger the travel time in other modes of transportation, more is the advantage of time in air travel to compensate for the higher cost of air travel.

In the context of regional air transportation in India, this issue becomes important because most of the towns / cities would find its nearest well-connected airport within 500 – 1,000 kms of its reach. Thus the regional air movement in India is less likely to be targeted for larger distances (1,000 kms and above). Especially in the southern part of the country, the road transportation is perceived to be more efficient, even for distances upto 300 kms, resulting in convenient travel in almost same time and less cost than that in case of air transportation. The competing modes of travel (road or rail) would thus tend to be preferred by the travelers as compared to the air travel for such routes.

For example, the distance from Surat to Mumbai is slightly less than 300 kms. Travel time through railway transportation is less than 5 hours and fare for 1st class AC ticket is around Rs 1,200. The timings are convenient in terms of departing from Surat in night and arriving in Mumbai in the morning and there are similar availabilities for return travel. However, the cost of air travel over the same city pair (presently provided by SpiceJet only) is upwards of Rs 3,000. The significant variation in price is believed to be one of the main reasons why the air travel between

this pair of cities has not really taken off despite Surat being a place for diamond business and Mumbai being a key port for import and export.

As observed above, one of the key factors influencing the demand of air travel over 300-1000 km range distances is the cost of air travel. In order to promote air connectivity over such routes, the competitiveness of the air transportation mode is needed to be enhanced vis-à-vis the other modes including road and rail by reviewing various elements impacting the cost of operations such that the air transportation can compete against the other modes.

8.2 Supply

Supply side factors pertain to those elements which determine the equilibrium value of services (in terms of capacity deployed) to be provided by the airline operator. Under the current industry regime, the airlines have to commit to a schedule in six months in advance. As noted above, a large chunk of consumers in India have high elasticity for air services which implies that on increase in prices, demand may fall considerably. Given the pre-commitment of airlines for schedule, the airline operator may therefore find it difficult to reduce the deployed capacity under such scenario.

8.2.1 Suitable size of Aircrafts to cater to market demand

One of the key issues impacting the supply of aviation services is the aircraft size. The aircraft size is important for regional and remote area air connectivity on account of the dynamics of demand of such connectivity which in turn impacts the number of seats per aircraft being deployed and the desired frequency of operation on a particular route. The markets being considered in context of the regional and remote area air transportation are generally characterized by lower passenger demand.

Accordingly, depending upon the nature of demand, such markets may only require limited frequencies and smaller sized aircrafts. However, if the airlines deploy larger aircrafts on such routes, it may potentially result in lower passenger load factors. Conversely if such routes are served with suitably smaller size of aircrafts, it may result in higher load factors but may also increase the cost of operations of the airlines which may then need to maintain different types of fleets. Having a fleet of different aircraft types and sizes present an operational engineering and scheduling challenges for airlines and some airlines (especially LCCs) tend to be averse to such fleet mix.

Demand as a factor impacting the size of aircrafts

One of the fundamental concepts of airline business is that seats offered by airlines in an aircraft are perishable commodity, which is why airlines are always focused on deploying the right size of aircrafts on a route to minimize the wastage of this perishable commodity, taking into consideration other factors impacting the cost.

Generally, there are three steps which an airline may take to develop a new route for providing air connectivity to an unserved market,

1. Test the market by commencing operations with a smaller size of aircraft and a limited frequencies (depending upon its own due diligence / assessment of the route)

2. Based on response from the market as reflected in the load factors and yields, gradually increase the frequency of operations
3. Once the market attains a threshold size, deploy a higher size of aircraft.

It is also understood from the interactions with the airline industry that development of a route requires the airline to commence operations at a lower fare for a certain period of time and increase the fare as the market builds up. Also such development of route takes its own time, which can range from 6 months to more than a year and in some cases may take more than a year.

Frequency as a factor impacting the size of aircrafts

Frequency of operations is also important from the point of view of passengers who may be looking to shift from another mode of transportation to air transportation. It is important for the airlines to provide frequencies at the right time of the day to a market as it enables the passengers to have the choice of a more convenient mode of travel. It has been observed that having two landings and two departures per day from an airport spaced around morning and evening provides adequate flexibility to the passengers in terms of time of travel. Such flexibility also enables the business travellers to visit the market, finish their business in the day and return by evening. Otherwise the traveller may need to spend a day in the city to wait for next departure.

Operating cost of an aircraft as a factor impacting the size of aircrafts

The total cost of operation of an aircraft varies with the size of the aircraft. Higher the size of the aircraft, usually higher will be the cost of operation of that aircraft, unless there is a technological difference. However, as the aircraft with higher size has more number of seats and is thus able to carry more passengers per trip, there is an economy of scale in this operation and the cost of operations per seat turns out to be lower than that for an aircraft with smaller size for the same stage length.

However, the issue of choosing a size and a type of aircraft for a market in regional aviation cannot be addressed solely by the factors of demand, frequencies and costs, as whether the airline can diversify its fleet from single size to multiple sizes of aircrafts or not is also dependent upon various other factors including the strategic decision of choice of routes to be operated, the available financing for acquisition of aircrafts, cost-benefit analysis of single-size fleet and multiple-size fleet, competitive pressures and negotiation with manufacturers. Characteristics of a route in terms of its stage length, level of competition as well as the infrastructure at an airport such as number of runways, availability of slots etc. also impacts the airlines decision on the right size of aircraft for that route.

Thus the issue of appropriate aircraft size for a particular route is intricate with multitude of factors and therefore the choice of an aircraft to be deployed on smaller routes should be left for the airlines to answer based on the market characteristics.

Other key supply side constraints impacting the airlines operating in a more volatile market with cheaper substitutes are discussed below:

8.2.2 Price-Point Discovery

Supply of any service and its acceptance by the market depends on the optimal pricing mechanism. In the context of aviation, the discovery of this optimal price band becomes an important task due to various factors. While on one hand, the non-scalability of an airline does not allow reduction in operation cost if the price-point is overestimated leading to a lower demand, on the other hand the small capacity makes exploiting the economies of scale a limited option if prices are undermined. Thus, it becomes important that the air services are offered as close to the optimal pricing point as possible.

Moreover, every new route has different market characteristics serving different customers and thus, experiences on other routes may have very limited resemblance to the optimal price of a new route. The route pricing in the aviation industry is governed by the market response leading to a slower equilibrium attainment process. As the process to reach the equilibrium elongates, so does the time period for inefficient operations distorting supply side factors. A lengthier time period of inefficient operations increases sunk costs for regional aviation which already operates in a fragile market scenario.

It is also noteworthy that such pricing difficulties are unique to air transportation as compared to other modes surface transportation. While railways have the advantages of economies of scale, road transportation industry has a lower deterrent for entries in terms of fixed costs and price points can be easily reached due to high competition.

8.2.3 Network Economics

The supply side mechanics of aviation is altered by network economics of the industry. Every new node (airport/town) being served by a link (route) adds to the number of connections available to the rest of the nodes which implies that airline operators have to solve a number of problems associated with connections of nodes such as shortest path, maximum flow and minimum cost. However, as noted in one of the research papers, "*the system optimized solution (as perceived by the airline operator) to these problems may differ from user-optimizing behavior (relating to the passenger's preference)*"[17]. This implies that consumer preferences for services may not be congruous with the commercial objective of the operator.

To mitigate this, the airline operators have to decide whether to develop a new route as a stand-alone or as a feeder route for a well-established link. As mentioned in the preceding paragraphs, the past experiences do not serve to predict the nature of a new route and thus such constraints elongates the process for attaining equilibrium.

8.2.4 Lack of availability of Low-Cost Airports

Lack of availability of Low Cost Airports is another supply side constraint impacting the growth of regional air connectivity in India. A detailed discussion on the impact on

[17] S.C. Dafermos and F.T. Sparrow (1969) "The Traffic Assignment for a General Network" *Journal Research of the National Bureau of Standards*

regional connectivity due to lack of Low Cost Airports has been undertaken as part of Section 7 in this report.

8.2.5 Maintenance Repair and Overhaul (MRO) Industry

MRO services are essential for an airline operator as the aircrafts require periodic maintenance, repair and overhauls. While some airlines like Air India have their own captive MRO setup in India, the third-party MRO facilities have not come up in a manner as was expected by the industry stakeholders. The lack of third party MRO options in the country force the airline operators to either establish an MRO unit within its operational structure or fly their aircrafts to foreign MRO located in countries such as Singapore, Dubai and Colombo.

For a regional schedule operator, both these options are not financially viable as creating an MRO setup within its own organisation has high fixed costs and also takes the focus of the management away from core operations, flying aircrafts abroad for MRO services adds to the variable operational costs for the airline.

While there is an adequate market available for third-party MRO players to develop their business in the country, because of significant fleet expansions by the national airlines as well as potential fleets from regional schedule operators, the fiscal regime in the country poses difficult challenges for this industry.

Basically, a third-party MRO service provider charges its customers for two types of services namely, the spare parts and the labour. Providing both these services impose tax implications on the MRO players which include taxes such as customs duty on import of spares, VAT on imported spares, Octroi in some locations on imported spares as well as service tax levied on the labour charges.

The Report of Working Group on Civil Aviation Sector by National Transport Development Policy Committee in June 2012 stated that Indian MRO players are disadvantaged compared to the foreign MRO players on account of additional tax burden of nearly 40% and this has resulted in Indian airlines taking their aircrafts to destinations such as Singapore, Dubai, Colombo etc. for MRO service. [18]

In this context, it is important to consider the CBEC notifications on Customs and Central Excise duties on import of spares. CBEC, vide its notification no 12 / 2012 – Customs dated 17th March 2012 (item no 454 and 456)[19] has provided for "nil" standard rate of Customs duty for import of *"Parts (other than rubber tubes), of aircraft of heading 8802"*, which includes *"Aeroplanes and other aircraft, of an unladen weight exceeding 15,000 kg"*. As per the condition number 21 and 22 to the row numbers 454 and 456 respectively, the said import rate of "nil" is applicable, if the parts have been imported under following conditions:

Condition No 21 –

"If, -

(i) imported for servicing, repair or maintenance of aircraft, which is used for operating scheduled air transport service or the scheduled air cargo service,

[18] Report of Working Group on Civil Aviation Sector by National Transport Development Policy Committee, June 2012

[19] http://www.cbec.gov.in/customs/cs-act/notifications/notfns-2012/cs-tarr2012/cs-notfns-tarr12.htm

as the case may be; or

(ii) the parts are brought into India for servicing, repair or maintenance of an aircraft mentioned in clause (ii) of Condition No.75."

Condition No 22 –

"If,-

(i) imported for servicing, repair or maintenance of aircraft imported or procured by Aero Club of India; or

(ii) imported for servicing, repair or maintenance of aircraft, which are used for flying training purposes or for operating non-scheduled (passenger) service or non-scheduled (charter) services;

(iii) imported for servicing, repair or maintenance of aircraft imported or procured by the Airports Authority of India for flight calibration purposes

(iv) the importer furnishes an undertaking to the Deputy Commissioner of Customs or the Assistant Commissioner of Customs, as the case may be, at the time of importation that:-

a. the imported goods shall be used for the specified purpose only; and

b. he shall pay on demand, in the event of his failure to use the imported goods for the specified purpose, an amount equal to the duty payable on the said goods but for the exemption under this notification."

From the above notifications from CBEC, it can be inferred that the import of spare parts for the purpose of servicing, repair and maintenance of aircrafts, which are used for operating scheduled air transport service or the scheduled air cargo service or for operating non-scheduled (passenger) service or non-scheduled (charter) services is exempted from payment of Customs duty.

However it is also understood from a representation made by the MRO Association of India to the Ministry of Civil Aviation that there are certain specific cases of import of spares for aircrafts, which still attract the import duty. Further it was represented by the Association that the MRO services in India are subject to the levy of service tax of 12.36% and sale of imported spares in Maharashtra is subject to levy of VAT at 12.5% as it is considered as first sale in India. In order to make the Indian third party MRO services competitive against the foreign MRO service players, the Association represented that these taxations should be relaxed. The MRO operators are also required to pay royalty charges and rental charges to the airport operators for the usage of hangars at the airport.

If suitable measures are put in place for MRO service providers to flourish in India, it will be a win-win situation for both the MRO service providers as well as the airlines. In the context of regional air transportation, it is believed that a well-developed third-party MRO industry within India would enable lowering of maintenance cost for the regional operators and thus would enhance the commercial viability of their operations.

8.3 Commercial Factors

Certain factors directly impact the cost of operations of an airline. These factors which are commercial in nature mainly include cost of various inputs, taxes (government taxes as well as airport charges) and certain macroeconomic factors such as the foreign exchange rate. These factors combined together determine the overall viability of an airline as they directly impact the bottom line of an airline's business.

The Demand and Supply side (economic) factors as discussed earlier, addresses the nature of industry dynamics i.e. the movement towards equilibrium, the nature of the equilibrium and pace at which equilibrium is attained. Any variation in these economic factors can only create an impact on the viability of regional airlines over a period of time.

Commercial factors on the other hand focus on variable costs which impacts the operational environment of the airline. A review of such factors would assist policy makers to arrive at measures which can immediately impact the financial viability of regional airlines.

The sub-sections below discuss some of the more prominent commercial factors that need to be addressed by the Government.

8.3.1 High prices of Aviation Turbine Fuel (ATF) and VAT/Sales Tax on ATF

It has been presented earlier in the report that fuel expense is one of the largest components of an airline's expenses and ranges from 40 to 50% of total operational costs for the airline. It is therefore natural for the airlines to expect a reduction in this cost component, especially when the airline industry as a whole is not doing financially well in India.

Airlines in India buy ATF from Oil Marketing Companies (OMCs). The ATF supplied by OMCs is refined in India from imported crude. The price of ATF is based on International Import Parity prices and reflects the sum total of Refinery Transfer Price, import duty, margin for the OMCs, excise duty and sales tax/VAT levied by State Governments.

The already high costs of ATF fuel are further accentuated through levy of a Sales Tax/ VAT on the sale of ATF to the airlines. The rate of sales tax is in the range of 20-30% for most of the states across the country. Given the fact that larger volume of fuel off-take occurs at major airports where the sales tax/VAT is in the higher bracket, airlines pay on an average 20-22% sales tax on ATF for domestic operations. Annexure 10 – VAT/Sales Tax on ATF presents the VAT / Sales Tax on ATF in various states across India.

It has also been highlighted in the past that ATF pricing by OMCs is not fully transparent and in 2010, Reliance Industries had moved a petition to the Competition Commission of India (CCI) for reviewing the pricing mechanism of ATF as it suspected there could be instances of cartelization.[20] This issue has further received

[20] http://www.indianexpress.com/news/reliance-moves-cci-says-psus-act-as-cartel-in-atf-supply/646598

attention in the last few months as Ministry of Civil Aviation has requested that ATF be considered under the purview of Petroleum and Natural Gas Regulatory Board (PNGRB), which is the government entity responsible for regulating prices of petroleum products in India.

Measures adopted in the past to address high ATF costs

Recently, many states have adopted the measure to incentivize air transport services to their states by reducing the tax on ATF. For example, Gujarat announced levy of 5% ATF for intra-state air transport services while it is 30% for all other operations. Madhya Pradesh has announced full refund of expenses on VAT on ATF for air transport services within the State for certain period.

In order to reduce the fuel expenses for the airlines, the Central Government has also taken certain initiatives. The prominent amongst these is classification of Aviation Turbine Fuel as "Declared Goods" when sold to an aircraft with a maximum take-off mass of less than forty thousand kilograms operated by scheduled airlines.

As a measure to alleviate some more pressure of taxes on ATF fuel, the Government of India, in February 2012, issued notification allowing private airlines to import jet fuel or ATF directly. This provision was expected to enable the airlines in saving a part of the cost of ATF as in case of direct import of ATF, the airlines would be incurring the import duty on ATF and would be able to save the otherwise payable excise duty and sales tax. This could potentially result in a saving of around 10-15% of the operational costs of airlines.

It is understood that initially many domestic carriers such as, Air India, Kingfisher and SpiceJet and Indigo were keen on direct import of ATF and had submitted their application to Directorate General of Foreign Trade (DGFT) seeking permission for the same. Based on their applications, DGFT granted its approval for direct import of ATF. The air carriers had then commenced discussions with oil suppliers in the overseas market and explored the possibility of import of ATF. However during this process, the airlines were faced with certain challenges such as:

- ATF infrastructure at the airports - Presently the infrastructure for supply of ATF to the aircrafts at Indian airports has been developed and controlled by Indian OMCs. For any new supplier to supply the fuel at these airports either the necessary infrastructure is required to be developed first or the supplier will have to use the existing infrastructure of Indian OMCs, after payment of certain usage charges. While the development of infrastructure would be a cost-intensive exercise, payment of charges for use of ATF infrastructure would add on to the final cost of ATF to the airlines and thus reduce the benefit from such direct import.

  It is understood that airlines were exploring an arrangement where ATF can be imported to some sea ports in India and can then be transported to certain identified airports through tankers. However the potential benefits from this arrangement can be studied only after a few cycles of fuel import through such mechanism. Even with these arrangements it can be inferred that, ATF imports will have better feasibility in port cities like Mumbai, Chennai, Kochi, Vishakhapatnam and Haldia as compared to inland cities like Delhi, which will largely restrict the amount of directly imported ATF as transportation by pipes

or tankers to inland cities would again result in higher costs, evaporation losses and logistical issues.

Also, Indian OMCs finds it more profitable to sell ATF to domestic carriers than share the ancillary infrastructure (tankers, pipelines for transportation, refuelling facility at airports) and thus availability of such infrastructure may also become an issue.

- Working capital requirement – While the Indian OMCs allow a credit period of 60-90 days to the domestic carriers, it is expected that the foreign suppliers would be tighter on the credit period and thus Indian air carriers will need to account for higher amount of working capital funds.

On account of the above mentioned challenges, the direct import of ATF has not taken-off as it was earlier expected to. Therefore, in order to recover their operational costs, airlines pass-through such costs to the passengers resulting in higher air fares, thereby dampening demand.

This issue becomes more pronounced for the regional air carriers. If the regional operators conduct their operations with smaller size of aircrafts, the cost of operation per trip will be spread over a smaller base of passengers and hence the impact on per passenger charges will be higher for such operators. This coupled with the fact that regional operators in India usually fly on routes which have low demand, the high ATF costs adversely impacts the viability of operations for such operators.

8.3.2 Withholding Tax of lease of aircrafts

Withholding tax is defined as the tax paid in respect of income derivable from service or investments. In context of aviation industry, withholding tax on lease of aircrafts is levied on income generated by the leasing agencies (lessors) from leasing of aircrafts to air carriers.

Leasing of aircraft is understood to be a common practice in the aviation industry, as the leasing arrangement allows the airline to increase its fleet in a short span of time and provides them an option to avoid substantial initial capital expenses in the form of advance etc., applicable on the purchase of aircrafts. The current regulation in India in respect of levy of withholding tax for acquisition of aircraft on lease is provided under Section 10(15A) of the Income-Tax Act of 1961, as follows:

"any payment made, by an Indian company engaged in the business of operation of aircraft, to acquire an aircraft or an aircraft engine (other than a payment for providing spares, facilities or services in connection with the operation of leased aircraft) on lease from the Government of a foreign State or a foreign enterprise under an agreement, not being an agreement entered into between the 1st day of April, 1997 and the 31st day of March, 1999, and approved by the Central Government in this behalf.

The following proviso shall be inserted in clause (15A) of section 10 by the Finance (No. 2) Act, 2004, w.e.f. 1-4-2006:

Provided that nothing contained in this clause shall apply to any such agreement entered into on or after the [1st day of April, 2006].

Explanation.—For the purposes of this clause, the expression "foreign enterprise" means a person who is a non-resident;]"

Thus, Section 10(15A) of Income-Tax Act provides exemption from payment of withholding tax on lease rental incomes on aircraft and engines earned by a non-resident Lessor from an Indian company, subject to respective agreements being approved by the Indian Government. However, this exemption is currently valid only for lease agreements which have been signed prior to 31 March, 2006. The non-availability of this exemption for agreements entered into on or after 01st April 2006 has the implication of significantly increasing fleet acquisition costs of Indian carriers.

While the Withholding tax is actually levied on the lessor, it is understood that non-availability of this exemption would significantly increase fleet acquisition costs of Indian carriers. This is because aircraft leasing finance companies generally have a clause in their agreements whereby the withholding tax, if any, is to be paid not by the lessor (i.e. leasing company), but by the lessee (Indian carriers).

Withholding tax rate, in India, is decided on the basis of the country, which the lessor firm belongs to. It is mostly in the range of 10 - 15% based on the country except for Greece which attracts 20% tax and a few other countries, which attract less than 10% tax.[21]

Leasing is preferred in a situation when the airline operator is not very certain of the market demand and plans to test the market for a short duration of time. In the context of the regional and remote area air connectivity, this issue becomes all the more important because on such routes, the market demand may vary significantly and therefore the airlines prefer to lease aircrafts instead of acquiring them for operating on such routes.

In this context, the withdrawal of exemption on withholding tax on leasing of aircrafts from non-resident Indian, earlier provided under Section 10(15A) of IT Act of 1961, has adversely impacted the commercial viability of Indian air carriers.

8.3.3 Airport Charges

The Report on Air Connectivity in India has observed that airports in India are second most expensive airports in Asia in terms of landing, parking and housing charges. While there are certain exemptions provided for smaller aircrafts from landing / parking / RNFC charges provided at some of the AAI and PPP airports[22], these exemptions are only applicable for the schedule operations and not for the non-scheduled operations.

Considering the context of regional and remote area air connectivity, it is important to understand the impact of high airport charges on non-scheduled operators and regional scheduled operators. Unlike the national permit holding air carriers, these operators have a thin traffic base and hence are more vulnerable to fluctuations in traffic. Traffic fluctuations may occur on account of various factors and mostly these

[21] *Source: http://law.incometaxindia.gov.in/Directtaxlaws/dtrr2005/R10.htm*
[22] As per Airport Charges specified by Airports Authority of India

factors would be outside the control of such operators. Thus lower volume of traffic and higher vulnerability to traffic fluctuations make the carriers prefer smaller aircrafts so as to target a better load factor. The high landing / parking charges are therefore spread on the lower base of passengers being carried by these aircrafts and results in incidence of higher cost per passenger.

The box below presents the extent of relaxations being provided on airport charges by various airports in India.

Relaxation in Airport and Navigation Charges by AAI and certain private airport operators

A. Relaxation in Route Navigation Facility Charges at AAI Airports:

- Airports Authority of India has provided relaxation to small aircrafts registered in India in payment of the Route Navigation Facility Charges (RNFC). The relaxation is as follows:
- In respect of aircrafts with maximum All-Up-Weight:

  (i) Upto 10,000 Kgs Shall be levied @ 20% of the applicable rates f weight –cum – distance formula;

  (ii) More than 10,000 Kgs to 20,000 kgs shall be levied @ 40% of the applicable rates of weight-cum- distance formula.

B. Relaxation in Landing Charges at AAI Airports:

- Landing Charges for Small Domestic Aircrafts up to maximum All Up Weight of 21000 Kgs shall be levied @ Rs.113.30/- per thousand Kgs. There is no minimum charge for this category.
- No landing charges shall be payable in respect of :- (a) aircraft with a maximum certified capacity of less than 80 seats, being operated by Domestic Scheduled Operators ; and (b) Helicopters of all types.
- Landing & Parking charges at all airports in the North Eastern Region, Jammu & Kashmir, A&N Island and Lakshadweep (other than Defence Airports) to be reduced by 25% of the current rates.

It is also important to note that the airport operators at Hyderabad and Bengaluru airports are currently following the charge structure as provided in their concession agreement and the tariffs at these airports are yet to be revised post review and approval of the Airports Economic Regulatory Authority of India. It would need to be seen if the airport operators would propose similar exemptions/ relaxations in airport charges for smaller aircrafts post review of tariffs by AERA.

8.3.3.1 Subsidies for air transport operations in the North-east Indian states

It is understood that Ministry for Development of North Eastern Region through North East Council has entered into an MOU with Alliance Air for provision of air services in the North Eastern Region of India (NER). Alliance Air was operating air services in the NER with ATR 42 aircrafts since 2002 based on the arrangement which was initially for a 5-year period, but was later extended on year to year basis. Under the arrangement, a sum was paid by NEC to Alliance Air towards viability gap funding for providing connectivity on commercially unattractive routes in the NER.

The last extension by the Council was for two years from 1st January, 2010 to 31st December, 2011 @ Rs. 46.07 crore per year.[23] However this arrangement of funding is now understood to have been discontinued and accordingly Alliance Air is understood to have discontinued its operations to North-East as part of the subsidy scheme.

In addition to the arrangement with Alliance Air and in order to provide connectivity to remote areas as well as to provide air connectivity to NER with the rest of India, helicopter services are promoted in the States of Arunachal Pradesh, Meghalaya, Nagaland, Sikkim and Tripura under a non-plan scheme with subsidy from the Ministry of Home Affairs. The subsidy portion is limited to 75% of operational cost after adjusting recovery from passengers. For the purpose of restricting subsidy, annual ceiling of flying hours for each helicopter has been fixed. However, the State Governments are permitted to operate helicopter services in excess of the ceiling of flying hours at such additional costs being borne by the States. After adjusting subsidy from the Ministry of Home Affairs, the balance cost of operating helicopter services is met by concerned State Governments. For the year 2011-12, as against the budget provision of INR 40 crore, INR 33 crore is understood to have been released and an additional amount of INR 20 crore to have been demanded in Revised Estimates 2011-12.

8.3.4 Depreciation of Rupee

The depreciation of Rupee in the year 2012 has also resulted in adverse financial impact for the aviation industry in general. Most of the commercial contracts of the airlines such as cost of fuel, lease rental and MRO expenses are denominated in US Dollars. A depreciating Rupee with respect to US Dollars makes all the goods and services being bought by the airlines more expensive in rupee terms. However this risk factor is beyond the control of stakeholders in aviation industry and industry players would need to manage such risks through financial management instruments like hedging etc.

8.4 Policy and Regulatory issues

Apart from the economic and commercial factors discussed earlier, the cost of operations of the airlines is also impacted by various policy and regulatory constraints being imposed on their operations. The sub-sections below discuss various policy and regulatory constraints impacting the operations of regional airlines.

8.4.1 State Government Policies

The Constitution of India refers to activities pertaining to civil aviation, i.e. *"Airways; aircraft and air navigation; provision of aerodromes; regulation and organisation of air traffic and of aerodromes, Carriage of passengers and goods by air in mechanically propelled vessels"* as a subject in the Union List.

[23] *Source:* http://mdoner.gov.in/sites/default/files/annual%20reports/2009-10/9-17/9-17.pdf & www.airindia.com/.../2010-2011_Annual_%20Report_%20of_%20Air_%20India%20_Allied%20_services_%20limited.pdf

It is understood that till around sometime back, the aviation sector was not looked upon as a priority sector by the State Governments who expected the Central Government to ensure air connectivity in all parts of the country. In spite of having airstrips under their control, there were no significant initiatives by these Governments to enhance the air connectivity in their states.

