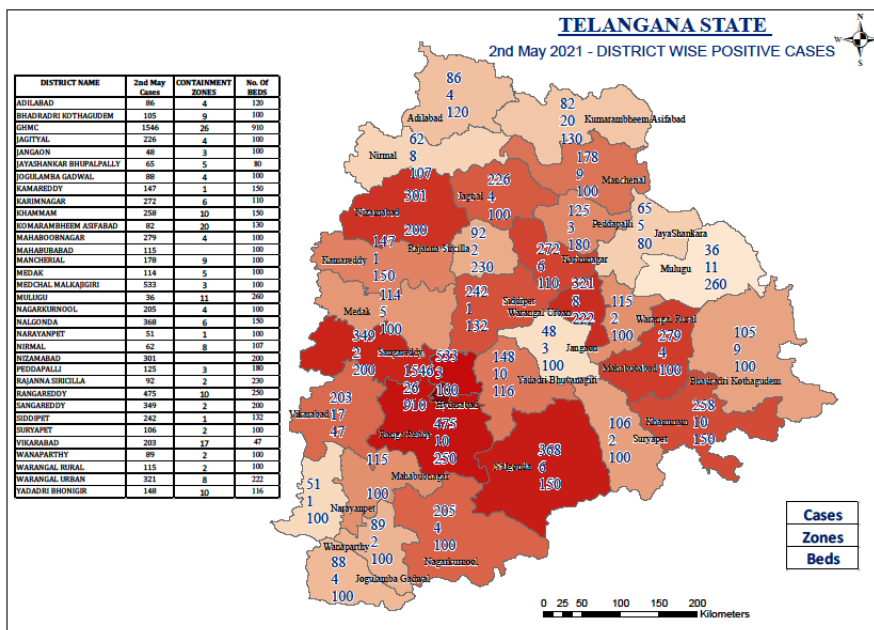


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Invitation



The Institution of Engineers (India)
TELANGANA STATE CENTRE
and
GEOMAP SOCIETY (GEMS)

All Members are requested to join

NATIONAL SURVEY DAY
Theme: "Surveying Using Drone Imagery"
(Through "ZOOM CLOUD MEETING APP")

Chief Guest & Speaker



Er T CH HANUMAN RAO, FIE
Sr. Transmission Engineer

President



Dr G RAMESHWAR RAO, FIE
Chairman,
IEI, Telangana State Centre

Date: 10th April, 2021 (Saturday)
Time: 1700 hrs
Meeting ID: 98453370983
Password: ieitsc



Er G S KUMAR
President
GeoMap Society (GEMS)



Prof. (Dr.) RAMANA NAIK B, FIE
Jt. Hon. Secretary, IEI, TSC &
Convener of the event



Er T ANJALIAH, FIE
Hon. Secretary, IEI, TSC

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Editorial

Removing restrictions on Geospatial data in February 2021 created excitement and new hopes Read the article on the impact of this on research & education. The author tried to restrict his comments to impact on research and education But his suggestions are applicable to other sectors of GeoSpatial Technology (GST). It is planned to generate a vision document as suggested by the author.

Sanjay Kumar of GS World has issued a letter to all about bright future of GST. Read and feel the spirit of it.

GeoMap Society (GEMS) has organised National Survey Day on 10 April 2010 in collaboration with Instn. of Engineers India, Hyderabad as in th past..Report of the function which includes case study

of using Drone imagery for Transmission lines

Read how Lidar system is providing better opportunities os Surveying & Mapping.

Members/readers Interested to join the preparation of Vision Document on New Geospatial Data Guidelines may please email to geomapsociety@gmail.com

New Geospatial Data Guidelines:

impact on research and education

OPINION

Map Policy 2021

1138 CURRENT SCIENCE, VOL. 120, NO. 7, 10 APRIL 2021

Bharat Lohani

Since the Indian government launched New Geospatial Data Guidelines on 15

February this year, there have been a lot of discussions on how this is going to

impact the industry and that how a market worth one lakh crore for geospatial

data is going to unfold over the next decade.

However, one aspect that is not being discussed equally is the impact of

this new guideline on education and research, which is important as it will decide how the stakeholders, i.e. students, researchers, universities, policy makers and funding agencies should respond.

The new guidelines are based on two basic pillars –

- (i) freedom to Indian entities for geospatial data collection and dissemination and
- (ii) access to public-funded geospatial data to Indian entities.

It may be noted that India is home to back-office processing of high-resolution data of the world

The guidelines are bold and open opportunities for Indian researchers and academicians.

In hindsight, the regulations governing the collection and use of geospatial data in India were highly ambiguous, illogical, irrelevant and restrictive. This led to irreparable damage to geospatial education and research, particularly in the domain of high-resolution technologies.

The scene is better for lower resolution data due to India being home to excellent

remote sensing programmes and fewer restrictions on their use. It may be noted that barring

a few places, no university in India teaches comprehensive courses in aerial sensing

technologies like photogrammetry or LiDAR, while these technologies are key to all engineering projects and disaster management which require high accuracy,

resolution and speed. The main reason for this was unavailability of aerial survey data

for hands-on practices. Further, as no research was being done in aerial mapping technologies,

no good teaching was possible as good research leads to good teaching. The scene around the

Western countries is very different where aerial photogrammetry is being taught

and researched extensively since the Second World War and has been a primary

source of large-scale mapping. In India there were a few campaigns on aerial photogrammetry, primarily by NRSC and Survey of India, but data could not become available

for teaching and research due to restrictions associated with data sharing. If data were available

with some institution, the same would be shared with students after tens of restrictions

thus marring the excitement of learning.

It may be noted that India is home to back-office processing of high-resolution

data of the world. This, though produced many trained individuals in data editing,

failed to build core expertise on project management, data capture, sensor integration and

calibration, error management and application development.

Restrictions on high-resolution aerial sensing also impacted research in these

technologies both at hardware and software level. A few researchers who work

in this area use data from international sites which lack Indian characteristics

and are beyond reach for ground truth collection. No research could be done for

developing solutions for solving problems specific to India, e.g. slum development,

flood management, urban growth modelling, urban utility management, precision forest

mapping, cadastral mapping and land consolidation, etc. Any research involving collection of

aerial LiDAR or photographic or hyperspectral data would get entangled more

on seeking permissions rather than the core research. The author took over two

years to collect one such data for research purpose after several visits and

calls to authorities. Data collected by a few researchers or national organizations

could not be shared with other researchers due to restrictive policy.

