Impact of Watershed Development Program on landuse/landcover Dynamics

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Abstract

The specific objectives of this study were- to determine the nature and extent of changes in land use along with the crop area across the area and time; to assess the index based greenness change in the watershed using atmospheric corrected temporal satellite data; to compare two periods soil erosion status of the watershed through revised MMF model using multi-temporal satellite data; and to investigate the Human Carrying Capacity(HCC) of the watershed based on the caloric requirements met by cereals integrating socio-economic and Remote Sensing data in GIS. The findings of the result indicate that Jakhan – rao watershed as a whole has been undergoing gradual improvement in recent years. We can relate this upbeat response of the watershed as awhole along with most of the early treated villages to the positive impact of the ongoing development program. Most of the villages maintained the tendency in intensifying cropping system i.e. from single crop to double crop or more. The wheat – paddy combination in the lower altitude villages and wheat – other crop combination in those of higher altitude has proven to be beneficial. The study revealed that the existing cereal calorie value of the watershed does not make of sufficiency in terms of Human Carrying Capacity. The main variables influencing sufficiency are crop area and cropping intensity.