



Sambus Geospatial Limited

THE PREMIUM GEOSPATIAL BULLETIN

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QUARTERLY NEWS BULLETIN ON GEOSPATIAL TECHNOLOGIES

NEWSLETTER

6th EDITION | MARCH, 2022.

P.5
Esri User Conference 2022.

P.8
Product Focus

FOREWORD

By Samuel Zoe

GIS is already changing how we think and how we act. It provides an integrative and comprehensive framework with the power of qualitative analytics blended with easy-to-understand geospatial visualization.

Here at Sambus, we resolve to work closely with individuals and businesses to design, develop and deliver a fully customized solution for the geospatial needs of organizations in West Africa. With our newsletter, we share insights on how to benefit from the myriad of opportunities in the geospatial technology space.

This edition of our newsletter focuses on the most recent geospatial industry developments, emphasizing how location intelligence is driving global digital transformation and achieving sustainable development. It showcases how various industries are leveraging geospatial technologies in a holistic manner for various projects, as well as introduces you to some of the newest products in the geospatial industry with the ability to integrate with other systems.

We hope that this newsletter will be useful in apprising every one of the opportunities that location intelligence provides. Sambus is grateful for your continuous support and contributions towards the success of our newsletters.



Samuel Zoe
Business Development Lead
Sambus Geospatial (Ghana)

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Sambus Geospatial is a Geographic Information System (GIS) and an applications development company that integrates technologies and provides a range of geospatial solutions. We have acquired an appreciable experience in the development and implementation of socio-economic and environmental related projects and methodologies using GIS.

SERVICE(S)

We serve our clients and stakeholders and support them in reaching their corporate objectives. As part of our services, we also help with ESRI GIS software installation, project support and capacity building, with the most complete GIS platform - The ArcGIS Suite, an integrated mapping, data management, planning and analysis, workforce optimization, and operational awareness platform, with a robust organizational database structure.

PARTNER(S)

Our partnership with geospatial industry giants like Esri, Trimble, L3Harris and Wingtra, coupled with our many years of experience in the region has given us an edge in the implementation of location intelligence solutions to support and empower decision making for Governments, NGO'S, Educational, Agro, Mining and similar Industries.

ESRI

Esri was founded with the vision that computer based mapping and analysis would make significant contributions in the areas of geographic planning and environmental science. Sambus Geospatial provides geospatial solutions using esri technologies among other related services.

- ArcGIS Suite
- GIS Training
- Consultancy

TRIMBLE

Sambus Geospatial is also the Authorized Resellers of Trimble GPS technology in West Africa. Trimble technologies integrates a wide range of positioning technologies including GPS, GNSS, laser, optical and inertial technologies with application software, wireless communications, and services to provide complete commercial solutions. See other products and services below.

- Mapping and GIS (GPS/GNSS devices)
- GPS Data Collection
- GPS Trainings
- Consultancy

L3HARRIS

L3Harris provides various industries with cutting edge image data processing products. Premiering the software for extracting meaningful information from geospatial imagery with the latest image processing and analysis tools regardless of the image format you use. Sambus Geospatial is the official distributor of L3Harris data imagery software in West Africa.

WINGTRA

WINGTRA - VTOL Mapping Drone used by professionals around the world for mapping and surveying applications to help improve decisions, reduce costs and risks, and improve returns on investment. Sambus Geospatial is an authorized dealer of WingtraOne VTOL mapping drone, used by geospatial specialists and industry professionals to capture aerial images for Surveying and GIS, Mining, Construction, Agriculture and Environmental Monitoring applications.

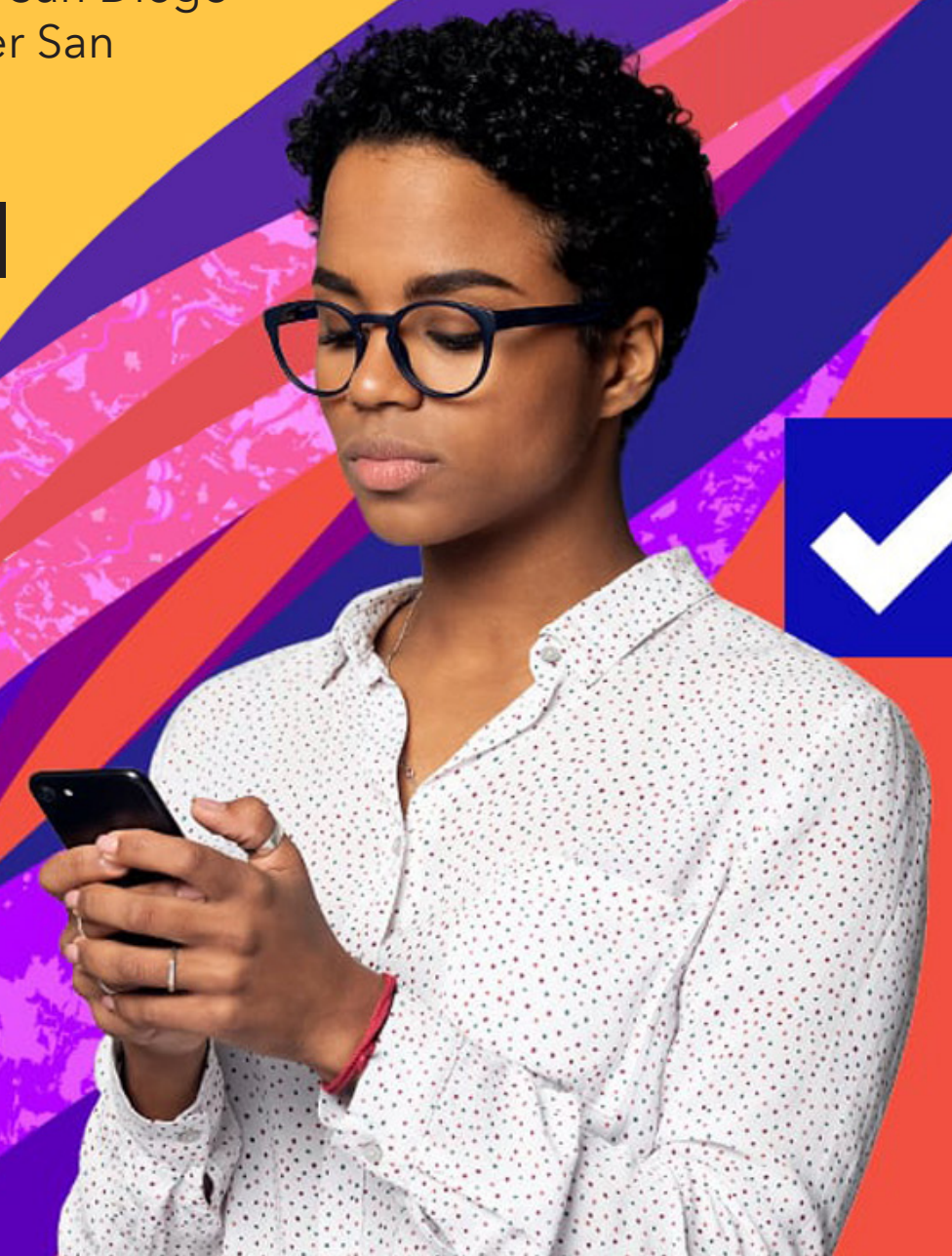
To learn more about our products and services, Visit our website at www.sambusgeospatial.com or send us an email via info@sambusgeospatial.com today

REGISTER TODAY!

ESRI USER CONFERENCE

July 11-15, 2022 | San Diego Convention Center San Diego, California

Register at esri.com/uc





AKUA ABOABEA ABOAH - MD, Sambus Geospatial.

