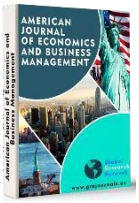

American Journal of Economics and Business Management

Vol. 7 Issue 7 | **pp.** 215-224 | **ISSN:** 2576-5973

Available online @ https://www.globalresearchnetwork.us/index.php/ajebm

Article

Innovative Strategy of Agrotourism Strengthing: Maksimalizing Agropolitan Potentials in Bromo Tengger Semeru National Park (TNBTS), Lumajang

Retno Murwanti[1]*, Danang Kumara Hadi[2], Juvitasari[3]

1,2,3 Universitas Muhammadiyah Jember

* Correspondence: retnomurwanti@unmuhjember.ac.id

Abstract: The agropolitan approach describes that rural development can well be done by connecting the countryside through urban development at the local level. The concept of agropolitan in this study is more focused on realizing the development of independent villages in accordance with their potential. The objectives of this research are: 1) Analysis of multi-use and competitive superior commodities to stimulate economic growth and prosperity of agri-business actors; 2) Identification of agro-economic potential in agropolitan areas; 3) Inventory of characteristics of means and supplies supporting the agricultural sector in order to promote the development of agropolitan areas; 4) Establishment of priorities of government policy in support of the progressive and sustainable development of agricultural areas. Analysis methods used: (1) base sector analysis; (2) value added analysis; (3) scalogram analysis; and (4) AHP analysis (Analytical Hierarci Process). Regarding the conditions and development of agri-government in the agropolitan area within the scope of Bromo Tengger Semeru National Park (TNBTS) of Lumajang district, there are several aspects that support, among other things, superior commodities, agro-sector potential, facilities and facilities supporting the agricultural sector, and priorities of government policy. That to the simultaneous credibility of each subsystem in agropolitan requires government intervention through regulation, coordination, protection, stimulation, service, and judgment of the entire system in agropolitics and the environment that affects it.

Keywords: infrastructure, superior commodities, government policy priorities

Citation: Murwanti, R., Hadi, D. K., & Juvitasari. Innovative Strategy of Agrotourism Strengthing: Maksimalizing Agropolitan Potentials in Bromo Tengger Semeru National Park (TNBTS), Lumajang. American Journal of Economics and Business Management2024, 7(7), 215-224.

Received: 9th July 2024
Revised: 16th July 2024
Accepted: 23rd July 2024
Published: 30th July 2024

1. Introduction

Agrotourism has become one of the exciting sectors in the global tourism industry, combining the potential of agriculture with tourist attractions [1]. Agropolitan areas within the scope of Bromo Tengger Semeru National Park (TNBTS) of Lumajang district offer abundant potential for agrotourism development. With base sector methods [2] and value-added analysis [3], the study aims to explore the potential for agro-environmental development in the region.

Agrowisata has proven to be able to make significant contributions to the local economy [4], infrastructure development [5], and environmental conservation [9]. However, to maximize the benefits, an integrated and sustainable approach is needed.

Through a basic sector approach, the study will analyze the potential of agrotourism in the context of inter-sectoral relations in the Agropolitan area of TNBTS. This approach enables the identification of opportunities for collaboration between agriculture, tourism,

and other industries [6], which in turn can improve resource efficiency and expand the positive economic impact.

In addition, value-added analysis will provide a deep understanding of how agro-economic products and services can increase the economic value of a region [7]. By taking into account aspects such as processing, marketing, and visitor experience, the study will identify strategies to increase added valu [8] in the agro-economic industry in the TNBTS area.

It is hoped that the results of this research can provide valuable insights for stakeholders, including local governments, industry actors, and local communities, in designing policies and strategies for sustainable and inclusive agro-economic development in the TNBTS Agropolitan area.

2. Materials and Methods

This research methodology uses a descriptive approach to describe the condition of the subject or object of research, namely the development of agropolitics in the Lumajang district. The research location focuses on the districts of Senduro, Pasruhjambe, Candipuro, and Pronojiwo which are the Agropolitan regions of Lumajiang, with a duration of implementation of 3 months.

