FOREST STEWARDSHIP APPROACHES

Climate Change & Resilience

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Will cover…

- Improving forest resilience in the climate change era
- Making this real - entrenching the science in public policy and applying it on the ground

Opening Thoughts

“The first law of intelligent tinkering is to save all the parts”

Aldo Leopold

“Adapt or perish, now as ever, is nature's inexorable imperative”

H.G. Wells

“We do not fear the things in the dark yet we fear the dark – we do not fear the search for the truth yet we fear the truth”

Lakota proverb

Improving forest resilience in the climate change era

Adaptation & Mitigation

Vulnerability Assessments

Track parameters

- Increase in temperature
- Changes and causes of extreme weather
- Variability in precipitation
- Changed disturbance patterns (fire, wildlife, insects, floods, disease, invasive species)
- Climate envelopes (effects particular eco-systems)
- Water temperature & flow

Estimate vulnerability

- Exposure to change
- Sensitivity and adaptive capacity of ecosystems
- Sensitivity and adaptive capacity of various fish, wildlife, and plant species,

Adaptation

Tree species

- Shift to more drought and heat tolerant in core places
- Use multiple species for diversity (cover your bases)

Ecosystem

- Localize ecosystem shifts projections
- Shift silviculture systems for predicted ecosystems

Cultural adjustments

- Sustenance species (predator-prey)
- Travel patterns

Mitigation

Silviculture systems

- Mimic Natural Disturbance Types (NDT)
- Maintain cover (coastal Cedar, interior Fir)

