

Agrosilvo ekosistem hutan rakyat model keberlanjutan dan adaptasi pengelolaan hutan rakyat pada bagian Hulu Das Serayu = Agrosilvo ecosystem of privately owned forest sustainability and adaptation model of privately owned forest management on serayu upstream watershed

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Abstrak

Agrosilvo ekosistem hutan rakyat (HR) adalah bentuk pengelolaan sumber daya alam berkelanjutan dan adaptif terhadap perubahan. Penelitian ini merumuskan model keberlanjutan dan adaptasi pengelolaan agrosilvo ekosistem HR, sebagai dasar konsep strategi pengelolaan lahan kritis DAS serta strategi adaptasi perubahan iklim berbasis ekosistem hutan. Penelitian ini menggunakan tiga tahapan analisis. Pertama, analisis statistik deskriptif untuk menggambarkan karakteristik dan fungsi agrosilvo ekosistem HR. Kedua, Analisis Multi Dimensional Scaling menggunakan aplikasi Rapid Appraisal HR (RAP-HR) untuk mengetahui status dan faktor penguat keberlanjutan dan adaptasi pengelolaan HR. Ketiga, analisis prospektif untuk merumuskan model keberlanjutan pengelolaan dan adaptasi agrosilvo ekosistem HR dalam rekayasa skenario masa depan. Karakteristik agrosilvo ekosistem HR dicirikan oleh pola penanaman multispecies dan multilayer yang mampu memenuhi fungsi sosial ekonomi dan hidrologis lahan dalam perubahan pola iklim yang terjadi. Karakteristik agrosilvo ekosistem HR dibentuk oleh inisiatif adaptasi subsistem sosial. Keberlanjutan dan adaptasi pengelolaan HR pada unit analisis cukup adaptif dan berkelanjutan didukung keberlanjutan variabel perencanaan tanaman, karakteristik agrosilvo ekosistem, dan kelembagaan. Variabel pola silvikultur dan pola pemanenan berada dalam status kurang adaptif dan kurang berkelanjutan. Keberhasilan model keberlanjutan dan adaptasi pengelolaan agrosilvo ekosistem HR digerakkan oleh faktor program penguatan kelembagaan dan diungkit oleh faktor aktivitas pengendalian lahan, penetapan jarak tanam, serta stratifikasi tanaman dan kesinambungan produksi yang berlangsung dalam skenario optimistik progresif.

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Agrosilvo ecosystem of privately owned forest (PoF) is a form of sustainable and adaptive natural resource management. This study formulates a model of sustainability and adaptive management of PoF agrosilvo ecosystems, as a basis for formulating the strategic concept of degraded watersheds management and rehabilitation and also forest ecosystem-based climate change adaptation strategies. This study uses three phases of analysis. First, descriptive statistical analysis to describe the characteristics and functions of PoF agrosilvo ecosystem. Secondly, multi dimensional scaling analysis using Rapid Appraisal HR (RAPHR) application to determine the status and leverage factors of sustainability and adaptive management of PoF. Third, prospective analysis to formulate a model of sustainability and adaptive management of agrosilvo ecosystems in engineered future scenarios. Agrosilvo ecosystem of PoF are characterized by multispecies and multilayer planting that is able to meet socio-economic needs and continuously maintain the carrying capacity of land in a changing climate pattern. The characteristic of agrosilvo ecosystem of POF were formed by autonomous adaptation initiatives of social subsystems. The sustainability and adaptation of PoF management on the unit of analysis is quite adaptive and sustainable, which are supported by the sustainability of plants planning, agrosilvo ecosystem characteristics, and institutional variables.

Silvicultural pattern and harvesting pattern are less adaptive and less sustainable. The model of sustainability and adaptive management of PoF are driven by institutional strengthening program and supported by land management activities, plant spacing determination, plant stratification, and sustainability of production factors in progressive optimistic future scenario.