



**FUA IMPLEMENTATION
AND
ITS LINKAGE TO ATFM IN INDIA**

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GM ASM
AAI CHQ**

SEGREGATION

VS

AGGREGATION

FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA

THE CONCEPT OF 1940s

Chicago Convention 7 December 1944

Poland 6 April 1945

India 1 March 1947

- Article 44 of the Convention on International Civil Aviation defines the privileges and restrictions of all ICAO Member States and provides for the adoption of International Standards and Recommended Practices (SARPs) regulating international air transport.
- Recognizes and accepts the principle that every State has complete and exclusive sovereignty over the airspace above its territory.

FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA

THE CONCEPT OF THE NEW MILLENNIUM

ICAO CIR 330

- Airspace should no longer be designated as either military or civil airspace but should be considered as one continuum and national asset.
- Airspace should be used flexibly on day-to-day basis.
- Any necessary airspace segregation should be of a temporary nature.



India

- Six decades of robust Civil Military Cooperation
- Continuous engagement
- Mutual trust
- Joint use of airports
- Joint use of air navigation facilities

India has embraced the global philosophy, that states:



Airspace should no longer be designated as either military or civil, but should be considered as one continuum and national asset

Airspace should be used flexibly on a day-to-day basis and any necessary airspace segregation should be of a temporary nature.

FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA



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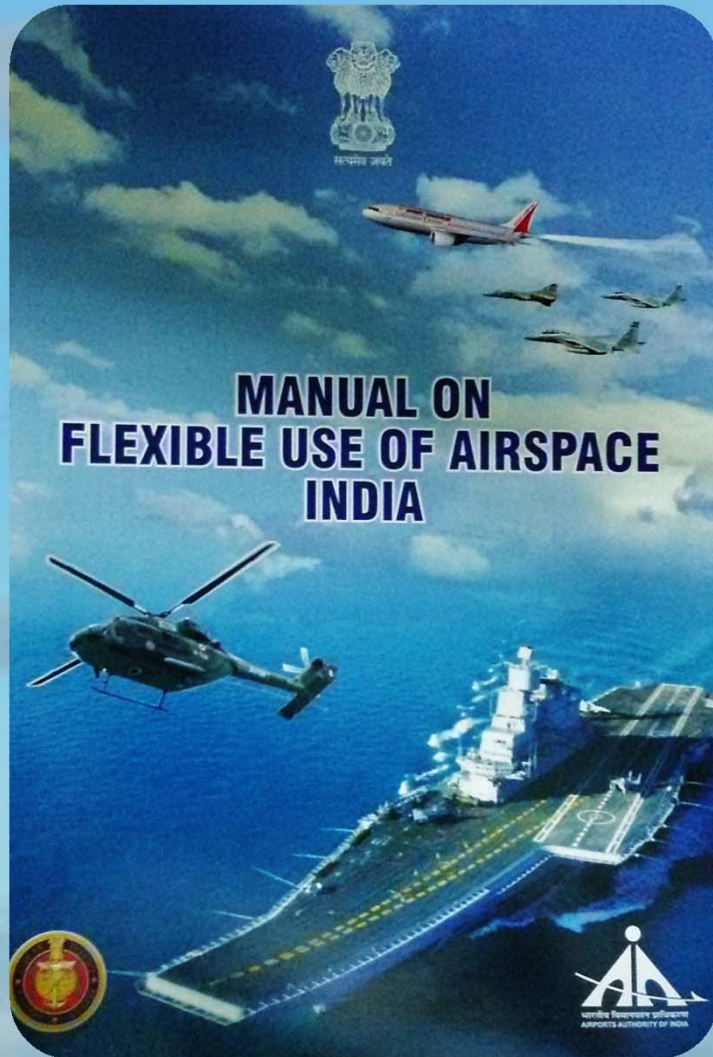
- *Surveillance (radar) data from various surveillance sensors to the Air Defence Direction Center (ADDC) of Integrated Air Command Control System (IACCS)*
- *Military Liaison Unit (MLU) for Civil-Military liaison*
- *Joint Command and Analysis Centre (JCAC)*
- *Navigational Aids at Joint Use Aerodromes*
- *CDM through Air Traffic Flow Management (ATFM - CCC)*

