

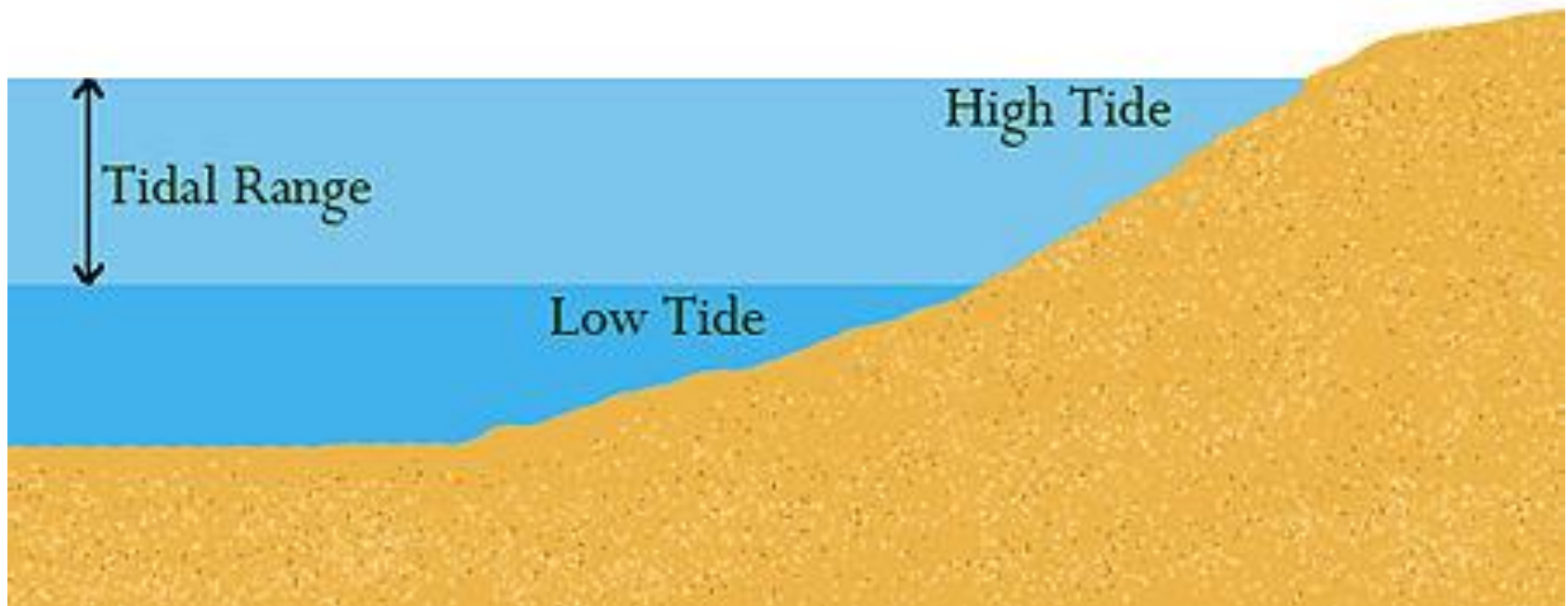
Handout 4 (blue) Oceanography

Chapter 21-3 Tides (Front)

Chapter 20-3 Ocean Resources (Back)

1. The periodic rise and fall of the water level in the oceans is called _____.

- tides



2. The period when the water level is highest is called

_____.

- High tide



HIGH TIDE



LOW TIDE

3. The period when the water level is lowest is called

_____.

- Low tide



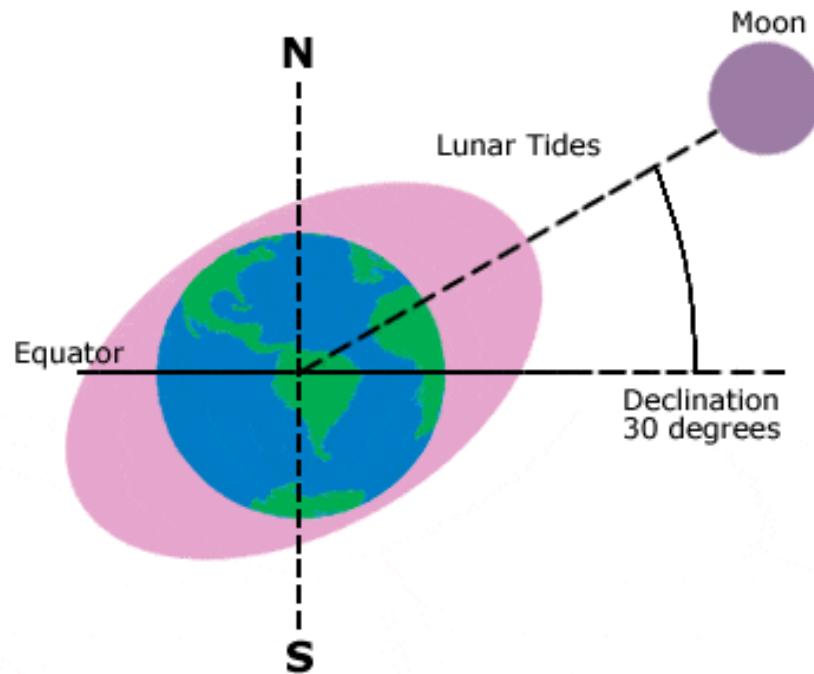
HIGH TIDE



LOW TIDE

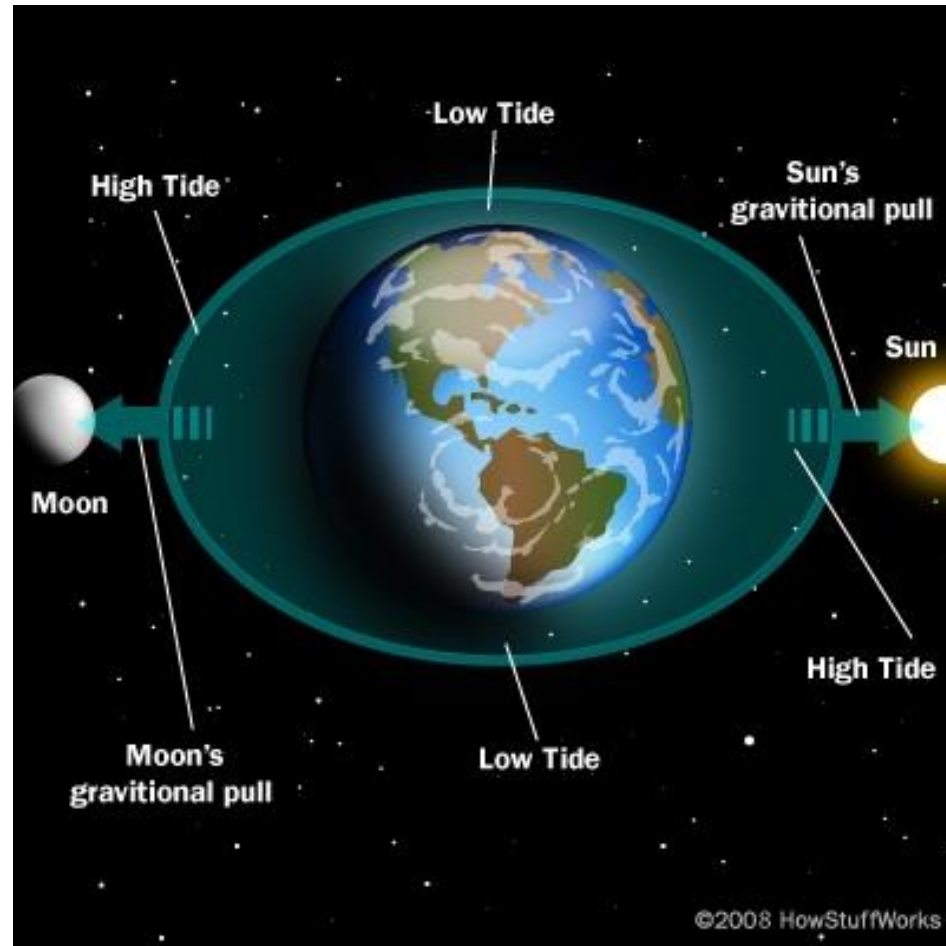
4. According to Newton's law of gravitation, what causes tides?

