MARCAPADA: JURNAL KEBIJAKAN PERTANAHAN
Sekolah Tinggi Pertanahan Nasional, Yogyakarta
Available at: https://jurnalmarcapada.stpn.ac.id

The Sustainability of Paddy Field Tourism: Problems and Control Instruments

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ARTICLE INFO

Kata kunci:
Rice Field Tourism, Sustainability, Spatial Planning, Land, Incentive-Disincentive

Date log:
Received: March 5, 2022
Accepted: April 5, 2022
Published: April 8, 2022

To cite this article:
Lestari, N.D. (2022). Keberlanjutan Wisata Sawah: Problematika dan Instrumen Pengendalinya, *Marcapada: Jurnal Kebijakan Pertanahan,* 1(2), 139–154. DOI: https://doi.org/10.31292/mj.v1i2.11

ABSTRACT

The growing paddy field tourism trend cannot be separated from the shift in tourist interest towards agritourism. Paddy field tourism is seen as having positive roles. Among others, it can improve the quality of life of farmers, provide educational facilities for tourists, and maintain the indigenous culture of the community. These things indicate the need for efforts to maintain its sustainability. However, recent data show that some paddy fields are beginning to experience physical degradation caused by pressure from tourism activities and developments. This is feared to threaten the sustainability of paddy field tourism. Therefore, it is necessary to immediately take steps to control the spatial use to ensure its sustainability in the future. This study aims to provide suggestions in the form of control instruments for the spatial use and strategies for implementing these instruments in order to support the sustainability of paddy field tourism. The method used was library research with qualitative analysis techniques. The results showed that the incentive-disincentive control instrument met the criteria to support the sustainability of paddy field tourism. However, to support its effectiveness, the strategy of implementing the instrument should be carried out by synergizing spatial planning substance with land data.

A. Introduction

Paddy field tourism is currently in demand by the community (Handayani, 2016) because tourist villages in Indonesia offer tourist activities in the form of tourist participation in the paddy field farming process. The limited number of paddy fields in urban areas makes this activity increasingly attractive to visitors from urban areas (Handayani et al, 2020). Paddy fields are used not only as a place to do farming activities, but also as a tourist destination (Latifah, 2021). These paddy field tourism destinations include Agro Edukasi Wisata Organik Mulyaharja (South Bogor, West Java), Tegalalang Ubud (Gianyar, Bali), Pematang Johar Paddy Field Tourism (Deli Serdang, North Sumatra), Sawah Segar Sentul (Bogor, West Java), Pujon Kidul Tourism Village (Malang, East Java), and Svarga Bumi (Magelang, Central Java).

Paddy field tourism is a form of agritourism. Agritourism is a series of tourist activities that utilize the agricultural location or sector, starting from the beginning of production to the production of agricultural products. These tourist activities are carried out on agricultural land and aim to expand knowledge, gain experience, and as a means of recreation (Rosardi et al, 2021). Thus, it can be understood that paddy field tourism is a combination of paddy field agricultural activities and tourism.

Tourism itself is very closely related to other sectors, even a combination of various sectors (Pramesti et al, 2020). Tourism can collaborate on economic, ecological, and social aspects (Rosardi et al, 2021). The perspective of economic development sees tourism as a comprehensive sector that covers many fields and topics so that it has the potential for conflicts of interest (Lan & Chau, 2020).

One example of a conflict of interest with tourism can be found in paddy field tourism in Jatiluwih, Bali. Research in Jatiluwih shows that the ongoing development of tourism results in changes in the physical environment of paddy fields (Rahmi & Setiawan, 2020). Some paddy fields were sold and turned into tourism supporting buildings, such as homestays and restaurants. On the other hand, tourist activities in the form of trekking in paddy fields have caused damage to paddy field dikes so as to disrupt the activities of farmers in working in the paddy fields. Another thing is the disruption of the authenticity of the paddy field atmosphere due to the addition of decorative elements, such as decorative lamps, gazebos, statues, and concrete roads. These elements change the atmosphere of the paddy field landscape that is identical with peace.

The same thing is more or less true in Kedewatan Village, Ubud, Bali. The beautiful panorama of paddy fields attracts investors to make the paddy fields a target of tourism accommodation (Setiawan, 2019). As a result, part of the paddy field area has been plotted and the price of land has increased continuously. On the other hand, irrigation water has become increasingly limited due to the utilization by the Local Water Supply Utility for the benefit of tourism. This condition is exacerbated by the reluctance of the younger generation to work as farmers because of the high cost of land management, uncertain crop yields, and tax burdens that are still considered to burden the lives of farmers. These conditions might have a negative impact on the sustainability of paddy fields and *subak* system as the main capital of paddy field tourism. Another case related to the conflict of interest in paddy field tourism is that the advancement of the tourism sector provides a reference for farmers to sell or lease their rice fields at high prices (Trisna et al, 2015).

