

<i>Systems Thinking term</i>	<i>Synonyms</i> (*term used by STELLA software)	<i>Definition</i>
System		An entity composed of diverse but interrelated parts that function as a complex whole
Component		Individual parts of a system ; can be a reservoir , an attribute of a system, or a subsystem
Couplings		Links between system components ; can be either positive (a change in one component causes a change in the same direction in the linked component) or negative (change in one component stimulates a change of the opposite direction in the linked component)
State		A set of attributes that characterize the system at a particular time
Flux	Input/Output <i>Flow*</i> Transfer <i>Converter*</i>	The rate of matter or energy movement (amount per unit time)
Reservoir	<i>Stock*</i> Pool Storage	A place where matter or energy resides
Cycle		Constant movement of material from one reservoir to another
Sink		If the flux of matter or energy into a reservoir is greater than the flux out, the reservoir is a sink
Source		If the flux of matter or energy out of a reservoir is greater than the flux in, the reservoir is a source
Feedback		A self-perpetuating mechanism of change and response to that change
Negative feedback loop	Balancing	Diminishes the effect of disturbances
Positive feedback loop	Reinforcing	Amplifies the effect of disturbances
Response time		The length of time for a system to return to steady state after being perturbed
Residence time		The length of time a substance remains in a given reservoir
Threshold	Tipping point	The level or value at which a rapid change in the system state, often from one equilibrium state to another, occurs
Perturbation		A temporary disturbance of a system
Forcing	Driver Cause	A persistent disturbance of a system
Response	Effect	Change in a system as a result of perturbation or forcing
Equilibrium state		Describes whether a system is <i>stable</i> (disturbances from equilibrium will be followed by system responses that return the system to its equilibrium state; results from

		negative feedbacks, and is sometimes called homeostasis or dynamic equilibrium) or <i>unstable</i> (disturbances from equilibrium will be followed by system responses that lead the system further from equilibrium; results from positive feedbacks)
Steady state		No change in any component or source/sink in a system as a function of time, although the system may not be at equilibrium
Systems diagram		A graphical representation of a system, showing system components and couplings
Box model	Dynamic systems model	A graphical and quantitative representation of a system, where reservoirs and fluxes are given values and followed through time
Open/closed system		Describes whether matter and/or energy are contained within (closed) or lost from (open) a system