The Venn (and Zen?) of Sustainable Communities: A Capital Approach

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Cutting to the Chase

- Explicit sustainability focus at community level
- Build on CCF and WCRC traction
- Paradigm change → scientific revolution
- The preanalytic vision or worldview
- Venn diagram conveys a story/narrative
- From separation to interdependence (or interbeing—the Zen of it all)
- Systems thinking and relationships
- Other sources/work to draw from . . . TNS, Transition, Ecological Economics, CBNRM, BALLE

Themes

- Change
- Relationships
- Resilience

- Stories
- Localization
- Participation

"an elaborate classificatory system?"

Wealth Creation in Rural Communities (WCRC)

THE SEVEN FORMS OF WEALTH

The WCRC has identified seven forms of community wealth:

- Financial Capital
- Natural Capital
- Social Capital
- Individual Capital
- Built Capital
- Intellectual Capital
- Political Capital

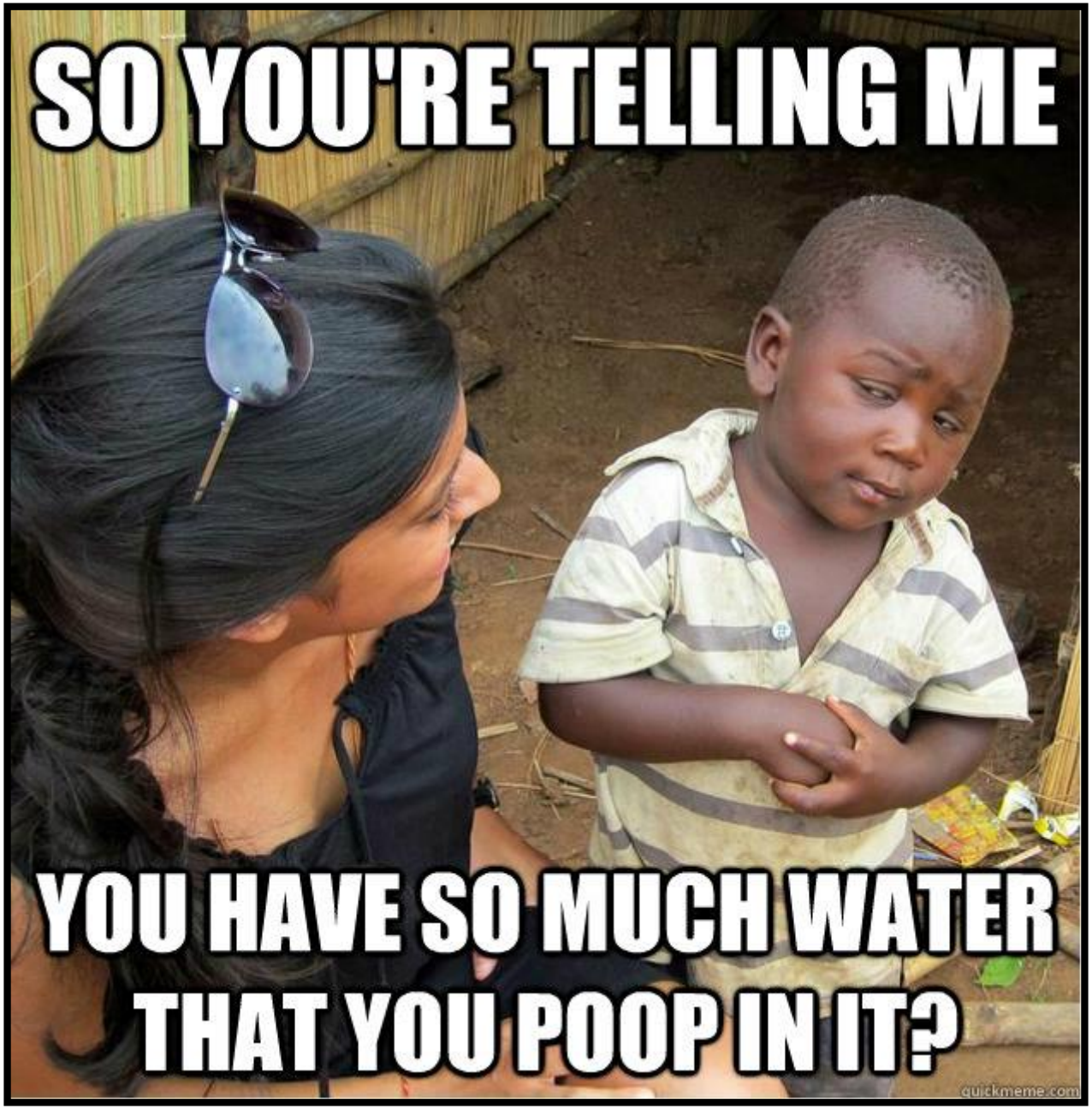
They believe a rural development strategy that builds many forms of wealth is more likely to create prosperity and local benefits that will stay in the community over time. To learn more about the seven forms of wealth visit www.creatingruralwealth.org.

Revolutionary Change

Scientific revolution and paradigm change

- **Scientific advancement** is not evolutionary, but rather is a "series of peaceful interludes punctuated by intellectually violent **revolutions**", and in those revolutions "**one conceptual world view is replaced by another**."

- Think of a **paradigm shift** as a **change from one way of thinking to another**. It's a revolution, a transformation, a sort of metamorphosis. It doesn't just happen. It is **driven by agents of change**.


SO YOU'RE TELLING ME
YOU HAVE SO MUCH WATER THAT YOU POOP IN IT?
quickmeme.com

Modern Science – Quantitative Emphasis – *Paradigm of Control*

- *Explanation*
- *Prediction*
- *Management/control*

Holistic Science – Science of Qualities – *Paradigm of Participation*

Indigenous knowledge systems

Reductionist Thinking

Traditionally, we try to understand complex systems by studying the **individual parts**

