DEVELOPMENT STRATEGIES FOR THE INTEGRATED AGRICULTURAL CIRCULAR ECONOMY EDU-TOURISM IN PANCASAN VILLAGE

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Abstract. This research aims to formulate development strategies for the Integrated Agricultural Circular Economy Edu-tourism in Pancasan Village, which exhibits a high potential for sustainability in waste management and aquatic kangkung farming. The research participants are stakeholders engaged in the Circular Economy Edu-tourism in Pancasan Village, identified through the snowball sampling technique. Data collection methods include both primary and secondary sources, and data processing is performed through stages of reduction, visualization, and classification, followed by source triangulation to ensure data validity. A SWOT analysis is employed as the principal analytical tool to determine the strategic positioning of the Integrated Agricultural Circular Economy Edu-tourism in Pancasan Village, supported by the Internal Factor Evaluation (IFE) matrix (Strengths – Weaknesses) and the External Factor Evaluation (EFE) matrix (Opportunities – Threats). The analysis places the initiative in Quadrant I, suggesting an intensive strategy focused on market and product development for the Edu-tourism initiative in Pancasan Village. The outcomes of this study are expected to contribute significantly to the growth and long-term sustainability of the Circular Economy Edu-tourism project in Pancasan Village.

Keywords: edu-tourism, SWOT, matrix

A. Introduction

Sustainable Development Goals (SDGs) 2030 is a common goal covering 17 goals and targets agreed globally, including Indonesia. This is emphasized by the commitment conveyed by the Ministry of National Development Planning (2024) to encourage the achievement of SDGs through innovative and inclusive policies. In its implementation, the achievement of SDGs is in line with the vision of Golden Indonesia 2045 which is outlined in four main pillars including: (1) Human Development and Mastery of Science and Technology, (2) Sustainable Economic Development, (3) Equitable Development, and (4) Strengthening National Resilience and Governance. There are similarities in the SDGs in point 8, namely Decent Work and Economic Growth with Pillar 2, namely Sustainable Economic Development. This is certainly a synergy in determining Indonesia's priorities in the future. Through the Ministry of Tourism and Creative Economy, Indonesia's economic recovery and growth are boosted by continuing to improve the Tourism sector.

Quoted from the National Statistics Agency (BPS). Indonesian tourism will gradually grow in 2023 with an increase in the number of domestic tourist trips of 12.37%, followed by an increase in foreign tourists reaching 98.30% when compared to 2022. This indicates the potential for economic growth through the tourism sector which must be utilized optimally in

all corners of the country, especially rural tourism, which of course, successful management can have a positive impact on society and the economy (Kaptan Ayhan et al., 2020) [1]

Based on data from the Ministry of Tourism and Creative Economy in 2022, Indonesia is one of the competitive and leading destinations in terms of tourism in Asia and the world. In fact, according to the Travel Tourism Development Index (TTDI) report released by the World Economic Forum 2024, Indonesian tourism is ranked 22 out of 119 countries in the world and ranked 2nd at the ASEAN level.

There is a significant correlation between tourism expenditure and economic development for local communities around tourist destinations and it has long been recognized that tourism can have an impact on the economy (Sari and De Fretes, 2021) [2]. The tourism sector has grown rapidly and become the most popular industrial sector globally, even moving almost 700 million people worldwide (Suban *et al*., 2021)[3]. No exception in the Indonesian tourism industry which is growing rapidly. According to a report from the Organization for Economic Co-Operation and Development (OECD) 2022 in the Tourism Trends and Policies 2022 report, in 2019, the tourism sector contributed 5.0% of Indonesia's gross domestic product (GDP).

According to the International Union of Official Travel Organizations (IUOTO), tourism should be developed by countries in the world because of eight main factors, namely (1) tourism is a trigger for national economic growth, (2) the driver of prosperity can be through economic development both nationally and internationally, (3) special attention in preserving culture, social values so that they have economic value, (4) equal distribution of welfare due to the consumption factor of tourist visitors which has economic value, (5) the country's foreign exchange earner, (6) the trigger for international trade, (7) the driver of the growth of professional tourism education institutions or special institutions that form a polite and reliable hospitality spirit, and (8) market share for local regional products that encourage the development of product diversity in line with the increasing socio-economic dynamics of the region.

Since 1980, tourist interest has shifted towards tourism that adopts an environmentally friendly concept. In line with this, interest in tourism that provides educational experiences has also increased (Rasool, 2024)[4]. Educational tourism or edutourism is a series of tourism activities in which a trip is also carried out for learning the main or secondary purpose (Prasetyo *et al*., 2021)[5]. Edutourism consists of ecotourism, agricultural and rural tourism, historical tourism, comparative study tours, student exchanges between educational institutions, school *study tour activities*, and domestic and foreign university activities (Putri *et al.*, 2023)[6].

Autonomy policy gives authority to regions to manage and regulate the needs of their local communities in order to increase regional income including villages. The regional autonomy policy was implemented by the Pancasan Village Government by establishing the Berkah Banyu Makmur BUMDes in 2016 with the vision of realizing the welfare of the Pancasan Village community through the utilization of village potential. Pancasan Village is a water source village in Ajibarang District and is a Tegal-Yogyakarta provincial route so that it is also advantageous from a geographical perspective. Based on these sources, a business unit was created that is managed by BUMDes, namely waste management, fisheries, and agriculture. In Pancasan Village there are also 10 farmer, livestock and fish groups that carry out integrated agricultural businesses.

The business units established by BUMDes Berkah Banyu Makmur Pancasan consist of a waste processing business "Berkah Runtah" and a fisheries business "Mina Sehat" established in 2021. The establishment of the waste processing business "Berkah Runtah" which turns waste into valuable items is based on concerns and anticipation of the continuous accumulation of waste from the BUMDes TPA. This waste processing starts from collecting waste from residents from 40 RTs as much as 5 - 6 cubic meters per day, and has even been commercialized through cooperation with 2 RWs of Karang Bawang Village worth IDR 150,000 per waste in an open-back truck. The large amount of waste is then processed by a special machine that turns

it into 150 kg of organic porridge every day. The organic porridge is used for maggot feed with a yield of 40 kg of maggots, 25 kg of kasgot, and 75 kg of compost every day. Maggots have a high protein content and can be consumed by fish to increase the fish's immune system from attacks by fungi and bacteria (Patang, 2024)[7].