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PERIOD	DETAILS
Jan, 2007	DGCA - India, submits a report on Flexible Use of Airspace in India
2008/2009	Representatives of Civil-Military authority, including AAI and DGCA delegation visits USA, NATS and Eurocontrol to study FUA implementation
Sep, 2012	MoCA proposed the implementation of FUA, constitution of a NHLAPB, authorizing the NHLAPB to set up appropriate committees to take suitable decisions to implement FUA in India
Mar, 2013	Government of India approved the implementation of FUA and the constitution of NHLAPB.
May, 2013	Draft Roadmap for the implementation of FUA in India prepared
Oct, 2013	NHLAPB Constituted
Dec, 2013	National Airspace Management Advisory Committee constituted.

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The NHLAPB,
in its fourth meeting,
has adopted the
Manual on FUA, India
V1.0



Manual of FUA India V 1.0 .pdf

www.aaians.org

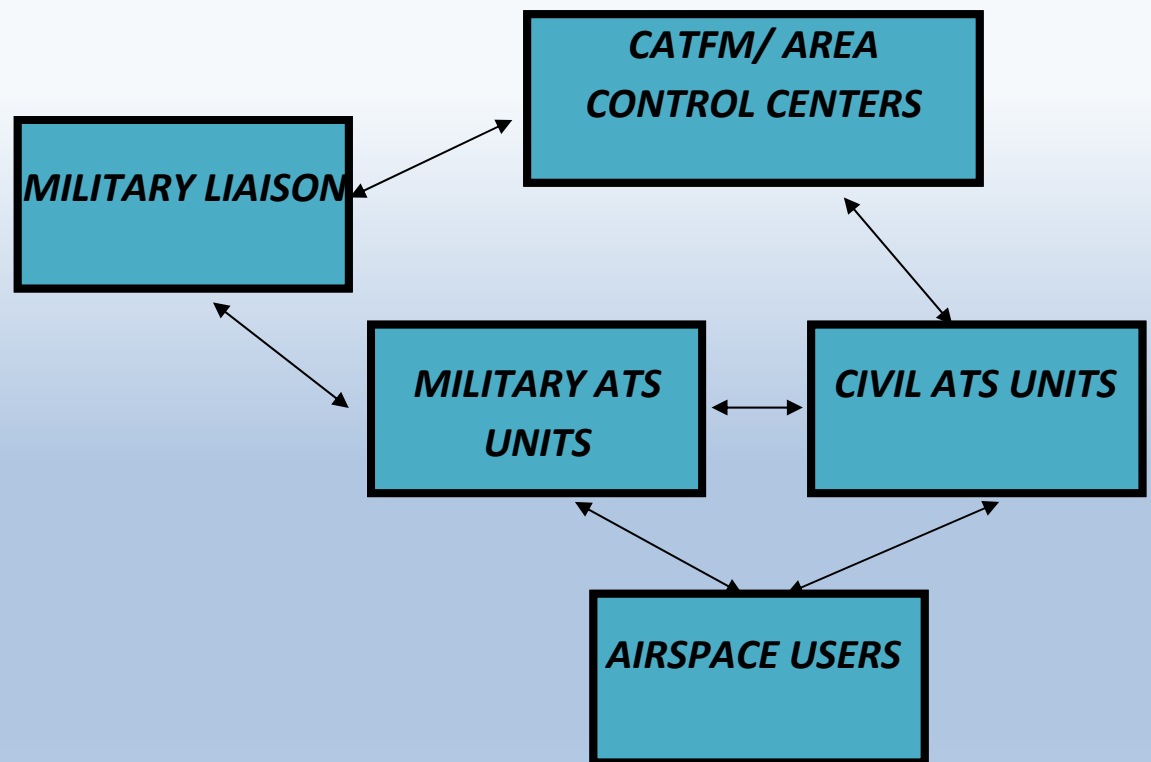
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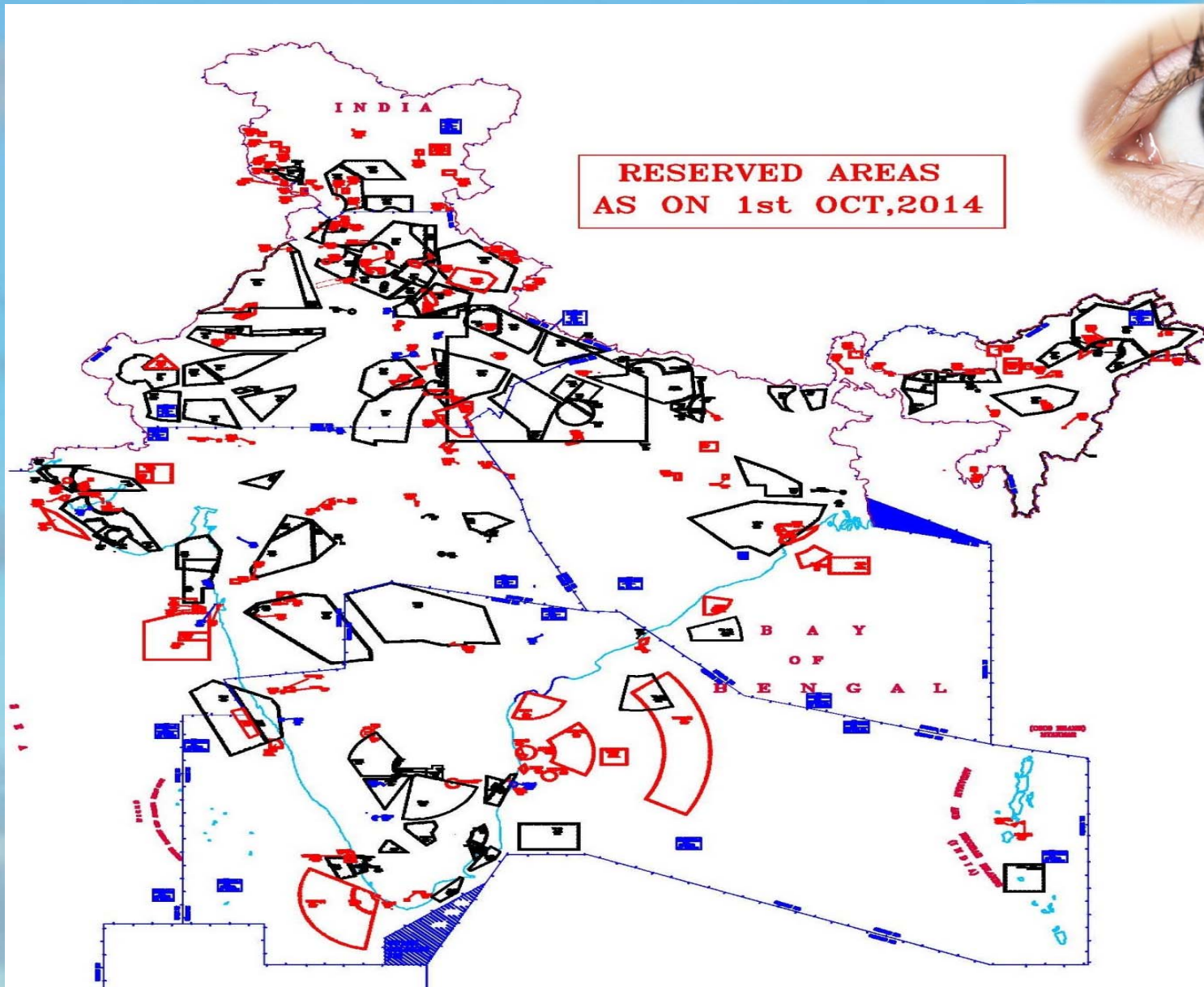


