

PENENTUAN LAHAN UNTUK PENGEMBANGAN AGROWISATA BUAH DI BUKIT TANDALO, KABUPATEN BANGGAI

Land Determination for Fruit Agrotourism Development In Tandalo Hill, Banggai Regency

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ABSTRAK

Persyaratan penggunaan lahan agrowisata merupakan salah satu jenis kegiatan pariwisata yang mengandalkan pada obyek wisata utamanya dari penataan tanaman pertanian seperti buah-buahan, sehingga perencanaan pengembangan agrowisata merupakan suatu persoalan penting dalam rangka mencapai tujuan penggunaan lahan yang berorientasi pada keseimbangan. maka perlunya penilaian lahan sebagai dasar rekomendasi pengembangan agrowisata di Bukit Tandalo Kecamatan Luwuk Timur. Penelitian ini dianalisis secara deskriptif dan kuantitatif serta diinterpretasi serta disajikan dalam bentuk Tabel. Penilaian lahan dilakukan dengan analisis kesesuaian lahan yang merujuk pada petunjuk teknis evaluasi lahan pertanian yang ditentukan berdasarkan nilai Indeks Lahan dengan menggunakan metode Akar Kuadrat. Adapun hasil penilaian lahan untuk pengembangan agrowisata buah di Bukit Tandalo Kecamatan Luwuk Timur tergolong sangat sesuai (S1) untuk tanaman mangga dan Alpukat, cukup sesuai (S2) untuk tanaman Klengkeng, Manggis dan Strawberry serta sesuai marginal (S3) untuk tanaman Apel. Berdasarkan hasil kesesuaian lahan potensial keenam jenis tanaman buah tersebut dapat dikembangkan sebagai komoditi agrowisata buah di Bukit Tandalo Kecamatan Luwuk Timur, Kabupaten Banggai.

Kata Kunci: *Agrowisata, Buah, Lahan, Rekomendasi*

ABSTRACT

Agrotourism land use requirements are one type of tourism activity that relies on tourism objects, mainly from the arrangement of agricultural crops such as fruits, so planning for agro-tourism development is an important issue in order to achieve balance-oriented land use goals. hence the need for land assessment as a basis for recommendations for agro-tourism development in Tandalo Hill, East Luwuk District Banggai Regency. This research is analyzed descriptively and quantitatively and interpreted and presented in the form of a Table. Land assessment is carried out by land suitability analysis which refers to the technical guidelines for agricultural land evaluation which are determined based on the Land Index value using the Square Root method. The results of the land assessment for the development of fruit agrotourism in Tandalo Hill, East Luwuk District, are classified as very suitable (S1) for mango and avocado plants, moderately suitable (S2) for Klengkeng, Mangosteen, and Strawberry plants and marginally suitable (S3) for Apple plants. Based on the results of potential land suitability, the six types of fruit plants can be developed as fruit agrotourism commodities in Tandalo Hill East Luwuk District, Banggai Regency

Keywords: *Agrotourism, Fruit, Land, Recommendations*

Land use in an area must be considered against the resources available

INTRODUCTION

in a location and its activities so that the existing area can obtain economic, ecological, and social benefits. Land use activities are often an integral part of survey activities to generate relevant databases. Determining the standard area of optimal land use in agro-tourism development planning is an important issue to achieve land use goals oriented towards agroecosystem development (Bagu, & Sunarto 2013). Agrotourism land use planning must be in accordance with the objectives, especially the regulation, utilization, and estimation of integrated land optimization between tourism and agriculture (Budiarjono & Wardaningsih 2013). If the arrangement is not carried out, it will cause an imbalance between the land's carrying capacity and the land's potential in an area.

The use of land resources needs to be adjusted to agroecological conditions, so that the agricultural business can be sustainable, with efforts to conserve land, water, plant, and animal genetic resources, which do not damage the environment (Damayanti 2013). To be able to support the use of land resources requires knowledge of the properties of the land. Land use requirements agrotourism is a type of tourism activity that relies on tourism objects mainly from the arrangement of agricultural crops such as fruits, food, and plantations. Rouw & Atekan (2015) stated that agriculture based on land resources must be based on accurate data and information to ensure sustainable use. Agrotourism provides a natural landscape of agricultural areas and activities in them such as science, tourism experience, and business linkages in agriculture (Budhi 2010). Even visitors can buy agricultural products that are made like souvenir as souvenirs. Agrotourism also involves tourists in agricultural activities. (Nurisjah 2001). So, it can be said that agrotourism is tourism that utilizes agricultural objects as the main attraction of interest.