This is called **reductionist** thinking

Systems Thinking

Systems consist of
interrelated parts

Systems depend on the
relationships between the parts

Dissecting the system
**destroys the pattern
of relationships**

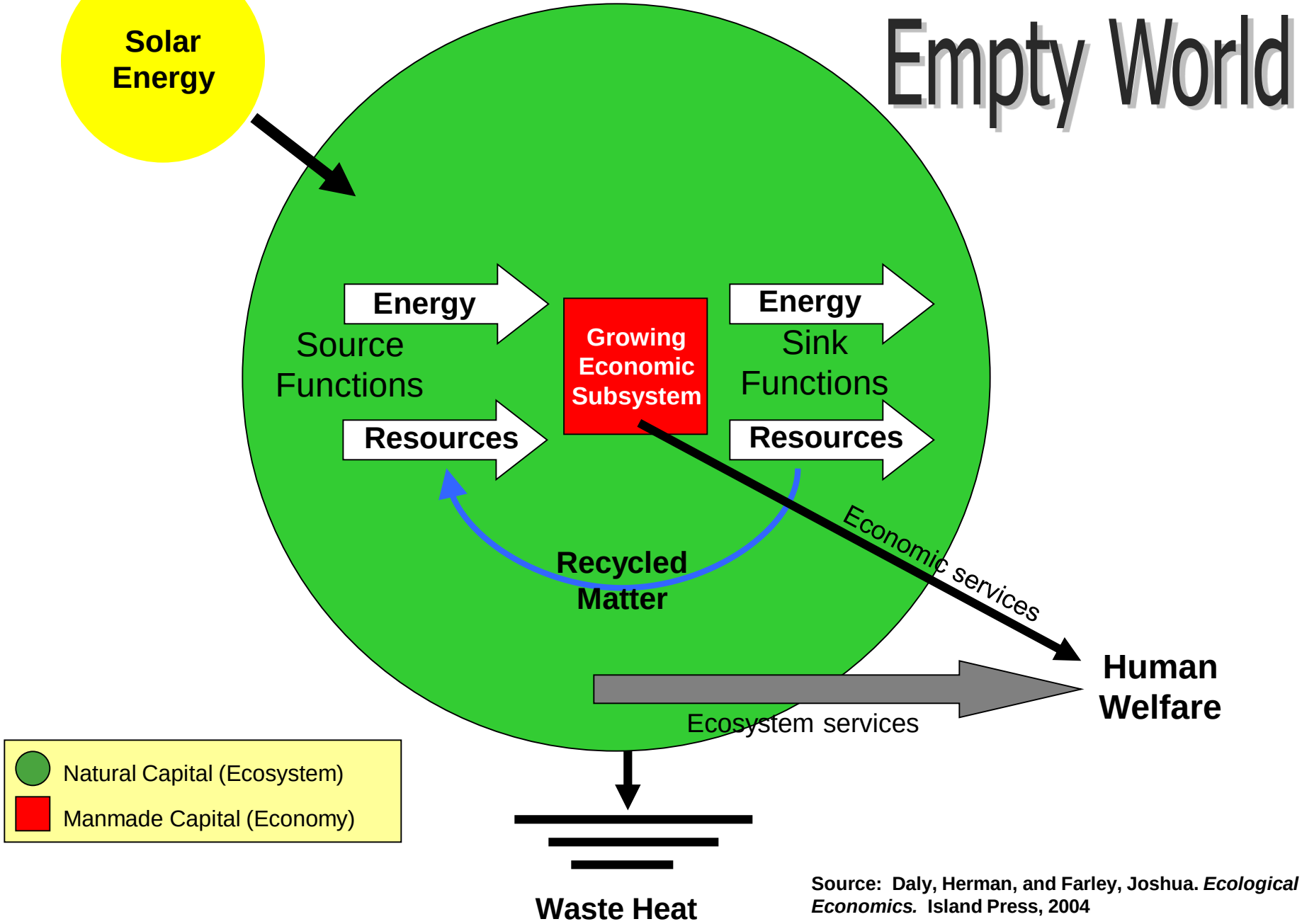
Relationships make the
whole greater than the sum

A Systems Approach

"Systems thinking is a discipline for seeing wholes, recognizing patterns and interrelationships, and learning how to structure those interrelationships in more effective, efficient ways."

Peter Senge

Finite Global Ecosystem



Source: Daly, Herman, and Farley, Joshua. *Ecological Economics.* Island Press, 2004