WE ARE USING GEOSPATIAL DATA TO HELP ORGANISTIONS MAKE BETTER DECISIONS.

AKUA ABOABEA ABOAH, Managing Director of Sambus Geospatial in this interview with BusinessDay's FRANK ELEANYA speaks on the geospatial market in Nigeria and Africa and the opportunities. The company opened its Lagos office recently and is looking to help the Nigerian authorities and businesses understand the need for geospatial technologies in aiding decision making and monitoring operations from electricity to military.

~ David Ijaseun - Mar 14, 2022

Sambus should be 35 this year, tell us about the journey so far?

That's an interesting question. It reminds me of my father, because he started the business, registered it 35 years ago, May 1987. Now, we have offices in Accra and Kumasi in Ghana. We also have offices in Abuja, Kano and this year, we are opening an office in Lagos. I think of these five branches, and I'm proud of where we are after 35 years. In the next five years, we are thinking of setting up offices in Liberia, Gambia, and Gabon.

So what exactly does Sambus do?

Think of Sambus as a geospatial company, which has affiliations and franchises that support special knowledge and information dissemination. I use the example generally of utility networks. So, we all want electricity, we all want water, but how do we effectively get water or electricity to the customer, because they pay

for value, the service, you must always get it and get it well.

At what point did you or did your father realize that this was a challenge that needed to be addressed?

If you look back at the founder's background, you'd realize that he, at a very young age, was the best SAT candidate in Ghana, then he won a full scholarship to Princeton University. While in Princeton, he made very valuable networks, and in those networks, one of the key determinants was technology. He came back to Ghana with the mindset that he was going to make Ghana technologically advanced. That was 35 years ago. He started off by going into high core, what we call IT systems. Along the way, he stumbled upon this, and he thought, this is a great way. I mean, this is how you can see maybe a road in the US being constructed in this angle because somebody has done the analytics and realized that the traffic in this area requires that we construct a road to manage that traffic. And that can only be done on a map, and it cannot be analog, it has to be digital. He had some friends with whom he partnered and brought some on board as partners. This is where we stand now. It's very beautiful because now it's more needed than ever.

When he started, I remember there were comments when I joined the business, that's the first 10 years, they didn't do anything in this area, because of course nobody understood what was happening. But now people have a sense of understanding.

So you've been in the market for a long time, 35 years, what's the size of this market?

Well, when you say the size of the market, I come to a point to say that every industry needs this.

So, it's the whole world, I mean, the whole of West Africa needs this. We play in oil and gas, we play in agriculture. We have a big customer coming up wondering how much fertilizer they should give to their farmers and how much that fertilizer should yield for them. They want to know, in real-time, whether these fertilizers are applied well, and how the fields are being managed so that they can get the results. This is cocoa. So, you know how valuable cocoa is, that's a customer. We work with, like I said, utility, we work with gas. We work with intelligence, defence, because they want to know the security concerns in this country and other countries. We even work with the Navy. So, there's no industry that we do not play in because people want to know what is happening in every context on a data site. I won't give us the size, I will say, we don't have any limits, we are everywhere.

One of the tools you use is drones, but looking at the drone market in Africa, especially Nigeria, regulation around drones is not very clear. How do you work around that?

As we speak, we're still navigating that terrain. We're still trying to find our feet on that level, and we've been trying to follow the due process and work through things as we should, that's where we are right now. I can't give you the end because we're not there yet, but we know that we will get there because of what we often bring to the table.

So, I think they understand that it is time for them to embrace this. Of course, with the roots and the structures, because it's a good thing, and it could also be a bad thing. So, we have to acknowledge both ends, and then make sure that we can convince the country that this is a good thing we are bringing.

How's the discussion going, are the regulators looking positive?

Yes, they're very positive. That's why I think it's what we bring at Sambus. They know us for the integrity of our business skills. We've been around for 35 years, and it's not because we are better than anybody else, but it's because of our values. And so, sometimes the value speaks for itself.

How large do you think the geospatial industry is going to get in Africa?

The last time I checked, they said it was worth \$18 billion in Western Africa, this was the last time I checked. I don't know where it will be in the next five years.

What are the major things driving the growth?

It's the value or the impact it creates. We all go to other countries and we see the development and you want to understand what the foundation for that development is, and it's just visual, and that knowledge helps you.

It helps you plug in quite easily, helps you in your defence, helps you in revenue generation for your utility companies, helps you in oil and gas management. So why wouldn't you want to embrace this technology?

ArcGIS Insights

Self-service location analytics software

Get started with ArcGIS Insights

ArcGIS Insights leverages the power of the ArcGIS platform to offer you flexible implementation and deployment options. Select the offering that fits your business needs.

SaaS deployment

Get up and running quickly. Always use the most up-to-date technology anywhere, on any device, anytime.

On-premises deployment

Make ArcGIS Insights accessible across your organization, behind your firewall or on infrastructure that you manage.

Desktop deployment

Complement your SaaS or on-premises deployment with Insights installed natively on your Windows or Mac.



Visit www.esri.com

Trimble MX7

Mobile Mapping System



Highly portable mobile mapping system to capture precisely positioned street-level imagery.

The Trimble® MX7 is a vehicle-mounted imaging system enabling fast and productive capture of road, infrastructure and city environmental data.

Utilize the Trimble MX7 to capture 360-degree, geo-referenced images at highway speeds to vastly reduce project operating cost whilst improving public safety. Then, use Trimble MX software to organize, visualize, interpret and efficiently extract structured data that can be integrated into a GIS and shared across your organization or via the Internet.



Visit geospatial.trimble.com for more information

PROCESS AND ANALYZE ALL TYPES OF IMAGERY AND DATA

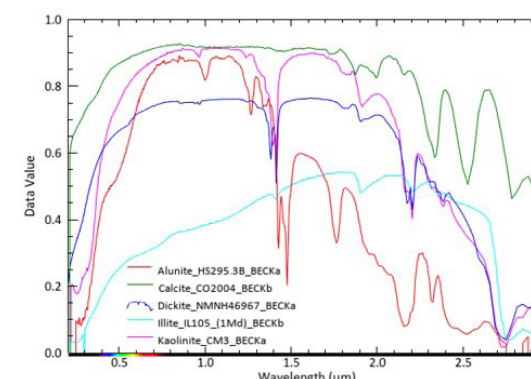
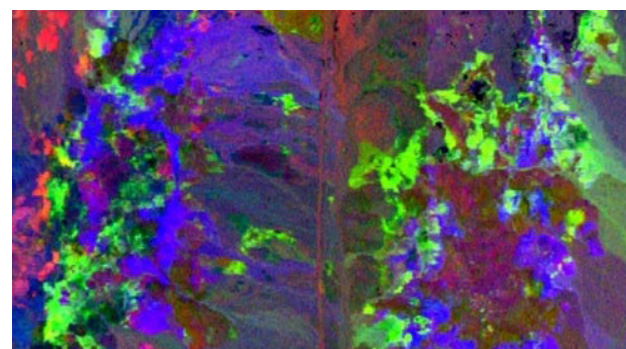
ENVI | Spectral Analysis

ENVI software is the definitive leader in spectral image processing with the top tools to analyze multi and hyperspectral data including spectral target detection and identification. These tools are based on established, scientific methods for spectral analysis – using pixel responses at different wavelengths to obtain information about the materials within each pixel.

Best in class and proven by experts

ENVI spectral tools can detect targets, calculate vegetation and forest health, map materials of interest and much more. They are used to measure marine debris and pollution, analyze wildlife habitats, map oil slicks, evaluate water quality, mitigate wildfires, detect methane leaks, identify minerals, map vegetation health and assist with many Defense and Intelligence applications.

