

**GEOG 101
PART II**

**Physical Geography:
Environment and Resources**
Chapters 2, 3, 4, and 5

Prof. Anthony Grande
Hunter College Geography

Lecture design, content and presentation ©2021. Individual images and illustrations may be subject to prior copyright.

Textbook Chapters: 2, 3, 4, 5

9: Intro. to People and their Physical Environment

- I. Introduction to the Physical Environment
- II. Earth-Sun Relationship
- III. Earth Systems
 - A. The Hydrosphere: Oceans
 - B. The Atmosphere: Weather and Climate
 - C. The Lithosphere: Geologic Influences
- IV. Earth Habitat
 - A. Biosphere
 - B. Natural Controls and Cycles
 - C. Human Impact
 - D. Natural Hazards
 - E. Earth Resources

EXAM 2 covers all the topics listed.

Look through all 4 chapters now. Return to the topics as we cover them in class.

2

People and their Physical Environment

❖ **There is a relationship between people and nature**, especially dynamic earth processes (chapters 2 and 3)

- ✓ People interact with the processes.
- ✓ People have an **impact** on earth systems (chapters 4 and 5).
- ✓ The Earth is composed of a complex of systems and subsystems that act as a whole.
- ✓ These systems may be altered by the works of people.

➤ **When one thing changes, other things also change!**

- This is called “interrelationship.”

3

Landscapes

- ✓ **Physical landscape** = natural conditions
- ✓ **Cultural landscape** = imprint of human activity
 - Physical landscape **influences the development** of cultural landscape:
 - economic activity
 - architecture/clothing
 - technology/inventions



Terraced farming, Southeast Asia




Cork, Ireland




Virginia, USA

People and their Physical Environment

There is a relationship between people and nature. (Chapters 2 and 3)




PHYSICAL LANDSCAPE



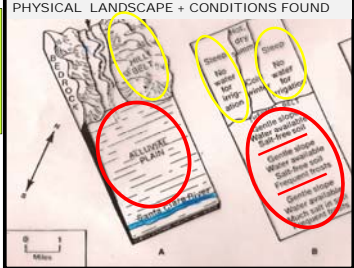
5

People and their Physical Environment

People identify and interact with the existing conditions and the processes creating them.



PHYSICAL LANDSCAPE + CONDITIONS FOUND



6

People and their Physical Environment

People have an impact on earth systems (ch. 4 and 5) and the result is the cultural landscape: **the human imprint on the physical environment.**

PHYSICAL LANDSCAPE + CONDITIONS = cultural landscape

Copy of this diagram is in the Handouts section of the Home Page

People and the Physical Landscape

- People cope with their environment and deal with natural processes.
- The natural processes that harmful to them are called "hazards."
- Likewise, actions of **people impinge on nature** and can be disruptive (*hazardous to nature!*) as pollution, agricultural methods, importing non-native plants, insects and animals, killing/extinction of various species of living things.

People and Physical Processes: The Risk Factor

There is a relationship between people and nature.

When dynamic earth processes **adversely** affect people they are called "natural hazards."

Prepare and Be Aware

HAZARDS: volcanic activity, flooding, landslides, tsunamis, coastal erosion, earthquake shaking, etc.

ASSETS: infrastructure, population, critical facilities, etc.

RISK

HÄGAR the Horrible © By Dik Browne

ALONGICE FEATURE IS THAT IT IS LOCATED IN A VALLEY WITH A NICE STREAM RUNNING THROUGH THE PROPERTY

Represented with special permission of King Features Syndicate.

People and their Physical Environment: The Change Variable

❖ Again, to stress this point:
The earth is made up of a complex of systems and subsystems that act as a whole.

When one thing changes, **other things change too!**

This is "interrelationship."

Examples: global climate change; dam/reservoir construction; turning an agricultural area into a suburb or shopping mall with a huge parking lot.

Interrelationship: An example of global warming

Warmer temperatures can occur naturally or can be caused by human activity.

Global Warming and Airline Industry

1. Rising sea level - flooded runways; storm surges
2. Hot runways - buckled concrete; melting tar
3. Decrease air density - longer runways needed; lighter loads
4. Extreme high temperatures - affect on aircraft operations and electronics

The same diagram can be used to show the effects of global cooling.

