

What is an ecosphere?

The term "*ecosphere*" has been used in a number of different ways. Cole (1958), followed by many ecologists, used it for a planetary-scale ecosystem. The term "*ecosystem*" was coined by Sir Arhur Tansley (1871-1955) for plants and animals interacting with the physical and chemical components of their environments (Tansley, 1935). Huggett (1998, p. 142): "*All living things form the biosphere. The biosphere interacts with non-living things in its surroundings (air, water, soils, and sediments) to win materials and energy. The interaction creates the ecosphere, which is defined as life plus life-support systems. It consists of ecosystems - individuals, populations, or communities interacting with their physical environment. Indeed, the ecosphere is the global ecosystem (Huggett 1995: 8-11: 1997).*" Some authors, use "*biosphere*" where we would prefer "*ecosphere*" and we must recognise that we are building on the pioneering contributions of Eduard Suess (1831-1914), who first coined the term "*biosphere*" (Suess, 1875), and Vladimír I. Vernadsky (1863-1945), both of whom promoted an integrated view of Earth systems. Vernadsky, who influenced Hutchinson (1970), stressed energy exchange and biogeochemical cycles.



Above left: Suess in 1869. Image: Joseph Krièhuber (1800-1876); public domain. Above right: Vernadsky. Image: unknown; public domain.

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Space images: NASA; kelp forest: NOAA; dolphin: P. Stanford, others M. J. Heath.

