



# Sustainable Water

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Terms & Definitions





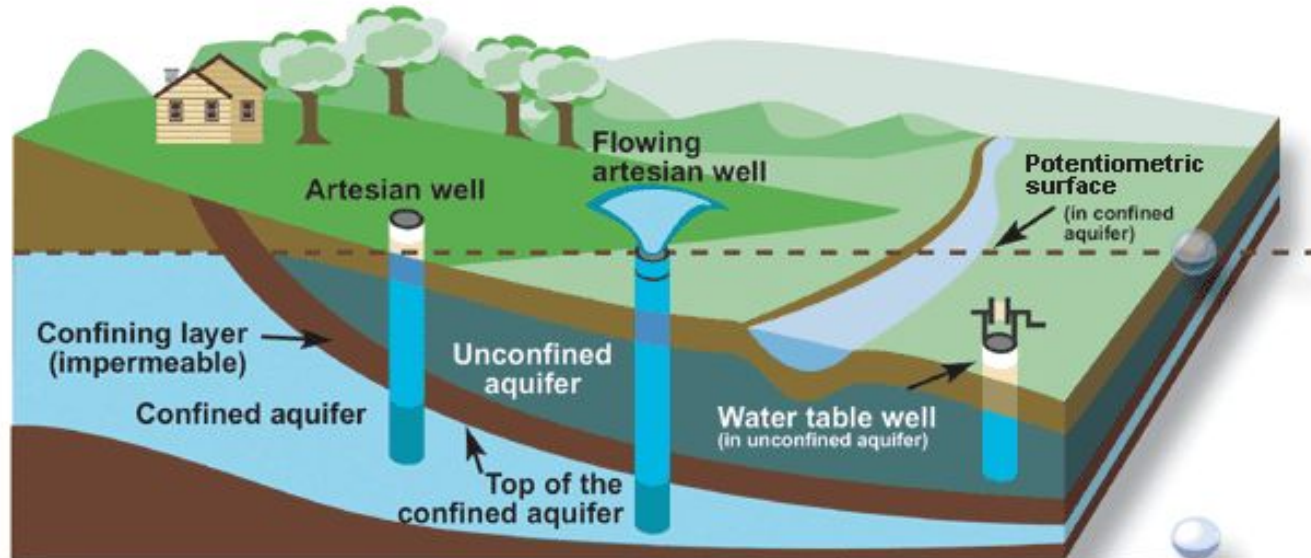
# Aquifer

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A body of permeable rock that can contain or transmit groundwater.