In addition to waste processing, Pancasan Village also has a kangkung fish farming business unit. There are 13 ponds with an area of 12 mx 14 m owned by BUMDes Berkah Banyu Makmur which are filled with fish for consumption. The fish from these 13 ponds are organic fish because the feed given is in the form of maggots taken from the waste processing business unit with a harvest every 3 months reaching 1 ton per pond. Alongside fisheries, there is agriculture in the form of kangkung which has become an icon of Pancasan Village with a harvest flow of 1-3 days once every 1-2 months, with fertilizer from kasgot.

The diverse potential in Pancasan Village encourages more comprehensive and systematic development with an integrated management model. The purpose of developing this potential is of course as a tool to encourage the welfare of the Pancasan Village community and maintain the comfort of the surrounding environment so that the *Circular Economy concept was taken. In addition, the Circular Economy* concept in the activities of BUMDes Pancasan includes waste collection, waste processing into organic porridge, organic porridge that is converted into maggots and kasgot, and maggots and kasgot which each become fish feed and compost in the mina kangkung business unit. In addition, the *Circular Economy concept* is in accordance with the Ministry of Environment program which is supported by Law Number 18 of 2009 concerning Solid Waste Management and Law Number 32 of 2009 concerning Environmental Protection and Management. Therefore, to encourage tourist attractions, the Pancasan Village Government plans to optimize waste processing, agriculture, and fisheries tourism with management from BUMDes Berkah Banyu Makmur through the 2023 village fund budget.

Tourism villages have an important role in advancing community welfare, equalizing business and employment opportunities, optimizing economic potential and regional characteristics, as well as promoting and protecting cultural values, religion, customs, and preserving nature. According to its development classification, Pancasan Village edu-tourism is included in the pioneering tourism village category. This is because currently Pancasan Village is still quite limited in terms of facilities and infrastructure. However, it is currently in the development stage which is being carried out seriously by BUMDes and the Pancasan Village Government. Based on the results of the feasibility study on the development of Integrated Agricultural *Circular Economy Edu-tourism* in Pancasan Village in terms of market and marketing aspects, as well as institutional aspects that have been implemented in 2023, it shows that this edu-tourism is generally feasible to be developed.

Circular Economy Edutourism in this study aims to make an environmentally friendly integrated agricultural system in Pancasan Village as an educational-based tourist attraction. To realize the achievement of this edutourism village, research needs to be conducted related to the development strategy of Integrated Agricultural *Circular Economy* Edutourism. Therefore, further strategic analysis is needed to determine the development strategy using SWOT and Balanced Scorecard, especially the perspective of internal business processes and learning-growth. This is a step to translate the vision, mission, goals, and environmental factors into a comprehensive and operational strategy so that it can be measured and evaluated sustainably.

B. Methods

The research utilized a qualitative approach, incorporating a case study method to explore the development of an Integrated Agricultural Circular Economy Educational Tourism in Pancasan Village. The case study was selected as it provides an in-depth understanding of real-world phenomena, particularly when the boundaries between the phenomenon and its context are not clearly evident. This method was particularly suited to examining the development strategies using the Balanced Scorecard framework, with a focus on internal business processes and learning-growth perspectives.

The primary data for this study was collected through semi-structured interviews and direct observations of key stakeholders, including representatives from the village's BUMDes (Village-Owned Enterprise), government officials, and community members actively involved in managing the Integrated Agricultural Circular Economy system. The interviews aimed to gather insights into the operational challenges, successes, and strategic goals of the village's waste processing, agricultural, and fisheries sectors. In addition, field observations were conducted to gain a real-time understanding of the processes involved in these activities, with a focus on how they contribute to the village's edutourism potential. Secondary data was obtained from government reports, previous research on the circular economy and educational tourism, and literature reviews, which helped provide a theoretical framework and background context to the study.

Key informants were selected using purposive sampling, a technique chosen for its ability to identify individuals with significant knowledge and involvement in the subject matter. The informants included leaders from the BUMDes Berkah Banyu Makmur, officials from the Pancasan Village Government, and members of the farmer group Mina Sehat, which manages the village's fisheries. This approach ensured that the data gathered was both rich in detail and relevant to the research objectives.

Data analysis began with a SWOT analysis, which identified the internal strengths and weaknesses, as well as the external opportunities and threats related to the development of the Integrated Agricultural Circular Economy Educational Tourism. The results of this SWOT analysis were then systematically aligned with the Balanced Scorecard framework, focusing on the perspectives of internal business processes and learning-growth. This alignment provided a comprehensive view of how the village's human, natural, and institutional resources could be leveraged for sustainable tourism development, ensuring both financial viability and educational value for visitors. Thematic coding was employed to categorize key insights from the interviews and observations, facilitating the identification of strategic priorities and areas for improvement.

To enhance the validity of the findings, triangulation was used by cross-referencing data from multiple sources, including interviews, observations, and secondary literature. Furthermore, member-checking was conducted, wherein the key informants were asked to review and verify the preliminary findings, ensuring that the interpretations accurately reflected their experiences and viewpoints. This process added to the credibility and reliability of the data, making it more robust for the formulation of development strategies. Should be described in short but complete enough to allow experiments to be reproduced or verified. This should include materials and instruments/tools, protocol of research, research/experimental design, observed variables, technique for data collection and analysis. Procedures and analysis methods should also be concise, and methods in general use need not detail description. Previously published procedures should be cited and important modifications (if any) should be mentioned briefly.

C. Results And Discussion

1. Overview of Research Object
    a. Overview of Pancasan Village

Administratively, Pancasan Village is one of the villages in Ajibarang District, Banyumas, Central Java. This village is flanked by 4 districts, namely Pekuncen District to the north, Wangon District to the south, Gumelar District to the west, and Cilongok District to the east. In addition, Pancasan Village is also flanked by several other villages listed in table 1.

