

Water Testing & Analysis Instruments

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>100,000
colleagues



5,700
R&D scientists/engineers



\$1.4B
invested in R&D



\$40B
in revenue

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Enable our customers to make the World
healthier, cleaner and safer

Water on Earth

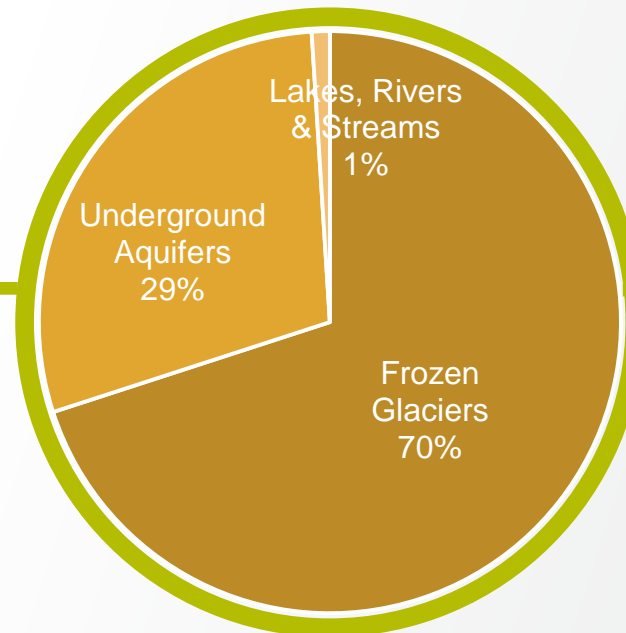
“Safe & Clean availability of Water - Bigger challenge than climate change” – Stanford University Business School



71% of Earth's Surface

Fresh Water
3%

97%
in
Oceans
& Seas



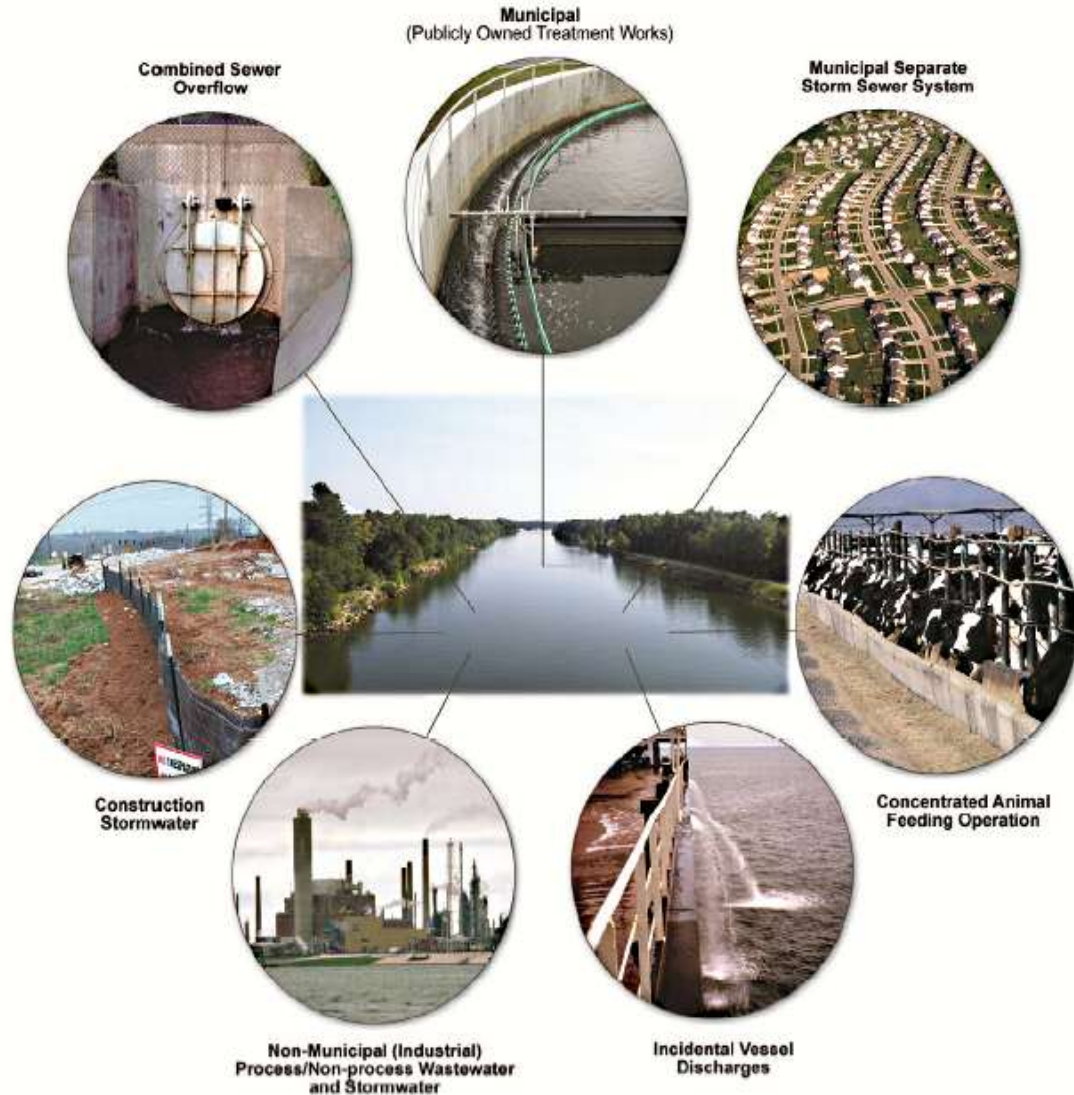
Fresh water is World's most precious commodity

