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C O N T E N T

In March-April 2020, GEMS initiated GIS application suitable for COVID 19 situation. Government of Telangana used GIS to monitor and manage distribution of vegetables and fruits in Hyderabad city. Some more details are in this issue.

Read about deliveries of health care items with drone. Q & A is a new feature.

Comments and suggestions may be mailed to mapstodaygis@gmail.com

Editorial

Several members expressed opinion in favour of On-line-journal. This can be updated periodically. Covid 19 also pushed us towards this. Hence this initiative.

This on-line-journal (OLJ) will be mailed directly to subscribers. The basic idea is to reach readers with latest technologies and applications.

We continue to promote training, research, applications and employment so that India uses digital maps and associated technologies more effectively.

Where there is a way, there is a will!!!

Maj. Dr. G. Shiva Kiran

When the lock down was announced on 24 March 2020, the state of Telangana, more so the city of Hyderabad faced a piquant situation. Restricted movement, 20 lakh household, how to make them stay at home was the million rupee question. One of the main reasons why people ventured out was to purchase vegetables and groceries. The departments of Agriculture, Horticulture and marketing were facing a challenge of procuring vegetables from traditional vegetable cultivating areas of Telangana, arranging labour, coordinating with the farmers and transporting it to Hyderabad.

It was possible to locate the MRBs on Bhuvan Portal and track their movements. This enabled to check the number of vehicles plying, which routes, halting time and distance covered in Kms

On reaching Hyderabad, the vegetables had to be routed through the 12 Rythu Bazars, which through the Mobile Rythu Bazars (MRBs) were to cater to the vegetable and fruit needs of the denizens of the city. A committee to oversee the availability and regulate essential commodities was constituted by the Government with the Principal Secretary, Agriculture as its Chairman. The Committee included senior officers from the Agriculture, Horticulture and Marketing as well as Police, Postal, Transport and civil society representatives.

It was during the initial meeting the proposal to use GIS (Geographic Information System) and mapping was suggested. About 200 vehicles, 20 lakh households, 625 sq kms, 6000 quintals of vegetables to be delivered, was a daunting challenge. It was at this stage that the help of National Remote Sensing Centre (NRSC), located at Hyderabad was requisitioned. NRSC mandate includes providing geospatial services for good governance. Over a few conversations, emails and following social and virtual distancing, the Department of Agriculture and NRSC agreed to collaborate.

The methodology was NRSC would provide a link for the MRB drivers to register their mobiles. The information about the vehicles required was, name of the driver, vehicle number, mobile number of driver and group name. NRSC created a special group for the Mobile Rythu Bazar fleet. A brief help document was created and the senior officers of the department were instructed to get the MRBs registered. At the back end, a senior NRSC scientist and yours truly were watching the registrations and approving the same.

It was possible to locate the MRBs on Bhuvan Portal and track their movements. This enabled to check the number of vehicles plying, which routes, halting time and distance covered in Kms. The pattern of MRBs was analysed and routes for subsequent day were made. With the intervention of the department officials routes were identified to cover all the areas in the city to help implementation of the "Stay Home" regulation.

With the location sharing feature, being a part of mobile it was possible to connect the requirements from various RWAs, communities, gated colonies very easily as the Bhuvan portal is a georeferenced mapping tool.