Based on these explanations, it can be understood that currently some paddy field tourism areas are experiencing symptoms of a decrease in the quality of the landscape of paddy fields due to the pressure from the tourism sector. The symptoms of a decrease in the quality of space that occur result in the problem of the lack of optimal control of the spatial use in paddy field tourism areas. This study aims to examine the problems of paddy field tourism and provide suggestions in the form of control instruments for effective spatial use, along with strategies for its implementation in order to support the sustainability of paddy field tourism.

B. Research Methods

This is library research conducted by collecting, processing, and drawing conclusions from secondary data using certain methods to solve a problem (Sari & Asmendri, 2018). This study was conducted in the library with research data sources based on secondary data, namely books, journals, laws and regulations, and sources from the internet. Data collection techniques were carried out using the list of categorization instruments of research materials (Budi & Rani, 2018). The library research method was carried out through the stages of selecting general ideas, searching for supporting information, affirmation of research focus, searching and categorizing materials, reading data and compiling research notes, conducting reviews and re-enrichment of reading materials, and re-categorizing reading materials and writing reports (Zed, 2008). The method was carried out on data and information related to paddy field tourism, the issues/phenomena that surrounded it, and the control instruments for the spatial use to be used as materials to examine the problems of paddy field tourism and the proposed control instruments.

This study used qualitative analysis techniques that included data simplification, data presentation, and conclusions (Mirshad, 2014 in Sari & Asmendri, 2018). Data simplification was done by focusing and transforming data into a scheme that covers land and spatial planning aspects. Data presentation related to paddy field tourism problems and types of control instrument for the spatial use was carried out to provide an understanding for determining the following step. Conclusions were drawn to describe the research findings related to controlling the spatial use in paddy field tourism areas. The following figure is a flow of analytical methods and techniques in this study.