However, in recent years, the State Governments have become more aware of the benefits of a developed aviation sector to the economy of their states and accordingly have become pro-active to promote regional air services. Some measures adopted or proposed to be adopted by the States are illustrated in the table below:-

Table 9: Measures adopted by state governments to promote regional air services

States	Measures
Andhra Pradesh	Formation of Andhra Pradesh Aviation Corporation Limited with the functions of acquiring, operating and maintain aircrafts/helicopters and to develop aviation sector in Andhra Pradesh
Chhattisgarh	To enable connectivity between major industrial centers in the state and state capital, Chhattisgarh had invited EoIs from major airlines. The sops offered by the government were exemption of landing and parking charges on the conditional operation of flights as per the published schedule. Reduction of VAT on ATF to 4%
Gujarat	Gujarat government released Gujarat Civil Aviation Policy, 2010 which inter-alia, has the following provisions:- • Formation of Gujarat State Aviation Infrastructure Company Limited (GUJSAIL) which will be responsible for implementing policy matters for civil aviation • Formation of Aviation Turbine Fuel Trading Company to cut down import parity, marketing expenses and thus creating a price advantage for aviation activity in Gujarat Formation of Gujarat Civil Aviation Board (GUJCAB) to act as an apex Board for fast paced development of aviation sector in Gujarat
Karnataka	A draft Perspective Civil Aviation Plan published by Infrastructure Development Department, Govt. of Karnataka envisages development of low cost airstrips at around Rs. 66 crores (including cost of land) and Helipads at around Rs. 57 lakhs (excluding cost of land).
Maharashtra	Government of Maharashtra has set-up Maharashtra Air Development Corporation (MADC), which is in the process of developing five greenfield airports in Maharashtra
Madhya Pradesh	Government of Madhya Pradesh has entered into a Seat Underwriting arrangement with Non-scheduled operators and thus has enhanced the viability of their operations. Government also announced a measure that for air transport services within the state, the expense incurred by airlines on VAT on ATF would be refunded.

As evident from the table above, certain State Governments have formed dedicated agencies with the objective of promoting regional connectivity. Such a dedicated agency is expected to offer one-stop solutions to airline and airport operators interested in the state aviation industry. It is imperative that such institutions be strengthened and given executive powers for infrastructure provisions.

However, one aspect of state aviation policies is the inward looking nature of these measures. The agencies so formed have the power to facilitate aviation activity within their respective state. For example, the Government of Madhya Pradesh is looking at Seat Underwriting or reimbursement of expense on account of VAT on ATF for air services provided within the State of Madhya Pradesh. Similarly, the Government of Gujarat has brought down the VAT on ATF to 5% for those air transport services, which are provided within the State of Gujarat.

While it is appreciated that an elected Government would like to deploy its resources for the benefit of its own people, it also needs to be noted that air carriers have a better viability of operations, when they are able to connect to more than a few towns / cities, which is usually the case in an inter-state network. Promoting interstate aviation activity is more elemental to the objective of achieving regional air connectivity as large distance and time-consuming nature of inter-state transportation can offer an advantage to airline operator over rail and road network.

8.4.2 High Operational Costs at the airports

Certain policy and regulatory requirements (constraints) also results in high cost of operations at the airports and addressal of these constraints could bring down such costs, benefitting the users of air transport services. These requirements pertain to cost of provision of security at the airport and cost of fire safety equipment at the airports.

Cost of provision of security at the airport: The rules pertaining to provision of security at the airport are laid down by Bureau of Civil Aviation Security (BCAS) in India. At present, security at the airports is provided by the Central Industrial Security Force (CISF). Cost of such security is borne by the airport operator which includes inter alia the salaries for the security personnel, provision of housing facilities for those personnel and other associated costs.

An analysis of various cost elements at an airport (as presented in Section 7 earlier) indicates that the security costs constitutes one of the key cost elements of an airport (generally in the range of 25-30% of total cost of operations at the airport). During our interactions with private airport operators developing regional airports in the country, it was highlighted that in order to reduce the cost of operations at smaller airports, which are likely to see moderate traffic, State Government should undertake the provision and bear the cost of security at the airport.

Fire Tender Services at the Smaller Airport: The requirement and specifications on Aircraft Rescue and Fire Fighting facilities at the airport is provided by DGCA in its Civil Aviation Requirement Section - 4, Series-B, Part - 1. Some of the industry stakeholders have expressed that the City Rescue and Fire Fighting services used by the State Governments may also be used for providing fire fighting services at the airports which have limited aircraft operations. However, this can be considered only if certain bare minimum requirements are taken care such that the distance of fire station from the airport is minimal, the services and vehicles provided are compliant with applicable sections of DGCA C.A.R. Section 4 Series ‘B’ Part 1 etc.

8.4.3 Minimum Requirements for Schedule Regional Air Transport Services

In India, the regulatory requirements for air transport operators are specified in the forms of the Aircraft Act, 1934, the Aircraft Rules, the Civil Aviation Requirements, the Aeronautical Information Circulars. While the broad principles of governing law for the aviation sector are contained in the Aircraft Rules, 1937, Civil Aviation Requirements are issued to specify the detailed requirements and compliance procedures. Owing to the impact that these CAR could have on scheduled and non-scheduled operations, the CARs were reviewed for any potential inhibiting factors they may impose on the development and growth of regional air connectivity. A brief summary of various CARs having provisions which impacts the regional air connectivity is provided as part of Annexure 3 – Existing Policies / Regulations.

Currently, Civil Aviation Requirement, Section 3 - Air Transport, Series C, Part VIII by the DGCA governs the minimum requirements for grant of permit to operate Scheduled Regional Air Transport Service. Various entities at different points of time have applied for obtaining this permit and some of them were granted the permit to operate Regional Air Transport service. However, very few regional airlines have actually taken-off and further very few have been able to sustain the operations.

One of the reasons why the regional schedule airlines have not been able to commence or sustain operations could be the stringent regulatory constraints which impact their ability to develop a reasonable market for viable operations. It is understood from the interactions held with various industry stakeholders that some of the requirements prescribed in CAR, Section 3 - Air Transport, Series C, Part VIII are considered to be onerous and may be considered by DGCA for relaxation. These requirements with their potential impact on the regional airlines are discussed below:

- The definition of “Scheduled Regional Air Transport Service” under this CAR is given as:

  “Scheduled Regional Air Transport Service means a Scheduled Air Transport service which operates primarily in a designated region and which on grounds of operational and commercial exigencies may be allowed to operate from its designated region to airports in other regions, except the metro airports of other regions.”

  Further the Notes to the Definition provide as follows:

  “Note 1: The regional airlines shall not be permitted to operate on Category I routes as given in Annexure-VII of this CAR.

  Note 2: The regional airlines of the southern region which has 3 metros would be allowed to operate between the metros within the southern region namely Bangalore, Chennai and Hyderabad.

  Note 3: Since scheduled regional airlines do not fall under the purview of Route Dispersal Guidelines, they shall not trade-off their ASKM on Category II, IIA and III routes with Scheduled Domestic Airlines granted permit in accordance with Civil Aviation Requirements Section 3 Series ‘C’ Part II.”

  As mentioned in the above definition, a regional scheduled operator is permitted to operate within a designated region (out of the 4 regions namely; North, East &

North-East, South & Western region). The CAR allows operations to other regions only in the event of commercial and operational exigencies. This constraint of limiting the operations of a regional airline is restrictive and impacts the business model of a regional airline.

Further the National Scheduled Operators may already be providing connectivity on attractive routes within a region (with potentially larger aircrafts) and thus in order to avoid competition from these established airlines, an RSOP may be forced to address primarily those Tier-3 markets which have yet not been catered to by the National Scheduled Operators and have low demand. These constraints do not allow regional airlines to develop optimum networks and achieve a desired level of utilisation of the aircrafts and load factors to have viable operations.

- Another requirement as prescribed in Clause 3.2.1 is related to the minimum number of aircrafts to be deployed within a particular timeframe. The airlines are permitted to operate with one aircraft to facilitate the start of operations and are required to acquire a fleet of minimum three aircraft within a period of two years and a fleet of minimum five aircrafts at the end of five years.

  This requirement, under the present context, is considered to play role of an entry barrier for the RSOPs on account of a few reasons. As highlighted above, the restriction on the boundary of operations of an RSOP leave primarily the thin routes in a region to be catered to by the RSOPs. As such thin routes may have demand uncertainty in the beginning, an RSOP would not be certain about the market response and may ideally like to get a fair idea about the market in a time period of 6 -12 months.

  Also, such thin routes are expected to have higher fluctuations in the traffic because of the low base and may significantly impact the viability of operations of an RSOP. On account of these factors, RSOPs may ideally prefer not to have minimum requirements being imposed on the scale of operations in terms of the minimum number of aircrafts.

- The Clause 3.2.3 under the above mentioned CAR pertains to the maximum certified takeoff mass of the aircrafts, which can be acquired by the RSOPs for their operations. Currently this requirement is for an aircraft with maximum certified takeoff mass of more than 5,700 kg, which corresponds to an aircraft with seating capacity of around 15-20 seats. During interactions, a need was expressed by the industry stakeholders that this requirement of 5,700 kg may be reviewed by DGCA in wake of the technological advancements and this value of maximum certified takeoff mass may be reduced.

8.4.4 Minimum Staff Requirements for providing Non Scheduled Air Transport Services

It is understood from interactions with various Non-Scheduled Operators that there are norms laid down under The Aircraft Rules, 1937 and under CAR by DGCA around minimum deployment of staff at the airport and as cabin crew / flight crew. The cost of such staff remains more or less the same irrespective of whether there is a single or more than one flights being operated by an aircraft in a day, unless it

crosses certain threshold number of frequencies, which would necessitate additional staff requirements.

With more frequencies, the cost of deployment of staff can be spread over a larger number of operations and thus per unit cost is reduced. But for limited number of operations, compliance with these norms causes a high operational cost for the air carriers. In such cases, NSOPs have expressed the desire to be granted the flexibility of using the same staff for different functional roles. For example, during non-operational hours, the staff can be used for undertaking marketing / commercial activities by the NSOP.

Further, Rule 38B of The Aircrafts Rule 1937 requires the air carriers to have one cabin crew for an aircraft having a seating capacity of "not less than 10 and not more than 50 passengers". The same rule provides a helicopter having a seating capacity of "not less than 20 and not more than 50 passengers" to have one cabin crew. Industry stakeholders have expressed that requirement of cabin crew for a fixed wing aircraft should be similar to the requirement for a same-sized helicopter, i.e. to have one cabin crew for a seating capacity of "not less than 20 and not more than 50 passengers".

8.4.5 Need for additional clarirty in selected DGCA CARs

In addition to the above requirements around schedule and non-schedule operations, industry stakeholders have also expressed that some of the clauses in the Civil Aviation Requirements need to be modified to provide more clarity in terms of compliance requirements.

For example, Clause 5.4 of Civil Aviation Requirement, Section 3 Air Transport, Series 'C' Part VIII mentions that

"For the import of unpressurised aircraft, the decision will be taken on a case-to-case basis depending on a complete examination of the records and, if required, inspection of the aircraft being procured. However, DGCA would normally not allow import of more than 20 years old aircraft".

The Airlines under such cases are uncertain in terms of the whether the aircraft intended to be acquired and imported by them in India will be cleared for import or not. On account of this uncertainty, the lead time for acquiring an aircraft may become very high and generally the lessors or sellers would not like to wait till such time as may be required for examination and final conclusion by the DGCA. This is more critical in case of smaller aircrafts as the market for smaller aircraft is not as large as that of narrow bodies / wide bodies and the availability of smaller aircraft for leasing purpose is limited in comparison to that of larger aircrafts. A

Accordingly industry stakeholders expressed that in such cases, a decision is left for the interpretation of the requirements by individual officials and there is no certainty on what is required to be done by the air carriers.

As highlighted earlier, it is important for the Ministry of Civil Aviation to focus on alleviating these issues faced by the regional air carriers in order to promote regional

and remote area air connectivity. Some of the proposed measures to address these issues are presented in Section 13 of the report.

Also, the requirement of promotion of regional and remote area air connectivity is not a novel concept and the issues faced by regional air carriers as well the Governments around the world are similar to each other. Successful attempts have been made in the past by various countries to address such issues which impact the growth of regional and remote area air connectivity. The subsequent Section of the report talks about certain support mechanisms considered and implemented by various countries for addressing such issues for promotion of regional and remote area air connectivity.

9 International Experiences in Promoting Regional Air Connectivity

Air connectivity in most countries began with the Government being the agency operating such air transport services and providing airport infrastructure.

In view of the higher costs involved in air transportation compared to other modes of transportation such as road or rail, many countries faced challenges in enhancing air connectivity with respect to the financial viability of air transport services. In most cases, the Governments have either continued these operations by themselves or have intervened by providing promotion through various support schemes or through regulatory measures. In some cases, there have been dedicated national level aid packages / support schemes for the promotion of regional and remote area connectivity.

Broadly, the measures adopted by various countries for promoting regional and remote area air connectivity can be classified under the following three heads.

Exhibit 14: Measures for promoting air connectivity

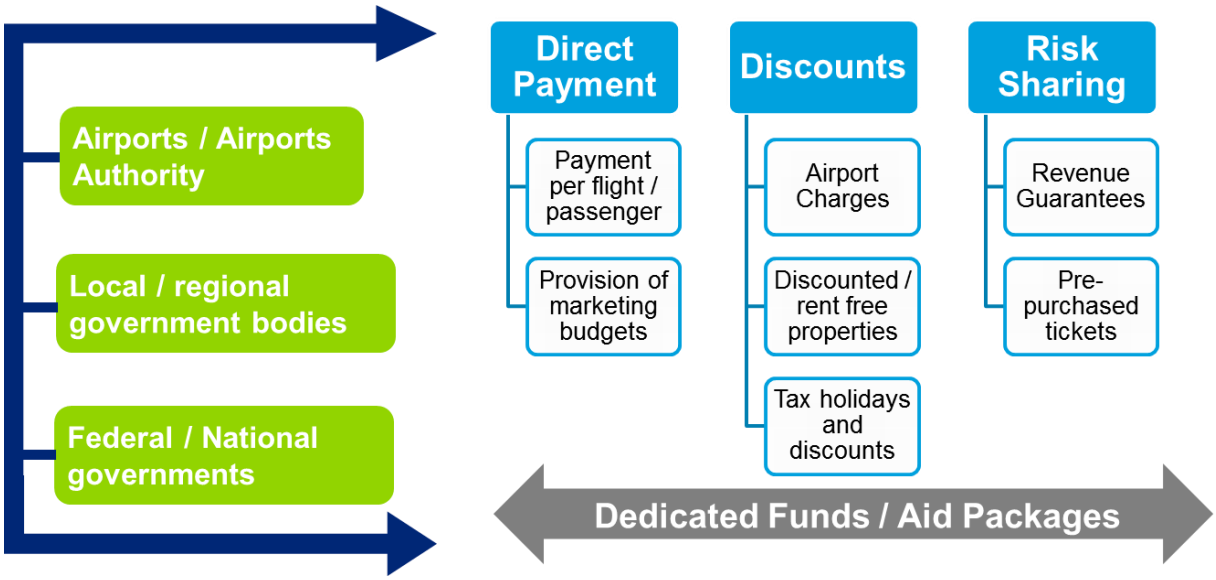
9.1 Support Schemes / Mechanisms

There are several types of support mechanisms which have been employed for development of new routes. These could be in the form of direct payments for new routes / passengers, discounts on various charges borne by airlines and sometimes by sharing risks which airlines would bear while adding new destinations to their flight routes. It has been observed that the entity offering the support could be different in different countries. Typically, it could be a private airport operator or a national / regional airports authority or a governing / regulating body for aviation in the country.

Funding for such initiatives is also provided by different entities in various cases – in some cases, airports offering the support are also the ones funding it while in others, government bodies are the ones funding such support initiatives. Sometimes,

dedicated funds are established for such support, provided for by local / regional / national governments or external funding agencies.

Exhibit 15: Broad framework of possible support mechanisms for improvement in air connectivity



To provide a context for policy options for promoting regional / remote area air connectivity in India, certain support schemes / mechanisms are identified below based on references on international experiences[24].

9.1.1 Direct Payments

Direct / incentive payment is made by the airport operator or government to the air carrier for addition of new origins / destinations to their routes or an increase of passengers on those existing routes which are intended to be promoted. Such payments could be an absolute amount or could be related to the number of flights or the number of passengers. Payments are also provided to the carriers for effectively marketing the services.

9.1.2 Discounts

In this kind of support mechanism, airlines are incentivized to ply on certain routes / airports by offering them discounts on certain expenses which airlines would have to bear to operate on such routes. These expenses could be in the form of airport charges such as Passenger Charges, LPH Charges, property rentals on airports, etc.

9.1.3 Sharing of demand-related uncertainties

While the mechanisms discussed in previous sections relate to either funding some aspects of airline expenses or providing discounts, some Governments adopt guaranteeing a certain amount of revenue for airlines as another form of promotional measure.

[24] A report on Air Service Development for Regional Development Agencies by STRAIR discusses in detail various options employed in the international jurisdictions through measures like Direct Payment, Discounts and Risk Sharing.

9.2 Policy and Regulatory Measures

Governments have also intervened in the form of regulatory mechanisms in order to boost regional connectivity. This intervention has been varied – from restricting the number of operators on particular routes to making it compulsory for airline operators to deploy capacity on certain low traffic potential routes in exchange for letting them ply on trunk routes. While the former has been attempted for routes which are perceived to be susceptible to destructive competition if left open to market, the latter is a systemic mechanism which by virtue of prescribed guidelines, targets generating implicit subsidy.

9.2.1 Regulation on routes

Regulation of routes is mainly based on the premise that every region should have access to an air service and that a special obligation arises with respect to those remote and sparsely populated localities which lack good alternative transport modes. An example of such regulation is reported from Western Australia[25].

9.2.2 Implicit subsidy / cross-subsidy

This is another form of route regulation in which, if an airline is providing service on a profitable route, it is mandatory for it to ply on certain less-profitable or loss-making route(s). In this kind of regulation, mechanism could be to specify particular routes for the operator in advance or it could be so that they can choose their routes from pre-specified categories of such routes.

In the United States of America, before the sector was deregulated in 1978, Civil Aeronautics Board (CAB) had authority over allotting routes to airlines. CAB used to award high traffic routes to carriers and, in exchange, require them to provide service on less profitable routes.

A similar case of implicit subsidies on routes has been prevalent in India in the form of Route Dispersal Guidelines (RDG).

9.3 Comprehensive Aid Packages

Comprehensive aid packages – typically with a nationwide presence, are also provided by certain Governments. Such packages typically operate in the form of Air Service Schemes and target domestic regional / remote connectivity. Examples of such comprehensive packages are found in Australia, Europe and US.

9.3.1 Essential Air Services Schemes

A Study of an Essential Service and Tourism Development Route Scheme, prepared by the ICAO Secretariat, examines whether, and if so how, States can provide

[25] A Research paper on “Thin Intrastate Air Route Regulation in WA: Compellingly Justified?” by Auguste J Hocking, examines the context, rationale and operation of the regulatory environment in Western Australia, with a specific concentration on smaller regional routes. The paper discusses in details the measures adopted by the state of Western Australia for promoting regional air connectivity through a combination of regulated and deregulated routes.

financial support to airlines for certain international route development and assurance of service purposes.

The study report acknowledges that:

> *"Existing EAS schemes, most of which are applied to domestic air services, differ in their specific objectives and mechanisms. They have in common, however, a number of features: they are aimed at linking small communities with larger ones; involve support for the operation of services or routes, rather than to the airline per se; the support generally comes from central budgetary allocations; the mechanism involves a transparent public competitive tender or application process for carrier selection; the provision of subsidies, the concession or licence granted is contractual and time-limited; and, the regulatory elements may cover frequency, capacity, levels and conditions of air fares, and standard of service."*

9.3.2 Route Development Funds

Another kind of a comprehensive aid package is reportedly provided through an Air Route Development Fund established in Scotland in 2002 to improve business connectivity and inbound tourist access all year round. The purpose of the RDF was to provide incentives through public funding to initiate new direct airline links that will benefit the overall economic development of Scotland.

9.4 Regional Aviation in China

China opened its economy to the global market about 30 years back and has witnessed high air traffic growth ever since. Due to large land mass of the country, regional aviation is a crucial component of China's air transport system and has also seen significant growth over the last few years.

Historically, China has faced a similar problem as India in terms of imbalance in the development of trunk and regional routes. The lack of regional aircrafts in China forced trunk airlines to serve medium and low volume routes with large aircraft, bringing inefficiencies in the overall sector. However, China acknowledged the role that civil aviation plays in the economic and cultural development of its country and identified a number of measures to encourage the civil aviation.

The developments in Chinese regional air transport market were reviewed as part of this study because of a number of similarities to the Indian context[26].

9.5 Key Observations

Measures to promote air connectivity to regional and remote areas have been adopted for quite some time now in different parts of the world. In most cases, these have been undertaken to complement the liberalisation of aviation sector where while on one hand airlines focus on routes with greater traffic potential, on the other, such measures can promote connectivity to regions with lesser traffic potential (under-served or un-served). The explicit promotion of regional connectivity began in

[26] A report by Embraer on Chinese Market Outlook 2012-2031 discusses the development of Regional Air Connectivity in China in detail.

developed countries followed by developing countries like China and India at a later stage.

The specific objectives in adopting measures described in this Section have been varied – starting new services from un-served locations, improving frequency from already served locations, converting hopping flights to non-stop flights, increasing passenger traffic, and promoting business and tourism activities at such places.

While in some schemes, local / regional governments have played an active part, most mechanisms are run by airport operators / authorities. In some cases governments have limited their role to providing funds for the cause with the mechanism being left to airport operators.

The funding requirement for promoting a particular route may vary depending upon the perceived market potential of that route. In most mechanisms pertinent to regional connectivity, support is usually extended during the initial phase of new services, typically three to five years, and is tapered down in magnitude gradually. Passenger traffic base is expected to build up during the subsidy period and the route is expected to become self-sustainable. However, in case of remote regions, such support mechanisms are often perpetual in nature.

An evaluation study for their Route Development Fund carried out by Scottish government indicated that fund, established for the purpose of improving air connectivity to Scotland (domestic and international) recorded successful results in achieving this purpose to a great extent. A number of new services which began with support from the fund, continued to ply on the routes even after the support was removed. In addition to this, the cost benefit study for the same indicated hefty benefits for the region as a result of the improved air connectivity.

Following table presents a summary of the measures adopted internationally to promote regional and remote connectivity:

Table 10: Support Mechanism for demand related uncertainties – International Examples

Mechanism	Applicability	Regional	Remote
Support Schemes			
Payment per flight	More applicable on those routes which are already established but it is desired to enhance frequency on them	Medium	Low
Payment per passenger	Applicable on existing routes where it is intended to enhance passenger traffic volume	Medium	Low
Marketing Support	Applicable for tourist destinations	NA	NA
Discounts on passenger-related charges	Applicable to regional locations where demand is perceived to be low in initial phases but is expected to build up with time	High	Low
Airport Charges – Landing Charges	Applicable to regional locations where, if initial support is provided, market may develop and operate on its own	High	Low
Airport Charges – Parking Charges	Applicable to regional locations where, if initial support is provided, market may develop and operate on its own	High	Low

Table 10: Support Mechanism for demand related uncertainties – International Examples			
Mechanism	**Applicability**	**Regional**	**Remote**
Reduction or exemption from Taxation	Applicable to regional locations where demand is perceived to be low in initial phases; if provided on permanent / long term basis, can be suitable for remote locations as well	Medium	Medium
Revenue guarantees	Reduce the impact on the airline of not reaching its break-even point	High	Low
Pre-purchased tickets	Reduce the risk of the airline not reaching its break-even point	High	Low
(i) **Regulatory Intervention**			
Route Control	To make it compulsory for airlines to provide services on routes which are perceived to have low traffic potential or are remote locations	Medium	High
(ii) **Dedicated aid packages**			
Comprehensive Aid Packages	Provide support to unviable routes; perpetual for remote while initial support to regional	Medium	High

While some of the above discussed mechanisms may be relevant in the Indian context in general, they would need to be suitably tailored if considered for implementation depending upon market potential of the regions intended to be connected by air, paying capacity of people, funding capacity of government, etc.

At present, implicit subsidy mechanism is prevalent in India (in the form of RDG) but it has not succeeded entirely in its objective of extending air connectivity beyond trunk routes and state capitals as discussed in a subsequent Section of this Report.

10 Strategic Options for Promoting Regional and Remote Area Air Connectivity

It can be observed from the previous Section that while various alternative support mechanisms have been explored and implemented by various Governments internationally, these mechanisms have been developed in the context of specific requirements. Some countries needed to promote connectivity to smaller communities, while the other needed to comply with the social obligation of connecting remote areas lacking other modes of connectivity. Some incentives are simply targeted at enhancement of air transportation without any social obligation. Hence, the implementation of some or all of these support mechanisms would need to be customized according to the objectives and requirements in India.

In the Indian context, impetus may be more required, at least in the first instance, on extending air connectivity beyond trunk routes and state capitals by developing new routes in Tier-2 and Tier-3 towns / cities. At the same time, there would be a requirement to ensure air connectivity to remote locations, which by definition otherwise have constrained accessibility by alternative transportation modes due to several factors such as geography, security, etc.

Essentially, in India, there would be two components for promoting air connectivity that would need to be addressed:

1. Regional connectivity involving Tier-2 and Tier-3 towns / cities which are presently un-served and
2. Ensuring air connectivity to remote locations.

The key strategic options available with the Government of India to address these components are:

1. Continue with a licensing based regime like RDG with some alterations in the structure (potentially making it more stringent); or
2. Adopt a direct subsidy based approach by providing cash subsidies/ revenue guarantee (through a regional / remote area air connectivity fund); or
3. A combination of the two options above; and
4. Provision of other key enablers which address (reduce) the cost of operations for airlines in general.

10.1 License Based Approach

The licensing based approach involves using policy tools which guide air operations to identified regions, either through a regulatory regime or through mandatory compliance of required operations on identified routes.

Regulation is usually adopted for routes which are believed to be unviable on their own, if left to market forces. Under this approach, the government decides to require

operations on certain routes on the grounds of these being unviable in a deregulated environment.

Another instrument under this approach is the mandatory compliance of operations on select routes by all operators as part of their license requirement. In this mechanism, an established level of air services on a pre-determined route or a group of routes (sharing some characteristic) is specified as a requirement by operators so as to ensure connectivity to identified regions.

In India, this approach was implemented through the Route Dispersal Guidelines (RDG) which requires provision of a certain level of services on certain specified route categories. RDG was introduced in 1994 when the aviation industry was deregulated to allow private sector operations. To ensure that social objectives and equitable distribution of aviation services was achieved, the Government enforced these guidelines. RDG remains the key approach of the Government of India for promotion of regional and remote area air connectivity.

10.2 Direct Subsidy Approach

The direct subsidy approach is based on providing connectivity to an identified region by enabling services through direct funding of operations or guaranteeing pecuniary returns on a conditional basis. Some measures adopted by various countries under this approach, and discussed in the preceding Section, are as follows:-

- *Direct Payments* for dedicated operations to an identified region
- *Cost Sharing* for ensuring efficient operations
- *Pre-Purchase of Tickets or Seat Underwriting* to ensure viable PLF
- *Revenue Guarantee* to provide unaffected operations
- *Route Development Funds*

Until now, direct subsidy based approach has been adopted in India with relatively less focus and in different formats. For instance, Alliance Air was provided subsidy by North Eastern Council for providing services in North East. The North Eastern Council has recently invited private airlines to operate schedule flights in the north eastern airports by expressing their willingness to support the selected operator by way of viability gap funding with an appropriate grant.

