

“Key Competencies for Sustainability”

by Wiek, Withycombe, and Redman

Systems thinking

Variables/indicators, sub-systems, structures, functions
Feedback loops, complex cause-effect chains, cascading effects, inertia, tipping points, legacy, resilience, adaptation, structuration
Across/multiple scales: local to global
Across/multiple/coupled domains: society, environment, economy, technology
People and social systems: values, preferences, needs, perceptions, (collective) actions, decisions, power, tactics, politics, institutions

Strategic

Intentionality
Transitions and transformation
Strategies, action programs, (systemic) intervention, transformative governance
Success factors, viability, feasibility, effectiveness, efficiency
Adaptation and mitigation
Obstacles (resistance, path dependency, habits)
Social learning
Social movements

Normative

(Un-)sustainability of current or future states
Sustainability principles, goals, targets, thresholds
Concepts of justice, fairness, responsibility, safety, happiness
Concept of risk, harm, damage
Concept of reinforcing gains (“win-win”) and tradeoffs
Ethical concepts

Anticipatory

Concepts of time including temporal phases (past, present, future)
Concept of uncertainty and epistemic status including backcasting and envisioning methods possibility, probability, desirability of future developments (predictions, scenarios, visions)
Concepts of inertia and path dependency
Concepts of consistency and plausibility of future developments
Concepts of risk, intergenerational equity, precaution

Interpersonal

Functions, types, and dynamics of collaboration
Strengths, weaknesses, success, and failure in teams
Concepts of leadership
Limits of cooperation and empathy
Concepts of solidarity and ethnocentrism