## Aquifers and wells



Source: Environment Canada, USGS


USGS Water Science:  
<http://water.usgs.gov/edu/earthgwaquifer.html>



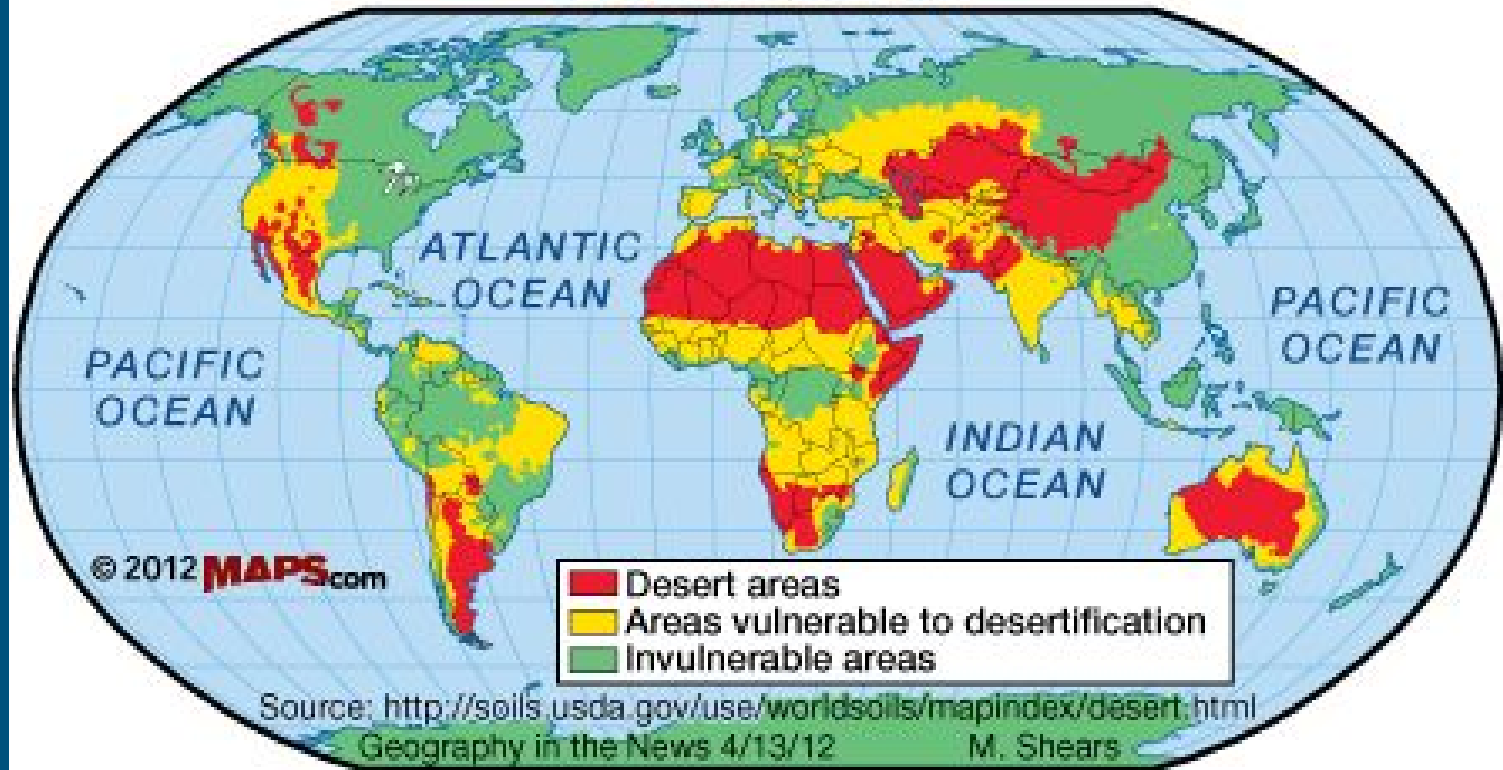
# Desertification

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The process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture.



# Desertification



Ace Geography:

<http://www.acegeography.com/what-is-desertification.html>

# Water Pollution

Contamination of water bodies (ex: lakes, oceans, aquifers and groundwater). Water without adequate treatment to remove harmful compounds.

## Fast Facts:

Every day 2 million tons (1.8 billion kilograms) of human waste are disposed of in waterways around the world.

<http://environment.nationalgeographic.com/environment/freshwater/pollution/>

## More Fast Facts:

- In developing countries, 70 percent of industrial wastes are dumped untreated into waters, polluting the usable water supply.
- On average, 99 million pounds (45 million kilograms) of fertilizers and chemicals are used each year.
- Portland, Oregon, is actively pursuing “green roofs” and “green streets” to prevent sewer overflows into the Willamette River. Chicago, Illinois, now has more than 517,000 acres (209,222 hectares) of vegetated roofs-more than any other U.S. city-which are helping to catch storm water, cool the urban environment, and provide opportunities for rooftop gardens.