Some states such as Chhattisgarh and Madhya Pradesh have adopted types of revenue guarantee schemes by entering into seat underwriting arrangements with Non-Scheduled Operators for providing intra-state connectivity.

However, this approach has been employed for a very limited number of cases and not extensively. Key requirements for such direct subsidy based schemes to succeed at a national level would be existence of an enabling framework / institutional mechanism and funding commitment – presently non-existent.

10.3 Other Key Enablers

The objective of providing other enabling measures / provisions would be to create an environment that generally supports regional operations by service providers by mitigating factors that impact their costs of operations, flexibility of operators, etc.

Some measures have already been taken in this direction – such as Aviation Turbine Fuel (ATF) for small aircrafts (< 40,000 kg) on scheduled operations being classified as a 'Declared Good' which limits the sales tax rate, Landing Parking and Housing (LPH) charges for smaller aircrafts being waived off at most airports for scheduled operations, some other aspects can be potentially addressed to facilitate regional and remote area air connectivity.

10.4 Evaluation of Strategic Options

Subsidy and Licensing based approaches have been adopted in various countries and have produced varying results. It will be important to evaluate these options to decide on the way forward for promoting regional and remote area air connectivity in India. However, other measures discussed in Section 13 of the Report could be adopted irrespective of this evaluation.

10.4.1 Merits and Demerits of Licensing Based Approach

Licensing based approaches can be effective in terms of them being enforcement oriented and not conditional on participation of stakeholders. By making operations a compliance matter and making license conditional on defined services, the government / agency can look to fulfil defined objectives.

However, licensing instruments shift all costs and risks to air transport service providers. It should also be noted that operations on less viable routes – mandated through licensing, can only be provided by an airline if it is able to generate profits through trunk route (more profitable) operations – essentially requiring cross-subsidy between different segments of the business.

Such a mechanism can also distort the market structure and prevent development of more efficient solutions. For instance, under the RDG arrangement in India, it is only natural for airlines to choose routes even within the specified categories that have the best traffic / revenue potential (cherry picking) while extending operations with their existing aircraft which may not be best suited for the market but which enable them to keep their operating & maintaining costs in check.

10.4.2 Merits and Demerits of Subsidy Instruments

Direct Subsidy Instruments (such as through establishment of a Fund) are made conditional on provision of services and have the advantage of facilitating direct monitoring and control. Most of the subsidy instruments can be monitored easily and allow the governing agency to directly observe the compliance to stipulated service conditions. An evaluation at a later stage can also lead to modification of these options as per requirements.

Although, this mechanism entails cost to the exchequer, partnership from airlines, local bodies and central government can reduce costs on each participant. Due to the latent nature of demand for aviation compared to other modes of transportation, subsidizing operations at least for some time, can allow for exploration of new markets till they become self-sustainable. However, a prolonged subsidy – as may be required in certain cases (remote area connectivity) can create sustained costs for the exchequer.

10.5 Way Forward

While both options – of a License Based Approach as well as a Direct Subsidy Approach have their own merits and demerits, a License Based Approach currently adopted in India (through RDG) seems to have created market distortions and stopped serving the required objectives in certain cases. For instance, as also observed in the Report of the "Committee on A road map for the Civil Aviation Sector", RDG may not only be contributing to losses of the airline industry but also be inadvertently hindering the emergence of specialised airlines with appropriate aircraft to cater to the regional and short-haul feeder routes.

It is also observed that licensing instruments which were once practiced in US have been phased out. Subsidy Instruments have become the chosen option for policy makers for promotion of regional connectivity.

The subsequent Sections review the Route Dispersal Guidelines and discuss the feasibility of creating a Subsidy Based Approach through a Regional Air Connectivity Fund (RACF)for promoting regional / remote area air connectivity.

11 Review of Route Dispersal Guideline

The first opportunity for private air transport service provision came in 1986 with the introduction of Air Taxi system to boost development of tourism. This move was associated with several restrictions which related to seat capacity, use of airports, timing and fare.

Gradually the extent of freedom granted to private air transport service providers was enhanced and in 1994 with the Air Corporations Act, 1953 being repealed, private air transport service providers could begin scheduled operations.

The number of domestic passengers carried by scheduled Indian airlines in the year 1993-94 was 75.1 lakhs and this number increased substantially to 110.57 lakhs in the year 1994-95. Similarly fleet size of all scheduled airlines also increased from 78 in 1993-94 to 118 in 1994-95. The entry and expansion of private airlines resulted in significant growth in capacity deployment considered in terms of Available Seat Kilometres (ASKs).

Prior to repealing the Air Corporations Act, 1953, scheduled air transport services were provided by nationalized carriers, Indian Airlines and Air India. The routes to be operated by the nationalized carriers were guided by the Government of India. While opening the Indian skies for private airlines, Government seems to have been minded to ensure that airlines deploy a certain part of their capacities on routes which may not be commercially attractive / viable in the short term. The Central Government, vide Order No. AV-11012/2/94-A dated 01.03.1994, issued Route Dispersal Guidelines (RDG).

11.1 Route Dispersal Guidelines – 1994

In its present structure, Route Dispersal Guidelines have classified air transportation routes in India in three categories, viz. Category I, II and III. These Guidelines direct every operator operating scheduled air transport service within the country to provide a certain minimum extent of scheduled air transport services on routes indicated in Categories II and III vis-à-vis scheduled air transport services provided on routes in Category I.

a. Category I routes were specified in terms of routes directly connecting the following:

Table 11: Routes under Category I	
Sl No.	Routes
1	Bombay – Bangalore
2	Calcutta – Delhi
3	Bombay – Calcutta
4	Calcutta – Bangalore
5	Bombay – Delhi
6	Calcutta – Madras
7	Bombay – Hyderabad

Table 11: Routes under Category I	
Sl No.	Routes
8	Delhi – Bangalore
9	Bombay – Madras
10	Delhi – Hyderabad
11	Bombay – Trivandrum
12	Delhi – Madras

b. Category II was defined as those routes, which connected stations in North-Eastern region, Jammu and Kashmir, Andaman & Nicobar and Lakshadweep.

c. Category III was defined as routes other than those in Category – I and Category – II.

The Guidelines mandated that anyone who operates scheduled air transport service on one or more of the routes under Category-I shall be required to provide service in Categories – II & III as indicated below:

a. Deploy at least 10% of the capacity deployed on routes in Category–I on routes in Category–II and of the capacity thus required to be deployed on Category–II routes, at least 10% to be deployed on services or segments thereof operated exclusively within Category-II.

b. Deploy at least 50% of the capacity deployed on routes in Category–I on routes in Category – III.

The Order is presented at Annexure 18: Order for RDG Compliance.

Route Dispersal Guidelines had also provided flexibility to operators to provide required services either by aircraft in their fleet or with aircraft in any other operator's fleet on mutually agreed terms with prior approval of the Director General of Civil Aviation (DGCA). However, a restriction was imposed in 2009 which prevented Scheduled Regional Operators (not under the purview of RDG obligations) from trading their capacities with other scheduled operators (under purview of RDG obligations).

The DGCA monitors compliance with Route Dispersal Guidelines on a monthly basis. In the event of non-compliance, airlines are required to make up any shortfall during the subsequent period.

Further, the Government has reconsidered aspects associated to the Route Dispersal Guidelines at certain instances. For example, in addition to the routes identified as Category IIA (intra Category II), operations on Cochin-Agatti-Cochin route were added to Category IIA routes vide Ministry of Civil Aviation letter No. AV.13011/22/1997-DT dated 26th June 2006.

11.2 Previous Reviews of Route Dispersal Guidelines

11.2.1 Report of the Committee on A Road Map for the Civil Aviation Sector

The Ministry of Civil Aviation, Government of India had constituted a committee in 2003 to prepare a Road Map for the Civil Aviation Sector under the Chairmanship of Shri Naresh Chandra (hereinafter referred to as the Naresh Chandra Committee). The Naresh Chandra Committee reviewed the mechanism of Route Dispersal Guidelines and the issue of provision of Essential Air Services. The relevant sections of the Report prepared by the Committee are reproduced below.

> "*The current arrangement for ensuring essential air services suffers from several limitations. To begin with, airlines often incur losses on Category II routes as they are required to charge subsidised fares on these routes. Furthermore, shorter routes among Categories II & III are commercially unattractive in view of the competition from alternative modes of transport such as rail and road. In any case, major airlines with their fleet comprising larger aircraft (geared towards capturing a share of the profitable long-haul trunk and regional routes with dense traffic) find it sub-optimal to serve shorter routes. Normally, routes that are not found to be commercially viable by major airlines can still be serviced by niche airlines with appropriate aircraft. The experience of Vayudoot not only underscored demand for air transport in small cities, but also that it can be successfully provided with the help of small modem economical aircraft." Recently, Air Deccan — a private "no-frills" airline — launched its service connecting Bangalore, Hubli and Mangalore. The route dispersal guidelines may be inadvertently hindering the emergence of specialised airlines with appropriate aircraft to cater to the regional and short-haul feeder routes. This is because given that the larger airlines are bound by the route dispersal guidelines to operate a specified percentage of their deployed capacity on Category II & III routes (regardless of the viability of such operations) they can (potentially) undercut the specialised airlines on those routes.*
>
> *In view of the above, the key to achieving the goal of expanding the reach of air services in the country appears to be in abolishing the route dispersal guidelines. Such a step would enable major airlines to focus their efforts on the routes of their choice and, more importantly, create room for the emergence of specialised airlines to service the remaining short-haul, regional and feeder routes. As regards maintaining essential air services on routes that are strategically important but are commercially unviable, the government should provide explicit subsidy support, preferably through direct budgetary transfers or the imposition of a sector-specific cess or a combination of both. In addition, such support should be allocated through a transparent process of minimum subsidy bidding. Here, it is noteworthy that competitive tendering of subsidy for maintaining essential air services is a well-established practice in several countries, as it allows such routes to survive but on the basis of fair competition and at the lowest cost possible to the tax payer. For instance, the Remote Areas Subsidy Scheme (RASS) in*

Australia and the Essential Air Services (EAS) Program in the U.S. are broadly based on minimum subsidy bidding.

Drawing upon international experience, the Committee suggests the following combination of principles and steps, to meet the objective of preserving essential but uneconomical air services.

- *First, the scope of Essential Air Service (EAS) objective (including the pace at which it is pursued) must be congruent with the available quantum of finances. In the absence of a firm link between the objective and resource availability, the essential service goals cannot be sustained and, worse, the entire initiative may lose credibility. In other words, if adequate funds are not available, the scope of the EAS may have to be less aggressive, i.e., target routes may need to be prioritised.*
- *Secondly, while arriving at a quantum of resources available for meeting the EAS objective, all avenues of raising resources through direct user charges must be exhausted. This is necessary to wean the targeted segments away from the umbrella of subsidy support and, more importantly, to mitigate the risk of subsidy being perceived as a perennial entitlement.*
- *Thirdly, the promise of support should be for a reasonable length of time, and backed by a credible stream of resources, so that the service providers can make their investment decisions with a greater degree of confidence. Towards this end, the government may consider the creation of a non-lapsable Essential Air Services Fund (EASF), outside the Consolidated Fund of India, and the Fund's management may be vested with an independent board.*
- *Fourthly, the government may consider replacing aviation-related taxes and fees such as IATT, FTT and PSF with .a single, lower ad valorem sector-specific cess, say at 5% of airfare, and the proceeds thereof may be credited to EASF.*
- *Fifthly, the proceeds from the proposed privatisation of Airports may be ploughed back into the sector, i.e., into the EASF, towards meeting the net cost of EAS.*
- *Sixthly, to the extent that the central and state governments consider EAS as an area of priority in general, they should augment the resources through the general exchequer (as is indeed the case for other laudable objectives pursued by the governments). In a similar vein, the state governments may contribute to the lowering of the net cost of EAS through fiscal concessions, as for example, by exempting the EAS operations from high incidence of sales tax on ATF.*
- *Seventhly, the funds from the EASF may be used to "purchase" essential air services through a transparent process of minimum subsidy bidding.*

The Committee recognises that the scope of EASF would include uneconomical airports and Air Traffic Control (ATC) services. Accordingly, the Committee suggests that all such services should be supported through the proposed EASF — subject, of course, to a clear demarcation of resources for different streams of support."

Key Recommendations

Naresh Chandra Committee recommended abolishing the Route Dispersal Guidelines making an argument that once the Guidelines are abolished, major airlines would be able to focus their efforts on the trunk routes and also enable emergence of specialized regional and feeder airlines to cater to regional routes.

The Committee suggested that the Government should support these routes through explicit subsidy which can either be funded through direct budgetary transfers or by imposing a sector specific cess. The Committee also considered the selection of operators to ply on these routes through a transparent competitive tendering process.

11.2.2 Report on Air Connectivity

The Ministry of Civil Aviation vide their Order No. AV. 13011/72/2010-DT dated 13.04.2011 constituted a Committee under the Chairmanship of Shri Rohit Nandan, Joint Secretary (hereinafter referred to as Rohit Nandan Committee) to review the Civil Aviation Requirement on Regional Scheduled Operations (RSOP) and other air connectivity issues. The Rohit Nandan Committee, as a part of its Terms of Reference, also reviewed the Route Dispersal Guidelines.

Rohit Nandan Committee initially endorsed the role played by Route Dispersal Guidelines in enhancing air connectivity in the past. It said:

> *"It is felt that Route Dispersal Guidelines, in the present state, have been quite successful in providing air connectivity in different parts of the country. It is mainly because of the Route Dispersal Guidelines that scheduled domestic airlines continue to link airports in North-Eastern Region, Jammu & Kashmir, Andaman & Nicobar Island and Lakshadweep Island. Further, with the increase in the air operations on Category I routes, airlines were bound to increase operations on Category II routes and on non-metro and smaller places under Category III routes. In other words, effective implementation of Route Dispersal Guidelines ensured that airlines fulfil at least some social obligations."*

In view of the airlines presently meeting RDG obligations, the Committee considered inclusion of certain Category III Routes into Category I Routes and noted the following:

> "*Analysis of the capacity deployment data after inclusion of eight Category III routes into Category I indicates that at present there is no impact on capacity deployment on Category II and III routes. However, airlines like Spicejet and IndiGo will have to deploy more flights on Category IIA routes to meet the Route Dispersal Guidelines obligations. Keeping in view the ambitious fleet induction plans, some of the airlines will also have to deploy additional capacity on Category II and III routes commensurate with increase in operations on Category I routes.*

However, Rohit Nandan Committee noted that such inclusion would still result in a situation where the airlines met the RDG requirements. The Committee considered further changes to the RDG conditions to attempt to address some of the other issues in regional air connectivity as follows:

"After the inclusion of 8 new routes in the Category I the present level of 98.9% connectivity of Category III would be reduced to 56.1%. Given the fact that there is a need to provide better connectivity to Category III is home to nearly 97% of Indians. The Committee recommends that the present requirement of 50% deployment in Category III may be increased to 75%. This would oblige the Airlines to devote an additional 19% ASKM to these routes resulting in better air connectivity to these areas. In order to ensure that the additional connectivity created through this measure does not again gets limited to the State Capitals, it is recommended that the additional connectivity so created should be distributed in 40:60 ratio between Capitals and Non-Capital stations to ensure a better deal for the hinterland. This would mean that any new addition to the route in future would be distributed in ratio of 40:60 between capitals and non-capitals of the 11 underserved States. This may be classified as a new category of routes and called Category III A Routes."

The Committee noted the following on the issue of exclusion of certain Category II Routes:

"Keeping in view the prevalent load factor on these routes (Delhi-Srinagar, Delhi-Guwahati and Delhi-Bagdogra) there has been a persistent demand from some quarters for the exclusion of some of these routes in order to improve connectivity to Category II States.

In case all the three routes are excluded from the purview of Category II routes, all the airlines except national carrier will be falling short of ASKM deployment requirements as indicated below and have to deploy considerable number of flights on remaining Category II routes."

However, the Committee also noted the following observation on RDG:

"The Committee felt that RDG already casts a burden on Airlines' commercial health. In order to ensure RDG does not become a millstone there is a need to have strong pegs in Category II to make operations on these routes sustainable in the long run. Hence the Committee recommends that presently the three routes may be allowed to continue as part of Category II. However, there is a justification for removal of Bagdogra from this category once Pakyong Airport becomes hopefully operational by 2012. Pakyong would then provide direct connectivity to Sikkim and hence the justification to include Bagdogra in the North East and consequently in Category II would disappear."

While reviewing the concept of an Essential Air Services Fund, Rohit Nandan Committee also noted the following:

"The Committee observed that RDG in itself offers only a partial solution to the issue of regional connectivity. It lays down the social parameters within which the airlines must operate. But it leaves the responsibility entirely on the airlines, which inhibits the full commercial growth of airlines. The RDG being a matter of internal cross-subsidisation between financially viable and un-economical routes creates problems of financial health within the industry. The tendency has been that even in Category II and Category III routes,

Airlines prefer to resort to cherry-picking or cream skimming and adopt only those routes which are comparatively more promising or lucrative while leaving the unviable sectors unserved or underserved. The Committee felt that in order to achieve the social objectives prescribed under the RDG new tools need to be developed to assist the aviation industry to balance social performance and economic viability.

The Committee also observed that if the RDG operate in isolation then it creates distortion in the overall fare structure. Since the RDG operates on the principle of internal cross-subsidisation, there is a huge possibility of airlines over-charging certain routes to minimize the losses on those routes which are prescribed by the Government. There is also a possibility that the airlines charge more on these uneconomical routes in order to reduce losses on operating on these sectors. This not only distorts aviation economics but has the consequential impact on making air travel unaffordable and hence reducing the number of people traveling by this mode of transport.

The ICAO Report too considered the economic aspect of internal cross-subsidisation and commented that: "Cross-subsidization might be considered to be an implicit subsidy for operations on unprofitable routes and a means to redistribute wealth between different regions, but the internal process of cross-subsidization is neither transparent nor likely to stimulate efficiency in terms of airlines" profit maximization. It also affects an airline's capital stock formation negatively. This is because, as internal financing to support unprofitable routes decreases profits, an airline has to offer a higher return to its investors in order to maintain their commitment to invest. This increases its cost of capital and thus reduces the amount of investment and capital formation. Furthermore, cross-subsidization is often made unworkable by market forces and is not compatible with efficiency and the increasingly competitive environment. Liberalization of air transport by domestic regulatory reforms and liberal air services agreements concluded in recent years has already substantially reduced or eliminated the opportunities for cross-subsidization in many markets." (Para 2.3.8 of the ICAO Report)

Key Recommendations

As can be seen from the above discussion, while Rohit Nandan Committee observed that the Route Dispersal Guidelines have significantly contributed to the enhancement of regional connectivity in the country, it has not been successful in doing so beyond the state capitals.

However, the committee suggested modifications to the Route Dispersal Guidelines and suggested development of additional measures like a Fund based mechanism to supplement the Route Dispersal Guidelines.

The key recommendations of the Rohit Nandan Committee on the issue of changes required to the Route Dispersal Guidelines are summarised at Annexure 17: Recommendations on Route Dispersal Guidelines by Report on Air Connectivity

11.3 Present Status of RDG Compliance

Since the submission of the Report on Air Connectivity by Rohit Nandan Committee, while the scheduled airline Kingfisher is presently not operating (since October 2012), some of the other scheduled carriers have enhanced their capacities. IndiGo has expanded its fleet of Airbus A-320s and SpiceJet has expanded its fleet of Q400s. These changes are also reflected in the RDG compliance numbers published by DGCA on monthly basis:

Table 12: Monthly RDG Compliance published by DGCA

Airline	Cat – II		Cat – II A		Cat – III	
Months	Sep 2012	Nov 2012	Sep 2012	Nov 2012	Sep 2012	Nov 2012
Air India + Alliance Air	27.2	21.3	2.50	2.0	93.0	81.2
Jet Airways + JetLite	14.0	18.9	1.56	1.75	97.5	104.4
Kingfisher Airlines	41.0		2.28		50.5	
SpiceJet	23.1	21.7	1.77	1.55	117.1	115.1
Go Air	36.1	40.0	2.79	2.29	121.9	120.2
IndiGo	16.1	15.6	1.20	1.20	112.0	111.1
RDG Requirement	**10%**		**1%**		**50%**	

Further, based on the Winter Schedule (Effective from 28th October 2012 to 30th March 2013) filed by the Scheduled airlines with the DGCA, the approximate capacities in ASKs proposed to be deployed by respective airlines can be estimated[27].

The table below details the percentage ASKM proposed to be deployed by each domestic airline as a Percentage of Category I.

Table 13: ASKs proposed to be deployed per week (on an average) as Percentage of Category-I

Airline	Cat – II	Cat – II A	Cat – III
Air India + Alliance Air	26.53%	2.45%	85.88%
Go Air	36.32%	1.63%	125.11%
IndiGo	17.37%	1.10%	112.96%
Jet Airways + Jetlite	19.88%	1.93%	106.54%
SpiceJet	27.69%	1.16%	121.81%

(Source: DGCA, website of respective airlines, Deloitte analysis)

[27] ASKs proposed to be deployed by airlines has been derived by taking the no of seats per aircraft and the respective stage lengths. Since the actual stage length (flown by the airline on a route) is not available, a proxy for the same has been taken in the Great Circle Distance between the pair of stations. The information on Great Circle Distance has been sourced from the website http://www.worldatlas.com/travelaids/flight_distance.htm. Information regarding number of seats being offered by a carrier on a type of aircraft has been taken from respective websites of the airline. Thus the ASKs proposed to be deployed by the airline for the entire winter schedule (of 22 weeks) has been derived, which has then been converted to a per week value.

It is evident from the table above that airlines are in adherence to the requirements under Route Dispersal Guidelines. The table also indicates that all scheduled airlines are well above the prescribed minimum percentages across all categories of RDG.

Had the capacities been marginally above the prescribed numbers, it could have been possible / considered that airlines were deploying capacities to ensure compliance with RDG. However, the substantially higher compliance figures clearly indicate to the possibility that – at an overall level, capacities are now getting deployed by airlines on routes under Categories III and II on account of commercial considerations and in the course of regular business / network planning.

11.3.1 Implications for Regional Connectivity

In the context of the study on promotion of regional / remote area air connectivity, an important issue to analyse has been the efficacy of RDG in enhancing air connectivity across the geographical spread of the country.

Compliance with RDG has been possible by a combination of providing connection to more destinations and enhancing capacities (frequencies, aircraft sizes, etc.) to already connected destinations in Categories II and III.

With the increase in air transport services on Category I routes, airlines needed to increase operations on Category II and Category III routes. Several bodies[28] at various forums have stated that Route Dispersal Guidelines, in the present form, have been successful in providing air connectivity to different parts of the country. It has especially been stated that because of the Route Dispersal Guidelines scheduled domestic airlines continue to link airports in North-Eastern Region, Jammu & Kashmir, Andaman & Nicobar Islands and Lakshadweep Islands.

During interactions with the Ministry for Development of North-Eastern Region (MDONER), it was affirmed that existing Route Dispersal Guidelines have definitely contributed to an increased number of air transport services to operational airports in the NE region.

However, analysis of the existing connectivity does indicate that airlines seem to have preferred certain routes within Category II. Analysis of the data available with DGCA indicates that mostly State Capitals have been well connected in terms of air transport services being provided by airlines.

Table 14: Existing Connectivity – Category II

Airports	State	State capital	Frequency Per Week	Destination Served
Port Blair	Andaman & Nicobar	Yes	60	3
Jorhat	Assam	No	14	3
Silchar	Assam	No	53	5
Tezpur	Assam	No	9	3
Dibrugarh	Assam	No	26	3

[28] MDONER, Issues on Civil Aviation in North Eastern Region and Sikkim – Road Ahead,
APAO Comments on Report on Air Connectivity in Regional, Remote and Inaccessible Area In India,
Working group on Civil Aviation for the 11thFive Year Plan,
Report on Air Connectivity, 2011

Table 14: Existing Connectivity – Category II				
Airports	**State**	**State capital**	**Frequency Per Week**	**Destination Served**
Guwahati	Assam	Yes	228	11
Jammu	Jammu & Kashmir	No	113	5
Leh	Jammu & Kashmir	No	20	3
Srinagar	Jammu & Kashmir	Yes	127	6
Thoise	Jammu & Kashmir	No	2	1
Agatti	Lakshadweep	No	6	1
Imphal	Manipur	Yes	72	6
Shillong	Meghalaya	No	9	2
Aizwal	Mizoram	Yes	21	3
Dimapur	Nagaland	No	24	4
Agartala	Tripura	Yes	90	4

(Source: Winter Schedule published on DGCA website, Deloitte analysis)

It can further be observed that the connectivity in Category II has been restricted to cities like Guwahati, Agartala, Imphal, Jammu, Srinagar and Port Blair and not all 10 states presently in Category II can be considered well connected. Based on the ASKs and no of seats proposed to be deployed by Scheduled Airlines as per Winter Schedule for 2012-13, it can be observed that ASKs deployed to the cities of Guwahati, Bagdogra, Jammu, Agartala, Port Blair and Srinagar are more than 80% of all ASKs deployed to Cat-II and Cat-IIA routes. This indicates the relative prominence of these 6 cities out of all the cities under Cat-II and Cat-IIA and it also indicates the possibility of formation of hubs.

Another aspect to be considered is the low passenger demand for certain routes in the North-East. Under an arrangement of viability gap funding with North-East Council, Alliance Air has been providing air transport service to various airports in the North-East. The aircraft used by Alliance Air was ATR 42 for these routes. Despite operating the routes with smaller aircraft for around 10 years, Alliance Air did not witness an improvement in PLFs on certain routes. As per the Alliance Air data on PLFs for their North-East operation, there are certain routes, which till recent years witnessed less than 20% PLF. This indicates that except for key cities, there could be a lack of inherent demand for air travel in certain remote areas of North-East.

11.4 Way Forward

As also discussed in Section 10, with respect to the strategic options for promoting regional / remote area air connectivity, RDG which is essentially a License Based Approach seems to have created market distortions and stopped serving the required objectives in certain cases. For instance, as also observed in the Report of the Naresh Chandra Committee, RDG may not only be contributing to losses of the airline industry but also be inadvertently hindering the emergence of specialised airlines with appropriate aircraft to cater to the regional and short-haul routes.

In terms of the broader comparison and decision between the 2 key strategic options for promotion of regional / remote area air connectivity, the following possibilities have been considered in the following table.

1. Retain RDG and make adjustments (discussed in the Report of Rohit Nandan Committee);
2. Retain RDG and operationalize a Regional Air Connectivity Fund; or
3. Abolish RDG and operationalize a Regional Air Connectivity Fund (direct subsidy approach).

Based on the following factors it is recommended that abolishing RDG would be the first step in focusing on and implementing a more targeted and transparent mechanism for promotion of regional / remote area connectivity to presently under—served / un-served parts of the country:

- Review of compliance data (of RDG) suggests that existing deployment of capacity on Category III (regional) routes, rather than being on account of the mandated requirement under RDG, seem to be based on commercial considerations / market analysis / business (network) plans of the airlines,
- Relative advantages of various options discussed in the following table,
- Previous review of this matter by Naresh Chandra Committee and aspects mentioned therein – the relevance of which is reinforced under the present study.