- The gravitational pull of the Moon on Earth and Earth's waters



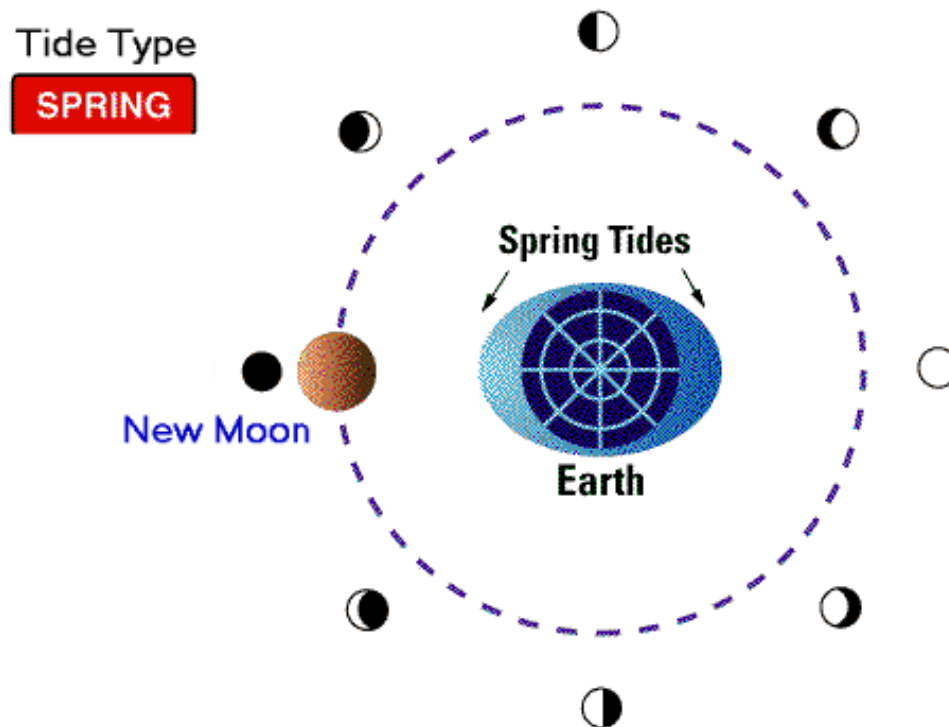
5. When tidal bulge occurs, what is caused in the area of the bulge?

- High tide



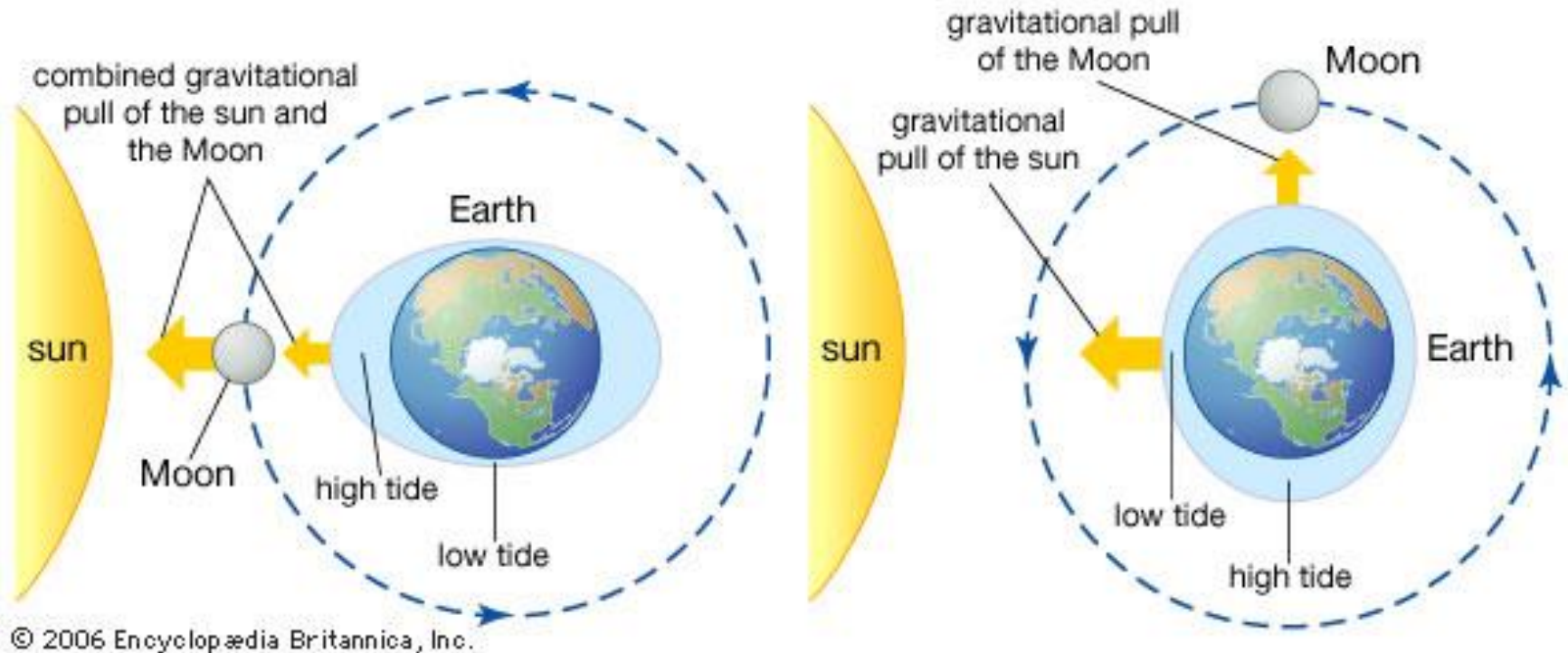
6. What causes low tides?

- Water has been pulled toward the other side of Earth by gravity creating high tides. This leaves less water behind creating low tides.



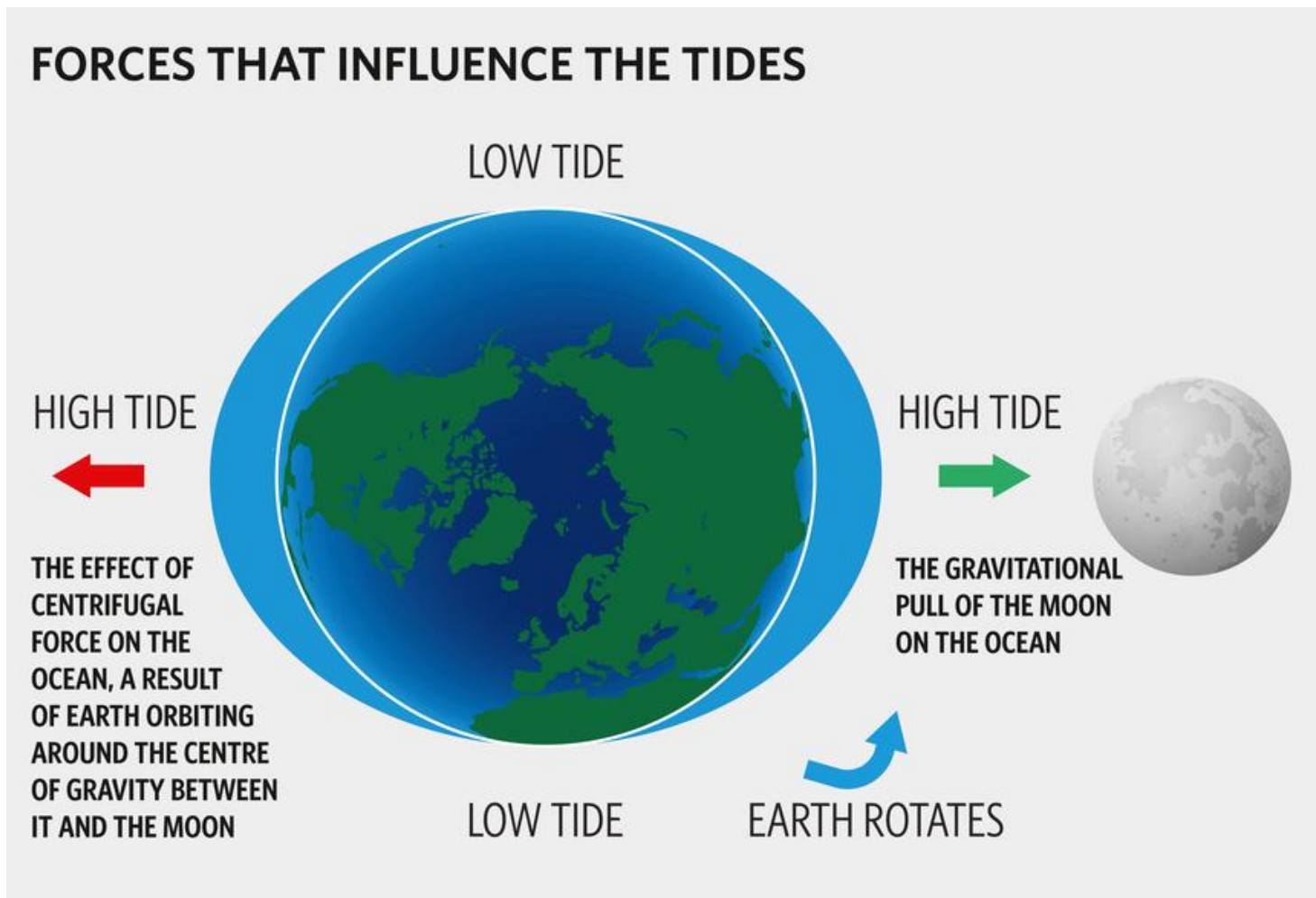
7. How long does it take for all areas of the ocean to pass under the moon?

