

trace metals. Atmospheric deposition was the most quantitatively important anthropogenic Pb source, which contributed 38–49% of the total sediment pollution and had an average contribution rate of 43.7%. The clusters in farther distances were mainly chemical fertilizer and livestock manure samples, indicating that they did not substantially contribute to watershed sediment pollution by Pb. On the other hand, the river sediment cluster was very near to the concentrated clusters for background soil and atmospheric deposition samples. Different Pb sources were also quantitatively discriminated by using Isosource.