Meet

Municipalities for an Equitable Transformation in Europe

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Building resilience through the COVID pandemic

Funded by the European Union

Vila Nova de Famalicão

Arcueil

Hernani Udala

Dąbrowa Górniczaa

Valsamoggia

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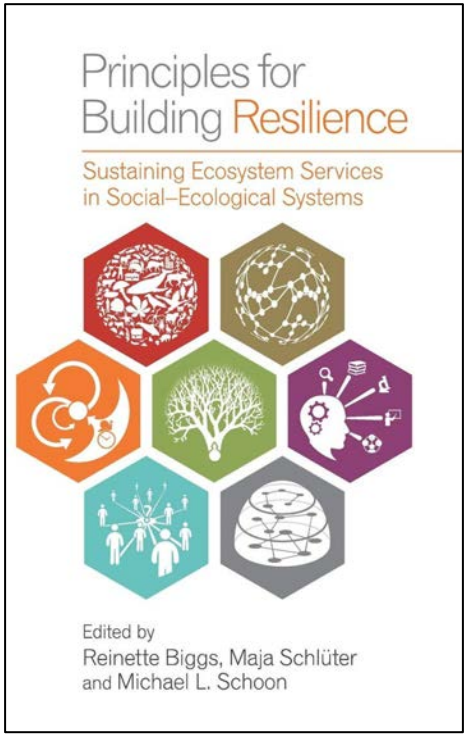
What is resilience

Let’s explore some ingredients …



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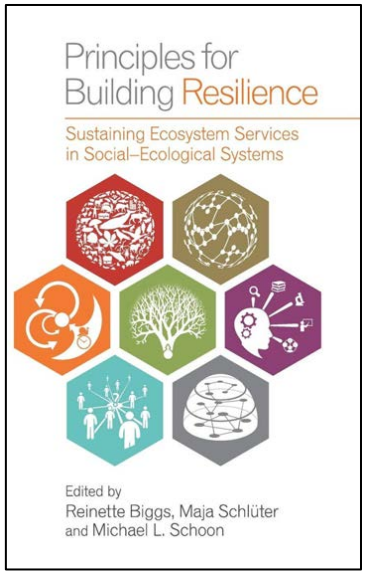
Premise



The resilience approach views humans as part of the biosphere, and assumes that the resulting intertwined social–ecological systems behave as complex adaptive systems – i.e. they have the capacity to self-organize and adapt based on past experience, and are characterized by emergent and non-linear behaviour and inherent uncertainty.

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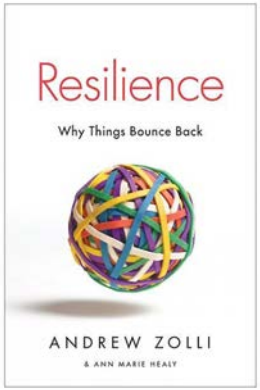
… with other words



Resilience is, like life itself,
messy, imperfect, and inefficient.
But it survives.

Andrew Zolli, Resilience: Why Things Bounce Back

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Principle 1

Maintain diversity and redundancy

Diversity and redundancy in social–ecological system components such as species, landscape types, knowledge systems, actors, cultural groups or institutions provide options for responding to change and disturbance and for dealing with uncertainty and surprise.

However, both diversity and redundancy may be costly in terms of increasing system complexity and inefficiency, especially with regard to the social dimension, and this may negatively affect the resilience of certain ecosystem services.

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Principle 1

Maintain diversity and redundancy

Example: the pollinators problem

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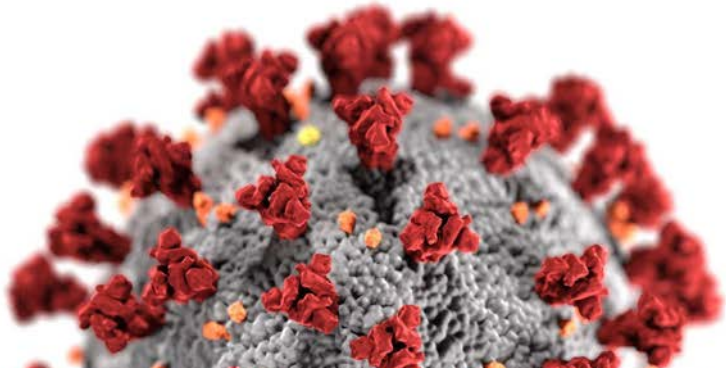
Principle 2

Manage connectivity

High levels of connectivity can facilitate recovery after a disturbance. At the same time, highly connected systems increase the potential for disturbances to spread.



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Principle 2

Manage connectivity

Example: pros and cons of wildlife corridors and power lines

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Principle 3

Manage slow variables and feedback

The importance of managing slow variables and feedbacks to maintain social–ecological regimes that produce desired bundles of ecosystem services, restore social–ecological systems to more desired configurations or transform systems to entirely new configurations is widely acknowledged in the resilience literature.

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Principle 3

Manage slow variables and feedback

Example: Climate change

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Principle 4

Foster complex adaptive systems thinking

We suggest that Systems Thinking can be fostered by the following: adopting a systems framework; tolerating and embracing uncertainty; investigating critical thresholds and non-linearities; [...] matching institutions to complex adaptive systems processes; and recognizing barriers to cognitive change.

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Principle 4

Foster complex adaptive systems thinking

Systemic Framework

Local Transformation Toolkit

Example: Corals and LTT

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Principle 5

Encourage learning

The recognition of complexity in social–ecological systems (SES) brings with it an assumption that knowledge of SES is always partial, and that knowledge requires continual renewal otherwise it will become obsolete as the system it represents changes. Hence, there is a constant need to revise existing knowledge to enable adaptation to change in SES, as well as to maintain valued ecosystem services in the face of disturbance and change.

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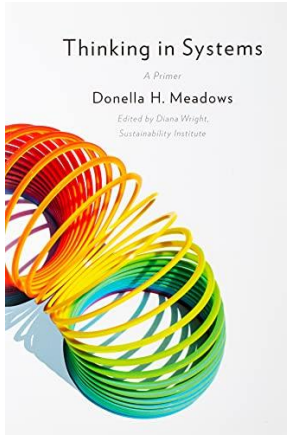
Principle 5

Encourage learning



Example: Citizen science and Thinking in Systems

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Principle 6

Broaden participation

The participation of a diversity of stakeholders is thought to build trust and relationships which, in turn, improve legitimacy of the knowledge base and decision-making; to promote understanding of system dynamics; and to improve the capacity of a management system to detect and interpret shocks and disturbances.

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Principle 6

Broaden participation

Example: Deliberative democracy, Sociocracy 3.0

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Principle 7

Promote polycentric governance

Polycentric governance, in contrast to more monocentric strategies, is believed to enhance the resilience of ecosystem services in several fundamental ways, all of which link with other principles in this list: providing opportunities for enhanced learning and experimentation (P5); enabling broader levels of participation (P6); improving connectivity (P2) in governance, etc.

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Principle 7

Promote polycentric governance

Example: Centric can crash, what polycentric does exactly?

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