Data collection techniques are carried out through two methods: purposive sampling for agropolitan development officials and snowball samplings for agribusiness and agro-industrial actors in agropolitan areas. Data collection is carried out through structured interviews with written questions prepared.

Basic Sector Analysis

This analysis is used to map the most dominant sectors consisting of agricultural commodity production indicators that are sourced on BPS and/or related services data over the past five years. Location Quotient (LQ) analysis tool with the following formula :

$$\mathbf{LQ} = \frac{(vi / vt)}{(Vi / Vt)}$$

Decision-making criteria:

LQ ≥ 1; base sector based on agricultural commodity production
LQ < 1;non-base sector based on agricultural commodity production

Added Value Analysis

Value added analysis is used to evaluate the benefits of value added or capital rewards, management, and labour. Value added of non-rice processed food raw materials used value added analysis with the following formulation:

VA = NP – IC

Decision-making criteria:

VA > 0, superior commodity processing gives positive added value to the raw materials processed.

VA ≤ 0, the processing of superior commodities gives the negative added value of the raw materials processed.

Further to know the ratio of added value used the following formulation:

$$\text{Rasio Nilai Tambah} \quad \frac{\text{VA}}{\text{NP}}$$

To determine the profit of value added or profit of capital rewards, management and labor rewards used the following formulation:

$$\pi = VA - BTk$$

$$\text{Rasio Keuntungan} = \frac{\pi}{VA} \times 100\%$$

$$\text{Rasio Biaya Tenaga Kerja} = \frac{BTk}{VA} \times 100\%$$

Scalogram Analysis

This method is used to determine the hierarchy of the territory. In the scalogram method, all the public facilities owned by each unit of territory are organized and organized in a single table. This scaling method can be used by writing down the number of facilities that each region owns, or write down the existence/absence of such facilities in a territory regardless of the number/quantity. This method will also identify the type, quantity and characteristics of infrastructure needed as SOC (social overhead capital) that will support the development of agropolitan areas. The infrastructure in Lumajang's agropolitan development that will be studied includes three main prasarana groups, namely:

- Hardware Infrastructure, including:Road networks, electricity, gas, clean water, telecommunications, and so on.
- Software Infrastructure, including:Quality of human resources (HRM), entrepreneurial attitudes, management, ability to gather market and marketing information, and consulting.
- Institutional Infrastructure, including:Education and training, promotion, trade, research, associations of producers, traders and exporters, and so on.

AHP Analysis (Analytical Hierarchy Process)

AHP decision-making uses numbers to describe the relative importance of one element over another. That value has a scale of comparison between 1 and 9. A scale with nine units is acceptable and reflects the degree to which we are able to distinguish the intensity of the relationship between the elements. This number is used to describe the relative importance of an element over the other elements presented in the following table 1.

Table 1. Pair Scale

Skala Banding Berpasangan

Intensitas Pentingnya	Definisi	Penjelasan
1	Kedua elemen sama pentingnya	Dua elemen menyumbangnya sama besar pada sifat itu
3	Elemen yang satu sedikit lebih penting ketimbang yang lainnya	Pengalaman dan pertimbangan sedikit menyokong satu elemen atas yang lainnya
5	Elemen yang satu esensial atau sangat penting ketimbang elemen yang lainnya	Pengalaman dan pertimbangan dengan kuat menyokong satu elemen atas elemen yang lainnya
7	Satu elemen jelas lebih penting dari elemen yang lainnya	Satu elemen dengan kuat disokong, dan dominannya telah terlihat dalam praktik
9	Satu elemen mutlak lebih penting ketimbang elemen yang lainnya	Bukti yang menyokong elemen yang satu atas yang lainnya memiliki tingkat penegasan tertinggi yang mungkin menguatkan
2, 4, 6, 8	Nilai-nilai antara diantara dua pertimbangan yang berdekatan	Kompromi diperlukan antar dua pertimbangan
Kebalikan	Jika aktivitas *i* mendapat satu angka bila dibandingkan dengan aktivitas *j*, maka *j* mempunyai nilai kebalikannya bila dibandingkan dengan *i*	

3. Results and Discussion

Great commodities

The sub-sector of food crops consists of seven commodities, i.e. peanuts, corn, peas, green beans, soybean, wood bean, and jalar bean. Whereas for the potential of the food crop of the five regions is the padi with the largest productive area is the Candipuro area. The subsector of plantation consists on several commodity, namely tobacco kasturi, tobacca Java, Arabica coffee, robusta coffee, coconut, cranberry, pinang and tebu, but for the plantation the most potential is coconut produced by the candipuro region.