There are interactive capabilities found exclusively in ENVI including spectral library support and workflows that are needed to process hyperspectral data. ENVI's spectral algorithms have been peer-reviewed, tested and ultimately proven by the remote sensing community over several decades.



Visit www.l3harrisgeospatial.com

The all-in-one drone: large coverage, high resolution and accuracy



WingtraOne

Resolution	down to 0.7 cm (0.3 in)/px GSD
Accuracy	down to 1 (0.4 in) absolute accuracy
Coverage	400 ha at 3 cm/px (988 ac at 1.2 in/ px) GSD

Wingtra One drone offers broad coverage, brilliant resolution and high accuracy in one mapping device. With such unprecedented functionality, WingtraOne can map a quarry the size of 240 American football fields in an hour's flight. The resolution of the final map allows to zoom in and see tiny details such as a coin lying on the ground. And what is best- it is possible to know the exact coordinates of the coin down to an absolute accuracy of 1 cm (0.4 in).



www.wingtra.com

ArcGIS For Defence Intelligence

Read the latest articles developed by Samburg Geospatial on various industry specific topics.

Visit www.samburggeospatial.com

Utilizing the ArcGIS Excalibur for Military intelligence Operations.

No military organization can conduct its functions effectively without accurate, concise, and sufficient intelligence. Military intelligence is a military specialty that uses information collection and analysis approaches to provide guidance and direction to assist commanders in their decisions. It involves various means of gathering and analyzing critical information to achieve national security.

As part of the military organization, military intelligence advises defence policymakers on force planning, major acquisitions, and political-military matters. They provide threat projections that guide the military services on how best to "organize, train, and equip" their forces and warn of potential crises. Failure of intelligence makes an ambush attack a success.

Military Intelligence consists of phases, which include Planning & Direction; Collection; Processing; Analysis & Production, Dissemination, and Feedback. The process is circular in nature, but movement between the stages can be fluid. Intelligence uncovered at one step may require going back to an earlier step before being able to move forward.

Military intelligence is not static. It evolves and constantly adapts to technological and geopolitical advancements. The necessity for military intelligence agencies to continue to adapt modern technology and techniques for carrying out military intelligence operations is a major priority.

With a focus on geospatial intelligence, the ArcGIS Excalibur modernizes and enhances image-based workflows by unifying traditional, separate geospatial and imagery-based views into a single field of vision. As a web-based application, ArcGIS Excalibur enables users to search, discover, and work with all types of imagery. The integrated search and discovery experience provides multiple ways to access imagery, easily create markups, take measurements, and apply image enhancements or predefined image renderers on oblique or orthorectified imagery. Imagery projects provide a dynamic way to organize all the resources required for an image-based task. Share results as imagery-derived reports or dynamic layers with key stakeholders for smarter decision-making.

ArcGIS Excalibur allows for Web-Based Imagery Exploitation, Search, and Discovery of remotely sensed data, which addresses the phase of data and intelligence collection. The ability for intelligence officers to access imagery in seconds from available image services and open it interactively from the search results within this single application helps with gathering imagery and intelligence from diverse sources. Users can perform an interactive search of available imagery, set search settings, preview imagery, view image metadata, and queue images for further use, such as digging deep into the publicly available satellite datasets to locate movements of troops or refugees, or the extent of an attack on a particular area.

The ArcGIS Excalibur also has imagery exploration and analysis capabilities, which include utilizing orthorectified and oblique imagery side by side, which is integrated with authoritative geospatial layers to maximize analytic value. This addresses the processing and analysis phases of military intelligence, allowing users to analyze imagery data to gain insights on enemy locations, movements, and logistics. It also allows for a spatial-temporal analysis to study trends and patterns of enemy movements over time.

Users can create markups, measurements, and apply image enhancements or predefined image renderers on oblique or orthorectified imagery. In addition, the ArcGIS Excalibur software allows for the integration of collected data to study patterns, such as visualizing locations where enemies have deployed improvised explosive devices (IEDs). Furthermore, it allows planning teams to customize each map by turning on and off separate geographies, basemaps, threats, and environmental layers, allowing them to explore the interactions of maneuvers in physical space. ArcGIS Excalibur also supports in intelligence sharing through uploading and analyzing Imagery for Dissemination. It allows its users create imagery observation reports and interactive briefing products, monitor product metrics, and share analysis as dynamic imagery layers.

In summary, whether it is gaining a strategic advantage or protecting resources and lives, decisions are only as good as the information they are based on. Geospatial intelligence is a force multiplier for the Navy, Air Force, and Army, bringing imagery intelligence and geospatial analysis, mapping, charting and geodesy into one discipline. Geospatial products provide a distinct and tailored view of the battlespace, which creates a shared understanding of the operating environment across the levels of war. Additionally, even with the right software, tailored visualization products cannot be created unless the user has the knowledge and skills to manage, store, discover, and/or create spatially enabled data.

It is also worthy to note that, although one can use all the quantitative data they can get, it must be modified based on their own intelligence and judgment. That is why ArcGIS Excalibur supports information dissemination by allowing different stakeholders, decision and policy makers, and others to visualize and easily understand geospatial intelligence information to scrutinize and make sound decisions.

Timely and effective use of intelligence is a major characteristic of a secure society, just like the failure to obtain or failure to use good intelligence can be an indicator of insecure society. It changes for known or knowable reasons, which may include bureaucracy and an attitude of feeling over-confident with a state's capabilities. It may also be because of a state being unable or unwilling to effectively utilize "best" intelligence at its disposal.

Every Intelligence organization deserves the location advantage. Geospatial Intelligence allows military organizations to capture real-time data related to the event, command, and mission development. Command leadership can collect, and review reports submitted by operations personnel from any connected device. This enables immediate interaction between the technology and military personnel, allowing for rapid information dissemination and intelligent decision-making.

GIS in Oil and Gas

Many companies have embraced digital transformation in their decision-making processes today due to smart technology and connected systems that continue to prove how efficient they can be in everyday business operations. The Oil and Gas (O&G) industry is no exception to this technological trend.

The impact of such embraced technologies, such as Geographic Information Systems (GIS), leads to the development of operational landscape modules for business expansion while industries continue to reap the benefits of improved productivity, higher efficiency, increased cost savings and effective monitoring. GIS encompasses systems that can handle location data and spatial information within the corporate office and the operational field. The cycle begins with data collection and subsequently, the collected data is structured, processed, managed, and analyzed within an allocated database in the system, to guide decision making and productivity boost.

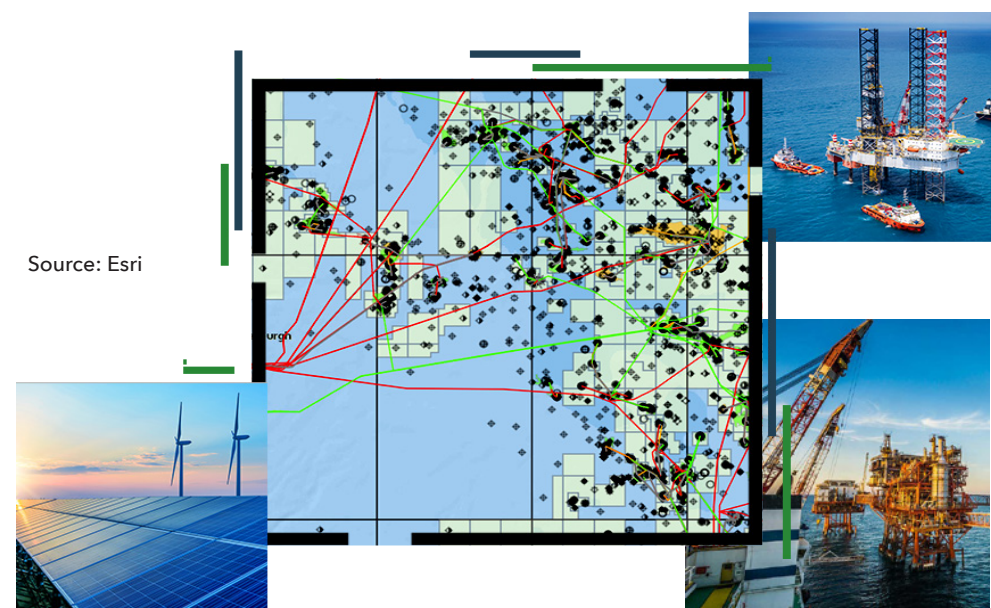
Usually, GIS systems require regular updates with data in real time within a cloud system specially dedicated to the storage of locational data. In most, O&G companies, locational data also tends to explore streaming what is termed as Internet of Things (IoT) data on maps and dashboards, identify temporal patterns, and extract location-based intelligence using GIS infrastructure. The Internet of Things (IoT), simply defined as a network of computers, consists of devices connected to the internet all over the world that are constantly collecting and sharing data thanks to the advancement of wireless network computer chips.

