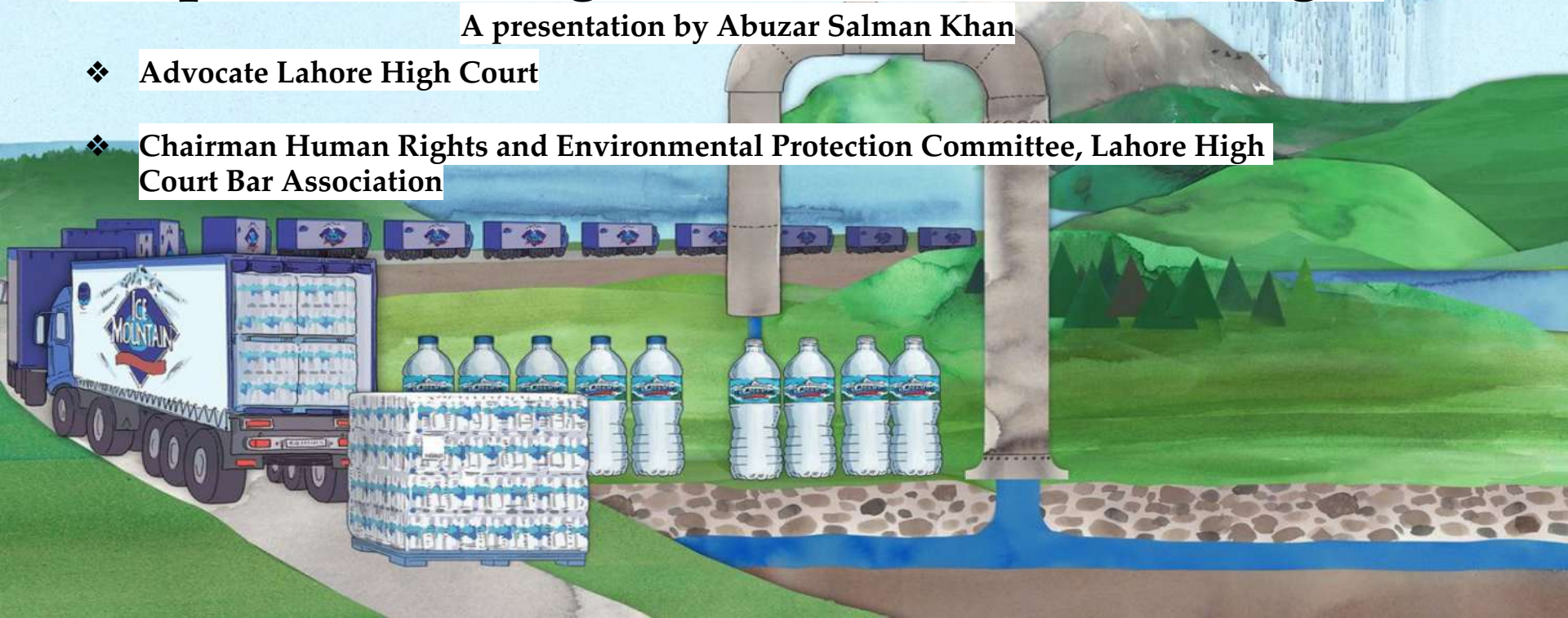


# Extent of Utilization of Groundwater by Corporations: Legal and Judicial Challenges

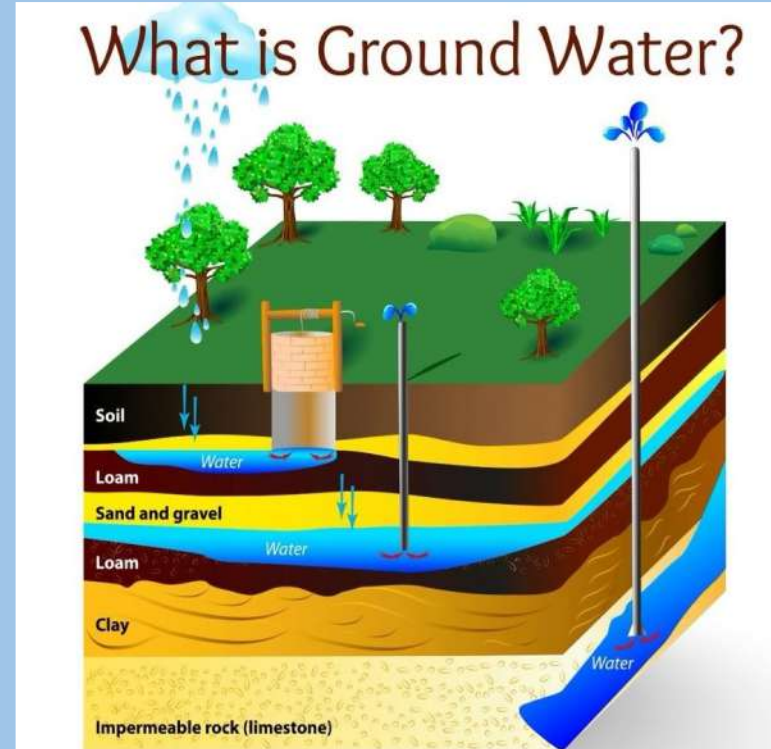
A presentation by Abuzar Salman Khan

- ❖ Advocate Lahore High Court
- ❖ Chairman Human Rights and Environmental Protection Committee, Lahore High Court Bar Association