Maintain refugia

- Wetlands, north slopes, canyons, shaded areas, moist areas

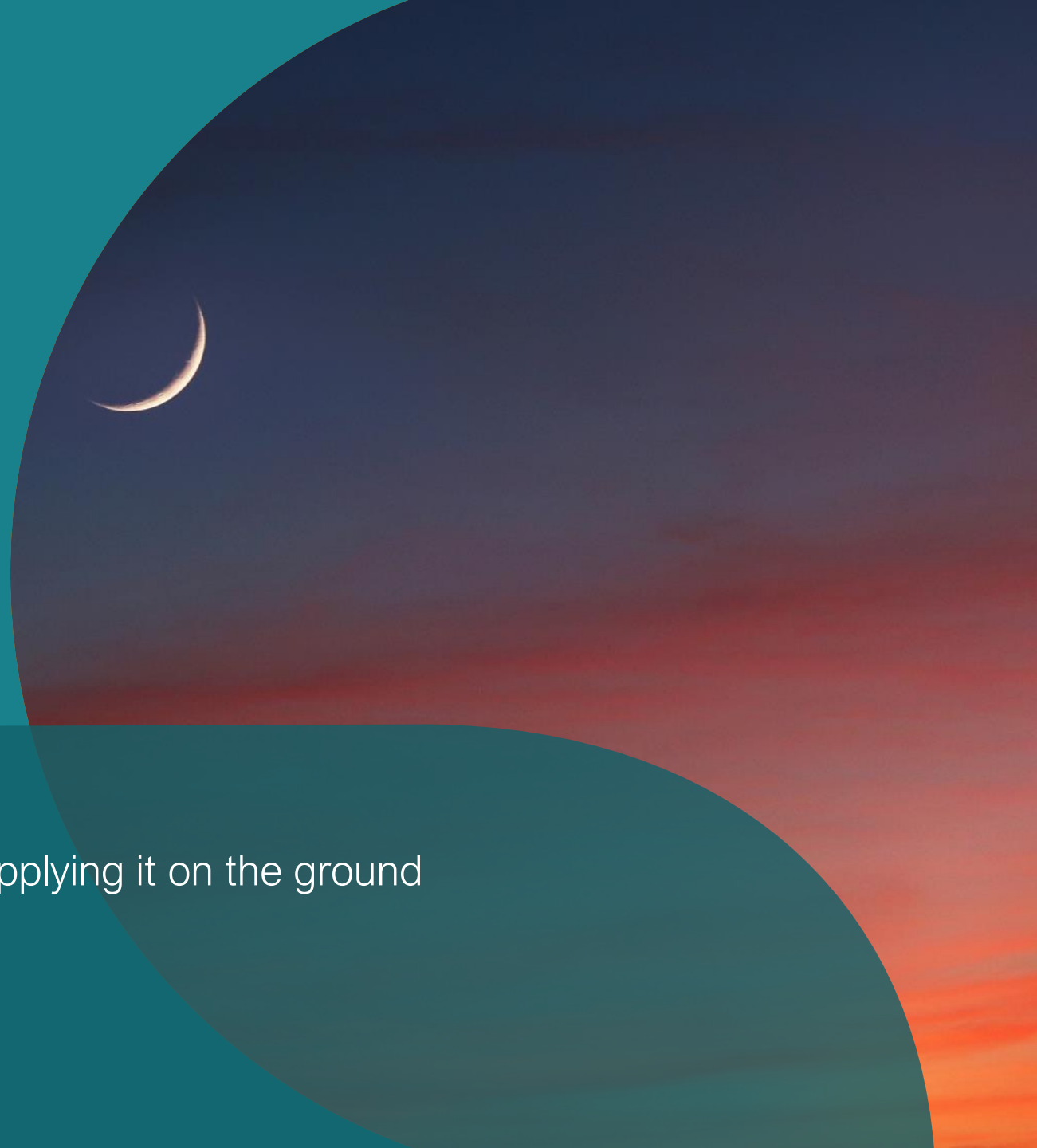
Maintain ecosystem integrity

- Parts & pieces reasonably intact across the landscape
- Maintain climate movement corridors