Restrictions on high-resolution aerial sensing also impacted research in these

technologies both at hardware and software level

In contrast to the past practice, the new guidelines (DST, 2021) mention

that, 'Indian Entities, whether in Government or outside, will be free to acquire,

collect, generate, prepare, disseminate, store, share, publish, distribute, update,

digitize and/or create Geospatial Data, including Maps, of any spatial accuracy

within the territory of India...', which is

a quantum leap. The guidelines further mention that, 'All Geospatial Data produced using

public funds, except the classified geospatial data collected by security/law enforcement

agencies, shall be made easily accessible for scientific, economic and developmental purposes to

all Indian Entities and without any restrictions on their use.... Such access

shall be given free of any charges to Government agencies and at fair and transparent pricing to others.' Both the above guiding principles will become the

key to open research and teaching opportunities in high resolution geospatial

technologies in India.

A vision document should be generated with the help of academic institutions and industry working in high-resolution technologies to assess the research directions for the future.

As we move with the new guidelines it is right time for all stakeholders to understand the

opportunities available and work towards realizing the innovation and research potential.

A few pointers to the way forward can be:

(1) Academic institutions should start courses on high-resolution technologies covering

basic physical principles of sensors, sensor integration, data generation principles, error

propagation in data and its treatment, processing algorithms for information extraction using

ML/DL and application development.

(2) Concerted efforts should be made by MHRD/AICTE/DST to popularize education on

high-resolution geospatial data leading to more capacity generation to cater to the

expected high demand from government and private sectors in coming times.

(3) Government along with autonomous organizations should design

mechanisms to create a layer of

chartered professionals in geospatial data generation and processing

thus ensuring quality of services.

(3) A vision document should be generated with the help of academic institutions and i

industry working in high-resolution technologies to assess the research directions for the

future.

(5) DST, which is the primary funding agency and leading the geospatial

policy development, should come out with mechanism for sharing of

public-funded data including the historical data.

(6) A platform should be developed listing all metadata of the publicfunded projects, so

researchers can search, view, and evaluate and download the data. This will also avoid

duplicity of efforts in data collection and save resources.

Geospatial World

SANJAY KUMAR

Founder & CEO, Geospatial World

sanjay@geospatialworld.net

Today, we enter 25th year of our journey, an evolving mission driven by passion and commitment to serve the world we live in. Having its origins in the user experience, “Geospatial World” follows a unique approach to advance the value of the geospatial industry in the world economy, society and environment – the determining pillars of “sustainability of everything”. An organization that sourced its inspiration from the quest for environment friendly development through production of an environmental atlas for industries, finds itself dedicated towards “Advancing Knowledge for Sustainability”.

We entered the geospatial industry ecosystem as a group of outsiders in 1997, but soon penetrated its core by extending its interface with public policy and mainstream economy. To begin with, our open and user-driven approach disrupted the closely guarded, government-driven geospatial industry, but soon, our continued persistence and user-centric approach was recognized as a “necessary evil”, enabling us to evolve and mature and weather many storms with the combined knowledge and experiences of our global network of partners in the last 24 years.

Having consistently been in a “learning and transformation mode”, team Geospatial World kept on setting new milestones and stretching its capabilities to serve the entire value chain of the geospatial profession, while continuously expanding the geospatial industry ecosystem. Awareness, advocacy, engagement and evangelism have been the key tenets of our vision of “Making a Difference through Geospatial Knowledge in the World Economy and Society”. On the one hand, Geospatial World facilitated a cohesive and collaborative environment between and amongst several components of geospatial and allied technologies, and on the other hand, we worked towards advancing the comprehensive and collective value of the geospatial industry in almost every walk of life through our offerings in media, events, consulting, and policy advocacy think tanks.

As we enter the 25th year of our service, it's important to acknowledge the growing role and relevance of the geospatial industry in shaping the world of tomorrow. And so, as the transformative role of Geospatial World in enhancing the understanding about technology innovations, collaborative workflows, shared economy business models and public policies, and facilitating alignment and engagement of geospatial industry with global development agenda.

Today, Geospatial World stands out as the most trusted source of information and thought leadership through its knowledge, network and collaborative partnerships with commercial companies, governments, academic institutions, international bodies and civil society organizations. Recognizing the pivotal role of being a “knowledge organization”, today, we step forward rebranding ourselves as “Geospatial World”, and will drive further our purpose to serve as a one-stop-source of information about the “world of geospatial”, and project its value while “Advancing Knowledge for Sustainability”.

I take this opportunity to extend our most sincere gratitude to each one of you. It's you and your trust that has inspired and empowered our team to serve you better every time. And today, we reiterate our pledge and commitment to serve you and be your trusted partner in your journey.

National Survey Day 2021

Invitation

The Institution of Engineers (India)
 TELANGANA STATE CENTRE
 and
 GEOMAP SOCIETY (GEMS)

