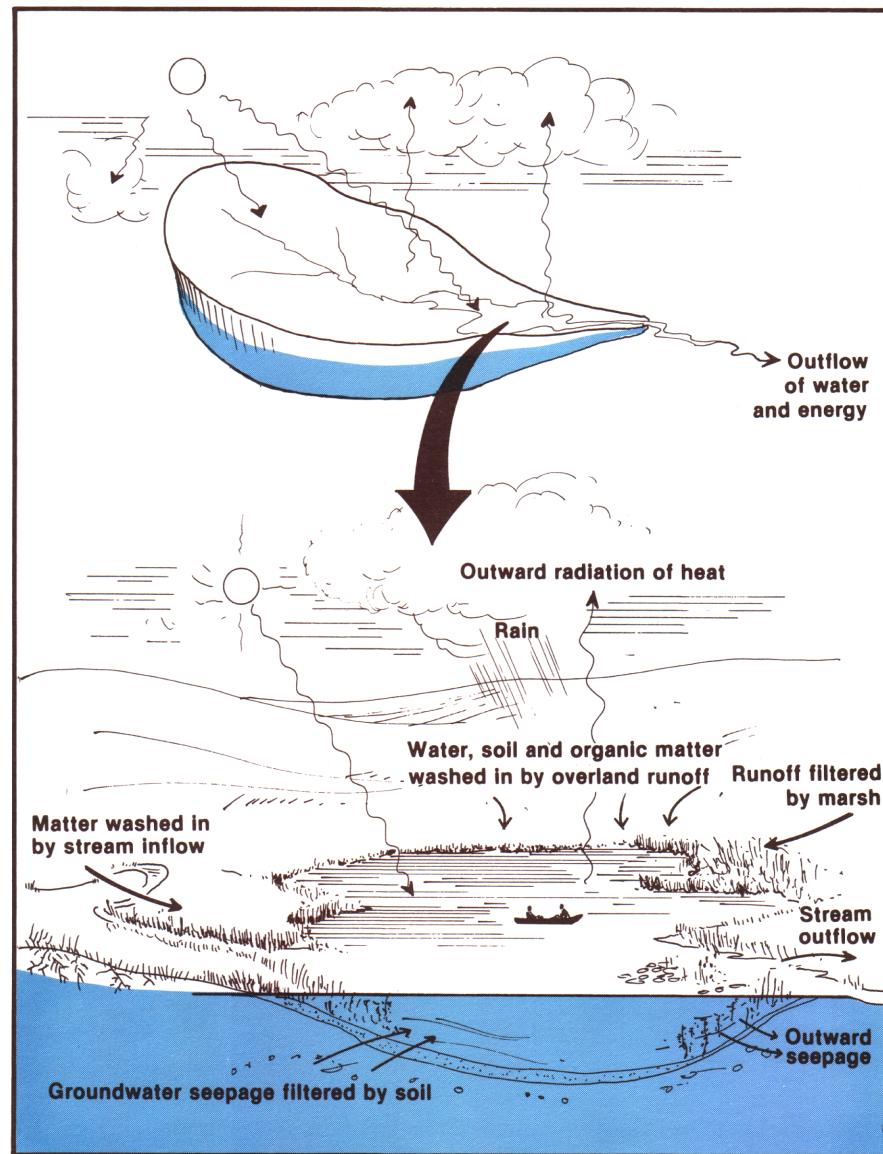


Flow of energy and matter into and out of the pond and its drainage basin.



ped and stored there. In contrast, most water and gases that flow in soon flow out again. The pond's energy is always dissipating outward as heat, and pond processes can continue only if it is replenished.

The pond ecosystem is part of the larger land-and-water ecosystem of the area which drains toward it, called the drainage basin. What goes on in the drainage basin greatly affects happenings in the pond. For example, disturbance of vegetation in the drainage basin may increase runoff of rainwater and the amount of soil it washes into the pond.

Some solid mineral and organic matter that reaches the pond settles to the bottom, and some is broken up and dissolved. Much mineral and

organic matter enters in the dissolved state. Plants use the dissolved chemicals as nutrients to make more plant matter.

Some plants are eaten by animals, and some die and fall to the pond bed. Some of the plant-eating animals die and drift downward, too, while others are preyed upon by other animals—which in turn may be eaten by still others. The plant and animal material which animals consume is either stored in their bodies or passes out into the water again as solid or dissolved wastes.

The dead plants, dead animals and wastes undergo at least partial decomposition and redissolving by the action of scavenger animals, microorganisms and chemicals. The