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Telangana CM, KCR launching Dharani Portal

## SURVEY TO TAKE PLACE **IN THREE PHASES**



State government signs MoU with Survey of India at the Tadepalli camp office in Guntur on Wednesday

- > First land survey from December 21 to July 2021 in **5,000** villages
- > Second phase in **6,500** villages from August 2021 to April 2022
- > Final phase in remaining villages from July 2022 to January 2023
- > Registrations of land in village secretariats will commence soon after completion of first phase survey
- > Mobile, district and appellate tribunals would be set up with retired judicial officers to resolve land disputes

AP CM Jaganmohan Reddy and Survey of India sign MoU for drone based cadastral surveys in AP

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### **Editorial**

Land is becoming increasingly important. Andhra Pradesh signed MoU with Survey of India for comprehensive cadastral surveys using Drones. Telangana State is similarly attempting cadastral surveys using Dharani portal. Read the report on Webinar on this topic organised by GeoMap Society (GEMS) with participation of professionals experienced in cadastral surveys. Also read about the Union Additional Secy review of implementation of Digital India Land Records Modernisation Programme in J&K; Also, know briefly about NaVIC, Global Smart City Market and reporting under Students Forum

## **AP Land Surveys Using Drones**

The survey would be taken up with advanced technology by using drones and high-resolution cameras.

Read more at:

([http://timesofindia.indiatimes.com/articles/how/79648968.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://timesofindia.indiatimes.com/articles/how/79648968.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst))

## **AP Signs MoU With Survey Of India** (*sakshi.com*)

The Chief Minister said that all the measurements will be highly accurate and a minimum error of 2 cm

Andhra Pradesh government signed a Memorandum of Understanding (MoU) with the Survey of India in the presence of Chief Minister YS Jagan Mohan Reddy for the implementation of the 'YSR Jagananna Saswatha Bhoomi Hakku-Bhoomi Rakshana', scheduled for launch on December 21

Speaking on this occasion, the Chief Minister (AP) said that the State government in partnership with Survey of India will be conducting a comprehensive survey which will go down in history with the golden letters, as such a large scale survey is being conducted for the first time in the country after almost 100 years. The State government and Survey of India are putting together 70 base stations to take up this survey, which will be added to their network in future.

He said that 14,000 surveyors have been appointed by the State government and 9,400 surveyors were given training by Survey of India and for the remaining people, it will be completed by January 26. The Survey will be conducted in 1.26 lakh sq km

across the state in villages, hamlets, towns, and cities except for forest lands in three phases. Around 5,000 villages to be covered in the first phase, 6,500 villages in the second phase, and 5,500 villages in the third phase. The State government is going to set up mobile tribunals to solve the land disputes on the spot.

A land titling card which consists of a unique identification number, measurements of the property, name of the owner along with the photo, and the total area would be given after the survey. Digitized Cadastral Maps would be prepared after the completion of the survey. All details of the lands in the village would be on the maps. Survey stones would be installed once the marking of land is completed. Digitized property register and title register and a register for complaints would be made available at village secretariats.

Lieutenant General Girish Kumar, Surveyor General of India, said that he was honored to be part of this initiative, which is the first of its kind survey in the country, standing as a role model to other states. He said that the records of the surveyed lands will be ready within five minutes, with utmost accuracy. He stated that a comprehensive survey is a visionary programme that uses the latest technology in the world.

## **Revenue Maps of Jammu and Srinagar Districts**

*Union Additional Secy reviews implementation of Digital India Land Records Modernisation Programme in JK*  
(*aninews.in*)  
<https://www.aninews.in/news/national/general-news/union-additional-secy-reviews-implementation-of-digital-india-land->

### Extracts

Meena said that the main aim of DILRMP (Digital India Land Records Modernisation Program) is to usher in a system of updated land records, automated and automatic mutation, integration between textual and spatial records, inter-connectivity between revenue and registration, to replace the present deeds registration and presumptive title system with that of conclusive titling with title guarantee.

According to an official release, a discussion was held on the constitution of PMU (Programme Management Unit), an overview of DILRMP, implementation of Plan of NLRMP during 2014 in three phases (Scanning of Revenue Documents/Maps), the establishment of Ground Control Points and Development of Web-based Enterprises Geo-Information System.

***main aim of DILRMP... to replace the present deeds registration & presumptive title system with conclusive titling and title guarantee.***

"Giving details of the project Phase-I, the FC informed that completion of scanning of 692.20 lakh revenue documents (98.18 percent), completion of scanning of 52341 Revenue Maps (98.18 per cent), completion of the digitisation of 2000 Revenue Maps of Jammu and Srinagar districts 99 per cent) and establishment of 3895 Ground Control Points for survey/re-survey. Besides, the State Data Center of Revenue Department is being set up by the IT Department for hosting CIS

and shall be completed within the stipulated time, he apprised the meeting further," read the release.