All Members are requested to join

NATIONAL SURVEY DAY
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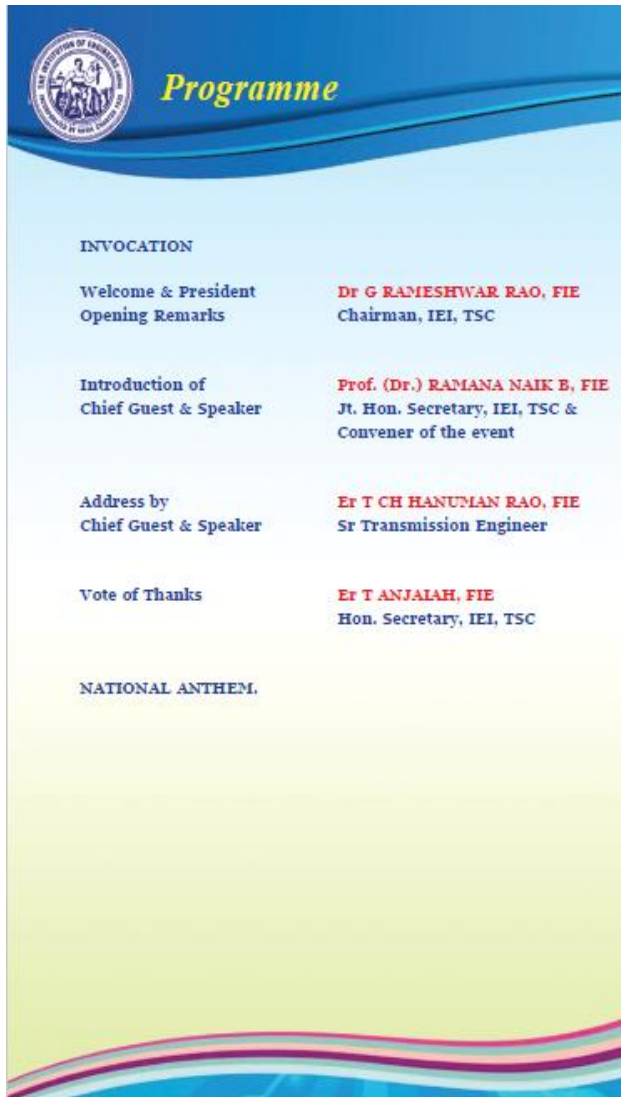
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 Hon. Secretary, IEL, TSC



Report

National Survey Day was organised on line on 10 April 2021 by Instn. of Engineers, Telangana State Centre in collaboration with GeoMap Society (GEMS) as in the past.

The theme was Surveying Using Drone Imagery

Dr G RAMESHWAR RAO, FIE
Chairman, The Institution of Engineers

(India), Telangana State Centre in his welcome address mentioned that

National Survey Day is celebrated every year in India to commemorate the measurement of the first Baseline of Great Trigonometric Survey (GTS) on 10th April 1802 near Chennai, Tamilnadu. Geospatial technology (Includes Surveying) continues to grow rapidly and applications are expanding. He highlighted importance of surveying and role of Survey of India in various sectors of development

Mr. GS Kumar, President, Geomap Society thanked Dr G Rameshwar Rao, FIE Chairman and his team at the centre for a good programme. He said Drone based surveying is the latest trend and complimented the speaker Mr.T Ch.Hanuman Rao, a senior transmission engr for presentation on this topic.

His presentation is available on YouTube

http://www.youtube.com/watch?v=6-HFYQm_GGs [10/04, 19:26] Tchhrao

As a part of imparting training for 21 unemployed youth on behalf of KEATS, at Vande mathram foundation at Thorroor, Mahaboobad Disntrict Telangana, has used drone for capturing field data . Using softwares, the ortho-mosaic image, the DTM were generated and contours too were prepared. This data would be used by Thorroor municipality for infrastructure

planning including roads, drainage, sewage etc

Present project of surveying including DTM (5 metre grid) helped the authorities to identify specifically danger spots in transmission line which was possible only by Drone-based technology. Contours were also generated. This approach led to finalise remedial measures.

Er.T Anjaiah, FIE; Honorary Secretary;
The Institution of Engineers (India)

Telangana State Centre thanked the speaker , Mr.T Ch.Hanuman Rao for the excellent presentation on surveying Tharoor using Drone imagery. He also thanked all the participants for making the programme lively. The programmed ended with Jana Gana Mana....

The Key Parameters of a Modern Lidar System

How Innovations in Measurement Technology Are Facilitating the Work of Surveyors

By Peter Rieger, Andreas Ullrich •
March 30, 2021



The Key Parameters of a Modern Lidar System | GIM International

In the past, the effort of hardware integration and the necessary combination of different software tools was a major hurdle to gain a foothold in the field of laser scanning. This hurdle has now been removed, allowing users to focus on data acquisition and data analysis – the ‘real work’ of a surveyor. But what are the key parameters for a modern Lidar system?

State-of-the art Lidar systems are fully integrated sensor platforms, typically comprising one or more laser scanners, digital cameras of different spectral ranges, inertial measurement units coupled with global navigation satellite system receivers, flight guidance systems and more. But a Lidar system is much more than just the hardware. Nowadays it includes means and measures for determining the optimal configuration of system parameters and flight planning tools to maximize productivity, easy-to-use software for the operator that provides direct in-flight feedback on system status and the

quality of collected data and, last but not least, comprehensive data post-processing software.

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For detailed article Visit [The Key Parameters of a Modern Lidar System | GIM International](#)

