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Agenda Item 2: Fostering aviation growth and air connectivity through investments in infrastructure, human capital and partnerships
2.1: Integrating civil aviation into national development and investment plans

CONNECTIVITY AS NATIONAL INFRASTRUCTURE: VIABILITY-GAP FUNDING, CROSS-GOVERNMENT COORDINATION AND THE CASE FOR CONNECTIVITY TARGETS IN NATIONAL DEVELOPMENT PLANS

(Presented by India)

EXECUTIVE SUMMARY

A road reaches everyone on it. A runway reaches everyone in the market it serves. That asymmetry is why regional air connectivity is among the most powerful tools available to a State seeking to bring peripheral regions into its national economy, and why it is also the hardest infrastructure to justify in a conventional investment appraisal.

The difficulty is structural. A thin route cannot pay for itself at fares its passengers can afford, so a commercial market acting alone will not serve it. It is nonetheless essential, because the alternative is economic exclusion. Every major aviation State has therefore built a subsidy mechanism: the Essential Air Service (EAS) in the United States, the Remote Air Services Subsidy Scheme (RASS) in Australia, Public Service Obligations (PSOs) across Europe. India's The Regional Connectivity Scheme (UDAN) scheme, launched in 2016, is the largest recent experiment among them, and the first designed as a demand-stimulation instrument rather than a lifeline-preservation one.

UDAN's record is substantial and its difficulties are instructive. Over nine years it has operationalised 687 routes across 95 airports, heliports and water aerodromes, carried more than 1.71 crore passengers on over 3.66 lakh flights, revived 55 abandoned airstrips, and widened India's operational airport network from 74 in 2014 to 165 today. It has also seen routes discontinued once support ended, because a three-year subsidy window is shorter than the time a new market needs to mature. The Modified UDAN scheme approved in March 2026 responds to that evidence directly, extending viability-gap support from three years to five, committing INR 28,840 crore over ten years, and shifting aerodrome selection to State governments — a change that is, in substance, a decision to embed connectivity planning in sub-national development plans.

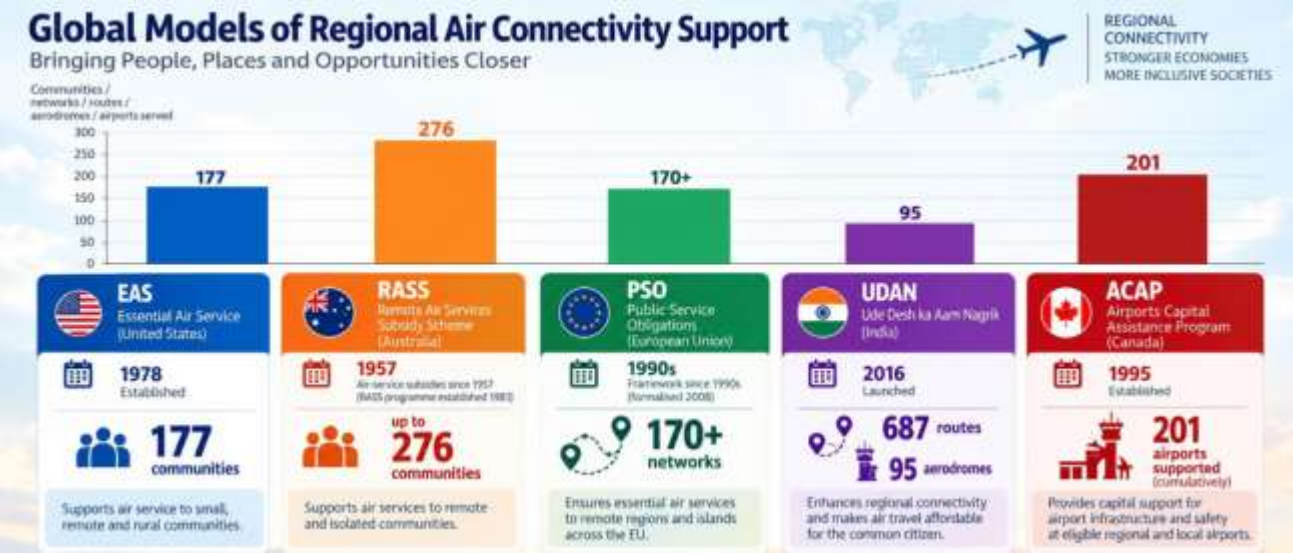
India proposes a Regional Air Connectivity and Infrastructure Sustainability Framework (RACISF). The framework would jointly assess airport readiness, route viability, local economic inclusion and long-term airport operating costs. It would be voluntary, scalable to developing States and supportive of the International Civil Aviation Organization (ICAO) No Country Left Behind (NCLB) strategic goal.

1. INTRODUCTION

1.1 National infrastructure planning frequently assesses an airport as a capital project and a regional air route as a separate commercial service. In underserved regions, these decisions are interdependent: an airport without sustainable service delivers limited accessibility, while an airline cannot serve a region without a reliable, affordable aerodrome and air navigation environment.