- c. 24 h 50 min



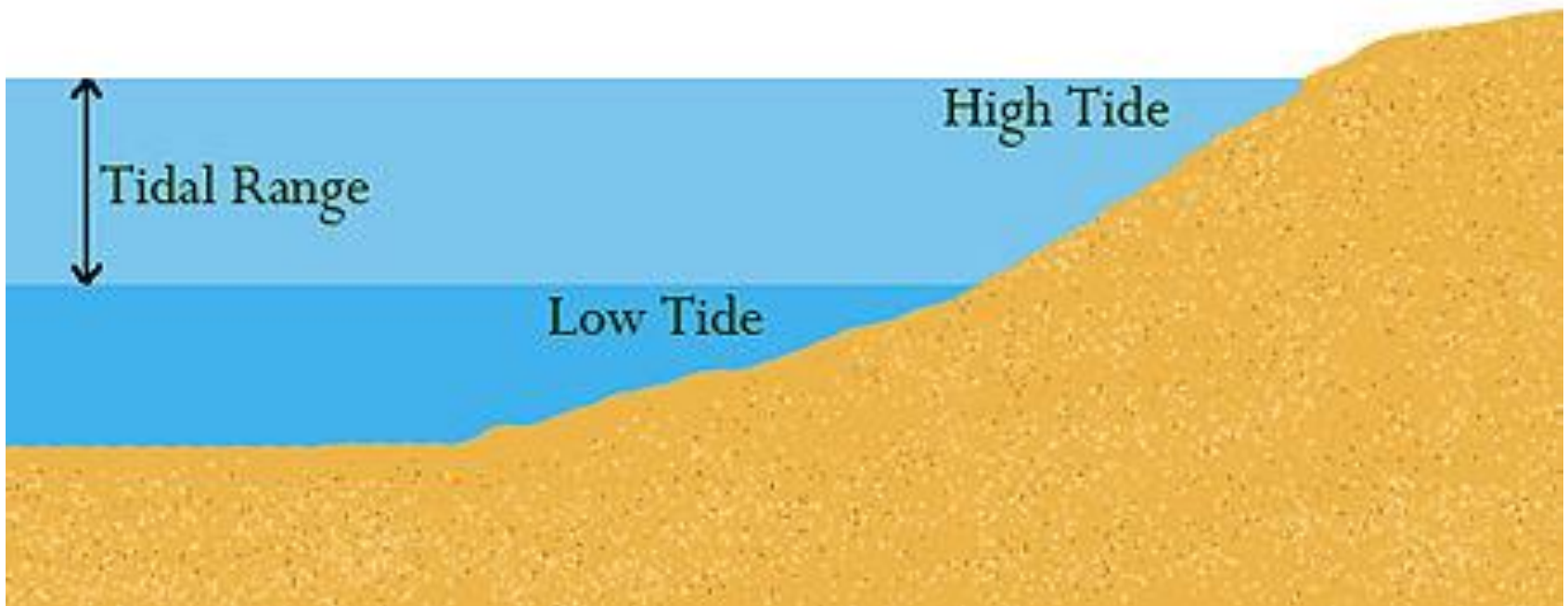
8. Most places in the ocean have two high tides and two low tides daily because

- b. there are two tidal bulges.



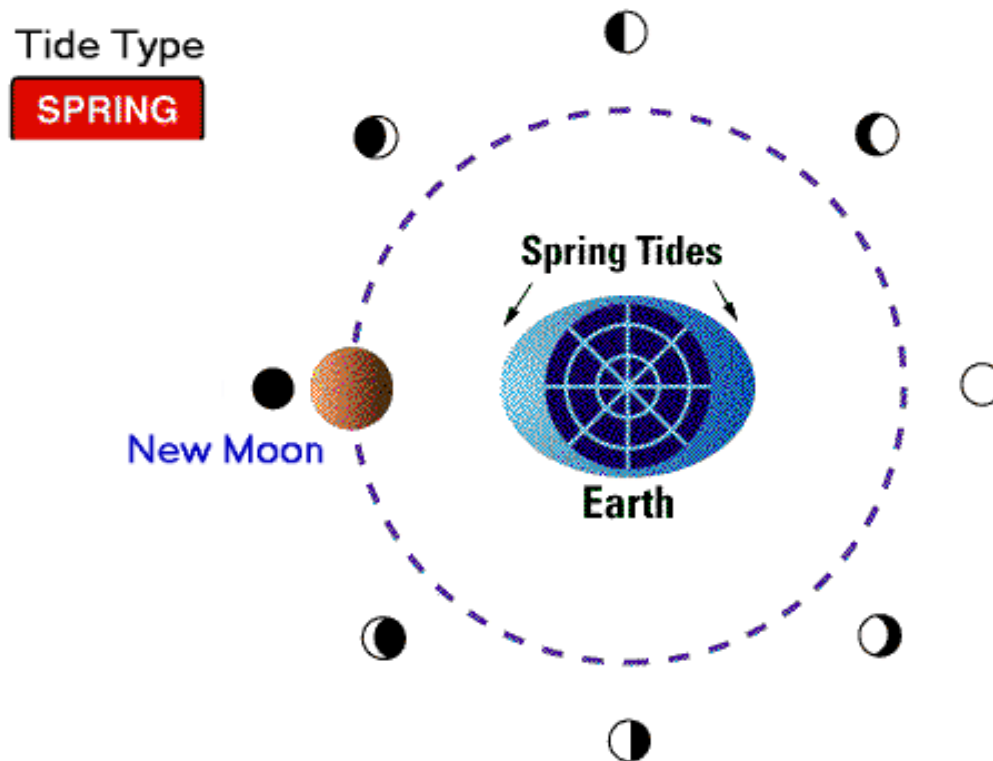
9. What is the difference in levels of ocean water at high tide and low tide called?

- c. tidal range



10. A tide that results when the gravitational pull of the sun and moon combine to create higher high tides and lower low tides is called a

- c. spring tide.



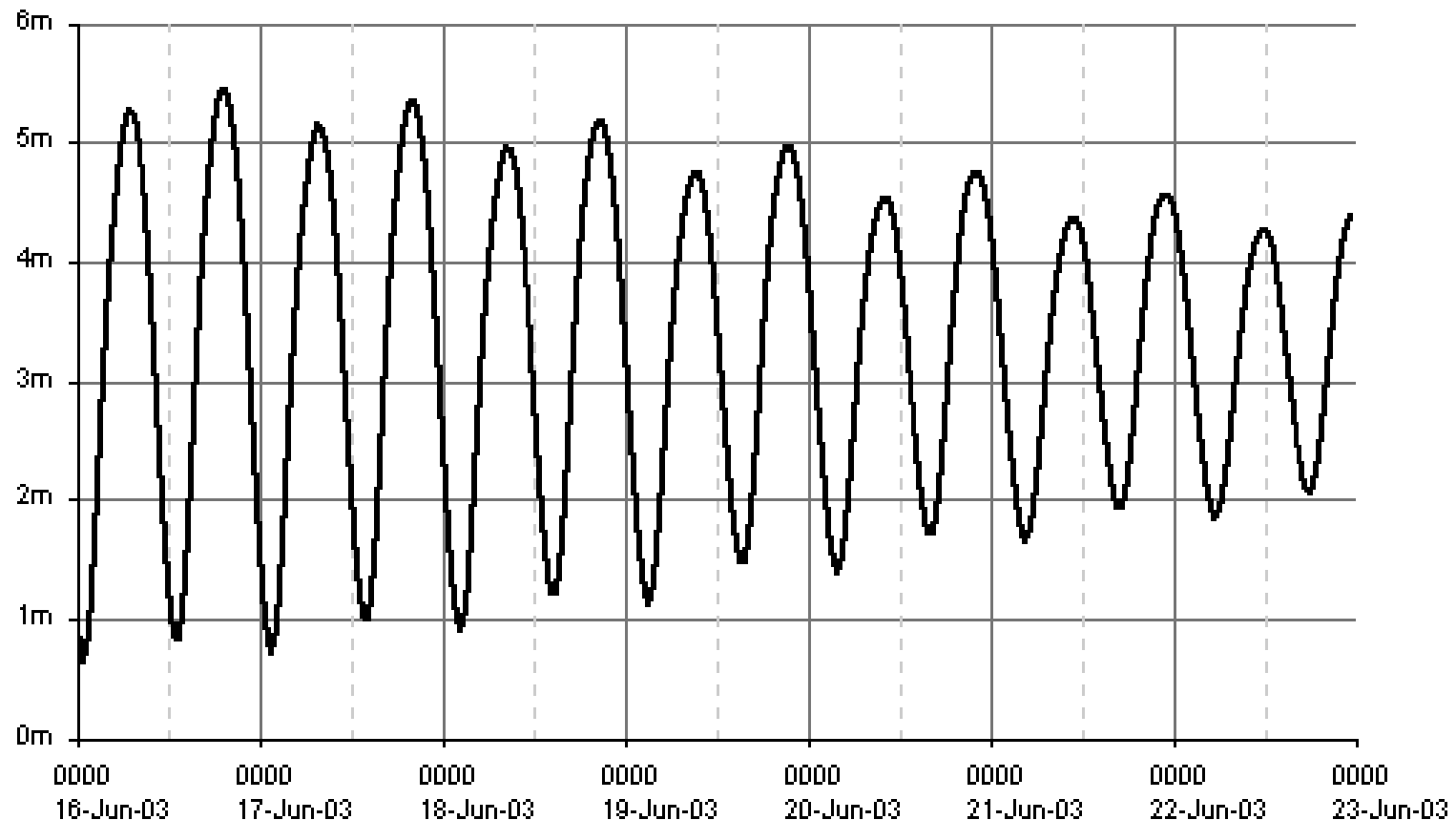
11. A tide that occurs when the gravity of the sun and the moon work against each other and create a small daily tidal range is called a