The horticultural plant sub-sector consists of several vegetable commodities, namely, red garlic, red pepper, ravit, potatoes, cabbage, strawberries, carrots, tomato, ham, siamese pumpkin, and onions. For the fruit commodity consists of mango, durian, oranges, bananas, papaya, wine, avocado, belimbing, seed rose, water rose, mangos, doughnuts, nangka, and rambutan. As for the potential of fruit horticulture agriculture in the agropolitan area of Lumajang is the banana with the largest producer area of the Pasruhjambe district.

The farming sub-sector consists of several commodities, i.e. pearls, sliced cows, cowboys, horses, goats, sheep, pigs, chickens, eggs, poultry merchants, ducks, manila duck, rabbits, birds and pigeons. Whereas the highest potential livestock producer is the trade chicken produced by the region of Senduro.

Potential Agrotourism

The Seroja agropolitan area is located in the district of Senduro and Pasrujambe (with a distance of approximately 15 km west of the capital of Lumajang District of East Java

Province). Seroja's agropolitan area has superior commodities of bananas, coffee, parsley cattle, vegetables and albisia. In the agro-political area of Seroja according to its agro-ecological potential are also developed market crops such as tropical exotic fruits durian, mango, pulong orange and avocado.

The town of Tani Jambearum is located in the Pasrujambe district, which is a Central Development Village (DPP) and has the hinterland of the villages of Paslujambe and Jambekumbu, whereas the city of Tani Kandangtepus is situated in the Senduro district and it has the Hinterland of Kandangan, Burno, and Argosari villages. The towns of Tani Jambearum and Kandangtepus are the main hubs of agribusiness access forming the Seroja agropolitan area.

In the Seroja agropolitan area, developed in some areas around the Senduro district (this is the Semeru peak climbing path and nature tourism B29, one of which is edutourism at the Goat Farm Senduro) and Pasrujambe. The development of the area was carried out in the district of Gucialit (the emergence of new tourist attractions such as walay tourism/forest tourism in the area of Wonokerto and tea garden tour in Kertowono), Pronojiwo and Candipuro. The district has the potential of a region to develop. The potential of the region includes agricultural commodities (coffee produced by the Gucialit region became the first champion in the coffee competition in the Lumajang squares), horticulture, food, and farming.

Characteristics of facilities and infrastructure supporting the agricultural sector in order to develop agropolitan areas

Facilities and infrastructure is an important factor in the development of agropolitan areas in Lumajang District. One of the promoters of the agricultural sector is the optimization of the Senduro agribusiness terminal, which is the trade center of agriculture and livestock sectors, for example, the optimisation of the agro-business terminal and the tourist area of Goat Farm. (peternakan kambing etawa). The improvement of the facilities available in the tourist area B29 and mountain Semeru, also increases the tourists to visit the Lumajang district, especially with the construction of rest area that goes to B29 will increase the comfort of tourists. Other things are with the area of Gucialit that is growing, the tourism that has begun to emerge in the area Gucialite with the concept that advances nature tourism is also in great demand, the emergence of forest tourism in the village of Wonokerto and the tea garden tour in the tea plantation Kertowono demanding in its heart the infrastructure in the region of Guccialit.

Agropolitan facilities that need to be developed, one of them by adding public utilities such as roads, means of transportation, agribusiness facilities from the beginning to the end, agri-business terminals, toilets, dining houses, musholas and shops by-by-type Lumajang, will add to the attractiveness of tourists to visit the tourist area of Gucialit.