In addition, GIS professionals within the O&G industry oftentimes leverage spatial-big data to gain real-time visibility into the day-to-day operations of the industry as they make efficient decisions based on increased situational awareness.

To dive deeper into the role of GIS in O&G, one needs to understand the general operational workflows within the industry. Oil field management workflows involve exploration processes such as seismic operations, specific identification of mines using coordinates, and field practices such as pipeline network management, which is used to transfer crude sources to refining plants, and management of facilities, which also hold the resources needed for operational activities. GIS in this field takes all the happenings in the field and replicates them in a digital way through modern visualization techniques to make better and well-informed decisions to increase performance. To emphasize the importance of GIS in the O&G field, it is important to note that data is a critical asset in a firm's production, sale, purchase, exchange, processing, handling, storage, transporting, or marketing of related products. These factors are quantifiable in GIS as it utilizes data sensors and applications expressly developed for that purpose...

CASE STUDY:

During a petroleum user conference, Marathon Oil gave a presentation whereby they leveraged on the IoT Data Feed to explore, collect, and integrate industry related information into digital Maps and Dashboards. The company used IoT feeds to enhance operations and logistics by optimizing feeds from the online fleet of data which is processed to understand the most optimal routes to wells, as they calculated the minimum distance to be covered before reaching the desired location, using ArcGIS. This help to reduce over 20% on their operational cost.



The above illustrations on GIS use in the O&G industry keep endeavouring to reduce costs of operation, improve performance, and reduce the risk levels of operation. The introduction of location intelligence systems has proved to be the answer as GIS systems are able to enable users to efficiently manage oil production processes and assess the environment or field of operations. This has significantly improved the flexibility of work within the O&G industry and seamless workflows tend to influence oil exploration plans, projects, and initiatives.



FEATURE IN OUR NEXT NEWSLETTER

Don't miss out on our next newsletter.
Get in touch with marketing@sambusgeospatial.com
to feature your projects and articles.

UPCOMING EVENTS

May 10-11, 2022.

GIS for a Sustainable World Conference

A Virtual Event Co-hosted by the United Nations Institute for Training and Research (UNITAR) -United Nations Operational Satellite Applications Programme (UNOSAT) and Esri.

Register - <https://www.esri.com/en-us/about/events/gis-sustainable-world/registration>

July 11-15, 2022.

Esri User Conference

Organized to help you learn to use the latest ArcGIS tools in and Applications in different industries.

Register - <https://www.esri.com/en-us/about/events/uc/registration>

November 16, 2022.

World GIS Day

Celebrating the initiation of GIS by Spatial Analytics World Leader, Esri. www.esri.com

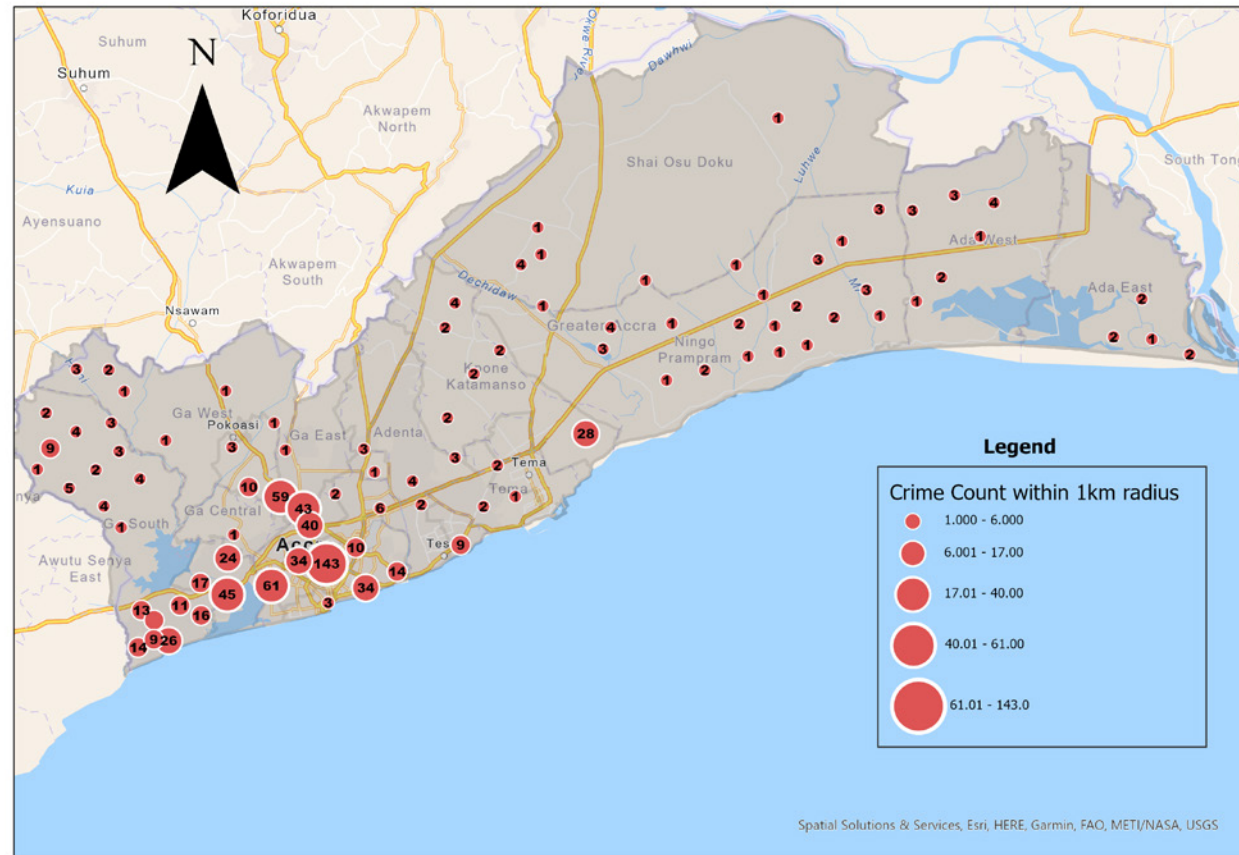
Register - <https://www.esri.com/en-us/about/events/uc>