Table 1. Borderline of Pancasan Village

No	Borderline	Subdistrict Name
1	Northern boundary	Ajibarang Wetan Village
2	Southern boundary	Sawangan and Pancurendang Village
3	Western boundary	Tipar Kidul Village
4	Eastern boundary	Tipar Kidul and Karangbawang Village

The total area of Pancasan Village consists of 6 RW and 41 RT. The total area of Pancasan Village is 197.8 ha. The following is the vision and mission of Pancasan Village.

1) The vision of Pancasan Village is "Working together and working together to create a peaceful, independent and prosperous society."
2) The missions of Pancasan Village include:
   a) Intelligent, moral, and dignified.
   b) The people are not sick (the people must be healthy) in order to improve the quality of their faith and devotion to God Almighty.
   c) The people are not hungry (the community is able to explore the potential of natural resources through farming and living things to balance education and knowledge of the wider community, both formal and non-formal, based on competency.
   d) The people are not stupid (able to empower all levels of society in exploring or developing and managing the resources owned by the village.

3) Population Education Level

Many educational facilities are available in the Pancasan Village area, from PAUD to SD/equivalent. Details of educational facilities in Pancasan Village consist of 2 PAUD, 2 TK, 3 SD, and 2 MI. The classification of the education level of the Pancasan Village population is shown in table 2.

Table 2. Level of education Pancasan Village

No	**Level of education**	**Number of people**
1	Not/Not Yet Attending School	1,815
2	Graduated from elementary school/equivalent	3.019
3	Junior high school/equivalent	1.160
4	High school/equivalent	875
5	Diploma I/II	18
6	Diploma III	29
7	Strata I	124
8	Strata II	3

Based on the education level data above, it is known that elementary school graduates/equivalent are still high and dominate as the level of education of the Pancasan Village community. The less than optimal level of education taken by the community is the reason for the importance of education and socialization to the community regarding the development of Integrated Agricultural Circular Economy Edutourism in Pancasan Village.

4) Occupation of the Population

In order to fulfill the needs of life, the population that is included in the productive age must have a job. The details of the jobs of the population of Pancasan Village are listed in table 3.

Table 3. Type of Work Pancasan Village

No	Type of work	Number of people
1	civil servant	23
2	Indonesian National Armed Forces	2
3	POLICE	4
4	Farmer	90
5	Teacher	46
6	Doctor	1
7	Midwife	3
8	Industrial Sector	11
9	Private sector employee	425
10	Self-employed	333
11	State-owned Enterprises	4
12	Regionally owned enterprise	2
13	Honorary	11
14	Farm laborer/planter	99
15	Other	4,526

Based on the data above, the types of jobs pursued by the residents of Pancasan Village are very diverse, dominated by private employees, self- employed, plantation owners, and farmers. Residents with types of jobs as self- employed, plantation owners, and farmers can be potential supporters of the development of Integrated Agricultural Circular Economy Edutourism in Pancasan Village.

b. Overview of Pancasan BUMDes

The establishment of BUMDes Berkah Banyu Makmur Pancasan is intended as a forum to encourage and accommodate all economic activities of the community that develop according to local customs/culture to be managed jointly by the Pancasan Village government. BUMDes Berkah Banyu Makmur is located at Jl. Raya Pancasan No. 409 Pancasan Village, Ajibarang, Banyumas. This BUMDes has 3 business units, namely waste processing, healthy fisheries, and swimming pool tourism with the management structure shown in Figure X. The following is the vision and mission of BUMDes Berkah Banyu Makmur Pancasan.

1) Vision

Realizing the welfare of the Pancasan Village community through the utilization of village potential, human resources, development of economic enterprises and professional and trusted social services with the Motto: “BUMDes for all "

2) Mission

a) Improving community and village-owned enterprise businesses in managing village economic potential.
b) Increasing village community income and Village Original Income.
c) Improving community resources and village economy.
d) Conducting training programs needed by the community.
e) Providing facilities and a conducive environment for the implementation of various operational activities of BUM Desa.
f) Collaborate with all parties.
g) Encourage people to become entrepreneurs.

c. General Overview of Pancasan Village Development

1) Potential of Pancasan Village

Pancasan Village, located in Central Java Province, has developed into an ideal example of a tourist village that combines the concept of a circular economy. Based on the policy outlined in the Regional Regulation of Central Java Province Number 6 of 2021 concerning the

Empowerment of Tourist Villages, this village has succeeded in optimizing its natural potential through the integration of natural tourism, culture, and human works. This village does not only rely on natural beauty, but also prioritizes an education-based approach and environmental conservation as part of its tourist attractions. This approach aims to improve community welfare by opening up business opportunities, creating jobs, and developing economic potential based on local wisdom.

The development of tourist villages in Central Java is grouped into three main categories, as explained by Dyana Gea et al. (2022). Pancasan Village, with all its potential, is one example of a village that is in the Developing Tourist Village category, and continues to move towards the Advanced Tourist Village category. This Advanced Tourist Village category indicates a village whose people are aware of and have been able to manage tourism potential optimally for economic sustainability. There are several sectors included in this edu-tourisms:

a) Waste Management Educational Tourism

In an effort to manage waste and maintain environmental sustainability, Pancasan Village has formed a waste management unit managed by the Village-Owned Enterprise (BUMDes). This unit converts organic waste produced by the community into products of economic value, such as maggots which are used as fish feed, and organic fertilizer (kasgot) which is used for the agricultural sector. Every day, this waste management produces around 40 kilograms of maggots and 75 kilograms of organic fertilizer which are useful for enriching agricultural land. With this initiative, the village can not only reduce the amount of waste, but also provide educational facilities for tourists and local communities about the importance of sustainable waste management.

b) Fisheries Educational Tourism: Healthy Mina Group

Mina Sehat Group utilizes the abundant water resources in Pancasan Village to cultivate various types of freshwater fish. By implementing environmentally friendly cultivation practices, Mina Sehat ensures that every stage of the cultivation process from seeding to fish rearing runs well and sustainably. This system is designed to support optimal fish growth while maintaining the balance of the aquatic ecosystem.