Categories of Ecosystem Services

Supporting

- *Nutrient cycling*
- *Soil formation*
- *Primary production*

Provisioning

- *Food*
- *Freshwater*
- *Wood and fibre*
- *Fuel*

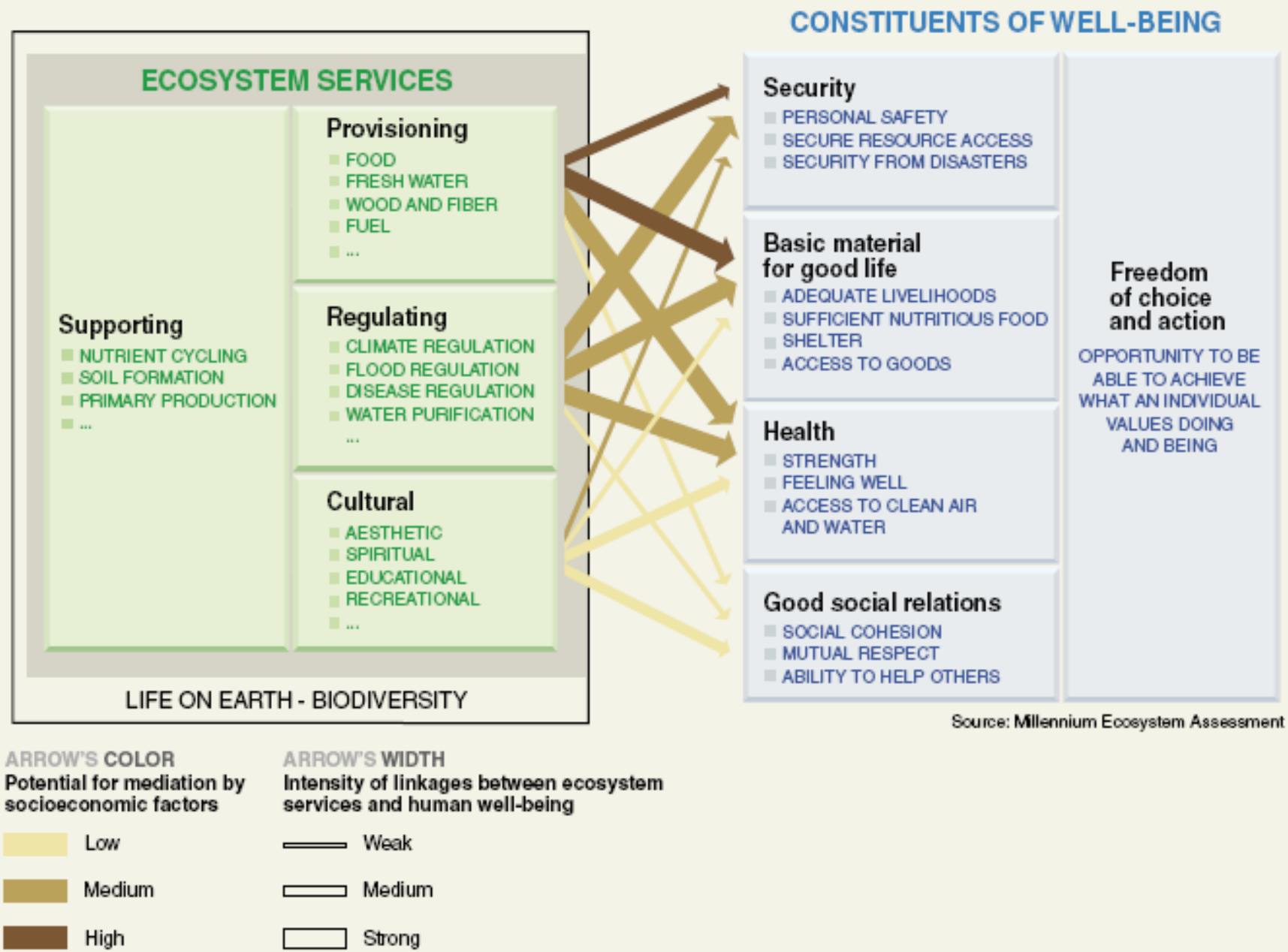
Regulating

- *Climate regulation*
- *Flood regulation*
- *Disease regulation*
- *Water purification*

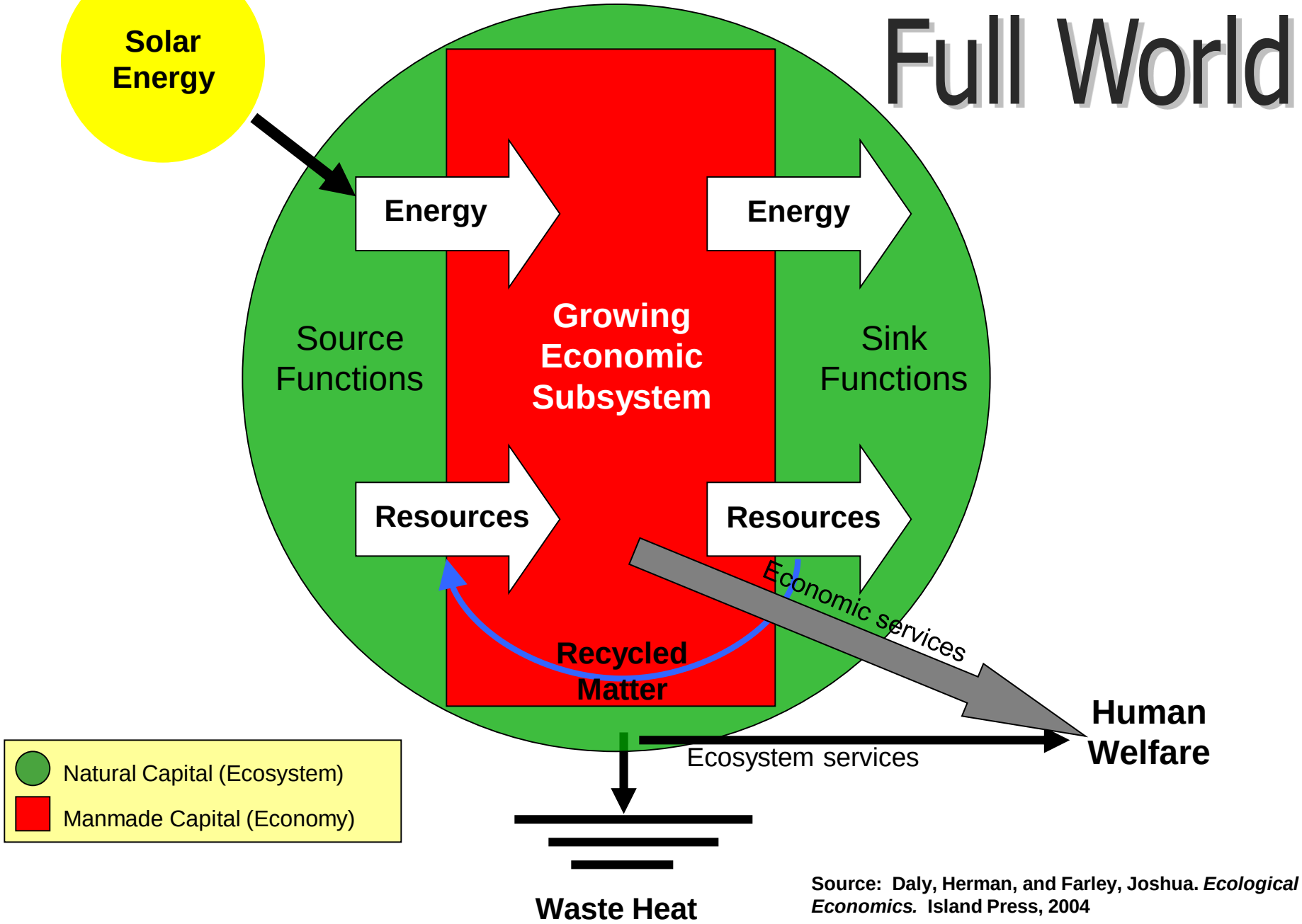
Cultural

- *Aesthetics*
- *Spiritual*
- *Educational*
- *Recreational*

Source: *Millennium Ecosystem Assessment.* 2005. Washington, DC: Island Press.


ECOSYSTEM SERVICES
Supporting
NUTRIENT CYCLING
SOIL FORMATION
PRIMARY PRODUCTION
...
Provisioning
FOOD
FRESH WATER
WOOD AND FIBER
FUEL
...
Regulating
CLIMATE REGULATION
FLOOD REGULATION
DISEASE REGULATION
WATER PURIFICATION
...
Cultural
AESTHETIC
SPIRITUAL
EDUCATIONAL
RECREATIONAL
...
LIFE ON EARTH - BIODIVERSITY
CONSTITUENTS OF WELL-BEING
Security
PERSONAL SAFETY
SECURE RESOURCE ACCESS
SECURITY FROM DISASTERS
Basic material for good life
ADEQUATE LIVELIHOODS
SUFFICIENT NUTRITIOUS FOOD
SHELTER
ACCESS TO GOODS
Health
STRENGTH
FEELING WELL
ACCESS TO CLEAN AIR AND WATER
Good social relations
SOCIAL COHESION
MUTUAL RESPECT
ABILITY TO HELP OTHERS
Freedom of choice and action
OPPORTUNITY TO BE ABLE TO ACHIEVE WHAT AN INDIVIDUAL VALUES DOING AND BEING
Source: Millennium Ecosystem Assessment
ARROW'S COLOR
Potential for mediation by socioeconomic factors
Low
Medium
High
ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being
Weak
Medium
Strong

