

Ecosystem services: what are they?

Ecosystems provide mankind with a number of benefits: clean air, drinking water, pollination, waste decomposition, and production of certain raw materials. These are known as ecosystem services. One of their particularities is that they are free. However, the provision of these common goods is increasingly under threat due to damage to biodiversity caused by human activities and climate change. And this poses serious risks to the sustainability and resilience of our societies and economies, especially for island territories like ours...

Is this a new concept?

The term was first coined by the *Millennium Ecosystem Assessment* back in the early 2000s, but the issue has been discussed and debated by environmentalists and scientists for decades. The concept highlights the interdependence between ecosystems and the economy, reminding stakeholders from the private and public sectors, including civil society, of their responsibilities to ensure the sustainability of these services by halting biodiversity loss.

What are the categories of ecosystem services?

There are **four** in total: **provisioning**, **regulating**, **supporting**, and finally **cultural** services.

1. **Provisioning services** include our food, raw materials (fuel, fodder, fertiliser, etc.), mineral, medicinal and energy resources, and not forgetting all our ornamental needs (clothing, handicraft and jewellery).
2. **Regulating services** help to purify our water and air, harness carbon and regulate our climate, provide natural pest and disease control, help protect us from floods, and pollinate our plants.
3. **Supporting services** are less obvious, but nonetheless vital to our well-being and that of our planet: photosynthesis, provision of healthy habitats and nutrient cycling. Carbon, nitrogen and phosphorus are all released when organisms die and decompose. This of course will eventually impact all other ecosystem services, as all living things need a constant supply of these nutrients to survive.
4. **Cultural services** concern the natural environment around us, which is a huge source of spiritual inspiration, but also cultural, as seen in art, cinema and literature. It is also the key arena for many recreational activities and the setting for scientific discovery and education. Of course, all of these are just as important to our well-being.

What is the situation in our territories?

The islands of the south-west Indian Ocean are home to unique ecosystems with a high rate of endemic fauna and flora. Various factors such as climate change, pollution and demographic pressures are currently undermining this natural capital and disrupting the provision of ecosystem services. Certain economic sectors, such as agriculture, fishing and tourism, are affected, directly impacting local populations.

Marine ecosystems (particularly estuarine and coastal) play an essential role for our islands. Mangroves, seagrass, salt marshes, and coral reefs sustain ocean life and help mitigate climate change. This in turn reduces threats to our coastal communities from cyclones, tsunamis, flooding and coastal erosion. Healthy ecosystems will boost our blue economy, provide natural barriers to mosquito-borne diseases, help fight invasive plant and animal species, and in turn continue to attract tourists from around the world.

Some key figures

75% of the land and about **66%** of the marine environment have been significantly altered by human actions.

More than a third of the world's land surface and nearly **75%** of freshwater resources are now devoted to crop or livestock production.

While coastal oceans only make up **10 %** of the total ocean surface area, they contain more than **50 %** of all phytoplankton.