Soil Erosion : Problem and Solutions of D.I.Khan

By

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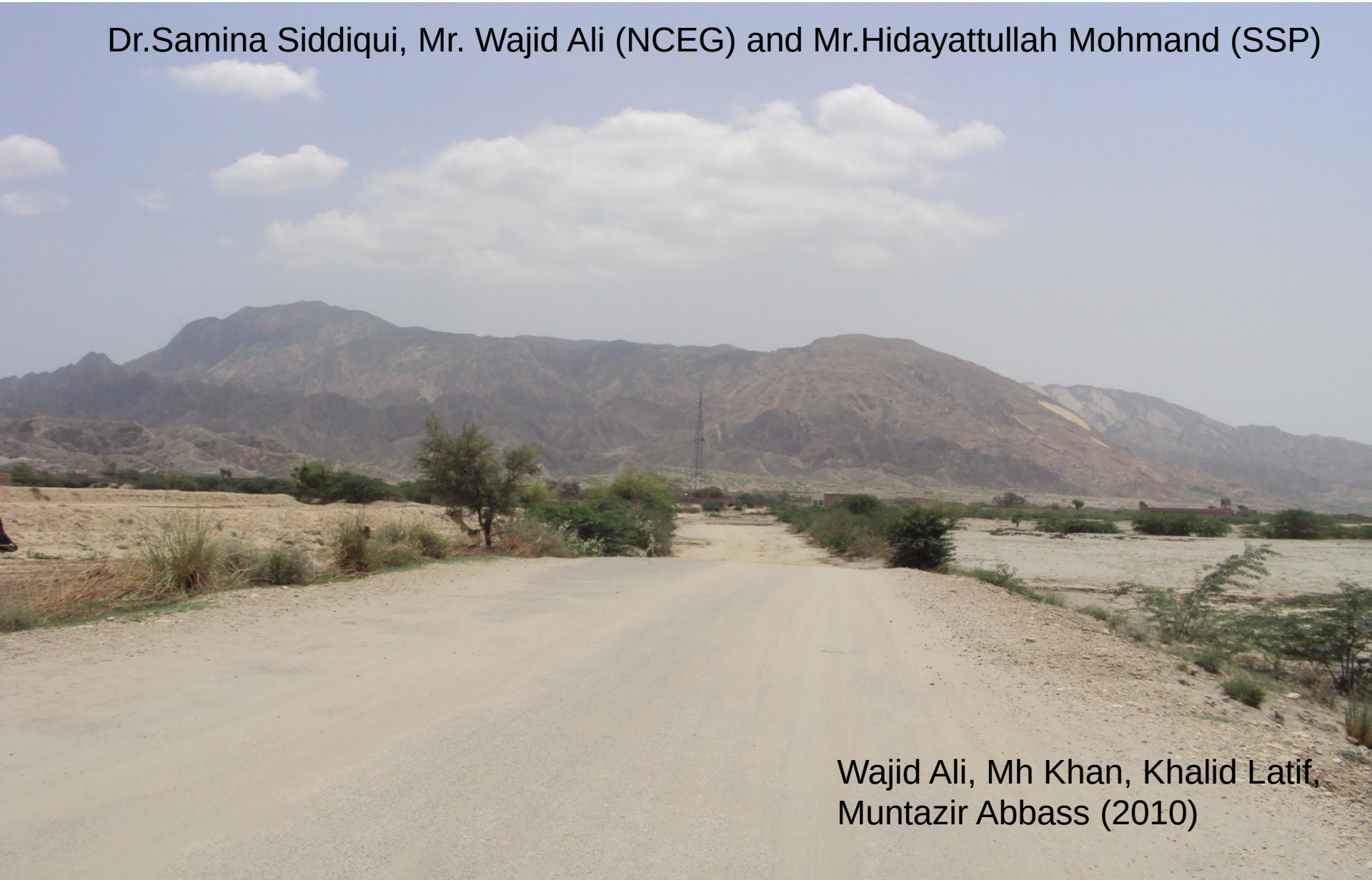
