Self Organizing Maps in Landform Analysis for Conservation Support–Practice Factor Evaluation

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SUMMARY
Proper, right development planning in a region require evaluation and evaluation of physical land to give a place to stand on in overcoming impact of exploitation and use of land/land resource, so both land resource and its environment might be put in sustainable management. Physical characteristics of land may be analyzed by observing component of land affected by meteorological, hydrological, agricultural processes, and change in climate related to physical capacity of land, structure of land, scope, and rate of erosion. One of harms caused by improper exploitation and use of land is erosion. To determine rate of erosion is by detecting P Factor value. P Factor is conservation measure constituting very important variable in RUSLE erosion sounding model, as P Factor suggest action against soil surface/topography affecting the magnitude of erosion rate. Physically, P factor value may be known by type of soil landscape. The form of soil may be known by data on remote sensing combined to DTM data. In this research, specific action on land/conservation measure is analyzed in erosion model in Bandung basin area based on analysis of land cover variables and topography. Model will be based on Artificial Neural Network of Self Organizing Map (SOM) system first introduced by Teuvo Kohonen. SOM model developed will be consisting of some stages in introduction of data pattern of vegetation cover by satellite imaging, aerial photography, and topography to produce information on specific action on land.

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