Analyzing the Risk to COVID-19 Infection using Remote Sensing and GIS

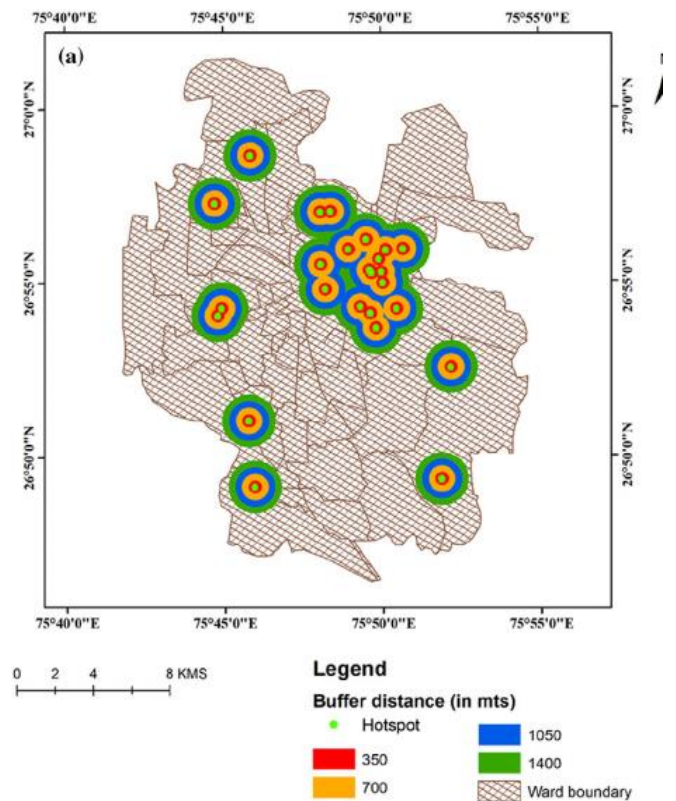
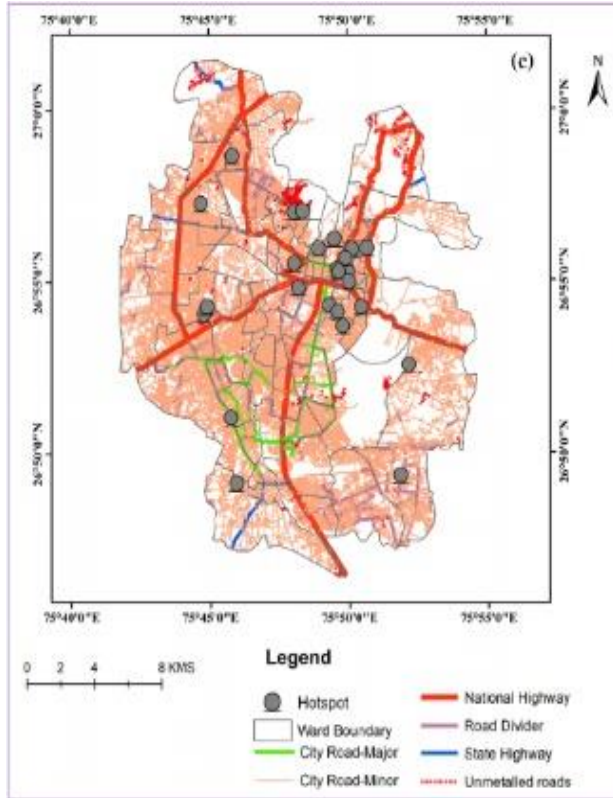
Analyzing the Risk to COVID-19 Infection using Remote Sensing and GIS (wiley.com)

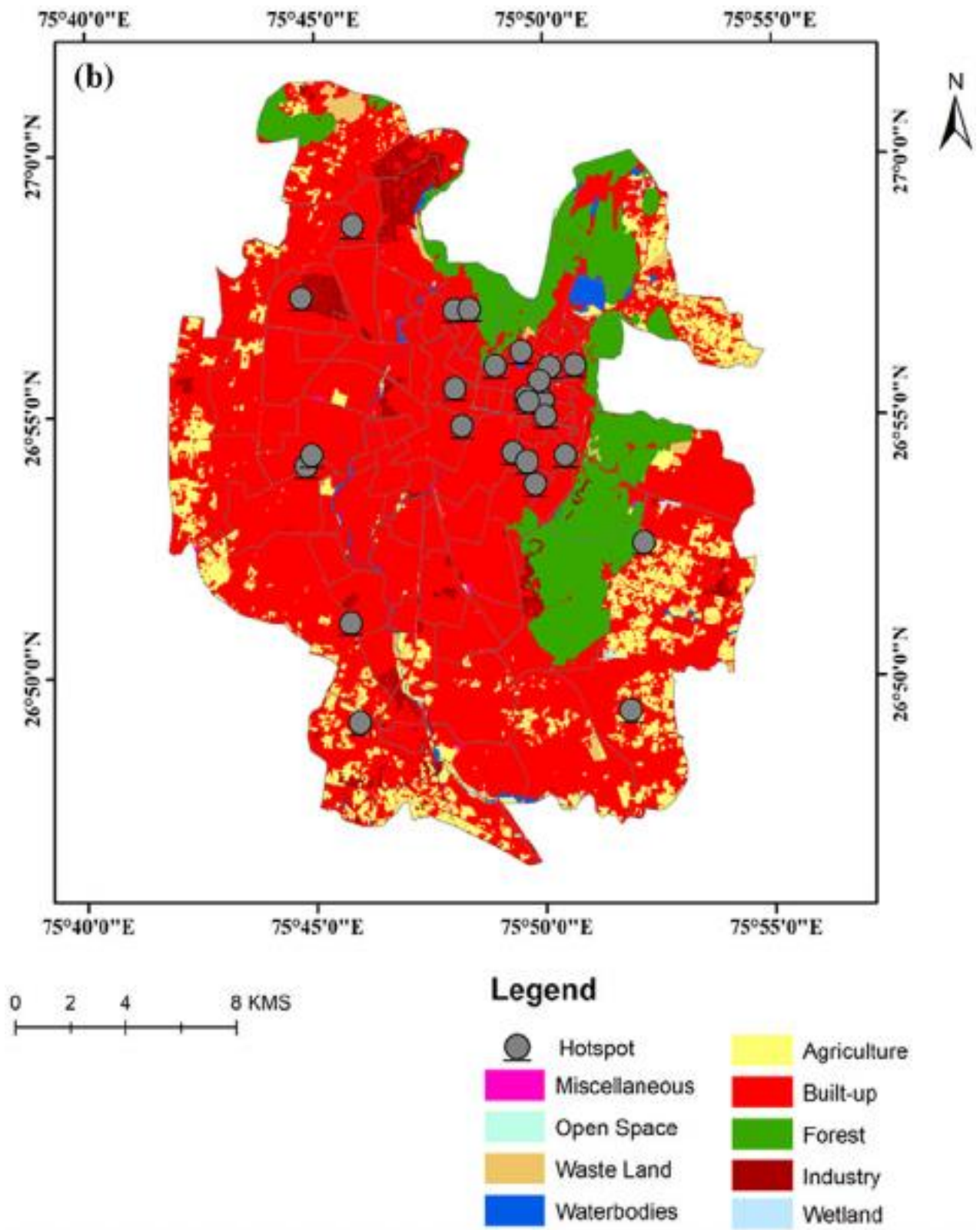
Globally, the COVID-19 pandemic has become a threat to humans and to the socioeconomic systems they have developed since the industrial revolution. Hence, governments and stake-holders call for strategies to help restore normalcy while dealing with this pandemic effectively. Since till now, the disease is yet to have a cure; therefore, only risk-based decision making can help governments achieve a sustainable solution in the long term.