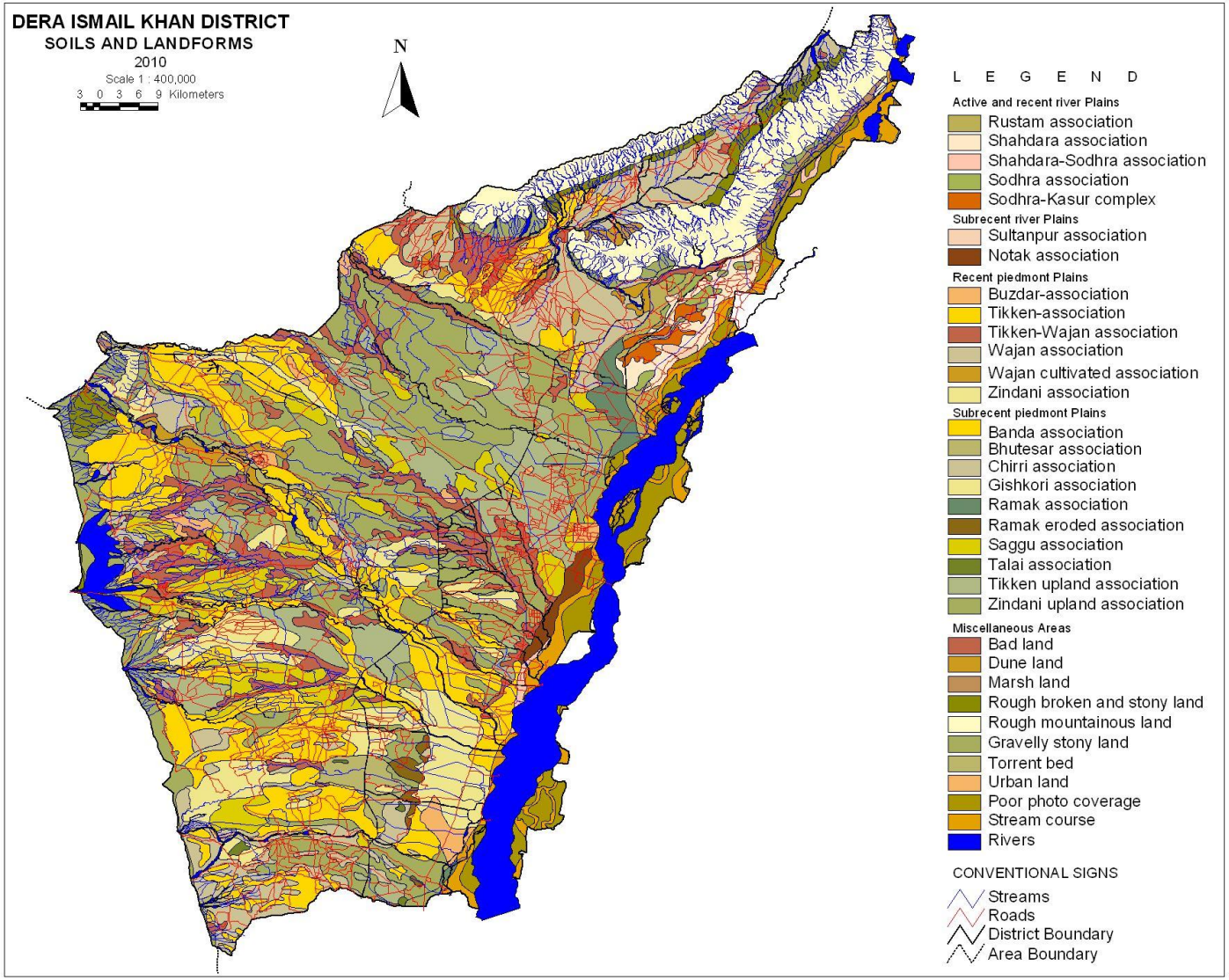
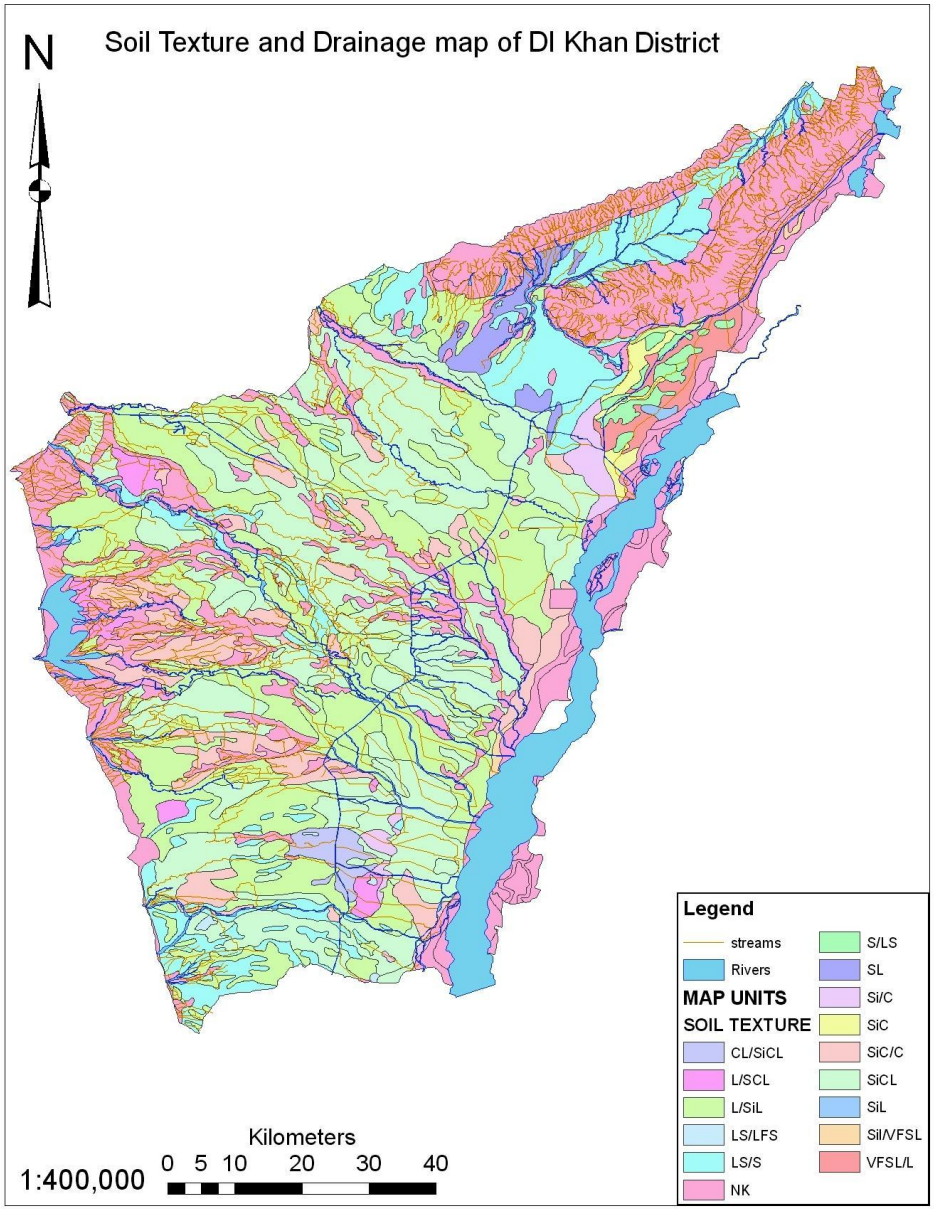


