

ABSTRAK

PENERAPAN KONSEP EKOLOGI KOMUNITAS UNTUK MEMBANGUN CONNECTANCE MASYARAKAT LOKAL DALAM PENGELOLAAN HUTAN LINDUNG GUNUNG GEULIS

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Connectance merupakan elemen penting dalam struktur jaringan ekosistem. Menurut teori *community ecology*, *connectance* dapat digunakan untuk menduga tingkat konektivitas yang menggambarkan sifat perilaku kerja sama antara organisme dalam suatu jaringan ekosistem. Sifat perilaku kerjasama merupakan wujud adanya interaksi antar individu dalam suatu komunitas. Dalam populasi manusia, interaksi antara individu-individu memainkan peran penting untuk menghasilkan perilaku kerjasama. Oleh karena itu keterlibatan manusia sebagai wujud adanya kekuatan hubungan antar individu dalam suatu komunitas merupakan hal yang sangat penting dalam mengelola ekosistem. Dalam pembangunan kehutanan, implementasi pendekatan *community based forest management* telah menunjukkan pentingnya keterlibatan masyarakat dalam pengelolaan hutan. Tujuan penelitian ini adalah: 1) mengkaji karakteristik kapasitas komunitas dalam mengelola kawasan hutan lindung; 2) mengkaji peranan perilaku kerjasama untuk mengembangkan *connectance* komunitas lokal dalam mengelola kawasan hutan lindung; 3) membangun model perilaku kolaboratif dalam pengelolaan kawasan hutan lindung.

Penelitian dilaksanakan di kawasan Hutan Lindung Gunung Geulis (HLGG) dengan menggunakan metode survey. Sampling dilakukan secara *purposive* terhadap populasi anggota Lembaga Masyarakat Desa Hutan (LMDH), dengan mengambil 60 responden sebagai sampel penelitian. Karakteristik kapasitas komunitas dianalisis dengan metode analisis faktor, karakteristik struktural jaringan kerjasama dianalisis dengan *Software Ucinet VI* dan *Netdraw* dilanjutkan dengan analisis faktor dan uji korelasi. Model perilaku kolaboratif disusun dengan menggunakan metode analisis jalur (*path analysis*).

Hasil karakterisasi kapasitas komunitas terhadap 17 variabel yang diuji, variabel penyusun kapasitas komunitas dikelompokkan menjadi dua komponen, meliputi kapasitas komunitas level individu dijelaskan oleh 16 variabel, yaitu: partisipasi komunitas, kepemimpinan, pengetahuan kelembagaan, struktur masyarakat, dukungan lembaga luar, dukungan lembaga luar, *asking why*, akses sumberdaya,

pengetahuan kelompok, hubungan dengan pihak lain, rasa komunitas, transfer sumberdaya, transfer pengetahuan, pemecahan masalah, infrastruktur, kemitraan kelompok dan kapasitas komunitas level kelompok dijelaskan oleh satu variabel, yaitu: modal sosial. Hasil analisis tersebut juga ditemukan bahwa modal sosial merupakan variabel yang penting sebagai penyusun karakteristik kapasitas komunitas. Hasil analisis lebih lanjut terhadap modal sosial, yaitu pada variabel *collective action* menunjukkan *connectance* komunitas belum baik.

Variabel penyusun dimensi perilaku kerjasama ditentukan oleh enam variabel, lima variabel menunjukkan hubungan positif, yaitu *degree centrality*, *betweenness centrality*, *closeness*, *eigenvector*, *betacentrality*, sedangkan satu variabel *clustering coefficient* menunjukkan hubungan yang bersifat negatif. Hasil analisis struktural jaringan kerjasama yang dilanjutkan dengan analisis model jalur perilaku (*behavior pathway model*) menunjukkan kecenderungan hubungan antara anggota komunitas LMDH di lokasi studi cenderung belum terbentuk perilaku kolaboratif. Padahal, keberhasilan implementasi pengelolaan kolaboratif pada kawasan Hutan Lindung Gunung Geulis sangat ditentukan oleh kekuatan jaringan perilaku kerjasama.

