

Human Dimensions of the Environment:

How Social Attitudes and Behaviors Impact Land Preservation and Restoration

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My Ecological Journey

- Grew up in central IL – outdoor activities were significant
- My father worked for IDNR and IEPA, my mother was a mental health counselor
- Started out Pre-vet Medicine, ultimately ended up in NRES with a concentration in Human Dimensions.
- Why?

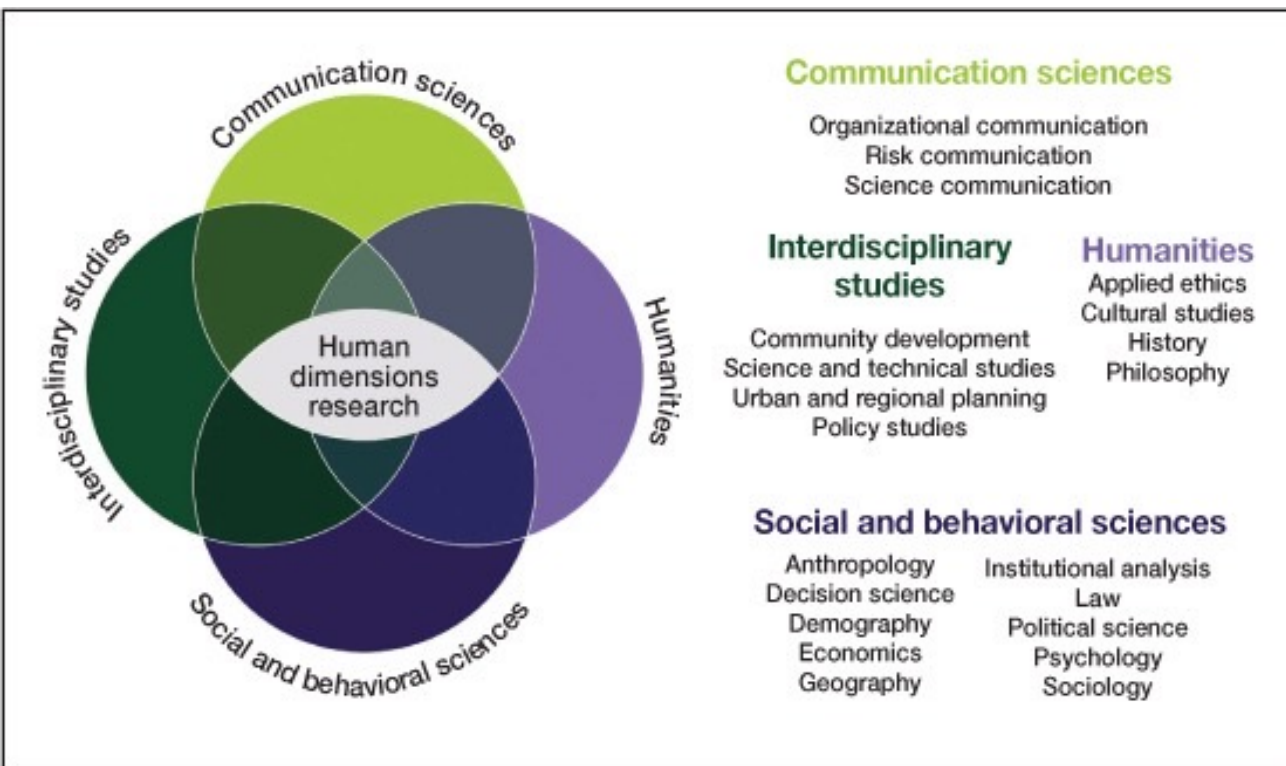
Then

Now



Today's Presentation

- This discussion will focus on how society has viewed the environment, and the impactful, **reciprocal relationship** we share with nature
- We will explore our evolving role with understanding how to **best steward** land and resources, while incorporating intrinsic value of nature and ecosystem services
- Encouraging a broader portion of **society** to embrace these concepts and **value** them, will lead to more long-term financial support, both public and private, for **conservation**
- Mission statements become more achievable



<https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1890/070181>

What is Human Dimensions?

Three main issues.

- Managing environments and resources to promote human well-being
- Encouraging sustainable behaviors through public policy
- Improving how stakeholders and other entities interact to improve environmental decision making
- Essentially, human perception and interaction with the environment.