While this tool ensured that the vehicles were monitored closely it shows how technology when correctly used can deliver even if the devil is corona. Surely, where there is way, there needs a will!!
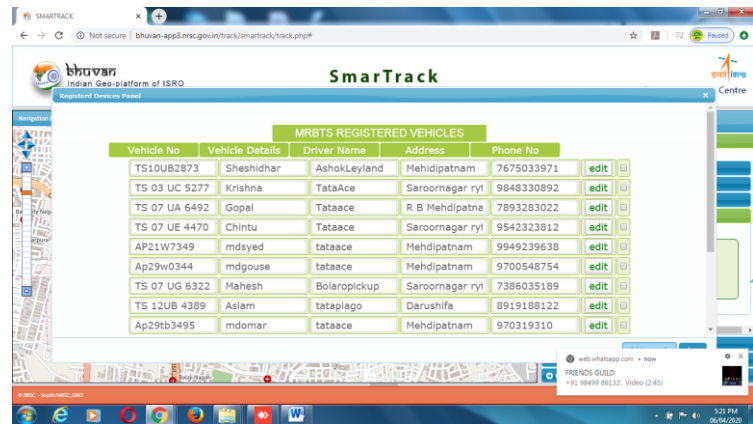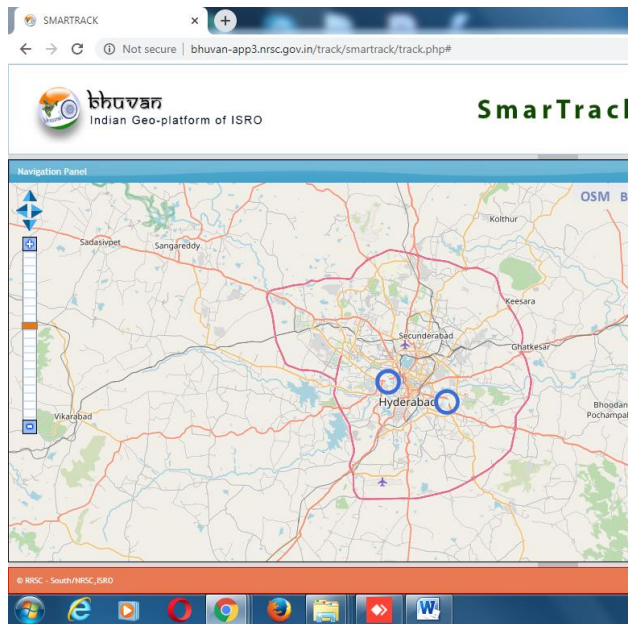
(*The author is a Phd in Geography / GIS applications; the Vice President of UFERWAS- United*

Federation of Resident Welfare Associations; Secretary, GEMS and Executive Editor, Maps Today)

ORR (Outer Ring Road) View on 06 April 2020 showing locations of only 2 Mobile Rythu Bazars (MRB) through BHUVAN-NRSC Portal
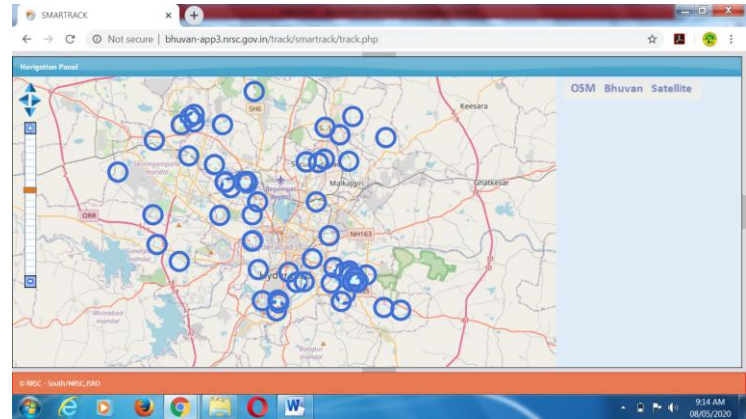
MRB Drivers registration on Bhuvan NRSC Portal

ORR (Outer Ring Road) View on 08 May 2020 showing locations of 180 Mobile Rythu Bazars (MRB) covering entire Hyderabad

App helps locate free meal centres, mobile rythu bazaars in Hyderabad

NRSC, which developed the app, geo-tagged 146 free meal centres and made them available on Bhuvan portal

The National Remote Sensing Centre (NRSC), which manages data from aerial and satellite sources, has come up with a innovative application to help the needy in accessing locations of Annapurna meal centres and mobile rythu bazaars.

One of the centres of the Indian Space Research Organisation (ISRO), NRSC has geo-tagged 146 free meal centres and made them available on Bhuvan portal, an Indian web-based utility which allows users to explore a set of map-based content and those looking for free meals can use the tool, Annapurna Canteen Locator and access the nearest centre.

