

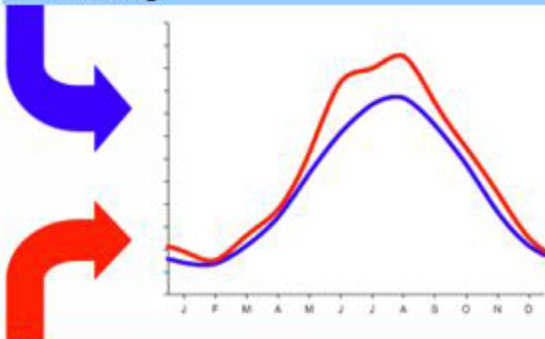
Natural factors

Climatic

Air temperature
Precipitation/evaporation
Incident/reflected solar radiation

Site-specific

Source of water (surface, groundwater)
Elevation
Exposure
Discharge
Hydromorphology
Shading



Anthropogenic factors

Heat inputs/withdrawals
Process cooling, heating
Water inputs
Wastewater, rainwater, turbined water, hydropeaking
Water withdrawals
Hydropower, drinking/process water, irrigation
Water storage
Dams, reservoirs, flood retention
Structural measures
Channel correction, bank reinforcement, colmation, culverting, removal of riparian vegetation

Indirect effects:

Oxygen concentration
Toxic substances
Pathogens and parasites



Direct effects

Temperature range

Temperature difference

Period of exposure

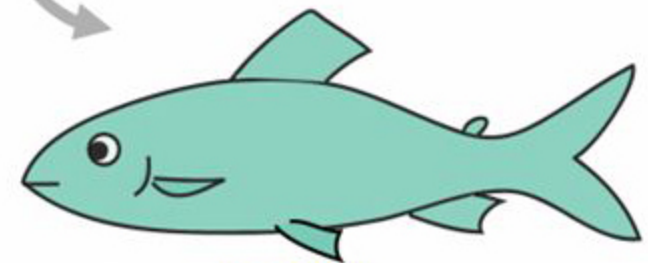
Development (ontogenesis)

Growth

Reproduction

Diseases

Metabolism
Immune system



Strategies

Avoidance

Behavioural changes

Adaptation (evolution)