Finite Global Ecosystem

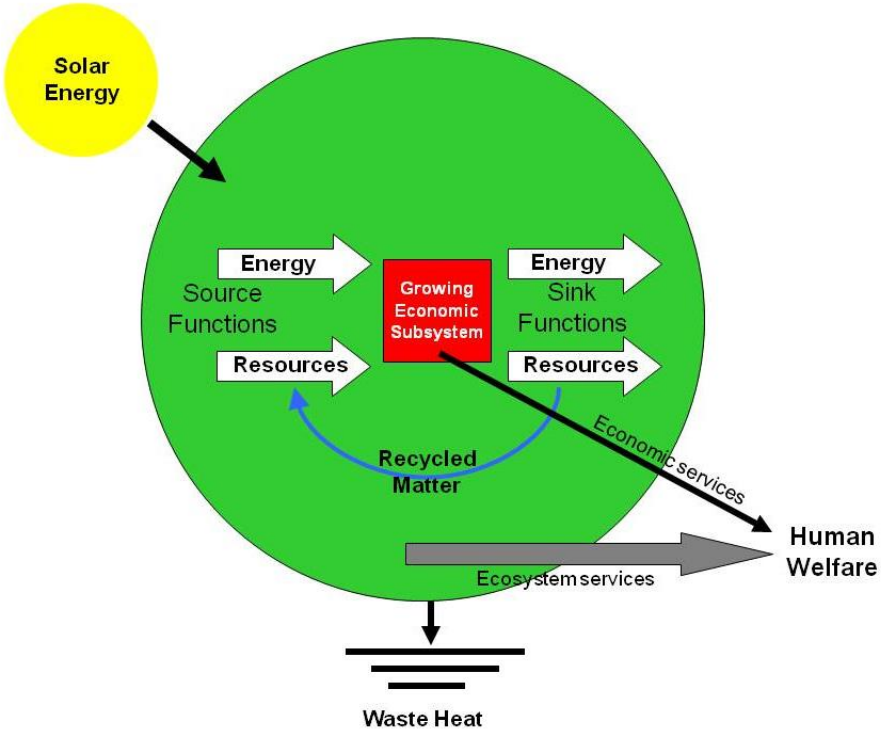


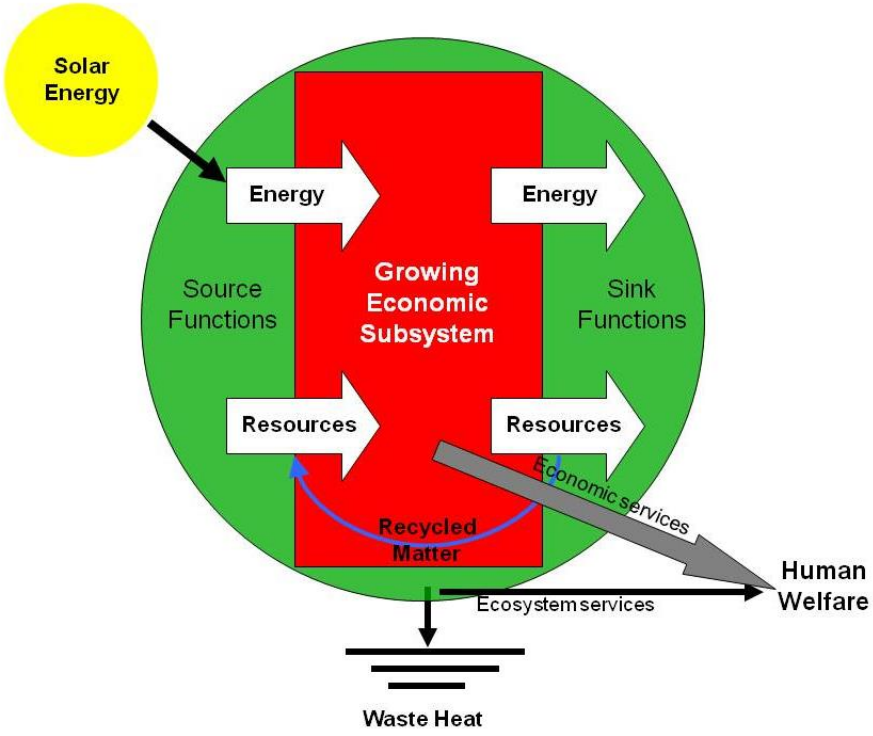
Source: Daly, Herman, and Farley, Joshua. *Ecological Economics.* Island Press, 2004

Empty World

Full World

Finite Global Ecosystem





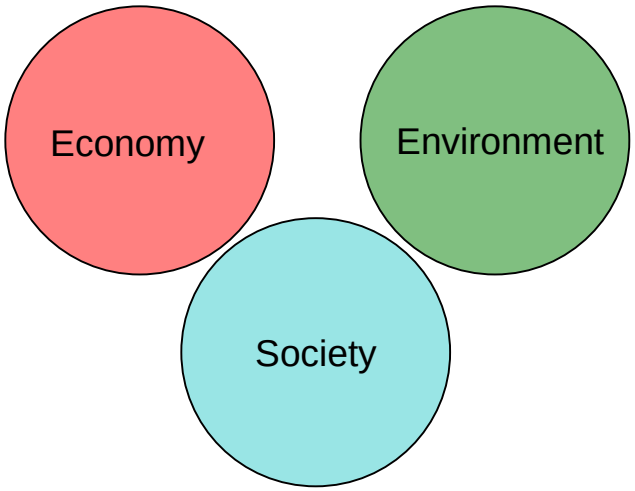
Natural Capital (Ecosystem)

Manmade Capital (Economy)

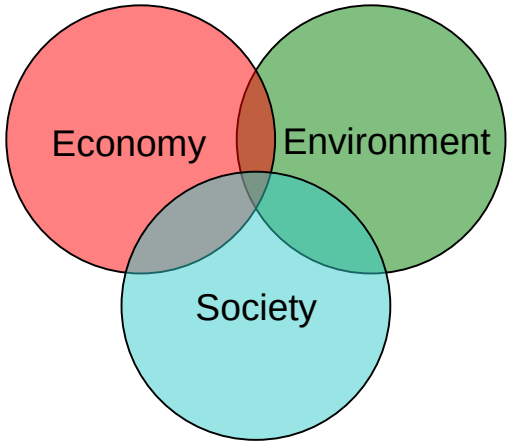
Source: Daly, Herman, and Farley, Joshua. *Ecological Economics.* Island Press, 2004