Through this application, one can find the availability of Annapurna meals programme in a particular locality and also know their nearest centre. By opening the link of the nearest centre, the app will guide the person, till he/she reaches the destination.

This apart, NRSC-Bhuvan GIS Mobile Rythu Bazaar tracking system was also developed. With co-ordinated efforts of the department of Agriculture, Marketing and Horticulture, NRSC developed this tool in decongesting crowds at mobile rythu bazaars while purchasing essential commodities such as vegetables and fruits. The tool will help in tracking mobile rythu bazaars.
About 250 mobile rythu bazaars have been covering 500 locations every day and 3,500 locations every week distributing vegetables and fruits. The community, mainly Resident Welfare Associations, have been coordinating on the ground.

Major (Retd) Shiva Kiran, a GIS and mapping professional and who has been associated with the projects, said it was easy to locate the mobile rythu bazaars on Bhuvan Portal and track their movements. "This enables us to check the number of vehicles plying, routes, halting time and distance covered in kilometres," he said.

In Narayanpet, the NRSC has developed a Home Quarantine Tracker App, which is used to locate people who need help by way of essential commodities and medical help. The app helped in organising relief on scientific lines by the district administration.

"These apps were developed by NRSC in active collaboration with the Telangana government, which is the only State in the country that has launched so many useful GIS-based apps," Shiva Kiran added.

Drones for health care

September 15-17, 2020

Paris Las Vegas

https://mail.google.com/mail/u/0/#inbox/FMfcgxwHMjjpggkCGRqpVsDqhcgB

https://mail.google.com/mail/u/0/#inbox/FMfcgxwHMjjpggkCGRqpVsDqhcgB

During the keynote address at the 5th annual Commercial UAV Expo Americas this past October in Las Vegas, we featured a keynote by Bala Ganesh, VP of the Advanced Technology Group at UPS. UPS had just made history by becoming the first drone company to obtain a Part 135 standard certificate to operate a drone airline. During his talk, Ganesh highlighted UPS' plans not only for fully automated drone deliveries, but also their involvement with the FAA's IPP program. In conjunction with the North Carolina DOT and Matternet, Ganesh reported that UPS was working on medical campuses to deliver blood samples via drone. As a result of this program, they discovered that they were able to cut transportation times down from hours to mere minutes.

"The one or two hours it used to take to deliver blood samples from one building to another on the Wake Med medical campus in North Carolina is now down to 5 minutes!" Ganesh stated. "But after thousands of flights in the state, it's time to scale because these improvements can have a huge impact on people's lives. What about anti-venom? Being able to get the right anti-venom to someone who has been bitten by a snake quickly could be lifesaving."

Less than six months after this keynote was given the world has been changed by the COVID-19 pandemic, seemingly overnight, and we are just beginning to understand just how significant this announcement truly was. Drones are demonstrating that they are capable of giving healthcare workers an edge in the battle against COVID-19 without putting them at further risk. Drones are being used across the globe to address the pandemic, from medical supply delivery to outfitting drones for sanitation.

Commercial UAV News has since put out a series of articles highlighting how drones are responding or could respond to this current crisis. This is intended to not only highlight these vital use cases in these unprecedented times, but to also make a case for the continued development of these technologies. Although the use case is novel, the technology has been in development for years and is capable of making significant improvements to the way we work and live well beyond these difficult times.

To learn more about how drones are making a difference check out our latest articles and check out www.CommercialUAVnews.com for up to date coverage

Extracts

India's Forests

Is the government telling a distorted story of the state of India's forests? Here's what it must do.
Times of india, March 24, 2020
Aparna Roy

…………………... The latest biennial India State of Forest Report (ISFR) highlights an increase in the country's forest and tree cover to 80.73 million hectares, or 24.56% of its total area.