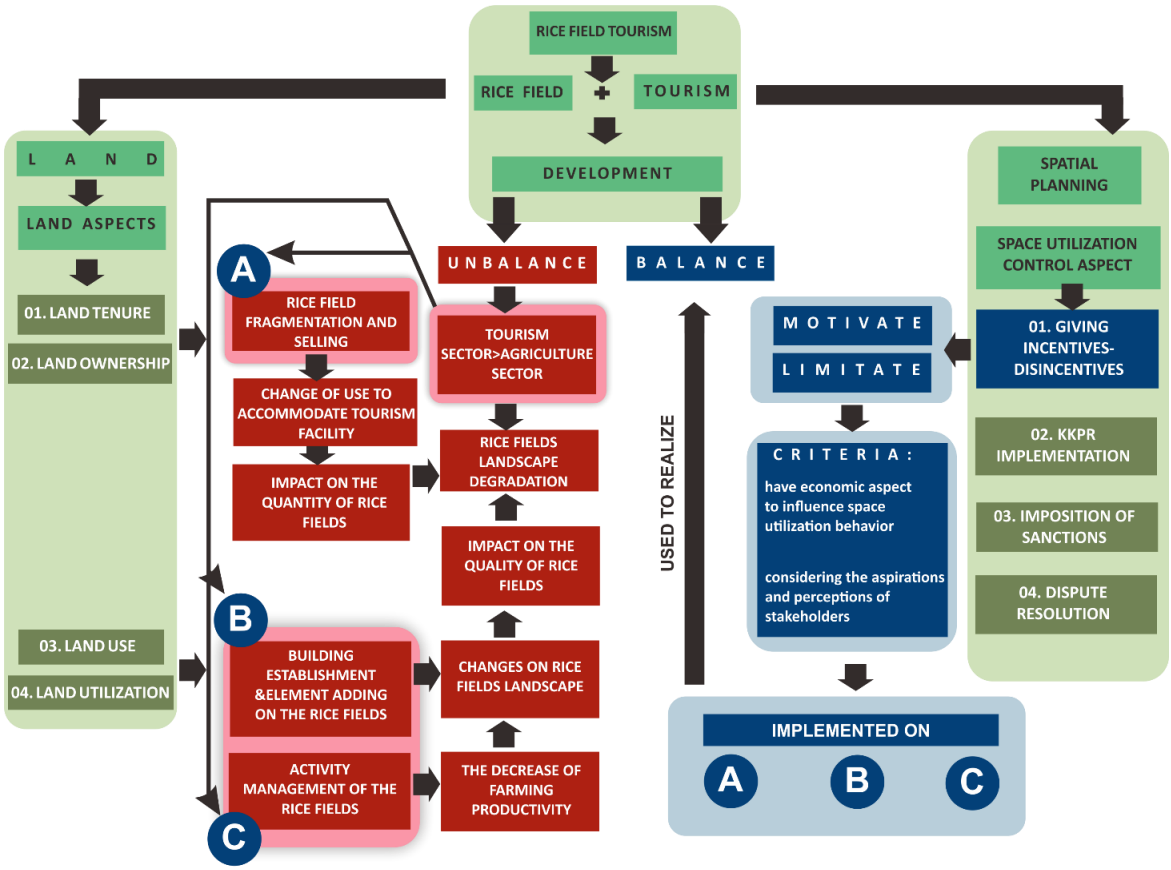

Figure 1. Analytical Methods and Techniques
Source: Processing, 2022

C. Paddy Fields, Agritourism, and Paddy Field Agritourism

Paddy fields are part of the characteristics of traditional community life that are often found in countries where the majority of the population makes rice their main consumption (Sudrajat, 2015). Paddy fields are also seen as components of ancient agricultural systems that integrate nature and culture (Wang et al, 2021). Integration with nature can be seen from paddy field agriculture which demands seasonal landscape conditions as a determinant for farmers to start planting time (Scandiffio, 2021). Cultural integration can be seen from the paddy fields which are a place of worship for Dewi Sri (Maulidi & Wulandari, 2017). On the other hand, the topic of paddy field farming also has a correlation with SDGs, including SDGs related to agricultural sustainability, infrastructure, settlements, climate change actions, and land and environment use (Dong & Xiao, 2016 in Scandiffio, 2021). These show that rice fields have a significant role in local communities because they have economic, social, and cultural values.

Today, however, paddy fields face many crises, including the abandonment of paddy fields and the loss of agricultural workers in rural areas (Wang et al, 2021). In the Indonesian context, this is due

to the decreasing interest of the population to make agriculture the main livelihood. One of them is caused by the small paddy fields so that it is no longer able to meet the needs of family life. On the other hand, industrial development attracts workers from rural areas to work in the industrial sector (Handayani, 2016).

Responding to the above problems, the government currently needs to encourage agricultural businesses to provide alternative sources of income for farmers as an effort to overcome the threat of neglect to rural areas and agricultural lands (Hjalager, 1996 in Yamagishi et al, 2020). In line with this, in Philippines, the local government has established the Farm Tourism Development Act which defines a farm tourism as an effort to attract visitors and tourists to agricultural areas for production, education, and recreation purposes (Yamagishi et al, 2020). In general, the term in these businesses is known as agritourism (Tiraieyari & Hamzah, 2011).

Agritourism is seen as an alternative activity to diversify the income of farmers who have small to medium agricultural land so that they can still survive in the agricultural sector (Tiraieyari & Hamzah, 2011). On the other hand, agritourism is also understood as (1) a combination of tourism and agriculture to attract tourists to activities related to agriculture; (2) tourism that has the main purpose to increase income of farmers; (3) tourism activities designed to provide entertainment and experiences to interact with nature and dive into farmers' lives; and (4) a combination of rural natural values and traditional cultural values (Lan & Chau, 2020). Agritourism is also understood as a type of tourism that specifically makes agricultural, livestock, and plantation products tourist attractions (Pramesti et al, 2020).

Agritourism in Indonesia has been widely developed in areas such as Malang, Bogor, North Sumatra, and other areas with certain locations and types of plants. The development of agritourism is very rapid along with the increasing needs of the city community for a fresh natural environment (Lanya et al, 2018). In this case, as part of agritourism, paddy field tourism/agritourism is understood as an educational tourism that uses the paddy field farming process as its tourist attraction (Handayani, 2016).

Figure 2. Pathways in the Jatiluwih Area
Source: https://travelspromo.com/htm-travel/jatiluwih-rice-terrace-tabanan/

D. The Need for Sustainability of Paddy Field Tourism

Agritourism is not a new phenomenon (Busby and Rendle, 2009). Many developing countries promote agritourism as a tool to strengthen livelihoods in the agricultural sector. This is done considering that livelihoods in the agricultural sector play an important role in realizing a country's food security (Songkhla & Somboonsuke, 2021). This is in line with the phenomenon that occurs in Bantar Agung Village, Majalengka. The conversion of the existing lands led to the migration of residents outside the village in search of work. Therefore, Ciboer paddy fields were developed for tourism in order to maintain the sustainability of community livelihoods in Bantar Agung Village (Syahadat et al, 2021).

On the other hand, traditional paddy field tourism (agritourism based on non-mechanical rice farming processes) can increase the income of local people, both those who have direct and those who have indirect involvement with agritourism activities (Handayani, 2016). In this case, the people who have a direct involvement with agritourism activities are farmers and agricultural instructors. Homestay owners, art groups, cooking groups, tour guides, and so on are community groups that do not have direct involvement with agritourism activities. Paddy field tourism is also a means of agricultural education for visitors (Arifianto et al, 2021). A study shows that paddy field tourism based on organic farming by offering outdoor activities in paddy fields that are given organic scents and pigments, biological pest control, healthy organic agricultural products, and so on becomes an educational medium and a destination for comparative studies that affect the level of visits and variations of tourists who come to visit (Nisa et al, 2014). This shows that in addition to being able to improve the economy of farmers and local communities, the variety of paddy field tourism by developing organic rice farming can increase the knowledge of the wider community about green agriculture as well as building the spirit of the community to preserve the environment.

