

Checklist

What you should know

After studying this subtopic you should be able to:

- Define 'ecosystem stability', including some examples of stable ecosystems.
- Outline the factors that affect stability and explain tipping points, using deforestation of the Amazon rainforest as an example.
- Evaluate the use of models to investigate the effect of variables on ecosystem stability.
- Explain the role of keystone species in the stability of ecosystems.
- Evaluate the sustainability of resource harvesting from natural ecosystems.
- Outline the factors affecting the sustainability of agriculture.
- Explain eutrophication and its effects on ecosystems.
- Outline biomagnification of pollutants.
- Describe the effects of microplastic and macroplastic pollution of the oceans.
- Describe the strategies for restoration of natural processes in ecosystems by rewilding.

Higher level (HL)

- Define ecological succession and outline the causes.
- Describe the changes during primary succession.
- Describe cyclical succession.
- Distinguish between climax communities and arrested succession.

Practical skills

Once you have completed this subtopic, go to Practical 5: Observing a sustainable ecosystem using a mesocosm
(<https://app.kognity.com/study/app/bio/sid-422-cid-755105/book/observing-a->

sustainable-ecosystem-id-46696/) in which you will study the effects of variables on ecosystem sustainability.