

## ***Dust and its centers: basics and methods of identifying and stabilizing, with a special attitude to the Khuzestan Plain***

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### ***Abstract***

*The phenomenon of fine dust is one of the most important environmental challenges nowadays. Recognition of this phenomenon and strategies in dealing with it is one of the new topics in environmental sedimentology. Detection of dust centers is possible by using various methods such as telemetry and satellite techniques, sedimentology and geochemistry studies, sediment tracking with the help of statistical models and data mining or a combination of these methods. The most important causes of dust are drought, erosion, lack of vegetation and improper management of water resources. To deal with the effects of dust, mulching, construction of windbreaks, construction of sediment traps and proper management of water resources are the most important factors and strategies to reduce dust storms and stabilize dust hotspots. The dust phenomenon has had a direct impact on human health and the agricultural and construction sectors, and imposed a direct and indirect impact on the economy and reduced quality of life. Existence of seven internal dust centers along with about 5 external dust centers in Khuzestan province has caused this province to be constantly exposed to dust storms. The sedimentological composition of these fine dusts generally falls into three groups: silicate, carbonate and evaporation, and the main sedimentary type of deposits in the interior of Khuzestan plain is sandy mud with a little gravel. Sedimentological parameters of deposits of dust centers of Khuzestan Plain improve in a vertical trend from north to south. The main sources of deposits of internal foci are salt domes, marl formations, sandstone and conglomerate. Environmental monitoring on dust centers and fine dust samples in Khuzestan Plain indicates the existence of environmental pollution affected by the imposed war, oil and petrochemical activities along with industrial and agricultural activities.*

**Keywords:** *Dust, Dust Center, Khuzestan plain*