

INTISARI

Pembangunan berkelanjutan pada dasarnya terletak pada tercapainya harmonisasi antara tujuan ekonomi, ekologi dan sosial. Pengelolaan DAS diharapkan dapat memberikan kerangka kerja ke arah tercapainya pembangunan berkelanjutan. Pemahaman berbagai pihak yang berkepentingan diperlukan untuk sinergitas pengelolaannya. Kondisi Sub DAS Ngrancah yang spesifik (bentuk membulat dan relatif kecil, termasuk dalam fungsi kawasan lindung, terdapat Waduk Sermo, termasuk DAS dalam skala prioritas penanganan oleh pemerintah), maka pendekatan dilakukan dari aspek ekologis dan multidimensi dalam rangka pengelolaan DAS berkelanjutan. Penelitian bertujuan : (1) mengkaji kebutuhan luas hutan optimum sebagai dasar pertimbangan pengelolaan DAS berkelanjutan dari sisi keharmonisan spasial, (2) mengidentifikasi dimensi dan atribut pengelolaan DAS berkelanjutan, (3) mengetahui status/indeks keberlanjutan, (4) membangun skenario pengelolaan DAS berkelanjutan.

Penelitian dilakukan di Sub DAS Ngrancah, Kulon Progo. Pendekatan penelitian secara kualitatif dan kuantitatif. Data sekunder bersumber dari instansi terkait dan studi pustaka. Data primer melalui pengambilan sampel tanah, kuesioner, wawancara, dan pengamatan lapangan. Pengujian sampel tanah di laboratorium, dilanjutkan perhitungan erosi, indeks kekeringan. Analisis menggunakan program linier, analisis multidimensional scaling, analisis leverage dan prospektif.

Hasil penelitian menunjukkan bahwa untuk keharmonisan spasial ekologis diperlukan luas hutan optimum 75,07% dari luas Sub DAS (2080 Ha). Mayoritas 474 Ha (85%) arahan lokasi agroforestry pengganti fungsi hutan terletak di hulu Sub DAS dan hanya sebagian kecil di bagian hilir atau sekitar Waduk Sermo 83 Ha (15%). Lima dimensi digunakan dalam penilaian pengelolaan keberlanjutan yaitu ekologi (10 atribut), ekonomi (11 atribut), sosial budaya (9 atribut), hukum dan kelembagaan (11 atribut), teknologi dan infrastruktur (11 atribut). Rata-rata status keberlanjutan 49,47%, (kurang berkelanjutan). Analisis *leverage* diperoleh 24 atribut yang sensitif dari keseluruhan dimensi keberlanjutan. Analisis prospektif diperoleh 13 faktor kunci yang berpengaruh terhadap sistem yang dikaji. Hasil tiga skenario pengelolaan DAS berkelanjutan dalam status cukup berkelanjutan berturut turut minimum : moderat : progresif = 52,80% : 53,98% : 59,87%. Berdasarkan kondisi spesifik Sub DAS Ngrancah, skenario progresif direkomendasikan untuk pengelolaan DAS berkelanjutan.

Kata Kunci : harmonisasi spasial, multidimensi, leverage

ABSTRAC

Sustainable development basically lies in the achievement of harmonisation between economic, ecological and social purposes. Watershed management is expected to provide framework toward sustainable development achievement. Considering the spesific condition of Ngrancah Sub Watershed (small watershed, fan shape, conservation area, the existence of Sermo Dam, as watershed under priority handling by government), management approach is done from ecological aspect and multidimensional aspect. This study aims to: (1) investigate the need of optimum forest area as one basis of consideration in sustainable watershed management from the perspective of spatial harmonism (2) identify dimensions and attributes in sustainable watershed management (3) analyse sustainability index (4) build a model for sustainable watershed management.

This research was conducted in Ngrancah Sub Watershed, Kulon Progo. Qualitative and quantitative approaches were implemented in this research. Secondary data were collected from many literatures and related institutions. Primary data were obtained through soil sample collection, questionnaire, and interview. Soil samples were analysed in laboratory, continued by erosion and drought index calculation. Data were analysed using QSB+, multidimensional scaling, montecarlo and prospective analysis.

Result revealed that spatial harmonism for sustainable management on the basis of erosion control needs 75,97% of conservation area from total area (2080 Ha). Land and forest rehabilitation plan predominantly (85%) is located in the upper area and only small part (15%) located in downstream. Five dimension is used to asses sustainability index, namely: ecological dimension (10 atributes), economic dimension (11 atributes), socio-culture dimension (9 atributes), vlegal-institutionvdimension (11 atributes), technology and infrastructure dimension (11 atributes). The average of Ngrancah Sub Watershed sustainability status is 49,47% (not sustainable yet). Leverage analysis shows there are 24 sensitive attributes. Prospective revealed there are 13 key factors that influence the system. The results of three sustainable management progressive scenarios namely mimumum scenario (52,80%), moderate scenario (53,98%), and scenario (59,87%). Based on the spesific condition of Ngrancah Sub Watershed, progressive scenario need to be considered for sustainable management.

Key words : spatial harmonism, multidimensional scalling analysis, leverage