Government Policy Priorities

The level of importance of aspects and attributes for the development of agropolitan areas in the TNBTS area of Lumajang district is shown in the following table 2.

Table 2. Level of importance of aspects and attributes for the development of TNBTS agropolitan areas

Aspects	Alternative	Definition
Environment	Organic farming	Facilitating eco-friendly organic farming systems
	Maintaining environmental support and conservation of natural resources	Conservation of biodiversity supported by roles as well as local communities, so that natural resources are available to meet basic needs and sufficient space to live at a certain

		level of social stability
	Supply and use of superior seeds/ seedlings and implement the Operational Standard Procedures	Provision and socialization of the benefits obtained by farmers/growers/breeders through the use of superior seed/seeds and the implementation of Operational Standards Good Procedures
Social	Socialization of the impact of the use of fertilizers and chemical drugs	Socialization of the impact of pest resistance and diseases occurring on the growth of flora and fauna due to the use of fertilizers and medicines manufacturers (chemical synthetic)
	Improving the quality of human resources of agribusiness perpetrators	Increase public awareness of appropriate technologies, environmentally friendly technologies, and basic education for farmers
	Construction of vascular power and optimization of services and consultancy agencies	Building and optimizing training and consultancy centres (P4S) as well as information centres in agriculture that are easily accessible by all business operators
Economy	Selectively channel help	Providing selective assistance to the community/group of peasants to motivate increased efforts for the group of beginners
	Optimization of Senduro agribusiness subterminals	Optimization of agro-business sub-terminal functions to accommodate agricultural and processed agricultural products
	Growing center areas of processed products (agroindustry)	Growing the center of the processed products of the Lumajang district and diversifying its types
	Capital strengthening and business partnerships	Empowerment of the combined group of peasants in the provision of capital for the peasant enterprise as well as the establishment of partnerships with financial institutions
Infrastructure	Integrated education and training center	Development of educational facilities and comprehensive agricultural training.
	Construction of facilities, facilities and physical facilities	Construction and rehabilitation of public and tourist roads and irrigation networks and other public facilities.
	Development of information technology and market information systems	Provision of integrated information systems on technology and markets

Based on the surveys we conducted, we obtained the results of the economic aspects with 4 attributes as shown in Figure 1.

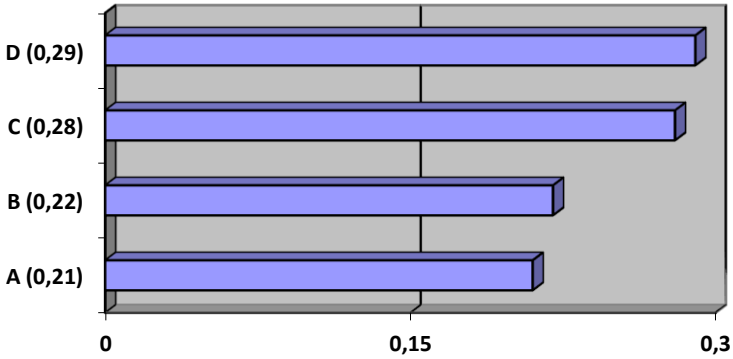

Figure 1. Economic Aspects Survey Results

Description:

A. Selectively channelled aid, with a value of 0.21
B. Optimization of the Senduro agribusiness sub terminal, with a value of 0.22
C. Growing the area of the center of processed products (agribusiness), with a value of 28
D. Capital reinforcement and business partnerships, with a value of 0.29

From the economic aspects of the most important attribute is the strengthening of capital and business partnership, because with the empowerment of the village group in the provision of capital for the village and the construction of partnership with the financial institutions so that UMKM that exists around the tourist area TNBTS will need the attention of the government of Lumajang district, it has actually begun to run with the presence of PNPM independent programmes that exist in each region in 5 districts in the district of lumajang among others Senduro, Pasruhjambe, Candipuro, Pronojiwo, and Gucialit district that has the revolving fund. The next attribute is to grow the area of the center of processed products (agroindustry), then optimize the Senduro agrobusiness sub terminals that have been implemented in the district of Senduro, waiting for other areas to follow. The last attribute is the distribution of aid which is practically less than the maximum, because it turns out to be uneven and targeted, because the purpose of the aid is actually to increase the effort of the beginner groups.