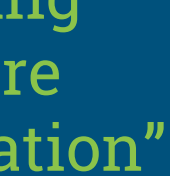
Discharge from a Chinese fertilizer factory winds its way toward the Yellow River. - Photography by Greg Girard



# Filtration

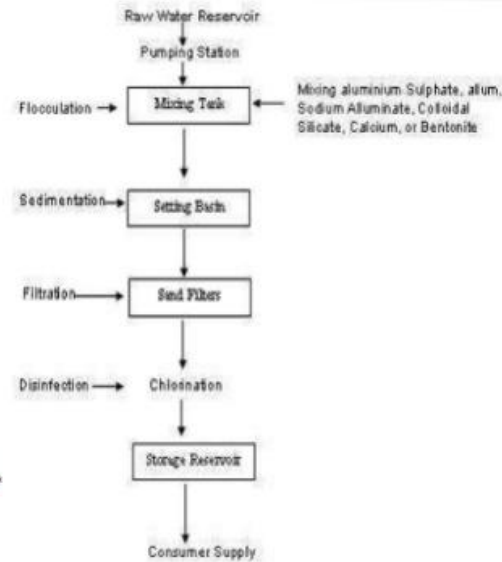
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The action or process of filtering something. “Small particles are difficult to remove without filtration”





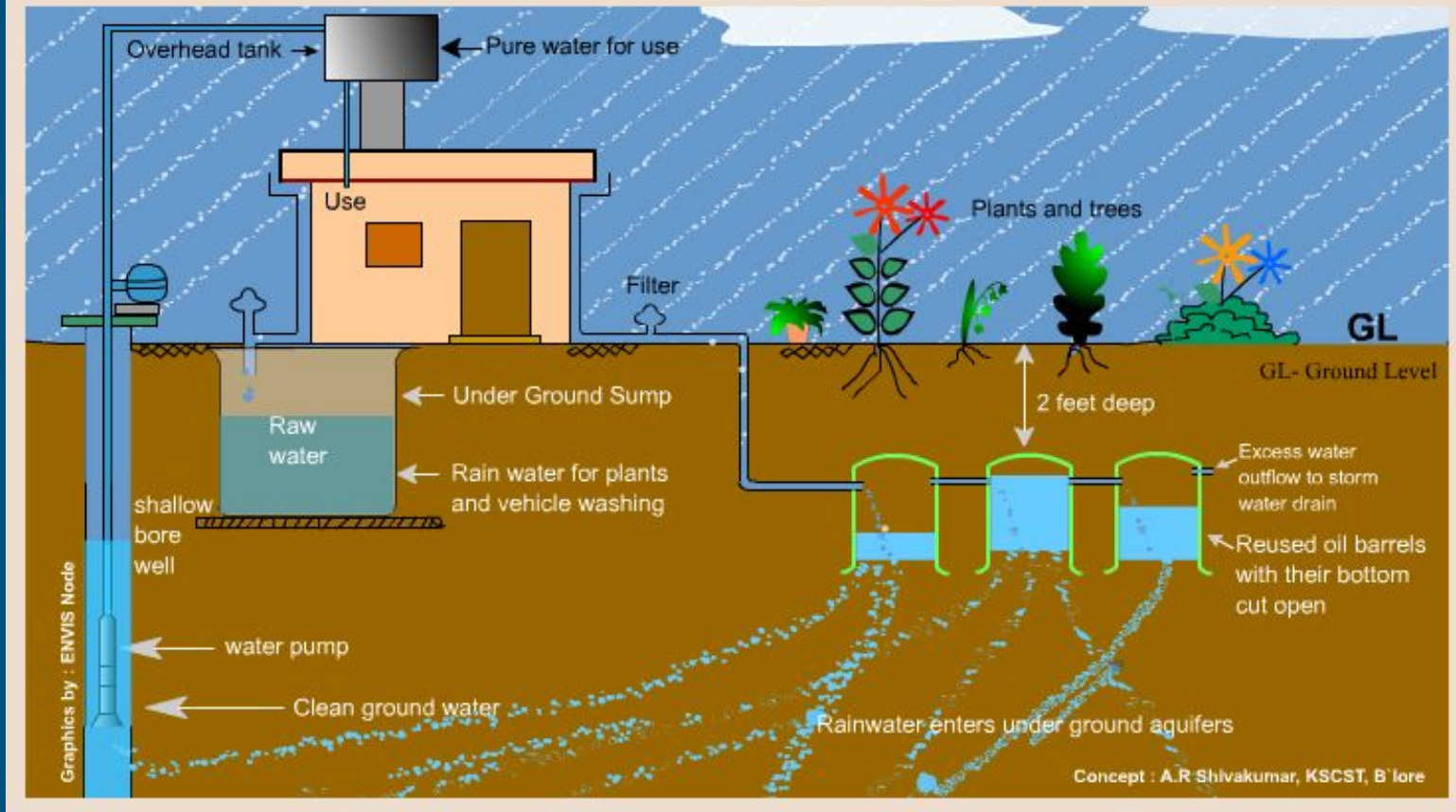
# WATER TREATMENT PROCESS



By: M. Vinod Kumar

# Rainwater Harvesting

Collection of water from surfaces on which rain falls, and subsequently storing this water for later use. Normally water is collected from roofs of buildings and stored in rainwater tanks.



