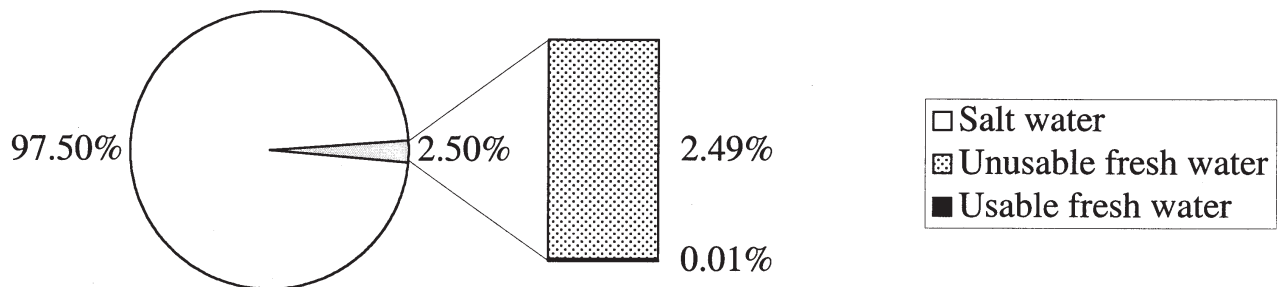


STREAM ECOLOGY

Water is necessary for life, and yet it is a scarce resource. The surface of the planet is 70% water, but most of it is in the form of salt water in the oceans. Fresh water amounts to only 2.5% of the total. Most of this is locked up in polar ice caps, mountain glaciers or in deep underground sources, leaving only .01% readily available available water in rivers, lakes, and streams.

Water Resources



Where water is available, in areas with rivers, lakes, and streams, high biodiversity is supported. Inland waterways are home to many plants and animals that form the first strands of complex food webs. Clearly, the health of inland water sources is of the utmost importance both as a source of fresh water and as a vital part of the earth's cycles.

Monitoring fresh water sources helps scientists keep track of the natural seasonal changes that occur and alerts them to the possible presence of pollution. Tests are conducted to keep track of acidity, temperature, dissolved oxygen, and contamination. These tests, together with surveys of the plant and animal life, can indicate the health of a water source.

When a water source becomes polluted, then the rivers and lakes that arise from the water source are also polluted. The animals and plants that rely on this water for survival may become diseased or mutated if the pollution is severe enough. This water eventually drains into the ocean, which also becomes polluted as a result, affecting the living organisms in the marine ecosystem.

Humans rely on these same streams, lakes, and oceans for food and water. For example, the water is used in the agricultural industry for crops. Pollution of water sources and waterways affects all living organisms on the earth; scientific monitoring is important in helping to resolve and prevent pollution of the earth's water.