Wajid Ali, Mh Khan, Khalid Latif, Muntazir Abbass (2010)

Soils series and geomorphological units of D.I.Khan (Soil Survey of Pakistan, 2005)



Soils texture map of D.I.Khan (Soil Survey of Pakistan, 2005)



Soils of DIKhan are broadlly placed into following textural classification

Sandy/loamy sand

•Loam/silty loam

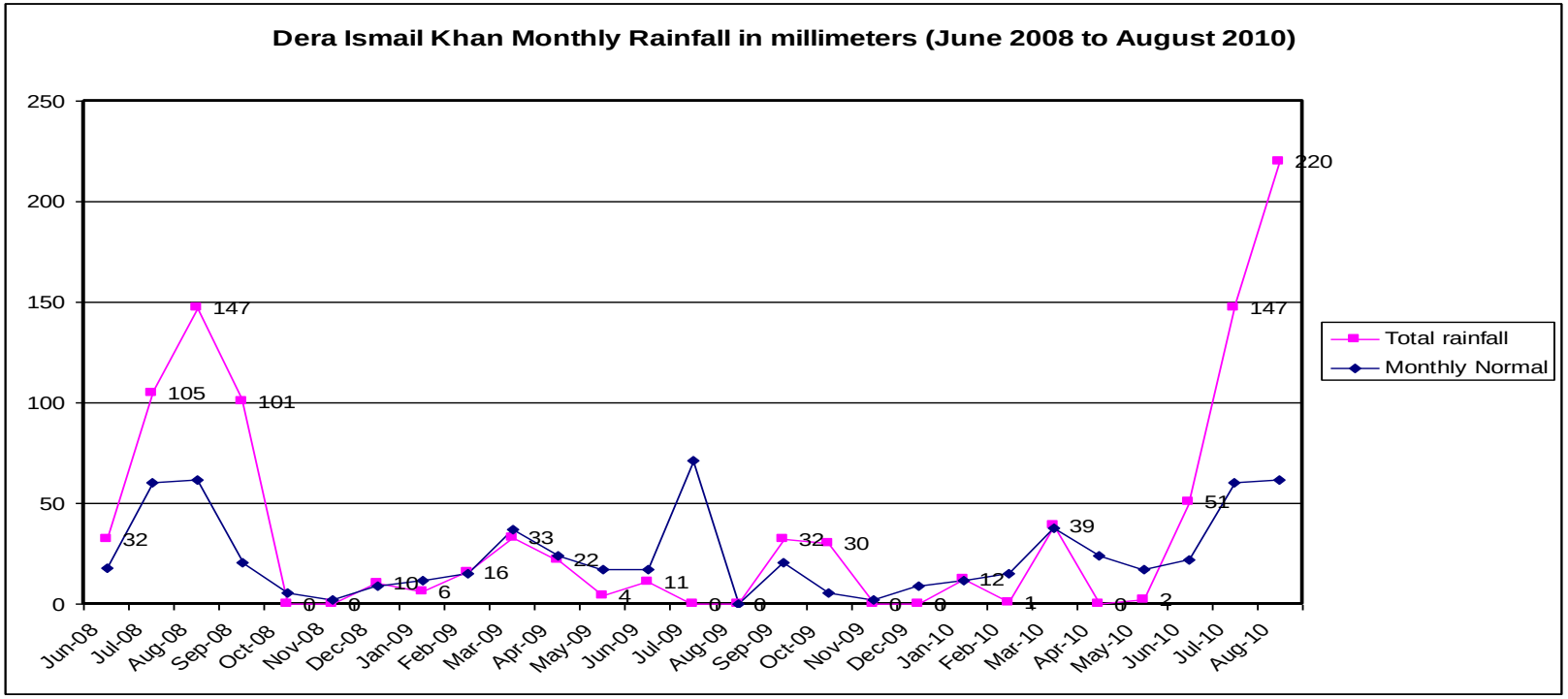
•Silty clay loam

AGRI STATISTIC OF PAKISTAN (2007)

		Pakistan	NWFP	DIKhan
Geographical Area (million hec)		79.61	10.17	0.896
Cultivated area		20.15	1.836	0.3
	Under irrigation (million hec)	14.36	0.808	0.105
	Non irrigated area (Rain fed, million hec)	5.7	1.028	0.195
Culturable waste area		10.92	1.357	0.374
REFERENCE=Rashi, A., and R.U.Khan (2008). Comparative effect of varieties and fertilizers levels on barley yield. International Journal of Agri Biology, 10:124-126.				