### Dharani Portal Goes Live

Telangana is pioneer in introducing IT intervention in Revenue Records Management, says CM, K

**Chandrasekhar Rao**

(Government News, [indiatimes.com](http://indiatimes.com))

Ushering in a new era in land ownership records, the Telangana government has launched Dharani portal that enables:

***'registration, mutation and transfer of ownership rights completely online'.***

"This is the real empowerment of people. Through this revolutionary initiative, we are making use of technology for the benefit of the common man in real sense for the first time in the country," said the Chief Minister K. Chandrashekar Rao while launching the portal at Mudu - Chintalapalli village of Shamirpet mandal in Medchal-Malkajgiri district, Telangana

### Resurveys in Telangana and AP Report on Webinar on 18 Dec 2020

Topic : Resurveys in Telangana and Andhra Pradesh

GeoMap Society has initiated the, "Discussion Forum" using the Webinar platform. The forum will enable, 'Presentations & Discussions' by eminent and experienced persons in academic, geospatial industry, government, practitioners and policy makers. The initiation to this activity has come from Prof I V Muralikrishna and strongly



supported by Dr V Raghava swamy. This activity is supported by Centre for Applied Research (CARG), Indian National Cartographic Association (INCA), Hyderabad Chapter & Innovation, Co-Innovation Research in Geoinformatics (ICORG), Hyderabad. The lead speaker was Brig JS Ahuja, Director, Sol (retd). Credit for this webinar goes to Prof IVM though last minute finalisations were made.

Brig JS Ahuja in his presentation made reference to (i) discontinued All India Cadastral Survey Conferences (ii) types of cadastral surveys (iii) absence of registration of title and other relevant points. He raised the point how, why and when revenue collection was stopped. He said land has become a dead capital today

Ch Subba Rao, Jt Director (retd), AP State Survey Dept. made very interesting points leading to a solution approach

- (i) Rules and regulations are OK. Political will is better now. Defect is with implementation
- (ii) Presumptive title also can serve the purpose of ownership rights
- (iii) Pass books with measurement map of property will be step towards improvements.
- (iv) Measurements map should be compulsory for registration

- (v) Drone based survey details pertaining to time frame, Drone, Camera, accuracy, field survey, projection and co-ordinates etc should be made clear at the earliest.
- (vi) Coordination and correlation particularly in respect of old surveys will be a challenge.
- (vii) In Gujarat also the project did not succeed. So, approaching PM may not help.

Mr. Sharma proposed learning from others like IT departments adopting modern technology with least human intervention.

Dr. TP Shasi Kumar too proposed making use of combination of political will and technology for improving the situation

### **Concluding Remarks**

Shri Ch Subba Rao, made it clear that one point target of Title should be replaced with "Incremental Approach". At present we should support Telangana's

### **Dharani project and AP's Drone based Mapping Project.**

*The Government is Normalising Drone Use, One Step at a Time*  
source:(medianama.com)

Six years ago, the Indian government had banned the use of drones, calling them a security threat. Today, drones are being pressed into all sorts of applications, including capturing aerial images of "critical infrastructure" facilities such as thermal power plants - considered crucial for the nation's

economy and security. So, what prompted this seismic shift in the government's attitude? Why does the government trust drones so much now?

The onset of the COVID-19 pandemic saw drones dotting skylines of several Indian states - Delhi, Maharashtra, Punjab, Kerala and Telangana, to name a few - to surveil streets and ensure that people were not violating lockdown guidelines. Drones of various capabilities were deployed. In Amritsar for instance, drones were equipped with an AI-based software that was capable of detecting the distance between two human beings, from 400 feet away. In Telangana, drones were equipped with thermal cameras to be able to detect people's temperatures. The efficacy of these solutions is unclear, and questionable, but again, it also symbolises the idea of tech solutionism - the idea that tech is the answer to everything.

Even before the pandemic, drones were used as a surveillance tools on a number of occasions, and for varied purposes - to surveil protests, and even polling booths during elections - and the government is already planning to start remote drone operations which open up use cases such as surveilling far off places, and making deliveries.

***The idea behind these moves seems simple: make drones so ubiquitous that people simply get used to them.***

### **Recent Deployment of Drones by Government Bodies**

Four different government institutions - only in October - were allowed to deploy drones for various purposes, including thermal power plants operated by the National Thermal Power Corporation (NTPC).

NTPC (National Thermal Power Corporation) *obtained a conditional exemption* from the regulator on October 19 for carrying out research and inspection activities at three of its power stations in Madhya Pradesh and Chhattisgarh. Drones manufactured by India-based ideaForge Technology have been allowed to carry out this inspection. Before that, the Odisha Mining Corporation was *permitted* to use drones for conducting aerial surveys of three of its mines in the state of Odisha.