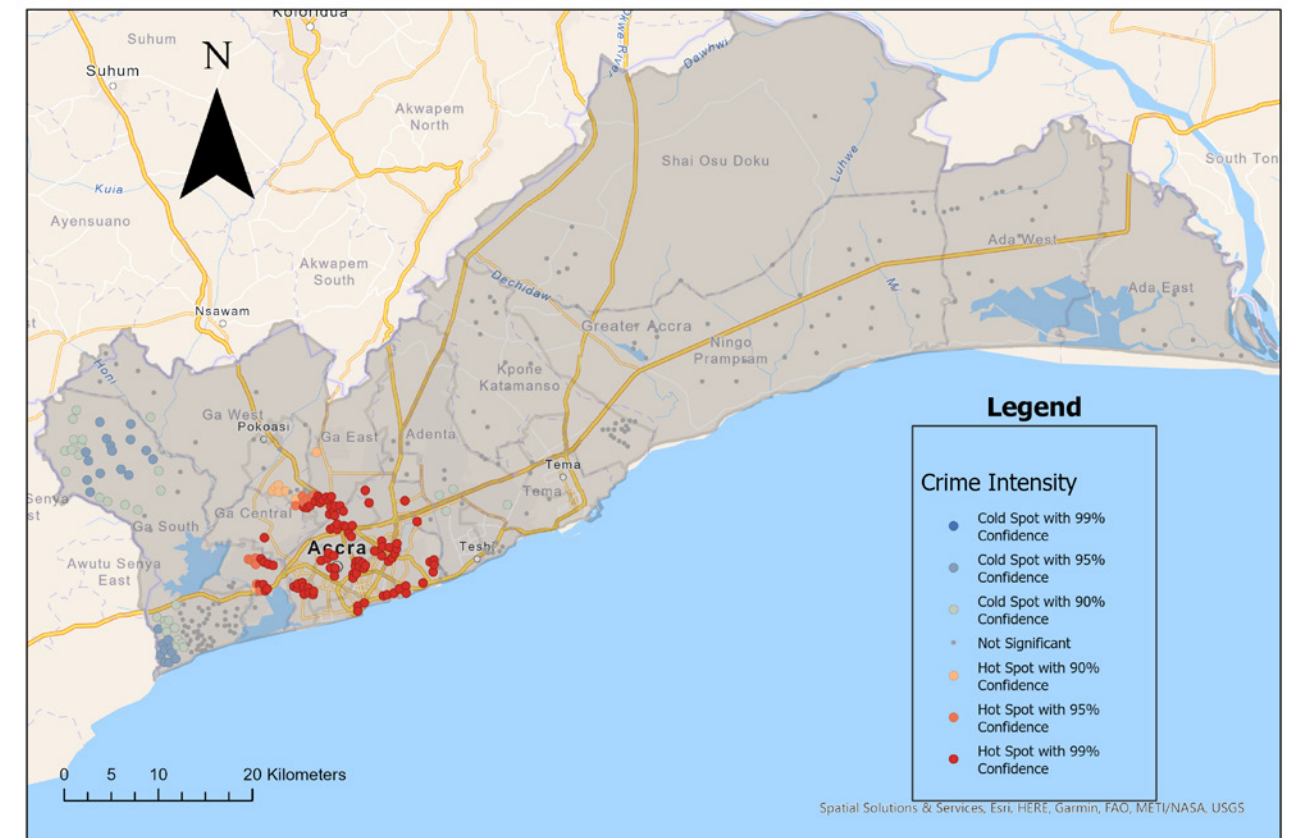
MAP GALLERY

SEE THE BEST MAPS DEVELOPED BY
GIS PROFESSIONALS FOR VARIOUS
INDUSTRIES

Crime Distribution Map of Greater Accra

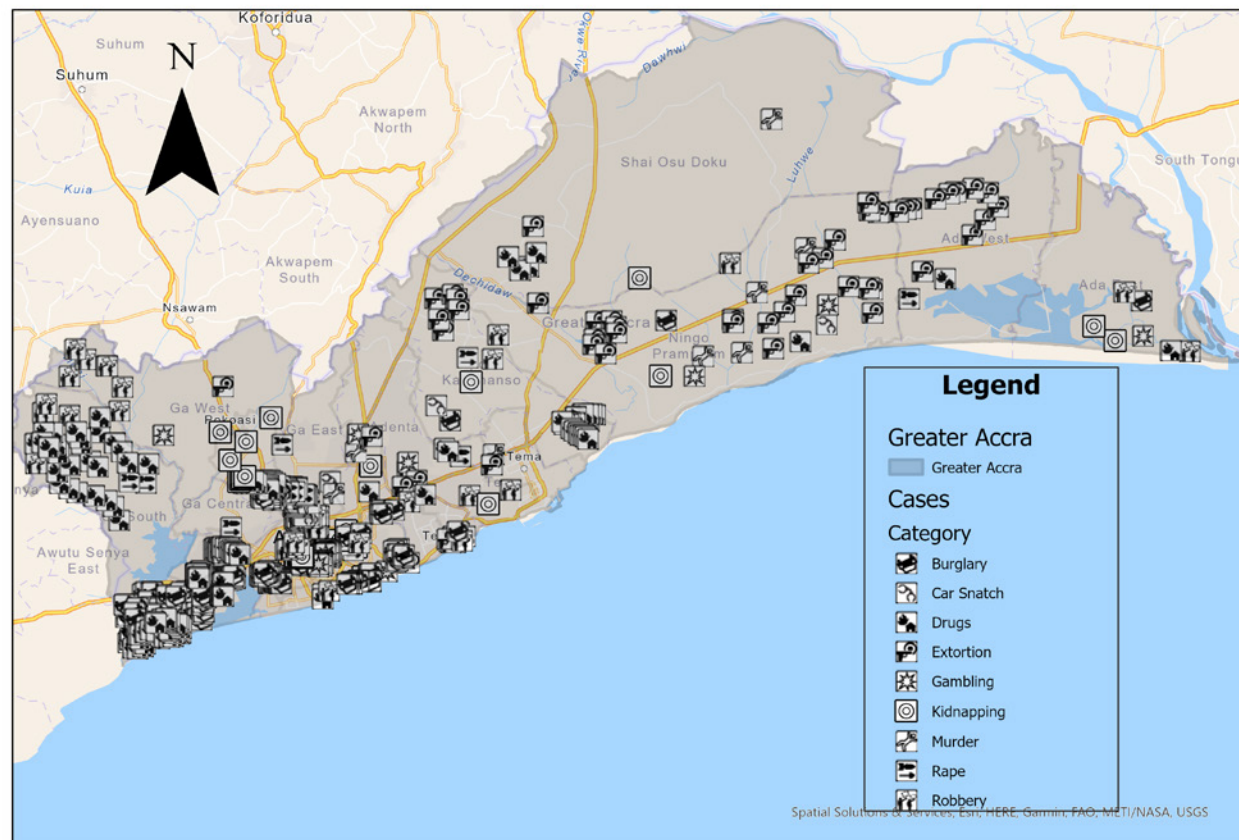


Crime Intensity Map of Greater Accra