Table 15: Strategic Options for Promoting Regional Air Connectivity			
Option		**Advantages**	**Disadvantages**
A	1. Retain RDG with adjustments	• Regulation of connectivity continues under an extant framework (known to all) and requirement to deploy capacities over specified categories of routes ○ However, adjustments to the RDG framework would be needed to address identifiable issues and more closely regulate provision of connectivity to under-served and un-served areas	• Airlines would continue to face cross-subsidy issues with deployment of capacity over thin routes • Adjustments to RDG to make the framework more closely regulate provision of connectivity to under-served and un-served areas would only exacerbate the cross-subsidy issues for airlines • As noted by the Naresh Chandra Committee, route dispersal guidelines may be hindering the emergence of specialised airlines with appropriate aircraft to cater to the regional and short-haul feeder routes.
B	• Retain RDG with adjustments • Operationalize a Regional Air Connectivity Fund	• Regulation of connectivity continues under an extant framework (known to all) and requirement to deploy capacities over specified categories of routes *a.* However, adjustments to the RDG framework would be needed to address identifiable issues and more closely regulate provision of connectivity to under-served and un-served areas • The Fund could begin to focus on transparently supporting provision of connectivity to certain regional / remote areas	• Airlines would continue to face cross-subsidy issues with deployment of capacity over thin routes • Adjustments to RDG to make the framework more closely regulate provision of connectivity to under-served and un-served areas would only exacerbate the cross-subsidy issues for airlines • The distinction between routes required to be operated under RDG and those that may transparently get support under RACF may not be clear or easy to implement with risk of ambiguity in implementation impacting

Table 15: Strategic Options for Promoting Regional Air Connectivity			
Option		**Advantages**	**Disadvantages**
			decisions on routes (for instance, should the airlines wait for the fund to support a route or pick up as a means to ensure compliance under RDG)
C	1. Abolish RDG 2. Operationalize a Regional Air Connectivity Fund	• Airlines would be free to decide their network without any obligations • May improve viability of operations for airlines • Would enable major airlines to focus their efforts on the routes of their choice and, more importantly, create room for the emergence of specialised airlines to service the remaining short-haul, regional and feeder routes. • Competitive tendering of transparent subsidy for regional connectivity is a well-established international practice and allows routes to survive on the basis of competition and at lowest cost possible	• Deployment of capacity over regional / remote area rotues in the medium-term (when airlines can change their schedules and network) would be uncertain especially till emergence of specialised airlines and operationalisation of fund

11.4.1 Implementation Timeframe

Routes under Category II of the RDG correspond to providing Remote Area Air Connectivity and can be seen to be promoting / sustaining a certain extent of social cohesion. The Ministry for Development of North-Eastern Region (MDONER) also affirmed that RDG seems to have contributed to an increase in the number of air transport services to operational airports within the North-East Region.

Abolishing RDG could potentially impact capacity deployment on routes in Category II in general and Category II-A in particular in the short to medium term in view of the inherent unviability of these routes (low demand).

Also, the compliance data on RDG suggests that while airlines' compliance to Category III requirements is significantly above specified threshold, the same is not the case for Category II and II-A. Abolishing RDG could therefore differentially impact routes in Category III and Category II. While, capacity deployment on routes in Category III does not seem to be driven by RDG and accordingly can be expected to remain in the same range after abolishing RDG, capacity deployment on routes in Category II and IIA could potentially be impacted by abolishing RDG – especially in the absence of an alternative supporting mechanism.

In view of the above, it is accordingly suggested that going forward,

- for the time required for development of a Fund based mechanism, and for the market to assess & respond to these changes (including through development of different business and operating models), RDG requirements for Category II and IIA be continued over a well-defined transition period. This would enable social obligations and national cohesion priorities to be met over this transition period; and
- Category III is abolished forthwith.

The Fund based mechanism – discussed in the subsequent Section, is expected to take a period of 2 years to implement and operationalize. Accordingly, the transition period before Category II and IIA of the RDG can be abolished is being suggested at 2 years subject to remote locations under Category II and IIA being connected through the alternate mechanism.

At the end of 2 years, there should be a specific review of the experience of promoting regional / remote area air connectivity through the Fund as well as the status / nature of compliance of airlines to Category II requirements. At the end of such review, if the Fund based mechanism has started providing required support to regional / remote routes (including routes under Category II and IIA), Category II and IIA of the RDG should also be abolished.

11.4.1.1 Advantages

The key advantages of implementing the recommendations over the timeframe discussed above pertain to:

- Airlines continuing to deploy capacity for Category II and IIA routes addressing a key social requirement in the transition period;

- Transition period providing time to the industry to respond to the new dynamics / develop suitable business models; and
- Fund allowing development of niche airlines / business models for regional and remote air connectivity.

11.4.2 Changes to RDG in the transition period

Rohit Nandan Committee considered certain changes to the RDG. For instance, the Committee recommended that three routes - *Delhi-Srinagar, Delhi-Guwahati and Delhi-Bagdogra,* may be allowed to continue as part of Category II as an interim measure before being considered for exclusion in future. The Committee also considered inclusion of 8 Category III routes into Category I that would in turn require reconsideration / increase in deployment of capacity in Category II.

Further, under the study, the efficacy of capacity deployment (ASKMs) was reconsidered as a monitoring parameter for reviewing compliance under Category II of the RDG. Alternative parameters like Revenue Passenger Kilometers (RPKM), number of seats deployed, frequency of operations etc. were considered.

Any change in the monitoring parameter would require a transition period of its own for the monitoring system to stabilize as airlines relook their network over cycles of Winter/Summer schedules.

Further, considering that the Summer Schedules for 2013 have already been filed by the Scheduled Airlines with DGCA, the airlines will be able to effect any proposed change in the Winter Schedule and thus the implementation of any proposed change can only be after a certain period.

In view of the above, and with the proposed abolishing of RDG for even Category II being recommended after 2 years, changing routes in Categories I and II or changing the monitoring parameter for reviewing compliance under Category II of the RDG in the interim is not recommended.

11.4.3 Capacity Trading

As indicated earlier, presently, Scheduled Regional Operators cannot trade their capacities with other scheduled operators which are under the purview of RDG obligations. Specifically, Note 3 to the Definitions of “Scheduled Regional Air Transport Service”, as provided for in Civil Aviation Requirement, Section 3 Air Transport, Series ‘C’ Part VIII, does not permit the RSOP(s) to trade-off their Available Seat Kilometre (ASKM) on Category II and IIA routes with Scheduled Airlines.

In this regard, Rohit Nandan Committee had observed as follows:

> *“As per present provision RSOP cannot sell their ASKM to scheduled passenger airlines. This guideline was incorporated so that SOPs can continue their operation even on smaller places where RSOP operate in order to increase connectivity or otherwise they will purchase the ASKM from RSOP and remain operating on profitable route. In turn RSOP which is bound to operate in their region will be found trading ASKM for their whole regional operation. This suggestion of RSOP cannot be accepted as in such cases the*

whole ASKM utilized by RSOP be traded off to SOPs and the purpose of RDG and Regional Airlines would not (be) served simultaneously."

With respect to the key concern noted by Rohit Nandan Committee in this regard, the following facts are considered relevant:

- In spite of a number of entities reportedly seeking No-Objection Certificates for grant of Scheduled Regional Operator's permit in the past, only one finally has a permit and has commenced operations - Religare Aviation Ltd. (Air Mantra)[29]
    - Air Mantra, presently operates flights connecting Chandigarh and Jammu - under Category II with other operations being in Category III (which is recommended to be abolished).
    - Even here, the seats operated by Air Mantra from Jammu, on a weekly basis, are presently only 0.6%[30] of the total seats operated by all scheduled operators from Jammu.
- In spite of the relevant regulations existing in this regard for the last several years, regional scheduled airlines have not been able to come up and play any major role in enhancing air connectivity in the country.

11.4.3.1 Potential Benefits

In view of the above facts, the concern that ASKMs deployed by Scheduled Regional Operators can be traded off to Scheduled (national) Operators, impacting the objectives proposed to be served by RDG and Regional Airlines simultaneously, may not be material. The facts suggest that any measure to allow such trading in capacities would not materially reduce the extant connectivity, if also not immediately contribute to an enhancement.

On the other hand, trading of capacities between Scheduled Regional Operators and Scheduled (national) Operators could provide incentive and support for development of regional operators / operations with smaller aircraft through availability of a stream of revenue to such regional players on a contractual basis.

With development of such operators / operations, smaller aircraft could be deployed by regional players complimenting the networks of larger players.

It is recommended that in view of the proposal to retain RDG for Category II and IIA, trading in capacity through a market based mechanism is allowed between the Scheduled Regional Operators and Scheduled (national) Operators. The same should be through a market-based mechanism with determination of costs of operating Category II/ IIA routes, contract provisions, etc. being governed by market interactions between the players with focus on operating and commercial efficiencies. The monitoring of RDG requirements by DGCA could in turn have reference to supporting contracts with details on flights, ASKMs traded, etc.

This could have the following potential benefits:

[29] List of Scheduled Operator's Permit Holders (as on 07.12.2012) on the website of DGCA
[30] Based on the existing Winter Schedule of scheduled airlines as available on the website of DGCA

- Flexibility to operators in complying with RDG requirements and encouragement for development of niche business models (smaller aircraft operations) required in the long run to enhance connectivity to regional / remote areas
    - This could in turn provide an enabling environment for enhancement in regional / remote connectivity on thin routes through a least-cost based provision of support through creation of a Regional Air Connectivity Fund (RACF)
- Enable Scheduled Operators to redeploy any surplus capacities on other routes including on Category I routes
    - This could in turn require enhanced deployment of capacity on Category II and IIA routes

The following Section discusses the feasibility of creating a Regional Air Connectivity Fund (RACF) (Subsidy Based Approach) for promoting regional / remote area air connectivity.

12 Regional Air Connectivity Fund

12.1 Rationale and Objective

As discussed earlier, it is recommended that a Regional Air Connectivity Fund (RACF / Fund) be operationalized to financially support new regional / remote area routes which are perceived to be unviable through an appropriate financial mechanism. Economically, a direct subsidy based regime, through such a Fund, is expected to be more advantageous than promotion of regional / remote area air connectivity through license / regulation based approach.

Such support mechanisms have been successfully implemented in several countries for improving and sustaining air connectivity. Even in India, there have been instances of sector-specific funds being set-up to provide financial support for achieving particular objectives.

The advantages of having a dedicated fund for promotion of regional / remote area air connectivity include:

- Inflow and outflow can be easily mapped – if a dedicated fund is established with identified sources and a specified purpose, it is easier to map the inflows and outflows to the fund, thus making it more transparent. It will also not be possible to divert funds for other activities
- A centralised mechanism can be devised to ensure equitable benefit to target beneficiaries who seek support from the fund subject to certain prioritization as may be required in some cases
- Ensuring better management of funds and helping in long term planning
- Ability to explore various financial options including external funding.

12.2 Empirical Evidence and Past Proposals for an air connectivity fund

As highlighted earlier, various measures have been tried in other countries to improve regional air connectivity. In many cases, a dedicated fund has been established to provide required support. Typically, these funds are provided by a multitude of agencies viz. local / regional / national governments or external funding agencies.

A brief comparison between the Essential Air Service Fund (EASF) in the United States of America and Remote Air Services Subsidy (RASS) scheme in Australia is provided at Annexure 15 -Regional Connectivity Funds in other countries.

Both, Naresh Chandra Committee and Rohit Nandan Committee also considered the possibility of formation of a dedicated fund for promotion of air connectivity. Some of their key observations and recommendations in this context are summarised below.

12.2.1 Key Findings of the Naresh Chandra Committee Report:

- The scope of Essential Air Service (EAS) Fund (including the pace at which it is pursued) must be congruent with the available quantum of finances
- Levy of user charges should be the most preferred source of raising resources.
- Support should be for a reasonable length of time, and backed by a credible stream of resources, so that service providers can make investment decisions with confidence
- Money from airport privatization may be used to provide resources for the fund.

12.2.2 Key Findings of the Rohit Nandan Committee Report:

- The Committee suggested that instead of abolishing Route Dispersal Guidelines, it should be restructured such that routes with high and medium PLF subsidise each other and routes with low PLF be supported by establishing a Regional Air Connectivity Fund.
- A dedicated fund may be setup by levying cess on domestic passengers through ticket sales by airlines.
- A portion of the fund should also be used for establishment and running of low cost airports, heliports and helipads.
- The State Governments should also contribute to a portion of the fund.
- The support should be provided to operators for an assured minimum period so that they can develop sustainable routes.

More elaborate summaries of key observations and recommendations of these Committees have been presented at Annexure 14 – Summary of earlier Committee Reports on Regional Air Connectivity Fund.

12.2.3 Similar funding support in other sectors in India

The provision of funding support for achieving social objectives has also been explored in other sectors in India. Some of the examples of such funding support are presented below:

- In order to increase access to telecommunication within rural areas as well as increase tele-density, the government set up a Universal Service Obligation Fund (USOF) in 2002.
- National Children's Fund was established to promote and fund the various programs for children in un-served and under-served areas including tribal and remote areas.
- National Culture Fund (NCF) was established in 1996 as a trust under Ministry of Culture to enable institutions and individuals to perform their role in promoting and preserving India's cultural heritage.

Brief descriptions of these funds in terms of objective, administrative structure, funding support etc. are provided as part of Annexure 11 – Universal Service Obligation Fund, Annexure 12 – National Children's Fund and Annexure 13 – National Culture Fund.

Further, funds have also been established in other infrastructure sectors like Roads & Highways, where the funding has been employed for the purpose of infrastructure creation.

12.2.4 Key Learning from International and Domestic examples:

As highlighted through international and domestic examples mentioned above, setting up of a dedicated fund could assist in promoting regional / remote area air connectivity. With reference to arrangements for international funds as well as similar mechanisms in other infrastructure sectors in India, the following aspects would need to be considered in successfully operationalizing the Fund:

a. Specifying the Objective

   It has been observed that support requirement for remote area connectivity and regional connectivity is quite different. International funds usually treat these categories differently. While remote area connectivity is considered a necessity for the concerned region because of certain kinds of constraints (geographic, political, etc.), regional connectivity is provided with an objective of promoting economic development in the region.

b. Possible forms of support provision

   From a study of other similar cases, it emerges that the support is provided to airlines in various forms which would either reduce the cost burden of airlines for operating on regional/ remote routes or provide adequate compensation to the airlines to cover costs, thus making the route viable for them. Some of such forms of support which have been observed internationally include:

   - Fixed payment per flight for each new route
   - Discount of various airport charges which airlines bear to ply on a route
   - Revenue / Seat guarantees
   - A fixed cost subsidy agreed at the beginning of the operations

c. Tenure of the funding support

   It has been observed that typically, funds are used as a mechanism to provide initial support to new routes in their development phase and usually withdrawn once the route matures and becomes self-sustainable. In the Indian context, both the Committees discussed above observed and recommended that the purpose of such a fund should be to seed regional connectivity and nurture it over a defined period of time.

d. Eligibility for Application

   Such funds primarily provide support to new routes in cases where there is no connectivity. Once, a threshold initial connectivity has been established so that a route can become self-sustainable; such funds may also promote additional frequencies where there is existing but little connectivity. In India,

the prevailing situation is such that there are large parts of the country which are totally un-served and thus any fund may naturally prioritize initial connectivity over enhancement of existing connectivity.

e. Source of funding

It has been observed that such funds are usually setup as revolving non-lapsable funds. The size of the fund is determined based on expected number of routes to be promoted and thus expected disbursement during any given year. The source of fund varies from direct budgetary allocation from general tax receipts, levy of cess on passengers, contribution from local / regional government, local business communities, etc.

f. Institutional mechanism

A robust institutional mechanism would need to be setup for management of such funds. Some key features are:

- A number of key stakeholders are involved in the decision making process of such funds
- Sound appraisal mechanism for connectivity proposals
- Important to ensure equitable and transparent process
- Robust monitoring mechanism to ensure contractual compliance

Taking into account these key characteristics, the subsequent sub-sections present an indicative mechanism to establish a fund to support and promote regional / remote area air connectivity in the country.

12.3 Objective of Regional and Remote Area Air Connectivity Fund (RACF)

The overall objective of the fund would be to promote both regional as well as remote area air connectivity in the country. Between regional and remote area connectivity, while the objective of the fund could be to provide social cohesion for remote areas, for regional routes the objective could be to stimulate the market by providing support for a limited period of time.

12.4 Risk Analysis

12.4.1 Key Implementation Risks

While establishing a RACF seems to be a better strategic option for promoting regional and remote area air connectivity in the country, as with implementation of any new policy measure, certain risks can be expected. These risks can be identified with different stages of the lifecycle of the fund.

- Risks during setting up of RACF
  - Lack of clarity on the objective of the fund: Funds are utilized to achieve other objectives.

  - Weak and ambiguous legal and implementation framework resulting in functional overlap with other government agencies, lack of clarity in roles and responsibilities of the key positions and prioritizing expenditure across various proposals etc.
  - Inadequate institutional capacity
- Risks during operational period
  - Lead time for the industry to accept the concept of RACF resulting in less interest during the bidding process in the initial stages
  - State Governments not realizing the potential of RACF, not providing sufficient support or lagging in putting up proposals
  - A number of proposals are received at the same time and prioritization and evaluation of the proposals may take time resulting in delays
  - Funding of the RACF is not sustainable especially when it is routed through general budgetary resources
  - Lack of effective oversight resulting in issues like ineffective fund utilization

It is imperative to address such potential implementation risks especially as the RACF is expected to replace the Route Dispersal Guidelines going forward.

The sub-sections below propose a suggested policy framework for operationalizing the fund with a view to addressing the key risks identified above.

12.5 Key considerations and Requirements

Four key considerations required to be kept in mind while setting up the fund includes:

- A strong legal and institutional framework for the fund
- Sustainable and credible source of financing for the fund that is not entirely dependent of budgetary sources. Moreover, financing even from budgetary sources should provide certainty.
- Pre-specified eligibility and prioritization criteria of applications/ proposals
- Adequate Size of the fund to be set up vis-à-vis target number of routes to be connected, expected budgetary support from the government, ability of existing passengers to contribute, etc.

The institutional and legislative framework to be put in place for the Fund should fulfill the following criteria:

- Greater autonomy in decision making;
- Provide a better model for service delivery through independent and more accountable governance ;
- Provide adequate opportunity for participation of industry stakeholders;
- The funding should be made available based on approved / agreed time schedule.

The proposed policy framework to address each of these key considerations is provided below:

12.5.1 Institutional Framework

International practices for setting up a dedicated fund suggest that such funds should be set up as an independent entity with high degree of autonomy in financing, decision making and representation from users.

Some of the possible options for establishing the fund are discussed below.

1. **Setting up the Fund under separate Institution**

   It is recommended that the fund should be structured and setup under an independent entity and has a strong institutional framework. The following measures could be considered by the Ministry of Civil Aviation while designing the institutional framework of the RACF:

   - Creating the fund as a separate entity and
   - Notifying the Rules for administration of the Fund

   The key advantage of this approach is that since the RACF would be constituted under a separate entity, its autonomy and accountability would be greatly enhanced.

2. **Setting up the Fund under an existing institution**

   Under this option, the RACF could form part of an existing institution such as Ministry of Civil Aviation. The RACF could have certain specified key staff positions.

   The key advantage of this option is that the lead time required for setting up the institutional framework of the fund would be reduced substantially and the fund could start operations at the earliest.

In this context the Naresh Chandra Committee noted:

> *"… the government may consider the creation of a non-lapsable essential Air Services Fund (EASF), outside the Consolidated Fund of India, and the Fund's management may be vested with an independent board"*

Rohit Nandan Committee noted:

"In the present case, it is proposed that the scheme should be administered through an independent agency established specifically. Till such a Body is created, it is proposed that the responsibility may be discharged either by AERA or by the proposed Civil Aviation Authority likely to be established in 2012."

Upon analysis of the above mentioned approaches, it is recommended that the fund be set up as a separate institution. In the meantime, in order to ensure that the whole objective of funding and promoting the regional routes is not delayed substantially, the fund could be temporarily created under an existing institution.

Irrespective of the approach adopted by the government, appropriate modifications in existing rules (such as Aircraft Rules) for making provisions for aspects like Levy of Passenger Cess would need to be considered / incorporated at the earliest.

12.5.2 Implementation Mechanism

For setting up the Fund, implementation mechanisms would need to be detailed in terms of inclusion of various stakeholders in the decision making process; sound appraisal mechanism; equitable and transparent process; and robust monitoring mechanism to ensure the contractual compliances; among others.

It is recommended that the RACF maintains a "Lean Organization Structure", having key external experts assisting it from time to time. Also, major studies / evaluations like financial evaluation of proposals, regular monitoring of agreements etc. can be outsourced and internal staff could be made responsible for key policy, administrative and financial matters.

Keeping this in perspective, the fund could be operationalised by the mechanism discussed below.

12.5.2.1 Key Stakeholders

(i) Management / Approval Committee

The RACF could be managed through a board which can be headed by a Chairperson and includes a limited number of full time Members and part time Members.

An Approval Committee could have the mandate to grant final approval for sanction of funds for evaluated proposals, allocate funds and award contracts subsequent to transparent bidding process. The Minister of Civil Aviation could be designated as the Chairperson of the Approval Committee with other members including the Director General of Civil Aviation, Chairman AAI etc.

(ii) Evaluation Cell

An Evaluation Cell could be setup to function as the secretariat for the Approval Committee. The cell could have the mandate to evaluate proposals for air connectivity, implement awarded proposals and monitor & audit allocated funds.

This cell would provide a standardized application format for air connectivity proposals. The cell would also perform the technical and commercial appraisal of the standardized proposal applications through independent professional experts.

This cell is proposed to be thinly staffed and would use technical and commercial expertise of existing organisations in the sector. Secretary, MoCA could be designated as Chairperson of the Evaluation Cell with other officials including representatives from DGCA, BCAS and AAI and supported by independent professional experts with background in air transport services.

12.5.2.2 Form of support

The support from the fund is proposed to be through provision of cost subsidy to the airlines by sharing a certain percentage of the costs of operating a particular route for a pre-defined tenure. The tenure may vary from a regional route to a remote area route depending upon the specific assessment.

It is also proposed that the fund be created for a period of at least 10 years in the first instance, in order to provide comfort to the airlines regarding the availability of the subsidies and in order to incentivize them to purchase/ lease appropriate aircrafts for operating on such funded routes.

Apart from the direct cost subsidy through the fund, other stakeholders such as State Governments could also provide additional incentives to the airlines. These incentives could be in the form of revenue support through measures like providing fixed payment per flight for each new route, providing revenue / seat guarantees etc. for routes connecting remote areas or in the form of measures like reduction of taxes, reduction of airport charges etc. to reduce the cost for regional routes. Together all the incentives would be specified as a comprehensive package against which airlines would need to bid under an open and transparent process.

12.5.2.3 Source of Fund

One of the key requirements for setting up the fund is that it should have a sustainable and credible source of financing. It is proposed that the fund could be a revolving non-lapsable fund. To cap the extent of support that can be provided by the Fund, the Fund would limit the number of proposals that it would approve for provision of financial support in any given time period.

The key resource mobilization options for the fund are presented below:

Primary Funding Sources

There are two primary resource mobilization options proposed for the fund.

(i) Budgetary resources from the Government on a year to year basis linked with likely demand for disbursements during the year; and / or

(ii) Levying a fixed passenger charge / cess on each departing domestic passenger in the country. This charge / cess could be collected by the airlines along with the ticket sale which could then be transferred to an account maintained by the fund.

A dedicated fund resourced through a passenger charge / levy can ensure that fiscal / budgetary constraints would not impact the fund's ability to commit required financial resources to support regional / remote area air connectivity.

Supplementary Funding Sources

Apart from the two primary resources mobilization options presented above, there could be supplementary resources mobilisation options for replenishing / adding to the Fund as and when possible. Some options in this regard are:

- Route specific support from the State Government, local industry associations etc.
- Revenue Share/ Premium obtained from existing/ future airport infrastructure privatizations undertaken by the Ministry of Civil Aviation

12.5.2.4 Eligibility / Tender Conditions

Since the proposed fund would have limited resources and will be able to take up only a limited number of proposals in any given year, certain eligibility conditions are proposed to be specified for proposal / applications that can be submitted to / considered by the Evaluation Cell of the Fund. Such conditions could include:

- *Eligibility conditions on the Airlines* - Only Scheduled Operators(s) and Regional Scheduled Operators(s) to be permitted to bid for the routes
- *Route Selection* - Support under the Fund could be provided only to those applications which propose to connect priority regional / remote area locations that are un-served / under-served
- *Prioritization of the proposals* – Since the Fund would have limited resources in any given year, it would be important to have a mechanism through which various proposals can be prioritized in case during a particular year, more proposals are received than what can be funded through the Fund. The prioritization could be on the following factors (i) Proposals for a network of routes rather than single routes, (ii) Routes connecting un-served markets (iii) Routes promoted by State Governments by providing additional incentives such as Fixed payment per flight for each new route, Revenue / Seat guarantees, etc. or (iv) even first-come-first-served basis as long as the routes cover prioritized set of towns / cities identified upfront.
- *Nature of aircrafts to be deployed* – Financial support through the Fund could be provided to aircrafts which have a seating capacity of around 70-seats (or 80 depending upon the configuration of the aircraft) or below to promote deployment of smaller aircraft to cater to such thin routes.
- *Minimum Service Levels* - Certain minimum service level parameters such as frequency of operations, timeliness of schedule, etc. could also be specified for period monitoring.
- *Penalty Mechanisms* - Provisions would need to be built into the financial support conditions to ensure that airlines comply with the minimum service level conditions. Such provisions could include linking the subsidies/ payments to periodic achievement of minimum service levels (monthly), and

providing penalties for not meeting the minimum level of service parameters. Such minimum service level parameters would typically be specified over the period of support provision to the airline.

- *Tenure of the support* - Tenure of subsidy could be for a 3-5 year period with maximum amount of subsidy and its yearly disbursement pattern to be determined by the Approval Committee and pre-specified for the bidding stage. (For instance, the subsidy for the second and third years could be specified to be 50% and 25% respectively of the first year subsidy.)
- *Exclusive rights to operate*: Along with extension of financial support to the airlines, in order to make the routes attractive to develop for the airlines, airlines could be given an 'exclusivity' right to provide air transport services on such routes during the period of subsidy. If such an exclusivity period is specified, a cap on yields / fares may also need to be specified to protect user interests.
- *Fares for the routes*: As part of the proposed form of support, only partial cost subsidy will be provided to airlines with associated obligation to meet certain minimum levels of service / connection. Subject to the previous point, determination of fares is proposed to be left to the airlines as it would be in their best interest to have reasonable price per ticket to increase their PLF and make the routes financially viable.

12.5.2.5 Application Process

A proposal for financial support from the Fund could either be generated by a State Government which wants to promote certain routes or by airlines.

For airline generated proposals, State Government(s) support could be sought in order to make the proposed route more viable. All such proposals received by the Fund should be put in the public domain along with support extended by the State Government(s) to ensure transparency and user involvement.

12.5.2.6 Process of consideration of Proposals by the Fund

(i) The approval process for financial support from the Fund could be a two-stage process. In the first stage, applicants (which could be a State Government or an Airline) could make a proposal, to be received by the Evaluation Cell.