GROWTH

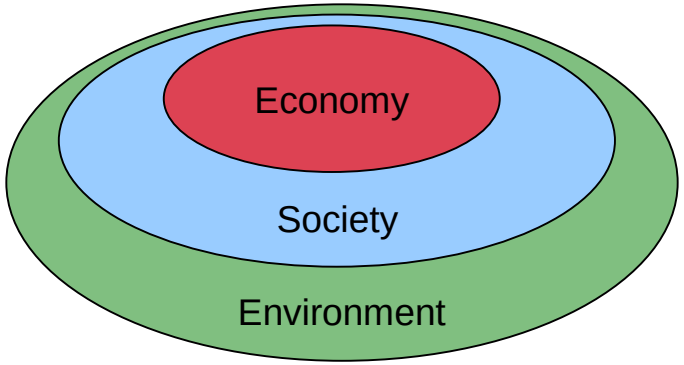
Evolving Views



Unconnected or silos view

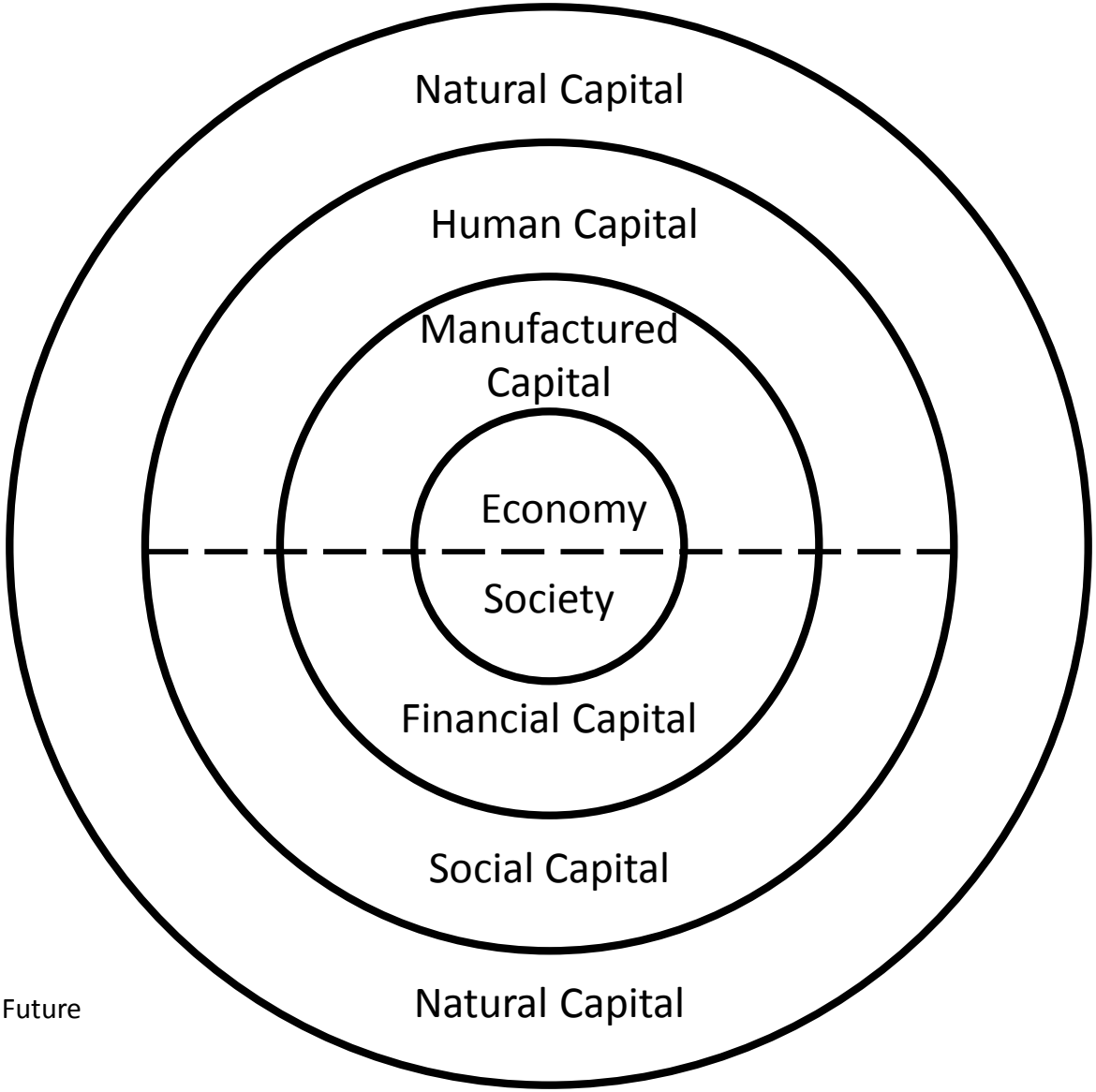


Interconnected or linkages view



Interdependent, nested, embedded, or systems view

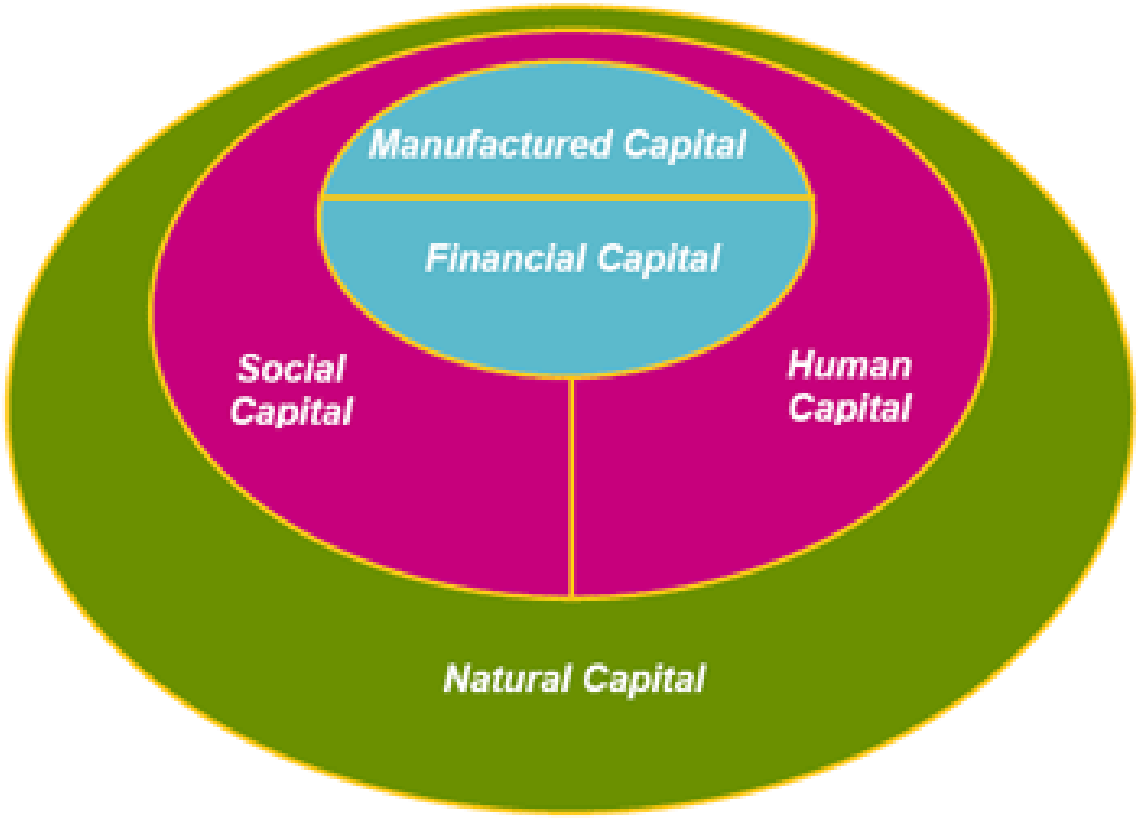
The Five Capitals Framework



Source: Forum for the Future

Five Capitals Model

www.forumforthefuture.org



Natural Capital is any stock or flow of energy and material that produces goods and services. Natural capital is the basis not only of production but of life itself!

Notes on the Five Capitals Framework