- **c. neap tide.**



12. The slow, rocking motion of ocean water caused by tidal bulges moving around the ocean basins is called

- Tidal oscillations

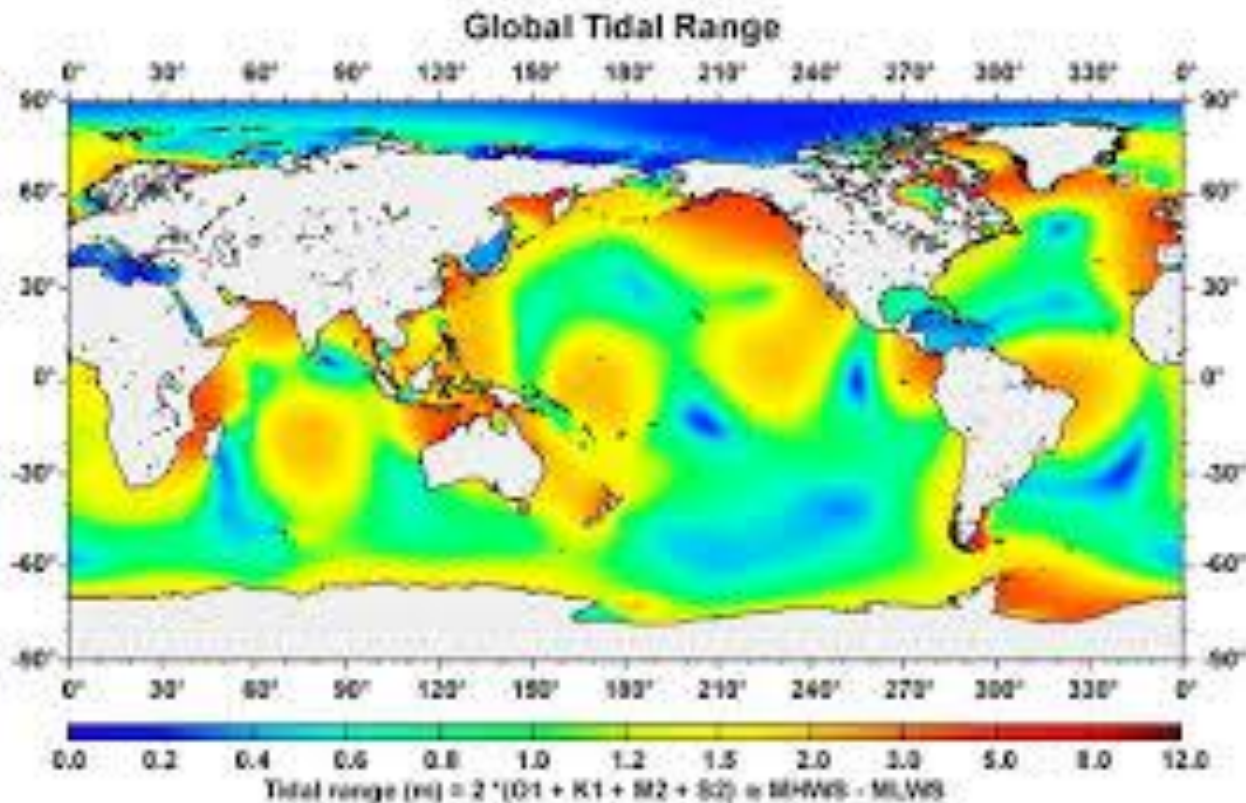


Plymouth (Devonport), England. From midnight local time (+0000 GMT) on 16-Jun-2003

Times do NOT take Daylight Saving Time into account - © Crown Copyright 2003. All rights reserved

13. Explain why the Baltic and Mediterranean Seas have a very small tidal range.

- Tidal oscillation effects the tidal bulge causing the tidal range to be very small.



Courtesy of James Chittleborough, National Tidal Centre, BoM
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14. Ebb tide

- a. flow of tidal current toward the ocean



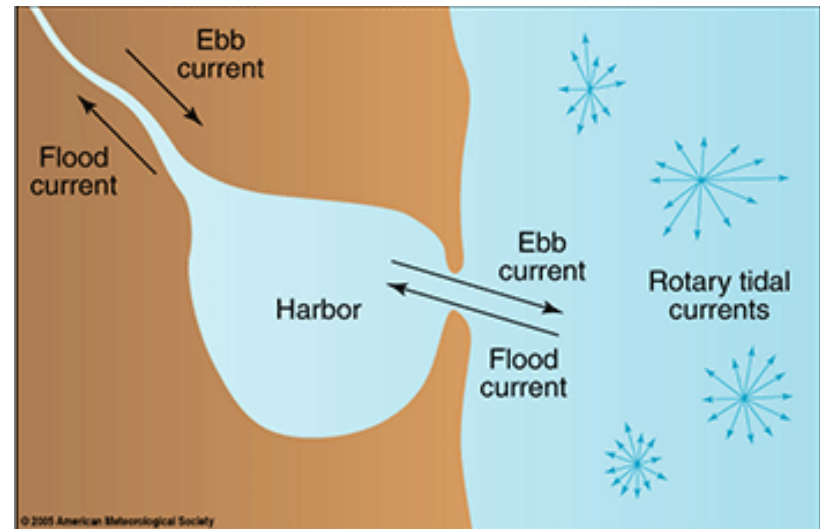
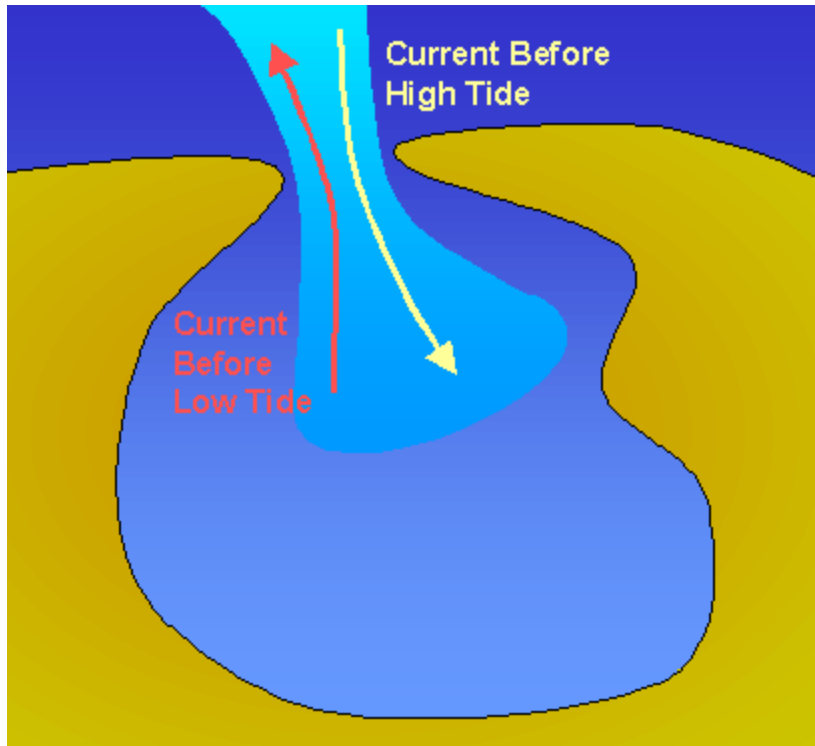
15. Tidal bore

- c. surge of tidal water upstream in a river that enters the ocean through a long bay