Factors influencing soil erosion

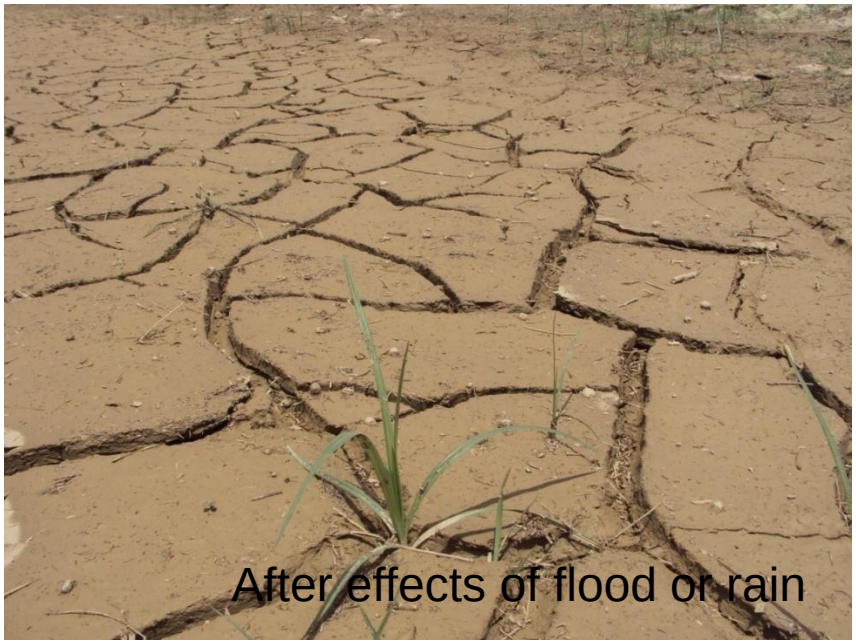
Rainfall erosivity factor R



Data obtained from Pakistan Department of Metrology,Peshawar (2010)

Effect of heavy rainfall (August 2010)


