Study: Heavy rains can produce more dust

October 26 2005

A recent NASA study of some of Earth's dustiest areas indicates heavy downpours can eventually lead to more dust being released into the atmosphere.

Researchers examining 14 of the Earth's dustiest regions found rainfall and flooding leave behind sediments in some areas that include fine grain size particles that eventually get carried by winds, increasing the amount of airborne dust released a year or more later.

The research also confirms dust emissions from a specific region can vary considerably from season-to-season, or year to year, and are largely dependent on climate patterns, said Charles Zender of the Department of Earth System Science at the University of California-Irvine, and lead author of the study.

Overall, in the 14 source regions studied, anomalies in dust emissions were closely related to precipitation in 12, vegetation in eight, and to wind speed in two, suggesting rainfall is the best climate predictor of dust emissions.

"This study highlights the importance of soil characteristics in dust emission and shows their influence to be more prevalent than previously believed," said Zender.

The study was published online in the Journal of Geophysical Research-Atmospheres.