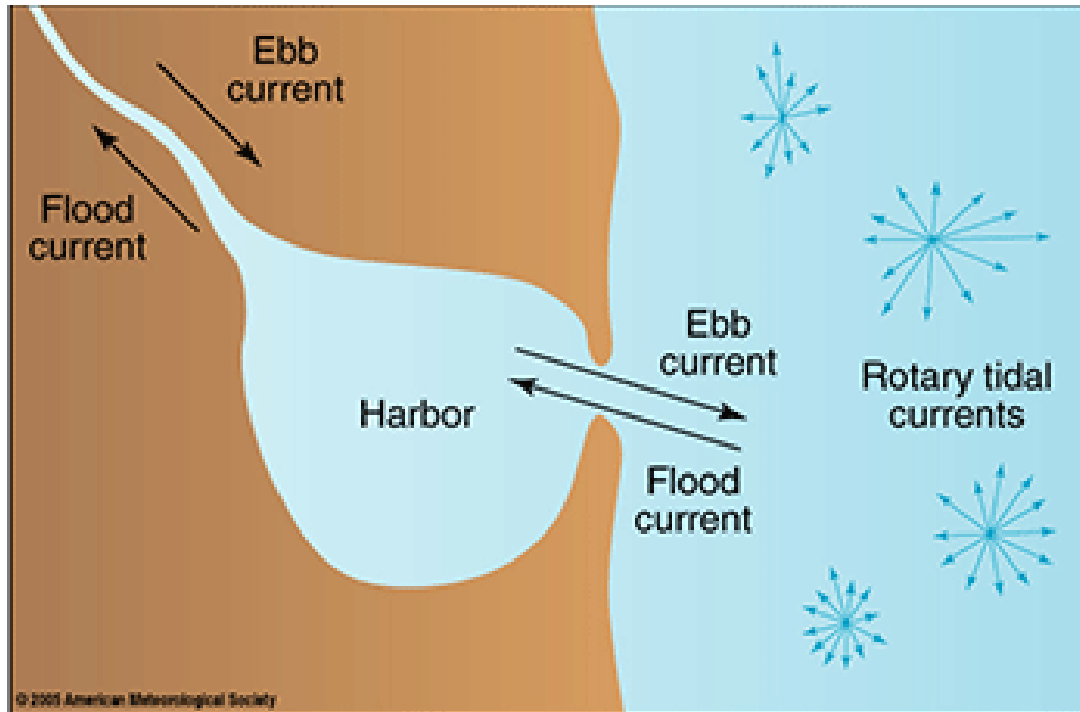
16. Tidal current

- D. the movement of water toward and away from the coast



17. Flood tide

- B. flow of tidal current toward the coast



18. The tidal bores in the River Severn in England reach as far as 33 km inland.

- <https://youtu.be/4ZuZiLuHM1A?t=41>
- https://www.youtube.com/watch?v=cAGABdvv5u8&ebc=ANyPxKrDCrdDdiQQfu0Aowz_7WkMrrOMJjzWVrzGtw85jWvdCO5gC3lDOHpYRtx1oZ7o3VijD88iBmCOPYM4djSnWrBwxCFGog&nohtml5=False



Chapter 20-3 Ocean Resources



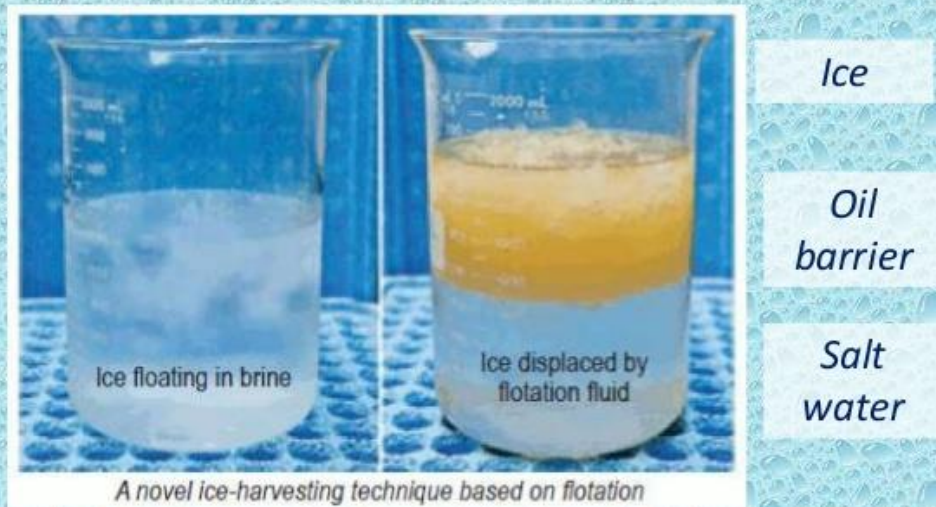
Ocean Health is Our Health

The ocean touches nearly every aspect of our lives – making it essential to the economic, social, and ecological well-being of everyone, everywhere.

1. freezing

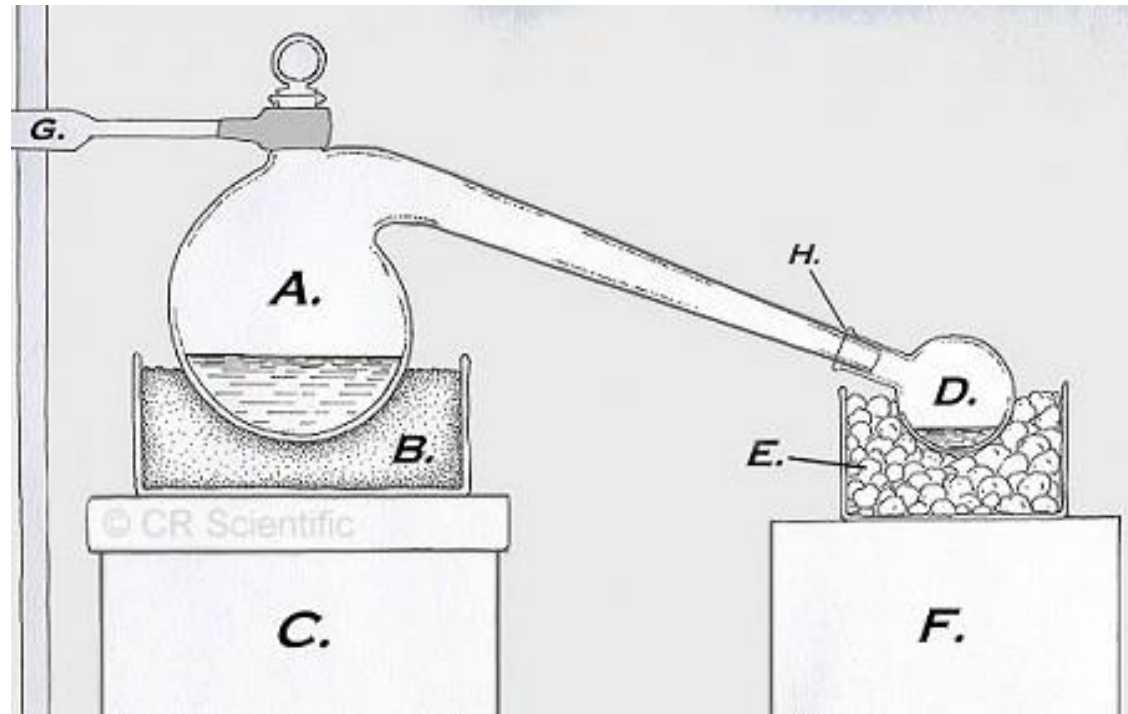
- C. a process in which water is frozen, and ice crystals are removed and then melted to obtain fresh water