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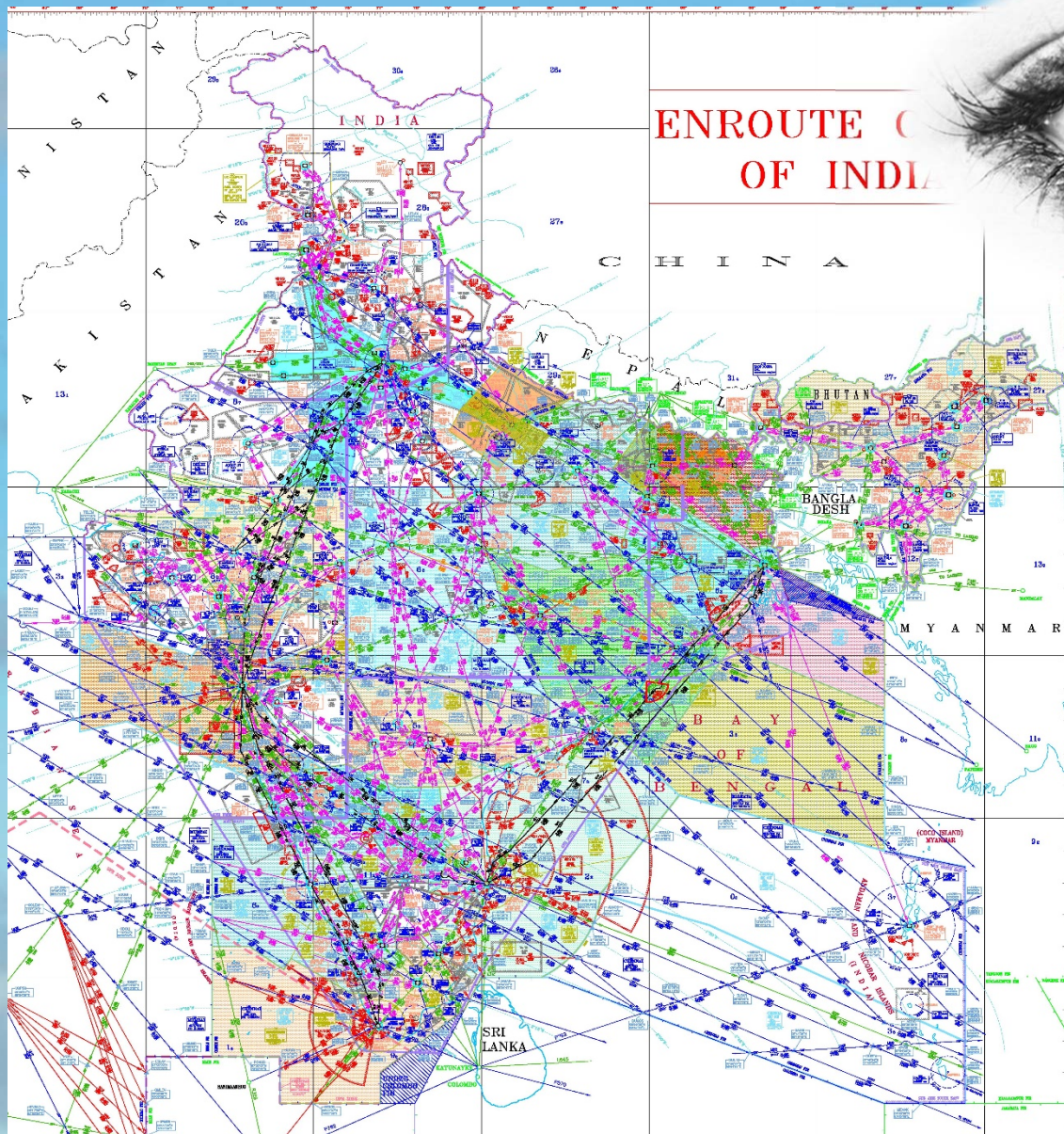
*Dynamic Airspace
Management*