August 2010 floods


After effects of flood or rain

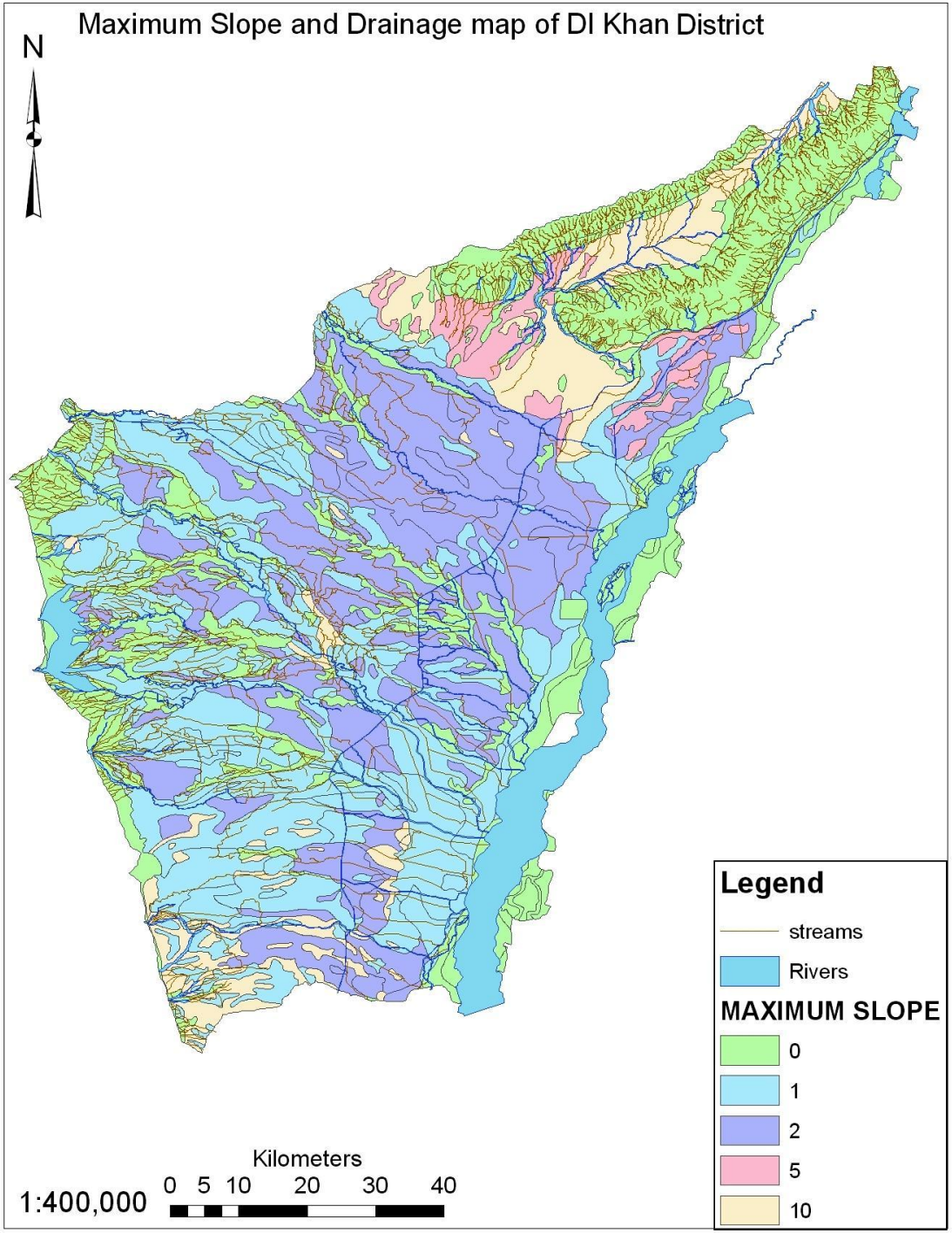

Silt brought by floods

Sandy loam

Soil erodibility factor

Cover management or land management

Tillage practices



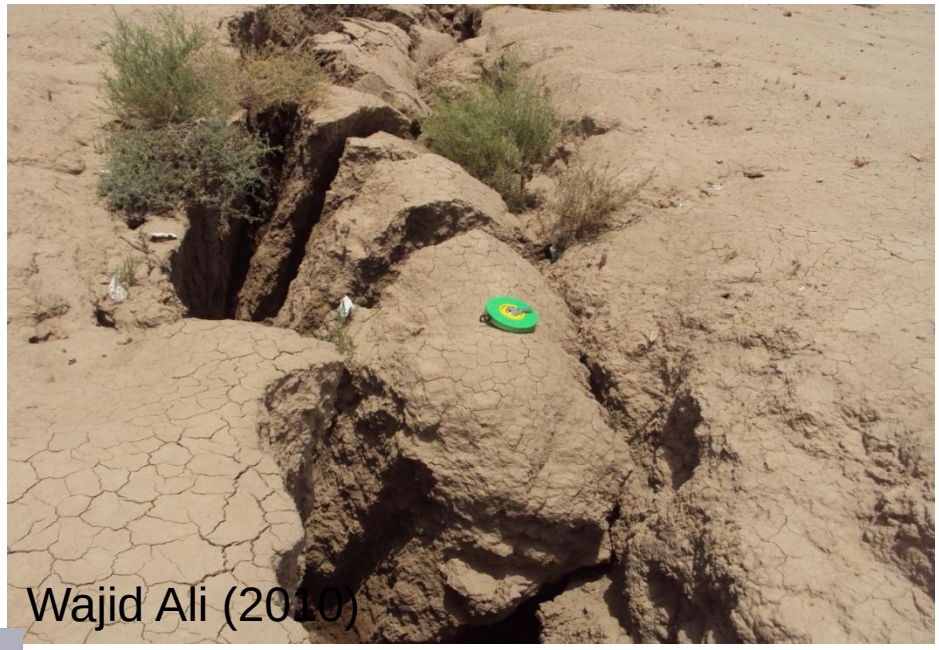
Slope length and steepness

slope is 0-10
The topography is flat

The culturable waste of DIKhan with reference to soils are

Gully erosion most commonly observed in the south western parts of DIKhan .