<http://www.kelvinindia.in/rain-water-harvesting-system.html>

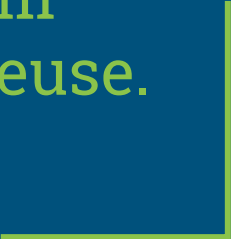


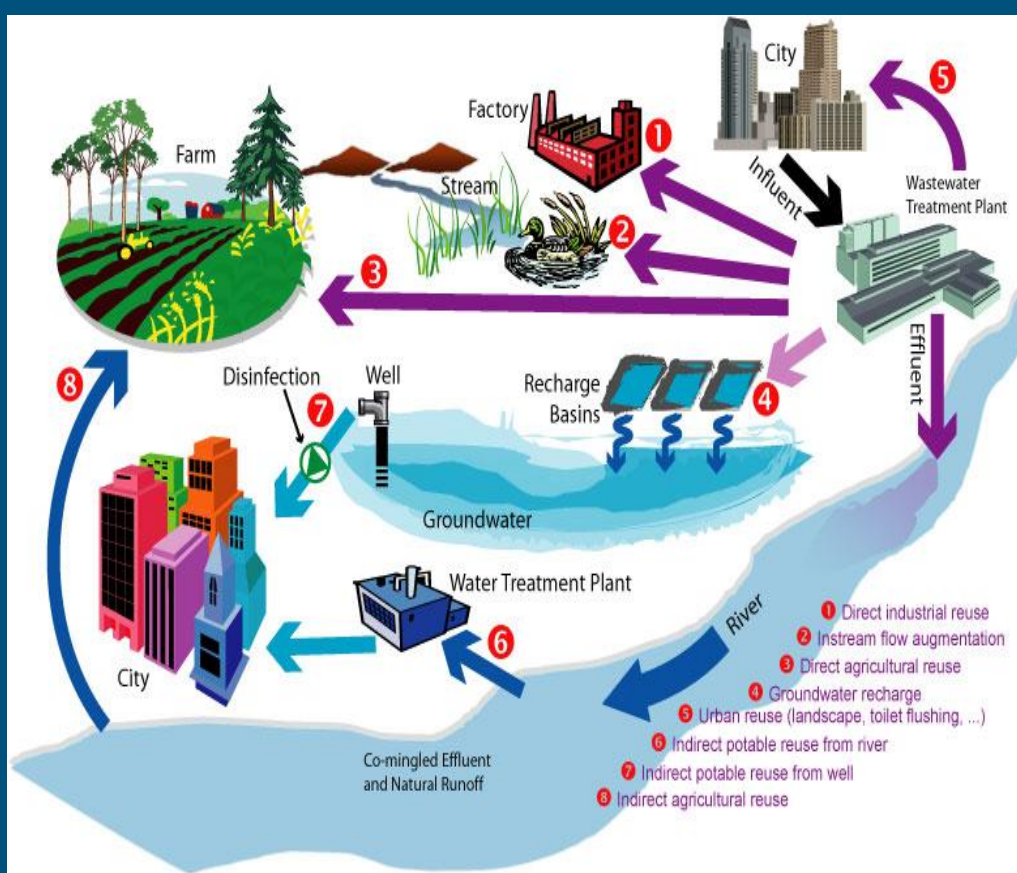
# Water Recycling

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To recover useful materials from  
garbage or waste. To extract and reuse.

<https://www3.epa.gov/region9/water/recycling/>






<http://www.water.ca.gov/recycling/>