Tourists visiting this village can take part in various educational activities related to fish farming, such as feeding fish, learning about the life cycle of fish, and understanding the importance of maintaining water quality. The fish ponds managed by the Mina Sehat group are separated based on the size and growth stage of the fish, so that each pond is focused on a particular cultivation phase. The types of fish farmed here include pomfret, tilapia, and nilem, all of which are farmed with a sustainable approach to ensure high quality results. The uniqueness of Mina Sehat lies in the organic feed used. By using maggots as the main feed, the fish produced from Mina Sehat are organic fish which of course contain fewer hazardous chemicals.

c) Agricultural Educational Tourism: Kangkung Fish Farming System

Pancasan Village also develops the agricultural sector by using the mina kangkung system, which integrates the cultivation of kangkung plants with fisheries. This system allows efficient land use, where two hectares of kangkung farming land is utilized together with fish farming. Water from the fisheries system is used to irrigate the plants, thus creating an ecosystem that supports both sectors. Kangkung products from this village are known to be of high quality, with a crispier texture and fresher color. Tourists who visit can enjoy direct experience in farming and feeding fish, while enjoying the natural beauty around the agricultural land.

The farmer group responsible for managing the mina kangkung system, namely the Jaya Tani group, is active in developing sustainable agriculture. Agricultural edutourism in Pancasan Village is not only attractive to tourists, but also provides a real example of how a sustainable agricultural system can improve the welfare of local farmers.

d. Interview Result Statement

Interview with the Head of Pancasan Village, Chairman of Pancasan BUMDes, Secretary of Pancasan BUMDes, and Coordinator of the Garbage Hanggar.

e. SWOT Analysis

SWOT analysis is a series of activities carried out to determine the strengths, weaknesses, opportunities, and threats of a company which are the basis for determining the direction of the company's work (Phadermrod *et al* ., 2019) . Through this analysis, the company's position in the market can be known so that the most appropriate decisions can be made to achieve the company's goals. In addition, analyzing SWOT can be an opportunity for company expansion based on internal strengths and external opportunities (Hasbullah *et al* ., 2021; Devi *et al* ., 2022) .

Based on the research in analyzing the internal and external factors of Integrated Agricultural *Circular Economy Edutourism* in Pancasan Village including analysis of the waste processing business unit "Berkah Runtah", fisheries and agriculture business unit "Mina Sehat", the data concerning the SWOT analysis of the edutourism is described. The researcher has completed interviews with the informants of this study.

1) "Berkah Runtah" Waste Processing Business Unit

The waste processing business unit "Berkah Runtah" is the output of the social and environmental mandate of BUMDes Pancasan to reduce and process surrounding waste. Furthermore, this business unit converts waste, especially organic waste, into organic porridge and maggot feed which will later produce other maggots as fish feed and kasgot as agricultural fertilizer.

a) Internal factors (strengths)

(1) The abundance of waste sources from the community.

The waste that is used as maggot feed is household waste from the Pancasan Village community, namely 40 RTs and some waste from Karangbawang Village. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"If the waste sent to the garbage hangar is a lot, ma'am, yes from Pancasan residents themselves and usually 3 open-back trucks from Karangbawang Village. For transportation, we are from morning to afternoon every Monday - Friday, ma'am." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(2) Supported by Village Government

The Village Government disbursed village funds, one of which was for the waste hangar section, including the construction of the hangar and the purchase of machines, in addition there was a plan to relocate the sorting and processing of waste to the Village Treasury Land which had been budgeted by the village government for 1M. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"The Village Government built the initial building of this hangar and its machines too. According to the village head, he has prepared 1M in funds to move the waste sorting and processing to TKD." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(3) Job rotation work system

Eight workers in the Berkah Runtah Waste Business Unit have been able to carry out the existing tasks, because there is a job rotation system in it. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"The workers have mastered everything, because those who hold the maggot are also used to holding the milling part, the maggot part, so it's safe. "Except if the freelancer is just making extra work if there's a lot of waste or one of the employees isn't working." (10 September 2024 at the Berkah Runtah Waste Processing Business Unit).

(4) Hangar facilities are complete

The hangar operation has been running well, starting from waste transportation to the production of maggots as fish feed and kasgot as agricultural fertilizer. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"Regarding the facilities, they are complete and can be operated, but there is still a shortage of quantity, but that can be done gradually." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(5) Location on the side of the highway

Based on observations, the waste processing location is on the edge of the highway so that there is easy access for visitors.

(6) There have been several institutions and schools that have visited

Since the beginning of its operation producing maggots and kasgot, the Berkah Runtah Waste Processing Business Unit has received various educational visits and study tours from surrounding villages, institutions, and schools, which can be served well. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

“People from schools often come here. Even the Subang Environmental Agency (DLH) visited to study using 1 bus and 2 small cars. And we usually provide snacks and treats.” (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(7) Human resource management who is a learner

As a result of job rotation, employees can see and observe the entire waste processing activity, so that it can be known if there is anything abnormal. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"I noticed, are these maggots healthy or unhealthy, the weather is like this and this, food factors from the garbage slurry. Even once maggots were poisoned, so someone sprayed fertilizer on the grass, and the grass was thrown into the garbage that was transported by the BUMDes, because they didn't know, the sprayed grass was ground into one organic slurry and used as maggot feed. After that, the maggots died completely from top to bottom. Well, it started from 0 again, and finally it became our experience that if there is grass in dry garbage, it is immediately separated and burned, because we are afraid of being poisoned again." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(8) The use of maggots reduces the generation of unpleasant waste odors

The use of maggots is one of the biggest advantages of this waste processing because it does not cause a bad smell. This is also a unique factor in this waste hangar. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"If here is a trash can but the smell is not as bad as imagined, that is the advantage of maggots because no matter how bad the smell is, if it is surrounded by maggots, the smell will disappear, even in less than a night." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

b) Internal factors (weaknesses)

(1) Operational constraints related to the quantity of machines and transport fleet.