hardpan is formed and very difficult to apply normal ploughing

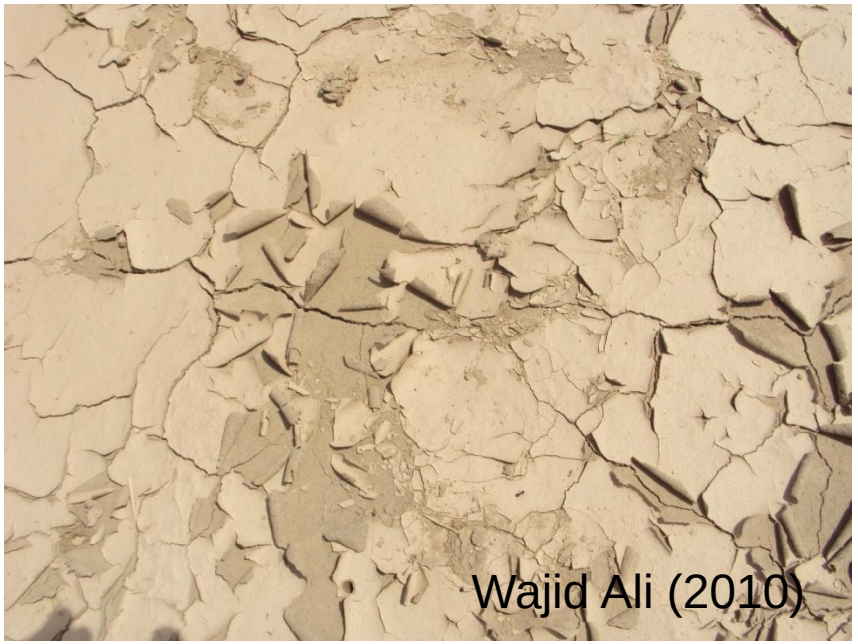


The land is occupied by local people and no soil conservation practices were adapted by them.

Sheet erosion

Removal of thin layer of fertile soil and reduces the nutritional status of the soils

Observed throughout DIKhan but in patches



Conservation Techniques To Reduce Erosion

To prevent existing gully erosion or gully plugs using sticks or branches or using flat stones with active participation of local community.