However, the International Union for Conservation of Nature (IUCN) and ministry of environment, forest and climate change (MoEFCC) 2019 progress report on forest restoration highlights that 9.8 million hectares of deforested and degraded land have been brought under restoration since 2011, yet forest cover has barely increased. A closer look at ISFR numbers reveals a disappointing growth of just 0.13% in India's green cover, along with rapidly degrading profile of India's forests since last assessment

India witnessed rapid deforestation in the past two decades, leading to degradation of over 30% of its land and losing 1.6 million hectares of its forest cover. More than a fifth of the country's population depends on forests for subsistence. Deforestation and land degradation are projected to impact agricultural productivity, water quality and biodiversity, thereby affecting over 600 million people in India. According to a TERI study, forest degradation is depriving the country of 1.4% of its GDP annually.

The real problem lies in how the government defines 'forest cover'. Relying majorly on satellite mapping, Forest Survey of India defines forests as "all patches of land, with a tree canopy density of more than 10% and more than one hectare in area, irrespective of land use, ownership and species of trees". Any plantation whether bamboo, coffee, tree orchards, or urban parks are hence currently recognised as forests. Satellite imagery is incapable of detecting differences between plantation and forest. India's natural dense forests have shrunk at an unprecedented rate.

A World Resources Institute study found that India has lost 1,22,748 hectares of prime forest within last four years. Moreover, the MoEFCC has recently proposed to abandon

the "no-go" forest area classification, thereby opening up India's dense, pristine and biodiversity rich forest zones to development projects.

Xxxxxxxxxxxxxxxxxxx

The Restoration Opportunities Assessment Methodology (ROAM) framework could be adopted at scale for rigorous analysis of spatial, legal and socio-economic data to plan best interventions for forest restoration.

However, a successful forest programme will depend on creating strict institutional mechanism, for effective implementation, utilisation and monitoring of funds. In the last decade, numerous petitions have been filed with the National Green Tribunal and the Supreme Court on the misuse of state forest funds and negligent monitoring by the states. Geo-tagging technology would prove a valuable tool for online recording, monitoring and checking leakages, as well as efficient mapping of forest landscapes.

Lastly, any effort to regenerate or afforest lands will require the government to recognise the long-standing knowledge systems and community efforts in protection of forests by formally establishing the authority of the gram sabhas in

forest stewardship. Given the critical state of our forests, it is time that the government move beyond celebrating the 'success' of ineffective plantation drives in the name of 'afforestation' and adopt meaningful strategies for creating serious impact on the ground.

Drones in Construction industry

How drones could transform the way we build Britain's cities

https://www.telegraph.co.uk/technology/2019/12/29/drones-could-transform-way-build-britains-cities/

Hannah Boland; 29 DECEMBER 2019

A drone takes a twentieth of the tir quarter of the cost than using huma

High in the sky, far above undulating hills flooded with bright yellow gorse bushes, a small black dot zips back and forth. It flies first one way, then back the other in a matrix formation, taking dozens of pictures of the ground below.

"A drone takes a twentieth of the time and a quarter of the cost than using humans would [to survey land]," explains Chris Fleming, whose Edinburgh-based company Cyberhawk can take images of more than 200 hectares of land in one day using drones.

Cyberhawk says it has seen an uptick in the use of such drones in the construction industry. Their low cost and ease of handling has made work more efficient for the engineers, architects and builders across the UK.

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"What would have happened traditionally is the surveyor would have gone to the remote location with their GPS equipment and they would walk 20 metres, stop, put the staff in the ground, press a button to measure the height and location of the land, and go up and down the landscape in a grid pattern," says Fleming.

"Now, rather than them spending two weeks traipsing all over that land, we can fly a drone over instead and create a photorealistic model."

Their low cost and ease of handling has made work more efficient for the engineers, architects and builders across the UK

Advances such as these are likely to have major implications for the cost of building work. As it stands, around 80pc of construction projects run over schedule, and 20pc are over budget.

According to figures from PricewaterhouseCoopers, drones could save the UK construction industry £3.5bn by 2030, making surveying 400 times faster and allowing data from the sites to be shared with stakeholders with ease.