- Freeze method-
freeze ocean water to remove salt



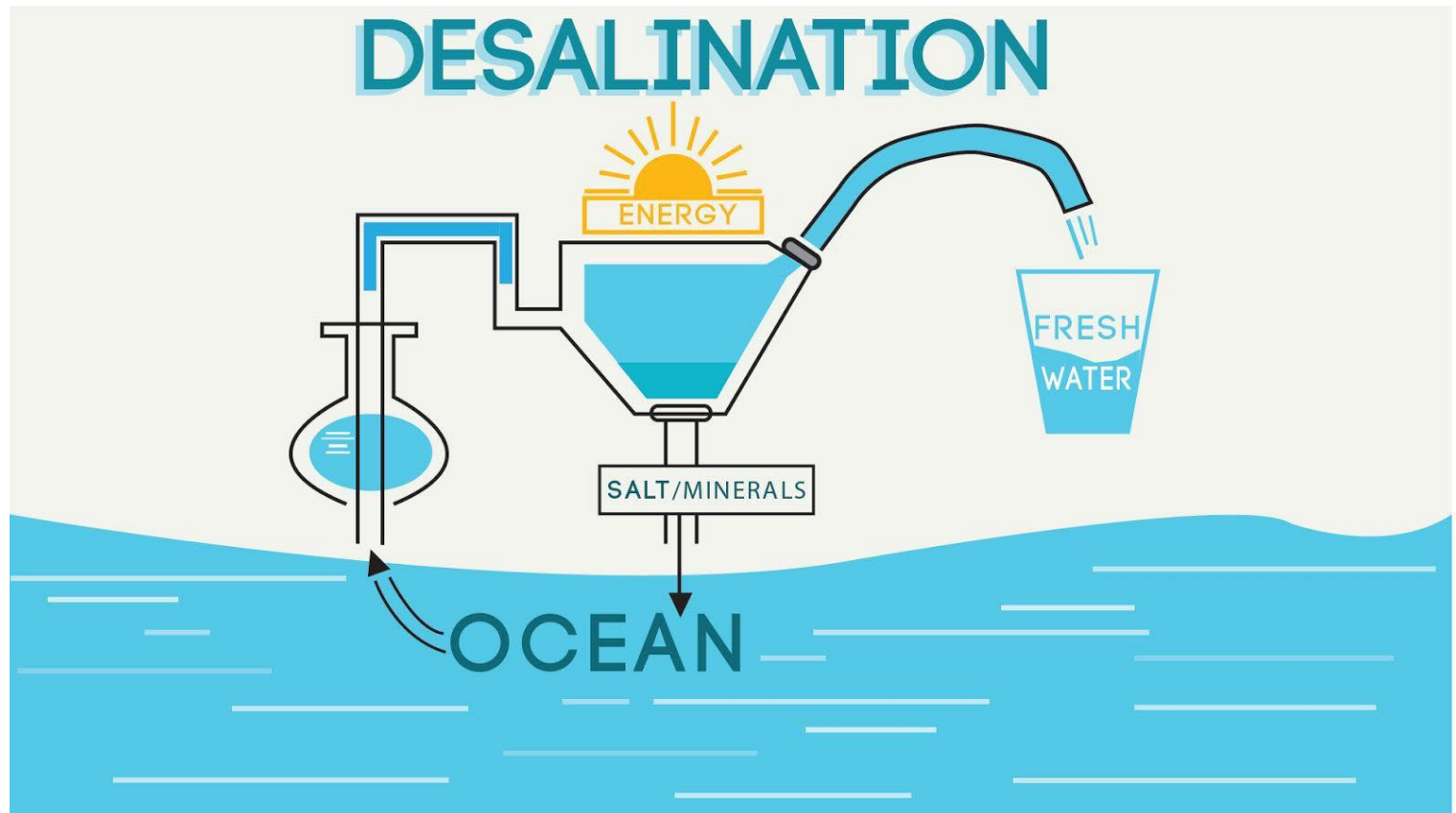
2. Distillation

- D. a process in which liquid water is heated, then evaporates leaving dissolved salts behind, and condenses, resulting in pure, fresh water



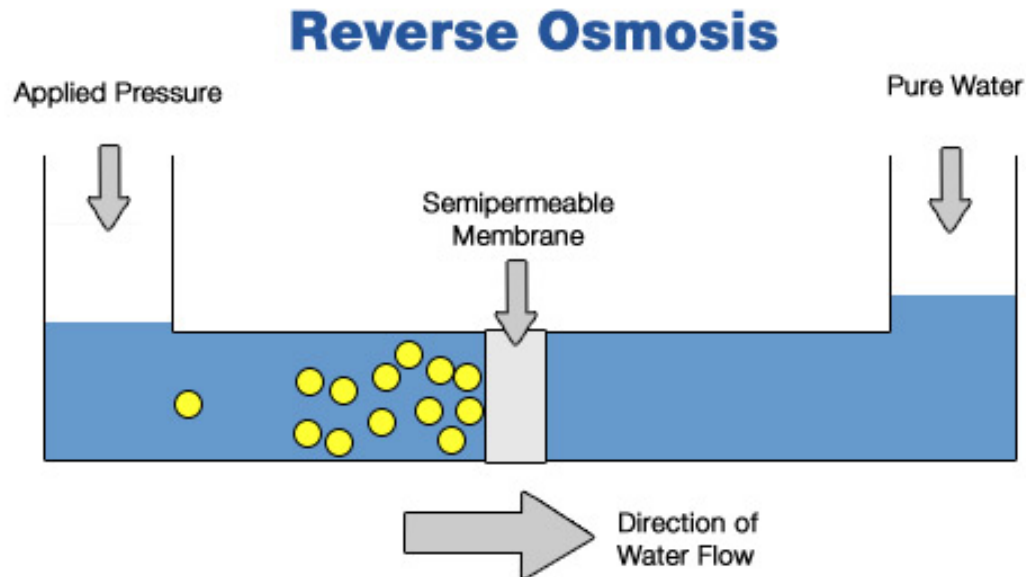
3. desalination

- a. a process of removing salt from ocean water



4. reverse osmosis desalination

- **d.** a process using special membranes that allow water under high pressure to pass through, while blocking dissolved salts



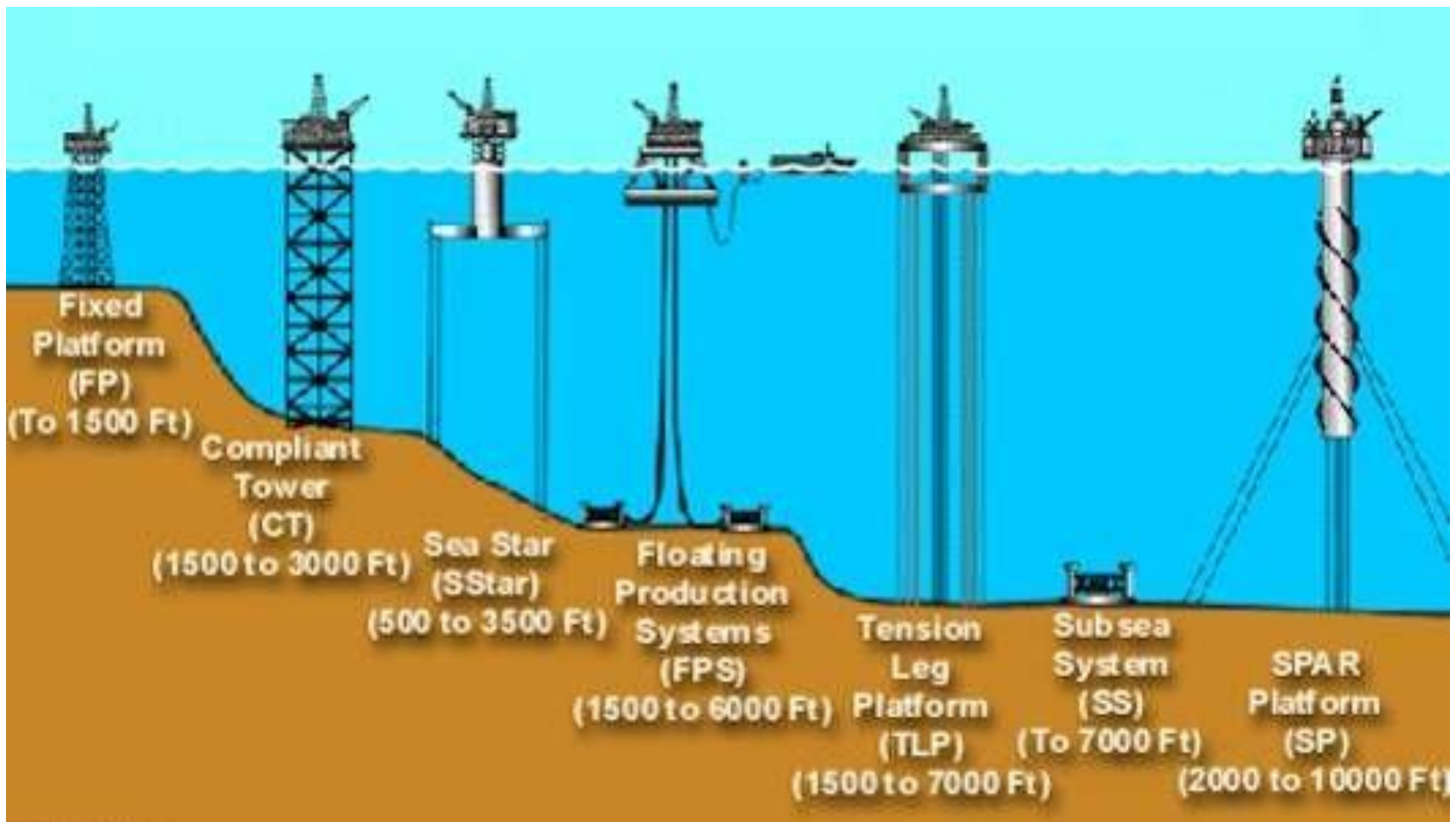
5. The most valuable resource found in the ocean is

- c. petroleum.



