

Knowledge Workshop: Civilian Applications of Unmanned Aerial Systems

Date

7th March 2015

Venue

Jain Global Campus, NH-209, Jakkasandra Post,
Kanakapura Taluk, Ramanagara District - 562 112



Initiative of

Karnataka Jnana Aayoga
Karnataka Knowledge Commission
Government of Karnataka



Organised by

International Institute of
Aerospace Engineering
and Management (IIAEM),
Jain University



JAIN UNIVERSITY
Jain Group of Institutions
Jain University

in cooperation with

National Institute of
Advanced Studies



Institution of Engineers (India)
Karnataka State Centre



IEI-KSC

GITAM University



AIMS

The main aim is to consider the potentials of Unmanned Aerial Systems as a viable tool to accelerate development and governance. The workshop will consist of expert talks and a panel discussion, the results of which will enable future actions by Karnataka Knowledge Commission for holistic assessment of UAS technology, applications, and policy. The aim is also to bring together government, industry, and academia to assess these aspects.



PROGRAMME

0930 – 1000	Registration
1000 – 1045	Inaugural Session
1100 – 1200	Session – I: Technology Perspectives of UAS <ul style="list-style-type: none">➤ Important Technology Elements of UAS➤ Sensors and Measurement systems➤ Status of UAS in India➤ Development of UAS industry – Ecosystem needs➤ Role of Academic and Research Societies
1200 – 1315	Session – II: Applications and Policy Needs <ul style="list-style-type: none">➤ Application Potentials➤ Case-study of UAS in Forests➤ Mapping and GIS➤ Civic and Emergency applications➤ Present DGCA policies
1400 – 1500	Demonstrations
1500 – 1600	High-level Panel Discussion

SCOPE

- ❖ Presentations on technology of UAS.
- ❖ Civilian applications, based on successful demonstrations in agriculture, forest and disaster monitoring, civic operations etc.
- ❖ Potential for integration with Karnataka Geographic Information System (K-GIS) to aid in governance and development.
- ❖ Deliberations on policy to encourage innovations and use by non-governmental organizations.
- ❖ Potential for academic institutions to take up UAS for education and research.

POTENTIALS

- *Agriculture* – Timely crop status and health monitoring; production and acreage information
- *City Mapping* – Urban growth, collection of buildings and traffic data
- *Forests and Mines* – Estimation of tree cover and volume; real-time status for forest fire assessment
- *Disaster Management Support* – Rescue operations and damage monitoring
- *Change Analysis* – record change in local-area development to measure impact of govt programmes
- *Civic operations and crowd management*



POSITIVES

- ✓ “At-Will” imaging and collection of data
- ✓ Direct ingest to GIS
- ✓ Variety of sensors can be used, such as those for imaging and measuring environmental data
- ✓ Low-cost solution

CHALLENGES

- Policy – on “flying objects” in the National Airspace
- Legal – safety, privacy, and insurance
- Security Issues
- Standardisation of technology and operational parameters
- Certification and training of personnel