1.2 India submits that the appropriate unit of public appraisal is therefore the airport–route–region system. Airports Authority of India's (AAIs) combined experience in developing airports, providing air navigation services, supporting regional connectivity and managing airport finances offers a practical basis for international guidance.



2. EVIDENCE FROM INDIA'S REGIONAL CONNECTIVITY EXPERIENCE

2.1 The Regional Connectivity Scheme (UDAN) scheme launched in 2016 combines viability-gap funding (VGF), affordability measures and concessions to support services to underserved and unserved regions. The source material reports 687 routes operationalised, 95 aerodromes connected, more than 3.66 lakh flights, over 1.71 crore passengers and 55 revived airstrips as of July 2026. India's operational airport network expanded from 74 in 2014 to 165 in 2026. These programme figures are subject to confirmation against official releases before submission.

2.2 The source material records a Modified UDAN programme outlay of INR 28,840 crore over FY2026–27 to FY2035–36, including INR 10,043 crore for VGF, INR 3,661 crore for helipads and INR 2,577 crore for airport operations and maintenance support. It also describes an extension of VGF support from three to five years. These figures and programme provisions require formal verification.

2.3 Importantly, some routes have ceased operations following withdrawal of support. This experience demonstrates that opening a route is not synonymous with creating a sustainable market. Appraisal should therefore include route survival, airport utilisation, recurrent infrastructure expenditure and regional development outcomes—not merely the number of airports or routes inaugurated.

3. THE DISTINCTIVE AAI PERSPECTIVE

3.1 Infrastructure readiness. AAI's airport network experience shows that terminal and runway investments must be sequenced with safety, air navigation, ground access, operating arrangements and realistic airline demand.

3.2 Operating sustainability. A regional airport may incur fixed expenditure on safety, staffing, maintenance and essential services even when aircraft movements remain limited. Such costs should be assessed alongside airline VGF when determining the full public cost of connectivity.

3.3 Revenue and transparent accounting. AAI's centralised billing and revenue systems provide an institutional example of how airport and air navigation charges, concessions, traffic and collections can be recorded consistently. Subject to data quality and access safeguards, these records can support transparent assessment of support requirements and outcomes.

3.4 Whole-of-government coordination. Aviation authorities, finance ministries, State governments, tourism and industry departments, airport operators and airlines should jointly select connectivity investments, define measurable outcomes and periodically review performance.

4. PROPOSED INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) REGIONAL AIR CONNECTIVITY AND INFRASTRUCTURE SUSTAINABILITY FRAMEWORK (RACISF)

4.1 India invites ICAO to examine voluntary guidance structured around four assessment pillars:

a) airport readiness and lifecycle cost: physical and operational readiness, air navigation provision, maintenance requirements, ground access and recurrent public expenditure;

b) route viability and support design: realistic traffic forecasts, affordability, operating economics, VGF requirements, duration of support, exit conditions and alternatives to air service;

c) regional development and inclusion: access to markets and essential services, tourism and enterprise potential, population coverage and connectivity gaps, with explicit attention to vulnerable regions; and

d) monitoring and sustainability: route continuity after support, passenger uptake, airport utilisation, public cost per additional connected passenger and transparent reporting of discontinuations.

4.2 The framework should distinguish financial performance from broader public value. Economic benefits should be assessed using proportionate, evidence-based methods and, where feasible, credible counterfactuals; benefits should not be presumed solely from the inauguration of a route.

5. CONNECTIVITY TARGETS IN NATIONAL DEVELOPMENT PLANS

5.1 India proposes that States be encouraged to express connectivity objectives as measurable access outcomes in national and sub-national development plans. Illustrative indicators include population within a defined journey time of scheduled air service, frequency and reliability of access, the number of economically underserved districts connected, and sustained service after VGF expiry.

5.2 Such targets should be aligned with investment programming and funding responsibilities, rather than confined to aviation-sector strategies. The framework should remain adaptable to States where aviation is an essential link for island, remote and landlocked communities.

6. IMPLEMENTATION PATHWAY

6.1 ICAO could prepare a voluntary airport–route–region appraisal template through its existing economic work programme, drawing on comparative experience from India's UDAN, United States Essential Air Service (EAS), Australian Remote Air Services Subsidy Scheme (RASS) and European Public Service Obligations (PSOs) models.

6.2 Interested States could test the template on a limited set of routes and publish comparable results, subject to confidentiality and national approvals. AAI could, subject to Government of India approval, contribute technical case studies on airport lifecycle costs, service readiness and transparent traffic/revenue measurement.

7. CONCLUSION

7.1 India's experience indicates that successful regional aviation policy requires more than financing an airport or subsidising a flight. The lasting public outcome is a region that remains connected through a service that is operationally reliable, affordable and fiscally understandable.

7.2 An ICAO framework linking infrastructure readiness, route support and development impact would enable States to invest in connectivity with greater transparency and stronger evidence. The proposed framework is not a universal subsidy model; it is a common method for deciding when, where and how regional connectivity merits public support.

7.3 The Conference is invited to note the information contained in this paper.

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