The number of machines and transport fleets is a separate obstacle because it reduces the efficiency of waste processing. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"There needs to be an increase in the number of machines, because if one of the machines breaks down, there will be a replacement. Because when the waste is not transported for a day, there will be an extraordinary pile-up. For example, we have 2 transport fleets but one is broken, so the waste transport will take longer and take longer." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(2) Quite a large capital

Of course, in starting and running a business unit, it requires a large capital. No exception for the garbage hangar, it requires quite a large capital for operational tools and materials. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"To open a waste processing business, the capital is automatically quite large, including building a warehouse, machines, and vehicles. Just buying a sorting machine costs 45 million, not including maintenance." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(3) Inorganic waste has not been processed properly

All types of waste have been transported, but only organic waste has been processed and utilized. This is different from inorganic waste which is only burned and produces thick smoke from burning. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"Indeed, currently we are focusing on maggots so that we are only utilizing the potential of organic waste, and inorganic waste is still only burned." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(4) The waste processing area is not well organized

Based on the researcher's observation, the layout of the hangar is still not organized if it is included in the educational tourism class. This is because there is no special path that makes it easier for visitors to observe and learn.

(5) This business unit sometimes experiences losses

Because this business is based on a social mandate, economic benefits will often disappear. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"From the waste itself, if it is said to be profitable, it is too heavy, the problem is because to make waste processing, the village must provide subsidies. This subsidy is a support so that this unit does not stall. Moreover, if you calculate it, many people do not pay waste fees, even though in Pancasan it is the cheapest, which is IDR 10,000. So here we are pursuing social services to the community for the sake of cleanliness." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(6) Waste residue that has not been processed properly

There are some remaining waste burning that is slightly piled up and creates an unsightly environment. Mr. Sukisno as the Head of Pancasan Village said:

"Indeed, there is still one deficiency in terms of waste, namely the residue left there." (September 10, 2024 at the Pancasan Village Head Office).

(7) Waste processing location close to where residents live

Because the processing location is close to residential areas, there are several complaints from the community such as smoke from burning inorganic waste. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"Hopefully, the waste sorting and processing section until it becomes porridge will be moved, so what is here for education is only maggots and kasgot, because if the initial waste processing involves burning, it is not healthy and people are indeed curious about maggots, not waste sorting." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(8) Lack of service facilities and support for educational tourism

Based on the researcher's observations, this waste processing unit does not yet have public service facilities to support educational tourism such as public toilets and mosques.

c) External Factors (opportunities)

(1) Becoming one of the best garbage hangars in Banyumas

Because of the good waste processing, even used as maggot and kasgot feed, this waste hangar is one of the best in Banyumas. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"This waste hangar can be said to be one of the best in Banyumas, because it has been running stably for several years, compared to other hangars that have been abandoned." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(2) Public interest in processing waste

The community is already aware that the accumulation of garbage causes a foul odor and is unsightly. According to Mr. Achmad Bukhori as the Coordinator of the Berkah Runtah Waste Processing Business Unit, he said:

"For public awareness regarding waste processing, some have, but there are some that have not." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(3) Maggot and cashgot can be a business opportunity

The results of waste processing are maggots and kasgots which can be used as fish feed and agricultural fertilizer respectively. Of course, both can be more profitable for other sectors. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"With maggots as fish feed, the hope is that it can reduce the cost of fish feed which usually uses pellets, if you use maggots it will be cheaper or even free, as well as kasgot as fertilizer." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(4) Momentum for improving the community's economy

The economic condition of the community has an influence on the waste produced, and of course will have an impact on the results of organic porridge that becomes maggot feed. If the economy is good, then the waste produced will also be abundant and varied so that the resulting waste porridge will be more varied. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"The economy in the village environment also has an effect, like this when the economy is good even though there is little waste but the organic content is high, and when the economy is difficult then there is also not much waste, I have noticed this for a long time. What makes it good is rich in vegetables, food waste, well organic porridge for maggot feed is very good." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

d) External Factors (threats)

(1) Unpredictable weather

Environmental factors that cannot be controlled have a negative impact on the operation of the waste hangar. This refers to the maggot hatching process, namely when it rains, the maggot hatching process will be hampered and result in the slowing down of the decomposition of the waste pulp by the maggots. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"The environment for maggot production is indeed very influential, including rain, there is no sunlight, so that inhibits the growth of flies that need sunlight." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

(2) Waste processing educational tourism is not yet widely known to the public

This waste processing edutourism requires high hard work when it will be targeted to the general public. Therefore, the market that will be targeted first is institutions and schools, after which it will be marketed to the general public. Mr. Achmad Bukhari as the Coordinator of the Berkah Runtah Waste Processing Business Unit said:

"The initial market for this educational tourism will be institutions or agencies and schools, then after that it will be for the wider community, because the main goal is education first." (September 10, 2024 at the Berkah Runtah Waste Processing Business Unit).

This is also in accordance with the statement of Mr. Sukisno as Head of Pancasan Village who said:

"Our first market in the garbage hangar is the government agencies, institutions, and schools. After that, we will try it out for the general public after conducting a major evaluation." (September 10, 2024 at the Pancasan Village Head Office).

(3) Accident prone due to busy area crossed by trucks and buses

Based on the researcher's observations, the placement of this garbage hangar is in an area with heavy traffic of large vehicles such as trucks and buses because it is a provincial route.

2) Agricultural Business Unit

The agricultural business unit is the output of the social and environmental mandate of BUMDes Pancasan to support the cultivation of the iconic Pancasan water spinach.

a) Internal factors (strengths)

(1) The abundance of water resources in Pancasan Village.

The history of Pancasan Village related to the abundance of water, in line with the fact of the abundance of water in Pancasan Village. Mr. Sukirno as the Head of Pancasan Village said:

"That's right, Pancasan Village is a village that never lacks water even during the dry season, for example, the swimming pool exists because of the abundance of water sources, and that extends to our water spinach farming system."