Stream temperatures

- Wider riparian
- Conserve wetlands
- Plant streamside and wetland vegetation

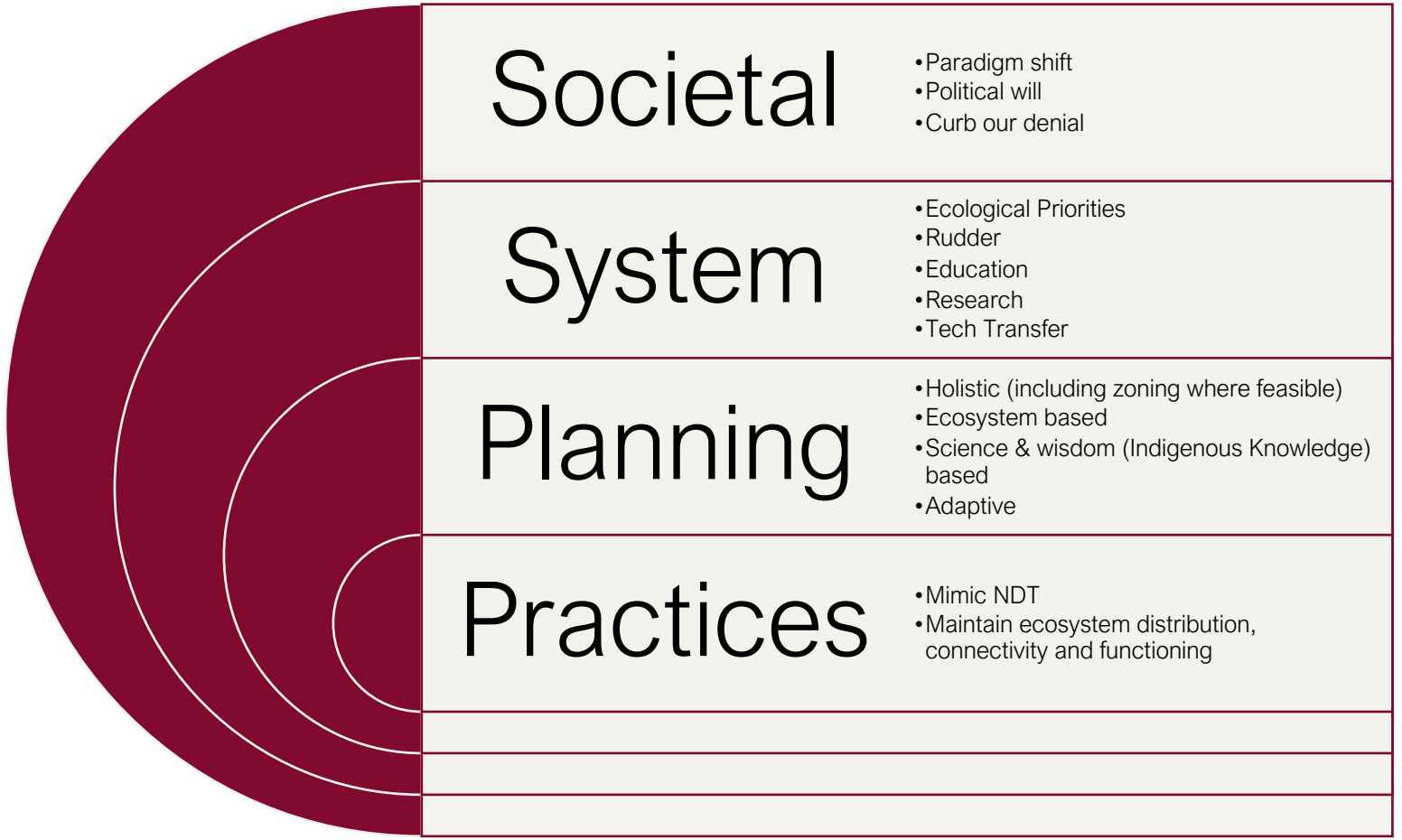
Making this real



Entrenching the science in public policy and applying it on the ground

HOW?

Requires a multi-level approach



Think Like An Ecosystem

Time

Form over long periods of time (often many tree rotations)
BC - old trees range from 250 to 1,200 years - oldest ecosystems are more than 10,000 years old

Scale

- Exist at all levels ranging from very small sites to the landscape level
- Maintaining small level health contributes to landscape level ecosystem health
- Movement is also at various small to large scales

Old Growth

- Stable (and healthiest) ecosystems contain a significant representation of the older portions of each ecosystem type
- Individual components of the ecosystem may change but the overall distribution of old to young remains relatively stable
- There is an inherent range of variability unique to each ecosystem type

Biodiversity

- Healthy ecosystems are very rich in the range and types of life that they support
- Requires enough suitable local and landscape level habitats to support those life forms
- The older and most productive portions of the ecosystem often contribute the highest amount of biodiversity to the overall ecosystem

Connectivity

- Ecosystems are distributed in types across a landscape
- Need to be somewhat connected to each other so that species can move around, genetic material can spread more easily
- Avoids overexposure and improves resilience