(ii) After receiving such proposals, the Evaluation Cell could put the proposal in the public domain and in parallel scrutinize the proposal. Such scrutiny could include a preliminary evaluation to examine the eligibility of the proposal which could be followed with an evaluation of the proposal in terms of technical and commercial aspects of the proposal and support being sought from the Fund. Depending upon its assessment, the Evaluation Cell may forward it to the Approval Committee for in-principle approval or send it back to the Applicant seeking clarifications / revisions to the proposal.

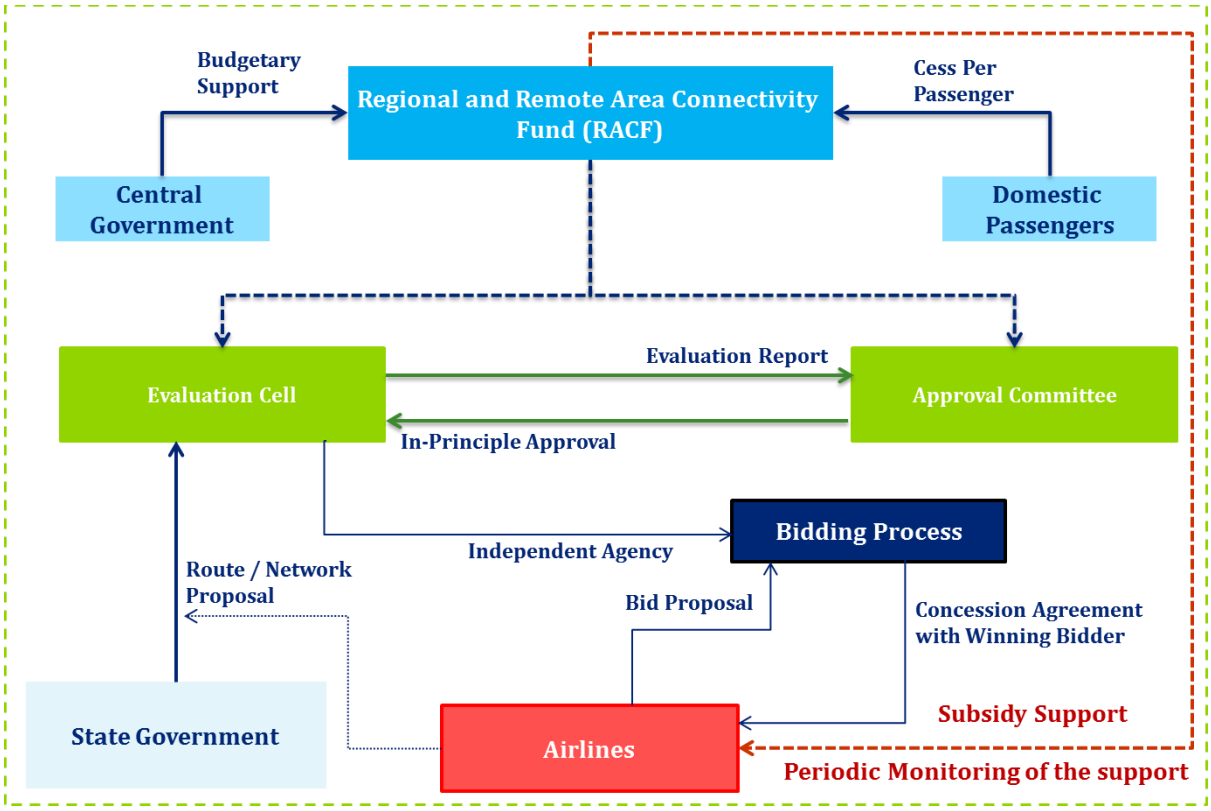
(iii) Following the appraisal by the Evaluation Cell, proposals could be sent for in-principle approval from the Approval Committee.

(iv) Once the in-principle approval is granted, bids could be invited from the market to operate the proposed route with extent of support sought from the Fund being the bidding criterion. The Evaluation Cell would perform the technical and commercial evaluation of the bids received and selection of final bidder. In this process the Evaluation Cell could be supported by independent professional experts on relevant aspects.

(v) Unsuccessful Bidding: In case the market does not evince interest in bidding for a particular route, other bidding structures may be considered (such as equated annual payments for a longer period). Such structures may be required for different routes / towns in terms of the distinction between remote areas and regional areas. In such a scenario, the Bidding may need to be held periodically after every 3 to 5 years.

This proposed process for consideration of proposals by the Fund is indicated in the Exhibit below. It needs to be highlighted that this proposed process is expected to be an indicative structure that can form the basis of further stakeholder discussions and formulation of an appropriate policy framework. Thereafter, the proposed process would need to be detailed in terms of various attendant aspects like details required to be submitted in various forms, etc.

Exhibit 16: Indicative process for consideration of proposals to the Fund



12.5.2.7 Evaluation / Review Parameters

The objective of the Fund would be to promote regional and remote area air connectivity in the country. It would therefore be critical for the final framework to specify a monitoring mechanism to assess compliance of airlines to minimum service

levels as well as the impact of the Fund on promotion of regional / remote area air connectivity.

Such monitoring mechanism would need to be detailed in the course of operationalizing the Fund. While DGCA, as part of its existing mandate, could monitor the service level compliance as well as traffic and occupancy data provided by the airline, the disbursement of financial support to the airline could be upon periodic review of such compliance data by the Evaluation Cell.

Monitoring / assessing impact of the Fund on promotion of regional / remote area air connectivity would be required to ensure that the Fund is able to refine the process / structure of support being provided so as to have maximum impact. Such assessment and refinement of process would be critical to ensure that the proposed mechanism stays relevant and is able to address issues as they are identified. In the initial stages of the operationalization of the fund, such review may need to be undertaken on a more periodic basis and for the entire scheme at least once every 3 years through an independent agency.

Aspects which can be analysed/ reviewed to assess impact could include:

- Has the connectivity improved on un-served / under-served routes
- Are airlines reporting any problems either in the operational framework of the fund or in market acceptability
- Feedback on the bidding process from industry stakeholders
- Are routes supported by the Fund continuing even after withdrawing of financial support

12.5.2.8 Size of the Proposed Regional Air Connectivity Fund

As highlighted earlier, the demand for air services and the latency period for a route before it gets fully developed may vary year-on-year and therefore it is important that the support from this fund is sustainable at least for a specific time period. Moreover, a well-established fund size would allow for adequate planning for promotion of regional air connectivity.

In this context, Naresh Chandra Committee noted:

> "*… the promise of support should be for a reasonable length of time, and backed by a credible stream of resources, so that the service providers can make their investment decisions with a greater degree of confidence.*"

The size of the fund would be impacted by a number of factors including inter alia target number of routes to be connected in a given year, expected budgetary support from the government, ability of existing passengers to pay a charge / cess for regional/ remote area connectivity, utilization of the funds by the beneficiaries and the disbursement mechanism for the fund.

A mechanism is being proposed herein to enable the Ministry of Civil Aviation to consider the same as it develops a policy framework for implementation.

In this indicative analysis, some indicative assumptions have been made on each of the input variables - such as number of routes in a given year, type of aircrafts being proposed, subsidy period and quantum, number of frequencies proposed etc.

A more realistic estimation of the size of the fund may only be possible subsequent to a process of consultations with various stakeholders, especially with State Governments, and some initial experience. Inputs could also be taken from State Governments on possible regional / remote area connectivity routes they would like connected, their inter-se prioritization as well as other aspects like frequency of services required, etc.

Based on such stakeholder consultations, the size of the fund can accordingly be fine-tuned.

Estimation of the fund size would require reference to a number of aspects / parameters mentioned in the table below. The table also presents the indicative values used for the purpose of initial estimation under the study.

Table 16: Indicative Values for estimation of the size of fund

Input Variable	Indicative Value for the current analysis
Tenure of the fund	10 years
Number of routes to be connected	178 (based on the indicative list of 89 towns presented in earlier sections and an assumption that a State Government may prefer a particular town to be connected to at least 2 destinations)
Number of routes to be considered for funding each year	18 (based on assumption of 178 routes to be spread over the tenure of the fund, except for the last year when 16 routes will be considered)
Number of flights per week	28 flights (4 to and fro daily flights in a week)
Aircrafts proposed to be deployed over the identified routes	20 seater, 50 seater and 70 seater aircrafts
Number of proposed to be undertaken through each type of aircrafts	20 seater, : 10 routes 50 seater : 6 routes 70 seater : 2 routes
Estimated Cost of operations per hour for each of the identified types of aircrafts	20 seater, : Rs. 95,000 50 seater : Rs. 155,000 70 seater : Rs. 195,000
Subsidy Tenure	3 years
Extent of Cost Subsidy	50% of the total cost in the first year 50% of the first year subsidy in the second year 50% of the second year subsidy in the third year
Inflow to the Fund	Levy on Departing Domestic Passenger Cess (initially estimated to be 60.8 Million)

Approach for estimating the fund size

1. The first step in estimating the required size of the fund would be to ascertain the number of routes which may be required to be funded in a given year
2. Once the number of routes are determined, the per year of cost of operating those routes can be determined based on input variables such as type of aircrafts, per unit cost of an aircraft, frequency of operations etc.

3. Subsequently, the input variables around the extent of cost subsidy and the tenure of the subsidy would need to be determined to arrive at a per year subsidy requirement for the routes selected for promotion in the first year
4. It needs to be noted that in practice the number of new routes selected for promotion and the first year cost subsidy amount for such routes may vary year-on-year and may be determinable only at the beginning of a particular year
5. With the above estmates on these parameters, the year-on-year indicative subsidy suppport requirement has been assessed under the study and is presented in the Table 17 below for each year till all the routes have been subsidized through this scheme is presented below.

Table 17: Fund Requirement for Each Year

Year	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7	Lot 8	Lot 9	Lot 10	Total
1	165.26	-	-	-	-	-	-	-	-	-	165.26
2	82.63	165.26	-	-	-	-	-	-	-	-	247.88
3	41.31	82.63	165.26	-	-	-	-	-	-	-	289.20
4	-	41.31	82.63	165.26	-	-	-	-	-	-	289.20
5	-	-	41.31	82.63	165.26	-	-	-	-	-	289.20
6	-	-	-	41.31	82.63	165.26	-	-	-	-	289.20
7	-	-	-	-	41.31	82.63	165.26	-	-	-	289.20
8	-	-	-	-	-	41.31	82.63	165.26	-	-	289.20
9	-	-	-	-	-	-	41.31	82.63	165.26	-	289.20
10	-	-	-	-	-	-	-	41.31	82.63	147.06	271.00
11	-	-	-	-	-	-	-	-	41.31	73.53	114.84
12	-	-	-	-	-	-	-	-	-	36.76	36.76

Estimated Passenger Charge / Cess Amount

The resource mobilisation for Fund has been assumed to be a charge / cess on departing domestic passengers. With the estimated fund requirement for each year, a passenger charge / cess amount can be estimated.

The passenger charge / levy has been estimated for the purpose of this study such that there are no substantial shortfalls / surpluses in the Fund over the years.

Based on the indicative values of input variables presented above, the total fund requirement is estimated to be around 2,800 - 3,000 crores over a 10-year period (in constant prices). Considering a number of other assumptions around the existing passenger base, growth in the passengers expected over the next 10 years as well as likely increase in the costs on account of inflation, the passenger charge / cess amount per departing passenger is indicatively estimated to be in the range of Rs. 40 – Rs. 50. As mentioned earlier, revision to these estimates would be required based on consultation with various stakeholders on the number of assumptions made.

It is also important to note that the estimated per passenger charge / cess which will be finally determined by the Ministry of Civil Aviation would need to be reviewed periodically (at least every 3 years) for any change in the assumptions and actual experience with operationalization of the Fund (number of proposals received / approved, expected market interest in future, likely budgetary support from the Central Government in future, etc.)

13 Policies and Regulatory Initiatives

The Government of India, in the past, has adopted various policy measures with the objective of facilitating expansion of air connectivity in different parts of the country. These measures included aspects like inviting private sector participation in the sector, providing connectivity through government-owned air carriers for specific segment or geography and provision of incentives to improve the overall viability of the air transport operations.

While the measures, adopted by the Government, have led to enhancement of air connectivity in the country, the growth has been primarily been limited to a select few airports. As analysed in Section 4 of this report, some of the major cities including the metro cities and other major cities in India such as Pune, Ahmedabad, Lucknow etc. are well-connected through air transport. It has also been analysed that a number of cities, identified based on a combination of parameters such as population, economic activity, tourism and connectivity to well-served airports, have the potential for further improvement in air connectivity.

However, despite having the potential, various towns / cities are yet to witness desired level of air connectivity, primarily on account of various issues discussed in detail in Section 8 of the report. It is imperative that certain initiatives / measures are taken by the Government to address these issues and to enable the development of air transport to regional and remote areas.

Key measures in the form of modifications to the Route Dispersal Guidelines and establishment of an RACF have been discussed in detail in Section 11 and Section 12. While these measures would focus on the twin aspects of connecting more airports and enhancing connectivity at underserved airports, there are additional enablers required to be adopted by the Government for enhancing the overall viability of air transport operations.

The overall viability of air carriers is impacted by elements on both revenue and cost sides. While the revenue side is governed by number of passengers and applicable fares, cost side has various elements to it including staff, fuel, infrastructure, technology, security and marketing.

Government intervention for improvement of viability of operations would need to address either one or both the aspects related to revenue and cost elements. The measures may include reducing risks/ providing support through incentives like seat guarantee etc. on the revenue side and / or liberalization of requirements or provision of support on the components of the cost side. As outlined in the Section 9 on international practices, Governments / communities abroad have extended various benefits for promoting regional/ remote air connectivity. Similar incentives have also been implemented by the Government of India in the past.

In order to reconsider the earlier taken initiatives as well as explore the possibilities of additional initiatives, it is important to understand various cost components for an air carrier and its linkage with the policies / regulations. An air carrier, providing air

transport service between a pair of cities, incurs expenses on various accounts. These include the following:

Table 18: Typical Cost Components for an air carrier	
Cost heads	**Description**
Cost of aircraft	Cost of acquisition or cost of leasing the aircraft
Fuel expenses	Expense on ATF, which includes taxes and duties at various levels such as Sales Tax on ATF levied by State Governments
Maintenance expenses	Expenses incurred by the air carriers on maintenance of aircrafts, which includes cost of spare parts and cost of services
Airport and Navigational charges	Charges levied by the airports, which include the landing, parking, housing charges and RNFC and TNLC charges
Handling charges at the airport	Expense incurred on ground handling services
Staff cost	Expense incurred on account of salaries and perks to be paid to staff at the airport, flight crew and cabin crew
Marketing expenses	Expenses incurred on marketing activities including promotion of routes, frequencies & services
Security expenses	Expense incurred on account of compliance with security norms of the country
Overheads	Other expenses

Most of the cost elements of air transportation are governed / guided by existing Government policies / regulations. Hence modification in these policies / regulations is likely to have an impact on the costs for air carriers. A summary of policies / regulations governing air transportation in India has been presented in Annexure 3 – Existing Policies / Regulations.

Support for the air carriers towards reduction of costs is required from all the stakeholders such as Central Government, State Government, Airport Operators as well as the Regulatory bodies like DGCA and BCAS. Each of these stakeholders need to undertake certain measures / initiatives in providing support for promotion of regional and remote area air connectivity.

While the issues identified in Section 8 were categorised as Demand, Supply, Commercial and Policy related factors, the possible initiatives / measures have been identified and allocated to the stakeholder in the best position to address such issues.

13.1 Proposed Measures by the State Governments

As mentioned earlier, having realized the role of aviation sector for boosting the economic growth in a region, various State Governments have become active in facilitating growth of aviation activities in their respective States. Also given the resource constraints with the Central Government, it may not be possible for the Central Government to undertake all the necessary initiatives and measures for promotion of air connectivity to all parts of the country. It requires a concerted effort from both Central Government and the State Governments to play their respective

roles in facilitating this growth. Accordingly certain measures have been identified and are proposed to be undertaken by the State Governments, as presented below:

13.1.1 Setting up of a Dedicated Aviation Agency

In order to ensure that the efforts made by the State Governments are well planned and have taken all the concerned factors into account, it would be critical to have a dedicated agency in each State, which could be made responsible for addressing the concerns of stakeholders and should also proactively drive the growth of air connectivity both within the State and with other States.

As mentioned in Section 8, some of the states have already formed dedicated agencies with the objective of promoting intra-state air connectivity as presented in the table below.

Table 19: Dedicated State Aviation agency

States	Agency	Role
Andhra Pradesh	Andhra Pradesh Aviation Corporation Limited (APACL)	For acquisition, operation and maintenance of helicopters / aircrafts for development of Aviation Sector in Andhra Pradesh.
Gujarat	Gujarat State Aviation Infrastructure Company Limited (GUJSAIL)	Responsible for carrying out all civil aviation infrastructure projects Authorized to setup SPVs by selecting strategic partners through transparent bid process Authorized to invite equity infusion for specific projects
Maharashtra	Maharashtra Airport Development Corporation (MADC)	To develop 5 greenfield airports to be owned and operated by MADC.

It is understood that Government of Andhra Pradesh is in the process of developing a Civil Aviation Policy and has plans of setting-up a State Civil Aviation Board, which will facilitate development of airports in Tier-II towns in the State.

In terms of having a policy roadmap, Government of Karnataka and Gujarat have prepared Civil Aviation Policies / Plan to lay down the roadmap for future growth of aviation in the respective states. These policy roadmaps or dedicated agencies are expected to identify the growth opportunities in the aviation sector in these states, the inhibiting factors and possible mechanisms to address those inhibiting factors.

Hence it is recommended that the State Governments should form a dedicated agency for facilitation of civil aviation matters in the State and also to have a roadmap document outlining the future initiatives and measures to be taken by the State for air connectivity.

13.1.2 Provision of Land, Enabling and Access Infrastructure for development of Low Cost Airports

It has been recognized that low cost airports are the need of the hour for promoting air connectivity to the regional towns. Lower capital and operating expenditure at an airport would further help lowering the charges for the users of the airport.

Whether it is development of Greenfield airports or expansion of existing non-operational airstrips, the process is cost-intensive on account of cost of acquisition of land, cost of construction of terminal and associated access and utility infrastructure. If all these costs are loaded on to the airport developer, it leads to a much higher amount, which the developer would later target to collect from its end-users.

Hence it is proposed that the State Governments can contribute for the creation / expansion of airport infrastructure through provision of land and extension of roads (access infrastructure) and utilities (power and water connections) for development of low-cost airports.

13.1.3 Relief from existing taxation

Reduction of tax on ATF to 4%

The Central Government has already brought the VAT on ATF sold to smaller aircrafts for scheduled operations to 5% by classifying it under “Declared Goods”. However, the same is yet to be replicated for non-scheduled operations.

Some States have realized the significance of air connectivity and have incentivized the operations to airports in their respective states by lowering the taxes. For example, Government of Chhattisgarh has reduced the VAT on ATF to 4% and Government of Punjab has brought it down to 5.5% after experimentation such reduction at Amritsar Airport. Government of Maharashtra has reduced VAT on ATF to 4% for all airports in Maharashtra except Mumbai Airport and Pune Airport. Certain other states have also reduced the VAT on ATF for air transport services provided within their States.

These initiatives should be emulated by other states also, especially the ones witnessing low levels of regional air connectivity. The initiative of reduction of VAT on ATF to minimal level would be important for State Governments to showcase their commitment towards facilitation of growth of air connectivity.

It is therefore recommended that Reduction of VAT on Aviation Turbine Fuel sold to an aircraft with a maximum take-off mass of less than forty thousand kilograms operated by non-scheduled air transport service providers (in additional to the present provision with respect to scheduled air transport service providers) should be considered by the State Governments.

Exemption to the airports from payment of property taxes

In order to reduce taxes on the airports which may in turn result in the reduction in airport charges, the State Governments should also provide relief to the airports from payment of property taxes, in the first instance for an initial period of 5 years. A period of 3-5 years is important for developing traffic at a regional airport and during

such periods relief in the form of exemption from property taxes would enhance the viability of their operations.

13.1.4 Risk sharing through Seat Underwriting

It is understood based on interactions with various NSOPs that arrangement for seat underwriting is currently being carried out by the State Governments of Madhya Pradesh and Odisha. Under the mechanism, a certain threshold number of seats for a specified non-scheduled operator have been blocked by the government at pre-specified air fare for operating between an industrial center of the state and state capital. The NSOP has to first make efforts for selling all the seats on its aircraft. Such selling of seats is done by the NSOP at prevalent market rates. In case it is not able to sell all the seats, Government makes the payment for the blocked number of seats at pre-decided fares.

This approach is understood to be a balanced approach in the sense that while the NSOP has all the incentive to sell all its seats at market rates (usually higher than the rate at which Government underwrites the seats), in case it is not able to do so, underwriting of seats by the Government assures it of recovering some part of the cost of operations. On the other hand, while the Government does not incur huge costs for underwriting the seats (being capped at number of seats blocked times the pre-decided fare), it ensures availability of air connectivity to the remote areas in the State and also makes use of the same for its own officials to travel to such places.

Similar arrangements may be explored by other States depending upon their specific requirements including terrain-related difficulties and safety & security-related concerns in accessing all parts of the State.

Provision of Airport Security services and Rescue and Fire Fighting services at the airport

There are a number of services provided at the airport by various stakeholders. Some of these services are performed to ensure the safety and security of the passengers. Examples of such services include Provision of airport security service and Provision of fire-fighting services.

- Security Cost at the Airports

As highlighted earlier, the costs related to provision of security at the airport constitutes a major portion of the airport costs. Per passenger security costs become exorbitantly high at the smaller airports which have limited aircraft operations during the day.

In this regard, it is proposed that (i) such costs need to be rationalized to bring down the overall operational cost at smaller airports and (ii) State Governments should bear the cost of providing security at the airport.

The alternatives for the State Government could either be to bear the expense for CISF personnel at the select airports or discharge the function of provision of security at such airports through its own agencies in compliance with the rules laid down by Bureau of Civil Aviation Security (BCAS).

- Rescue and Fire-fighting services at the Airports

It is recommended that at the airports with limited aircraft operations, Rescue and Fire Fighting services could be provided by the State Government provided that the services and vehicles comply with applicable sections of DGCA Civil Aviation Requirements.

13.1.5 Inter-State Agreements for promotion of regional and non-scheduled operations

Some of the existing initiatives taken by the State Governments are only available to flights operating within a state. However, industrial centers usually extend beyond state borders and demand can originate from other states. Thus, state governments should have an outward looking aviation policy with respect to such mechanisms and extend them to flights originating or arriving beyond state borders. A shared mechanism of seat underwriting between two different states can be an optimal solution for all stakeholders - states as well as airlines for (a) it would decrease the cost for states if underwritten seats remain the same or (b) it would benefit the airline if both the governments decide to underwrite seats.

13.2 Proposed Measures by Central Government

Central Government will have a pivotal role in promotion of regional and remote area air connectivity. It has to ensure not only the implementation of measures within the domain of Ministry of Civil Aviation, but also play the coordination role with other Ministries such as Ministry of Finance or Ministry of Petroleum for implementation of measures requiring their approval or actions.

Specific efforts by Ministry of Civil Aviation may be directed towards the following aspects:

13.2.1 Reduction in the total price of Aviation Turbine Fuel (ATF)

As discussed earlier, fuel expense, ranging from 40% to 50% of total operational costs of the airline, is one of the largest cost components for the airlines at present. Another complexity with this cost component is the volatility in the price of fuel and inability of the airline to predict the direction and extent of movement of fuel price. While the systemic issues including global demand-supply imbalances would impact the airline industry everywhere, Government can take the following measures to lessen the burden of fuel expense on the airlines:

Review of Tax on ATF

Central Government, in past, had considered this issue of high prices of Aviation Turbine Fuel and in order to reduce this burden, had considered including ATF under the category of “Declared Goods”. Accordingly ATF, when sold to an aircraft with a maximum take-off mass of less than 40,000 kilograms operated by scheduled airlines, was included in the category of “Declared Goods” under the Central Sales Act, 1956, which puts an upper cap on tax on ATF to 5%. For the purposes of this clause, “scheduled airlines” were defined to mean the airlines which have been permitted by the Central Government to operate any Scheduled air transport service.

However, the benefit of the above reduction in tax on ATF is available only to the Scheduled Operators but not to the Non-scheduled Operators. Considering the ability of the Non-scheduled Operators in providing air transport services to remote areas and to cater to customized requirements, they can be expected to play an important role in providing air connectivity to such remote locations.

There are examples of Non-scheduled Operators providing services to mining towns in Odisha, some remote areas in Madhya Pradesh and in the North-East. If Non-scheduled Operators are provided incentives similar to those provided to Scheduled Operators, they can play a larger role than presently being played by them in enhancing air connectivity within the country.

Hence it is proposed that the Ministry of Civil Aviation should propose reclassification of ATF as Declared Good to cover Aviation Turbine Fuel sold to an aircraft with a maximum take-off mass of less than forty thousand kilograms operated by non-scheduled air transport service providers (except for business jets) in addition to its present coverage of scheduled operations.

The issue of high price of ATF impacts all the air carriers in general. As a long term solution to address this issue, Government needs to consider classifying ATF sold to any aircraft under "Declared Goods'.

ATF to be put under Petroleum & Natural Gas Regulatory Board

It is understood that currently the pricing mechanism for ATF is not transparent in India[31]. It can be observed from the website of ATF suppliers in India (IOCL, HPCL et al) that there is a list price of ATF, which is quoted without any break-up into import costs, processing cost, taxation details and company margin. Further it is understood that this list price does not straightaway apply to the airlines as there are discounts applied on the list price. The discounts are based on a number of factors including the volume of purchase, duration of contract, credit policy and advance payments. Thus the actual ATF price may differ from one airline to another. Airlines have, in past, expressed that the lack of transparency in ATF pricing has been a major issue for them and have requested for greater transparency.

The agency, which can enhance the transparency in pricing of ATF, is Petroleum & Natural Gas Regulatory Board. The Act, under which Petroleum and Natural Gas Regulatory Board (PNGRB) was constituted, provides for the establishment of Petroleum and Natural Gas Regulatory Board to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to promote competitive markets and for matters connected therewith or incidental thereto. The Act also empowers the Regulator to monitor prices and take corrective measures to prevent restrictive trade practice by the entities.

Hence to provide more transparency in ATF pricing in India, the Ministry of Civil Aviation may consider proposing ATF to be notified as a petroleum product for the purposes of PNGRB Act.

[31] Ministry's report on "Aviation Turbine Fuel in India" (by Nathan Consulting)

Fuel Throughput Charges

Fuel Throughput charges are levied by Airport Operators on Oil Companies for provision of access to the airport. It is understood that these charges are mostly passed on by the Oil Companies to their customers, which is the airlines. This also results in increasing the effective price of ATF paid by the airlines.

It is proposed that MoCA may consider exemption from the levy of such Fuel Throughput Charges at regional airports to benefit the airlines.

Reduction in cost of acquisition of aircrafts

As discussed in Section 8, it is a common practice in the airline industry to acquire the aircrafts on lease basis. The lease rental to be charged by the lessor on the lessee (the airline) is dependent upon a number of factors such as type of lease, age of aircraft, type of aircraft and duration of leasing agreement. In addition to the lease rental, so determined, tax components play a role in increasing the burden on the airlines.