Agro-tourism is a combination of tourism activities and agricultural activities that are integrated with the entire agricultural system and the use of agricultural objects as tourist objects. Kristiana & Theodora (2016) defines agro-tourism, is an integrated system of activities for the development of tourism as well as agriculture, in improving community welfare. Furthermore, Budiarti et al. (2013) stated that Agrotourism activities are expected to create new tourism products/diversification of agricultural activities to increase the added value of agricultural activities and the welfare of farmers as well as the economic growth rate of the region (Palit *et al.* 2017). The better the population's quality of life as a result of development activities, the sustainability of development will be achieved. On the contrary, mistakes in selection/decision-making in development will be reflected in the incompatibility between humans and nature so that in the end it will cause the quality of life of the population to decline so that the sustainability of development is threatened (Susetyaningsih 2013). According to Astuti (2013), the development of agro-tourism must be carried out with careful planning and pay attention to the available carrying capacity in order to support human recreational activities that support their desire, satisfaction, and comfort in using the site for tourist areas. The development of agro-tourism can also be done by adopting today's environmentally friendly technology to produce superior agro-products. Banggai Regency has sufficient fruit farming potential, especially in Tandalo Hill, East Luwuk District so the economy in East Luwuk District is still outperformed by the agricultural sector of the fruit subsector. The potential of fruit in Tandalo Hill is a tourist attraction that attracts the community. So, it is necessary to conduct a land assessment study with the aim of recommending land use for the development of fruit agro-tourism in

Tandalo Hill, East Luwuk District, Banggai Regency.

MATERIALS AND METHODS

Research location is an area planned as a fruit agrotourism area in Tandalo Hill, East Luwuk District, Banggai Regency (Figure 1). The research was carried out from June to October 2021, by conducting sampling in the field. Samples obtained from the field were analyzed Laboratory Chemistry and Soil Fertility Faculty of Agriculture, Hassanudin University. The physical properties of the soil analyzed were texture by pipette method and soil chemical properties consisting of pH H₂O extract 1:2.5, C-organic Walkley & Black method, N-total

Kjedahl method, P₂O₅ Olsen method, K₂O HCL method 25%, KTK and KB with NH₄-acetate 1N pH 7 and climate data such as temperature and humidity obtained from BMKG Luwuk Banggai. Data are obtained, processed, and presented in the form of Tables. Furthermore, the data are analyzed descriptively and quantitatively and interpreted according to the objectives of the study. The determination of land suitability from each sample in this study was determined using a matching method between land quality and crop growth requirements based on land suitability criteria that refer to technical guidelines for agricultural land evaluation (Ritung *et al.* 2011).