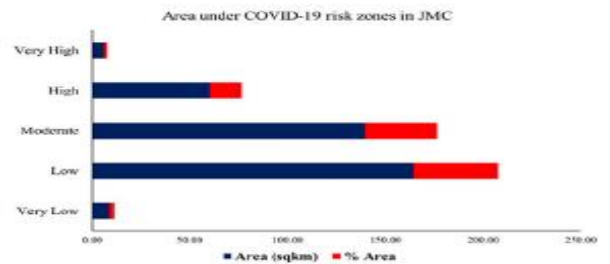
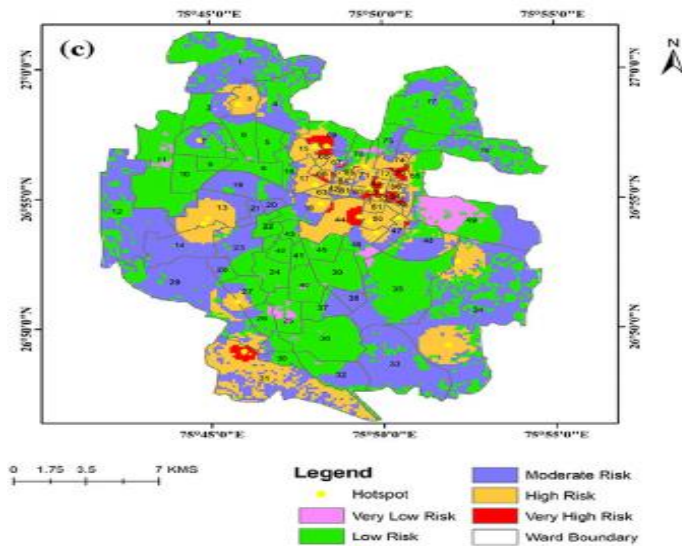
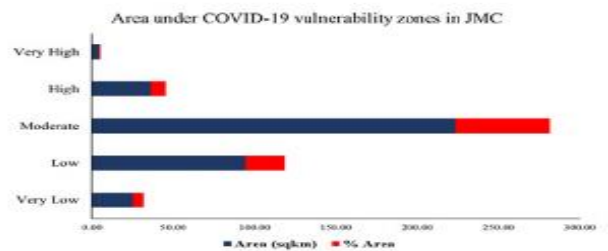
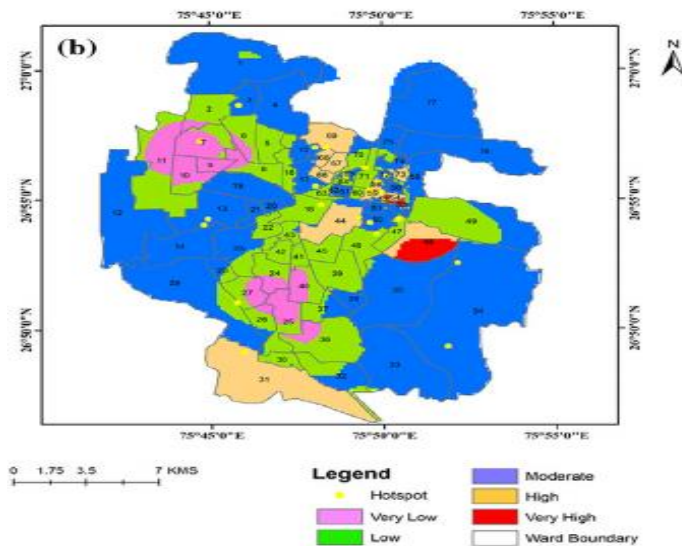
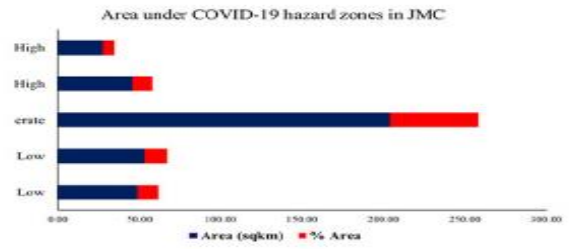
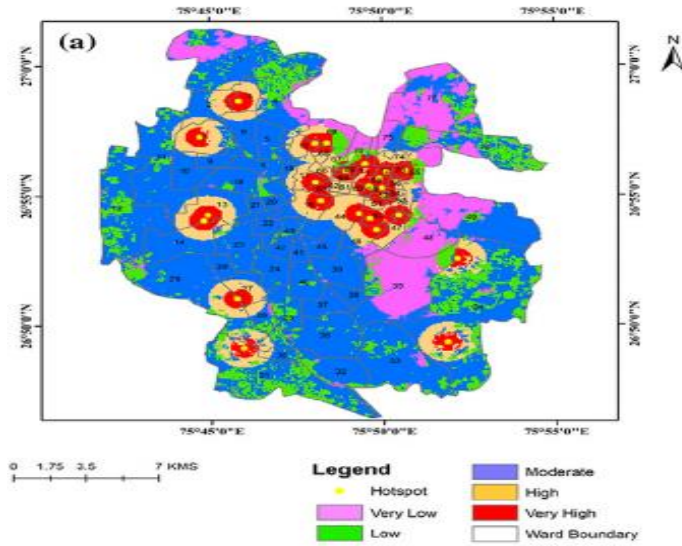
To help the decisionmakers explore viable actions, we propose a risk-based assessment framework for analyzing COVID-19 risk to areas, using integrated hazard and vulnerability components associated with this pandemic for effective risk mitigation. The study is carried on a region administrated by Jaipur Municipal Corporation (JMC), India. Based on the current understanding of this disease, we hypothesized different COVID-19 risk indices (C19Ri) of the wards of JMC such as proximity to hotspots, total population, population density, availability of clean water, and associated land use/land cover, are related with COVID-19 contagion

and calculated them in a GIS-based multi-criteria risk reduction method. The results showed disparateness in COVID-19 risk areas with a higher risk in north-eastern and south-eastern zone wards within the boundary of JMC. We proposed prioritizing wards under higher

risk zones for intelligent decision making regarding COVID-19 risk reduction through appropriate management of resources-related policy consequences. This study aims to serve as a baseline study to be replicated in other parts of the country or world to eradicate the threat of COVID-19 effectively







CONCLUSIONS AND LIMITATIONS

The assessment results identified areas under the very high-risk category, for example, NE and SE zone wards of the JMC, Jaipur India. Prioritization of regions for decisions regarding containment and isolation is viable using this approach.