Credit: ArcGIS Solutions

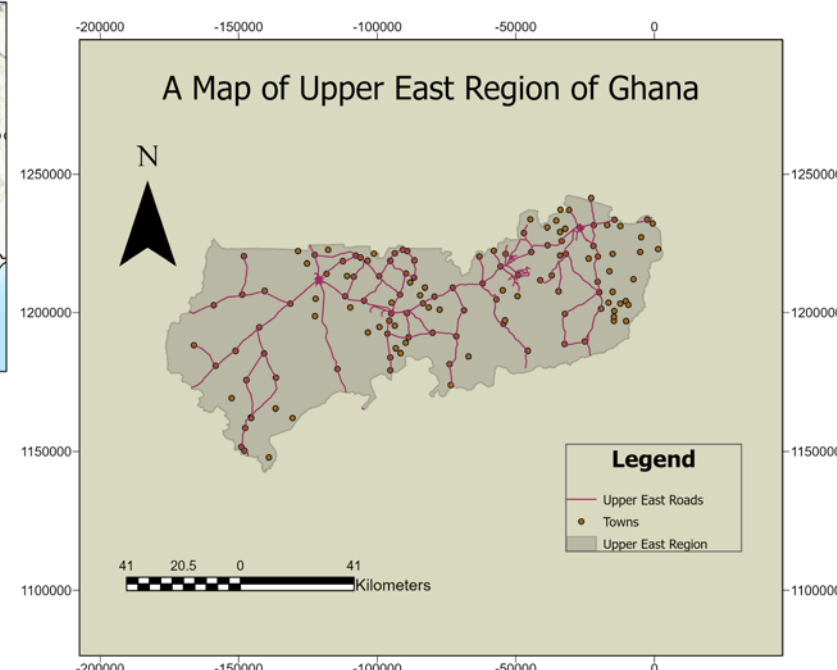
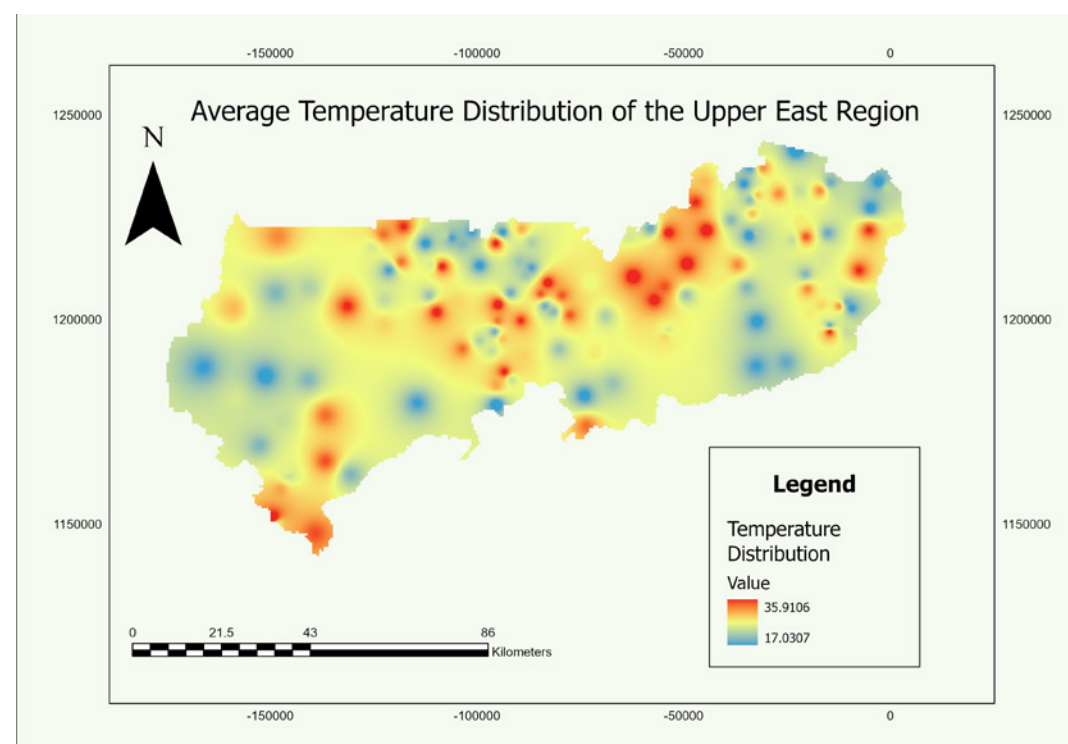
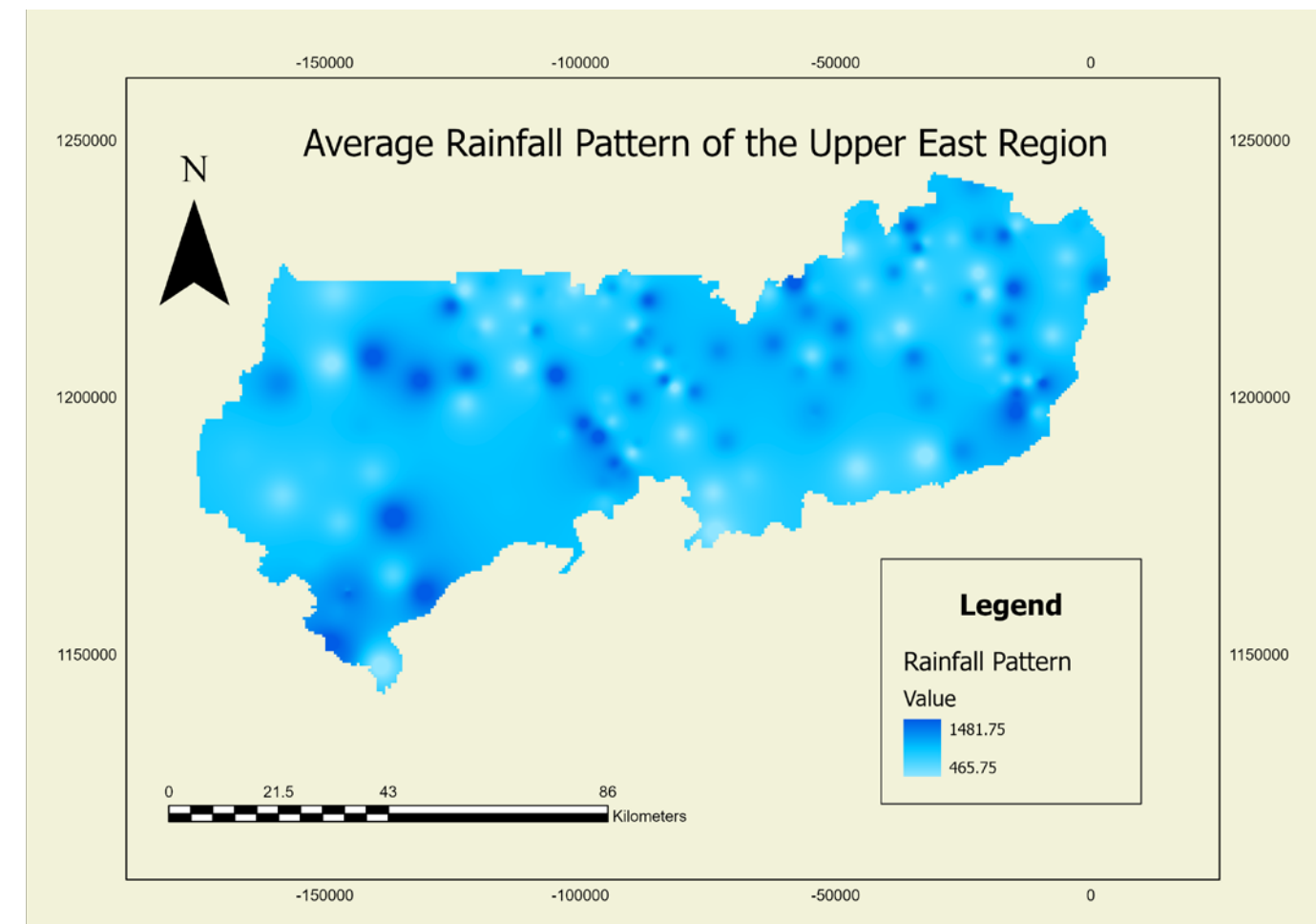
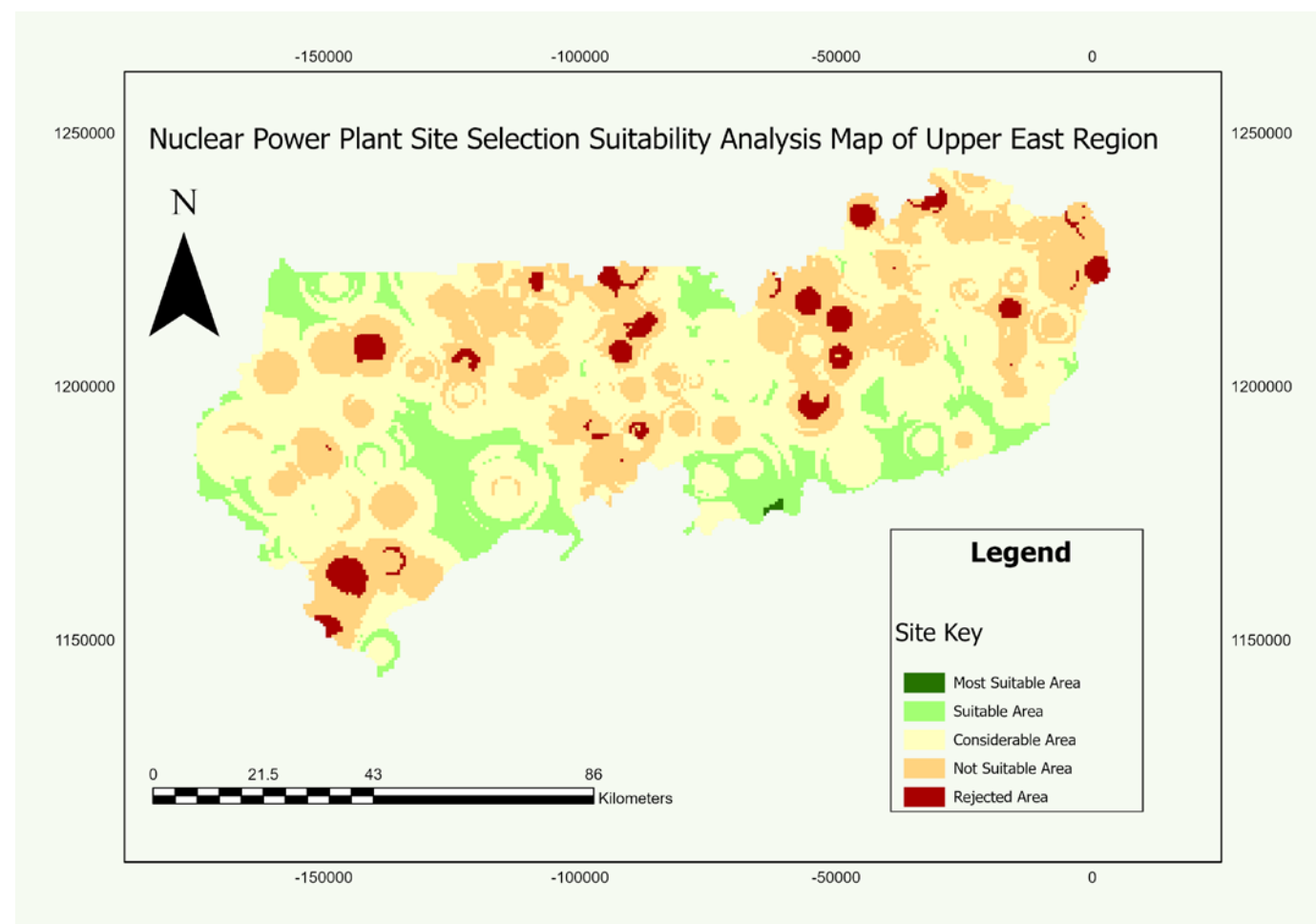
Crime Distribution Map of Greater Accra