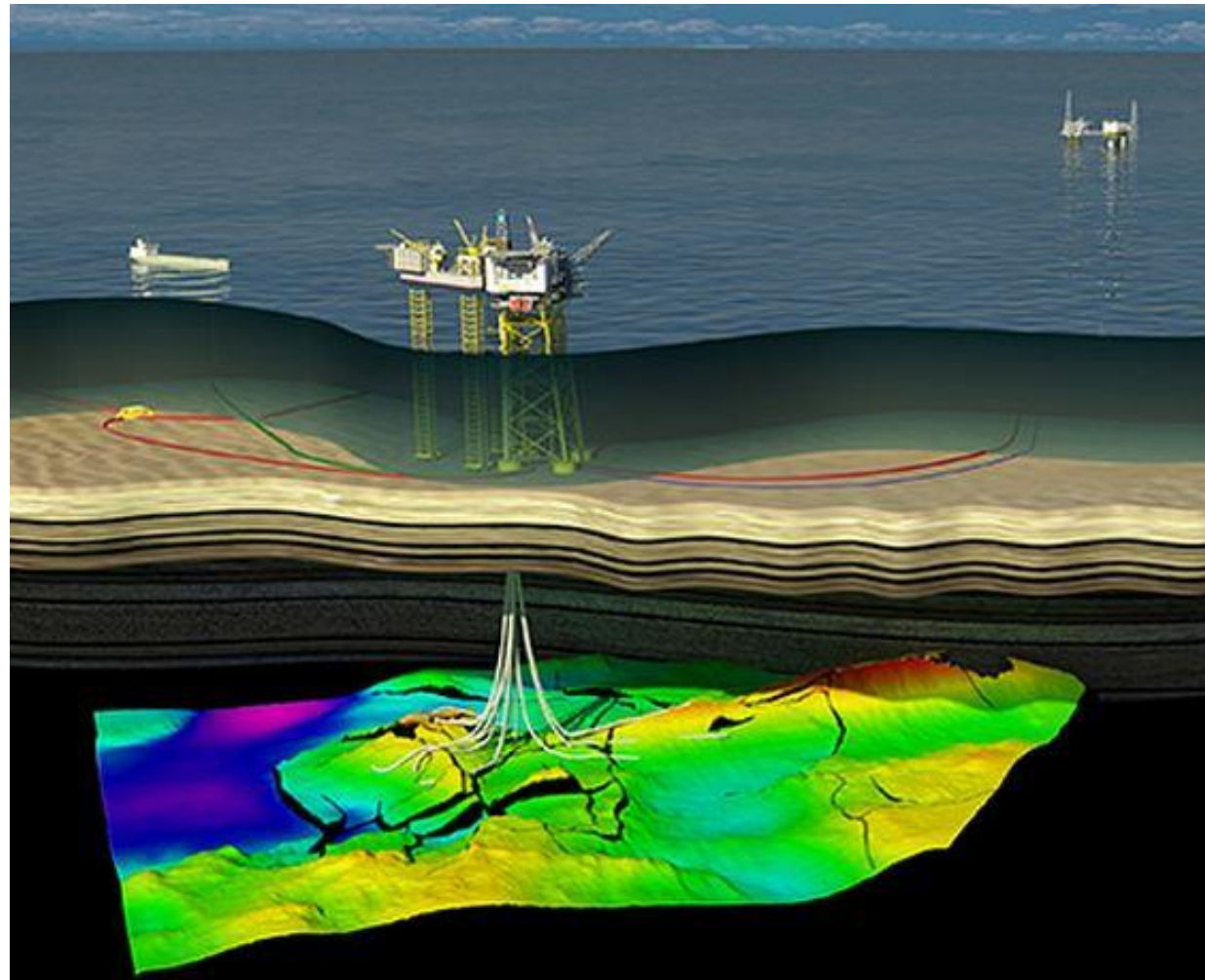
6. Offshore oil and natural gas deposits exist

- c. along continental margins



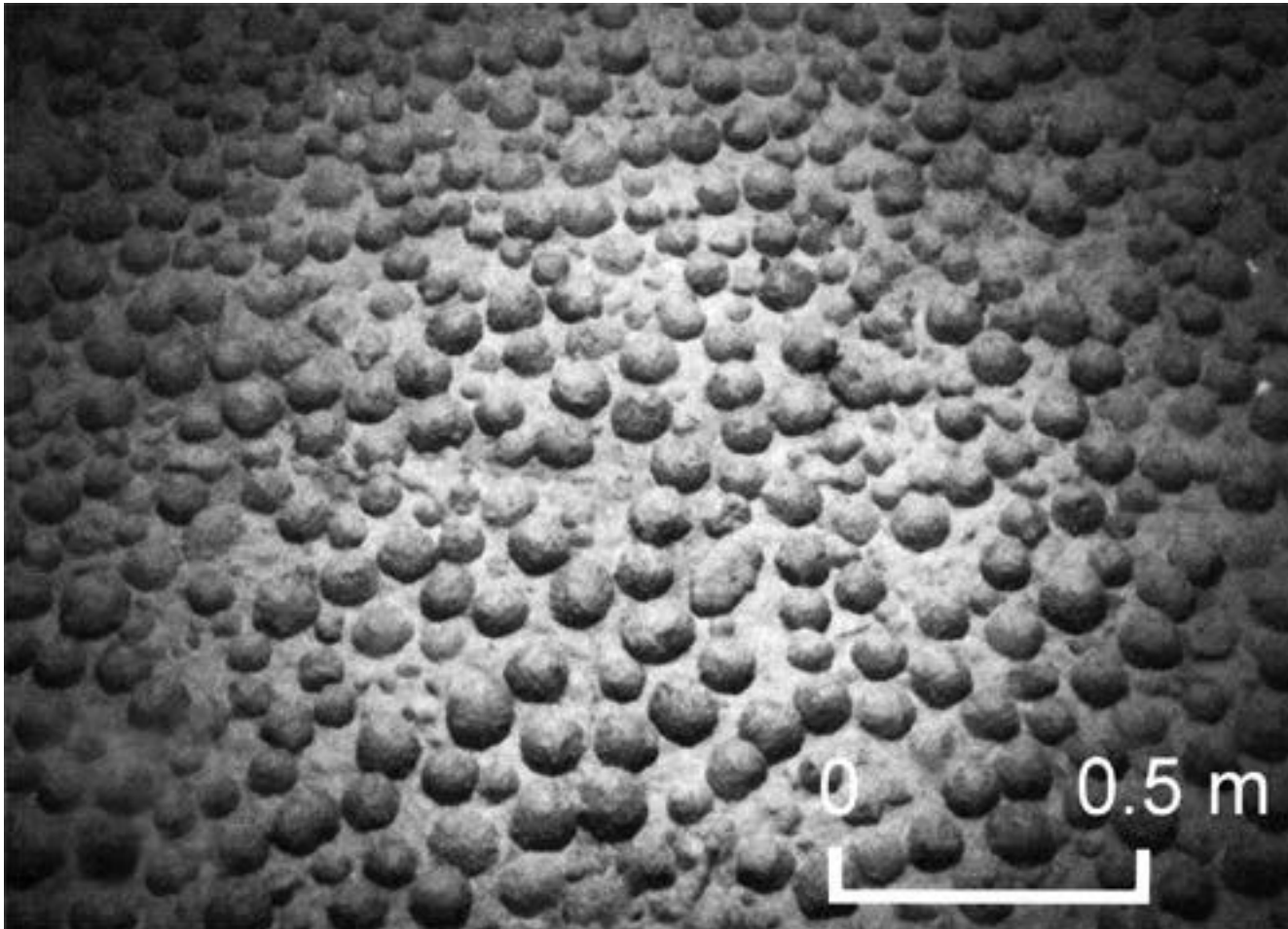
7. About how much of the world's oil supply is currently mined from offshore wells?

- **b. one-fourth**



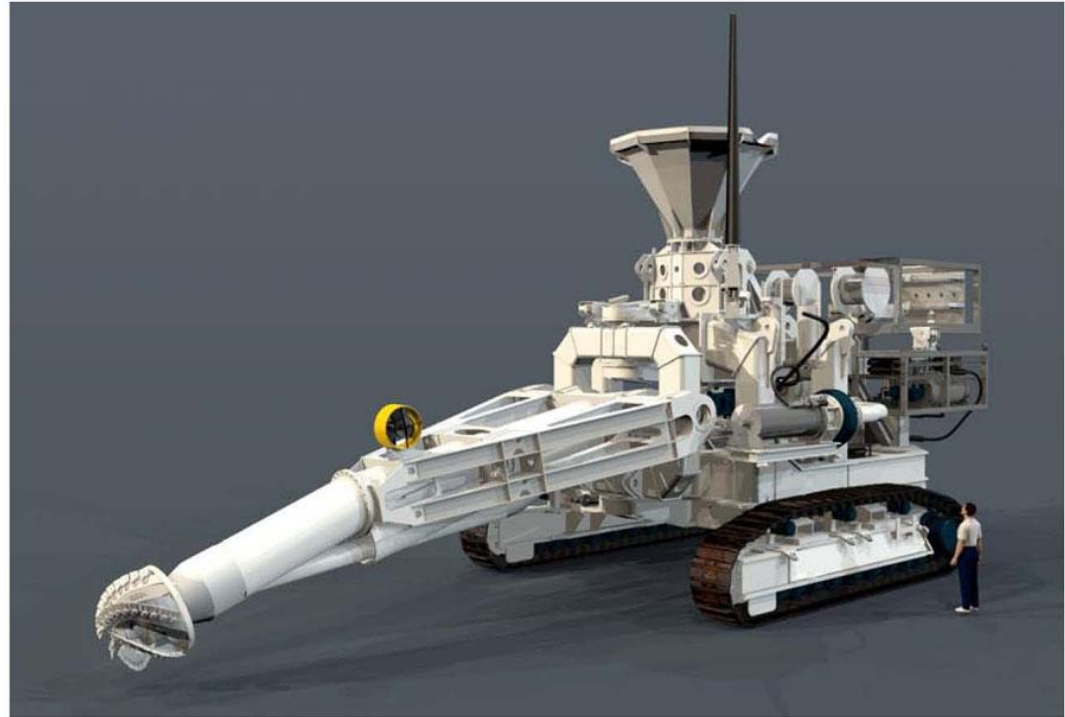
8. Potato-shaped lumps of minerals, called *nodules*, are found

- a. on the abyssal floor of the ocean.