Securing Financial Support

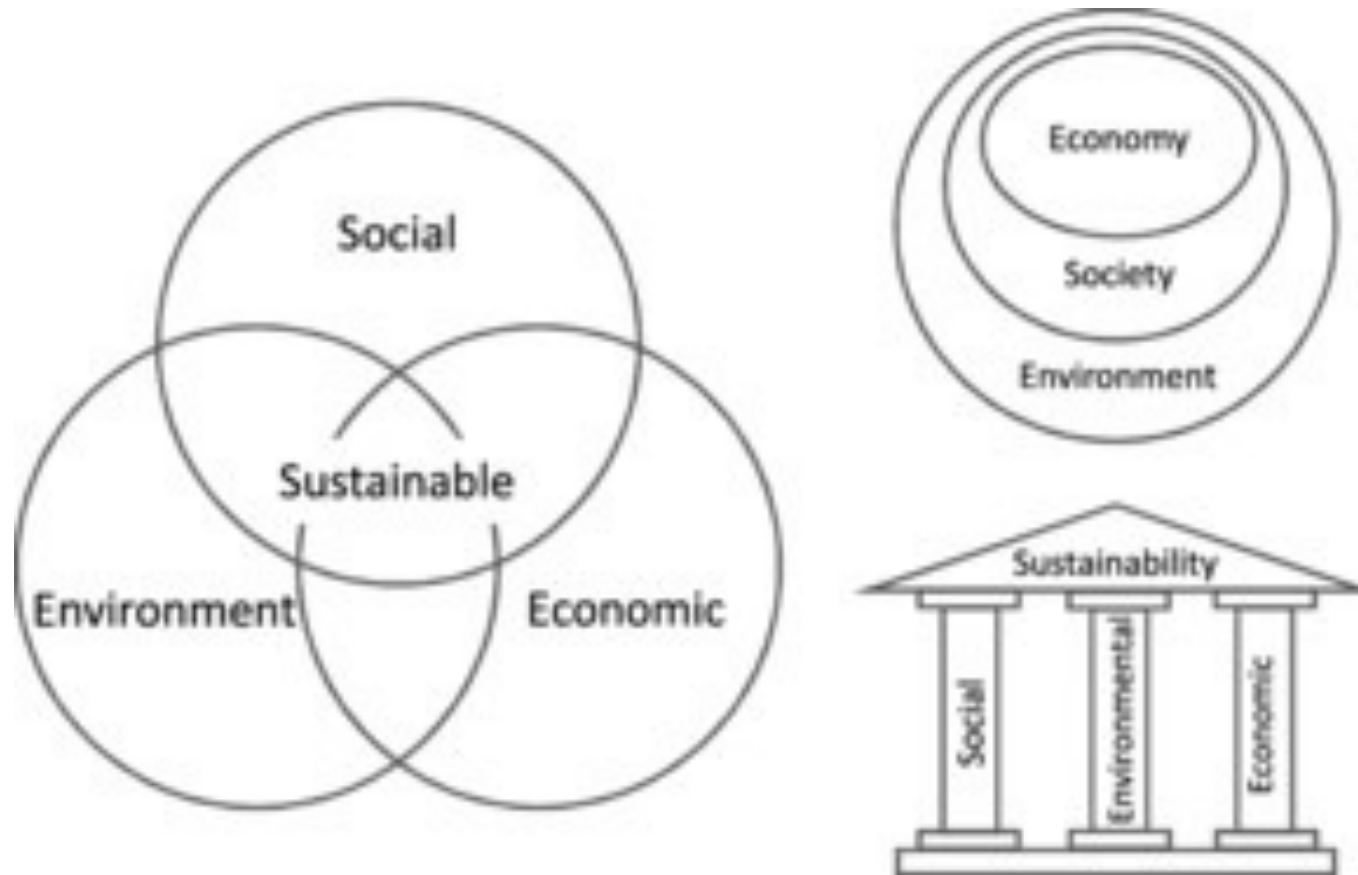


- Challenging and limits scope
- Effective restoration focuses on individual conservative species – “Remnant Out”
- Indicators of remnant habitat – why care about an orchid?
- Depends who you are speaking with and their learned behaviors regarding nature
 - Polluting knowingly (tossing out garbage) or unknowingly (vegetable oil)
- When people begin to assign value to ecosystems, they become more invested in a quality outcome and are more likely to vote for policies which reflect better funding of ecologically minded projects.

Our Perception

- Where did my car, or the shirt I'm wearing **come from?**
 - Distinctly different than from where something was purchased
- Raw materials
 - Food and other essentials which come directly from the earth, but often not in an ecologically friendly way
- Finite in a derivative based financial system
- Focus becomes profits not environment
- People are often disconnected with nature; they don't comprehend that it makes up everything they see, eat, breathe, wear, interact with, etc.
- Presently an **Economically-Minded Society** and need to become an **Ecologically-Minded Society**

Different Views of Achieving Sustainability



<https://en.wikipedia.org/wiki/Sustainability>

Economically-Minded “Vs.” Ecologically-Minded

- Not mutually exclusive
- Most cases, environmentally conscientious route is the most cost effective in the **long-term**
- Our current perceptions, in conjunction with a focus on short term **mitigation** as opposed to long term **prevention**, often pit these items against each other
- Having an ecology first mindset doesn't mean that economical factors aren't at play, they just are no longer the **only deciding factor** when discussing land and resource management
- Ex: Intermittent land bridges for wildlife
- Ex: Pond buffer maintenance

Reactive



Preventative



Conceptual Social Changes: What do we do?

- To become an Ecologically-Minded Society we must first:
 - Be aware that many people do not understand why nature and ecology are **essential to their daily lives**
 - Understand that **community involvement** will be at the root of a **social movement** that shifts our society into a paradigm from Economically-minded people to Ecologically-minded people
 - Address the issue through outreach to **all types of communities**, building a **baseline** knowledge that will determine how people make **lifelong** decisions

How Do We Achieve This Goal?