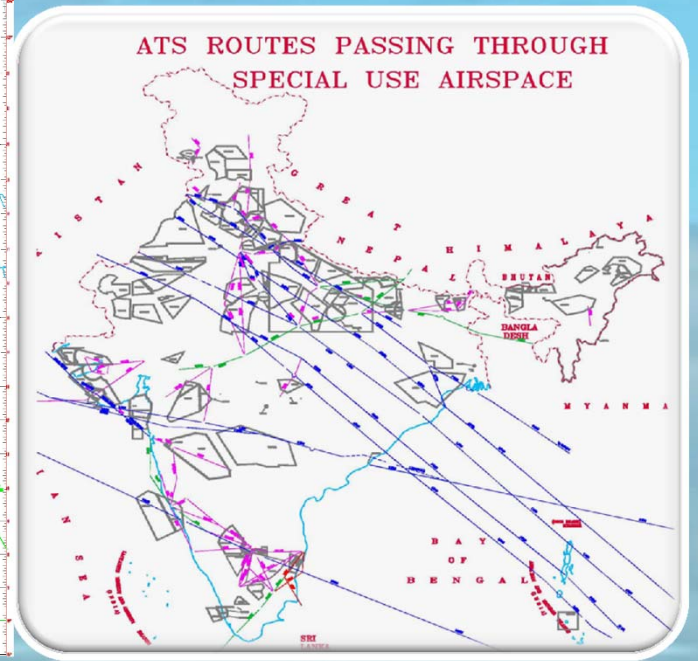
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OF INDIA



ATS ROUTES PASSING THROUGH
SPECIAL USE AIRSPACE

FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA

The Civil-Military Cooperation in India, even prior to FUA implementation, has been extremely effective.

There are several Domestic/International ATS routes which ply through restricted airspaces of Military ; e.g., R460, L759, W20, W114

Commercial Civil Aircraft operate to about 26 Military Airports such as Srinagar, Pune, Agra.

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- International Sked/Non-Sked flights have been operating to Goa airport belonging to Indian Navy, for many years.
- 14 RNP10 International ATS routes such as L301, M770, M875 and P646 have been established through Military Airspace which are available during night (CDR-1).

FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA

- **DRAFTING THE MANUAL ON FUA IN INDIA**
- **ADOPTION OF THE MANUAL ON FUA, INDIA, V 1.0**
- **VALIDATION OF THE MANUAL ON FUA,INDIA V 1.0**
- **FUA AWARENESS EDUCATION PROGRAMME**



FUA: WORK IN PROGRESS

- Continual Review of existing Restricted/Danger Airspace under process
- “Gap Analysis” for civil military systems’ interoperability.
- Implementation of Central Air Traffic Flow Management System (associated CADF) in India

