

# HJK CONSULTING ENGINEERS

**Project Management – Technology – Operating – Consulting Excellence** 







Drinking & Irrigation Water Harvesting "Water Borne Diseases"





- > Polio
- Malaria
- Cholera
- Hepatitis
- Dengue
- Scabies
- > Typhoid
- Anemia
- Diarrhea
- Hookworm infection
- Ring Worm or Tinea
- Japanese encephalitis

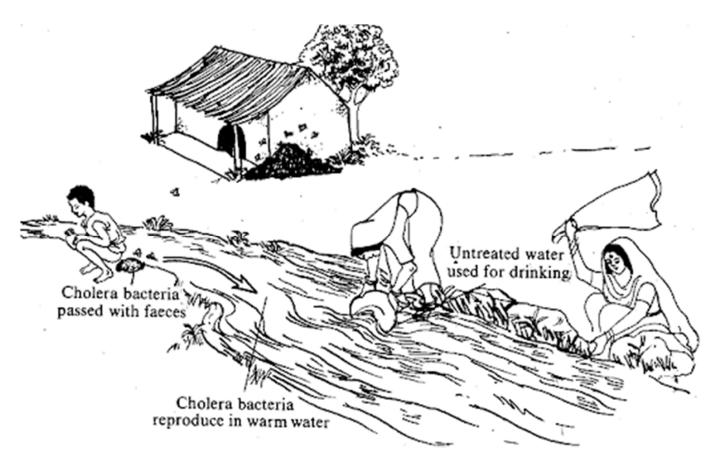
Source: https://legacywaterfoundation.com





Drinking & Irrigation Water Harvesting "Water Borne Diseases"





Source: http://www.expertsmind.com

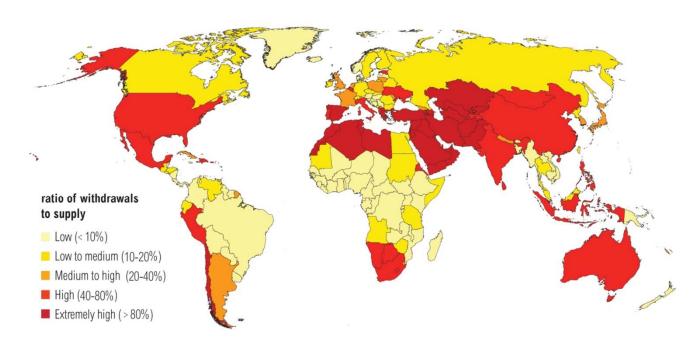




Drinking & Irrigation Water Harvesting "Water & Sanitation Coverage"



Water Stress by Country: 2040



NOTE: Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

For more: ow.ly/RiWop







Drinking & Irrigation Water Harvesting "Preventing Water – Related Diseases"



The only way to mitigate water-related diseases is to use clean and fresh drinking water. But still, here are some useful measures to reduce or even prevent water-related diseases.

#### **Provision of clean drinking water**

Clean drinking water is prerequisite for reducing water-related diseases. For this purpose, the disinfection method helps to prevent the growth of pathogenic organisms and to provide clean drinking water. The 2 most common practices used for disinfection of water are:

Irradiation with ultra-violet radiation; and,

Oxidation with chemicals like chlorine dioxide or ozone, or chlorine to kill micro-organism in the water.

#### **Improved Sanitary Conditions**

One of the main reasons why waterborne diseases are so common is due to the lack of sanitation and hygiene. Unless these conditions do not improve, all other efforts in this regard will be futile.

#### Recycle

Recycle urban, industrial, and agricultural waste so that it does not mix up with clean and drinking water. Similarly, industrial waste should not be allowed to throw into rivers and spread water pollution (as this practice is still being carried out in under-developed countries).

#### **Efficient Management of Resources**

Adequate and efficient management of available freshwater resources is the need of the hour. Due to increasingly shrinking resources, it is essential to manage these resources properly.