- Education at a young age
 - Intrinsic value of nature through direct experiences.
 - Not just volunteer programs, fishing/hunting clubs, school speakers, nature I.D. walks, field trips, etc.
- When individuals gain these experiences, it allows them to see nature and **ecology as a whole, functional system**, which we can impact directly, and directly impacts us every day
- Having these programs developed through a wide network of entities, will allow better **outreach** to **diverse** communities that make decisions which impact their **local** ecology
- This builds a coalition of people who will eventually **vote** in an ecologically-minded way, and are encouraged to be involved both directly and indirectly with their **local environment**



**The Forest
Preserves are
the hidden gems
of Cook County**

**But they
won't protect
themselves**

**That's why we
need to Vote Yes**

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Ecosystem Services

- What are they?
 - Goods and services produce the many life-sustaining benefits we receive from nature
- What do they provide to local areas, in **financial** and **ecological** terms?
- When people can connect to something directly, it alters the way they may make decisions
- Insects - Crop amelioration
- Wetlands - filter pollutants, retain stormwater
- All of these are less expensive to focus on proactively

Ecosystem Services Cont'd

- 4 main types
 - **Provisioning:** Food, Drinking water, Oil, Medicine
 - **Regulating:** Clean air, Filter water, Decompose waste
 - **Cultural:** Architecture, Velcro!
 - **Supporting:** Creation of soils, Water cycle
- How do they impact local communities?
- Connect with nature on a daily basis
- Leads to increases in community involvement and funding



Impacts Of A Social Human Dimensions Approach

- First step toward individuals being **engaged** in ecology via education and careers – desire to **learn**
- As simple as reading a new ecology article on your phone, or as much as dedicating a career to the environment
- More people of **variable backgrounds** involved, we develop a more **comprehensive** approach to land management, and further **increase outreach**
- Early involvement develops the environmental stewards of the future who will be tasked with taking on the projects we have all started, and expanding them for an ecologically minded society



Statement of commitment to diversity

Date: September 21, 2021 Author: Prairie State Conservation Coalition



PSCC Statement of Intention Regarding Justice, Equity, Diversity, and Inclusion

Lake County FPD Education Investment

- Starting Summer of 2022 many outdoor education programs were offered for free
 - This is viewed as an investment
 - Lake county expects a well-informed public to increase funding for environmental projects and vote in the interests of preserving land
 - “To promote removal of invasive plant species and replacement with native plant species for Lake County residents”
 - Here are some of the programs offered:
 - Butterfly Gardening
 - Landscaping for a Changing Climate
 - Landscaping with Native Plants
 - Intro to Native Plants
 - Planting for Pollinators
 - Rain Gardens 101
 - Starting Native Plants from Seed

Alternative Funding

- We must adapt how we operate
- Crowdfunding - funding a project or venture by raising small amounts of money from a large number of people
- Allows people to decide what matters to them
- People have a stake in the outcome, locally or more broadly
- Libertyville High School example

LHS QRC



How Does This Result In Better Land Stewardship?

- Enhanced **community awareness** leads to increased funding
- Land manager can make wholistic decisions – “remnant out”
- Utilize a “Remnant-Out” method
 - Comprehensive approach to management should be undertaken, with a goal of enhancing the most intact portion of the remnant area, and increasing acreage through invasive control along a degraded perimeter
 - Increasing remnant acreage improves nature’s ability to “fight back”
 - Consolidates resources

Extended Management Plans

- Eradication is novel, but utopian – likely here to stay
- Additional funding is necessary to continue to manage previously restored land
- Phragmites Ex.
- There are many examples of land clearing where invasive species readily re-establish

Lake County Buckthorn

- Goal as stated on their website, “In Lake County, the invasive species common, or European, buckthorn (*Rhamnus cathartica*) is of particular concern. Buckthorn accounts for 52.2% of the county’s trees. We aim to **eliminate** buckthorn from all forest preserves and reduce it by 50% countywide by reaching out to private landowners, working with Lake County schools, and teaming up with partners.”
- This is very valuable, often does focus on remnant areas – but there will always be more
- Hypothetical 10-year eradication
- Ultimately will require naturalization

2022 Mowing - Cleared Approximately 20 Years Ago



Private Residence Lake County



BACT Volunteer Days



Private Residence Lake County: Pre-install Flooding



Private Residence Lake County: 3 Years Post-install



Human Dimensions Summary

- Attempted to highlight our perceived role in ecology, by understanding how **ecosystem services** impact our daily lives, and how **increasing community awareness** will allow us to gain **more funding** for projects and **better steward land** as a community
- Distinction of what it means being **ecologically-minded** as opposed to **economically-minded**, and how this crafts our **daily decision-making process**
- Examples were presented showing how these **perceptions of nature** have allowed some property owners and local entities to make a **wholistic land decision**, without negatively impacting their **financial bottom line**

We Need to Love Nature Back!



Thank you



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