Hasil analisis jalur menunjukkan variabel yang memiliki peranan besar untuk mengembangkan jaringan kerjasama, yaitu: variabel eksogen karakteristik kapasitas komunitas yang mempengaruhi model melalui pengaruhnya terhadap Power, yaitu: pengetahuan pengelolaan hutan berbasis masyarakat, dukungan lembaga eksternal, dan kepemimpinan, sedangkan variabel endogen, yaitu: kekuasaan (power), persepsi manfaat kerjasama, persepsi biaya/pengorbanan kerjasama, social network, komitmen kerjasama, kapasitas kolaboratif, kinerja kolaboratif. Oleh karena itu, untuk mengembangkan perilaku kolaboratif dalam pengelolaan kawasan di HLG, diperlukan pengembangan *connectance* komunitas lokal dengan melalui penguatan struktur jaringan perilaku kerjasama dan memberikan perhatian pada variabel-variabel penyusun perilaku kerjasama agar keberhasilan pengelolaan kolaboratif di Hutan Lindung Gunung Geulis dapat diwujudkan.

Kata Kunci: Pengelolaan Hutan Berbasis Komunitas, Connectance, Model Perilaku Kolaboratif

ABSTRACT

APPLICATION OF COMMUNITY ECOLOGY CONCEPT FOR ENHANCING THE LOCAL COMMUNITY CONNECTANCE OF MOUNT GEULIS PROTECTED FOREST MANAGEMENT

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Connectance is an important element in the network structure of ecosystems which can predict the characteristics of ecosystem network. According to theory of community ecology, the connectivity pattern describe the characteristic of cooperative behavior that occur between organisms in the ecosystem network. The characteristic of cooperative behavior as reticulum of interaction is determined by connectance of ecosystem network structure. In human populations, interactions between individuals play an important role to produce cooperative behavior. Therefore, the human involvement in ecosystems management is very important. In forestry development, community-based forest management approach has raised awareness about the importance of community involvement in forest management. The purpose of this study was 1) to determine characteristics of community capacity for enhancing local community connectance in protected forest areas management; 2) determine the role of cooperation for enhancing local community connectance in protected forest areas management; 3) to construct collaborative behavior models in protected forest area management.

This study conducted in the area of Mount Geulis Protected Forest (MGPF) and its vicinity using survey methods. Sampling is done by using purposive sampling technique with the number of respondents 60 respondents. Characteristics of community capacity were analyzed by factor analysis method; Structural characteristics of cooperative behavior network analyzed with Ucinet VI and NetDraw Software Program followed by factor analysis and correlation tests. To construct the collaborative behavior model was conducted by path analysis method.

The results of community capacity characterization of 17 variables tested, the constituent variables of community capacity grouped into two components, the individual-level was described by sixteen variables: community participation, leadership, institutional knowledge, community structure, external support, asking why, access to resources, knowledge about group, links with others, sense of

community, resource transfer, knowledge transfer, problem solving, infrastructure, group partnerships, and the group-level was described by one variable: social capital. The results of the analysis also found that social capital is an important variable as a constituent variable of community capacity characteristic. Further analysis of social capital, the collective action variable indicates that local community connectance have not been good.

Results of collaborative behavior network analysis showed that the cooperation relations between members of the community has not formed collaborative behavior. Constituent variable of cooperative behavior was determined by five variables that showed a positive relationship, namely: degree centrality, betweenness centrality, closeness centrality, eigenvector centrality, betacentrality, while the clustering coefficient variable showed negative correlation. The result of collaborative behavior network structural analysis followed by behavior pathway model analysis also showed that the tendency of relationship between members of Forest Village Community Institution (FVCI) in study location have not formed collaborative behavior. Meanwhile, the successful implementation of collaborative management in MGPF is largely determined by the strength of the cooperative behavior network.

The results of path analysis showed variables that have a major role to develop the collaborative behavior, namely: characteristics of community capacity as exogenous variable that influence through power variable, namely: knowledge of joint forest management, external institutions support, and leadership, while as an endogenous variable, namely: power, perceived of cooperative benefits, perceived of cooperative costs/sacrifices, social network, commitment of cooperation, collaborative capacity, collaborative performance. Therefore, to develop collaborative behavior, strengthening the connectance of local communities needed by enhancing the collaborative behavior network structure and paying more attention to the cooperative behavior variables so the successful of collaborative management in MGPF can be realized. The successful implementation of the collaborative management in MGPF areas largely determined by the strength of Collaborative Behavior Network. The stronger of Collaborative Behavior Network structure, the higher successful of collaborative management at MGPF Area.

Keywords: Community Based Forest Management, Connectance, Collaborative Behavior Model,