It is further understood from the interaction with the stakeholders that the market for smaller aircrafts is not as developed as is the market for narrow-body and wide-body jets. The more developed the market is, the easier it becomes for the lessor to arrange for an aircraft for lease or to deploy an aircraft freed from an existing lease.

It is proposed that in order to bring down the cost of acquisition of aircraft, the Withholding Tax on lease of Aircrafts – especially in respect of aircraft with a maximum take-off mass of less than forty thousand kilogram, to be rationalized. This initiative will enable the airline to avail this cost-effective measure for aircraft acquisition.

13.2.2 Encourage / Incentivize development of third Party MRO firms within India

It has been presented earlier that a well-developed third party MRO industry in India would help bring down the cost of maintenance of aircrafts for airlines. The Government of India, in this regard, has already taken certain measures such as exempting the import of spare parts for the purpose of servicing, repair and maintenance of aircrafts, which are used for operating scheduled air transport service or the scheduled air cargo service or for operating non-scheduled (passenger) service or non-scheduled (charter) services from payment of Customs duty.

However the cost competitiveness of third party MRO providers in India vis-à-vis the foreign MRO players is also impacted by the levy of service tax and by consideration of sale of imported spares as first sale in India, which attracts the highest slab of applicable VAT rate.

In order to make the Indian third party MRO services competitive against the foreign MRO service players, the Government may consider exempting the MRO services by third party MRO players from the payment of service tax as well as reducing the VAT rate applicable for aircraft spares imported for the purpose of servicing, repair and maintenance of aircrafts for scheduled as well as non-scheduled operations in India.

13.2.3 Funding support for Regional Air Connectivity Fund

As detailed in the Section 12, there is a requirement of establishing Regional Air Connectivity Fund for provision of support to improve air connectivity to under-served and un-served markets. While a cess on the domestic passengers has been proposed as a means of finance for this fund, if certain part of the fund is contributed by the Central Government through budgetary support on an annual basis, it would be helpful in reducing the burden on existing passengers.

As provided for in the RACF mechanism, requirement of fund can be reviewed at a regular interval in view of the budgetary support position to determine the continuity of levy of cess.

13.3 Proposed Measures by the Regulatory Agencies

Regulatory requirements laid down by DGCA in its Civil Aviation Requirements define the detailed requirements and compliance procedures for the airline operators in order to be able to provide air transport services. As highlighted in Section 8, it was desired by the industry stakeholders that some of the requirements prescribed in the Civil Aviation Requirements or The Aircraft Rules, 1937 can be considered by DGCA for providing modifications / relaxations.

It was expressed by the industry that some of the requirements in their current formation do not provide the desired clarity on the matter and rather leave the decision to be imparted by DGCA on a case-to-case basis. Additionally relaxation in some of these requirements would enable the industry to become cost-effective. This is especially required for promotion of air connectivity to smaller towns, which need cost-effective solutions to boost passenger demand.

Specific recommendations for review / modifications of the regulatory requirements are presented in the following sub-sections:

13.3.1 Relaxations in respect of Minimum Requirements for Scheduled Regional Air Transport Services

As highlighted in Section 8, the requirements expressed for compliance by the Regional Scheduled Operators (as part of Civil Aviation Requirement, Section 3 Air Transport, Series ‘C’ Part VIII, which lays down the Minimum Requirements for Grant of Permit to Operate Scheduled Regional Air Transport Service) can be reviewed for relaxation / modification by the DGCA. Specific provisions which can be reviewed are provided below:

- The definition of “Scheduled Regional Air Transport Service”, as provided for in the referred CAR, should be reviewed to remove the restriction on the operation of a Scheduled Regional Air Transport Service to a designated region only.

  To give flexibility to the operations of an RSOP, it should be allowed to operate to other regions as well. A distinction should however be maintained between the regional and national air carriers by restricting the operations of a regional airline to only the non-metros in the other region. Thus, an RSOP would be an airline operator which is designated to operate in one particular region but is permitted to operate to non-metro towns in other regions.

- Note 3 to the Definitions of "Scheduled Regional Air Transport Service", as provided for in this CAR, does not permit the RSOPs to trade-off their Available Seat Kilometer (ASKM) on Category II and IIA routes with Scheduled Airlines. As outlined in Section 11, in view of the proposal to retain RDG requirements for Category II and IIA, enabling this trade-off mechanism would help the RSOPs in developing their business model with an additional stream of revenue and lesser competition from National Schedule Airlines.
- It is recommended to modify Clause 3.2.1 of the referred CAR to allow minimum five aircrafts to be acquired by the end of five years while waving off the interim requirement to acquire three aircrafts within a period of two years.
- In the current form, Clause 3.2.3 of the referred CAR requires that the aircrafts to be acquired by the Regional Scheduled Operators should have a maximum certified takeoff mass of more than 5,700 kg. This requirement may be reviewed by DGCA for relaxation to a lower value of maximum certified takeoff mass, which will enable the regional operators to consider more alternatives of smaller aircrafts for deployment.

13.3.2 Additional measures

- Review of round-the-clock security requirements

  MoCA in consultation with the BCAS should consider reviewing the requirement for round-the-clock security service for small and low-activity airports in order to reduce the operating expenses of such smaller airports. Such requirement can be considered from the perspective of providing a bare minimum perimeter security during the non-operational hours at the airport.

- Relaxation of cabin crew requirement

  MoCA in consultation with the DGCA may consider relaxing the requirement (as provided in Rule 38B of The Aircrafts Rule 1937) to have one cabin crew for an aircraft having a seating capacity of not less than 10 and not more than 50 passengers. The same rule provides a helicopter having a seating capacity of not less than 20 and not more than 50 passengers to have one cabin crew. Similar requirement (to have one cabin crew for a seating capacity of not less than 20 and not more than 50 passengers) should be specified for fixed wing aircraft.

- Code-Sharing Mechanism

  Code-sharing as a commercial arrangement between two airlines allows such airlines to leverage each-other's network and marketing strength to enhance their route options to the passengers. Under the current form, DGCA Civil Aviation Requirement for grant of permit to Regional Scheduled Operators does not allow them to operate to more than one region.

  Code sharing as such is not prohibited under any DGCA CAR. In case the recommendation on permitting RSOPs to operate to more than one region except for the metros of the other region is considered, the RSOPs can enter into a code-sharing arrangement for provision of extended services. However, in case the relaxation of restriction on the geographical boundary under the Schedule

Regional Air Transport Permit is not considered, a mechanism may be explored such that two RSOPs, each belonging to a different designated region, are allowed to enter into code-share agreement.

Such RSOPs could submit a proposal for code-share agreement to the DGCA along with the details on flights, which they plan to operate from one designated region to another designated region. With the approval of DGCA on such arrangement, RSOPs would then be able to provide services beyond their designated region.

13.3.3 Additional clarity in Civil Aviation Requirements

As discussed earlier in Section 8, there is a need to provide more clarity in the DGCA CARs on acceptable levels and means of compliance with the CARs. Currently, in most cases, such CARs provide some broad contours or generic guidelines, based on which DGCA examines a particular case.

It is recommended that an industry interaction can be held to understand the issues faced by air carriers in this regard and their suggestions on additional clarity in the DGCA regulations can be taken on-board by DGCA after appropriate discussions and review.

13.4 Proposed Measures by Airports Authority of India

In order to improve the overall viability of the airlines, it is proposed that certain cost exemptions be provided to the airline operators on cost components which are under the control of the Airport Operator. The measure has been experimentally in other countries as a trade-off by the airport operators between the initial loss of revenue and long term gain of enhanced traffic at the airport. Internationally, such incentives were provided for a limited period (upto 3 years) to see their effectiveness in development of traffic on a particular route. Based on the response received from the market, decisions were taken in terms of further continuation of such incentives.

Since there are different models of airport ownership in India, the issue of exemptions / relaxations may be approached differently by the AAI Airports and by the Private/ PPP Airports. While AAI is a Public Sector entity which has a number of revenue sources apart from airport operations, such as revenue share from private airports, revenue from provision of ANS services as well as the ability to receive budgetary support from the Government, the primary source of revenues for the private airports are airport charges. Thus private airports, whose main objectives would be to generate expected returns for their shareholders, are expected to selectively consider this mechanism of exemption / relaxation for boosting passenger demand before being willing to implement it.

The measures/ initiatives proposed from the perspective of airport operators in India are identified below:

13.4.1 Exemption from Airport Charges – RNFC / TNLC / Landing / Parking

In order to provide support to provision of air transport service with smaller aircrafts, the Government has exempted aircrafts with less than 80 seats being operated by

Domestic Scheduled Operators from payment of landing and parking charges at AAI airports. Some relaxation in terms of reduced charges is also provided in respect of Route Navigation charges levied by AAI.

However these exemptions / relaxations are available only at the AAI airports and not at the private airports (like Delhi & Mumbai). Further these relaxations are available only to the Scheduled Operators and not to the Non-Scheduled Operators.

As discussed earlier in Section 8, Non-Scheduled Operators have an important role to play in providing air connectivity to remote areas. Most of the operations of Non-Scheduled Operators are conducted with smaller aircrafts. To incentivize the operation of smaller aircrafts, the existing exemptions / relaxations for schedule operators is recommended to be extended to the Non-Scheduled Operators also (except for Business Jets).

As regards to providing such exemptions at the private major airports in the country, tariffs at these major airports (Delhi & Mumbai) is governed by the regulations of Airports Economic Regulatory Authority (AERA). Thus it will require policy guidelines to be issued by the Ministry of Civil Aviation for these exemptions / relaxations to be followed by the private airports. However it may be noted that as per the methodology for determination of tariff at these airports, exemptions to the smaller aircrafts would be compensated by an appropriate increase in tariff for other set of users.

AAI should also consider exemption for aircrafts with a maximum take-off mass of less than forty thousand kilograms (small/ regional) from payment of Route Navigation & Facilities Charges (RNFC) and Terminal Navigation & Landing Charges (TNLC) for a period of 5 years.

13.4.2 Flexibility to regional operators to choose from services such as CUTE / GHS

It is understood that there are certain services at the airport, which are either provided by the airport operators themselves or by the agencies appointed by the airport operators to airlines. These services include Common User Terminal Equipment (CUTE) and Ground Handling Services (GHS) and require payment of charges by the airline for use of these services. During interactions with the industry, it has been expressed that RSOPs may not have enough traffic or frequency to an airport to justify for payment of charges for use of CUTE and GHS. Hence it is proposed that such services should not be imposed upon regional airlines by the airport operators and the airlines should have the flexibility to choose a business model depending upon their traffic levels and convenience.

13.4.3 Benchmark for Low Cost Airports

As discussed earlier in the report, low cost airports could help in reducing the airport charges being levied on the airlines and passengers on account of lower capital costs incurred for the airport infrastructure at these airports. This would have an impact on the fare charges for operations on the regional routes.

In this context, it becomes important to understand as to what can be considered or classified as low cost airports. It is understood that there is no standard definition available for low cost airports and context specific definitions are adopted by various

countries. A low-cost airport definition considered for the purpose of European Regional Airports Study is as follows:-

- A Low Cost Airport is the one having
  - Less than 500,000 passengers per year
  - More than 50% of available seat capacity by low-cost carriers
  - Runway length of around 2000m and width of 45m

The term low cost airport denotes certain features, which are targeted towards reducing the capital expenditure for development of the airport and operating expenditure during operations of the airport. These features may include a low cost terminal without climate control (air-conditioning), with less emphasis on aesthetic elements and an impetus on utility. Other capital intensive but dispensable components of the airport are aerobridges and fuel hydrants. Similarly, shoulders at taxiway can be removed depending on the design of the aircraft. There is also immense scope in controlling O&M costs of utilities by utilizing rainwater harvesting system, efficient usage of natural light, substituting electronic information system by Television set similar to the ones used in railway stations, bussing of passengers, etc.

In India, airport security costs are borne by the airport operator and such costs are directly proportional to the area covered by the airport due to fencing and vigilance requirements at the airport. Thus, in India's context, development of low cost airports could involve having a bare minimum land requirement which serves air transportation purpose as effectively & efficiently as possible.

It is understood that one of the arguments in support of providing large area at the airport is to exploit non-aeronautical revenue potential at the airport. But it is also important to perceive a low-cost airport as a transit point for air connectivity and not as a real estate hub with provision of hotels and restaurants facilities. Also, based on the industry discussions it is understood that the non-aeronautical revenue potential at regional or smaller airports is very limited.

Thus it is required that AAI should frame certain standards / benchmarks for low cost airports so that the approximate cost of development of such airports would also be known to the policy makers. As and when a location is considered important for provision of air connectivity and requires development of a low cost airport infrastructure, the set benchmarks by AAI could be followed for development of such airports.

In this context, it is understood that AAI has initiated the process of conceptualization of low cost airports and is considering certain alternative constructs of airport, which is aimed at reducing the cost of development as well as the cost of operation of these low cost airports without effecting the quality and efficiency of services. Some of the features being considered by AAI for low cost airports are presented below:

General features of low cost airports being considered by AAI are:-

- Terminal building may be designed for half the per peak hour passenger space as compared to the per peak hour passenger space provided to the legacy airlines.
- Terminal building will be developed in a phased manner initially to cater the needs of 20/40/80 seater aircrafts depending on traffic forecast on modular design concept.
- The terminal building will not be provided with commercial space so as to have channel for sustainable non-aero revenue.
- Air conditioning will be provided only in the security hold area.
- The design will be basically for smaller aircrafts. Accordingly, the runway length can be 1400 — 1800 mtrs. and apron can be with two parking bays.
- The NAV AIDS may be with HF1 VHF. DVOR — DME only with or without Night Operation Facilities.
- Perimeter wall will be provided with chain link fencing instead of permanent wall.
- Perimeter road will be for two wheeler vehicles, wherever possible.
- Security & fire service shall be provided by State Govt. for Operation time/ watch hours.
- ATC towers can be mobile van till the traffic picks up and requires a permanent building.
- Mobile check-in counters can be given to share the check-in area by various airlines.
- Various services in the airport for airlines like Ground Handling, coach services etc. can be shared.
- Budget Hotels can be provided at city side of airports in coordination with tourism departments / State Govt. Departments.
- The development of Low-cost Regional Airports would also require a separate Regulatory framework both for Safety and Security. For example Airports with less than 50 passengers in a day may be exempted from X-ray screening and it may be replaced by physical checking as suggested by the Committee constituted by MoCA.. DGCA and BCAS should examine Regulatory regimes available in countries where low-cost airports have developed and adopted similar minima based systems.

13.4.4 Exemption for Private Regional Airports from payment of Air Navigation Services cost recovery charges

Since AAI is the sole provider of Air Navigation Services in the country, all the private airports avail of the ANS services from AAI. In lieu of the same, a charge is paid by private airports to AAI on cost recovery basis.

It is proposed that in case a private airport is developed in a smaller town for promotion of regional or remote area air connectivity, such airport could be considered by AAI for exemption from payment of charges for Air Navigation Service. Such exemption may be granted initially for a period of 5 years and depending upon the market response and growth of traffic at such airports, may be extended for another limited period or be discontinued.

Further to safeguard the interests of AAI and ensure the viability of its operations, it is proposed that AAI should work out and levy the RNFC and TNLC charges at a system level (all India level) considering all its airports and traffic handled at such airports.

13.4.5 Provision of slots for flights from regional and remote routes

All the initiatives / measures discussed above are to facilitate provision of air transport services to regional and remote areas in the country and to connect them with larger population centres, which in the first phase may include State capitals / Metros and may be expanded later to include other towns.

However all of the above efforts would not serve a purpose if a flight from such remote / regional route is not allotted a desired slot at the airports. It is also understood that availability/ allocation of slots at certain metro airports is difficult on account of congestion and significant demand for slots at such airports (for example at the Mumbai Airport).

While it cannot be mandated to the metro airports to provide slots to remote / regional routes, provision of slots to these routes should be discussed and considered favourably during Winter / Summer Schedule cycles.

Annexure 1 – Study Terms of Reference

(i) *To bring out the role of regional air connectivity in India and identify the factors that are inhibiting the growth of regional air connectivity in different parts of the country which shall include economic, commercial, technical, infrastructure, policy and regulatory constraints.*

(ii) *To lay down criteria with justification for selection of towns for promoting regional air connectivity and identify towns based on those criteria in each region of India where there is adequate market potential for regional air lines to operate.*

(iii) *The Consultant shall study and document the best international practices prevalent in comparable countries with regard to the methods by which regional air connectivity has been promoted and their learning outcomes*

(iv) *On the basis of analysis of the learning outcomes in other countries and based on studies conducted in India such as the Report on Air Connectivity in MoCA (2011), the Consultant shall come out with suitable recommendations to promote regional air connectivity in the shortest possible time frame. This shall include the following:*

- *Mapping of existing infrastructure of airports including air strips and analysis of the adequacy or otherwise of the existing airports infrastructure in those areas where the identified towns are located*
- *Determining the appropriate air craft size (s) for the purpose of providing regional air connectivity taking into account the nature and size of the airports that are available for such purposes in the identified towns.*
- *Identifying policy provisions including regulatory requirements that need a review and suggest required amendments to encourage operations to new areas*
- *Listing the incentives accurately and in detail such as exemption from duties/taxes, charges, fees and other levies that have the potential to promote service in such regional areas*

(v) *The policy framework and other analysis by the consultant should be backed by an illustrative economic and financial analysis including business model for the stakeholders*

(vi) *The Consultant shall examine the feasibility of creation of Regional Air Connectivity Fund, its source, management and manner of its utilisation in the context of recommendations made by various committees in the past and recommend suitable measures for implementation.*

(vii) *The Consultant shall review the existing Route Dispersal Guidelines and provide a new framework with a view to enhance connectivity to remote and inaccessible areas in the country.*

(viii) *The Consultant shall examine the feasibility of introducing a market based mechanism such as trading in Capacity deployed in specified areas under RDG amongst Carriers.*

(ix) The Consultant shall define the role of the State Governments in the matter of enhancing air connectivity in the regional, remote and inaccessible areas

(x) Any other aspects that are not covered above but are relevant for the study

Annexure 2 – List of industry stakeholders with whom interactions were held

Table 20: Stakeholders Interacted with	
Stakeholders	**Persons/Entities**
Ministry of Civil Aviation	• Honourable Minister of Civil Aviation • Secretary, Ministry of Civil Aviation • Economic Advisor, Ministry of Civil Aviation
Director General of Civil Aviation	• DGCA • Deputy DG
Airport Infrastructure Providers	• Airports Authority of India • Delhi International Airport Limited • Mumbai International Airport Limited • Reliance Airport Developers Private Limited • RAHI
Air Transport Service Providers	• Air India • SpiceJet • Jet Airways • Pawan Hans • Air Mantra • Ventura Air Connect • Business Aircraft Operators Association (BAOA) • Alliance Air
Other Stakeholders	• DONER • Ministry of Tourism • Blue Dart • Industry professionals

Annexure 3 – Existing Policies / Regulations

The aviation activity in India is governed by the established rules / policies / regulations of various agencies/ ministries of Government of India. Ministry of Civil Aviation, Ministry of Finance, Ministry of Petroleum, Ministry of Defence and Ministry of Home Affairs are the key ministries governing various stakeholders in the civil aviation sector in India.

The Aircraft Act, 1934, provides the overall legal framework for development and operation of aerodromes and aircrafts in India. The act is used as a reference document for any new policies and regulations to be established in the sector. The act enlists the power of the central government over aircrafts and aerodromes and is complemented by Aircraft Rules, 1937 which constitutes of 13 parts each detailing technical and regulatory aspects of a particular element of airlines and aerodromes operations.

The Directorate General of Civil Aviation is the regulatory body in the field of Civil Aviation primarily dealing with safety issues. It is responsible for regulation of air transport services to/from/within India and for enforcement of civil air regulations, air safety and airworthiness standards. The regulations of DGCA are in the forms of the Aircraft Act, 1934, the Aircraft Rules, the Civil Aviation Requirements and the Aeronautical Information Circulars. From time to time, these policies, Acts and regulations have been modified / amended and supplemented with additional policies / regulations to cater to the requirements of various stakeholders in civil aviation.

List of Policies / Regulations

As the focus of this study is on enhancing the regional footprint of aviation sector in India, the present study has focussed on such rules, policies, regulations that impact or govern the development / operations of stakeholders involved in providing regional connectivity including infrastructure providers as well as air transport service providers.

As part of this study, the policies, as mentioned in the table below, have been analysed in terms of the framework they provide for regional air connectivity in India. While there are many detailed technical requirements stipulated by the DGCA for various entities involved in providing air connectivity, the present analysis is limited to the requirements pertaining to licensing/ broad operational requirements for providing regional air connectivity.

Table 21: List of Policies / Regulations studied in the present study

#	Agency	Role
1.	Minimum Requirements for undertaking aircraft operations with Aircrafts owned by State Governments/Public Sector Undertaking for Central/State Governments	CAR Series C Part X
2.	Minimum Requirement for Grant of Permit to Operate Non-Scheduled Air Transport Services	CAR Series C Part III

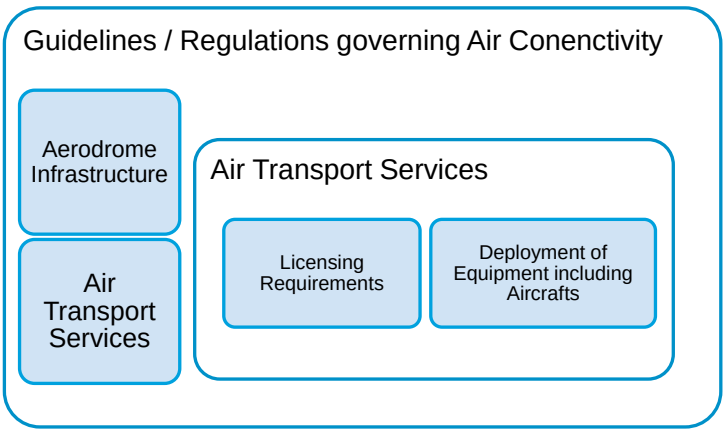
Table 21: List of Policies / Regulations studied in the present study		
#	Agency	Role
3.	Minimum Requirement for Grant of Permit to operate Scheduled Air Transport Service	CAR Series C Part II
4.	Minimum Requirement for Grant of Permit to operate Regional Scheduled Air Transport Service	CAR Series C Part VIII
5.	Import/Export of Aircraft, Spares, Items of Equipment etc. for use on aircraft.	CAR Series F Part XXI
6.	Guidelines for Foreign Equity Participation in domestic aviation	
7.	Requirement for Issue of an Aerodrome Licence	CAR Series F Part I
8.	Aerodrome Design and Operations	CAR Series B Part I
9.	Requirement of Maintenance/inspection of Communication, Navigation, Landing and other equipment installed at Airports en-route	CAR Series D Part I
10.	Exemption procedure for non-compliance with Aircraft Rules	CAR Series B Part II
11.	Issue/Validation and Renewal of Certificate of Airworthiness	CAR Series F Part III
12.	Minimum Safety requirement for temporary helicopter landing area	CAR Series B Part II
13.	Minimum Safety requirement for unlicensed/temporary aerodromes	CAR Series B Part VI
14.	Heliports	CAR Series B Part III
15.	Age of Aircrafts to be Imported for Scheduled/Non-Scheduled including charter, general aviation and other operations	CAR Series F Part XX
16.	Aircraft Rules,1937 – Aerodromes	Aircraft Rules Part 11
17.	Aircraft Rules, 1937- Airworthiness	Aircraft Rules Part 6

The review of such rules/ regulations was undertaken under the following three categories:

(i) Guidelines / Regulations related to Aerodrome Infrastructure

(ii) Guidelines / Regulations related to licensing requirements for provision of air transport services

(iii) Guidelines / Regulations related to equipment, including aircrafts, for provision of air transport services



Annexure 4 – Capacity Growth and Traffic Growth[32]

Table 22: Capacity Growth and Traffic Growth			
#	Year	ASKM (Millions)	RPKM (Millions)
1	1993-94	10,821	6,779
2	1994-95	10,297	6,545
3	1995-96	13,438	9,249
4	1996-97	15,502	10,277
5	1997-98	16,454	10,600
6	1998-99	17,931	10,828
7	1999-00	19,089	11,420
8	2000-01	19,897	12,284
9	2001-02	20850	11574
10	2002-03	22833	12848
11	2003-04	24936	14566
12	2004-05	27790	18031
13	2005-06	35077	23709
14	2006-07	48702	33519
15	2007-08	60590	41718
16	2008-09	59160	37704
17	2009-10	61091	43959
18	2010-11	68216	52707
19	2011-12	78581	59085

[32] Source: DGCA Data

Annexure 5 – Existing Connectivity at top 18 airports[33]

Table 23: Existing connectivity at top 18 airports			
#	Origin	No. of Destination	No. of seats per week
i.	Delhi	44	315287
ii.	Mumbai	41	286601
iii.	Kolkata	27	133958
iv.	Hyderabad	24	105173
v.	Bangalore	23	131238
vi.	Chennai	21	119886
vii.	Pune	12	41398
viii.	Guwahati	11	33532
ix.	Ahmedabad	10	47385
x.	Cochin	10	31872
xi.	Nagpur	10	20737
xii.	Jaipur	8	24306
xiii.	Bhubaneswar	8	21744
xiv.	Indore	8	18522
xv.	Goa	7	39658
xvi.	Coimbatore	6	25768
vii.	Lucknow	6	24268
viii.	Srinagar	6	21838

[33] Data is based on the Winter Schedule for 2012-13 filed by Scheduled Airlines with DGCA

Annexure 6 – Priority list of towns/cities identified based on criteria of Population, Economic potential and lack of Existing Connectivity[34]

Table 24: List of towns / cities identified for promoting regional air connectivity based on criteria of population, economic potential and lack of existing connectivity

#	Town / City	State	#	Town / City	State
1.	Vijayawada	Andhra Pradesh	27.	Kolhapur	Maharashtra
2.	Guntur	Andhra Pradesh	28.	Jalgaon	Maharashtra
3.	Kakinada	Andhra Pradesh	29.	Imphal	Manipur
4.	Muzaffarpur	Bihar	30.	Rourkela	Orissa
5.	Durg	Chhattisgarh	31.	Pondicherry	Pondicherry
6.	Korba	Chhattisgarh	32.	Ludhiana	Punjab
7.	Bilaspur	Chhattisgarh	33.	Jalandhar	Punjab
8.	Bhavnagar	Gujarat	34.	Patiala	Punjab
9.	Jamnagar	Gujarat	35.	Ajmer	Rajasthan
10.	Junagadh	Gujarat	36.	Kota	Rajasthan
11.	Gandhidham	Gujarat	37.	Bhilwada	Rajasthan
12.	Hisar	Haryana	38.	Alwar	Rajasthan
13.	Dhanbad	Jharkhand	39.	Sri Ganganagar	Rajasthan
14.	Jamshedpur	Jharkhand	40.	Salem	Tamil Nadu
15.	Bokaro	Jharkhand	41.	Agartala	Tripura
16.	Belgaum	Karnataka	42.	Agra	Uttar Pradesh
17.	Mangalore	Karnataka	43.	Allahabad	Uttar Pradesh
18.	Bellary	Karnataka	44.	Moradabad	Uttar Pradesh
19.	Mysore	Karnataka	45.	Saharanpur	Uttar Pradesh
20.	Gwalior	Madhya Pradesh	46.	Sambhal	Uttar Pradesh
21.	Singrauli	Madhya Pradesh	47.	Meerut	Uttar Pradesh
22.	Burhanpur	Madhya Pradesh	48.	Aligarh	Uttar Pradesh
23.	Khandwa	Madhya Pradesh	49.	Muzaffarnagar	Uttar Pradesh
24.	Jabalpur	Madhya Pradesh	50.	Haridwar	Uttarakhand
25.	Nashik	Maharashtra	51.	Malda	West Bengal
26.	Brahmapur	Orissa	52.	Haldia	West Bengal

[34] This list has been derived based on the analysis presented in Section 6.5.2.