On the other hand, paddy field tourism also has a correlation with the preservation of indigenous culture. For example, the *subak* irrigation system in Bali. In addition to its function in terms of irrigation management, *subak* is also related to the implementation of the Upakara traditional ritual (Lanya et al, 2018). The *subak* system is run on the principle of Tri Hita Karana (harmonious relationship between God, human, and environment). This principle is implemented through a series of traditional ceremonies, mutual cooperation, and the creation of paddy fields that are adjusted to the slope of the land (Windia et al, 2018). Therefore, it can be understood that *subak* represents and preserves Balinese culture. In other words, rice field tourism that makes *subak* part of its tourist attraction indirectly maintains the cultural customs in Bali.

E. Paddy Fields and Tourism Industry

Paddy fields and tourism industry are two interconnected sources of livelihood and cannot be separated from each other. Tourism can develop with the support of paddy fields that serve as tourist attraction so that it can attract tourists to come visit (Widia, 2018). On the other hand, farmers get opportunities to increase their income from tourism development (Tiraieyari & Hamzah, 2011). Furthermore, the use of paddy fields as tourism objects, in addition to being able to function as a source of community income, can prevent the functional shift of paddy fields, preserve cultural traditions, and support other tourism in the surrounding (Syahadat et al, 2021). As in Bali, the traditional rice farming system followed by a series of traditional ceremonies has a positive effect on the number of tourists visiting the village (Prasiasa & Widari, 2019). These things show that paddy fields and tourism industry mutually collaborate in supporting social, economic, and cultural aspects.

However, simultaneously, the development of paddy field tourism turns out to bring a number of threats to paddy fields so that it also threatens the sustainability of paddy field tourism in the future. Paddy fields that attract tourists' interest trigger the construction of tourism supporting infrastructures on paddy fields (Rahmi & Setiawan, 2020; Trisna et al, 2015). The transition of paddy fields as supporting facilities for tourism causes the blockage of irrigation channels due to waste and decreases water quality, thereby threatening the success of farmers' crops. On the other hand, high land prices and income inequality from the tourism and agricultural sector make farmers more interested in turning their rice fields into tourism supporting facilities or leasing their paddy fields. This is supported by the data that state that in 2015 the price of paddy fields in Petitenget was in the range of 0.5-1.5 billion rupiah per area, the rental price of paddy fields was in the range of 3-5 million rupiah per area per year, while the harvest for a year was in the range of 630-714 thousand rupiah per area (Trisna et al, 2015). This is an irony given that in paddy field tourism, paddy fields are the main capital for the sustainability of the tourism. The degradation of paddy fields in paddy field tourism areas will certainly decrease the interest of tourists to visit the area.

The above explanations show that even though paddy field tourism is still ongoing and in demand, the ignorance of the symptoms of paddy field degradation due to the pressure of tourism will sooner or later threaten the sustainability of paddy field tourism in the future. In this case, it is necessary to take measures to control the spatial use so that the rate of degradation of paddy fields can be stopped and the sustainability of paddy field tourism can be maintained.

F. Sustainability of Paddy Field Tourism and the Protection of Paddy Field Policy

Nature and natural environment are the most important factors of a tourist destination (Satriawati et al, 2019). Regarding paddy field tourism, the main thing that is the main concern of its sustainability is the existence of paddy fields, including the level of fertility that must be maintained and observed regularly and sustainably (Widia, 2018).

In the context of protecting paddy fields, the government has established a series of laws and regulations related to paddy fields. Regulations related to the protection of paddy fields include Law Number 41 of 2009 concerning the Protection of Sustainable Food Agricultural Land (PLP2B), Government Regulation Number 1 of 2011 concerning the Determination and Functional Transfer of Agricultural Land, Minister of Agriculture Regulation Number 07/Permentan/OT.140/2/2012 concerning Technical Guidelines for Criteria and Requirements for Sustainable Agricultural Areas, Lands, and Land Reserves, Government Regulation Number 12 of 2012 concerning Incentives for the Protection of Sustainable Agricultural Land, Law Number 22 of 2019 concerning Sustainable Agricultural Resource Management System, Government Regulation Number 59 of 2019 concerning Control of Paddy Field Functional Shift, and Minister of Agrarian Affairs and Spatial Planning/Head of National Land Agency Regulation Number 12 of 2020 concerning Procedures for Verification of Paddy Data on Land Data and Spatial Data, Determination of Protected Paddy Field Maps, and Recommendations for Land Use Changes on Protected Paddy Fields.