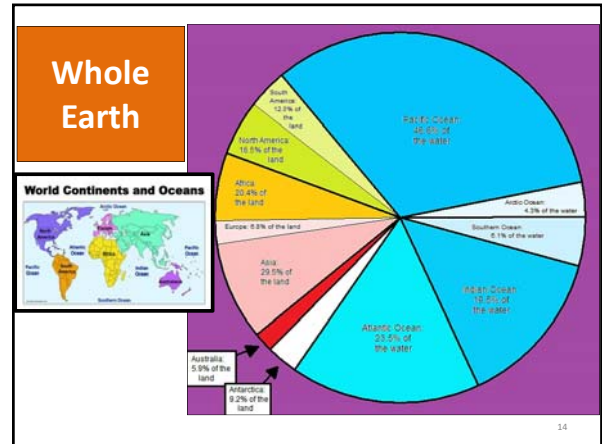
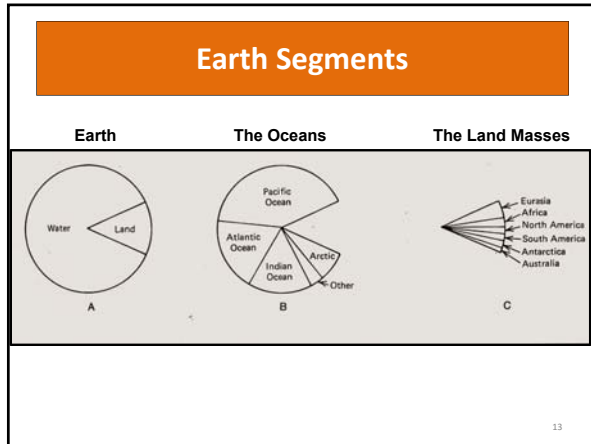
Earth Statistics

Limited land area

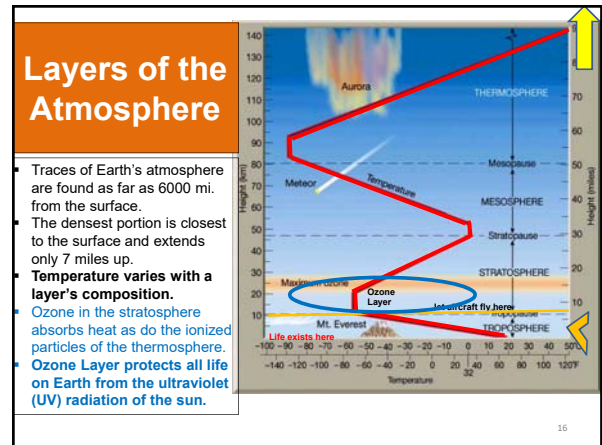
Circumference	= 25,000 mi
Diameter	= 8,000 mi
Total area	= 197 million sq. mi.
Water area	= 139 million sq. mi. (71%)
Land area	= 58 million sq. mi. (29%)

Human population: est. 7.85 billion in 2021
Human population grows but earth statistics stay the same. Usable land area gets smaller.

<https://www.worldometers.info/world-population/>



- ### Spaceship Earth
1. Closed environment.
 2. Life depends on a critical balance of elements to survive.
 3. Life exists at the bottom of a 600 mi thick “ocean of air” composed of:
 - 78% nitrogen
 - 21% oxygen
 - 1% other of which .03% is CO₂ (carbon dioxide)
 4. The bottom of the atmosphere is 5-7 mi thick and composed of air, water vapor and dust particles.
 5. This provides the comfort zone of air pressure, humidity and light.
- 15



- ### Role of the Geographer and those who are Geographically Literate
1. **Study interrelationships** (*people + knowledge of processes = better habitat*)
 2. **Espouse conservation/preservation** (*recurring theme*)
 3. **Monitor human influence** (*short period on earth/great change*)
 4. **Counsel political realities** (*haves vs. have-nots*)
 5. **Push for sustainable development** within an area's **carrying capacity** (*working with nature; limited resources that are unevenly distributed*)
- 17

NEXT

EARTH - SUN RELATIONSHIPS

18