CRIME ANALYSIS OF GREATER ACCRA

Location intelligence (LI) is achieved via visualization and analysis of geospatial data. Geospatial data analysis enhances understanding, insight, decision-making, and prediction. In the field of security, location intelligence assists security agencies by using mapping and analytical methods such as hot spot analysis to identify crime trends and patterns, identify problems, allocate resources, and solve crimes. This map demonstrates how security organizations can use ArcGIS Pro to respond intelligently to crime.

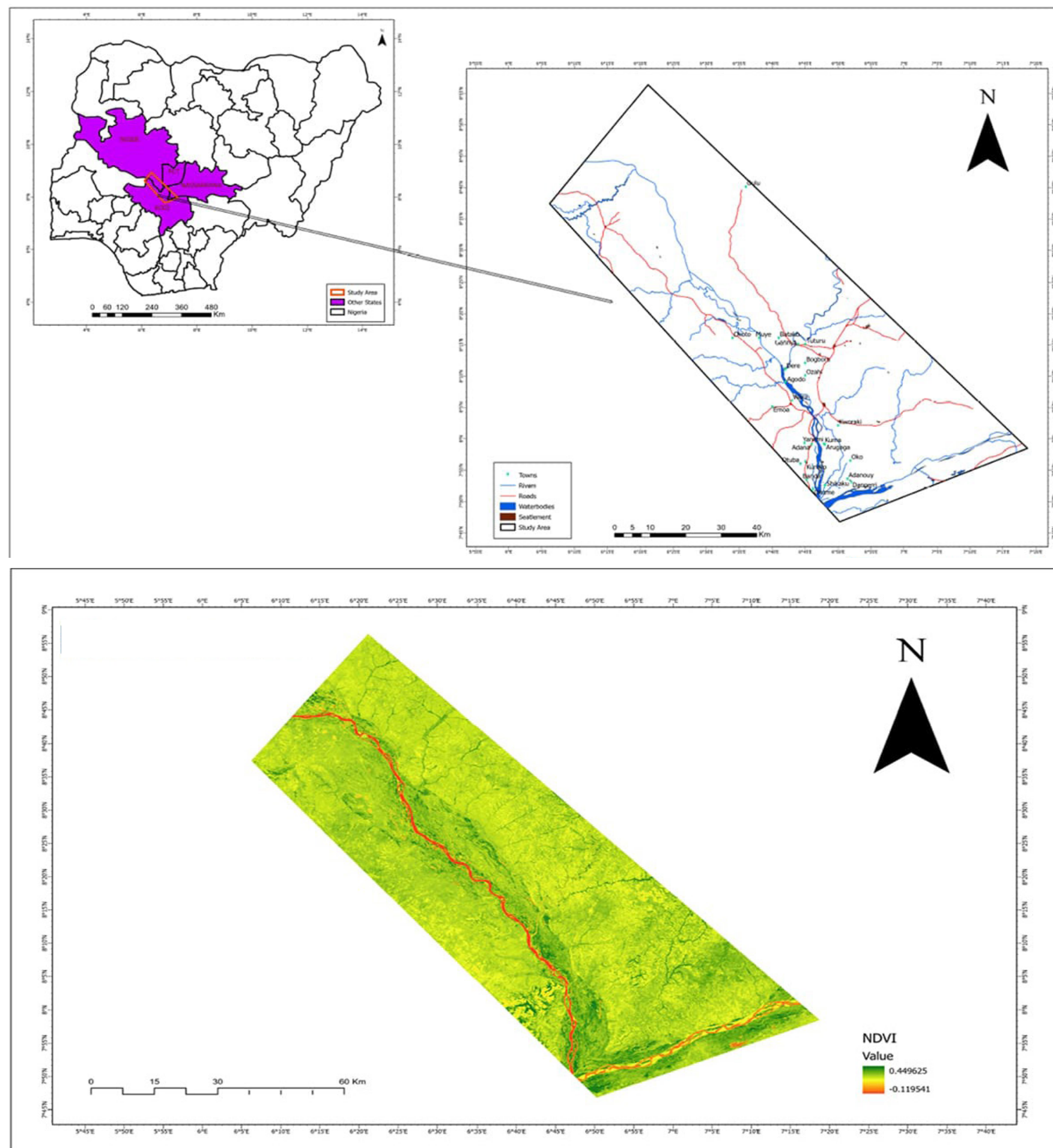
Contact: Kwabena Denteh
Software: ArcGIS Pro 10.9



SITE SELECTION OF AN ELECTRICITY PLANT

Site selection, or suitability analysis, is a type of GIS analysis that determines the ideal location or site in decision making. This is a site selection project in the Upper East region of Ghana to find the best place for a power company. The project was based on four criteria: average temperature, average windspeed, and average rainfall for the last 40 years, as well as distances from key towns in the Upper East Region. Using ArcGIS pro, an ideal site for the electricity project was proposed using weighted overlay analysis from the weights assigned to the criteria by the client. Site selection analysis can be used in a variety of situations. Examples include choosing a school for your kids in an area, selecting a new location to stay based on a new job, and an investor selecting the best site for a beach resort.