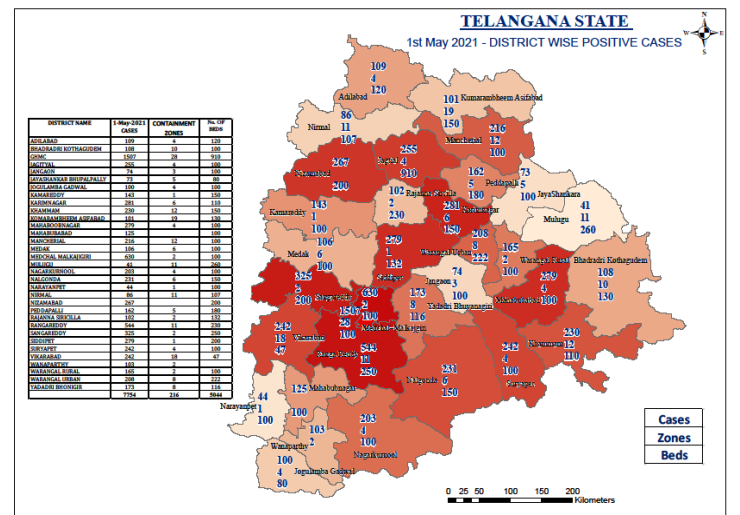
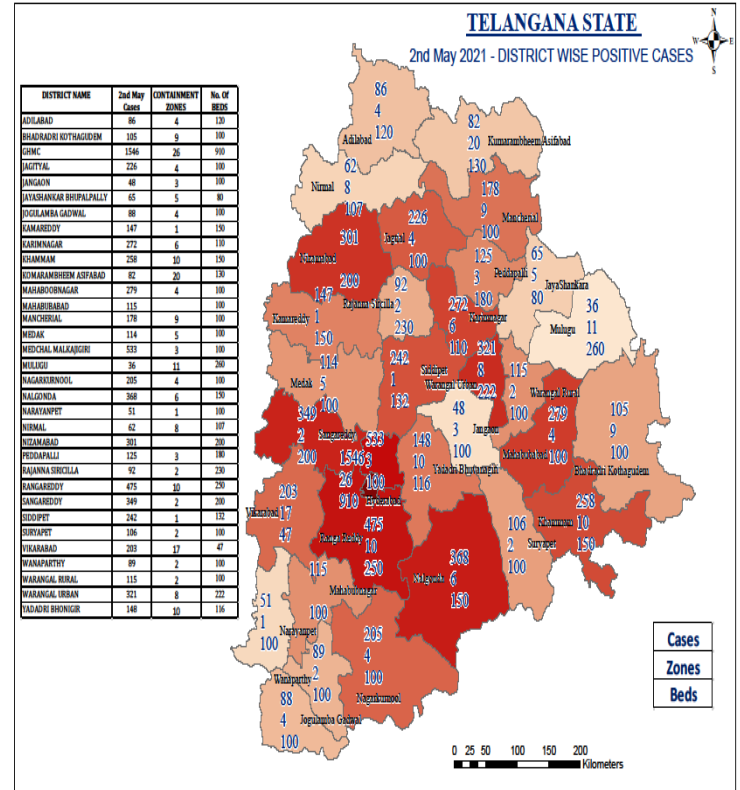
Thus, this approach provides long-term COVID-19 risk management opportunities so that the economy and livelihood suffer least in the study area.

The authors understand that there are scores of limitations in the proposed CRAM framework, mainly due to the incomplete knowledge of the operational mechanism of COVID-19 infection. Moreover, the number of risk indices used are 1s in number, but since the science related to this pandemic is still evolving, once more indices are available, the same can be used in further studies. At the moment, whatever knowledge is possible, must be utilized to eradicate this threat.

(For detailed paper and references visit Analyzing the Risk to COVID-19 Infection using Remote Sensing and GIS (wiley.com)

COVID-19 Risk Assessment using
GIS Map report on Telangana

Issue No. 14 April 2021 | mapstodaygis@gmail.com | www.geopediasociety.com



GIS / Map report on the status- District –Cases, Containment Zones & Beds- 02052021

Based on Daily Medical Bulletin report provided by Dept of Health- Govt of Telangana

Prepared by Maj Shiva Kiran, Phd-
Development Studies & K Venugopal-
GIS Engineer

Date	Tests done	Positive cases
01 May	77930	7754
02 May	76330	7430

The Map depicts the status of the positive cases, CZs and Covid Care Beds as on 02 May 2021.

As compared to yesterday (01/5/2021) the districts of Suryapet and Vikarabad show a reducing trend. The border with AP on the eastern side does not seem to be a problem. Adilabad, KumaramBheem and Nirmal in the North Telangana show a reducing trend. The Southern districts show a reducing trend.

The western and central districts purportedly due to the Maharashtra border continue to show high number of cases. Districts of Sangareddy, Rangareddy, Medchal Malkajgiri and GHMC continue to be vulnerable.

The numbers on the map, placed at districts indicate Cases (today- 02 May 2021), Containment Zones and Beds respectively. GHMC area shows 1546 cases , 26 CZs and 910 CC centres Beds. showing increased cases, less CZs and same number of CC bedsreduced CZs meaning clustering.

Nizamabad with 301 cases shows no CZ !!!

Beds availability is from Government hospitals

Patterns in GIS / Map analysis of case data 30 April and 01 May

Suryapet shows decreasing trend (Lighter shade of marron / red)

Western Districts other than Vikarabad leading onto GHMC show increase again.

Northern, Southern and Eastern Districts show continued reducing trends.

Subscription to Maps Today

This is to inform all that we switched over to on-line publication, on a regular basis from January 2020. We expect it will have wider outreach, flexible and contextual to considering COVID 19 pandemic.