Annexure 7 – Additional list of towns / cities identified based on criteria of Economic potential and lack of Existing Connectivity[35]

Table 25: Additional list of towns / cities for promoting regional air connectivity based on Economic potential and lack of Existing Connectivity

#	Town / City	State	#	Town / City	State
1.	Nellore	Andhra Pradesh	20.	Hazaribagh	Jharkhand
2.	Kurnool	Andhra Pradesh	21.	Sidhi	Madhya Pradesh
3.	Kadapa	Andhra Pradesh	22.	Shahdol	Madhya Pradesh
4.	Nizamabad	Andhra Pradesh	23.	Amravati	Maharashtra
5.	Tirupati	Andhra Pradesh	24.	Chandrapur	Maharashtra
6.	Anantapur	Andhra Pradesh	25.	Solapur	Maharashtra
7.	Karimnagar	Andhra Pradesh	26.	Jowai	Meghalaya
8.	Ongole	Andhra Pradesh	27.	Tura	Meghalaya
9.	Tezu	Arunachal Pradesh	28.	Lunglei	Mizoram
10.	Yupia	Arunachal Pradesh	29.	Kendujhar	Odisha
11.	Bomdila	Arunachal Pradesh	30.	Baripada	Odisha
12.	Along	Arunachal Pradesh	31.	Ferozepur	Punjab
13.	Silchar	Assam	32.	Nagaur	Rajasthan
14.	Jorhat	Assam	33.	Virudhunagar	Tamil Nadu
15.	Tezpur	Assam	34.	Bijnor	Uttar Pradesh
16.	Sasaram	Bihar	35.	Kheri	Uttar Pradesh
17.	Chapra	Bihar	36.	Azamgarh	Uttar Pradesh
18.	Bettiah	Bihar	37.	Pantnagar	Uttar Pradesh
19.	Shimla	Himachal Pradesh			

[35] This list has been derived based on the analysis presented in Section 6.5.3 and does not include the towns already captured in the Annexure 6 and Annexure 8.

Annexure 8 – List of towns / cities based on Tourism potential and lack of Existing Connectivity[36]

Table 26: List of towns / cities for promoting regional air connectivity based on criteria of Tourism potential and lack of Existing Connectivity		
#	Town / City	State
13.	Gaya	Bihar
14.	Jagdalpur	Chhattisgarh
15.	Yamunanagar	Haryana
16.	Dharamshala	Himachal Pradesh
17.	Khajuraho	Madhya Pradesh
18.	Nanded	Maharashtra
19.	Anandpur Sahib	Punjab
20.	Gangatok (East Sikkim)	Sikkim
21.	Kanyakumari	Tamil Nadu
22.	Rameshwaram	Tamil Nadu
23.	Darjeeling	West Bengal
24.	Murshidabad	West Bengal

[36] This list has been derived based on the analysis of towns identified by the Ministry of Tourism for their tourism potential, as presented in Section 6.5.4 and does not include the towns already captured in the list of towns presented in Annexure 6 and Annexure 7 above)

Annexure 9 – RDG Compliance

Exhibit 17: ASKM Deployment on Category III Routes

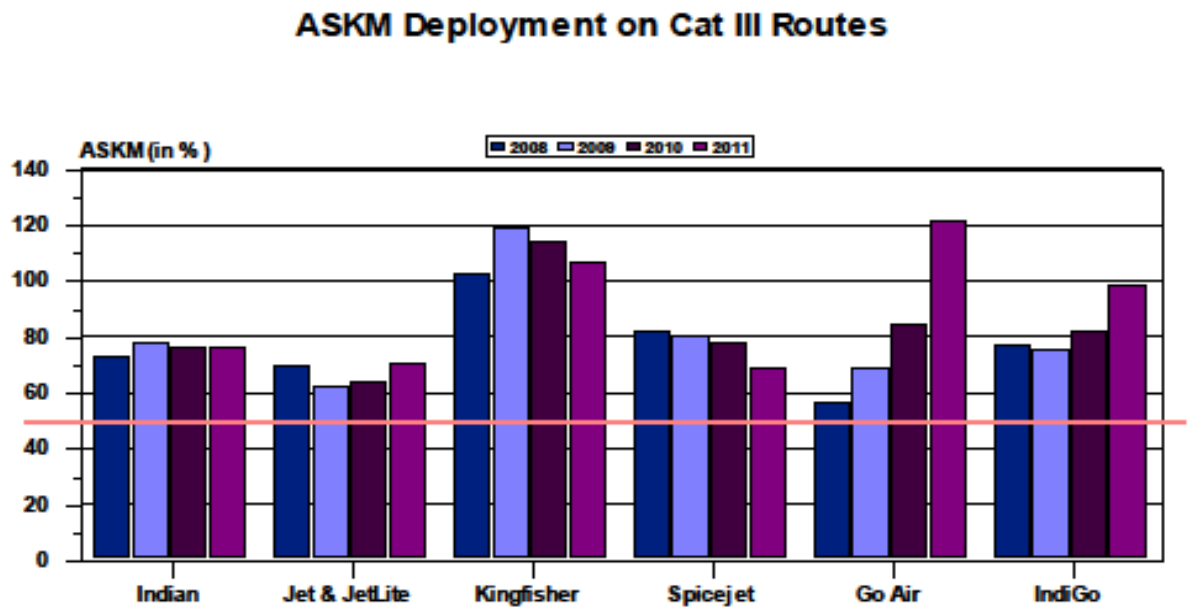


Table 27: ASKM Deployment (%) of Category I						
Airline	Cat – II		Cat – II A		Cat – III	
Months	Sep 2012	Nov 2012	Sep 2012	Nov 2012	Sep 2012	Nov 2012
Air India + Alliance Air	27.2	21.3	2.50	2.0	93.0	81.2

Table 27: ASKM Deployment (%) of Category I						
Airline	**Cat – II**		**Cat – II A**		**Cat – III**	
Jet Airways + JetLite	14.0	18.9	1.56	1.75	97.5	104.4
SpiceJet	23.1	21.7	1.77	1.55	117.1	115.1
Go Air	36.1	40.0	2.79	2.29	121.9	120.2
IndiGo	16.1	15.6	1.20	1.20	112.0	111.1
REQUIREMENT	**10%**		**1%**		**50%**	

Annexure 10 – VAT/Sales Tax on ATF

Table 28: VAT/Sales Tax on ATF		
#	State	VAT/Sales Tax (%)
1.	A & N Islands (Union Territory)	No Sales tax
2.	Andhra Pradesh	16
3.	Arunachal Pradesh	20
4.	Assam	22
5.	Bihar	29
6.	Chhattisgarh	4
7.	Delhi (National Capital Territory)	20
8.	Goa	12.5
9.	Gujarat	5 for intra-state operations 30 for other operations
10.	Haryana	20
11.	Himachal Pradesh	25
12.	Jammu and Kashmir	21
13.	Jharkhand	20
14.	Karnataka	28
15.	Kerala	25
16.	Lakshadweep (Union Territory)	No Sales tax
17.	Madhya Pradesh	28.75
18.	Maharashtra	25 at Mumbai Airport and Pune Airport 4 at other airports
19.	Manipur	20
20.	Meghalaya	20
21.	Nagaland	13
22.	Orissa	20
23.	Pondicherry (Union Territory)	5
24.	Punjab	5.5
25.	Rajasthan	20
26.	Sikkim	4
27.	Tamil Nadu	29
28.	Tripura	22
29.	Uttar Pradesh	21
30.	Uttaranchal	20
31.	West Bengal	13.5

Annexure 11 – Universal Service Obligation Fund

Universal Service Obligation in the telecom sector in India governs the requirement for Telecom Service Providers to partially fund the infrastructure provision in rural and remote areas. The primary objective for Universal Service Obligation is to expand the coverage of telecom network to the sections of the nation which might not possess the adequate demand volumes for viable operations for commercially oriented telecom firms. The implementation goals are as follows:-

- to promote the availability of quality services at just, reasonable, and affordable rates
- to increase access to advanced services throughout the Nation
- to advance the availability of services to all consumers, including those in low income, rural, insular, and high cost areas at rates that are reasonably comparable to those charged in urban areas.

The above mentioned goals are achieved through funding provided by the Universal Service Obligation Fund (USOF). As per the New Telecom Policy, 1999 (NTP 99), the resources for USOF were to be raised through imposing a levy on Adjusted Gross Revenue of all telecom service providers in India.

USOF was constituted as a statutory fund by the Indian Telegraph (Amendment) Act, 2003 wherein USOF was to be utilized to meet USO and USO was defined as “the obligation to provide access to basic telegraph services to people in the rural and remote areas at affordable and reasonable price”. Subsequently, Indian Telegraph (Amendment) Act, 2006 was passed enabling broadening USO to cover mobile and broadband connectivity services.

Functionality of USOF

USOF is managed by USOF Administration presided by Department of Telecom, Ministry of Communication & Information Technology. The objectives for USOF have been categorized in six streams which pertain to different levels of telecom and communication services. These streams also identify the targets to be achieved. These streams are as follows:-

Stream-1: Provision of Public Telecom and Information Services

The funds cover O&M of Village Public Telephone (VPT) in the villages identified by Census 1991 and installation of VPTs in villages identified through Census 2001.

Stream-2: Provision of Household Telephones

This stream covers rural and remote areas as identified by the government from time to time

Stream-3: Infrastructure Provision for Mobile Services

The need for infrastructure will be ascertained by Government from time to time. It has been noted by the USOF Administration that capital recovery from infrastructure provision (funds received from services provided) will be accounted for net costs

Stream-4, 5 and 6: Provision of new technologies

The USOF also envisages adoption of new and more efficient technology in rural areas thereby ensuring the advancement of the masses.

Thus, while the first stream addresses public access to telecom services, stream 2 and stream 3 seek to enable individual access to the services as well. The remaining streams are meant to continuously upgrade the technology in villages and remote areas.

Implementation Mechanism

Although, Indian Telegraph (Amendment) Act, 2003, provides for the government funding for USOF, currently the fund has Universal Access Levy as its resources which is 5% of the Aggregate Gross Revenue of telecom service provider, except pure value added service providers such as Internet, Voice Mail, E-mail providers etc. The services as mandated above are provided by one of the eligible telecom operator which pertains to all the Basic Service Operators, Cellular Mobile Service Providers and Unified Access Services Licensees or any other entities as may be specified in this behalf by the Central Government from time to time. The entity chosen for providing services is chosen through a bidding process from amongst eligible providers. The entity chosen thus so is known as Universal Service Provider (USP) and an agreement catered to the need for service being provided is framed. The funds are also released as per the need of the service being provisioned. Agreements have been signed with BSNL and six other telecom operators such as Reliance, Bharti, Tata Teleservices, Himachal Futuristic Communications Limited and Shyam Technologies.

The service provider is allowed to retain revenues arising out of user charges and applicable rentals form the provided service.

The funds to be allocated to USP are provided to cover net costs of providing the specified stream of service, where net costs are defined as follows:-

Net Costs = Operating Expenses of the service + Capital Recovery – Revenue,

where Capital Recovery is defined as follows:-

Capital Recovery = Depreciation of Capital + Interest on Debt for Capital Employed + Return on Equity on the Capital Cost

From the above formula, it can be seen that the telecom operator is subsidized to the extent of breakeven. The breakeven calculation also accounts for opportunity costs of the capital being employed.

Functions of USOF Administration

USOF Administration is entitled to certain powers and functions, which are as follows:-

- To formulate USOF projects under the various streams provided in the Indian Telegraph Rules, in consultation with telecom services providers and various stakeholders.
- To design the bidding process and carry out tendering.
- To enter into implementation agreements with Telecom Service Providers (TSPs).
- To monitor the implementation of USOF projects and to disburse subsidy in accordance with terms and conditions of USOF agreements.
- To design the format of various records and returns to be maintained by the TSPs.
- To carry out post implementation review of USOF Schemes.
- Budgeting and Audit of USOF Activities.

From the above list of powers and responsibilities of USOF Administration, it can be seen that not only is it mandated to achieve the targets meant for the fund, there is also a requirement for maintaining transparency for the allocated funds and continuous monitoring of the projects under implementation. This requirement ensures that outcomes match outlays for the project and leakages are kept minimal.

Results

USOF has achieved substantial achievements in all of the above mentioned streams of projects.

- Agreement was signed with BSNL in November 2003 for providing VPTs in 66822 uncovered villages in India as per Census 1991. Villages with population less than 100 and suffering with insurgency were not to be targeted for this purpose as of then. The targets for this stretch have been completely covered.
- Further, another 62, 443 villages were considered to be uncovered as per the Census 2001. To provide VPTs to these villages, agreement was signed with BSNL in February 2009. Of these villages, around 85.60% of villages have been provided with VPTs.
- Regarding individual access to telecom services, agreements were signed in March 2005 with four operators, including three private operators, for providing Rural Direct Exchange Landlines (RDELs). These RDELs were to be provided in a time period of two years. As of 31st March 2010, a total of 7,927,191 RDELs were installed.

- For providing telecom towers in villages for mobile telephony services, agreements were signed in May 2007 for installing 7353 towers, out of which 7309 were set-up by October 2012.

The table below provides details for utilization of funds since the inception of the USOF in 202-03.

Table 29: Result of USOF

#	Financial Year	Funds Collected as UAL	Funds Allocated	Funds Disbursed
1.	2002-03	1653.61	300	300
2.	2003-04	2143.22	200	200
3.	2004-05	3457.73	1314.59	1314.59
4.	2005-06	3215.13	1766.85	1766.85
5.	2006-07	3940.73	1500	1500
6.	2007-08	5405.8	1290	1290
7.	2008-09	5515.14	1600	1600
8.	2009-10	5778	2400	2400
9.	2010-11	6114.56	3100	3100
10.	2011-12	6723.57	1687.96	1687.96
11.	Total	**43947.49**	**15159.4**	**15159.4**

Annexure 12 – National Children's Fund

National Children's Fund was established in 2004 and is administered by the Department of Women and Child Development, Ministry of Human Resource and Development. The objectives of the Fund are to promote various programs for the betterment of children which are affected by natural calamities, riots, aggressions etc. and to promote the development of children in tribal and remote areas which remain underserved or unserved in terms of administration.

Administrative Structure

The Fund is managed by a Board of Management, which is chaired by the Minister. It also has representation form non-official members appointed by the Minister and representatives from State Governments and Union Territories nominated by Secretary, Department of Women and Child Development.

The Board of Management is sub-ordinated by a six-member Working Committee, which is responsible for executing the projects as designed and formulated by the Board of Management. Working Committee is authorized to disburse funds on its own upto a limit of INR 5 lakhs per case.

Implementation Mechanism

The Board of Management does not have a structured program or specific modules to achieve its objectives. However, it provides assistance to various proposals presented by agencies which have goals aligned with those of the National Children's Fund.

The agencies may include voluntary organizations, state governments, *Panchayats*, non-profit charitable institutes etc. Applicant agency should be registered under the relevant legislation and should have at least three years of experience in the field of child welfare and development.

The Board of Management evaluates each proposal in terms of its relevance to the community and indigenous nature and decides to disburse the funds. The projects so funded are implemented and monitored by the Working Committee.

Certain conditions on funding are as follows:-

- 10% of the project cost will have to be met by the proposing agency.
- Funding will be available in terms of one-time grant and can last upto 2 years and any project phase beyond this duration will not be funded.
- Assistance from National Children's Fund will not be available for programs which already receive grants from Central/State Government or any other funding scheme.

Source of Funds

- The primary source of fund for National Children's Fund was INR 1 lakhs contributed by the Government of India.
- Apart from this, the source of funds include all recurring and non-recurring grants received from Central and State Governments, local bodies and other organizations/bodies set up by the Central/State Governments.
- NCF can also receive donations and charities from individuals and other voluntary institutes.
- All the amount of National Children's Fund is to be allocated in an account of a Scheduled Bank. The Board of Management has been allowed to spend only the interest income of its deposit and 50% of the funds accumulated in the preceding financial years

Annexure 13 – National Culture Fund

National Culture Fund was established in 1996 as per a notification in the Gazette of India. The fund is administered by Department of Culture, Ministry of Culture. The guiding principles of National Culture Fund are dictated by the Charitable Endowment Act, 1890. The objectives of NCF are to:-

- Preservation of India's tangible heritage relating to immoveable properties such as Heritage sites and monuments
- Promotion of India's tangible heritage relating to languages, culture, customs and arts of communities residing in India

Administrative Structure

NCF is administered by a 24-member Council which is chaired by the Union Minister of Tourism and Culture. Due to the task of representing marginalized culture and preserve endeared customs of India' diverse culture in an ever changing society, it has been kept in mind that the Council has adequate representation from various foundations and independent agencies involved in preservation of culture and tourism. The role of the Council is to design and formulate the policies of NCF.

The Administrative Structure is sub-ordinated by the Executive Council, the role of which is to select the programs to be supported by the NCF. Adhering to the same principles as above, it has been ensured that the committee has representation of NGOs and cultural societies to ensure equitable and effective disbursement of the corpus. The Executive Committee is responsible for implementing the policies decided by the Council for dispersion of the funds of the corpus.

Implementation Mechanism

The Council of NCF initiates projects through collaboration, in the form of MoUs, with various (government or non-government agencies) agencies which have had their activities primarily in the field of culture. These MoUs determine the Cost Sharing Mechanism between the Council and the entities. Agreements are formed through a proposals put forward by the participating entities to the Department of Culture.

The participating entities may include State governments' culture ministry (or departments thereof), Archaeological Society of India, any voluntary organization, registered under the Societies Registration Act 1860 or registered as a Public Trust is also entitled for establishing agreements with the Council of NCF. To ensure reliability of funds and their effective implementation, agreements with individuals are not entertained.

The MoUs signed as part of the Agreement are implemented and thereafter monitored by the Executive Committee.

Source of Fund

- NCF got its initial monetary impetus from the Government of India through a contribution of INR 19.5 crores in 1996-97. Each year INR of 2 crores form this corpus is utilized by the Department of Culture for its various projects.
- Apart from this corpus, the NCF also receives funds through donations and charities. As an incentive mechanism, the donations made to NCF are eligible for 100% tax exemptions as per the Income Tax Act, 1961.
- NCF also receives funds from various international agencies. Various agencies which have participated are Hampi Foundation, ASI, UNICEF, World Monuments Fund etc.
- The deployment of funds is user selective which implies that donors can select the project that they want to fund. This mechanism has ensured that interested groups such as Corporations also get to participate in projects. Recently, the Council has signed agreements with SAIL, IOCL, NTPC, UCO Bank etc.

Annexure 14 – Summary of earlier Committee Reports on Regional Air Connectivity Fund

Naresh Chandra Committee Report

Naresh Chandra Committee was constituted by the Government of India in 2003 to chart a road map for rapidly rationalizing and reforming the aviation sector in India. Study on 'Development of regional air connectivity within the country' was one aspect of the agenda. In this context, the committee had proposed to establish a dedicated 'Essential Air Services Fund' or EASF to provide support to the commercially unviable routes. Key observations and recommendations made by the committee on this aspect are summarised below.

The report acknowledged the need to provide air connectivity on certain routes in order to ensure social, strategic or geographical equity. These routes are perceived as commercially unviable for the airlines to ply on either because of lack of inherent traffic potential or due to competition from competing modes of transport. The report identified the limitations of the prevalent mechanism of Route Dispersal Guidelines to ensure air services to these routes. It points out that these routes prove to be suboptimal and loss making for the airlines, which primarily have a fleet of larger aircrafts in order to cater to the trunk routes and are forced to deploy the same large aircrafts on these relatively low traffic routes. These routes can be better served by niche airlines which would deploy smaller and more fuel efficient aircrafts appropriate for the traffic potential of these routes. However, such airlines have not been able to make their foray in the market because of the prevailing RDGs as major airlines have to operate their services on these routes which results in the over capacity on these routes with inherently low traffic potential.

In light of the above, the report made a recommendation to abolish the Route Dispersal Guidelines. It makes an argument that once these guidelines are abolished, major airlines will be able to focus their efforts on the trunk routes and this will lead to emergence of specialized regional and feeder airlines to cater to the regional routes. However, it suggests that government should support these routes through explicit subsidy which can either be funded through direct budgetary transfers or by imposing a sector specific cess. It adds that selection of operators to ply on these routes who will be beneficiary of such subsidy support should be done through a transparent competitive tendering process which is already a prevalent practice in other countries such as Australia and USA which are running similar schemes for enhancing regional air connectivity.

While suggesting the broad features of such a proposed fund, the committee suggests that the most preferred source for such funds would be from the direct user charges. This would ensure that once the traffic at such routes develops, the routes can become self-sustainable and would not be dependent on state support. It also

suggests that such financial support to airlines should be guaranteed for a minimum initial period backed with a credible source of funding as it would instil confidence among the airlines to take up such routes for operation in the beginning. Other sources which the committee suggests could contribute for such a fund include the proceeds from the airport privatization and contribution from the state governments in various forms such as tax exemptions.

One recommendation made by the committee regarding the abolition of several aviation related taxes namely IATT, FTT, etc. which were prevalent at the time of the study were implemented in 2004. The government had decided to reduce the excise duty on ATF from 16% to 8% and abolish inland air travel tax (IATT) as well as foreign travel tax (FTT) of INR 500 per passenger.

Rohit Nandan Committee Report

This Committee, under the Chairmanship of Mr. Rohit Nandan, the erstwhile Joint Secretary, MoCA, was constituted by the Ministry of Civil Aviation in 2011 in order to explore policy initiatives for expansion of connectivity in the country. In this context, the committee reviewed the Naresh Chandra Committee's recommendation in regard to creation of a subsidy fund called EASF to provide financial assistance to airlines to fly on commercially unviable routes. It concluded that there is a strong case for establishing such a fund in India to give supplementary support to the RDG as well as to provide financial support to airlines operating on unviable routes. The Report suggested the establishment of a 'Regional Air Connectivity Fund' or RACF in India. Committee's observations and recommendations on the same are summarised below.

The committee observed that although, the Route Dispersal Guidelines have significantly contributed to the enhancement of regional connectivity in the country, it has not been successful doing so beyond the state capitals. As a result, connectivity among the Tier-3 towns still remains a concern and needs to be further enhanced. It also points out to the tendency of airlines to overcharge fares on the unviable routes in order to minimize their losses which in turn makes air travel unaffordable and thus defeating the very objective of Route Dispersal Guidelines. However, the committee was not in favour of eradicating Route Dispersal Guidelines and suggested development of additional measures to supplement the Route Dispersal Guidelines. It says that the objective of improving regional connectivity would be best achieving by striking a balance between Route Dispersal Guidelines and a support fund.

The report suggested and discussed several ways in which the said fund can be designed and implemented. It talks about designing the routes based on Passenger Load Factor (PLF) values of various routes. Routes with PLF higher than or equal to the national average of PLF can be categorized a trunk routes or Group A while the routes with PLF marginally lower than the national average can be categorized as Group B. these routes would need none or very less external financial support and would be able to sustain by cross subsidizing among them. However, the routes with PLF substantially lower than the national average of PLF would be categorized as Group C and would need to be supported financially by establishing a dedicate fund. The committee proposed that the scheme be administered through an independent agency established specifically for the task and till such a body is created, AERA or

Civil Aviation Authority (proposed to be formed at the time of the study) can administer the fund.

It suggested that the fund may be setup by levying a cess of around Rs. 25 or Rs. 50 on domestic passengers. This would result into a total collection in the tune of Rs. 125 crores or Rs. 250 crores respectively. This fund would support the new routes, which are not operational at the time, proposed by airlines or states and such routes can be identified by a committee comprising of representatives from various agencies related to aviation sector. It suggested that states also partner in the fund through a mandatory contribution, proportion of which could be different for routes of different categories. It also suggested that the fund should also contribute a fixed proportion towards the development of low cost regional airports. However, the report underscores that such fund should not create monopolies and routes should be awarded to operators on tendering basis. It also suggests that such support should be provided for an initial period of around 3 to 5 years and should be removed once the route becomes sustainable.

Annexure 15 -Regional Connectivity Funds in other countries

Table 30: Regional Connectivity Funds in Other Countries

	USA EASF	Australia RASS
Overview	After the sector was deregulated in 1978, The Essential Air Service (EAS) program was put into place to guarantee that small communities that were served by certificated air carriers before deregulation maintain a minimal level of scheduled air service. This program subsidizes operation of smaller aircrafts to the identified remote areas with certain minimum frequency. DOT generally establishes a two-year EAS service contract with the appointed carrier.	Australian Government has a comprehensive approach to develop regional aviation under a program called Regional Aviation Access Program (RAAP) and Remote Air Services Subsidy (RASS) Scheme is part of the this program. This Subsidy Scheme provides financial support for weekly air transport service for the carriage of passengers and goods to communities in remote and isolated areas of Australia.
Source of fund	• Transfers from an overflight fees that Federal Aviation Administration (FAA) charges to operators of aircrafts that fly in U.S. controlled airspace, but neither take off nor land in the United States • Annual appropriations of varying size	Government funded fixed annual budget
Eligibility	A community is eligible: • If it is located more than 70 miles and less than 210 miles from the nearest hub airport and requires a rate of subsidy per passenger less than USD 200; • If it is located more than 210 miles from the nearest hub	A community for being eligible for receiving subsidy: • there must be a demonstrated need for a weekly air service ○ Absence of a weekly or more frequent air service capable of carrying passengers and essential supplies ○ permanent population base.

Table 30: Regional Connectivity Funds in Other Countries

	USA EASF	Australia RASS
	airport Recent amendments in the scheme have added more restrictions to the eligibility criteria.	• Remoteness of community in terms of surface travel time to a population centre or neighbouring community receiving a weekly transport service ○ regarded as remote or very remote using the Australian Standard Geographical Classification ○ beyond two hours (one way) safe surface travel to a service centre providing essential goods and services ○ beyond one hour's (one way) safe surface travel to a community receiving a weekly RASS or equivalent transport service.
Service level requirement	• Service reliability • Contractual and marketing arrangements with a larger carrier at the hub • Interline arrangements with a larger carrier at the hub • Community views	
Selection of carriers	DOT follows a bidding system for selection of carrier. RFPs require air carriers to submit their proposals for subsidy and set forth the level of service (frequency, aircraft size, and hubs) that would be appropriate for the community given its location and traffic history. Once the proposals are received, DOT seeks the views of the communities on their choice of carrier. After receiving the communities' views, DOT decides on	Air operators are contracted with the Australian Government for a fixed term and are selected in accordance with the Commonwealth Procurement Guidelines.