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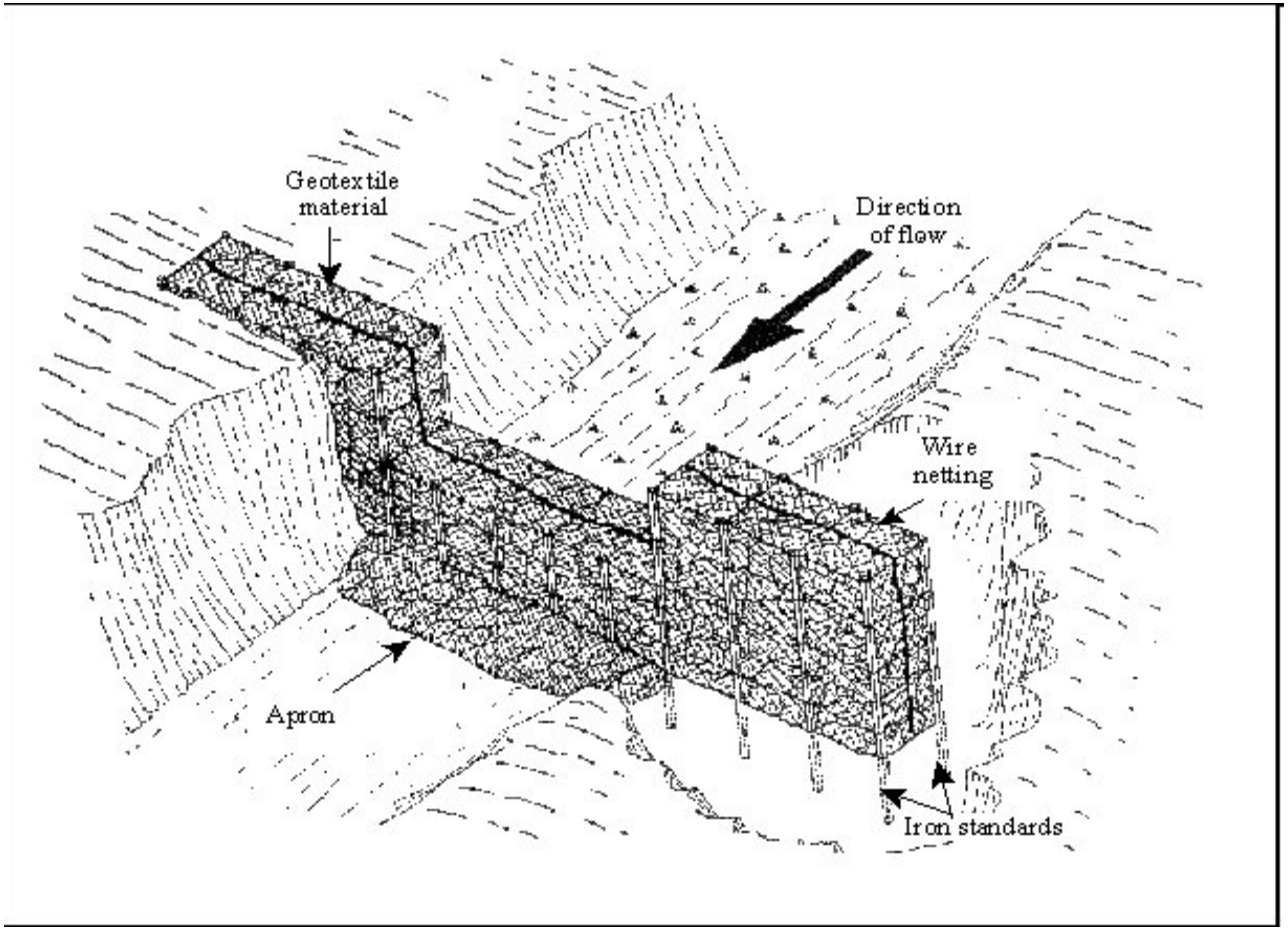
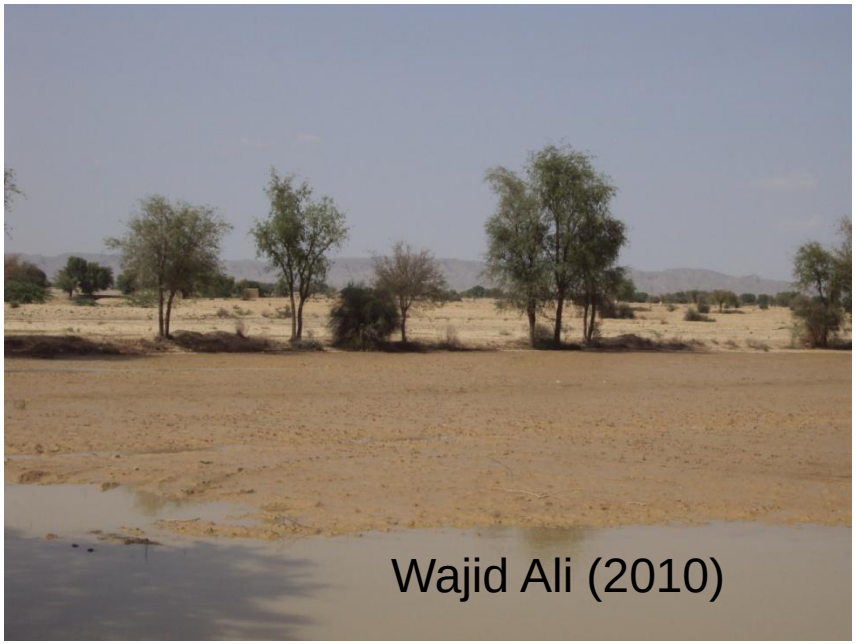


Conservation Techniques To Reduce Erosion

To prevent existing sheet erosion required shelter belt of trees and grasses should be grown between the crops to act as barriers



Traditional methods to reduce soil erosion
Mulching