ABSTRACT


Decreasing of water quality in the coastal area of Makassar probably comes from three dominant resources i.e. population concentration in the city, industrial activities around the city and agricultural activities in up land area of Jeneberang river. This research is aimed to design integrated and sustainable management models for coastal area: a) knowing sustainability status of coastal area of Makassar, b) controlling the rate of land use for coastal area of Makassar, c) arranging policy strategies for coastal area d) developing management for coastal area of Makassar.

In order to know sustainability status for coastal area of Makassar, Multidimensional Scaling (MDS) by using Rapfish computer software was applied. Prospective analysis is applied to create a scenario of sustainable development for coastal area of Makassar in the future by defining key factors which influence on system work. In general there are four steps of suitability analysis were conducted, i.e. (i) developing scenarios of the area, (ii) develop suitability matrix of every activities would be done (iii) ranking and standardizing and (iv) conducting spatial analysis for knowing suitability for every further activities. To analyze total source of pollution, landscape and water quality in period of 2002 – 2028 dynamic model methods of powersim tool 2.5d and powersim STUDIO were used. Several efforts to reduce total waste burden by means of functional intervention were decreasing population development fractions in the form of socialization policy for family planning (KB), limitation of marital age and limitation of migration in to coastal area of Makassar. While technical policies would be done for reducing waste burden were training in utilizing of wastes from the hotels and municipal such as creating compost and biogas by using such approach: reduce, reuse, recycle, recovery and participation (4R + P) in order to empower people in handling of waste in the coastal area of Makassar. The results of this research indicate that ecological dimension is in the status of less sustainable (47.13%), economical dimension is sustainable enough (53.89%), social-culture dimension is less sustainable (34.82 %), infrastructure and technology dimension is sustainable (13.28%), law and institutional dimension is sustainable enough (74%) and from 45 attributes were analyzed, 20 attributes were urge to be handled because of their sensitivities in increasing indexes and status of sustainability.

Keywords: coastal area, sustainability