Based on the surveys we conducted, we obtained the results of infrastructure aspects with 3 attributes as shown in Figure 2.

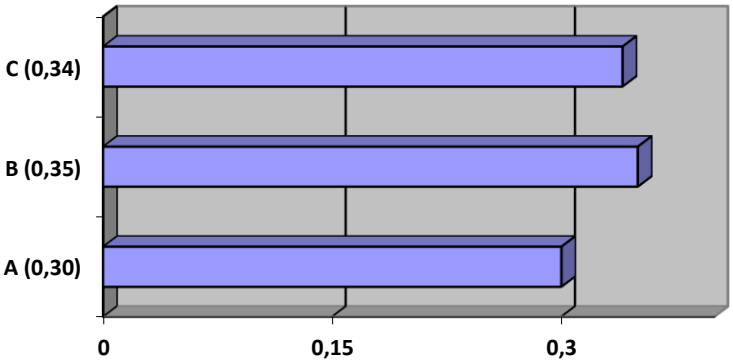

Figure 2. Infrastructure Aspects Survey Results

Description:

A. Integrated education and training centres, with a rating of 0.30
B. Construction of facilities, facilities and physical equipment, with a value of 0.35
C. Development of information technology and market information systems, with a value of 0.34

The next most important aspect is the infrastructure, where the most important attribute is the construction of facilities, means, and physical facilities needed to support the agricultural sector in the Lumajang district, because with the facility, facilities and

physical equipment complete then will be filled all the facilities necessary to develop the agropolitan area in the District. One of the most important attributes is the development of information technology and market information systems. The marketing process is expected to be more timely and cost-effective. The last attribute is an integrated education and training centre, hoping that each region has adequate human resources and is ready to develop an agropolitan area in the TNBTS area.

Based on the surveys we conducted, we obtained environmental aspects with 3 attributes as shown in Figure 3.

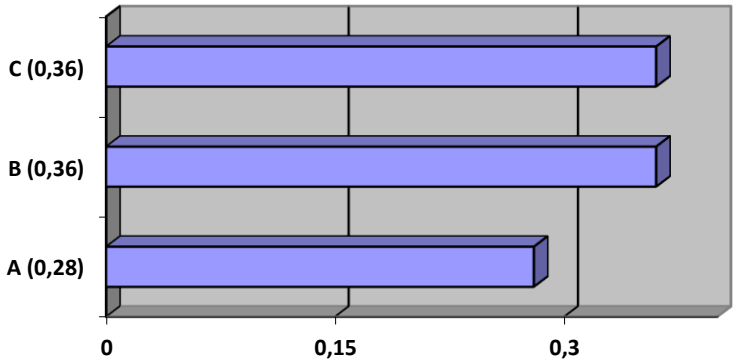

Figure 3. Enviromental Aspects Survey Results

Description:

A. Organic farming, with a value of 0.28
B. Conservation of environmental support and conservation of natural resources, with a value of 0.36
C. Provision and use of superior seeds/seedlings and implementation of the Operational Standard of Procedures, with a value of 0.36

The environmental aspects are in the third order with the attribute of preserving the supporting power of the environment and natural resources and the attributes of supply and use of seeds / seeds superior and implementation of Operational Standards Procedures are at the same level of importance, because for the sustainability of agropolitan development in the area of TNBTS these two attributs are important means that between the utilization of natural resources as well asining natural sustainability can run continuously.

Based on the surveys we conducted, we obtained the results of social aspects with 3 attributes as shown in Figure 4.