Contact: Kwabena Denteh
Software: ArcGIS Pro 10.9



SPATIAL ANALYSIS (NDVI) OF BASIN IN AMAC, ABUJA - NIGERIA

The Normalized Difference Vegetation Index (NDVI) analysis, is critical for managing urban greening and the thermal environment. The biophysical components of the environment are constantly changing daily due to vegetal removal, environmental degradation, and atmospheric pollution.

The changes have resulted in an increase in environmental temperature and an energy imbalance. The Normalized Difference Vegetation Index (NDVI) is a Remote Sensing (RS) index that measures the difference between near-infrared (NIR) that vegetation strongly reflects and red light (R) that vegetation absorbs to quantify the amount of vegetation in a given area.

When the NDVI value is negative, it indicates the presence of water; when it is close to +1, it suggests the presence of dense green leaves; and when it is close to zero, it indicates the absence of green leaves, which could indicate an urban area. As a result, urbanization has impacted NDVI values in cities, as cities account for only 2% of the total global surface area but house over 50% of the human population. The urbanization process has resulted in the widespread removal of vegetation from urban surfaces and replacing these with urban fabrics capable of increasing thermal fluxes, resulting in human heat discomfort in urban areas.

This research seeks to analyse the Normalized Difference Vegetation Index for agricultural purposes in the lower part of the River Niger. The study area cuts across FCT, Nasarawa, Niger and Kogi state, respectively. Kogi State is one of Nigeria's 36 states, located in the country's Middle Belt. The confluence of the River Niger and the River Benue occurs in Kogi State's capital, Lokoja, earning it the nickname "Confluence State." Kogi State is a crucial centre of commercial trade in Nigeria due to its strategic location in the middle of the country and access to these significant rivers. Igala, Ebira, and Okun make up most of Kogi State's population. Agriculture continues to be the mainstay of the Kogi State economy.

Contact

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Software

ArcGIS Pro 2.7.2.

AUTOMATIC SHORELINE DELINEATION USING GEOSPATIAL TECHNOLOGY

Delineation of shoreline is a fundamental task practiced in different fields for development of setback planning, erosion-accretion studies, hazard zoning, boundary monitoring and predictive modeling of coastal morpho-dynamics.

Shoreline delineation is difficult, time & cost effective, and sometimes impossible for entire coastal system when using traditional ground survey techniques. In Recent times, remote sensing and geographical information system (GIS) techniques and application are best considered as a more simplified method in the extraction and delineation of shoreline position and detection of shoreline changes.

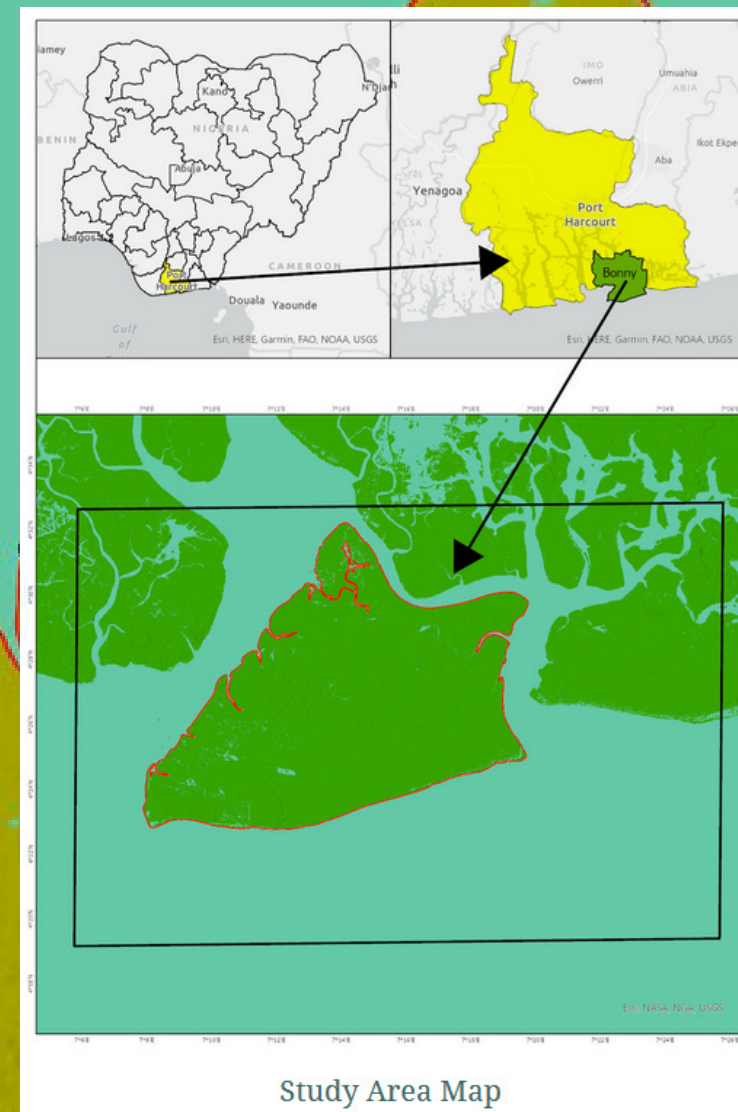
This project focuses on techniques using the Tasseled Cap and Normalized Difference Vegetation Index (NDVI) approach in ArcGIS Pro to delineate shoreline automatically. This approach takes advantage of the fact that land and sea around the coastal zone become distinct and easily identifiable, which helps in the delineation process. The geoprocessing tools considered during the process are Landsat Tasseled Cap, NDVI, Category Creation for Land and Sea, Classify Land and Sea, and Create Shoreline Boundary.

After Shoreline was extracted, the ArcGIS Tool for generating points along lines was used to extract points at intervals of 1km. Further Geo-processing analysis was also conducted to extract the coordinates of these points to populate the attribute table for any other field activities that would be required.

In conclusion, due to the fact that Shoreline delineation is a rigorous process when using traditional ground survey techniques, Using remote sensing technique can help in the extraction and delineation of Shorelines from different years to create a spatial temporal data of shorelines in a study area, within the a particular season or different seasons of the year for Shoreline monitoring and effects of tidal occurrence in different seasons of the years.

Contact
Benedict Mberede

Software
ArcGIS PRO





Sambus Geospatial is measured on the quality, innovation, focus and longterm relationships and results. Our custom-made solutions are carefully developed by our professional service Team using our technologies and Intelligent Information Management Systems to deliver end-to-end Information Technology solutions to the client's specific needs, as we take full responsibility for Installation support, system maintenance and Training Services required. We are measured on quality, innovation, focus on long term relationships and results.

Get In Touch





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