Broadly speaking, these regulations contain the substance that regulates the designation of some land as sustainable food agricultural land, regulates the activities and procedures for their functional shift, and implements sanctions for the violators. These regulations also regulate agricultural incentives to attract landowners to cultivate their agricultural land. Thus, it is hoped that these lands can later be protected from function shifting so that food security can be achieved.

However, after the enactment of Law Number 11 of 2020 concerning Job Creation, there were significant regulatory changes related to the protection of agricultural land. The changes are in the

form of adding object criteria that fall into the category of ''public interest'' (one of which is tourism activities), and the enabling of the functional shift of LP2B for the purposes of the National Strategic Project (PSN). In terms of protecting paddy fields, this actually leads to facilitation of land functional shift (Sumarja et al, 2021). In relation to paddy field tourism, the changes also facilitate the tourism sector to be able to develop and/or build tourism supporting facilities through the functional shift of paddy fields on behalf of the public interest.

Policies related to protection of paddy fields post Law of Job Creation is like a double-edged knife. On the one hand, it prohibits the functional shift of paddy fields. On the other hand, it provides space for the tourism sector to carry out the functional shift of paddy fields for tourism purposes. Therefore, the policy of functional shift of paddy fields for tourism purposes needs to be further regulated. As a first step, control instruments for the spatial use that can minimize the quantity of paddy fields that are converted and minimize the negative impact of the functional shift of paddy fields are needed.

G. Sustainability of Paddy Field Tourism and Control of Spatial Use

It is necessary to understand that in its development, the focus of paddy field tourism has changed from an additional commercial activity to a main tourism sector. This happens when the income obtained from the tourism sector is greater than the income from the agricultural sector (Busby & Rendle, 2000). When this happens, the uniqueness of agricultural tourism will be distorted (Peebles, 1995 in Busby & Rendle, 2000). Several similar phenomena have occurred in several paddy field tourism in Indonesia as seen in Jatiluwih and Petitenget (Rahmi & Setiawan, 2020; Trisna et al, 2015). In this case, if control is not carried out immediately, it is possible that other similar paddy field tourism will also experience the same phenomenon.

From this, before taking measures to control the spatial used aimed at maintaining the sustainability of paddy field tourism, it is necessary to understand that there is a fundamental difference between agriculture and agritourism (in this case, paddy field tourism). This principal difference needs to be recognized so that the control measures taken later have conformity/right on target with the objects and elements that want to be controlled.

Paddy field tourism is understood as an additional activity outside the agricultural sector that serves as an additional source of income for farmers. Therefore, a paddy field tourism area is not an area that was designed as a place for tourism from the beginning. There is an element of change, namely from an agricultural area to an agritourism area. The change from ''agriculture'' to ''agritourism'' is a complex process and involves many factors, one of which is the functional shift of some agricultural land to facilitate tourism activities (Songkhla & Sumboosuke, 2012).

Another thing that needs to be understood is that paddy field tourism does not demand the maximization of crops such as rice farming. The focus of paddy field tourism is more on the management of paddy fields so that the social, economic, and environmental values of paddy fields are maintained to be able to support the tourism sector. Broadly speaking, the differences between paddy field agriculture and paddy field agritourism can be seen in the following table:

Table 1. Differences between Paddy Fields Agriculture and Paddy Fields Agritourism

Subject	Objectives	Efforts to Achieve Goals	Threats	Control Efforts
Paddy field farming	Maximizing rice harvest → product orientation	- Performing agricultural mechanization - Using chemical pesticides to resist pest attacks - Maximizing paddy fields for rice production	Functional shift of paddy fields for various interests	- Suppressing functional shift of land by incentivizing agriculture - Regulating the use of land to be used as an alternative to new paddy fields - Conditioning paddy fields so that they can continue to produce to the maximum - Increasing farmers' income through selling agricultural products
Paddy Field Agritourism	Selling view of paddy field landscape and traditional/authentic/unique paddy field farming process as tourist attraction → process orientation to create tourism activities	- Maintaining the traditional/manual process of paddy field farming - Using natural (organic) pesticides in tackling pests - Reducing part of the paddy fields to be used as tourist facilities	Functional shift of paddy fields for tourism purposes	- Reducing functional shift of land by regulating stakeholder behavior in spatial use - Regulating land use so that it can share with land utilization for the tourism sector - Conditioning paddy fields to remain being a tourist attraction - Increasing farmers' income through the sale of agricultural products and the tourism sector

Source: Processing, 2022

Based on the description above, it should be noted that there will be a difference between the control policy in order to protect paddy fields and the control policy in order to support the sustainability of paddy field tourism even though both have the same protection object, namely paddy fields. The protection policy for paddy fields has the main objective of achieving food security. Therefore, efforts to do functional shift of paddy fields are prevented as far as possible. On the other hand, the control policy for the sustainability of paddy field tourism has the main objective namely the tourism and agricultural sector can continue to run side by side without negating each other. Therefore, efforts to do functional shift of paddy fields are limited as far as possible.

