



Guiding principles for life on Earth



- Every species has a specific role to play in nature (**the ecological niche principle**).
- The size, growth rate, age structure and distribution of a species population are controlled by its interactions with other species and its non-living environment (**the principle of population dynamics**).
- The Earth's life-support systems can withstand much stress and abuse, but there are limits to how much can be tolerated (**the principle of limits**).
- The Earth's atmosphere, hydrosphere, lithosphere (upper crust and mantle) and life forms are continually changing in response to changes in solar input, heat flows from the Earth's interior, movements of the Earth's crust, other natural changes, and changes brought about by humans and other living organisms (**the principle of adaptability**).
- Our survival, quality of life and economies are totally dependent on the Sun and the Earth; the Earth can get along without us, but we can't get along without the Earth (**the principle of Earth capital**).
- The Earth does not belong to us; we belong to the Earth (**the humility principle**).
- We should try to understand and work with the rest of nature to sustain the ecological integrity, biodiversity and adaptability of Earth's life-support systems for ourselves and other species (**the sustainability principle**).
- When we alter nature to meet our needs or wants, we should choose the method that does the least possible harm to ourselves and other living things (**the principle of least harm**).
- Every species has a right to live – or at least to strive to live – simply because it exists (**the right of species principle**).
- The best way to protect species and individual organisms is to protect the ecosystems in which they live (**the principle of ecosystem protection**).
- We should not inflict unnecessary suffering or pain on any animal we raise or hunt for food or use for scientific or other purposes (**the principle of the humane treatment of animals**).
- We can learn a lot about how nature works, but nature is so incredibly complex and dynamic that such knowledge will always be limited (**the principle of complexity**).
- In nature, we can never do just one thing; everything we do creates effects that are often unpredictable (**the first law of human ecology**).
- Most resources are limited and should not be wasted; there is not always more, and it is not all for us (**the principle of resource conservation**).
- Renewable resources should be used no faster than they are replenished by natural processes (**the principle of sustainable yield**).
- Non-renewable resources should be used no faster than renewable substitutes can be developed (**the principle of renewable resources substitution**).
- The market price of a product should include all the estimated present and future costs of any pollution, environmental degradation or other harmful effects connected with it that are passed on to society, the environment and future generations (**the principle of full-cost pricing**).
- History shows that the most important changes brought about by human actions come from the bottom up, not from the top down (**the principle that individuals matter**).
- We should think globally and act locally (**the principle of change**).