

Examples of aspects of ecological structure and function to consider when predicting impacts (taken from IEEM, 2006)

<b>Available resources</b>
Territory; hunting/foraging grounds; shelter and roost sites; breeding sites; corridors for migration and dispersal; stop-over sites. Food and water (quantity and quality). Soil minerals and nutrients and hydrochemistry. Solar radiation and gaseous resources.
<b>Stochastic processes</b>
Flooding, drought, wind blow and storm damage, disease, eutrophication, erosion, deposition and other geomorphological processes, fire and climate change.
<b>Ecological processes</b>
Population dynamics; population cycles; survival rates and strategies; reproduction rates and strategies; competition; predation; seasonal behaviour; dispersal and genetic exchange; elimination of wastes. Vegetation dynamics; colonisation; succession; competition; and nutrient-cycling.
<b>Human Influences*</b>
Animal husbandry, cutting, burning, mowing, draining, irrigation, culling, hunting, excavations, maintenance dredging, earth shaping, ploughing, seeding, planting, cropping, fertilising, pollution and contamination, use of pesticides and herbicides, introduction of exotics, weeds and genetically modified organisms and disturbance from public access and recreation, pets and transport.
<b>Historical Context</b>
Natural range of variation over recorded historical period. Irregular perturbations beyond normal range (such as very infrequent storm events).
<b>Ecological relationships</b>
Food webs, predator-prey relationships, herbivore-plant relationships, herbivore-carnivore relationships, adaptation and dynamism.
<b>Ecological role or function</b>
Decomposer, primary producer, herbivore, parasite, predator, keystone species.
<b>Ecosystem properties</b>
Fragility and stability, carrying capacity and limiting factors, productivity, community dynamics. Connectivity. Source/sink. Numbers in a population or meta-population, minimum viable populations. Sex and age ratios.

Patchiness and degree of fragmentation.

\* *Note:* Many of our semi-natural habitats and wild species have co-evolved with humans over many centuries and are adapted to traditional cultural management practices that now sustain their current conservation status.

(Based on Oxford 2001)