# Water-borne disease

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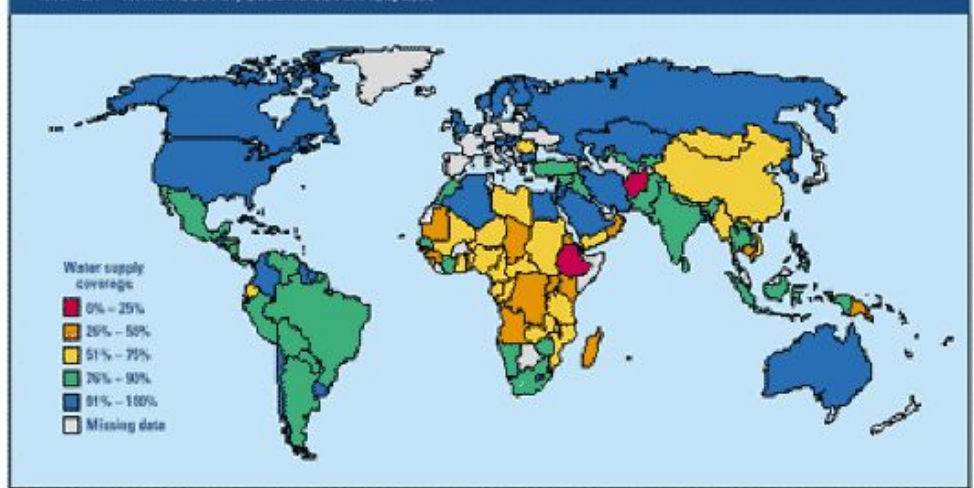
Any illness caused by drinking water contaminated by human or animal faeces, which contain pathogenic microorganisms.



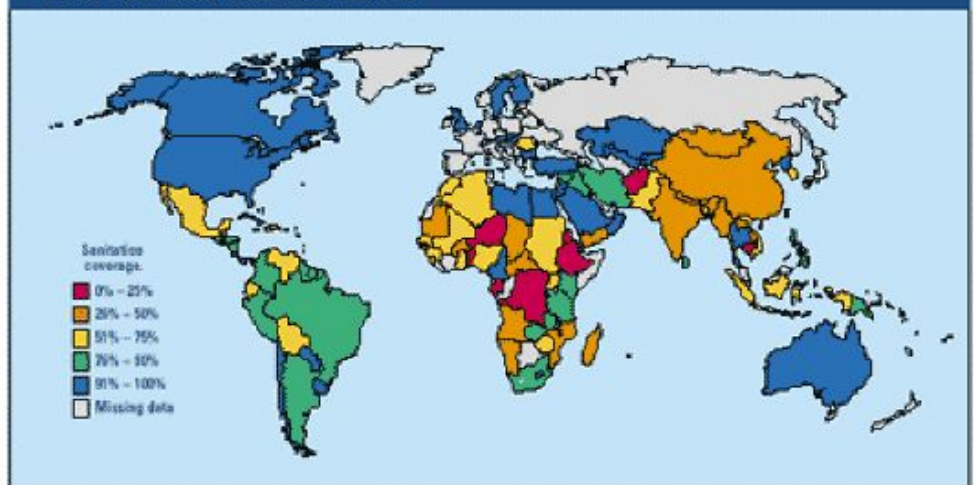
Source: 'Global Water  
Supply and Sanitation  
Assessment 2000  
Report', section 2.2,  
WHO 2000

