Effects of desertification after year 2003 on Dust Deposits Quantity in Babylon Governorate/Iraq

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As it known that agriculture improve environment by several factors, one of these factors is plant roots work as reinforcement for soil to prevent dust agitation. Thus, agriculture weakness will result with serious environmental problems such as dusty weather and desertification. As it known that Iraq suffered from Decline of agriculture especially after year 2003, that rustled with remarkable increasing in the Percentage of desertified areas.

Thus, this study will investigate the effects of desertification on dust deposits in Babylon Governorate- Iraq.

In this research the dust deposits quantities in the Babylon governorate (case study) during years 2008, 2009 and 2010 were investigated and compared with those before year 2003, as well as compared with other global studies and WHO standards.

In order to make a reasonable estimation of dust deposits quantity long term data of dust depositions in the Babylon region was needed. Thus, dust deposits in Babylon governorate were measured by using standard dust collecting cylinder device over all of years 2008 to 2010. Measuring process was carried out in six monitoring stations distributed inside and around the governorate center. These stations where located in Al-Musaibe District (Residential Station), Al-Mahaweel District (Residential Station), Al-Hashimiyah District (Residential Station), 60-Street (Residential Station), Al-Sena’ay Quarter (Industrial Station), and Senjare Village (Agricultural Station). This data covered the whole of year’s 2008 to 2010 using monthly sampling program.

To support the validity of the measured data here, another dust deposits concentration data were obtained from the records of the Babylon Environment Office, and they were approximately in the same range.

The result of this research showed a great increasing rate in dust deposits quantities; where in year 1990 the maximum average deposit was (44.8 g/m²/month) but in it becomes 58.8 g/m²/month, 64.9 g/m²/month and 81.1 g/m²/month during years of 2008, 2009 and 2010 respectively. This means the percentages of increasing was 31.25%, 44.87% and 81% during years of 2008, 2009 and 2010 respectively.

As will as, the results showed that the maximum dust deposits usually took place in the Al-Sena’ay Quarter because of its nature that applied a heavy traffic volume that agitate more quantities of dust, while the minimum quantity of dust deposits seen during in Senjare village (the agricultural station).