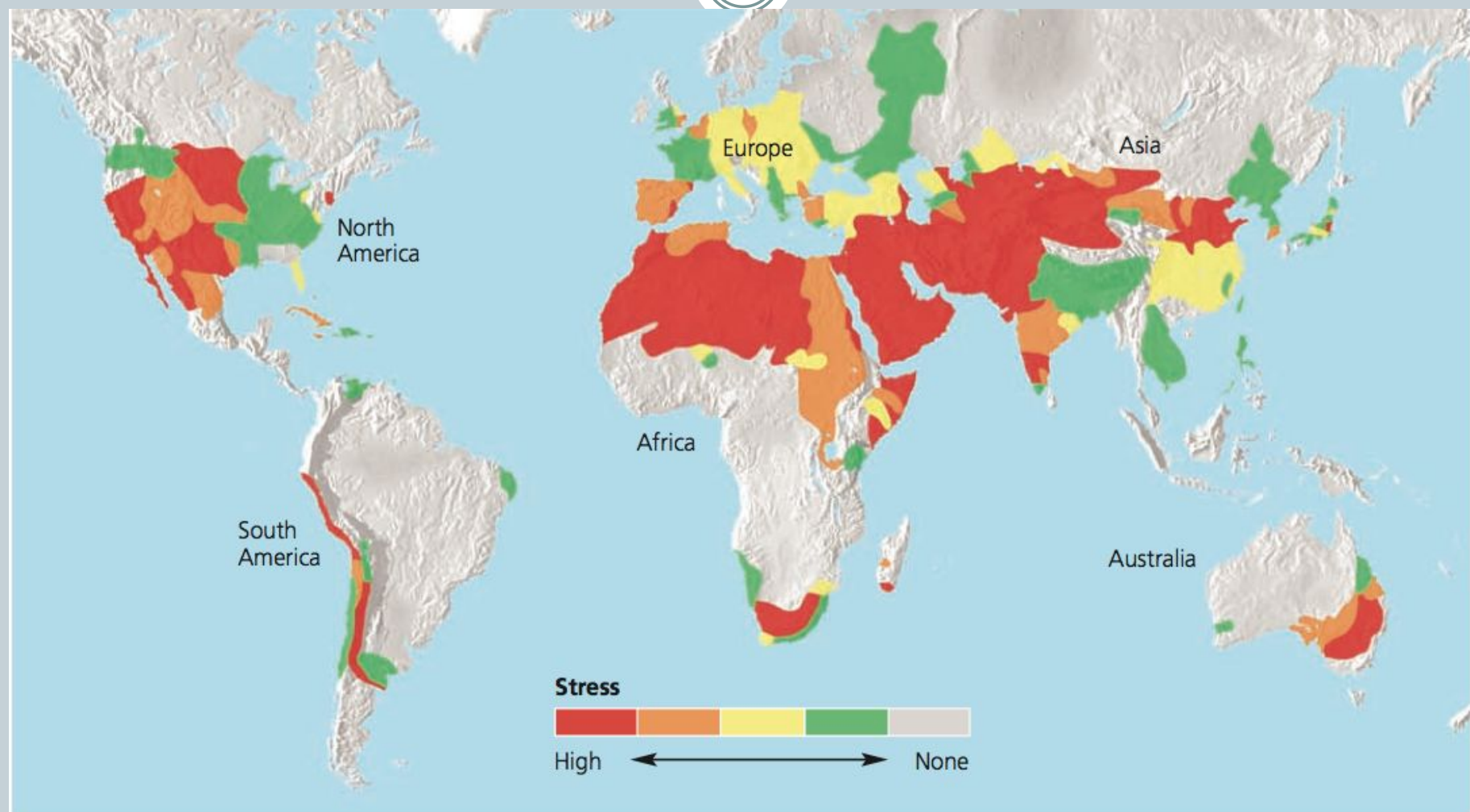




# Water Resource



- We already know that water covers about three-quarters of the Earth's surface, and
- It is essential to life (plants, animals, humans)
- Water is a renewable resource- that is after it has been used it returns to the water cycle and in time it will be used again.
- The total abundance of water on Earth might not seem to be a problem.
- people rely heavily on **fresh water** and its amount is limited ( 3.5%) in comparison to the rising world population and increasing demand.
- Huge amount of water is being polluted and also wasted.
- Making water available where and when it is needed is a problem.



# Use of Water



Water is used in many different ways, including:

- Domestic use: for showering, washing clothes, watering lawns and gardens etc.
- Agricultural use: includes water used in irrigation.
- Industrial use: water used for processing, washing and cooling in facilities that manufacture products.
- In-stream uses: hydroelectric power generation, navigation, recreation, fish and wildlife habitats (ecosystems).