Drones will also be used for *gathering geographical data* for the upcoming Delhi-Meerut Regional Rapid Transit System. The data gathered from the drones will be used to develop a web-based Geographical Information System (GIS) platform for the project. The drone that will be used here - SPIDEX-600 -has been developed by Bengaluru-based Edall Systems.

CEPT University (Ahmedabad) was allowed to use drones to gather data for a research project about energy use in urban areas. One of the tasks of this project is to gather administrative data from urban local bodies which will be supplemented with data available from other sources including, digital maps, and GIS planning layers.

### **Eye in the sky**

Even though the actual benefits of using drones are yet to be established, the government has used it not just for COVID-related activities, but to track and surveil people, upon sensing a 'law and order' disharmony:

- A drone was sighted hovering over the Hathras victim's house. in broad

daylight, as members of the media, and several opposition politicians met with the grieving family.

- Drones were also used on the streets of Ayodhya as the Supreme Court was about to pronounce its judgement on the Ayodhya land dispute case.
- Drones were flown over people protesting against the controversial Citizenship Amendment Act

These are only a handful of examples, but they are enough to prove that the government believes drones are a practical and realistic way to keep an eye on its citizens. But there are problems: (i) we don't know what kind of data was captured by these drones, and (ii) how administrations might potentially use this data.

The government is also busy facilitating the development of a drone ecosystem in the country. People who want to fly these drones - known as "drone pilots" - will be able to get training at special schools being set up by both government bodies and private drone companies. There are also guidelines for drone insurance.

**Govt bodies are preferring Indian made Drones:** There has been a notable trend in permits granted for drone usage since July. Since the escalation of tensions between India and China at their border, drones made by the Chinese company DJI - which sells the most commonly-available drones in India - have not been chosen for use at government-owned facilities. In July, the government had allowed the Indian Oil Corporation to use DJI-made drones for aerial surveillance of its pipelines. This was the last time -since then, no government organisation has gone with

DJI's drones and have instead opted for Indian-made ones.

### Legitimising Drones in the Absence of Safeguards

There is almost no public oversight when it comes to the use of drones in India. This is largely because of the absence of laws that govern personal data, and a lack of transparency from government bodies that are using these devices. For instance, when MediaNama filed an RTI asking the Delhi police about its use of drones to monitor CAA protests in December 2019, we got a surprising answer - the Delhi police told us it never used drones for this purpose.

### Opaque manner of Usage

- Responses to RTI applications filed by MediaNama had established that Delhi police had *hired* drones -instead of buying them -from the open market to film the Northeast Delhi riots in February this year. This allowed the police to not issue a request for proposal (RFP), which would have had made public details about the drones, their technical specifications and so on. In the absence of such a document, it is difficult to say what kind of drones were used, and what their capabilities were
- **Lack of Accountability:** We've seen that police forces have sometimes used drones without taking permissions from the Ministry of Civil Aviation or the DGCA, the airline regulator. Even when they have permissions, sometimes these orders are not made public. The only reason we know that drones will map land between Delhi and Meerut is because the Ministry had made that

exemption letter public. In the case of Delhi police's drone usage in February, no authorisation letter was given in writing. As pointed out earlier, the absence of written orders usually leads to zero accountability.

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- **No privacy Law in Place:** Almost all of drone usage is happening in the absence of a privacy law. Take the Draft Unmanned Aircraft System Rules, 2020 for instance: the draft mentions privacy only briefly, to say that drones shouldn't invade the privacy of people or properties. However, apart from this provision, there are no procedural safeguards laid down in the draft. Even the personal data protection bill, which is currently being deliberated upon by a joint Parliamentary committee has carved out exemptions for government agencies when it comes to adhering to its provisions. This suggests that government institutions like the Delhi Police could potentially be able to collect, store and process biometric data of Indians without procedural safeguards.

### **Parallels to Facial Recognition Technology**

Similar to drones, facial recognition technology systems too are being widely deployed by the Indian government, several state governments and police departments. The National Crime Records Bureau is currently working towards building a national facial recognition system, and only very recently revealed that it wants to tests the system on mask-wearing faces, and generate "comprehensive biometric reports".

A number of airports in the country have introduced facial recognition

based boarding solutions. The private sector too has joined this party: we had reported that popular tea chain Chaayos had deployed a facial recognition system, and was initially running it while not even mentioning how it uses facial data anywhere in its privacy policy.

*MediaNama has prepared an exhaustive guide to the drone industry in India, encompassing regulations, use cases, concerns around privacy and surveillance, and the way forward for the industry.*

### **Indian Regional Navigation Satellite System (IRNSS) : NavIC**

IRNSS Programme - ISRO

IRNSS is an independent regional navigation satellite system being developed by India. It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area. An Extended Service Area lies between primary service area and area enclosed by the rectangle from Latitude 30 deg South to 50 deg North, Longitude 30 deg East to 130 deg East.