A large part of the potential savings boil down to drones' capacity to map large areas of land, or buildings themselves. Fairhurst Estates, for example, a chartered surveying company which started using drones more than four years ago, says they allowed it to scale buildings without actually having to get on top of them.

"It was a bit random when we decided to get a licence," Jonathan Hyde, a surveyor at the company, says. "At the time, most of the people were using drones for photography whereas we wanted to use them to be able to access buildings."

Historically, for large properties, Fairhurst would have had to either scaffold the place or use a cherry picker – an access platform – to be able to see its condition. But, with a drone, it "basically allowed us to see all the levels of the building from ground level," Hyde says.

Aside from making the whole surveying process significantly less time consuming, advocates say there is another major benefit: safety.

"These are places where if something goes wrong, you might die. It's as simple

as that," Cyberhawk's Fleming says. By putting drones in places where workers would previously have had to go, companies can "keep people out of very dangerous environments".

In the future, drones could also be used to put together buildings. ETH Zürich's Institute for Dynamic Systems and Control, for instance, has pioneered research on the potential of drones to build towers. In one study, the researchers created a 20ft tall tower constructed from 1,500 "bricks" using a fleet of drones.

With these benefits, you would think construction companies would be piling into the drone space, investing in their own products, deploying them across their sites.

But, of course, it isn't as simple as that – there are significant barriers to entry. For one thing, regulation in the space is increasingly difficult to navigate.

From the beginning of December, drone users have been at risk of facing £1,000 in fines if they fly their device without passing an online theory test or registering as an operator.

For an industry where margins are already painfully tight, there are some concerns that this will put smaller businesses off investing. Even now, when it appears companies are starting to adopt drones, "the hype is greater than the numbers on the ground," says Tony Shooter, who chairs COMIT Projects's drone community, whose members include Balfour Beatty, Kier and Costain.

There are 5,500 companies registered at the CAA to fly drones commercially CREDIT: HAROUB HUSSEIN/AP

On paper, there are 5,500 companies registered at the CAA to fly drones commercially, but the majority are thought to have between one and five employees.

There are added risks as well; accidents do happen. Filings from the Air Accidents Investigation Branch last year revealed one drone owner flew his aircraft into a crane "because of a lack of perspective" and, speaking to The Telegraph, a roof specialist, who had advertised his drone services through online listings, said his had "crashed and I didn't buy another one".

With all these factors, there is the possibility that building companies may be put off adopting the technology, even with all the added benefits down the line. After all, much of their work is done on a project-by-project basis, making the initial costs hard to swallow, and flying a drone comes with risk.

One way or another, though, the construction industry may not be able to hold off investing in technology for too much longer. If history is anything to go by, companies which resist digitisation will soon be replaced by others which use technology to deliver projects on time and on budget.

The use of drones in construction may be a cottage industry now – but chances are it's just a matter of time until it takes off.

OBITUARY

Dear friends,
I am sorry to inform you that Shri C.S. Joshi is no more. I have seen a post of his son, Devender Joshi, in Facebook that he passed away peacefully yesterday, in Ahmedabad.
He was a very good person liked by all who knew him. I have lost in him a close friend like a brother. I and all my family members have known him and all his family members for long and have very pleasant memories.
May God bless his soul and give strength to the bereaved family to bear this irreparable loss!
His daughter Veena Joshi in Ahmedabad's Mob. No. is +91 9724836220.
Yours in Grief, GS Oberoi, Noida.

With love and regards, Gurbaksh Singh Oberoi.

I had the privilege of being with him in Hyd
Later I met him at Chandigarh
An intelligent and bold person
His support to all our efforts for betterment of SoI is unforgettable.
GS Kumar

--

Neelakantan TC; 2 April 2020

Heard with great regret the sad demise of Shri G S Joshi
He was my D D while I was at NWC at Chandigarh
It was only for a short duration since I was under transfer to Hyderabad
He was gentle and soft spoken
I heard he settled at Sector 16 Chandigarh.
My heart felt condolences to the bereaved family
I pray for the departed soul
May his soul rest in peace