Global facts

- Over **2 Billion** people live in water-stressed countries. These people use a drinking water source contaminated with faeces.
- Microbial contamination of drinking-water poses the greatest risk to drinking-water safety.
- **368 Million** people taking water from unprotected wells and springs
- **122 Million** people collecting untreated surface water from lakes, ponds, rivers and streams.

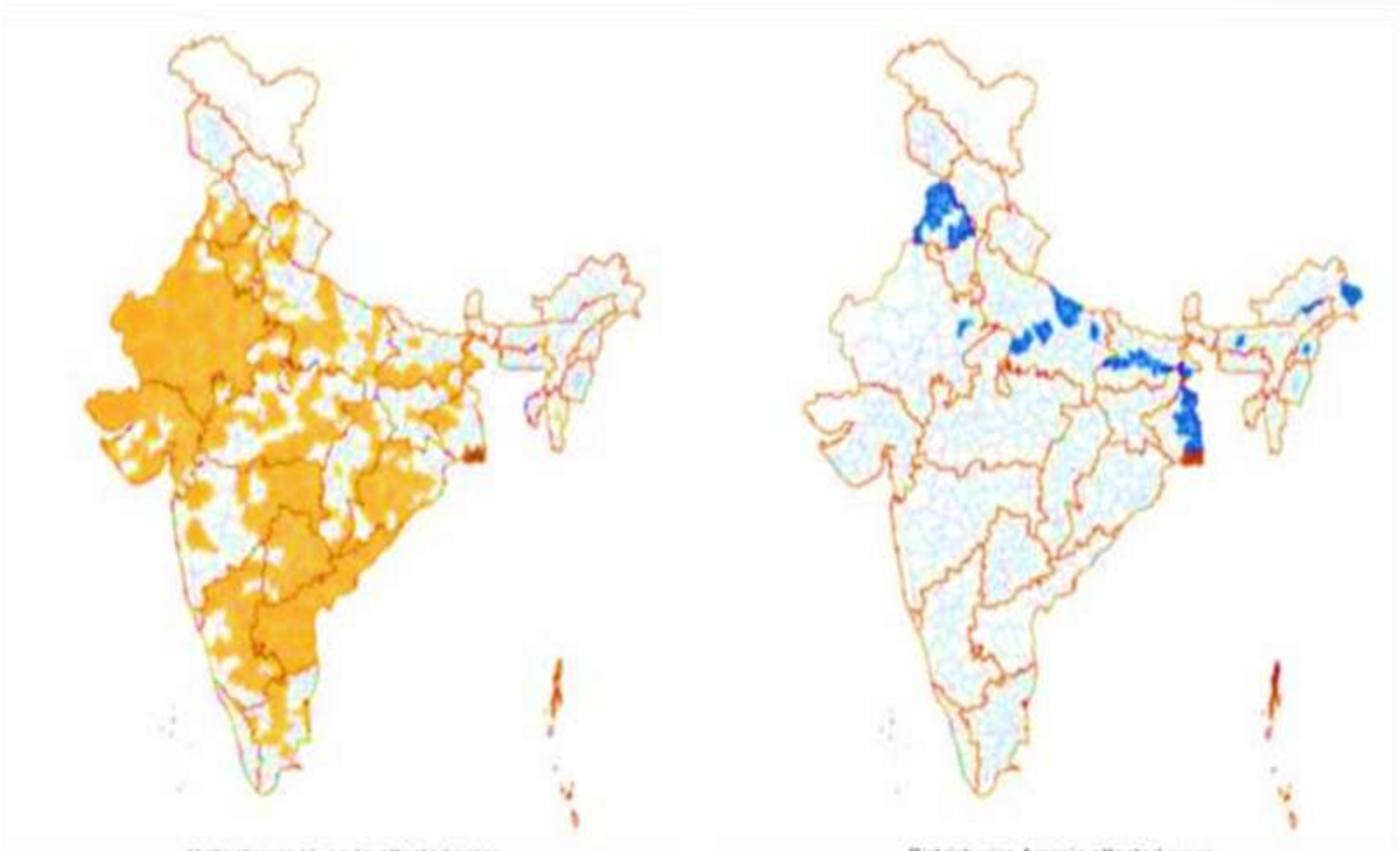


Sources of Water Pollution



- **Safe and Clean Drinking Water is a necessity.**
- **Improved water supply and sanitation with better management of water resources boosts countries' economic growth thus contributing to poverty reduction.**
- **Main source of pollution is from sewage and wastewater treatment, unsustainable farming methods and fossil fuel power plants.**

India's Drinkable Water Testing Scenario



Source: JIM-IMIS

Source: JIM-IMIS

(Note: A district is highlighted even if there is a single small hotspot in the entire district. The highlight does not necessarily indicate that the entire district is contaminated.)



WASH – A WHO Initiative



- **Drinking Water Services**



"Safely managed drinking water service" is "one located on premises, available when needed and free from contamination"

- **Sanitation Services**



The improved sanitation facilities is must.

- **Hygiene Services**



"Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases."

Drinking Water Parameters

Drinking Water Parameters monitored in most countries:-

- pH
- Dissolved Oxygen
- Turbidity
- Conductivity
- Chlorine – if disinfected using Chlorine
- Organics – TOC /COD/BOD
- Fluoride – If water is fluoridated
