

**EVALUASI KESESUAIAN LAHAN KAKAO (*Theobroma cacao. L*)
DENGAN METODE ANALYTICAL HIERARCHY PROCESS (AHP) DI
DESA AGROWISATA NGLANGGERAN, GUNUNGKIDUL, DAERAH
ISTIMEWA YOGYAKARTA**

INTISARI

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Kakao (*Theobroma cacao L.*) merupakan salah satu komoditas untuk ekspor yang penting di Indonesia. Pengembangan komoditas kakao di Indonesia saat ini lebih terfokus pada pengembangan lahan-lahan di desa. Pengembangan produk pertanian seperti kakao, memerlukan pertimbangan aspek kesesuaian dan potensi lahan. Desa Nglanggeran adalah salah satu desa penghasil kakao yang kini sudah memiliki beberapa UKM coklat. Penelitian ini bertujuan untuk menerapkan dan mengevaluasi metode *Analytical Hierarchy Process* (AHP) untuk menilai kesesuaian lahan kakao di Desa Nglanggeran dan memberikan alternatif upaya perbaikan kesesuaian lahan kakao. Penelitian ini menggunakan *drone* sebagai alat untuk mengambil foto udara lokasi penelitian. Foto udara dianalisis dengan *software* Agisoft Metashape dan ArcGis 10.3 untuk mendapatkan penggunaan lahan (land use) terkini. Penilaian kesesuaian menggunakan AHP dilakukan dengan *software expert choice*. Parameter kesesuaian lahan yang digunakan adalah suhu, curah hujan, kelerengan, tekstur, pH H₂O, C – Organik, serta akses ke jalan dan pasar. Data iklim didapatkan dari Balai Besar Wilayah Sungai Serayu Opak. Lahan yang dievaluasi adalah penggunaan lahan tegalan, semak, dan kebun. Terdapat 5 dusun di Desa Nglanggeran yang diambil sampel tanahnya. AHP menghasilkan skor untuk kemiringan lereng 0,341; curah hujan 0,189; akses ke jalan dan pasar 0,143; suhu 0,064; tekstur 0,054; c-organik 0,036; dan pH H₂O 0,03. Indeks kesesuaian rentangnya 0 - 0,30, selanjutnya dibagi menjadi 4 kelas dengan cara equal interval. Hasil dari evaluasi lahan di Desa Nglanggeran diperoleh 4 kelas yaitu S1 (sangat sesuai) 8,6%, S2 (sesuai) 17,9%, S3 (sesuai marginal) 43,1%, dan N (tidak sesuai) 30,4%. Metode AHP dapat diterima dengan angka CR 0,09 untuk evaluasi kesesuaian lahan kakao di Nglanggeran. Hasil yang diperoleh ini dapat digunakan sebagai informasi dasar pengembangan lahan kakao di Desa Nglanggeran.

Kata kunci: *analytical hierarchy process*, kakao, kesesuaian lahan, Nglanggeran Gunung Kidul

**ASSESMENT OF SUITABILITY LAND FOR COCOA PLANTATION
USING ANALYTICAL HIERARCHY PROCESS IN AGROTOURISM
AREA OF NGLANGGERAN VILLAGE, GUNUNGKIDUL,
YOGYAKARTA**

ABSTRACT

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Cocoa (*Theobroma cacao* L.) is an important export commodity in Indonesia. The development of cocoa commodities in Indonesia is currently more focused on developing land in villages. The development of agricultural products, such as cocoa, requires consideration of aspects of suitability and land potential. Nglanggeran Village is one of the cocoa-producing villages which now has several chocolate SMEs. This study were aimed to apply and to evaluate the Analytical Hierarchy Process (AHP) method in assessing the suitability of cocoa land in Nglanggeran Village, then to provide alternative efforts to improve the suitability of cocoa land. This study used a drone as a tool to take aerial photos of the research location. Aerial photos were analyzed using Agisoft Metashape and ArcGis 10.3 software to get the latest land use. Conformity assessment using AHP was carried out with expert choice software. The land suitability parameters used were temperature, rainfall, slope, texture, pH H₂O, C – Organic, as well as access to roads and markets. Climate data were obtained from the Serayu Opak River Basin Center. The land that was evaluated was the use of dry land, shrubs, and gardens. There were 5 hamlets in Nglanggeran Village whose soil samples were taken. AHP yields a score for slope of 0.341; rainfall 0.189; access to roads and markets 0.143; temperature 0.064; texture 0.054; c-organic 0.036; and pH H₂O 0.03. The suitability index ranges from 0 to 0.30, then divided into 4 classes by means of equal intervals. The results of the land evaluation in Nglanggeran Village obtained 4 classes, namely S1 (very suitable) 8.6%, S2 (appropriate) 17.9%, S3 (marginally suitable) 43.1%, and N (not suitable) 30.4% . Here the AHP method is acceptable with a CR number of 0.0884. The results obtained can be used as basic information for the development of cocoa land in Nglanggeran Village.

Keywords: analytical hierarchy process, cocoa, suitability land, Nglanggeran Gunung Kidul