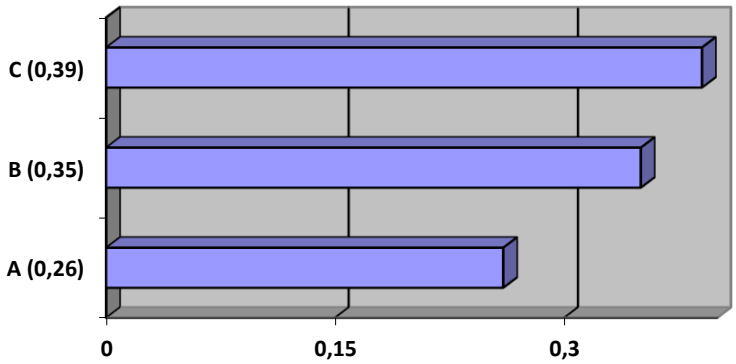

Figure 4. Social Aspects Survey Results

Description:

A. Socialization of the impact of fertilizer and drug use, with a value of 0.26
B. Improved quality of human resources of agribusiness perpetrators, by 0.35

C. Construction of infrastructure and optimization of service and consultancy institutions, with a rating of 0.39

The last aspect is the social aspect, with the attribute of the construction of the resource force and the optimization of the service and consulting institutions having the highest level of importance, because the people cannot walk alone without the guidance of the accompaniment of the advisers so that the people can exchange opinions and consult continuously about the problems that occur in the field and how to solve them. The second most important attribute is the improvement in the quality of the human resources of agribusiness operators, which is expected after the adoption and support will improve the human resource quality and change their mindset about the importance of the development of agropolitan areas for all fields, be it agriculture, farming, planting, and tourism. The last attribute of the social aspect is the socialization of the impact impact of the use of fertilizers and chemical drugs, because when the TNBTS area will be fully developed as an agropolitan area, then what is not less important is how to maintain the ecosystem in the T NBTS area so that the agropolitan area runs sustainably both from the social, economic, environmental, and infrastructure aspects.

4. Conclusion

There are several leading commodities in the agriculture, planting, horticulture and farming sectors in the Lumajang district, with the Candipuro and Senduro districts being the highest potential in some agricultural commodity. The Seroja agropolitan area, especially in the districts of Senduro and Pasrujambe, offers agro-economic potential that includes bananas, coffee, parsley cattle, and vegetables, reaffirming the importance of agropolitan development in various areas such as Gucialit, Pronojiwo, and Candipuro. Improvement and improvement of facilities and facilities supporting the agriculture and tourism sector is a major concern, with a focus on the development of public facilities such as roads, transportation, toilets, rest areas, and other infrastructure to increase attractiveness for tourists. The government is also expected to prioritize the strengthening of enterprise capital, infrastructure development, environmental conservation, and improvement of the quality of human resources in the agricultural sector, with particular attention to empowerment of peasant groups and enterprise partnerships. Furthermore, training and resource development programmes need to be enhanced to improve the quality of human resources, while socializing and monitoring the use of fertilizers and chemicals and encouraging organic farming practices to maintain environmental sustainability.

REFERENCES

[1] Saraswati, A. I. Hatneny, and A. N. Dewi, "Implementasi Model Diamond Porter dalam Membangun Keunggulan Bersaing pada Kawasan Agrowisata Kebun Belimbing Ngringinrejo Bojonegoro," *Jurnal Ilmu Manajemen*, 2019. [Online]. Available: https://riset.unisma.ac.id/index.php/jimmu/article/view/2732.

[2] M. Patiung, "Penyusunan Masterplan Pengembangan Kawasan Agropolitan Kabupaten Probolinggo," *Jurnal Ilmiah Sosio Agribis*, 2018. [Online]. Available: https://journal.uwks.ac.id/index.php/sosioagribis/article/view/443.

[3] T. A. Andarrini, "Analisis Kinerja Kawasan dan Strategi Pengembangan Agropolitan Gisting Kabupaten Tanggamus Provinsi Lampung," *digilib.unila.ac.id*, 2022. [Online]. Available: http://digilib.unila.ac.id/65003/.

[4] M. R. Fauzi, "Evaluasi dan Strategi Pengembangan Kawasan Agropolitan Sendang di Kabupaten Tulungagung," n.d.