(2) Skilled and experienced human resources in managing agriculture

This kale farming is handed over to the residents in its system, BUMDes rents agricultural land to the community. Mr. Sukirno as the Head of Pancasan Village said:

"The community is already very skilled at cultivating water spinach."

(3) Support from Village Government

The government continues to encourage the activities and sustainability of this water spinach farming, even the village government has plans related to development in terms of educational and culinary tourism. Mr. Sukirno as the Head of Pancasan Village said:

"We, the village government, really support this water spinach farming. We even want visitors to not only plant water spinach but also be able to pick and cook water spinach."

(4) Having kasgot as a utilization of organic agricultural fertilizer

One thing that distinguishes this farm from others is the use of kasgot as fertilizer. This can also reduce operational costs, especially the purchase of fertilizer. Mr. M. Agung Nugroho as Director of BUMDes Berkah Banyu Makmur said:

"From the garbage hangar, we have 2 products, there are maggots and kasgot. Kasgot is used for agricultural fertilizer."

(5) The land is located near the highway so access is easy.

In order to support the educational tourism plan, the farm is located near the highway to support access and transportation. Mr. M. Agung Nugroho as the Director of BUMDes Berkah Banyu Makmur said:

"The location of the farm is strategic, so it will be easy for tourism to go from the garbage hangar directly to the kale farm."

b) Internal factors (weaknesses)

(1) Land management is not optimal

Based on researchers' observations, the use of existing agricultural land is still not maximal and optimal.

(2) HR requires additional training especially for tourism

This agricultural land is still very much in the agricultural stage, not yet ready to move towards edu-tourism. Mr. Sukirno as the Head of Pancasan Village said:

"Because this farm is still only rented, so yes, the community is not yet fully ready to move from their original farm, because they are already making a profit from that activity."

(3) There is no separate organizational structure for its management

The impact of the agricultural land rental activity, there is no organizational structure or management in this agricultural sector. The researcher found this when asking about the organizational structure or management of all business units but the Director of BUMDes did not mention the agricultural business unit.

c) External Factors (opportunities)

(1) Realizing zero waste agriculture

Based on the researcher's observations, through the use of kasgot and reducing chemical fertilizers, this water spinach farming encourages the concept of zero waste.

(2) Discourse on the existence of a Detailed Spatial Planning Plan (RDTR) for West Banyumas for the coming years

The local government collaborates with Pancasan Village to realize the RDTR policy which will support the development of Pancasan Village including educational tourism. Mr. Sukirno as the Head of Pancasan Village said:

"In Pancasan, we have RDTR together with the local government, this is a great opportunity and potential for us."

(3) The kangkung fish farming plan is rarely implemented in other areas

d) External factors (threats)

(1) Pest and disease attacks can damage agricultural products

Mr. M. Agung Nugroho as the Director of BUMDes Berkah Banyu Makmur said:

"Indeed, this is a challenge for agriculture in terms of pests."

(2) The existence of agricultural tourism objects in other areas

Mr. M. Agung Nugroho as the Director of BUMDes Berkah Banyu Makmur said:

“Maybe the challenge is agricultural and non-agricultural tourism in the Ajibarang area.”

3) Fisheries Business Unit

This fisheries business unit is a milestone in utilizing the output of waste management in Pancasan Village, namely maggots as the main organic-based fish feed.

a) Internal factors (strengths)

(1) Adequate fishing grounds with many ponds

With this strength, Mr. Anwar, as the manager of the fisheries business unit, said:

"Here, because the land belongs to Budes, it can be managed freely, sir, to make it into a fish pond."

(2) The abundant water resources in Pancasan Village

BUMDes channels water from springs in Pancasan Village directly through channels to BUMDes' fish ponds. Mr. Anwar as the manager of the fisheries business unit said:

"We have extraordinary water potential, this channel is from above, so it is directed directly from the spring to here."

(3) Support from Village Government

The Pancasan Village Government strongly supports the existence of this fisheries business unit by focusing on the utilization of maggots and improving facilities and infrastructure. Mr.

Sukirno as the Head of Pancasan Village said: " The village government is very supportive, we have also prepared funds, the results can later increase PAD (Regional Original Income."

(4) Have organic feed in the form of maggots from waste processing

The uniqueness of this agricultural business unit lies in the feed used because it uses maggots as the main feed so that it produces organic fish. Mr. Anwar as the manager of the fisheries business unit said:

"Yes, this is because we use full maggots, so there are no other chemicals, people also say the taste is different, it's tastier."

(5) The strategic location of the fish pond is because it is on the edge of the highway and the Ajibarang main market.

This is very profitable because it facilitates tourist access in visiting tourist attractions. Mr. Anwar as the manager of the fisheries business unit said:

"Yes, above here is the Ajibarang main market, so it's always busy here."

b) Internal factors (weaknesses)

(1) Uncertain maggot production

Because it relies on maggots, sometimes the problem lies in the number of maggots produced. Mr. Anwar as the manager of the fisheries business unit said:

" We depend on the maggot results, if there are a lot, we feed them a lot, but if there are only a few, we have no choice but to look for alternatives like using soybeans."

(2) HR requires additional training

Because this agricultural business unit is self-taught, so there have been several fish deaths. Mr. Anwar as the manager of the fisheries business unit said:

"Yes, it's called learning from experience, yes if it dies several times, but we also don't know the cause, it needs to be checked again."

(3) Supporting facilities are inadequate

Because it is more focused on fisheries only, this tourist attraction provides minimal facilities. Mr. Anwar as the manager of the fisheries business unit said:

"Right now, it's more about seeing the pond and buying the fish, later we want to add a gazebo so we can see the fish."

c) External Factors (opportunities)

(1) Community enthusiasm in carrying out fishing activities

The community is enthusiastic about the existence of this fishery business unit because it is unique in using maggots as the main feed. Mr. Anwar as the manager of the fishery business unit said: "Yes, the community is finally curious, is it true that the fish are different, then they finally try it & want to keep it too."