- Different representations are possible, what matters most is the interconnections and interdependencies
- Natural and human capital are the primary forms of capital (and only sources of wealth), with social and manufactured capital derived from them
- Must take account of the **preconditionality of natural capital**
- There are no hard lines

Ecological Economics: Three Basic Policy Goals

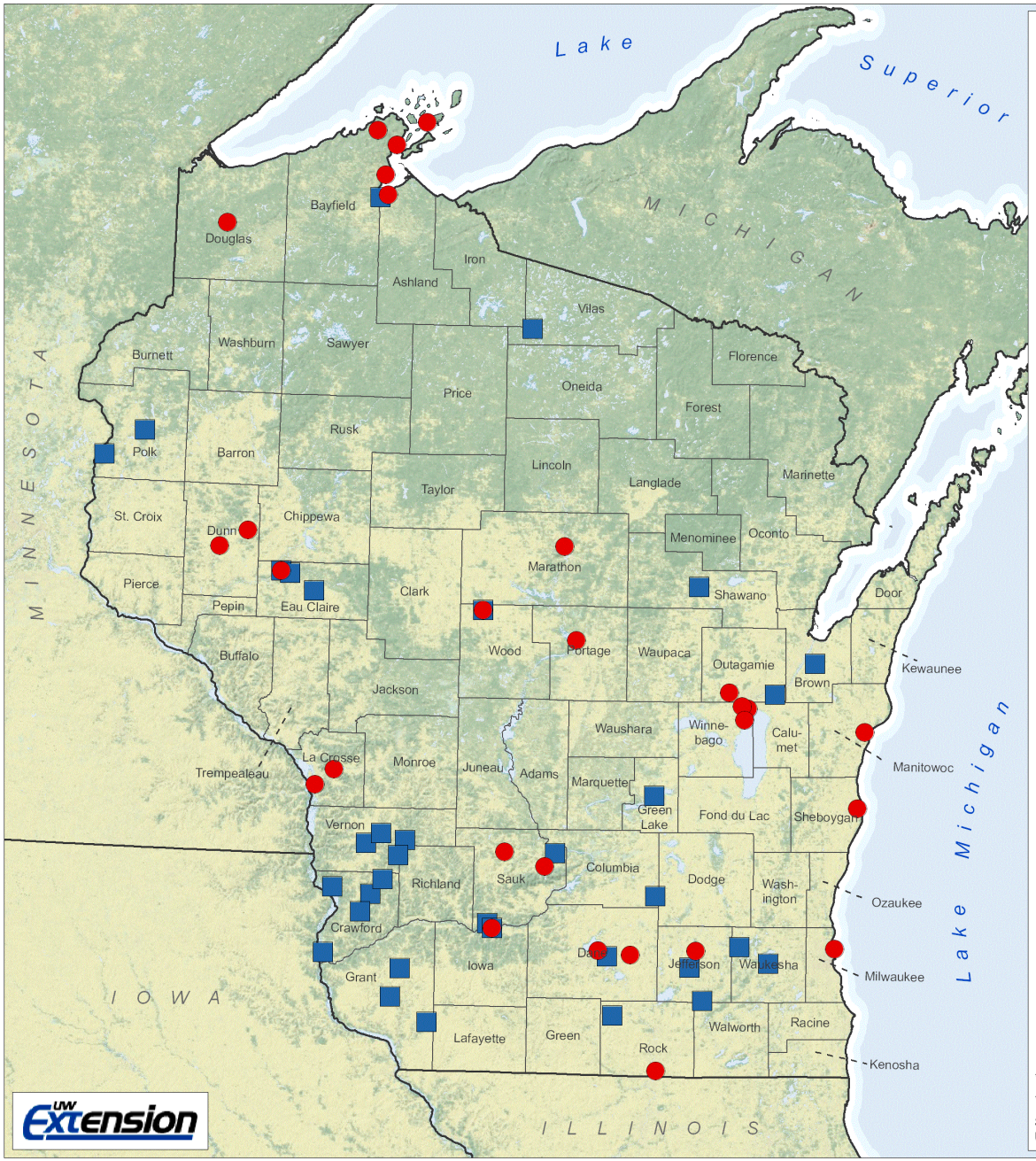
- Sustainable scale
- Just distribution
- Efficient allocation

Source: Daly, Herman E., and Farley, Joshua. *Ecological Economics.* Washington, DC: Island Press, 2011.