In paddy field tourism, the use of part of paddy fields for tourist facilities is seen as something that cannot be avoided (Songkhla & Sumboosuke, 2012). This is given that the attraction of paddy field tourism is the paddy field itself. Therefore, to be able to enjoy the landscape view and/or gain experience related to the paddy field farming process, supporting facilities are needed on that land.

Based on the above explanations, it can be understood that both paddy field farming and paddy field tourism have the same protection object, namely paddy fields. However, both have differences in terms of control, namely that in paddy field farming, the control is carried out so that paddy fields

can continue to produce the maximum rice harvest. Meanwhile, in paddy field tourism, the control is carried out so that paddy fields can continue to have a recreational attraction according to the expectations of tourists**.**

H. Sustainability of Paddy Field Tourism and Incentive-Disincentive Instrument

The phenomenon of paddy field landscape degradation that occurs in paddy field tourism areas shows a process of change from ''tourism on agricultural land '' to '' agricultural tourism'' (Busby & Rendle, 2000). The tourism sector, which was originally only an additional activity for the existing agricultural activities, shows a tendency to develop into the main activity of the area. This development makes the tourism sector provide higher profits and/or income than the agricultural sector. Therefore, there is a tendency of farmers to redirect their paddy fields as tourist facilities and switch their job to the tourism sector. If this is allowed, it will threaten the sustainability of paddy field tourism in the future.

Threats to the sustainability of paddy field tourism are beginning to be seen with the appearance of symptoms of a decrease in the quality of the paddy field landscape in the form of physical changes in the landscape to accommodate tourist supporting facilities (Rahmi & Setiawan, 2020). The tourism management system has not shown performance that can absolutely control farmers not to sell their paddy fields to then shift functions as a means of supporting the tourism sector. Tourism development has provided a reference for farmers to sell or lease their paddy fields at high prices to the tourism sector (Trisna et al, 2015).

However, it should be noted that paddy field tourism is part of agritourism, which is a branch of nature-based tourism. As part of natural tourism, the tourism should focus on activities that have a low impact and are based on the community/involve the local community to be able to develop culturally, socially, and economically (Yamagishi et al, 2020). Therefore, the functional shift and/or the use of paddy fields as supporting facilities for tourism needs to be limited through a mechanism for controlling the spatial use that can involve the role of the community and all existing stakeholders.

In terms of control, the sustainability of paddy field tourism is also determined by the exploration of the correlation between rural landscape transformation and tourism development, which is then synergized with analysis sourced from local community perceptions (Zhang & Stewart, 2017). In this case, the aspirations of the community/stakeholders should be part of the control instrument that will be taken because tourism development not only changes the physical environment, but also affects the society, traditions, and quality of life (Kang et al, 2008 in Zhang & Stewart, 2017).

Furthermore, Weaver and Fennel (1997), Busby and Redle (2000), McGehee et al. (2002), Miller (1993), and Nickerson (2001) in Tiraieyari & Hamzah, 2012) stated that the biggest motivation of agritourism development is the economy. Good economic system management will ensure the sustainability of paddy field tourism areas (Rahmi & Setiawan, 2021). Furthermore, there is an opinion stating that one of the spatial planning policies that is initiated to become an alternative policy to the current ''command-based'' policy is an incentive-based economic instrument (Bocher, 2012; Dargusch & Griffiths, 2008 in Pleger et al, 2018). The policy uses market-based coordination mechanisms to influence the behavior of actors in spatial use. Based on these explanations, it can be understood that people's behavioral preferences in spatial use can be directed through incentive mechanisms associated with economically assessable losses/gains. In relation to control of paddy field tourism, the control instrument should be an instrument that can direct the perceptions and preferences of stakeholders in paddy field tourism areas by offering things that are considered to have economic value for them. The control instrument should also open a space that allows exploration of various

interests and things that are considered valuable by each stakeholder. Based on these explanations, it can be understood that the characterizing substances of control instruments that can be taken to support the sustainability of paddy field tourism lead to the substance of incentive-disincentive control instruments.

When it comes to protecting agricultural land, regulations related to incentive-disincentive are not new substances. Government Regulation Number 12 of 2012 concerning Sustainable Food Farm Land Protection Incentives has regulated matters related to incentive-disincentive. However, the incentive is still limited to efforts to improve the quality of human resources in agriculture, so it does not have a direct correlation with space. On the other hand, what is meant by disincentive in the Government Regulation is the terminology for the revocation of the incentive if the recipient no longer performs the required activities. In addition, the type of incentives is the same for all regions and all regional functions. This has the potential to cause ineffectiveness of policy implementation because each region and each regional function has their own characteristics. Different characteristics correlate with different preferences as well. Thus, it can be understood that the incentive-disincentive instrument in the regulation concerning paddy field protection is less effective if it is immediately applied as a control instrument in order to support the sustainability of paddy field tourism. The factor of its proximity to the substance of space and the vastness of the types of incentive-disincentive are less able to accommodate the various preferences of stakeholders in paddy field tourism activities.