# What is Groundwater?

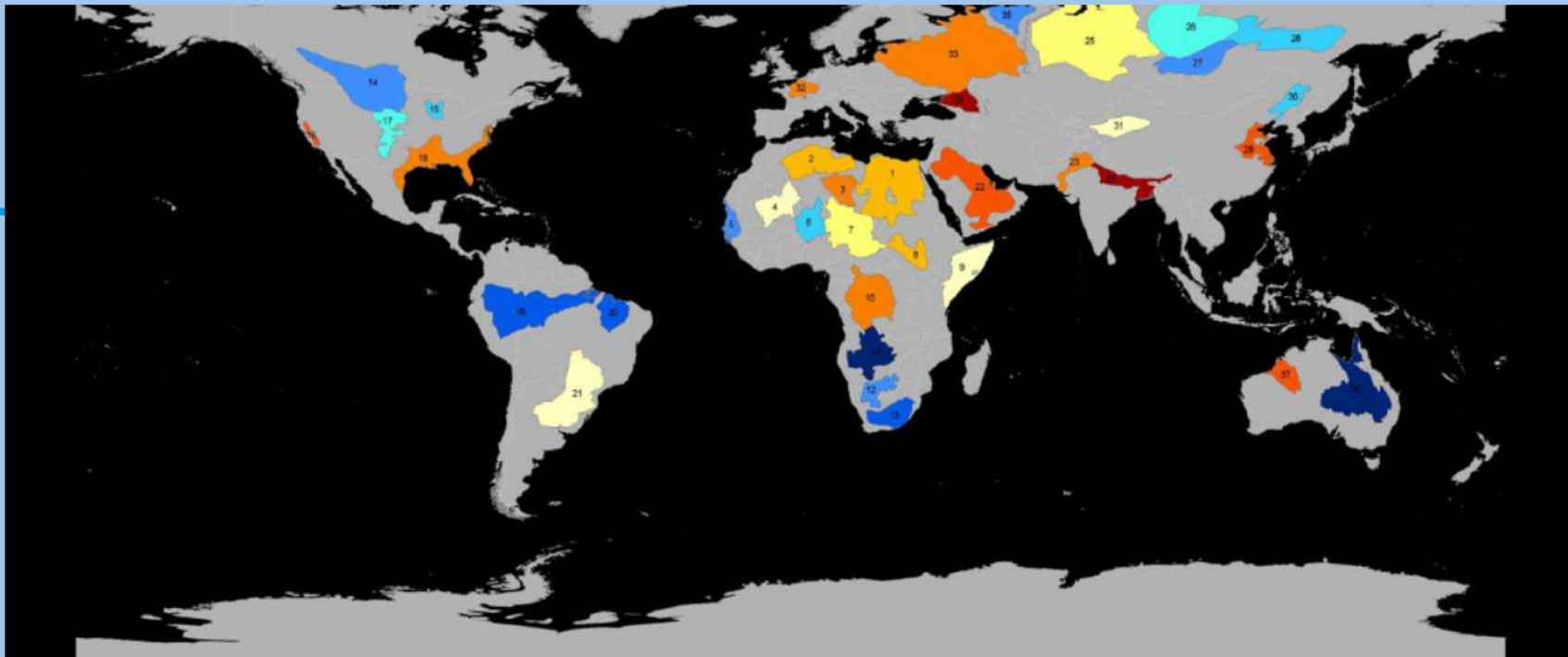
- It is a natural resource that is held in aquifers beneath the earth's surface
- Significance of Groundwater; it is a major source of freshwater
- Uses of Groundwater; drinking, bathing, agriculture, industrial processes