9. Recovery of nodules is difficult and expensive because

- c. they are located in very deep water.



Collecting Machine (CM) - collects cut material with seawater, pumping and transfers the slurry to the RALS

10. The ocean is an important source of

- **b.** magnesium and bromine.

Unit 5: The ocean resources

Are oceans rich in mineral resources?

Storehouse of minerals

- The sand and gravel in the sea are very useful building materials.
- Salt that we all take each day comes from the sea.

Sand

11. The raising of aquatic plants and animals for human use or consumption is called _____.

- aquaculture



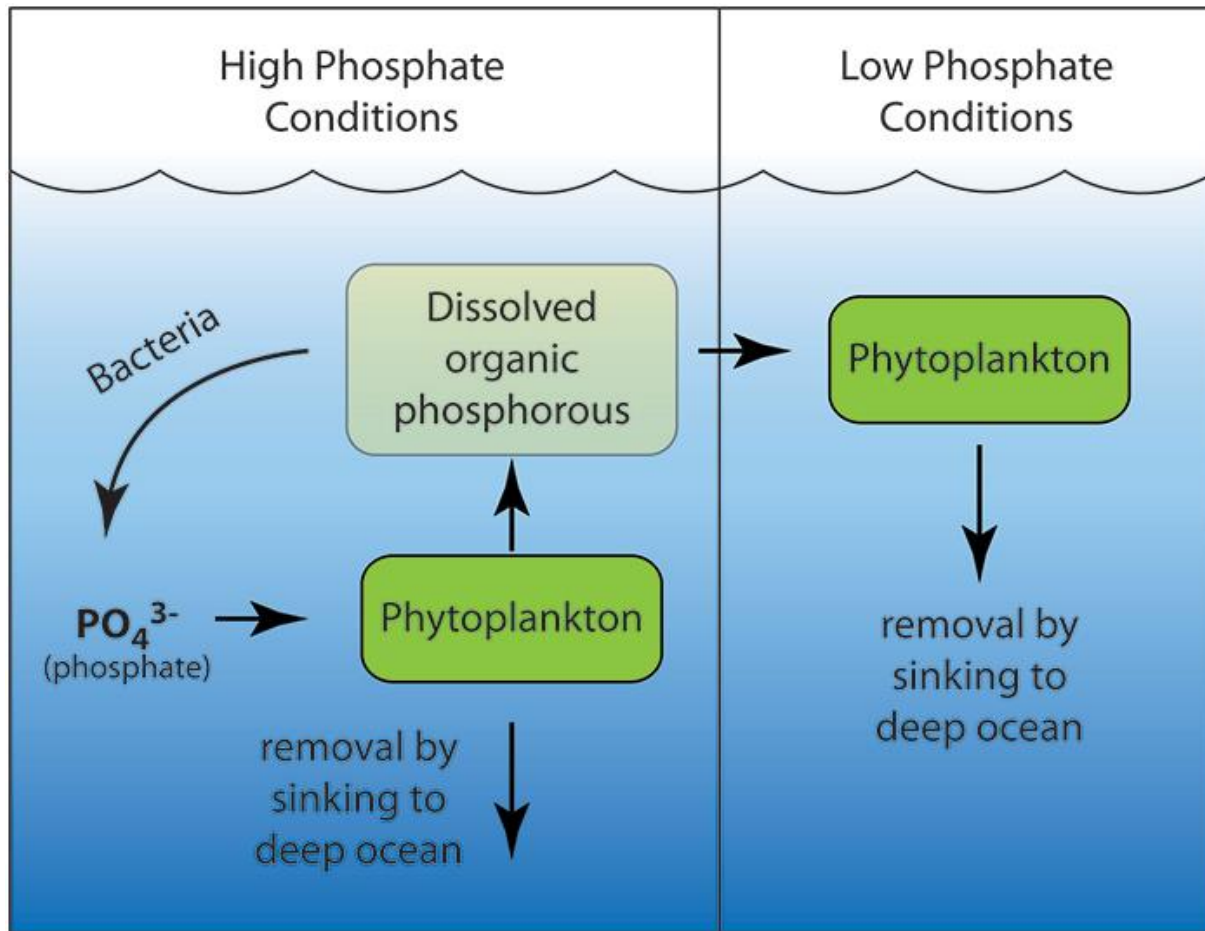
12. What factors have reduced the ocean's ability to absorb wastes and renew itself?

- a. growth of world population and use of more-toxic substances



13. Which of the following items is NOT a dangerous pollutant in the ocean?

- **b. phosphates**

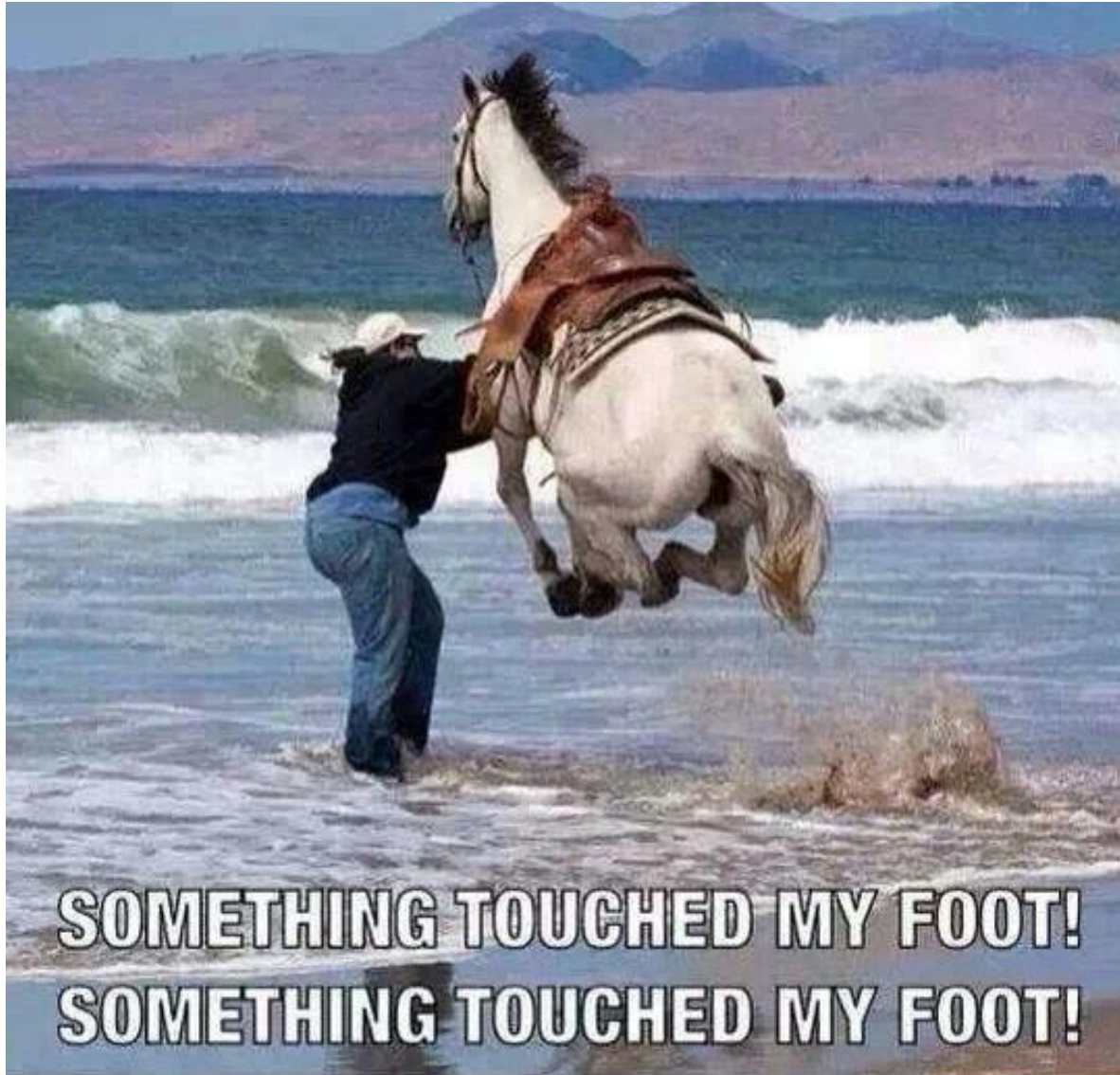


14. What are two ways scientists and governments have worked to reduce pollution?

- **d.** Use of DDT has been banned in the United States, and use of leaded gasoline has been reduced.



The End



**SOMETHING TOUCHED MY FOOT!
SOMETHING TOUCHED MY FOOT!**