<http://www.lennotech.com/library/diseases/diseases/waterborne-diseases.htm>

MAP 2.1 WATER SUPPLY, GLOBAL COVERAGE, 2000



MAP 2.2 SANITATION, GLOBAL COVERAGE, 2000





# Privatization

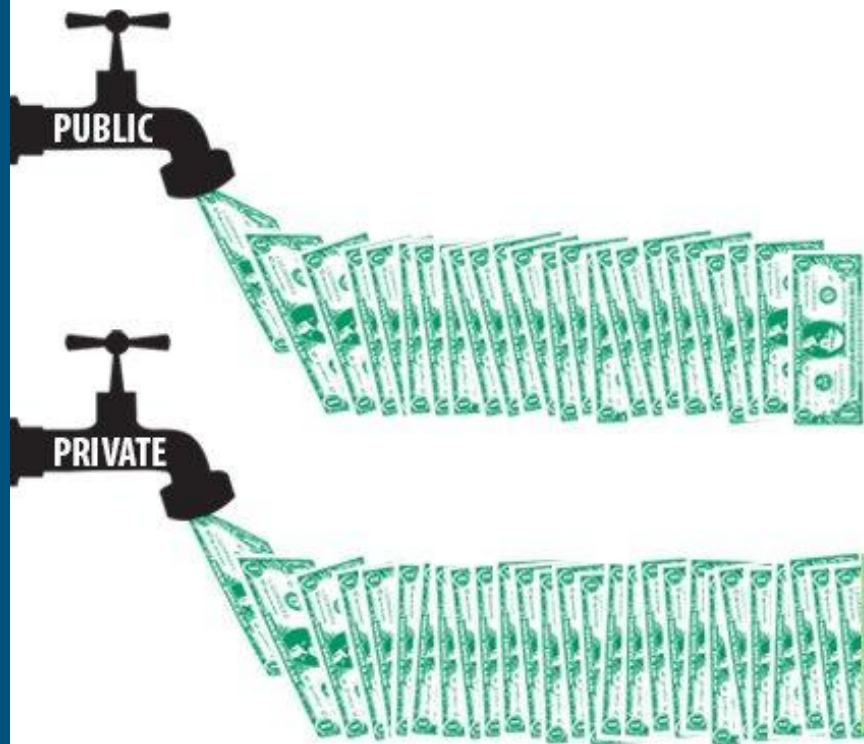
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The process of transferring an enterprise or industry from the public sector to the private sector. The public sector is the part of the economic system that is run by government agencies.



<http://whatis.techtarget.com/definition/privatization>





For the typical household,  
privately owned  
water utility service  
**costs 59% more**  
than public water service —

**about \$185  
each year.**

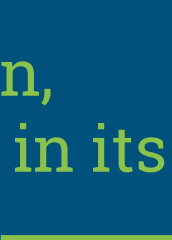
<http://www.foodandwaterwatch.org/insight/water-privatization-facts-and-figures>



# Drought

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A period of below-average precipitation in a given region, resulting in prolonged shortages in its water supply.