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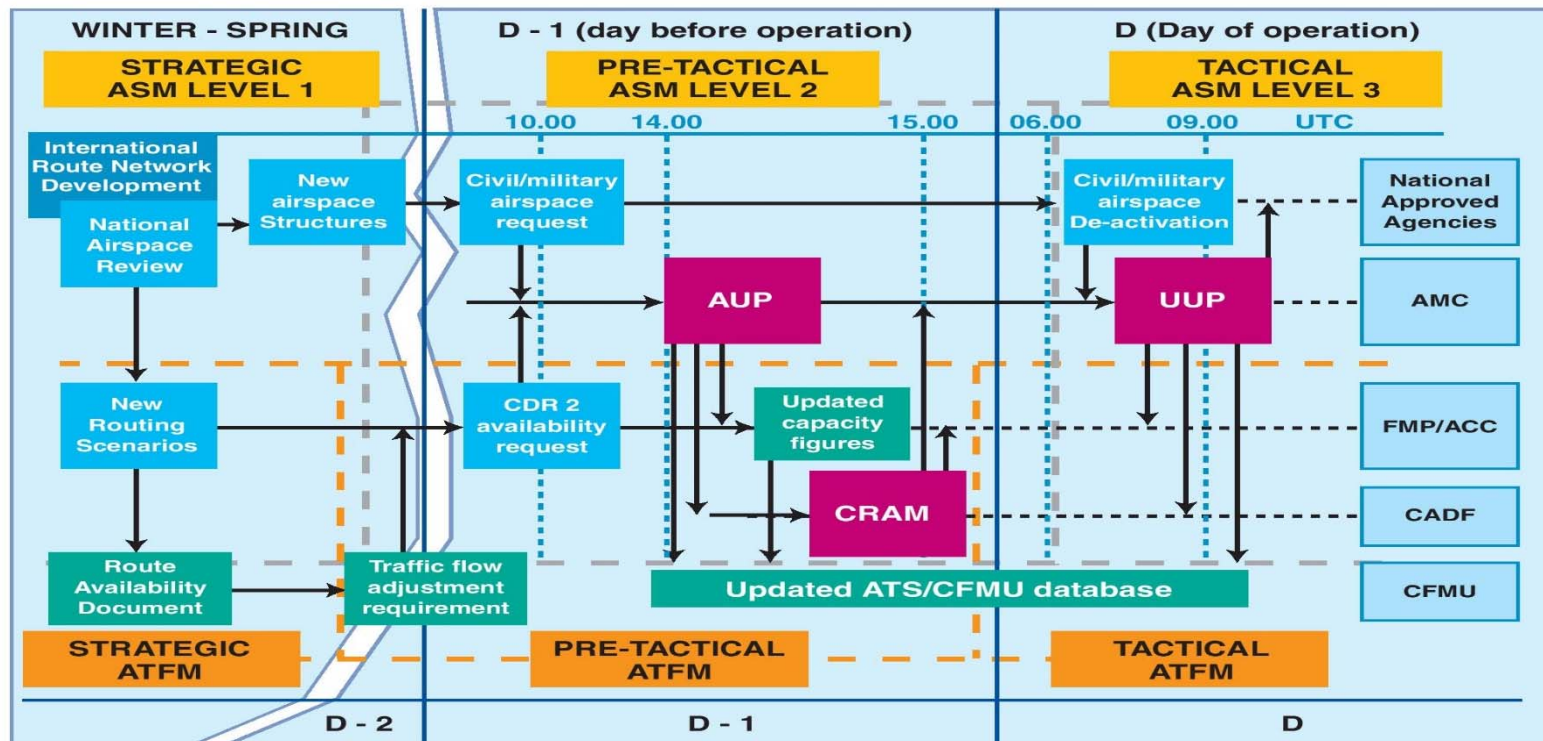


FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA

ASM / ATS / ATFM Relationship

As an integral part of Air Traffic Management (ATM), Airspace Management (ASM) works in close cooperation with both Air Traffic Services (ATS) and Air Traffic Flow Management (ATFM).

In order to materialise the full benefits resulting from the introduction of the Concept of the Flexible Use of Airspace, ASM, ATS and ATFM procedures and timetables have been harmonised at all the three Levels.



FUA IMPLEMENTATION AND ITS LINKAGE TO ATFM IN INDIA

- **AIRSPACE MANAGEMENT CELLS (AMC) vs FLOW MANAGEMENT POSITIONS (FMP)**
- **NATIONAL AMC IN CATFM CENTRAL COMMAND CENTRE**
- **CENTRALISED AIRSPACE DATA FUNCTION (CADF)**
- **FUA INFORMATION MANAGEMENT – AUP/UUP/CRAM**
- **OVERLAPPING FUNCTIONS**
- **COMMON RESOURCES FOR EFFICIENT MANAGEMENT**

PROVISIONS FOR

BASIC FUA

AND

DYNAMIC AIRSPACE MANAGEMENT (DAM)

POST CATFM IMPLEMENTATION

AVAILABLE IN THE MANUAL ON FUA, INDIA



.....whose airspace is it anyway?