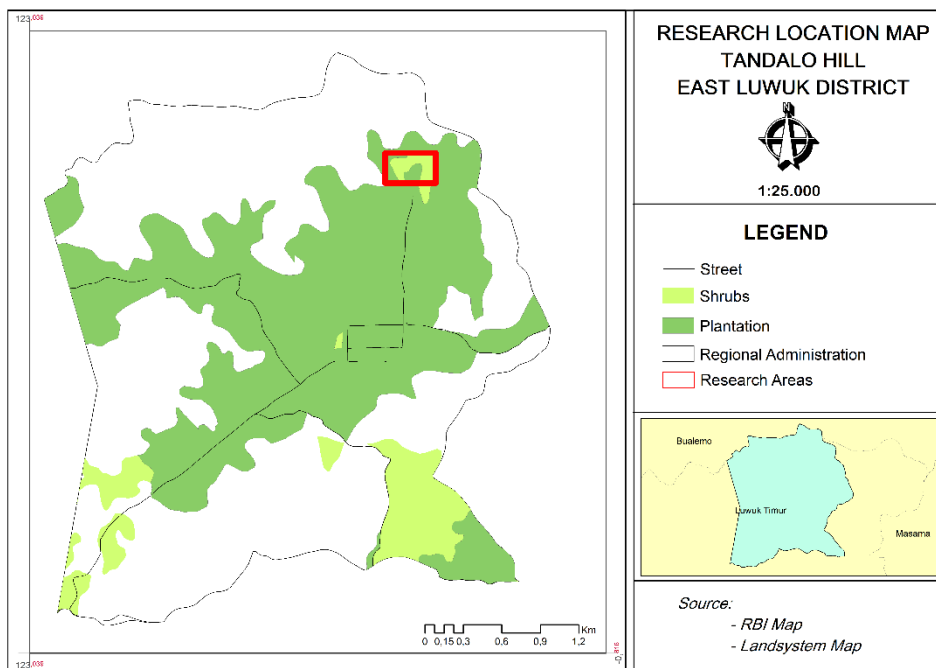


Figure 1. Research lokation map

RESULTS AND DISCUSSION

Actual Land Suitability of Fruit Plants Tandalo Hill, East Luwuk District

Land suitability is the suitability of land for a specific purpose of use, by determining the value of land classes linked to the potential of its territory so,

that land use is more directed toward sustainability (Setianingrum *et al.* 2014). The results of the analysis of the actual

land suitability of the research site for the development of fruit agrotourism are tabulated in the form of Table 2 below.

Table 2. Actual land suitability Tandalo Hill, East Luwuk District, Banggai Regency

Fruit Crops	Actual Land Suitability Class				Limiting Factors
	Point A	Point B	Point C	Point D	
Mango	S2	S2	S2	S2	nr,na,eh
Avocado	S2	S2	S2	S2	nr,na,eh
Apple	N	N	N	N	wa
Klengkeng	S3	S3	S3	S3	na
Mangosteen	S3	S3	S3	S3	na
Strawberry	S3	S3	S3	S3	na, eh

Description: wa= water availability; nr= nutrient availability; na= soil fertility; eh=topography
Source: Process data 2021

Based on the analysis of the actual land suitability class of Mango and Avocado plants (Table 2) the study location at points A, B, C, and D are classified as moderately suitable (S2) with limiting factors of nutrient retention (nr), available nutrients (na) and erosion hazards (eh) and for Apple plants classified as unsuitable (N), the unsuitability is influenced by very low rainfall (wa) for apple plant growing requirements. Apart from that, the Klengkeng and Mangosteen plants at the research site are classified as marginal (S3). The limiting factor in Klengkeng plants is that the available nutrients (na) is very low. Furthermore, the actual land suitability of Strawberry plants is classified as marginally suitable (S3) with a very low available nutrient limiting factor (na) and a moderate erosion hazard (eh) at erosion levels.

Limiting Factors and Potential Land Suitability of Tandalo Hill Fruit Plants, East Luwuk District

The results of the actual land suitability analysis were obtained so that efforts are needed to improve the limiting factors that limit the development of fruit agro-tourism in Tandalo hill, East Luwuk District. In general, Mango, Avocado, Apple, Klengkeng, Manggis, and Strawberry plants in Tandalo hill, East

Luwuk district, are suitable for cultivation. The limiting factors in the development of fruit crops for mango and avocado are nutrient retention (nr), available nutrients (na), and erosion hazards (eh). According to Akbar et al. (2020) with this limiting factor, improvement efforts can be made such as liming and adding organic matter, fertilizing, and making terraces, planting parallel contours, and planting land cover crops (Munthe et al. 2017), so that the suitability of the land for the development of mango and avocado crops can be increased to potential (S1) is very suitable (Table 2).