Worldwide,

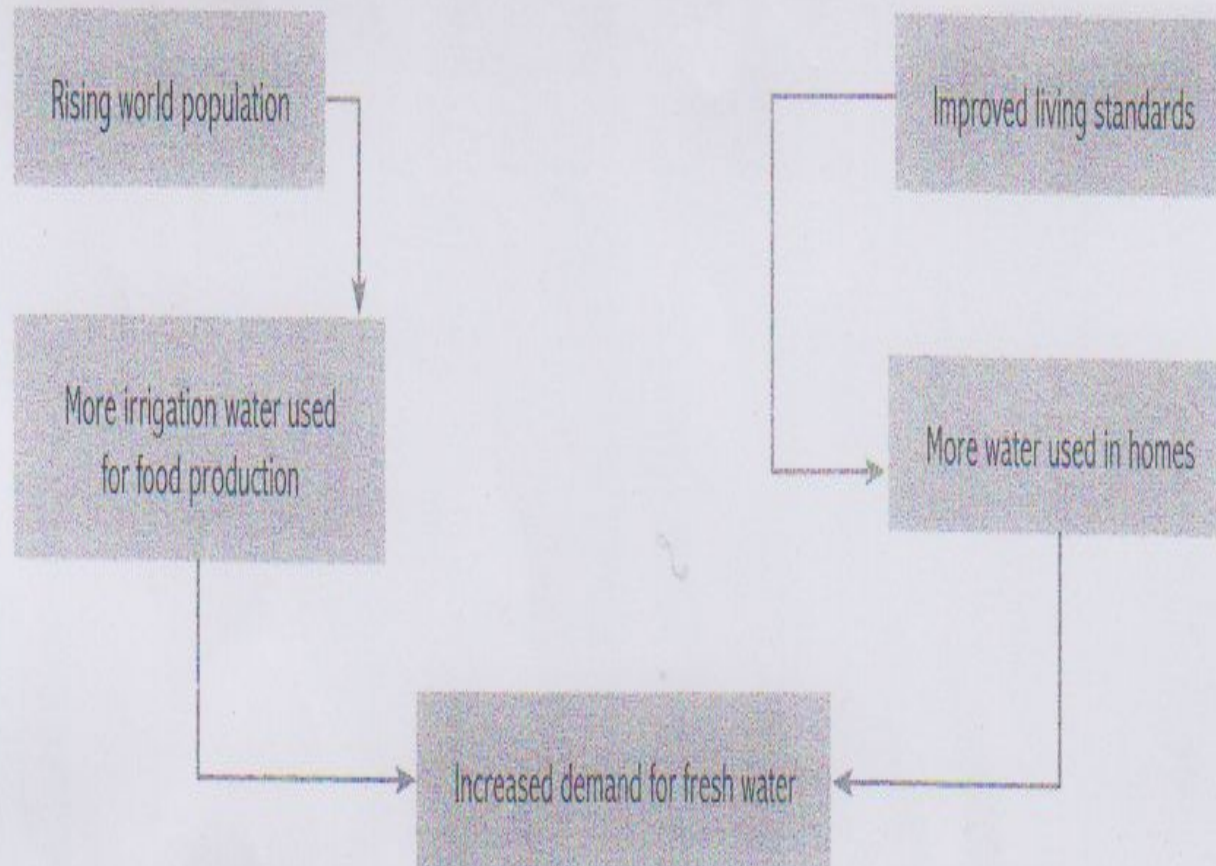
- irrigation agriculture consumes over 70% of all the water used by people
- industry accounts for a further 20 % and
- domestic & municipal uses account for most of the remainder (10%).

The amount used, and what it is used for, varies a great deal from country to country.

# Increasing Demand For Water (Fresh Water)



- Water is the most basic and most important of all natural resources.
- We require regular supplies of water but it must be **fresh water**.
- Most comes from rivers, lakes and underground aquifers.
- Sea water can be used but the salts dissolved in it must first be removed (by desalination) before it is suitable for people to drink or use directly.
- Demand for water has increased markedly in recent centuries.
- During the twentieth century world water use increased seven times.



**Figure 2.13**

Increasing demand for  
fresh water

# Water conservation



Water conservation is the **careful use** and the **protection of water resources**. It involves both the **quantity** of water used and its **quality**. Conservation is an important component of sustainable water use.

## Steps that can be followed for water conservation:

- ❑ Use improved agricultural irrigation system
- ❑ Use computer monitoring and schedule release of water for maximum efficiency
- ❑ Integrate the use of surface water and ground water to more effectively use the total resources
- ❑ Turn off water when absolutely not needed for washing, brushing and so on
- ❑ Take a long bath rather than a long shower
- ❑ Don't wash sidewalks and driveways with water rather sweep them
- ❑ Industries might curb water usage by increasing in-plant treatment and recycling of water or by developing new equipment and processes that require less water.



# Sustainable water use



Water is essential for life. It is also necessary for maintaining ecological systems necessary for the survival of humans. As a result water plays important roles in

- ❑ ecosystem support
- ❑ economic development
- ❑ community well-being

From water supply use and management perspective, sustainable water use can be defined as use of water resources by people in a way that allows society to develop and flourish into an indefinite future without degrading the various components of the hydrologic cycle or ecological systems that depend on it.





● THANK YOU