BBC News - Man Made Desaster (irrigation canals)

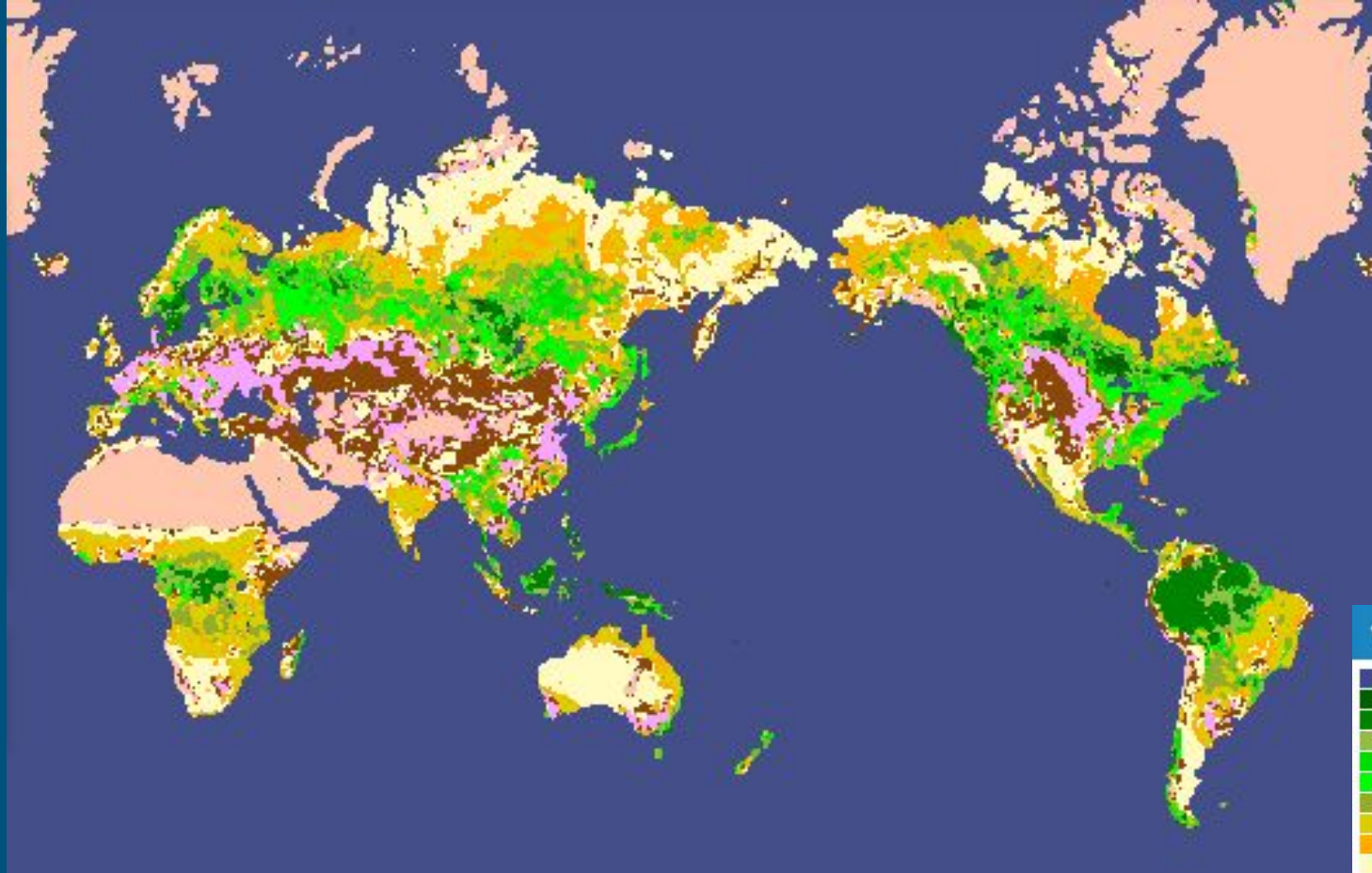


# Surplus

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When there is more rainfall than evaporation.





▼ Land Cover

- Water
- Evergreen Needleleaf
- Evergreen Broadleaf Forest
- Deciduous Needleleaf Forest
- Deciduous Broadleaf Forest
- Mixed Forest
- Woodland
- Wooded Grassland
- Closed Shrubland
- Open Shrubland
- Grassland
- Cropland
- Bare Ground
- Urban and Built-up

NatGeo MapMaker Interactive