On the other hand, incentive is also regarded as control the spatial use. Regulations related to incentive are contained in Government Regulation Number 21 of 2021 concerning the Implementation of Spatial Planning. The Government Regulation contains substance which states that incentive is one of four types of spatial use control instruments. Incentive is an instrument that can provide stimulants for spatial use activities that have benefits where developments are needed. In contrast, disincentive is an instrument that imposes limits on space use activities that have the potential to exceed the carrying capacity and the capacity of the environment. The types of incentive-disincentive can be fiscal and non-fiscal, where both have economic losses and/or benefits for the recipient. Fiscal incentive relates to tax reductions and/or exemptions, while fiscal disincentive relates to the imposition of high taxes. Non-fiscal incentive can be in the form of compensation, subsidies, rewards, space leases, stock purchase, facilitation of Suitability of Spatial Use Activities (KKPR), provision of facilities and infrastructure, awards, and/or promotions. On the other hand, non-fiscal disincentive can be in the form of an obligation to provide compensation, restrictions on the provision of infrastructure, and/or the granting of certain status.

In relation to the economic element which is one of the consideration criteria for control instruments, Government Regulation Number 21 of 2021 places this economic element in the implementation of incentive, namely in the explanation of compensation and rewards. In this case, compensation can be given in the form of programs and/or money, while rewards can be given in the form of the transfer of the right to build, the provision of infrastructure that can support preservation, money, and/or other things that can be assessed with money. Based on the criteria above, the substance of the incentive-disincentive control instrument in the domain of controlling the spatial use indicates that the instrument meets the criteria as a control instrument that supports the sustainability of paddy field tourism.

However, the government regulation is still limited to directives on forms and procedures of incentive-disincentive. The details of the directives on forms and procedures for implementing incentive-disincentive become the authority of the central government which will later be determined through a ministerial regulation. In this case, it can be seen that the incentive-disincentive policy tends

to be less able to meet the aspirations of many parties. This is because the local government has not been given room to determine the details of its own incentive-disincentive forms and procedures. Each region has a different culture of people and customs. The level of public/community acceptance related to the forms and procedures of implementing the spatial incentive-disincentive offered depends heavily on the culture and customs of these communities. Therefore, it can be understood that in researching the forms and procedures of incentive-disincentive, not all aspects can be generalized.

The forms of incentive-disincentive that can be generalized can be done through a spatial function approach, which is an approach that is based on the ideal conditions for the spatial use to be achieved from a paddy field tourism area. However, a correlation is needed between the suitability of the conditions to be achieved, the obstacles/threats faced, and the directives of the forms and procedures for implementing incentive-disincentive contained in the regulations of spatial planning.

The implementation of forms and procedures of incentive-disincentive needs to be focused on regulating the crucial things that can have an effect on changes in the paddy field landscape. Therefore, incentive-disincentive arrangements that focus on paddy fields need to be prioritized. Reflecting on the existing problems, there are at least three things that need to be encouraged and/or limited to paddy fields, namely related to the breakdown of paddy fields, the development and/or addition of elements on paddy fields, and the management of paddy fields and the surrounding environment. Based on this explanation, the incentive-disincentive can be applied in the following schemes:

Table 2. Scheme for the Implementation of Incentive-Disincentive in the Field of Spatial Planning for Stakeholders in Tourism Areas

Subject	Objectives of control	Incentive-Disincentive
Restrictions on the breakdown of paddy fields	- Maintaining the sustainability of land use for paddy fields - Limiting the tendency of farmers to sell their paddy fields	- Providing fiscal incentive for paddy field owners who maintain a certain area of paddy fields so that the area can be cultivated as productive agricultural land
Restrictions on development and/or addition of elements on paddy fields	- Limiting the transfer of paddy field functional shift to tourist supporting facilities - Optimizing non-farm land for the construction of tourist supporting facilities	- Providing incentive in the form of compensation and/or rewards to farmers who are willing to make part of their houses for tourist supporting facilities - Providing disincentive in the form of an obligation to compensate for the addition of decorative elements on paddy fields
Management of paddy fields and the surrounding environment	- Maintaining the sustainability of land use for paddy fields - Limiting the tendency of farmers to sell and/or neglect their paddy fields - Restricting tourism actors from building on paddy fields	- Providing incentive in the form of remuneration for farmers who are willing to cultivate their paddy fields by working with third parties through the imposition of usufructuary rights over property rights