# Global Groundwater Crisis

- There are 37 large aquifers in the world and as per NASA's research, 8 of these are "overstressed"
- This is due to over-extraction and negligible recharge of aquifers
- Pakistan shares Indus Basin Aquifer with northwestern India





[mm H<sub>2</sub>O yr<sup>-1</sup>]



Richey, A.S., B.F. Thomas, M. Lo, J.T. Reager, J.S. Famiglietti, K. Voss, S. Swenson, M. Rodell (2015). Quantifying Renewable Groundwater Stress with GRACE. *Water Resour. Res.*, doi: 10.1002/2015WR017349

1	Nubian Aquifer System (NAS)	11	Upper Kalahari-Cuvelai-Upper Zambezi Basin	20	Maranhao Basin	29	North China Aquifer System
2	Northwestern Sahara Aquifer System (NWSAS)	12	Lower Kalahari-Stampriet Basin	21	Guarani Aquifer System	30	Song-Liao Basin
3	Murzuk-Djado Basin	13	Karoo Basin	22	Arabian Aquifer System	31	Tarim Basin
4	Taoudeni-Tanezrouft Basin	14	Northern Great Plains Aquifer	23	Indus Basin	32	Paris Basin
5	Senegalo-Mauritanian Basin	15	Cambro-Ordovician Aquifer System	24	Ganges-Brahmaputra Basin	33	Russian Platform Basins
6	Iullemeden-Irhazer Aquifer System	16	Californian Central Valley Aquifer System	25	West Siberian Basin	34	North Caucasus Basin
7	Lake Chad Basin	17	Ogallala Aquifer (High Plains)	26	Tunguss Basin	35	Pechora Basin
8	Sudd Basin (Umm Ruwaba Aquifer)	18	Atlantic and Gulf Coastal Plains Aquifer	27	Angara-Lena Basin	36	Great Artesian Basin
9	Ogaden-Juba Basin	19	Amazon Basin	28	Yakut Basin	37	Canning Basin
10	Congo Basin						

# Groundwater Utilization By Private Corporations

- Groundwater is extracted by various industries i.e cement industry, beverage industry, leather and textile industry etc
- Beverage industry extracts massive quantities of water through water mining
- It takes 4 litres of water to produce 1 litre of plastic water bottle



# Groundwater Utilization by Private Corporations

- The Coca-Cola Company alone uses about 300 billion liters of water annually
- In southern Ontario, bottled water giant Nestlé continues to extract four million liters of groundwater every day from an aquifer near Guelph
- In 2014, Nestle used roughly 705 million gallons of water in its operations in California.
- Nestlé's request to the Michigan Department of Environmental Quality to pump 576,000 gallons of water each day from the White Pine Springs

## Pakistan's Groundwater Crisis

- Pakistan will reach absolute water scarcity by 2025 (UNDP report) (PCRWR)
- Justice Qazi Faez Isa of SC addressed the water crisis of Balochistan
- Reports published by WWF report and PCRWR predict similar, terrifying conclusions
- In Pakistan, Nestle extracted 14 billion litres of groundwater from 2013-2018. Kinley and Gourmet, too, have extracted billions of litres of groundwater