(Portal: www.geopediasociety.com)

Subscription rates have been revised accordingly, as below :

Institutional subscription Rs
600 for 2 years

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Rs 400 for 2 years

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with access details

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doubts by Domain experts

Information on Academic & Skill
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events of GEMS

Other Benefits as decided from
time to time

Those who paid subscription for GIS
India/Maps Today will be adjusted
appropriately.

Subscription to Maps Today may please
be considered as your contribution to
the mission of promoting use of maps
and GIS, particularly in view of new Map
Policy of 2021.

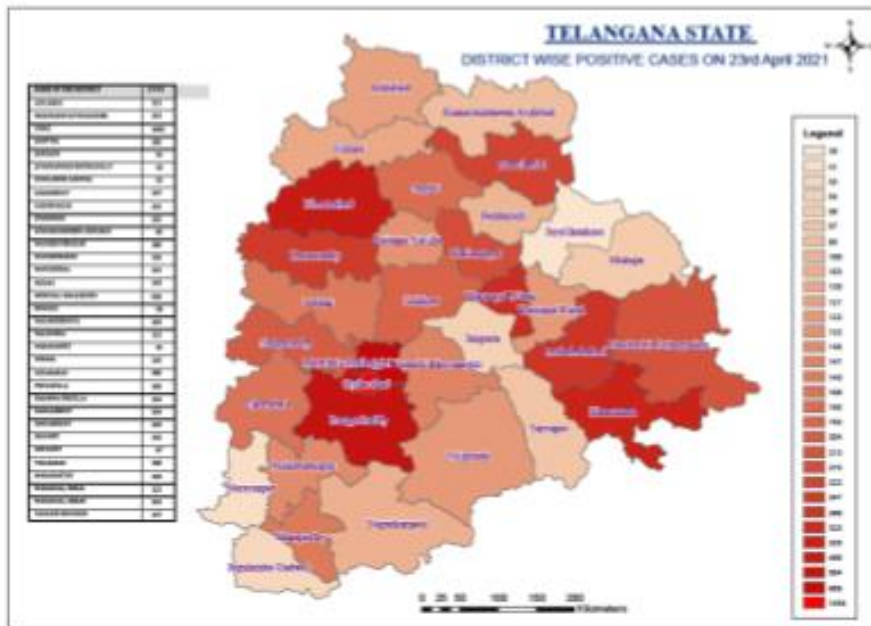
We seek cooperation & support from all
in managing the present difficult
pandemic situation. We will continue
our mission to promote applications of
Digital maps and GIS in various
activities to improve good governance.

Maj Shiva Kiran
Chief Executive

Day wise -GIS Analysis- Covid number of Positive cases

23-25 April GIS / Mapping analysis by Maj Shiva Kiran- Phd (development Studies- Geography) and K Venugopal (GIS Engineer)

Date	Rangareddy	Nizamabad	Warangal	Khammam	Mancherial
23 April	504	486	445	325	222
25 April	482	389	380	118	152
27 April	514	291	394	277	171



23 April Analysis

1. The District Cluster of Kamareddy, Nizamabad on the North-West side show a high number of cases

Inference

Probability of these districts bordering Maharashtra could be attributed to the large number of cases

2. The District cluster of Khammam- Mahbubabad & Bhadradi Kothagudem on the eastern side show higher cases.

Inference

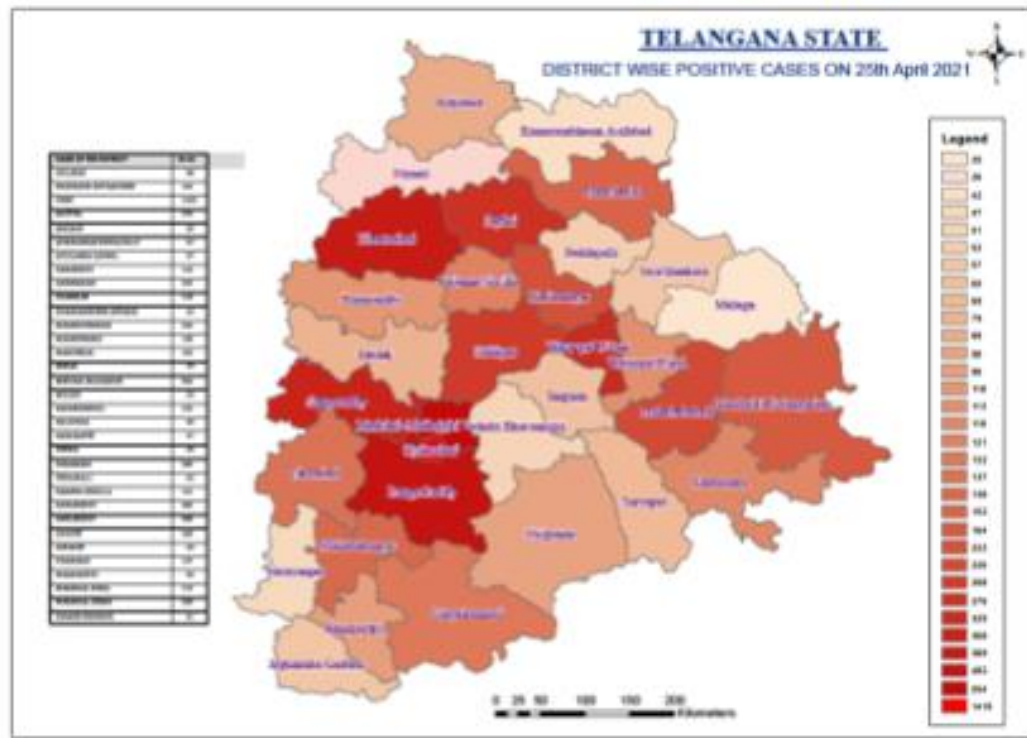
These districts border Andhra where too higher number of cases are being reported

3. Hyderabad and Rangareddy district show the maximum number of cases in the State

Inference

Urban Phenomenon and needs attention

25th April Analysis



Analysis- 25 April 2021

1. The District Cluster of Nizamabad, Jagtial and Mancherial on the North side show a high number of cases

Inference

Probability of these districts bordering Maharashtra and movement of people into these districts could be attributed to the large number of cases