IRNSS will provide two types of services, namely, Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS), which is an encrypted service provided only to the authorised users. The IRNSS System is expected to provide a position accuracy of better than 20 m in the primary service area it observes.

### **Some Applications of IRNSS are**



- Terrestrial, Aerial and Marine Navigation
- Disaster Management
- Vehicle tracking and fleet management
- Integration with mobile phones
- Precise Timing
- Mapping and Geodetic data capture
- Terrestrial navigation aid for hikers and travellers
- Visual and voice navigation for drivers
- etc

The IRNSS Signal-in-Space Interface Control Document (ICD Ver. 1.1) for Standard Positioning Service (SPS) is released to the public to provide the essential information on the IRNSS signal-in-space, to facilitate research & development and aid the commercial use of the IRNSS signals for navigation-based applications. IRNSS Programme - ISRO

On November 11, 2020, India became the fourth country in the world to have its independent regional navigation satellite system recognised by the International Maritime Organisation as a part of the World Wide Radio Navigation System (WWRNS). Navigation with NavIC will be equivalent to USA's GPS

### **The Recognition is only for Four Countries**

BeiDou of China  
 GLONASS of Russia  
 GPS OF USA  
 NavIC of India

It may be recalled, USA had declined crucial access to GPS to India during Kargil war. GPS support would have proved vital for the Indian forces

defending the border of the country against Pakistan. But the US had its own reasons to not extend a helping hand to India. Today india has its own GPS version - IRNSS with the operational name NavIC. Its range is all over India and 1500 kms around it. Range is yet to be expanded. But it's more accurate than GPS. NavIC pushes Atmanirbhar Bharat to the Next Level.

### **Insights on the Global Smart City Market 2020-2024: COVID-19 Analysis, Drivers, Restraints, Opportunities, and Threats - Technavio**

*Insights on the Global Smart City Market 2020-2024: COVID-19 Analysis, Drivers, Restraints, Opportunities, and Threats - Technavio | Business Wire*

The smart city market is expected to grow by USD 2118.14 billion, progressing at a CAGR of almost 23% during the forecast period

The decrease in prices of connected devices is one of the major factors propelling the market growth. However, factors such as the high cost of upgrading smart grids will hamper the market growth.

<https://www.technavio.com/report/smart-cities-market-industry-analysis>

### **Students Forum (Brief on GIS Day & Geography Awareness Week 2020 Celebrations)**

Two Institutions : Scanpoint Geomatics Ltd (SGL), Ahmedabad jointly with ISG, ISRS, INCA and Department of Geography, Bharathidasan University, Tiruchirappalli alongwith ISRS Regional Chapter organised through

online webinar, the GIS Day on 18th November, 2020.

SGL program included, Two invited talks on, i) Education and Career Opportunities in Geospatial Sector & ii) on Potential and Directions of Geospatial Technologies in the context of Atmanirbhar Bharat and Make in India. This was followed by Map Competition on 'New Ideas and Innovative Methods for Creating Thematic Maps' on various subjects using, ISRO-SGL IGiS software made available to UG/PG/PhD individual students (registered via email) in colleges and universities, across the country. The maps submitted in .SHP file were evaluated based on, input raster/vector/attribute data data ; methodology; IGiS modules/functions used; legend, symbology, colour scheme applied; and aesthetics, clarity & utility of the map. The winners (intimated on 16th November) were given a 10 minute presentation on their submitted maps, during the webinar on 18th November. The top three winners received cash prize, certificate of merit and IGiS Desktop-1 year license s/w; Certificates to all participant students. (<https://www.sgligis.com>; <https://www.facebook.com/sgligis/18Nov.2020>)

ISRS Regional Chapter program was organised as part of 'GIS Day and Geography Awareness Week' (16-22nd November, 2020) on the theme, 'Discovering the World through GIS'. It included, Three invited talks on, i) Open Source and Cloud Applications of GIS, ii) Recent Trends in GIS and iii) Recent Advances in Geographical Research. Further, the GIS Quiz was held online through Google Form from 18 to 20<sup>th</sup> Nov. 2020. The quiz had 50 questions

@ 2 marks for each question. E-Certificates were issued to all those who qualified with a minimum of 50 percent of the mark (<https://isrstrc.blogspot.com/18Nov.2020>; email: [isrsistrichychapter2018@gmail.com](mailto:isrsistrichychapter2018@gmail.com))

*(Compiled by V Raghavaswamy)*

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- Geospatial World Excellence Award 2018
- Best Professionally Managed Company 2014
- Geospatial Company of the year 2013
- National award for Excellence in Engineering Consultancy 2012
- Project of National Excellence - Urban Infrastructure 2011
- Export Excellence Award 2008 & 2010



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