

4. Писаренко В.Н. Безотходные технологии при переработке сельхозпродукции: Агроэкология: веб-сайт. URL: <https://agromage.com/book.php?id=12> (дата звернення: 19.10.2021).

5. Технологія консервування плодів, овочів, м'яса і риби [Текст]: підручник: рекомендовано МОН України / Б. Л. Флауменбаун [та ін.] ; за ред. Б. Л. Флауменбаума. - К.: Вища школа. 1995. 31 с.

Language adviser: Kryvonos I.A., Senior Teacher of the Department of Foreign Languages, Dmytro Motornyi Tavria State Agrotechnological University

THE IMPORTANCE AND PRINCIPLES OF OPERATING OF SUSTAINABLE GEOSPATIAL SYSTEMS IN UKRAINE TODAY

Semeniuk Y.O., lizzavetta.44@gmail.com

Dmytro Motornyi Tavria State Agrotechnological University

Land reform in Ukraine is not limited to lifting the moratorium on the sale of agricultural land and the introduction of a land market. It also adopted a number of less popular but no less important pieces of legislation. One of them is the Law of Ukraine “On National Geospatial Data Infrastructure”, adopted by the Verkhovna Rada of Ukraine on April 13, 2020.

What is Geospatial?

The term geospatial is a term that has only recently been gaining in popularity and is used to define the collective data and associated technology that has a geographic or locational component. A search using Google’s Ngram Viewer (Fig.1.) shows that the term only entered literature during the late 1980s and has rapidly been rising in frequency ever since then.

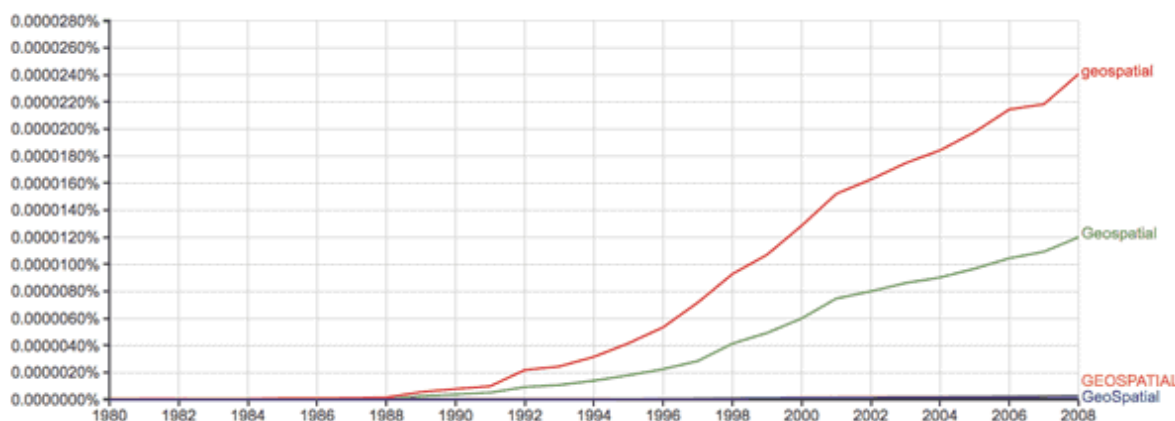


Fig.1. The term “Geospatial” in literature

Geospatial technology refers to all of the technology used to acquire, manipulate, and store geographic information. GIS is one form of geospatial technology. GPS, remote sensing, and geofencing are other examples of geospatial technologies.

Restrictions on COVID-19 from 2020 have affected the mode of operation and consumer demand. Global construction, changes in land cadastres, remote management of territories and objects have influenced the emergence of a large number of new modern GIS programs in different countries. Compared to 2019, the demand for geospatial information and GIS technology has more than tripled.

So it makes sense to talk about the basic principles of a sustainable geospatial system:

- **Focus on user needs**

People of the 21st century are used to getting everything easy and fast. That is, the system must be easy to use and quickly respond to user requests.

Spatial planning considers the world in layers. New geospatial technologies, artificial intelligence, big data processing, and cloud computing facilitate complex analysis to support solutions. If you compare the availability of such information with what it was 5 years ago, modern technology allows you to get the necessary data in two clicks.

- **Ongoing involvement at all levels**

Blockchain technologies and tools introduced in cadastre and land management, as well as for property valuation and management, can add confidence and clarity to investment decisions, making them simpler and faster. By linking existing ownership, valuation or other property data to digital systems or artificial intelligence, the blockchain provides a transparent digital relationship.

- **Ensuring the integrity of information**

Each sensor and device connected to the Internet has location information that specifies the context of the transmitted information. The use of GNSS helps to collect all the different sensor data in a common frame of reference for easy data combination. Moreover, the new devices allow for cadastral and engineering surveys to collect the data about the features of the objects that are very close to the surveyed object or from afar, including air or underground and underwater environments.

- **Promoting data openness**

Smart cities provide solutions to urbanization problems through better management of complex environments, creating opportunities for smart technologies and effective governance models. Smart cities together with geoportals create the most comfortable and open environment for its inhabitants. Today, large amounts of data can be processed in minutes, saving hundreds of hours for efficient management.

Potentially, it is the geospatial data infrastructure that can comprehensively meet the needs of citizens, the private sector and public administrators in all types of geographic information.

The basis of the system is the intersectoral integration of completely different, at first glance, real-time data: land, urban planning, water, forest cadastres, deposits and manifestations of minerals, natural medical resources, territories and objects of nature reserves and other sources and , most importantly - ensuring wide access to them in information networks at the national, regional and local levels.

The geospatial profession needs to continually evolve to respond to global challenges, social impacts and the rapid evolution of technology. It is also essential that the next generation of professionals are educated and competent and able to contribute responsibly to the global challenges.

References

1. International Federation of Surveyors. website. URL: <https://www.fig.net/news/index.asp> (Last accessed 10.10.2021)
2. What is the Difference Between GIS and Geospatial? website. URL: <https://www.gislounge.com/difference-gis-geospatial/> (Last accessed 15.10.2021)
3. На Всесвітньому геопросторовому форумі обговорили сучасні тренди і принципи на шляху до сталої геопросторової системи. website. URL: <http://zemvisnuk.com.ua/page/news1> (Last accessed 25.10.2021)
4. Key Global and Technology Drivers Impacting Surveying. website. URL: <https://www.gim-international.com/content/article/key-global-and-technology-drivers-impacting-surveying> (Last accessed 22.10.2021)
5. Краглевич В. Створення національної інфраструктури геопросторових даних. website. URL: <https://equity.law/press-center/publications/1184.html> (Last accessed 20.10.2021)

Language adviser: *Lemeshchenko-Lagoda V.V., Teacher of the Department of Foreign Languages, Dmytro Motornyi Tavria State Agrotechnological University*