## Negligible Amount is Paid in Taxes by Companies for Groundwater Charges

In Pakistan, beverage companies only pay 0.00021 PKR per liter (0.0000016 US Dollars)

Whereas some other states and countries charge a much higher value;



# Global Groundwater Extraction Charges

<b>Country/City/State</b>	<b>Groundwater charges PKR/Liter</b>	<b>Groundwater charges US Dollars/Liter</b>
Burma	0.10	0.00076
Jordan	0.13	0.00099
Georgia	0.15	0.0011
India Maharashtra	0.20	0.0015
Delhi	0.30	0.0023
Kyrgyzstan	0.32	0.0024
Ontario	0.48	0.0037
Fiji	0.58	0.0044

## Legal Challenges

- Unfortunately, there are no inadequate laws, rules or regulations in Pakistan with regard to groundwater extraction.
- Section 62-A of **Canal and Drainage Act 1873** deals with groundwater but it is inadequate.
- **Lahore Development Authority Act 1975** and **Local Government Act 2013 of Punjab** are silent on the issue at hand.
- Punjab Assembly is in process of enacting **Punjab Groundwater Protection Act.**

# Judicial Challenges

There has been visible judicial activism in regards to preservation of Groundwater

- Shehla Zia Case reported as PLD 1994 Supreme Court 693
- Khewra Mines Case reported as 1994 SCMR 2061
- Supreme Court of Pakistan, recognized the Public Trust Doctrine while deciding the landmark Lahore Canal Widening Case (reported as 2011 SCMR 1743)
- Nestle Case reported as 2005 CLC 424
- Asghar Leghari case reported as 2018 CLD 424

# Judicial Challenges

- Recently, in Supreme Court, Mr. Saqib Nisar took a suo moto notice
- The Supreme Court opined that the charges should be increased from 0.21 paisa's PKR per liter to at least 75 paisa's PKR per liter

Pakistan	PKR/Liter	Dollar/Liter
Current Charges	0.00021	0.0000016
Proposed Charges by SC	0.75	0.0057

35000%  
Increase

# Judicial Challenges

- Few months ago Supreme Court took notice of reports that the pond in the ancient Katas Raj temple are being exploited through over-extraction of Groundwater
- Few days ago, the Supreme Court disposed off the matter and fixed 0.42 rupees [0.0031 US Dollars] per litre as extraction charge on cement industry.
- Despite the existence of the public trust doctrine in our jurisprudence, the Groundwater crisis in Pakistan calls for serious legislative reforms. Judicial activism isn't substitute for lawmaking.

## Progress made in India

- Majority of Indian States have statutory laws explicitly mandating Groundwater conservation

E.g. Tamil Nadu Groundwater (Development and Management Act) 2003, Himachal Pradesh Groundwater Act 2005, West Bengal Groundwater Act 2005, Maharashtra Water Resources Regulatory Act 2005, Chhattisgarh Groundwater Act 2012.

- In February 2017, PepsiCo, was forced to shutter a bottling plant in the state of Kerala
- In 2017, Rs.750 crore Coca-Cola plant in Hoshangabad faced a roadblock after the local panchayat passed a resolution to not allow the water-guzzling plant.

## Conclusion

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- Pakistan needs to enact laws regarding Groundwater conservation and wastage, and formulate rules especially with respect to Beverage Industry.
- Beverage companies need to take corporate social responsibility seriously
- Companies should make considerations to reduce their water use it to cut back on energy usage as energy requires a lot of water for production