Table 30: Regional Connectivity Funds in Other Countries

	USA EASF	Australia RASS
	the selected air carrier and specifies the details of service pattern (routing, frequency, and type of aircraft), annual subsidy rate and effective period of the rate.	
Payment method	Payment is made to carriers at the end of each month based on the claims submitted by him detailing the service actually completed, including date of service, aircraft type, routing, and frequency of service, and any actual variations from the service contemplated by the contract.	Subsidy payment is directly made to the operator.

Annexure 16 - International practices for promotion of regional air connectivity

Mechanism	Countries implemented	Objective	Eligibility criteria	Duration	Funded by	Remarks
Direct Payments						
(i) **Payment per flight**	Italy	Enhancing Connectivity : new routes & frequencies	Connecting airports which were previously either not connected or had a frequency lesser than a minimum specified frequency	Ongoing	Airport operating Authority	Payment is made in form of marketing contribution for international routes based on the number of flights per day and passengers per annum that the carrier guarantees..
(ii) **Payment per passenger**	Ireland Sweden Thailand Norway	Enhancing passenger traffic	Increasing passenger count on specified airports	Usually for an initial duration (typically, 2-5 years, most often 3 years)	Airport Operating Authority	payment on the basis of net annual increase in the number of passengers at the specified airports
(iii) **Marketing Support**	Sweden Norway Canada	Enhancing Passenger traffic, tourist	Usually offered on new services at specified airports	Usually for an initial duration (typically, 2-	Airport Operating Authority Local / Regional	Various mechanisms in this include the following: Co-financing of marketing activities for airlines that start a new route /

Mechanism	Countries implemented	Objective	Eligibility criteria	Duration	Funded by	Remarks
	USA	expenditure		5 years, most often 3 years)	government	enhance an existing route with at least 20 departures during a twelve-month period. Direct grant for not more than 50% of the external costs (direct expenses, except for the cost for the use of personnel). Also, the amount of the direct grant will be assessed in relation to the estimated effect of the project on the traffic volume, profit, other type of services etc. provide financial support for marketing for a proposed new route
Discounts						
(iv) **Discounts on passenger-related charges**	Sweden Norway Hong Kong Italy Spain	Enhancing Connectivity : new routes & frequencies	New services from specified airports	Usually for an initial period (typically 3 – 5 years), magnitude usually tapers down	Airport Operating Authority	Usually offered on services fulfilling certain specified requirements such as non-stop service, minimum frequency, etc.
(v) **Airport Charges – Landing, Parking**	Thailand Sweden UK Bahrain	Enhancing Connectivity & traffic: new frequencies, new routes,	New destinations; Additional services at existing	Usually for an initial period (typically 2 – 5 years)	Airport Operating Authority	Different variants of the scheme for different airports depending upon the intention

Mechanism	Countries implemented	Objective	Eligibility criteria	Duration	Funded by	Remarks
		new direct routes,	destinations			
(vi) **Reduction or exemption from Taxation**	Greece	Encourages airlines and aviation-related companies to relocate their operations		Could range from a specified duration to forever	National / Regional authorities	Offering tax advantages to air carriers subject to certain requirements like basing the aircraft in the region or serve it.
Sharing of demand-related uncertainties						
(vii) **Revenue Guarantees**	USA	Reduce the impact on the airline of not reaching its break-even point	Regular scheduled service from an airport which is otherwise unserved	Initial phase of operation	Airport Operator Regional development authorities Local Business communities	Airport operator and/or government guarantee the airline's occupancy or revenue levels in the initial phase of operation. They cover the airline's losses on the route if it does not reach break-even.
(viii) **Booking tickets before commencement of aircraft operations**	USA	Reduce the risk of the airline not reaching its break-even point	Regular scheduled service from an airport which is otherwise unserved	Initial phase of operation	Airport Operator Regional development authorities Local Business communities	A community through its representatives persuades major airlines in their region by promising to commit to book a minimum number of tickets during the initial period of operation of a new service. Without putting a financial burden on the Government, the community persuades the airline to commence the services

Annexure 17: Recommendations on Route Dispersal Guidelines by Report on Air Connectivity

Inclusion of More Routes in Category I

The committee analyzed the Category III routes for a period of five years (2006-2010) having appreciable passenger load factor for inclusion in Category I routes. The committee observed that following eight Category III routes have developed over the years and are performing very well having an average passenger load factor of more than 75%, which may be considered for inclusion in Category I routes

1 Mumbai- Cochin

2 Mumbai-Coimbatore

3 Mumbai-Jaipur

4 Delhi-Ahmedabad

5 Delhi-Goa

6 Delhi-Pune

7 Bangalore-Pune

8 Chennai-Pune

The committee also observed that all the above mentioned routes have a sector distance of more than 700 kms, which will increase the ASKM deployed on Category I routes thereby increasing the capacity deployment obligation on Category II, IIA and III.

Exclusion of Delhi-Srinagar, Delhi-Guwahati and Delhi-Bagdogra from Category II Routes

The committee observed that some routes viz. Delhi-Srinagar, Delhi-Guwahati and Delhi-Bagdogra have developed over a period of time providing adequate air connectivity and registering appreciable passenger load factor averaging around 70-75%. Keeping in view the prevalent load factor on these routes there has been a persistent demand for the exclusion of some of these routes in order to improve connectivity to Category II States.

On further analysis, the committee found that in case all the three routes are excluded from the purview of Category II routes, all the airlines except national carrier will be falling short of ASKM deployment requirements and have to deploy considerable number of flights on remaining Category II routes.

The Committee also noted that RDG already casts a burden on Airlines' commercial health. The Committee also felt that in order to ensure RDG does not become a millstone there is a need to have strong pegs in Category II to make operations on

these routes sustainable in the long run. The Committee, therefore, recommended that the three routes may be allowed to continue as part of Category II. However, the committee was of the view that there is a justification for removal of Bagdogra from Category II once Pakyong Airport becomes operational. Pakyong would then provide direct connectivity to Sikkim and hence the justification to include Bagdogra in the North East and consequently in Category II would disappear.

Increasing the capacity deployment requirement on Category III routes and formation of new category within Category III routes to include stations other than State Capitals

The committee noted that 11 States are still largely under-served. The committee also noted that even in Category III, the distribution of flights between the State Capitals and non-capital stations is around 50-50%. The committee also observed that nearly all the non-State Capital airports are poorly serviced which clearly reveals a tendency to cherry-pick. These ratios are indicative of the fact that there is a need to change them in order to achieve higher and better connectivity of non-metros and smaller stations.

In this regard, the Committee recommended that the present requirement of 50% deployment in Category III may be increased to 75%. This would oblige the Airlines to devote an additional ASKM to these routes resulting in better air connectivity to these areas. In order to ensure that the additional connectivity created through this measure does not again get limited to the State Capitals, the committee recommended that the additional connectivity so created should be distributed in 40:60 ratio between Capitals and Non-Capital stations to ensure a better deal for the hinterland. This would mean that any new addition to the route in future would be distributed in ratio of 40:60 between capitals and non-capitals of the 11 underserved States. This may be classified as a new category of routes and called Category III A Routes.

Increase in Air Connectivity in North-Eastern Region

The Committee observed the need to increase air connectivity in the States of Meghalaya and Nagaland for which following options were recommended

- Airlines may be asked to deploy additional capacity in future to the States of Meghalaya and Nagaland only. However, this will be subject to the market demand and adequate airport infrastructure like availability of parking, watch hours, etc.
- There is a need to deploy smaller aircraft within the North-Eastern Region for better air connectivity as majority of scheduled domestic airlines have bigger aircraft which are not suitable for intra North-East operations owing to infrastructure and demand constraints.
- At present, no scheduled airline is permitted to stop/delete/modify already approved route in North-East without written authorization of the Ministry. To promote air connectivity, airlines may be permitted to shuffle/select routes within Cat II/IIA in NER, without seeking prior approval of the Government as long as their numbers of flights to North East are not reduced.

(a) Suggestions for Overall Improvement

For overall improvement of air connectivity, following were recommended:

- Route Dispersal Guidelines may be reviewed after every 3 years to remain relevant and responsive to market/national needs.

The committee also noted a suggestion from the industry that airlines may be asked to add one Category II route/virgin Category III route in every scheduling period.

Annexure 18: Order for RDG Compliance

CIVIL AVIATION REQUIREMENTS
SERIES 'C' PART II

SECTION-3 AIR TRANSPORT
1ST MARCH, 1994

ANNEXURE VII

No. AV 11012/2/94-A.
GOVERNMENT OF INDIA
MINISTRY OF CIVIL AVIATION & TOURISM
(DEPARTMENT OF CIVIL AVIATION)

"B" BLOCK, RAJIV GANDHI BHAVAN,
SAFDARJUNG AIRPORT, ARBINDO MARG
NEW DELHI 110 003 Dated 1.3.94

ORDER

In exercise of the powers conferred by sub-rule (1A) of rule 134 of the Aircraft Rules, 1937; the Central Government, with a view to achieving better regulation of air transport services and taking into account the need for air transport services of different regions in the country, hereby direct that every operator operating any scheduled air transport service within the country on any route specified in annex hereto, under category – I, shall be required to provide a minimum of scheduled air transport service on routes indicated in category II and III in the annex. For rendering the prescribed minimum service on routes in Category II and III, an operator may at his option provide the service either by aircraft in his fleet or with aircraft in any other operator's fleet on mutually agreed terms. In the latter case, the arrangements shall have prior approval of the Director General of Civil Aviation.

Sd/-
(P.K. Banerji)
Joint Secretary to the Government of India
Tele:- 4610369

CIVIL AVIATION REQUIREMENTS **SECTION-3 AIR TRANSPORT**
SERIES 'C' PART II **1ST MARCH, 1994**

PROVISION OF SERVICES OF DIFFERENT CATEGORIES OF ROUTES

CATEGORY- I

Routes connecting directly

BOMBAY – BANGALORE	CALCUTTA – DELHI
BOMBAY – CALCUTTA	CALCUTTA – BANGALORE
BOMBAY – DELHI	CALCUTTA – MADRAS
BOMBAY – HYDERABAD	DELHI – BANGALORE
BOMBAY – MADRAS	DELHI – HYDERABAD
BOMBAY – TRIVANDRUM	DELHI – MADRAS

CATEGORY- II

Routes connecting stations in North-Eastern region, Jammu and Kashmir, Andaman & Nicobar and Lakshadweep.

CATEGORY- III

Routes other than those in Category – I and Category – II.

Any one who operates scheduled air transport service on one or more of the routes under Category- I, shall be required to provide such service in categories – II & III as indicated below:-

The operator will deploy on routes in category – II at least 10% of the capacity he deploys on routes in category – I and of the capacity thus required to be deployed on Category – II routes, at least 10% would be deployed on services or segments thereof operated exclusively within the North-Eastern region, Jammu & Kashmir, Andaman & Nicobar and Lakshadweep.

The operator will deploy on routes in Category – III, at least 50% of the capacity he deploys on routes in Category – I.

Note 1: A service operated on a category – I route as a part of international air service will not be reckoned for the above purpose.

Note 2: Capacity deployed will be reckoned in Available Seat Kilometres (ASKM)

Note 3: On multiple sector routes like Delhi-calcutta-Guwahati-Imphal, the capacity provided on Delhi-Calcutta sector will count towards Category – I, that provided on Calcutta-Guwahati sector will count towards Category – II and the capacity on Guwahati-Imphal sector will count towards service exclusively within Category – II.

Annexure 19: Annual Charges at AAI-owned Airports

भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

AIRPORT CHARGES

INDEX :

Updated as on *08/05/2012*

AIRPORT CHARGES (INDIA)

SECTION A - TARIFF INTERNATIONAL AIRPORTS

(i) Route Navigation Facility Charges (RNFC) :

RNFC for Landing Flights :
RNFC = Rs.(R x D x W)
R = Rs.4620/-
D = √(GCD/100) with GCD cap as 1200 NM
W = √(AUW/50000) with AUW cap as 2,00,000 Kilograms
Abbreviations used :
R=Service Unit Rate
D=Distance Factor
W=Weight Factor
GCD= Great Circle Distance in NM
AUW = All Up Weight of aircraft in Kilograms

Rates for Small Aircrafts registered in India
Route Navigation Facility Charges(RNFC) in respect of aircrafts with maximum All-Up-Weight:-
(I) Upto 10,000 Kgs Shall be levied @ 20% of the applicable rates of weight –cum – distance formula; and
(II) more than 10,000 Kgs to 20,000 kgs shall be levied @ 40% of the applicable rates of weight-cum- distance formula.

Note:- In case of Overflying --- RNFC worked out above is increased by fixed cost of Rs.4400/-

(ii) LANDING & PARKING CHARGES

(a) Landing charges per single landing:

Weight of Aircraft	Rate per landing-- International Flight	Rate per Landing-- other than International Flight
Upto 100 MT	Rs. 250.50 per MT	Rs. 187.90 per MT
Above 100 MT	Rs. 25,050/- + Rs 336.60 per MT in excess of 100 MT	Rs. 18,790/- + Rs 252.50 per MT in excess of 100 MT

Note:

1) **Landing Charges for Small Domestic Aircrafts up to maximum All Up Weight of 21000 Kgs shall be levied @ Rs.113.30/- per thousand Kgs. There is no minimum charge for this category.**

2) No landing charges shall be payable in respect of :- (a) aircraft with a maximum certified capacity of less than 80 seats, **being operated by Domestic Scheduled Operators ; and** (b) **Helicopters** of all types.

3) Landing & Parking charges at all airports in the North Eastern Region, Jammu & Kashmir, A&N Island and Lakshadweep (other than Defence Airports) to be reduced by 25% of the current rates.

4) Charges shall be calculated on the basis of nearest MT (i.e 1000 kgs.)

5) A minimum fee of Rs. 1100/- shall be charged per single landing.

6) A surcharge of 25% will be levied on landing charges for super sonic aircraft.

(b) Housing and Parking Charges per Landing :

Total Weight	Housing Charges Rate per Hour	Parking Charges Rate per Hour
Upto 100 MT	Rs.8.10 per hour per MT	Rs. 4.10 per hour per MT
Above 100 MT	Rs.810/- + Rs.10.80 per MT per hour in excess of 100 MT	Rs. 410/- + Rs. 5.40 per MT per hour in excess of 100 MT

(c) Night parking charges between 2200 hours to 0600 hours are @50% of the existing parking charges at all airports **except Kolkata and Chennai Airport**.

Night parking charges between 2200 hours to 0600 hours are as under

Total Weight	Parking Charges Rate per Hour
Upto 100 MT	Rs.2.10 per hour per MT
Above 100 MT	Rs.210/- + Rs.2.70 per MT in excess of 100 MT

NOTE:

1. No parking charges shall be levied for the first two hours. While calculating free parking period, standard time of 15 minutes shall be added on account of time taken between touch down time and actual parking time on the parking stand. Another standard time of 15 minutes shall be added on account of taxing time of aircraft from parking stand to take off point. These periods shall be applicable for each aircraft irrespective of actual time taken in the movement of aircraft after landing and before take off.
2. For calculating chargeable parking time, part of an hour shall be rounded off to the nearest hour.
3. Charges shall be calculated on the basis of nearest MT.
4. Charges for each period parking shall be rounded off to nearest rupee.
5. At the in-contact stands, after free parking, for the next two hours normal parking charges shall be levied. After this period, the charges shall be double the normal parking charges.

(iii) TERMINAL NAVIGATIONAL LANDING CHARGES (TNLC)

Weight of Aircraft	For each landing / Domestic flights / International flights (Amount in Rs.)
Below 10,000 kgs.	1087.90
10,000 kgs and above	6546.10

Note:

i) TNLC at 5 International Airports, i.e., Kolkata, Delhi, Mumbai, Chennai, Trivandrum to be reduced by 25% of the current rates for Domestic Flights.

ii) **For Small Domestic Aircraft** (MTOW upto 21000 Kgs.) TNLC shall be @ Rs110 /= per 1000 Kgs. *(Since TNLC rate for Small Domestic aircraft is a concessional rate, there is no further concession/reduction for Small Domestic Aircrafts)*

iii) Charges shall be calculated on the basis of nearest MT (i.e 1000 kgs.)

(iv) For PSF, UDF and Charges for Extension of Service Hours (Airport/ATC) please see Section – D.

SECTION B - TARIFF DOMESTIC AIRPORTS

(i) Route Navigation Facility Charges (RNFC) :

RNFC for Landing Flights :
RNFC = Rs.(Rx D x W)
R = Rs.4620/-
D = √(GCD/100) with GCD cap as 1200 NM
W = √(AUW/50000) with AUW cap as 2,00,000 Kilograms
Abbreviations used :
R=Service Unit Rate
D=Distance Factor
W=Weight Factor
GCD= Great Circle Distance in NM
AUW = All Up Weight of aircraft in Kilograms

Rates for Small Aircrafts Registered in India
Route Navigation Facility Charges(RNFC) in respect of aircrafts with maximum All-Up-Weight:-

(I) Upto 10,000 Kgs Shall be levied @ 20% of the applicable rates of weight –cum –distance formula; and
(II) more than 10,000 Kgs to 20,000 kgs shall be levied @ 40% of the applicable rates of weight-cum-distance formula.

Note:- Incase of Overflying --- RNFC worked out above is increased by fixed cost of Rs.4400/-

(ii) LANDING & PARKING CHARGES :

Landing Charges per single landing

(a) International Flights

Weight of Aircraft	(Amount in Rs.)
Upto 10,000 kgs	Rs. 122.10 per 1,000 Kgs
10,001 kgs to 20,000 Kgs	Rs. 1221/- Plus Rs. 179.30 per 1,000 kgs in excess of 10,000 Kgs
20,001 kgs to 50,000 kgs	Rs. 3014/- Plus Rs.354.20 per 1,000 kgs in excess of 20,000 kgs
50,001 kgs to 1,00,000 kgs	Rs. 13640/- Plus Rs. 413.60 per 1,000 kgs in excess of 50,000 kgs.
Over 1,00,000 kgs	Rs.34,320/- Plus Rs. 471.90 per 1,000 kgs in excess of 1,00,000 kgs

(b) Domestic Flights

Weight of Aircraft	(Amount in Rs.)
Upto 10,000 kgs	Rs. 67.10 per 1,000 Kgs
10,001 kgsto 20,000 kgs	Rs. 671/- Plus Rs. 117.70 per 1,000 per kgs in excess of 10,000 kgs
Over 20,000 kgs	Rs. 1,848/- Plus Rs. 231/- per 1,000 kgs in excess of 20,000 kgs

Note:

1) **Landing Charges for Small Domestic Aircrafts up to maximum All Up Weight of 21000 Kgs shall be levied @ Rs.64.90 per thousand Kgs. There is no minimum charge for this category.**

2) No landing charges shall be payable in respect of :- (a) aircraft with a maximum certified capacity of less than 80 seats, being operated by domestic scheduled operators ; and (b) Helicopters of all types.
3) Landing & Parking charges at all airports in the North Eastern Region, Jammu & Kashmir, A&N Island and Lakshadweep (other than Defence Airports) to be reduced by 25% of the current rates.
4) Charges shall be calculated on the basis of nearest MT (i.e 1000 kgs.)

(iii) HOUSING CHARGES (International / Domestic flights)

Weight of Aircraft	(Amount in Rs.)
Upto 40,000 kgs	Rs. 3.50 per hour per 1,000 kgs
40,001 kgs to 1,00,000 kgs	Rs. 140/- Plus Rs.6.80 per hour per 1,000 kgs in excess of 40,000 kgs
Over 1,00,000 kgs	Rs. 548/- Plus Rs.10.30 per hour per 1,000 kgs in excess of 1,00,000 kgs

(iv) PARKING CHARGES (International / Domestic flights)

Weight of Aircraft	(Amount in Rs.) Rate per Hour
Upto 40000 Kgs	Rs.1.80 per hour per 1000 Kgs
40001 to 100000 Kgs	Rs.72/- +Rs.3.40 per 1000 Kg per hour in excess of 40000 Kgs
Above 100 MT	Rs.276/- +Rs 5.20 per 1000 Kg per hour in excess of 100000 Kgs

(v) Night parking charges between 2200 hours to 0600 hours are @50% of the existing parking charges at all airports **except Kolkata and Chennai Airport**.

Night parking charges between 2200 hours to 0600 hours will be as under

Weight of Aircraft	Parking Charges Rate per Hour
Upto 40000 Kgs	Rs 0.90 Kg per hour per 1000 Kgs
40001 to 100000 Kgs	Rs.36/- +Rs.1.70 per 1000 Kg per hour in excess of 40000 Kgs
Above 100 MT	Rs.138/- +Rs.2.60 per 1000 Kg per hour in excess of 100000 Kgs

NOTE:

(i) No parking charges shall be levied for the first two hours . For calculating free parking period, irrespective of actual time taken, a standard time of 15 minutes, on account of time taken between touch down and actual parking and another 15 minutes of Taxing from parking shed to take-off point shall be added.

(ii) For calculating chargeable parking time, part of an hour should be rounded off to the nearest hour. Charges for each period of parking are also rounded off to nearest rupee.

(iii) Landing / RNF charges for cargo operations are same as for passenger operations.

(iv) In all cases, total weight of the aircraft is calculated to the nearest thousand kgs and charges to be rounded off to the nearest rupee.

(v) For PSF, UDF and Charges for Extension of Service Hours (Airport/ATC) please see Section – D.

SECTION D - OTHER CHARGES

(i) PASSENGER SERVICE FEE : (revised w.e.f. 1st April,2009)

(a) **Rs. 207/-(Rupees two hundred seven only)** per embarking passenger at international/Domestic airports including Civil Enclaves.

(b) **$ 5.18 (US$ Five and eighteen cents only)** per passenger in respect of the tickets issue against Dollar Tariff.

(c) Collection charges: if the payment is made within 15 days of receipt of bills, then collection charges at 2.5% of PSF per passenger is payable. No collection charges shall be payable if the operator fails to pay the PSF to AAI within the credit period and in case of part payment.

(d) No collection charges are payable to casual operator/non scheduled operators.

(e) Exemption of airlines from paying PSF from Sky Marshals.

Note: For conversion of US$ into INR the rate as on the 1st day of the month for 1st fortnightly billing period and rate as on 16th of the month for the 2nd fortnightly billing period shall be adopted. If the payment is made within 15 days of receipt of bills, then collection charges at 2.5% of PSF per passenger is payable.

(ii) USER DEVELOPMENT FEE(UDF):

Ministry of Civil Aviation/Airports Economic Regulatory Authority of India(AERA) has approved the levy of UDF to embarking passengers at the following AAI airports. UDF is collected by the airlines from passengers through travel tickets on behalf of AAI.

S.No	Airport	UDF in Rs [inclusive of Service Tax & Collection charges]		Effective date
		Dom.	Intl.	
1.	Jaipur	150	1000	01.01.10
2.	Ahmedabad*	110	415	01.09.10
3.	Amritsar	150	910	15.06.10
4.	Udaipur	150	Nil	15.06.10
5.	Trichy	150	360	15.06.10
6.	Vishakapatnam	150	Nil	15.06.10
7.	Mangalore	150	825	01.09.10
8.	Varanasi	150	975	15.11.10
9.	Trivandrum*	Nil	575	01.03.11

*UDF is excluding of Service Tax and Collection Charges.

Note: UDF collection charge at a flat rate of Rs. 5/- per pax (all inclusive) is allowed to airlines subject to payment of UDF collection to AAI within the credit period.

ii) Exemption from levy and collection from DF/UDF/PSF at the airports

The Ministry of Civil Aviation, Govt. of India vide order no. AV.16011/002/2008-AAI dated 30.11.2011 has directed AAI to exempt the following categories of persons from levy and collection of UDF/DF/PSF at the Indian airports:

(a) Children (under age of 2 years),
(b) Holders of Diplomatic Passport,
(c) Airlines crew on duty including sky marshals & airline crew on board for the particular flight only (this would not include Dead Head Crew, or ground personnel),
(d) Persons traveling on official duty on aircraft operated by Indian Armed Forces,
(e) Persons traveling on official duty for United Nations Peace Keeping Missions.
(f) Transit/transfer passengers (this exemption may be granted to all the passengers

transiting up to 24 hrs. "A passenger is treated in transit only if onward travel journey is within 24 hrs. from arrival into airport and is part of the same ticket, in case 2 separate tickets are issued it would not be treated as transit passenger").

(g) Passengers departing from the Indian airports due to involuntary re-touting i.e. technical problems or weather conditions.

(iv) CHARGES FOR EXTENSION OF SERVICE HOURS (AIRPORT/ATC) EFFECTIVE FROM 01-12-2011

1.	Charges for Extension of Service Hours(Airport/ATC) are categorized into (a) Instrument Landing System Operating Stations(ILS Station) (b) Non-ILS Operating Stations (Non-ILS Station).

Charges for extension of Service Hours(Airport/ATC) beyond designated watch hours irrespective of the weight of the aircraft are categorized as follows:

[PER HOUR CHARGES IN RUPEES]

	AIRPORT CATEGORY	ILS STATION	NON-ILS STATION	REMARKS
(i)	AAI Aerodrome	12240	2760	
(ii)	Civil Enclave	9180	2070	75% of charges at Sl.no.1
(iii)	Aerodrome where only ATC Services are provided by AAI	3060	690	25% of charges at Sl.no.1

Note: Above charges are excluding of applicable Service Tax.

2.	The charges are payable by all operators/agencies operating outside the watch hours, except aircraft(s) belonging to any armed force of the Union, including BSF & NCC.
3.	The charges are payable at the Aerodromes where extension is availed at the time of landing / taking off as the case may be. Where credit facilities have been already authorized (for example scheduled operators, State Govt. aircraft etc.), payment will be accepted only in demand draft along with the Routine bills.
4.	When the two aircraft use the facility at the same time, Charges for Extension of Service Hours for each Airline/aircraft should be charged separately and no sharing of charges between the Users is permissible.
5.	Fraction of hours may be rounded off to the next half an hour and charged accordingly.
6.	If the aircraft has taken off just before the closing of watch hours, watch hours should be extended at least for a period of 30 minutes after take off as is the normal practice, this will not attract extra service charge. If the aircraft returns to land due to any technical reason, extended period beyond the normal watch

	hour, if any, should not be charged. However, any extension required after such landing should be charged as per rates applicable.
7.	Any extension of Service Hours provided to accommodate an aircraft experiencing technical problem and requesting emergency landing should not be charged. Any extension required after such landing should be charged as per rates applicable.
8.	No charges will be levied for extension of Service hours due to inescapable delays because of runway block/VVIP Movements/weather conditions at the station.
9.	The concessional tariff for Extension of Service Hours (Airport/ATC) applicable to small domestic aircrafts with MTOW21000Kgs. and below has been withdrawn from the date of implementation of revised rates for Extension of Service Hours i.e. w.e.f. 01-12-2011.
10	If an Operator, after obtaining approval of AAI for extension of service hours, subsequently intends to withdraw the request under any circumstances, shall inform AAI at least 6 hours in advance of the scheduled departure or arrival time. If the Operator fails to do so, he shall be charged Service Charges for Extension of Service Hours for a period of 4 hours as penalty.
11	The charges for Extension of Service Hours (Airport/ATC) shall be levied as per revised rates per hour basis for a minimum period of one hour.
12	The Service Charges indicated above are only for the services rendered by AAI.
13	The Charges for Extension of Service Hours (Airport/ATC) is applicable to non-major (non-AERA) airports only.