(2) *Zero waste* based fisheries edutourism

Based on the researcher's observations, utilizing maggots as the main fish feed in fisheries business units can be a real step towards the *zero waste* movement.

(3) High *value* Organic Fish

Based on researchers' observations, organic fish has a special place for its connoisseurs with a higher selling price than regular fish.

(4) *Fish* management potential

The potential for fishery products to be processed into various food products that have high sales value, such as shredded fish and other fish-based dishes.

d) External factors (threats)

(1) *Disease* attacks, seasons and weather are sometimes unpredictable

Mr. Anwar, as the manager of the fisheries business unit, said: "Yes, of course the season is unpredictable, and there are lots of fish diseases, that's the threat."

(2) *Fisheries*-based educational tourism in other villages located nearby

Mr. Anwar, as the manager of the fisheries business unit, said:

"Yes, it competes with fisheries in other villages, as far as I know, there are some near Ajibarang too."

2. Figures and Tables

Table 4. SWOT Matrix for "Berkah Runtah" Runtah Processing Unit

INTERNAL	**S (STRENGTH)**	**W (WEAKNESS)**
	1 The abundance of waste sources from the community	1 Operational constraints related to the quantity of machines and transport fleet.
	2 Supported by Village Government	2 Quite a large capital
	3 Job rotation work system	3 Inorganic waste has not been processed properly
	4 The hangar operational facilities are complete	4 The waste processing area is not well organized
	5 Location on the edge of the highway	5 This business unit sometimes experiences losses
	6 There have been several institutions and schools that have visited	6 Waste residue that has not been processed properly
	7 Human resource management who is a learner	7 Waste processing location close to where residents live
	8 The use of maggots reduces the generation of unpleasant waste odors	8 Lack of service facilities and support for educational tourism
EXTERNAL **O (OPPORTUNITY)**	**SO**	**WO**
1 Becoming one of the best garbage hangars in Banyumas	1 The high amount of waste can be processed well so that it is awarded the title of one of the best hangars in Banyumas and even used as a study for other villages and institutions (S1, S4, S6, O1)	1 Taking advantage of the title of one of the best hangars in Banyumas to seek funds to increase the quantity of processing machines and waste transport fleet (W1, W2, O1)
2 Public interest in processing waste	2 There is strong, full support from the government, both moral and material, and public interest in processing waste (S2, O2)	2 Optimizing active community participation in inorganic waste processing (W3, O2)

3	Maggot and cashgot can be a business opportunity	3	The qualified human resource capabilities of the workers have encouraged the award of the title of one of the best hangars in Banyumas (S3, O1)	3	Collaborate with the Spatial Planning Agency to organize waste processing areas (W4, W6, W7, O1, O5)
4	Momentum for improving the community's economy	4	The results of waste processing in the form of maggots and kasgot can reduce slum areas and actually become business opportunities, thus becoming a momentum for improving the community's economy (S8, O3, O4)	4	Collaborate with the Environmental Service and community participation to process waste processing residue (W6, O2, O5)
5	The desire to create a clean village and educational tourism area for waste processing in Pancasan Village	5	Creating a sales market for maggots and kasgot (S8, O3)	5	Providing public service facilities to support educational tourism such as public toilets (W8, O1, O5)
		6	Collaborate with the Environmental Service, Tourism Service, Fisheries Service, and surrounding local governments to help promote waste processing educational tourism in Pancasan Village (S2, S6, O1, O5)	6	It is necessary to formulate regulations regarding the orderly payment of waste contributions to the community so that the operation of waste processing units continues to run well (W2, W5, O2)
		7	Cooperating with institutions and schools to educate about environmental cleanliness, waste management, and maggot and kasgot cultivation (S1, S6, S8, O1, O2)		
T (THREATS)		**ST**		**WT**	
1	Unpredictable weather	1	Carry out mapping of seasons and weather in order to store high maggot reserves (S4, S7, T1)	1	Need for completeness for consumers in the waste processing educational tourism area (W8, T2)

2	Waste processing educational tourism is not yet widely known to the public	2	Focusing on the institutional and school market, followed by the general public, carried out with appropriate promotions (S2, S5, S6, T2)
3	Accident prone due to busy area crossed by trucks and buses	3	It is necessary to create security facilities in the area around waste processing, such as traffic signs (S5, T3).

Table 5. SWOT Matrix for Agricultural Business Unit

INTERNAL	**S (STRENGTH)**	**W (WEAKNESS)**
	1 The agricultural land is extensive and suitable for the fish farming system.	1 Land management is not optimal
	2 The abundance of water resources in Pancasan Village	2 HR requires additional training especially for tourism
	3 Skilled and experienced human resources in managing agriculture	3 There is no separate organizational structure for its management
	4 Support from Village Government	4 Inadequate supporting facilities
	5 Having Kasgot as a Utilization of Organic Agricultural Fertilizer	
	6 The kangkung fish farming system is rarely used in other areas	
EXTERNAL		
O (OPPORTUNITY)	**SO**	**WO**
1 Realizing *zero waste agriculture*	1 Inviting the community to jointly utilize BUMDes land as a fish pond for kangkung (S1, O1)	1 Improve better land management by cooperating with village governments and being friendly to tourists according to RDTR guidelines and in accordance with the implementation of zero waste (W1, O1)