# References

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- ❖ Un-igrac.org. (2018). What is Groundwater? | IGRAC. [online] Available at: <https://www.un-igrac.org/what-groundwater> [Accessed 25 Oct. 2018].
- ❖ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4744761/>
- ❖ supply, T. (2018). The map that reveals the world is running out of water:The drought that has swept California is now threatening the state’s drinking water supply. [online] Ecologyenergy.blogspot.com. Available at: <https://ecologyenergy.blogspot.com/2015/06/the-map-that-reveals-world-is-running.html> [Accessed 25 Oct. 2018].
- ❖ HydrateLife. (2018). Bottled Water: Why It’s Bad for You, the Environment, and Water – Part III. [online] Available at: <https://www.hydratelife.org/bottled-water-why-its-bad-for-you-the-environment-and-water-3> [Accessed 25 Oct. 2018]./
- ❖ Shannyn Snyder “Resource Demands of Bottled Water” at The water Project. Available at:[https://thewaterproject.org/bottled-water/bottled\\_water\\_resource\\_usage](https://thewaterproject.org/bottled-water/bottled_water_resource_usage)



# References

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- ❖ GreenBiz. (2018). *Coca-Cola and its bottlers 'replenish' all the water they use*. [online] Available at: <https://www.greenbiz.com/article/coca-cola-and-bottlers-achieve-replenishment-all-water-they-use> [Accessed 25 Oct. 2018].
- ❖ The Globe and Mail. (2018). *Nestlé continues to extract water from Ontario town despite drought: activists*. [online] Available at: <https://www.theglobeandmail.com/news/national/nestle-continues-to-extract-water-from-ontario-town-despite-severe-drought-activists/article31480345/> [Accessed 25 Oct. 2018].
- ❖ The Globe and Mail. (2018). *Nestlé continues to extract water from Ontario town despite drought: activists*. [online] Available at: <https://www.theglobeandmail.com/news/national/nestle-continues-to-extract-water-from-ontario-town-despite-severe-drought-activists/article31480345/> [Accessed 25 Oct. 2018].
- ❖ Npr.org. (2018). *NPR Choice page*. [online] Available at: <https://www.npr.org/sections/thetwo-way/2018/04/03/599207550/michigan-oks-nestl-water-extraction-despite-over-80k-public-comments-against-it> [Accessed 25 Oct. 2018].

# References

---

- ❖ (www.dw.com), D. (2018). Water crisis: Why is Pakistan running dry? | DW | 07.06.2018. [online] DW.COM. Available at: <https://www.dw.com/en/water-crisis-why-is-pakistan-running-dry/a-44110280> [Accessed 25 Oct. 2018]
- ❖ Niazi, A. (2018). Our groundwater crisis. [online] Thenews.com.pk. Available at: <https://www.thenews.com.pk/print/374621-our-groundwater-crisis> [Accessed 25 Oct. 2018].
- ❖ Idrees, M. (2018). Top mineral water brands 'paying peanuts' to govt against massive groundwater extraction. [online] Daily Pakistan Global. Available at: <https://en.dailypakistan.com.pk/pakistan/top-mineral-water-brands-paying-peanuts-to-govt-against-massive-groundwater-extraction/> [Accessed 25 Oct. 2018].
- ❖ Idrees, M. (2018). Top mineral water brands 'paying peanuts' to govt against massive groundwater extraction. [online] Daily Pakistan Global. Available at: <https://en.dailypakistan.com.pk/pakistan/top-mineral-water-brands-paying-peanuts-to-govt-against-massive-groundwater-extraction/> [Accessed 25 Oct. 2018].
- ❖ Epaper.dawn.com. (2018). Zofeen T. Ebrahim, THE REAL COST OF BOTTLED WATER | ePaper | DAWN.COM. [online] Available at: [https://epaper.dawn.com/DetailImage.php?StoryImage=21\\_10\\_2018\\_521\\_001](https://epaper.dawn.com/DetailImage.php?StoryImage=21_10_2018_521_001) [Accessed 25 Oct. 2018].

# References

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- ❖ Waterinfo.net.pk. (2018). [online] Available at:  
<https://waterinfo.net.pk/sites/default/files/knowledge/Prospectives%20and%20Limits%20of%20Groundwater%20Use%20in%20Pakistan.pdf> [Accessed 25 Oct. 2018].
- ❖ Nikkei Asian Review. (2018). Indian activists wage water war with soft drink companies. [online] Available at:  
<https://asia.nikkei.com/Politics/Indian-activists-wage-water-war-with-soft-drink-companies> [Accessed 25 Oct. 2018].