Research regarding basin soil management using the remote sensing data

[Point]

To examine the applicability of satellite remote sensing technology to grasp soil transfer phenomenon amount and sediment amount, we examined geomorphometry method of volcanos in eruption and landslide transfer phenomenon by delta chromatid interference measuring SAR (synthetic aperture radar) technology. When Usu Mountain erupted in 2000, we verified accuracy of digital elevation model (DEM), easily made with IKONOSimages, using DEM made from the hypsography of the volcano before the eruption, the accuracy degree of DEM was about 8m. However, a report says, when we took IKONOSimages, object area of making DEM had already been uplifted about 10m. If it is true, the accuracy of the DEM would be within several meters. On the other hand, we tried measuring transfer phenomenon amount landslide by delta by the chromatid interference measuring SAR technology. Along with lengthening observing spacing between 2 periods of chromatid SAR images, the phase data coherency of SAR was lowered. In this research, the landslide transfer amount was examined under the case of that observation interval by SAR was longer than accumulation interval (longer than half a year), which is the length to accumulate soil much enough (several cm) to be detect by the same technology. For this reason, the phase data coherency of SAR became very low, we couldn't measure the landslide transfer amount. We need to examine the cause of lowering the accuracy of phase data coherency of SAR, related with lengthening the observation interval.

Keyword : volcano eruption, IKONOS, landslide, delta chromatid interference measuring SAR