Furthermore, the limiting factor for Apple plants at the study site is the availability of water (wa) such as rainfall which is classified as very low so the actual suitability of the land is classified as (N) not suitable. However, in this limiting factor, improvements can be made to improve the status of land quality at the research site, such as the development of irrigation water channels to meet plant water needs (Katili dan Sari 2021). According to the results of a survey of agro-tourism development sites in Tandalo hill, there are springs that can be managed to meet the needs of apple plants. Thus, the potential land status of apple crops can be increased to (S3) as per marginally suitable

(Table 3). As is the case for Klengkeng, Mangosteen, and Strawberry crops, actual land suitability is classified as marginally suitable (S3) with a low available nutrient limiting factor (na) and moderate erosion hazard (Table 2). So, improvement efforts can be made by fertilizing and making terraces, planting parallel contours, and planting land cover crops, so that an increase in the level of a potential class of land suitability to S2 can be obtained that is moderately suitable. In general, the land suitability class of Klengkeng, Mangosteen, and Strawberry plants can be developed in Tandalo Hill with a suitable land suitability class (S2). This is due to the limiting factor of the average temperature (tc) which is an obstacle in the development of Klengkeng, Mangosteen, and Strawberry plants (Table 3). In the

technical guidelines for the suitability of agricultural land, this type of limiting factor cannot be made improvement efforts (Ritung et al. 2011).

Furthermore, Sara et al. (2020) temperature limiting factors are obstacles that are impossible to make improvements. However, based on physical field surveys, the research site can be categorized as feasible and can be directed to develop Klengkeng, Mangosteen, and Strawberry plants because of its natural conditions which are still classified as virgin land. The results of the analysis of the potential land suitability of mango, avocado, apple, klengkeng, mangosteen, and strawberry crops were conditionally cultivated in Tandalo Hill, East Luwuk District, Banggai Regency. More details can be seen in Table 2 below.

Table 3. Potential Land suitable for fruit agrotourism development in Tandalo Hill East Luwuk District, Banggai Regency

Fruit Crops	Actual land Suitability Class				Improvement Efforts	Potential Land Suitability Class				Status
	Point					Point				
	A	B	C	D		A	B	C	D	
Mango	S 2	S 2	S 2	S 2	Carrying out liming or addition of organic matter, fertilizing and making terraces, planting parallel contours, planting land cover crops.	S 1	S 1	S 1	S 1	Very suitable
Avocado	S 2	S 2	S 2	S 2	Carrying out liming or addition of organic matter, fertilizing and making terraces, planting parallel contours, planting land cover crops.	S 1	S 1	S 1	S 1	Very suitable
Apple	N	N	N	N	Development irrigation canal/irrigation system.	S 3	S 3	S 3	S 3	Marginally suitable
Klengkeng	S 3	S 3	S 3	S 3	Fertilizing.	S 2	S 2	S 2	S 2	Moderately suitable
Mangosteen	S 3	S 3	S 3	S 3	Fertilizing.	S 2	S 2	S 2	S 2	Moderately suitable

Strawberry	S	S	S	S	Carrying out fertilizing and making terraces, planting parallel contours, planting land_cover crops.	S	S	S	S	Moderately suitable
	3	3	3	3		2	2	2	2	

Source; Process data 2021

The results of the land suitability of Mango and Avocado plants with land suitability classes are very suitable at points A, B, C, and D with very feasible criteria to be developed, Furthermore, for Apple plants with marginally suitable at points A, B, C, and D as well as determining the feasibility of marginal apple crops, meaning that for this commodity can be developed or cannot be developed, adapted to field conditions (Ishak et al. 2012). Furthermore, for Klengkeng, Mangosteen and Strawberry plants with land suitability quite suitable at points A, B, C and D, so that the cultivation of these plants can be carried out with intensive and good management (Rizkiyanti et al. 2014). It can be assumed that the entire fruit crop that is planned to be developed at the Tandalo Hill research site is categorized as quite suitable and appropriate as a fruit crop-based agrotourism crop with relatively medium and relatively low land management in general (Luntungan et al. 2020).

CONCLUSIONS

The land assessment for the development of fruit tourism ag in Tandalo hill East Luwuk District, Banggai Regency, classified as very suitable (S1) for mango and avocado plants, moderately suitable (S2) for Klengkeng, Mangosteen and Strawberry and marginally suitable (S3) for Apple. Based on the results of the potential land suitability, the six types of fruit plants can be developed as commodities fruit agrotourism in Tandalo hill East Luwuk District, Banggai Regency.

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