

## Stream Channel Changes in Balingara River, Sulawesi Tengah

**Authors :** Muhardiyan Erawan, Zaenal Mutaqin

**Abstract :** Balingara River is one of the rivers with the type Gravel-Bed in Indonesia. Gravel-Bed Rivers easily deformed in a relatively short time due to several variables, that are climate (rainfall), river discharge, topography, rock types, and land cover. To determine stream channel changes in Balingara River used Landsat 7 and 8 and analyzed planimetric or two dimensions. Parameters to determine changes in the stream channel are sinuosity ratio, Brice Index, the extent of erosion and deposition. Changes in stream channel associated with changes in land cover then analyze with a descriptive analysis of spatial and temporal. The location of a stream channel has a low gradient in the upstream, and middle watershed with the type of rock in the form of gravel is more easily changed than other locations. Changes in the area of erosion and deposition influence the land cover changes.

**Keywords :** Brice Index, erosion, deposition, gravel-bed, land cover change, sinuosity ratio, stream channel change

**Conference Title :** ICGG 2017 : International Conference on Geography and Geosciences

**Conference Location :** Amsterdam, Netherlands

**Conference Dates :** July 10-11, 2017