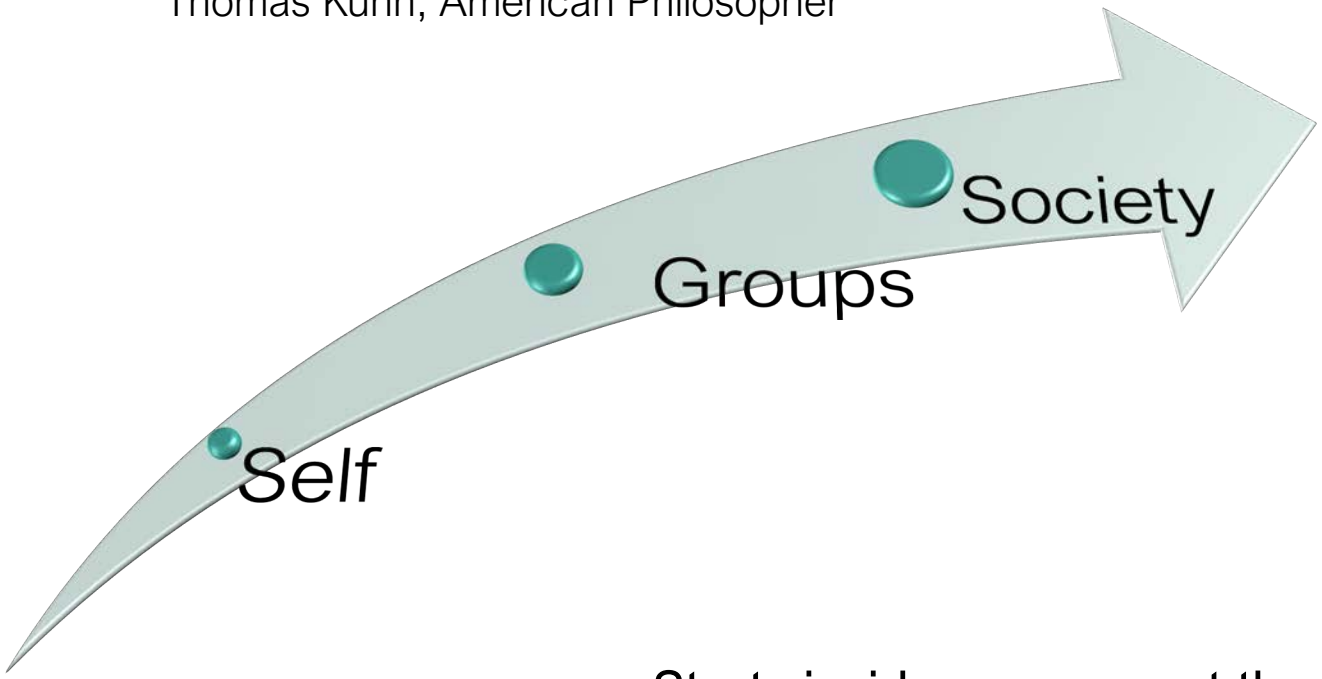
Integrity

- All of the parts are important (even if we don't know why yet)
- The processes that link these parts are as important as the parts

Paradigm Shift?

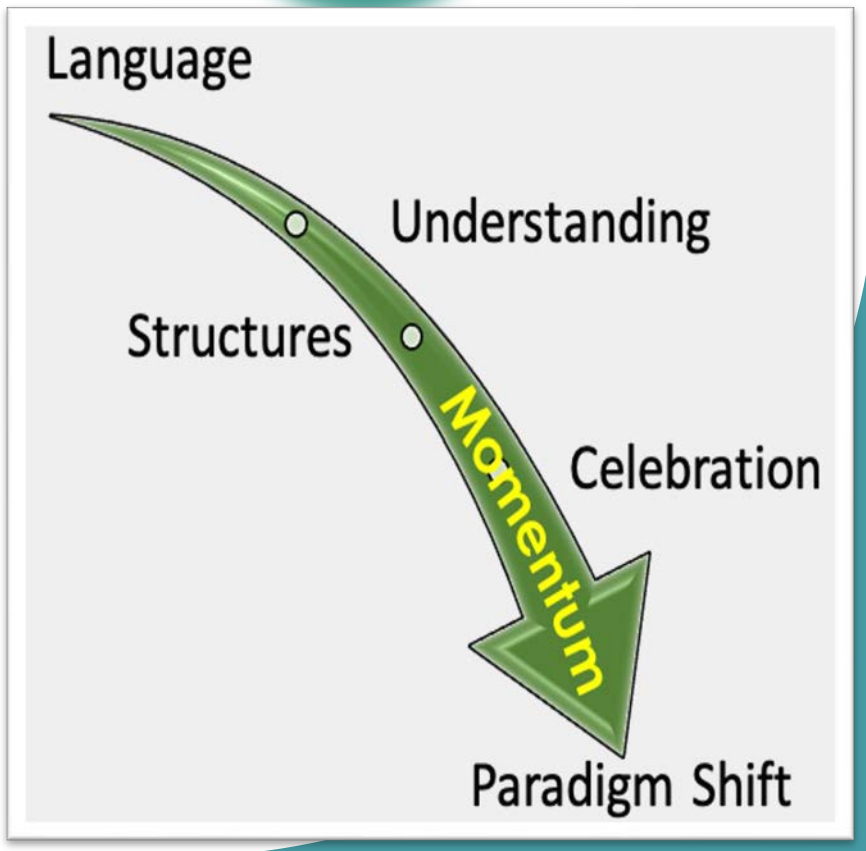
"When a discipline abandons one view of the world for another; a revolution; a drastic conceptual restructuring"

Thomas Kuhn, American Philosopher



"First comes thought; then organization of that thought, into ideas and plans; then transformation of those plans into reality. The beginning, as you will observe, is in your imagination."

Napoleon Hill, Think & Grow Rich



Starts inside government then expands to the broader audience

And Me…


Humility
Knowing our place
Knowing we don't know
Courage
Speak the truth
Not avoid the issues
Truthfulness
We don't know
We are running out of choices
Acceptance
Of our smallness
Of th
rea


I'M NOT IN DENIAL. I'M JUST VERY SELECTIVE ABOUT THE REALITY I ACCEPT.

