中華水土保持學報, 40(2): 123-134 (2009)
Journal of Chinese Soil and Water Conservation, 40 (2)*:123-134* (2009)

以數值高程模型為基礎之河源位置的地形特徵 - 以塔克金溪上游集水區為例

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摘　　要　河流系統在一個流域中扮演輸送水及泥砂的角色。而在輸送的過程中，坡面與河道交界之處一直都被認爲是水流將由擴散作用轉換成河流切蝕作用。因此，在研究集水區地形及水文特性時，探討河道源頭位置便是一個相當重要的問題。本研究以塔克金溪集水區爲例，探討河道源頭的位置及其地形特性。提出點繪出該集水區的河道源頭的方法，並將其繪於數值高程模型上。藉由一些分析方法，可以發現，大部分的源頭所需的匯流面積都不需要很大，而且由地形圖形，直接利用面積－坡度的關係可以提供源頭位置的可靠測度。

關鍵詞：河道源頭、數值高程模型、匯流面積、面積－坡度關係

Topographic Properties of Channel Head Location Based on a Digital Elevation Model: A Case Study in an Upstream Basin of the Takejin River

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ABSTRACT　The drainage network within a basin is the conduit through which much surface water and sediment are routed. In a basin, the position where hillslopes end and channels begin has been considered the position of transition between diffusive processes upslope and incisive fluvial processes downslope. Consequently, understanding channel head location is an important issue in understanding basin hydrology and geomorphology. This study examines channel head position and characteristics in an upstream basin of the Takejin river. In this study, the position of channel heads was mapped within the watershed and plotted on a digital elevation model of the watershed. It was found that the majority of channel heads have relatively small source areas and that graphical descriptors, such as the area-slope relationship can provide reliable measures of the position of the heads of first-order streams and the transition from hillslope to channel.

Key Words:　channel head, digital elevation model, source area, area-slope relation ship.

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