

ORIGINAL APPLICATION No 676/2023

In re: News item appearing in the The Times of India dated 12-10-2023 titled " Agricultural Runoff causing ground water pollution in Punjab making Drinking water unsafe, Reveals Study"

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Sr. No.	Particulars	Dates	Pages
1.	Short affidavit of Arun Kumar, Joint Director Agriculture (HG) (Additional charge), Department of Agriculture & Farmer's Welfare, Punjab on behalf of respondents No. 5 (Department of Agriculture & Farmer's Welfare, Punjab, State of Punjab through its Administrative Head).	19.03.2024	5 (Five)

Place:-

Date:-

19 MAR 2024

Deponent


19/3/24
(ARUN KUMAR)

Joint Director Agriculture (HG)
(Additional Charge)
Department of Agriculture &
Farmer Welfare, Punjab,
S.A.S. Nagar.

BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL
BENCH, NEW DELHI

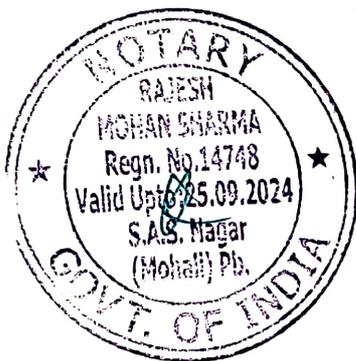
ORIGINAL APPLICATION No 676/2023

In re: News item appearing in the The Times of India dated 12-10-2023 titled " Agricultural Runoff causing ground water pollution in Punjab making Drinking water unsafe, Reveals Study"

The contents of this Affidavit/Document has been explained to the deponent/executants. He/She has admitted the same to be correct. The deponent/executant has signed Registered

at Sr. No. 235...P. No. 30...Date/19-3-24

Reply by way of Short affidavit of Arun Kumar, ,
Joint Director Agriculture (HG) (Additional charge),
Department of Agriculture & Farmer's Welfare,
Punjab on behalf of respondents No. 5 (Department
of Agriculture & Farmer's Welfare, Punjab, State of
Punjab through its Administrative Head).



I, the above named deponent do hereby solemnly affirm and declare as under:-

Respectfully Showeth:-

1. That the above noted application is pending before this Hon'ble Tribunal and the same is fixed for hearing on 19-03-2024.
2. That the Original Application, registered *Suo-moto*, in the Hon'ble National Green Tribunal, New Delhi on the basis of news item titled 'Agriculture Runoff Causing Groundwater Pollution in Punjab, making Drinking Water Unsafe, Reveals Study' appearing in the Times of India dated 12.10.2023.
3. That as per facts disclosed in the news item this Hon'ble Tribunal was pleased to implead Department of Agriculture and Farmer's Welfare, Punjab as one of the respondents.

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4. That that Department of Agriculture and Farmer's Welfare, Punjab monitors the groundwater quality of irrigation water by analysing the standard parameters i.e. Electrical Conductivity (EC) and RSC (Residual Sodium Carbonate) to assess the irrigation water quality for crops. (*The Monitoring of Quality of Ground Water for drinking purpose is not done by this Department*). Based on the result of these parameters, groundwater quality is categorised as fit, marginal-fit and unfit for irrigation purposes. Undertaking monitoring the quality of irrigation groundwater is regular feature in all the districts of the State. A number of farmer awareness camps are organised at the village, block and district level to sensitize the farmers to use prescribed quantity of fertilizers and pesticides to minimize the impact on soil and water.

5. That Department of Agriculture and Farmer's Welfare, Punjab with the collaboration of National Institute of Hydrology (NIH), Roorkee has carried out the study to assess the groundwater saline zones at various aquifer depths specifically focussing southwest Punjab (Faridkot, Fazilka and Sri Muktsar Sahib districts) in the year 2020-2021 (one time study) under Crop Diversification Program (CDP). Under the study, groundwater samples were collected by NIH, Roorkee from 142 piezometers installed by the Department in the Southwest Punjab for groundwater monitoring. On the basis of result of the study, a report entitled 'Assessment of saline and freshwater zone in Faridkot, Fazilka and Sri Muktsar Sahib districts of Malwa region

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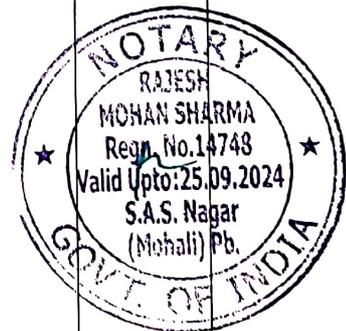
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of Punjab' has been formulated by NIH, Roorkee. Result of the samples in the report are tabled below:

Table: Variations of EC (electrical conductivity) in the proportions of piezometers

EC = $\mu\text{S}/\text{cm}$ Water suitability	Proportion (%) of the piezometers in different EC ranges				%of wells out of the total 142 Shallow, intermediate and deep piezometers
	Deep	Inter mediate	Inter mediate	Shallow	
	28-32m	(1) 15-20m	(2) 10-15m	5-8m	
< 350 (for drinking)	5.7	10.3	19.4	7.1	10.56
350 to 1050 (suitable for irrigation & livestock)	11.1	25.6	11.1	20.0	20.42
1050 to 1750 (suitable for irrigation & livestock)	22.9	25.6	22.2	10.7	20.42
Brackish water; EC = 1750 to 2450 (suitable for irrigation & livestock after mixing with low EC water, appropriate	20.0	15.4	13.9	21.4	16.90



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for salt tolerant crops, suitable for industrial applications and other secondary water uses)					
Highly Brackish: 2450 to 3150 (suitable for salt tolerant crops, suitable for industrial applications and other secondary water uses)	8.6	7.7	19.4	7.1	10.56
Marginally saline: 3150 to 3850 (suitable for salt tolerant crops; moderately suitable for industrial applications and other secondary water uses)	5.7	7.7	8.3	7.1	7.04
Marginally saline: 3850 to 4550 (moderately suitable for salt tolerant plants and cooling plants and other secondary water uses)	11.4	5.1	2.8	3.6	5.63



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Saline > 5200 (suitable for saline water aquaculture, suitable for salt tolerant crops and cooling plants after mixing with freshwater)	17.1	2.6	2.8	14.3	8.45
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6. That as per above report, deposition of salts released from the parent rock, ancient drainage basins and lack of proper natural drainage are major reasons for relatively higher impacts of salinity in south-west Punjab.

Place:-

Date:- 19 MAR 2024

Deponent


(ARUN KUMAR)

Joint Director Agriculture (HG)
(Additional Charge)
Department of Agriculture &
Farmer Welfare, Punjab,
S.A.S. Nagar.

Verification:-

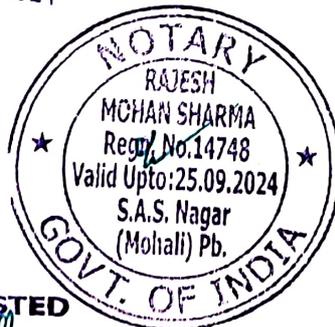
Verified that the contents of the Para No. 1 to 6 of short affidavit are true and correct to the best of my knowledge, belief and as information derived from official records and nothing has been concealed therein.

Place:- 9 MAR 2024
Date:-

Deponent


(ARUN KUMAR)

Joint Director Agriculture (HG)
(Additional Charge)
Department of Agriculture &
Farmer Welfare, Punjab,
S.A.S. Nagar.



ATTESTED

RAJESH MOHAN SHARMA
Notary, S.A.S. Nagar (Mohali)