Closing Thoughts

- Our species (humans) is to smart for our own good
- This is a transformative change that is here to stay
- Requires a paradigm shift
- It will take some time
- We are not alone in this type of change
- Requires all of us working together to make it happen in the best way possible
- There are no enemies out there – only frightened people
- The land always wins

"It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change."

Charles Darwin
1809-1882, British Scientist

Taxas

(That's it)

Medu

(Thank you)

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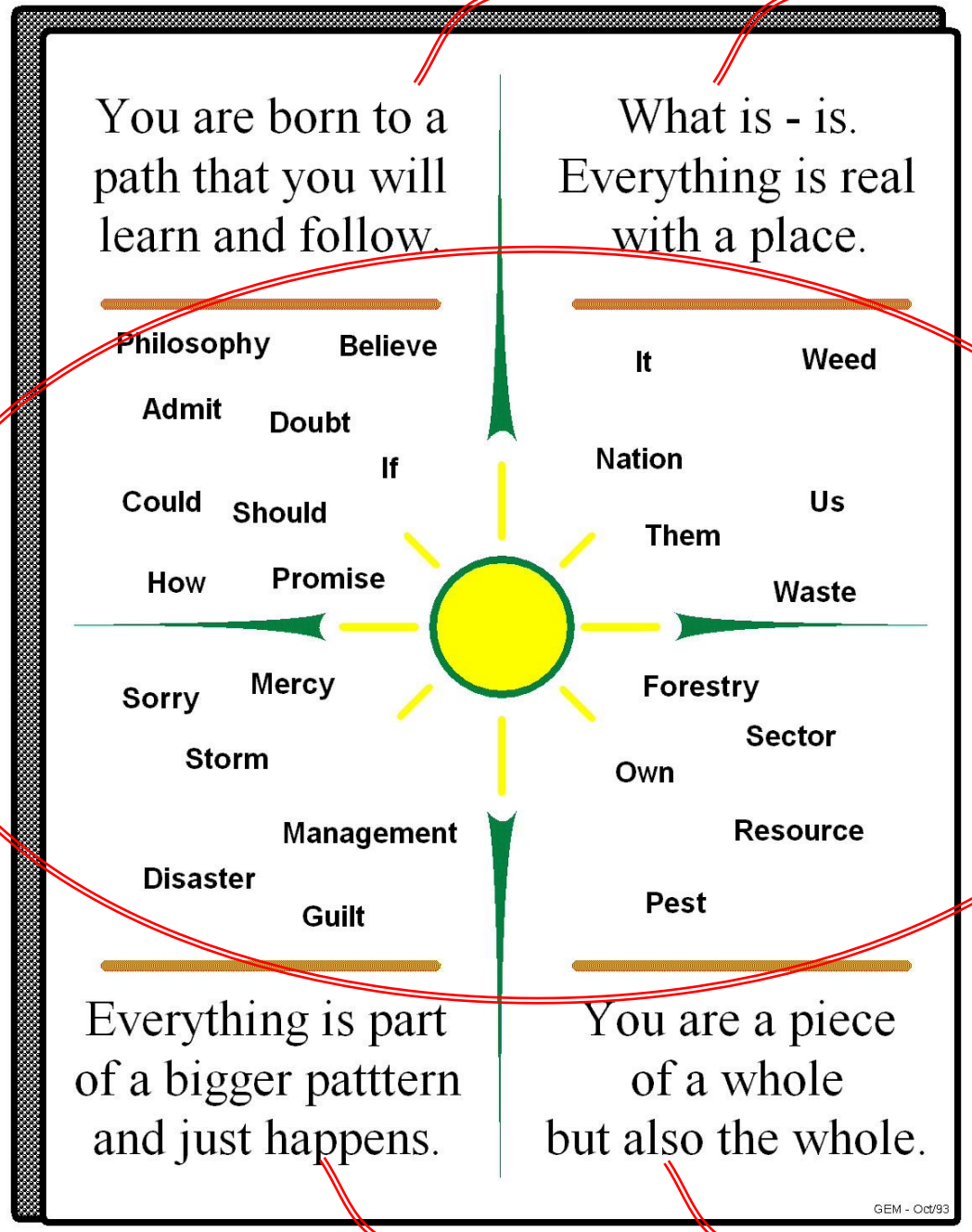

The belief that causes the words or concepts to not exist

Words or concepts that do not exist in earth-based religions