

According to the data from the NASA, the Earth's vital statistics are as follows:

- **Age:** 4.543 billion years old
- **Equatorial circumference:** 40,075 km
- **Equatorial radius:** 6,378 km
- **Polar radius:** 6,356 km
- **Total mass:**  $5.972 \times 10^{24}$  kg
- **Total volume:**  $1.08 \times 10^{12}$  km<sup>3</sup>
- **Total surface area:**  $5.10 \times 10^8$  km<sup>2</sup>
- **Average density:** 5.513 g/cm<sup>3</sup>

## Earth Systems

The Earth is composed of systems or “spheres”, each having their own unique properties, that continuously interact with one another. We can divide them into four major spheres.

### 1. Atmosphere

The atmosphere is a collective layer of gas that envelopes the Earth. It can be further divided into different layers based on characteristics.

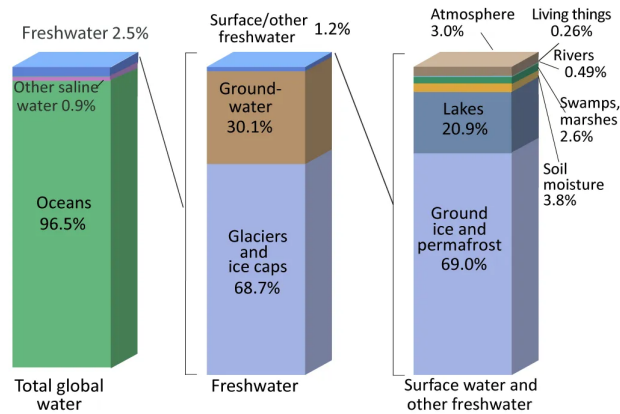
The atmosphere is essential to life on Earth because (1) It shields the Earth and its inhabitants from harmful ultraviolet (UV) radiation from the Sun; (2) maintains the warmth of the Earth's surface; and (3) contains all of the essential gasses needed to support life. More about the atmosphere will be covered later on.

### 2. Hydrosphere

The hydrosphere refers to the bodies of water consisting of freely flowing bodies of water found on the surface of the Earth, as well as water reservoirs stored below the ground as *groundwater*.

This sphere covers **nearly 71% of the Earth's surface**.

## Where is Earth's Water?



Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*. (Numbers are rounded).

Nearly 97.4% of the water in the hydrosphere is composed of saline or salt water found in vast oceans covering the Earth. The remaining 2.6% is made up of fresh water, mostly stored in glaciers and ice caps and underground reservoirs.

Although freshwater makes up only a tiny fraction of the total, we and other Earth residents rely on it for survival.

### 3. Biosphere.

The biosphere refers to the narrow band on the Earth's surface where all biological life resides. This could range from bustling cities, lush tropical rainforests, arid deserts, or even extreme environments like the bottom of the ocean floor.



## Earth Science Reviewer

*Earth's Vital Statistics*

### 4. Geosphere.

**The geosphere is the largest out of all the spheres**— extending from the surface of the Earth down to its center. It is composed of external processes that we can observe on the surface and internal processes that happen deep within.

**Here's a fun fact:** soil can be thought of as the interface of the four spheres. It is made up of weathered or broken down rock (geosphere), organic matter or **humus** (biosphere), moisture (hydrosphere), and air (atmosphere).



To get more Earth Science  
review materials, visit  
<https://filipiknow.net/earth-science-reviewer/>

***To God be the glory!***