#### **Awareness**

Aware and sensitize general masses about how infections spread through campaigns and seminars

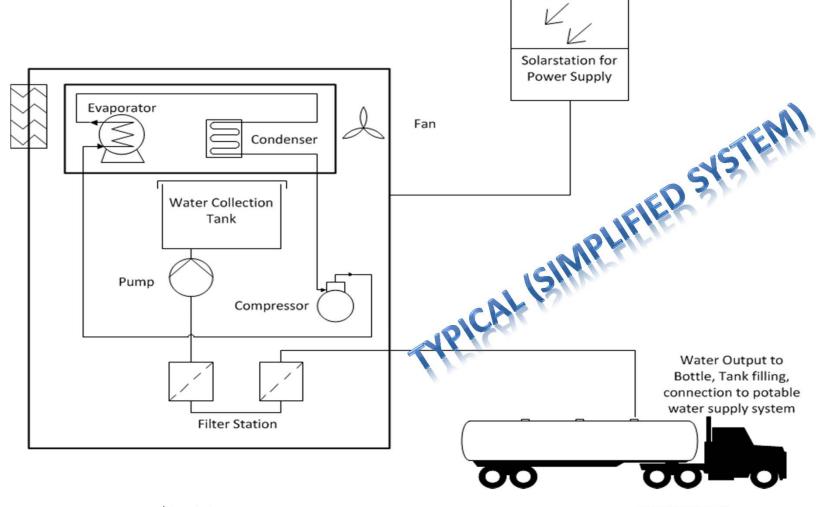
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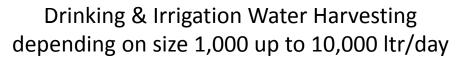
Drinking & Irrigation Water Harvesting depending on size 1,000 up to 10,000 ltr/day



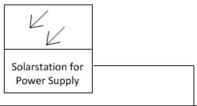




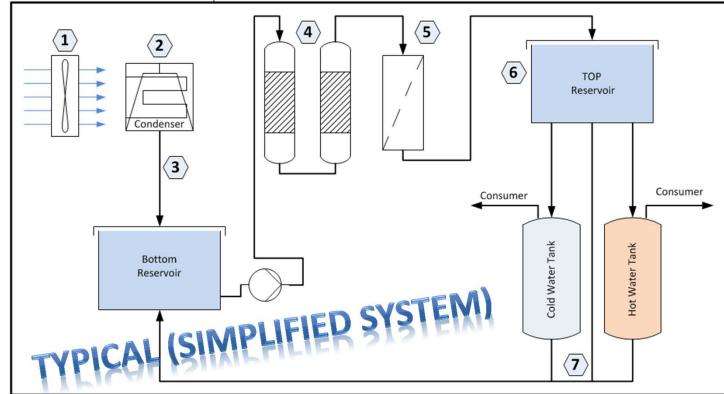








- 1 .... Electrostatic Filter (appr. 93% airborne particles)
- 2 .... Condensing water vapor into liquid
- 3 .... Water collection
- 4 .... UV rays (appr. 30 min., >90% germs & bacteria)
- 5 .... Sediment screen, 2 solid block SBAC, 1μ filter, 90% VOCs, AWS UF membrane 0.15μ
- 6 .... Reservoir Tank
- 7 .... Water recycling every 30 min.







Drinking & Irrigation Water Harvesting depending on size 1,000 up to 10,000 ltr/day

Production Capacity (Temperature: 30°C / Humidity: 80%)	5,000 ltr/day	500 ltr/day
Total Wattage	116.6 KW	9.9 KW*2
Compressor Power	2 x 47.3 KW	
Fan Power	2 x 11 KW	
Power Supply Cold Water Temperature Hot Water Temperature Refrigerant Type Storage Capacity	380V, 50 Hz	220V/50Hz / 110V/60Hz
Cold Water Temperature	4 - 10°C	
Hot Water Temperature	75-95°C	
Refrigerant Type	R134a	
Storage Capacity	1800 ltr	240 ltr
Environmental Temperature	15°C - 40°C	
Environmental Humidity	35% - 95%	45% - 95%
Noise Level	<79 DB	<79 DB
Size(mm)	5300 x 2200 x 2200	1460 x 850 x 235
Net Weight	4500 kg	650 kg





## STEEL PLANT PROCESS OPTIMIZATION





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