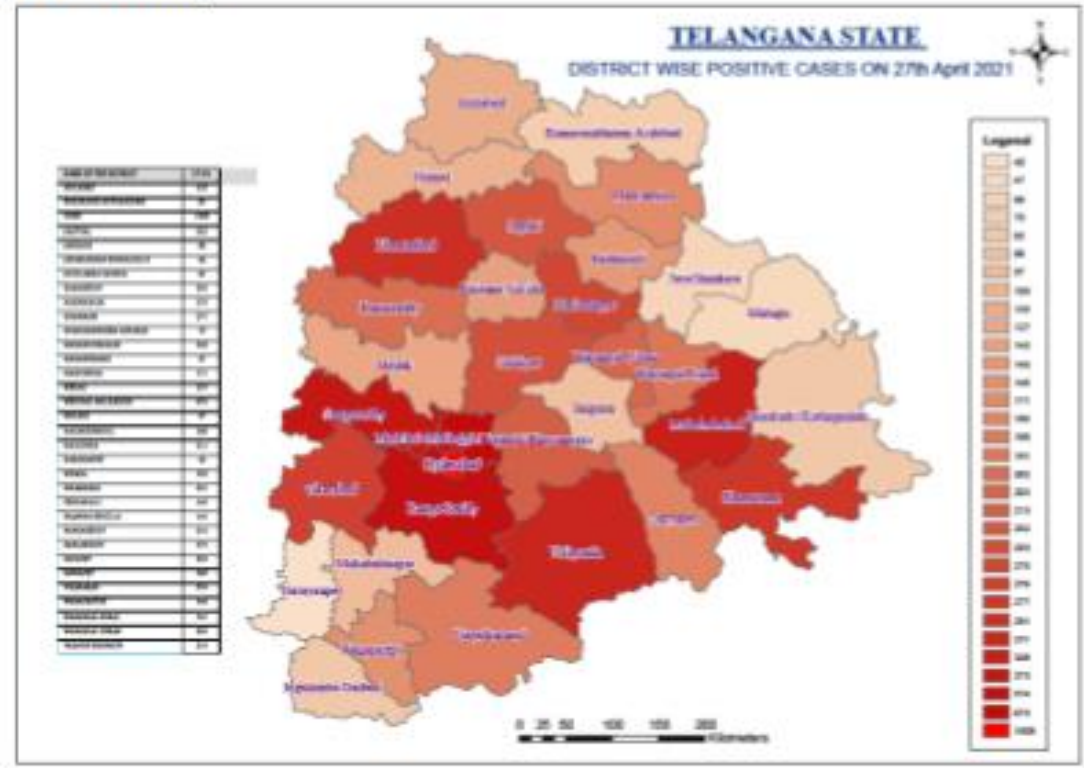
2. Hyderabad and Rangareddy district show the maximum number of cases in the State

Inference

Urban Phenomenon and needs attention

3. Rest of the state shows scattered distribution

27 April Analysis



Analysis- 27 April 2021

1. The District Cluster of Vikarabad, Rangareddy, Hyderabad, Yadadari, Nalgonda, Khammam & Mahububababad from west to east show a high number of cases

Inference

Indicates movement amongst these districts

Prioritisation of vaccination and distribution of Oxygen to these areas

2. Hyderabad and Rangareddy district show the maximum number of cases in the State

Inference

Urban Phenomenon and needs attention

3. North and South Telangana appear under control

Inference

Medical resources as well as manpower from these areas can be moved to critical areas.

Overview



RACURS, Russia

The PHOTOMOD software family comprises a wide range of products for the remote sensing data

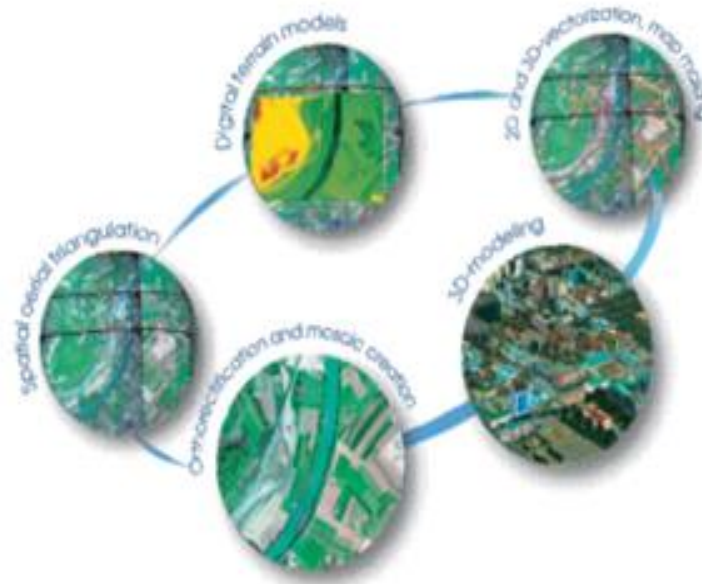
photogrammetric processing. This state-of-the-art software allows the extraction of geometrically accurate spatial information from almost all commercially available types of imagery, whether obtained by film or digital cameras, UAS, high resolution satellite scanners.

PHOTOMOD's flexible modular architecture and powerful import/export tools permit a variety of configurations: **Complete Digital Photogrammetric Workstation** (standalone configuration), high productivity distributed network environment for accomplishing large projects, complementary workplaces that can be used along with third-party systems to increase the overall productivity during the most time-consuming and labor-intensive operations like feature extraction and DTM creation.

Today PHOTOMOD is the most popular digital photogrammetric software in Russia and is also used in 70 countries all over the world. PHOTOMOD is the only digital photogrammetric system with the Russian Federation Ministry of Defense certificate and also the main digital photogrammetric software for the Federal Space agency of the Russian Federation (ROSCOSMOS) and Russian Federal Service for State Registration, Cadastre and Cartography (ROSREESTR)

General questions: info@racurs.ru

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- Underwater Leak Detection and Turnkey Solution
- Airborne and Ground Geophysical Surveys
- Route Planning & 3D Corridor Mapping
- GIS/CADD Data Processing
- Geodetic, Topographic, Cadastral, Hydrological Surveys

HONOURS & AWARDS

- 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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