- Calcium – determine the water hardness
- Nitrate – potential contaminant
- Algae – Potentially toxic (blue-green Algae)
- E-Coli – Microbial monitoring



Innovative Technology – ROSS Electrodes

- **Dr. James Ross – Professor & Scientist at MIT Boston introduced ROSS technology.**
- **In 1966 – First Ion Selective Electrode (ISE) was introduced.**
- **In 1981 - First pH electrode using Redox Reference System instead of Ag/Cl introduced. ROSS pH electrode is flagship product.**
- **Industry leader in variety and proven quality of ISE's – pH, Fluoride, Calcium, Sodium,**
- **Successfully partnered with World Health Organization (WHO) – Fluorosis Project for Fluoride Analysis in India**



THERMO FISHER SCIENTIFIC SOLUTIONS

- PORTABLE LABORATORY CONTROLLERS PROCESS



We have had the honor of serving our country in collaboration with -



Public Works Department (R&B)
Government Of Tripura



सत्यमेव जयते
GOVERNMENT OF ASSAM
Assam Public Health
Engineering Department



Jal Shakti (PHE) Department Jammu & Kashmir
Save Water Save Life



Public Health Engineering Department
Government of West Bengal



**PUBLIC HEALTH ENGINEERING
DEPARTMENT**
GOVERNMENT OF NAGALAND



Public Health Engineering Department
Government of Mizoram



Delhi Jal Board
Government of NCT of Delhi



**THE ADMINISTRATION OF UNION TERRITORY OF LADAKH
Public Health Engineering/I&FC Department, Ladakh**

Mission : To Make The World Healthier, Cleaner & Safer

The **Air** you Breathe

The **Water** you Drink

The **Security** around you

If there is any problem, **WE** detect it.....

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S C I E N T I F I C

Thank you