	- Limiting the construction of tourism facilities adjacent to paddy fields that can reduce the view quality of paddy fields	- Providing incentive in the form of awards and/or promotion of the marketing of agricultural products for paddy field owners who want to cultivate their own paddy fields - Providing incentive in the form of space leases to tourism developers who are willing to build their tourism facilities outside the paddy field area or within a certain radius around the paddy fields - Providing disincentive to tourism developers in the form of the obligation to compensate farmers for the management of paddy fields that support tourism in paddy field tourism areas. - Providing disincentive in the form of restrictions on infrastructure facilities and/or the obligation to compensate development actors on paddy fields

Source: Data processing by author, 2022

Table 2 provides an overview of the implementation of spatial use control instruments in the form of incentive-disincentive on three things, namely restrictions on the breakdown of paddy field, restrictions on the development and/or addition of elements on paddy fields, and management of paddy fields and the surrounding environment. These three things are the main things that are seen as having an influence on degradation and/or changes in the paddy field landscape due to the pressure from the tourism sector, both in terms of quantity and quality. These three things also have a correlation with land aspects which include land control, ownership, use, and utilization. All three are also correlated with the spatial planning aspect because the granting of land rights, use, and utilization of land must be in accordance with the spatial plan. These relationships allow for synergies between the aspects of land and spatial planning, which in this case are realized through the implementation of spatial use control instruments in the form of incentive-disincentive.

The aspect of land control and ownership correlates with the pressure from the tourism sector which results in the breakdown and/or functional shift of land for tourism purposes, thus affecting the quantity of paddy fields. Aspects of land use and utilization correlate with the pressure from the tourism sector in the form of development and/or addition of decorative elements on paddy fields, resulting in changes in the hue of paddy fields and reduction in irrigation water. These aspects are also correlated with the pressure from the tourism sector in the form of the management of paddy fields for trekking activities and farming practices by tourists, resulting in the disruption of rice farming activities by the farmers. The development and/or addition of decorative elements as well as the management of paddy fields for the tourism sector have an influence on the quality of paddy fields.

In this regard, Table 2 also shows the proposed role of the control instruments on the spatial use in the form of incentive-disincentive by choosing the forms of incentive-disincentive that offer encouragement and restrictions that have economic value (compensation, appreciation, promotion, space rental) as a form of balancing efforts between the tourism sector and the agricultural sector in the paddy field tourism area, so that it is hoped to be able to support the sustainability of paddy field tourism.

I. Conclusion

The problem faced by paddy field tourism is the pressure from the tourism sector on the agricultural sector caused by the development of the tourism sector that goes beyond the development of the agricultural sector. This results in degradation and/or changes in the paddy field landscape that can threaten the sustainability of paddy field tourism in the future. The sustainability of paddy field tourism requires efforts to control the tourism development so that it does not develop beyond agricultural development that can have negative effects on the quality of the paddy field landscape. In this regard, the substance of the incentive-disincentive control instruments for the spatial use indicates the fulfillment of criteria to be used as control instruments that can support the sustainability of paddy field tourism. This is because the instruments have the principle of encouraging (incentive) and limiting (disincentive) so that it can be used to balance the spatial use for the tourism and agricultural sectors in paddy field tourism areas. Such instruments can also directly influence in terms of space and tend to be an accommodative restrictive through the offer of options/choices for each stakeholder to determine behavioral preferences in utilizing space.

With regard to its implementation, incentive-disincentive in controlling the spatial use will be more effective if it is carried out through synergies between spatial planning and land in a complementary and supplementary framework. Complementary synergy is implemented in determining the form, type, and procedure of incentive-disincentive. In this case, the substance of *zone-based* spatial use control is in synergy with *field-based* land data. Incentive is implemented by focusing on limiting activities that cause vulnerability to paddy fields, namely paddy field breakdown, development and/or addition of elements on paddy fields, as well as paddy field management. On the other hand, supplementary synergy is implemented through collaboration in the dissemination of information related to the established incentive-disincentive regulations. In this case, information dissemination can be integrated in any land registration process and/or KKPR granting mechanism.

In order to optimize the implementation of incentive-disincentive for the sustainability of paddy field tourism, further research is needed to determine how many effective paddy field areas can be converted to support paddy field tourism, determine the types of buildings and/or decorative elements on paddy fields, and map the potential paddy fields to be developed as paddy field tourism (requires preventive measures) or even degraded paddy field tourism (requires countermeasures).

J. Recommendations

1. Policies related to the regulation of the implementation of incentive-disincentive instruments as a form of prevention and mitigation efforts for degradation and/or changes in the rice field landscape due to the urging of the tourism sector are needed;
2. Deeper exploration related to the various interests of each stakeholder in the paddy field tourism area to increase the level of acceptance and participation of these stakeholders in the implementation of incentive-disincentive control instruments is needed;

3. Commitment is required from all parties involved, especially infrastructure providers in supporting the implementation of established incentive-disincentive regulations; and
4. It is necessary to provide space for the local government to be able to determine the details of the forms and procedures for implementing incentive-disincentive so that it can be adjusted to the preferences and culture of the community.

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