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Fluctuations of water level in the riverbed in 2011 in the upper reaches of the River Azusa, Central Japan

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The upper reaches of the River Azusa, central Japan, is a braided river with gravel bed. Yearly mapping of the riverbed micro-landforms revealed that channel migrations and landform changes in the active riverbed occurs once every one or several years. To discuss the landform changes of the riverbed in the upper reaches of the River Azusa, photographs were taken at 10-minute or 30-minute intervals in the daylight between 3 July and 4 October using the GardenWatchCam made by Brinno Inc. The camera was set on the slope which can overlook the riverbed. Channel migration occurred before camera setting. It was probably caused by the 10 May and/or 22 June floods. After camera setting three flood events were observed on 4 July, 23 August and 20 September. On 4 July in the Baiu rainy season and on 20 September by a typhoon, water level of the main channel rose 0.5meters and 0.7 meters, respectively. During these events no landform change but slight lateral erosion occurred. Although the daily rainfall on 20 September was much larger than that on 4 July, the maximum depths of the main channel of the two flood events were the same. This shows that heavy rain event after the Baiu rainy season does not cause the extreme rise of the water level and that major landform change occurs only in the Baiu rainy season.

Keywords: riverbed, landform change, water level, River Azusa, Kamikochi