	2	Discourse on the existence of the West Banyumas RDTR for the coming years	2	Utilizing kasgot as organic fertilizer to realize *zero waste farming* as a unique educational tourism (S5, O2)	2 Collaborate with the fisheries department in providing additional training to be ready to support educational tourism and the fish and water spinach program (W2, O1)
	3	The land is located near the main road so it is busy as a market opportunity in the future	3	Skilled human resources can become educational *tour guides* to prepare the West Banyumas RDTR (S3, O2)	3 Establish a special organizational structure for the management of *zero waste agricultural educational tourism* to take advantage of future market opportunities (W3, O1, O3)
			4	Construction of more adequate road facilities to support the potential of land near highways (S4, O3)	4 Providing public service facilities to support educational tourism such as public toilets (W4, O1, O2)
			5	Collaboration strategy with government agencies such as schools and other village governments for kangkong fish farming visits (S6, O3)	
			6	Collaborating with the Tourism Office to popularize Mina Kangung in Pancasan Village (S3, S6, 02, 03)	
T (THREATS)			**ST**		**WT**
1		Pest and disease attacks can damage agricultural products	1	Cooperating with the services through the village government in providing counseling related to pest and disease attacks (S4, T1)	1 Forming a separate organizational team to reduce competition and increase competitiveness (W3, T2)
2		Security of agricultural land against theft and others	2	Create a monitoring team periodically in this case through the support of the village government (S4, T1)	2 Optimizing human resource training to reduce the risk of pest and disease damage (W2, T1)
3		The existence of agricultural-based tourist attractions in other areas	3	Utilizing the uniqueness of mina kale and cashew as a characteristic in facing competition (S5, T3)	

	4	Using Kasgot as organic fertilizer to increase the resistance of water spinach in agricultural business units (S5, T1)

Table 6. SWOT Matrix for Fisheries Business Unit

INTERNAL	**S (STRENGTH)**	**W (WEAKNESS)**
	1 Adequate fishing grounds with many ponds	1 Uncertain maggot production
	2 The abundant water resources in Pancasan Village	2 HR requires additional training
	3 Support from Village Government	3 Supporting facilities are inadequate
	4 Have organic feed in the form of maggots from waste processing	
	5. The fish produced are classified as organic fish.	
EXTERNAL		
O (OPPORTUNITY)	**SO**	**WO**
1 Community enthusiasm in carrying out fishing activities	1 Developing educational tourism packages in collaboration with schools related to fisheries organically (S1, O1, O2)	1 Maximizing maggot production with more structured waste management (W1, O2)
2 Zero waste based fisheries edutourism	2 Developing organic fish processed products and distributing them to the Ajibarang main market and other markets (S5, O3, O5)	2 Facilitating advanced training for fish management human resources so that they can guide zero waste- based fisheries educational tourism (W2, 02)
3 High value Organic Fish	3 Holding a harvest festival and organic fish processing competition (S5, O3, O4)	3 Establish a special organizational structure for the management of *zero waste agricultural educational tourism.* in order to take advantage of future market opportunities (W3, O2, O4)

4	Fish management potential	4	Cooperation with the fisheries and tourism service through the village government in popularizing fisheries educational tourism in Pancasan Village (S3, O2)	4	Providing public service facilities to support educational tourism such as public toilets (W3, O2)
5.	The land is located near the main road so it is busy as a market opportunity in the future			5	Involving the community in the process of improving educational tourism human resources to utilize enthusiasm (W2, O1)
T (THREATS)		**ST**		**WT**	
1	Disease attacks, seasons and weather are sometimes unpredictable	1	Cooperating with the services through the village government in providing counseling related to disease attacks on fish (S3, T1)	1	Preparing alternative feed during low production to reduce the negative impact of disease attacks (W1, T1)
2	Fisheries-based educational tourism in other villages located nearby	2	Create a monitoring team periodically in this case through the support of the village government (S4, T1)	2	Providing complete tourist facilities such as wider road access and public toilets so that it can compete with other villages (W3,T2)
		3	Utilizing the uniqueness of mina kale and cashew as a characteristic in facing competition (S5, T3)		

D. Conclusion

This research demonstrates that the development of Integrated Agricultural Circular Economy Edu-tourism in Pancasan Village has substantial potential to enhance local community welfare through sustainable resource management. By applying the Balanced Scorecard approach, specifically focusing on internal business processes and learning-growth perspectives, the village has successfully integrated waste management, fishery, and agriculture into a cohesive, eco-friendly system. This strategy not only benefits the environment but also creates new economic opportunities through educational tourism. The findings suggest that using the Balanced Scorecard framework effectively aligns operational strategies with long-term sustainability goals, positioning Pancasan Village as a model for rural eco-tourism development.

E. References

[1]. Kaptan Ayhan, Ç., Cengiz Taşli, T., Özkök, F., & Tatli, H. (2020). *Land use suitability analysis of rural tourism activities*: Yenice, Turkey. Tourism Management, 76 (February 2018). https://doi.org/10.1016/j.tourman.2019.07.003.

[2]. Sari, S.N. and De Fretes, M.D. (2021) 'Pengembangan Pariwisata Dalam Upaya Pembangunan Ekonomi Masyarakat Di Pulau Pari Kepulauan Seribu', *Abiwara: Jurnal Vokasi Administrasi Bisnis*, 2(2), pp. 6–12. doi:10.31334/abiwara.v1i2.1384.

[3]. Suban, S. A., Madhan, K., Shagirbasha, S. (2021) 'A Bibliometric Analysis of Halal and

Islamic Tourism.', *Journal of Islamic Marketing*, 32(1). Available at: https://doi.org/10.1108/ihr-05-2021-0038.

[4]. Rasool, R.T. (2024) 'the Role of Educational Tourism in Developing the Local Economy (a Study of a Sample of Students Arriving At Karbala Technical Institute)', *International journal of tourism and hospitality management*, 04(02), pp. 53–68. doi:10.55640/ijthm-04-02-06.

[5]. Prasetyo, D., Manik, T. S., Riyanti, D. (2021) 'Pemanfaatan Museum Sebagai Objek Wisata Edukasi.', *Kepariwisataan: Jurnal Ilmiah*, 15(1), pp. 1–11. Available at: https://doi.org/10.47256/kepariwisataan.v15i01.146.

[6]. Putri, P.A. et al. (2023) 'Strategi Pengembangan Wisata Edukasi pada Candi Sambisari di Kabupaten Sleman candi di Provinsi Yogyakarta. Beberapa situs candi menjadi tujuan para wisatawan, salah', 21(1).

[7]. Patang (2024) 'Chemical analysis of the effect of the effect of the use of maggots as a source of protein on the quality of fish feed', *International Journal of Life Science Research Archive*, 6(2), pp. 052–062. doi:10.53771/ijlsra.2024.6.2.0051.