[5] D. Satria and J. M. Wibowo, "Peran Klaster Pariwisata Terhadap Ekonomi Kreatif Kabupaten Banyuwangi di Era Industri 4.0," *Jurnal Kepariwisataan Indonesia*, 2021. [Online]. Available: http://repository.ubaya.ac.id/41023/.

[6] R. S. Lia, S. Satmoko, et al., "The Impact of Development of Agropolitan Areas on the Social Economic Life of Crisan Farmers," *Sosial Ekonomi Pertanian*, 2021. [Online]. Available: http://eprints.undip.ac.id/80915/.

[7] J. R. Saragih, "Strategi Pengembangan Agribisnis Hortikultura di Wilayah Pedesaan," *Series: Local Wisdom, Social, and Arts*, 2018. [Online]. Available: https://talentaconfseries.usu.ac.id/lwsa/article/view/143.

[8] D. S. Dewandaru, "Kajian Prioritas Pembangunan Prasarana Jalan Pedesaan Berdasarkan Rural Access Index (RAI) di Kawasan Agropolitan Ciwidey Kabupaten Bandung," *Jurnal Pembangunan Wilayah*, 2017.

[9] M. Patiung, N. S. Wisnujati, S. Hanafie, et al., "Pengembangan Kawasan Agropolitan Kecamatan Krucil Kabupaten Probolinggo Tahun 2020," *Jurnal Ilmiah Sosio Agribis*, 2020. [Online]. Available: https://journal.uwks.ac.id/index.php/sosioagribis/article/view/977.

[10] D. B. Zahrosa, "Region and Forecasting of Banana Commodity in Seroja Agropolitan Area Lumajang," *Journal of Physics: Conference Series*, vol. 1465, no. 1, 2020, doi: 10.1088/1742-6596/1465/1/012001.

[11] Y. A. Wirahayu, "Developing a Model of Sustainable Development Goals (SDGs) at the Agropolitan-Based Oro-Oro Ombo Tourism Village," *Geojournal of Tourism and Geosites*, vol. 42, pp. 735-742, 2022, doi: 10.30892/gtg.422spl12-883.

[12] C. N. Rahmah, "Agriculture Development of Lampung Province Based on Agropolitan Zonation," *IOP Conference Series: Earth and Environmental Science*, vol. 451, no. 1, 2020, doi: 10.1088/1755-1315/451/1/012035.

[13] P. Marín-Sanleandro, "Influence of the Type and Use of Soil on the Distribution of Organic Carbon and Other Soil Properties in a Sustainable and Resilient Agropolitan System," *Forests*, vol. 14, no. 6, 2023, doi: 10.3390/f14061085.

[14] M. Savira, "Digitalizing Rural Entrepreneurship: Towards a Model of Pangalengan Digital Agropolitan Development," *IOP Conference Series: Earth and Environmental Science*, vol. 592, no. 1, 2020, doi: 10.1088/1755-1315/592/1/012030.

[15] L. Somantri, "Spatial Modelling Analysis for Potential Expansion of Cipanas City Candidate Area as Autonomous City," *Forum Geografi*, vol. 38, no. 1, pp. 57-73, 2024, doi: 10.23917/forgeo.v38i1.3579.

[16] H. Idajati, "Analysis DPSIR for the Strategic Environment Assessment in Planning Development in Agropolitan Areas and Minapolitan Areas in East Java," *IOP Conference Series: Earth and Environmental Science*, vol. 1186, no. 1, 2023, doi: 10.1088/1755-1315/1186/1/012008.

[17] A. Rifani, "Spatial Distribution of Agriculture Commodity in Cilacap Regency," *IOP Conference Series: Earth and Environmental Science*, vol. 686, no. 1, 2021, doi: 10.1088/1755-1315/686/1/012050.

[18] Kartono, "Potential Environmental Pressures on Water Availability in Gembong Reservoir in Pati District for the Development of Agropolitan Area," *Journal of Physics: Conference Series*, vol. 1217, no. 1, 2019, doi: 10.1088/1742-6596/1217/1/012061.