Sources of Market Failure

- Imperfect competition
- Public goods (nonexclusive)
- Externalities
- Income distribution
- Imperfect information (asymmetric information)
- Intergenerational considerations
- Institutional failure

Wisconsin Eco-municipalities and Energy Independent Pilot Communities



Eco-municipality**

Energy Independent Pilot Community**

State Border

County Border

Energy Independent Pilot Communities

2009
- Brown County
- Chequamegon Bay
- Village of Osceola
- City of Marshfield
- City of Columbus
- City of Evansville
- City of Platteville/City of Lancaster
- City of Oconomowoc
- Town of Fairfield
- Village & Town of Spring Green

2010
- Crawford County*
- Vernon County*
- City of Fennimore*
- City of Prairie du Chien*
- Village of Soldiers Grove*
- Village of Ferryville*
- Village of Viola*
- Village of La Farge*
- City of Viroqua*
- City of Gays Mills*
- City of Altoona
- City of Eau Claire
- Eau Claire County
- Green Lake County
- City of Jefferson
- City of Kaukauna
- Lac du Flambeau Band of Lake Superior Chippewa Indians
- City of Monona
- Polk County
- Shawano County
- Waukesha County
- City of Whitewater

Eco-municipalities

Town of La Pointe
City of Washburn
City of Ashland
City of Madison
City of Bayfield
Town of Bayfield
Douglas County
Village of Johnson Creek
City of Marshfield
City of Manitowoc
City of Neenah
City of Menasha
Town of Menasha
City of Eau Claire
Town of Cottage Grove
City of La Crosse
La Crosse County
City of Stevens Point
City of Wausau
City of Beloit
City of Baraboo
City of Sheboygan
Dunn County
Village of Spring Green
Village of Colfax
Town of Greenville
Village of Shorewood
City of Reedsburg

* Part of the E3 Coalitiion (Energy, Environment & Economic Coalition LLC)

** Counites are represented by their centroids

Sources: Wisconsin Office of Energy Independence, ESRI and UW-Extension Sustainability Team

UW Extension

the NATURAL STEP

Four Sustainability Principles

In a sustainable society, nature is not subject to **systematically increasing...**

...concentrations of substances extracted from the Earth's crust,

...concentrations of substances produced by society,

...degradation by physical means,

and, in that society...

...people are not subject to conditions that systematically undermine their capacity to meet their needs.

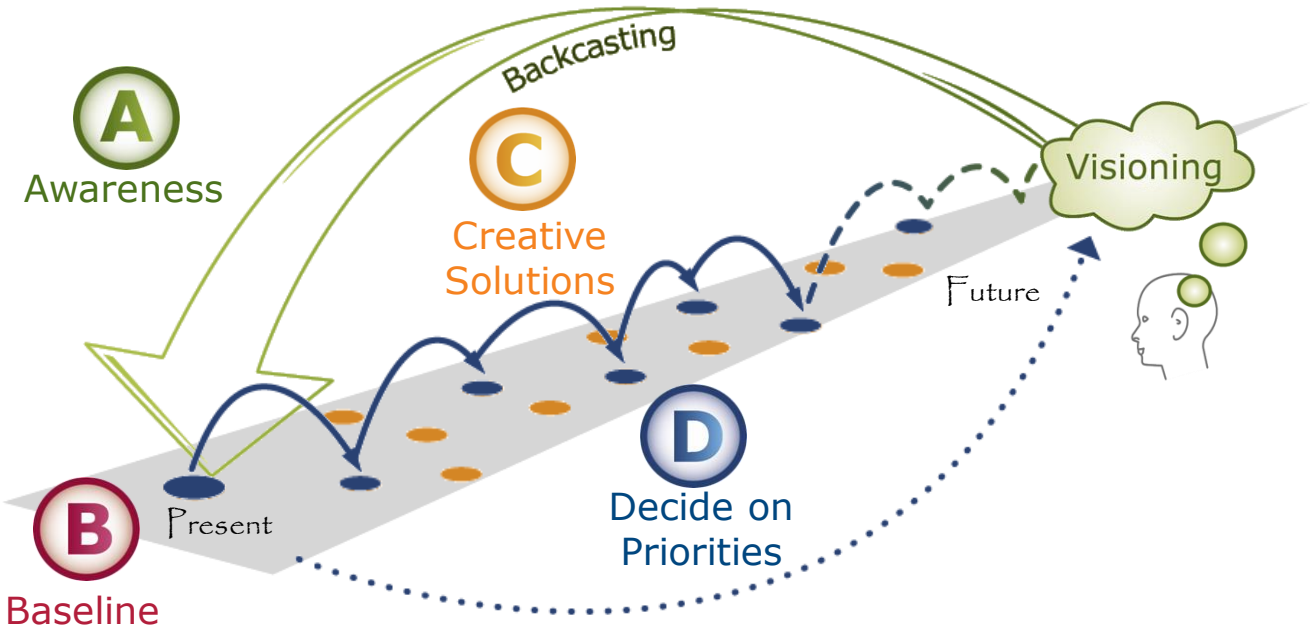
the Natural Step

Fundamental Human Needs

Subsistence	Protection	Participation
Idleness	Affection	Understanding
Creativity	Identity	Freedom

the NATURAL STEP

ABCD



Does it move us in the right direction?
Is it a flexible platform?
Is it a good return on investment?

5-Level Model

Systems level	A : Awareness of the natural systems
Success level	C: Vision of a sustainable future
Strategic level	C: Strategic Goals, D: Prioritizing Actions
Actions level	D: Action Plans
Tools level	B: Baseline analysis, D: Indicators & Tracking Progress

Transition Towns

Transition Network.org

TRANSITION UNITED STATES

Local Living Economies

BALLE brings together independent business leaders, economic development professionals, government officials, social innovators, and community leaders to build local living economies.

