Paleohydrological implication of flood deposit in Yukiya River Basin, NE Japan

Hiromu Daimaru[1]; Wataru Murakami[1]

[1] FFPRI

Slack water deposits are often formed at tributary mouth of floodplains and provide valuable information on the magnitude and frequency of past floods. In Japan, however, few studies have reconstructed the magnitude of past floods, because flood deposits are easily eroded under the humid and temperate climate. We found a series of slack water deposits in Yukiya River Basin in NE Japan and obtained datings of the deposits and observed elevations of the deposits from modern flood level. The age of the deposits clustered into ca. 1700 to 2300yBP and one layer was dated to the 16th century. The elevations of the 2-ka deposits often exceed the level of the 1999 flood those return period is estimated as ca. 200 years. Thus, the 2-ka flood deposit was probably accompanied by significantly larger discharge than that of the 1999 flood.