

Evaluation of groundwater chemistry in Northern Indo-Gangetic alluvial region

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Hydrochemical characteristics of groundwater and their changes through geogenic and anthropogenic activities were assessed in the North-western part of Unnao District, Uttar Pradesh, India, to understand the groundwater evolution, to identify the predominant geochemical processes and to exemplify the anthropogenic processes affecting the groundwater environment. For this purpose, 74 groundwater samples were collected from dug wells during pre-monsoon and post- monsoon 2010 period, respectively, covering an area of about 950 km². The major ion concentration and total dissolved solids (TDS) in the groundwater showed a great variation, with 49% during pre and 89% samples during post-monsoon being brackish. Chemical obliteration in groundwater has occurred to a great extent and this alteration was assessed through silica v/s TDS approach. Human activities, in particular, the agricultural and leather tanning activities has led to tremendous change in the groundwater regime which is reflected by fluctuating ion concentrations in the groundwater.

Anthropogenic

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		-50%	-50%	-50%	-50%
		Samsung G_	Samsung _	Samsung G_	Sams
		RM99.50	RM39.50	RM174.50	RM2

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