80 networks representing more than 30,000 entrepreneurs

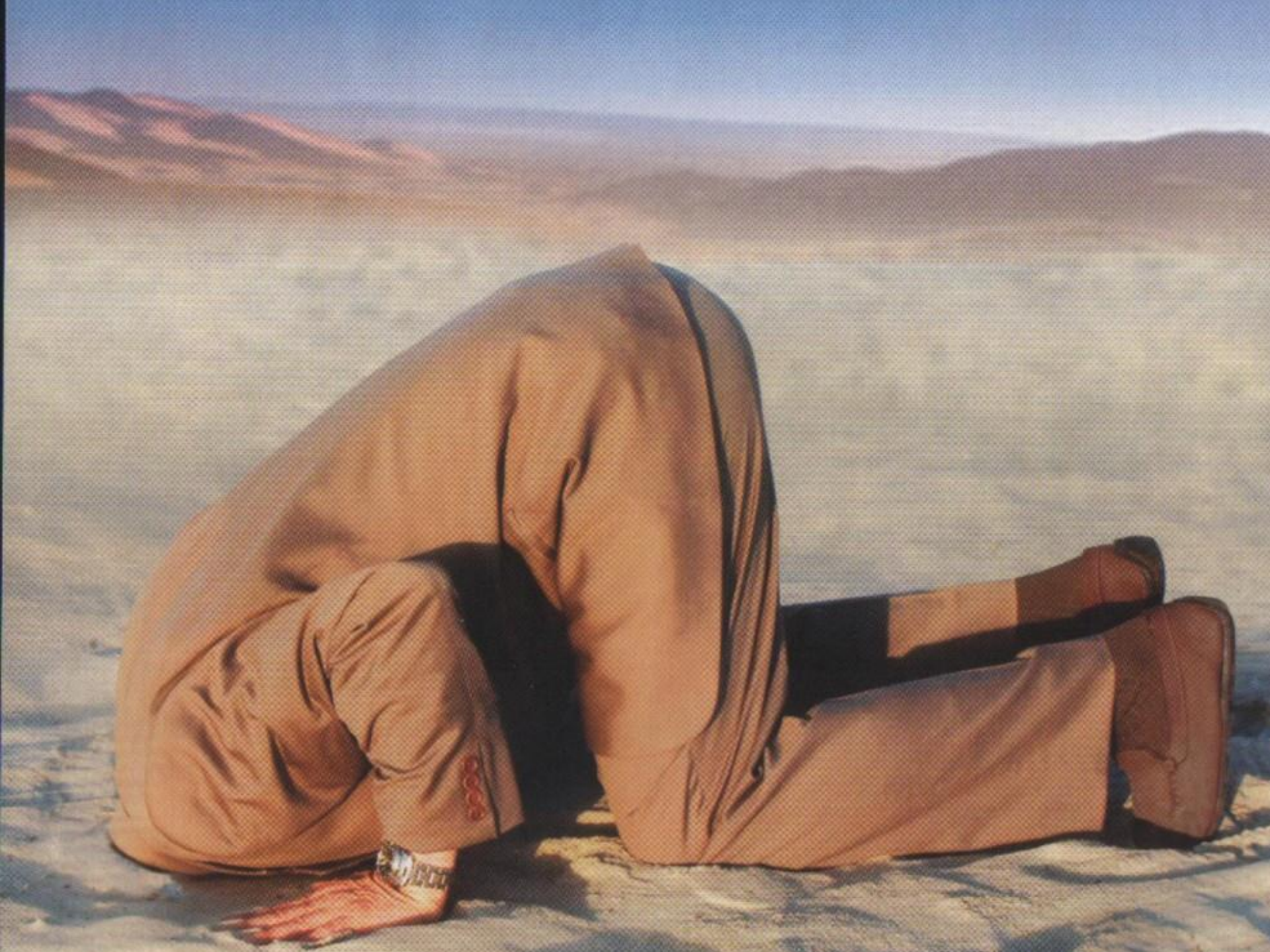
https://bealocalist.org/

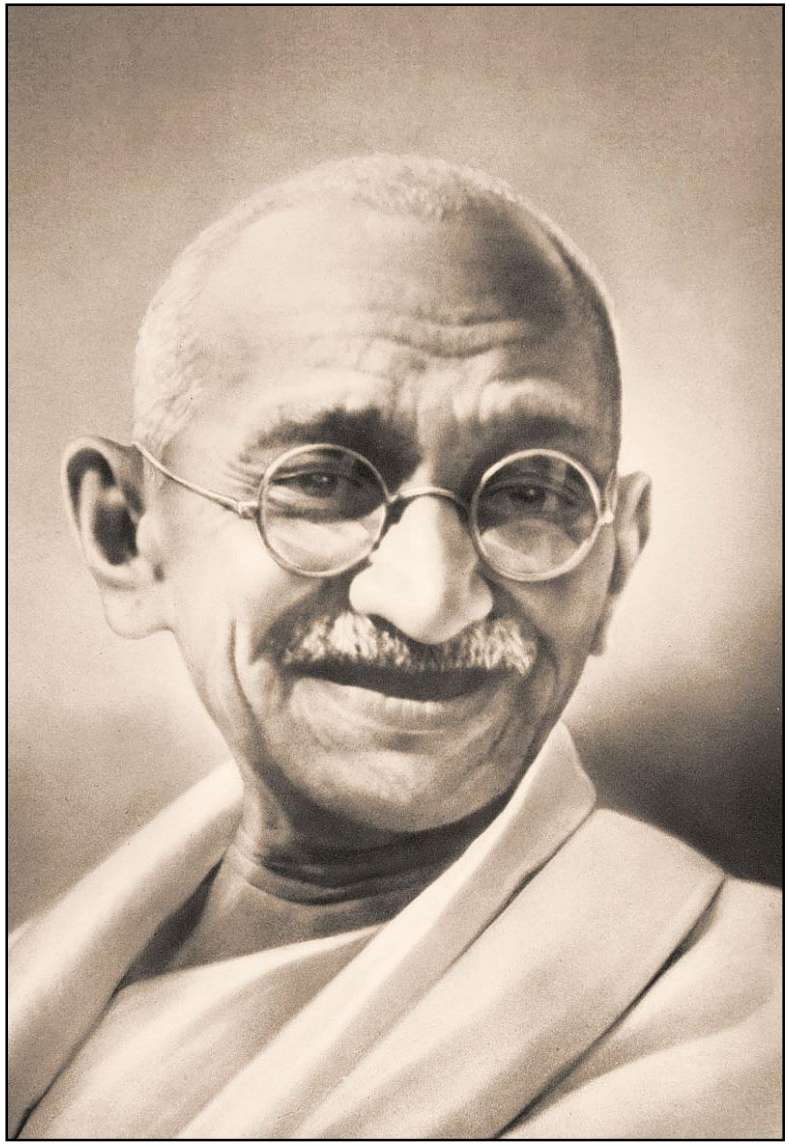
GreenBiz FORUM 14

International Crimes Against Peace

- Crimes Against Humanity
- Genocide
- War Crimes
- Crimes of Aggression
- *Ecocide (Crimes Against Nature)*

Countries with Ecocide laws in place: Georgia (1999), Republic of Armenia (2003), Ukraine (2001), Belarus (1999), Kazakhstan (1997), Kyrgyzstan (1997), Republic of Moldova (2003), Russian Federation (1996), Tajikistan (1998), and Vietnam (1990). Ecuador has included the Rights of Nature in its Constitution.





You must be the change you wish to see in the world.

First they ignore you, then they ridicule you, then they fight you, then you win.

Comments?

Questions?