

# **SOSCP Conservation Science Forum 2019**

**What is Conservation Science?**

**Who are the Scientists?**

**Why is Communication Important?**



# What is science?

## Definitions

Observations and experiments that lead to reliable knowledge about the world around us.

Knowledge that may be studied, learned, tested, and organized in unified disciplines.

# What is conservation?

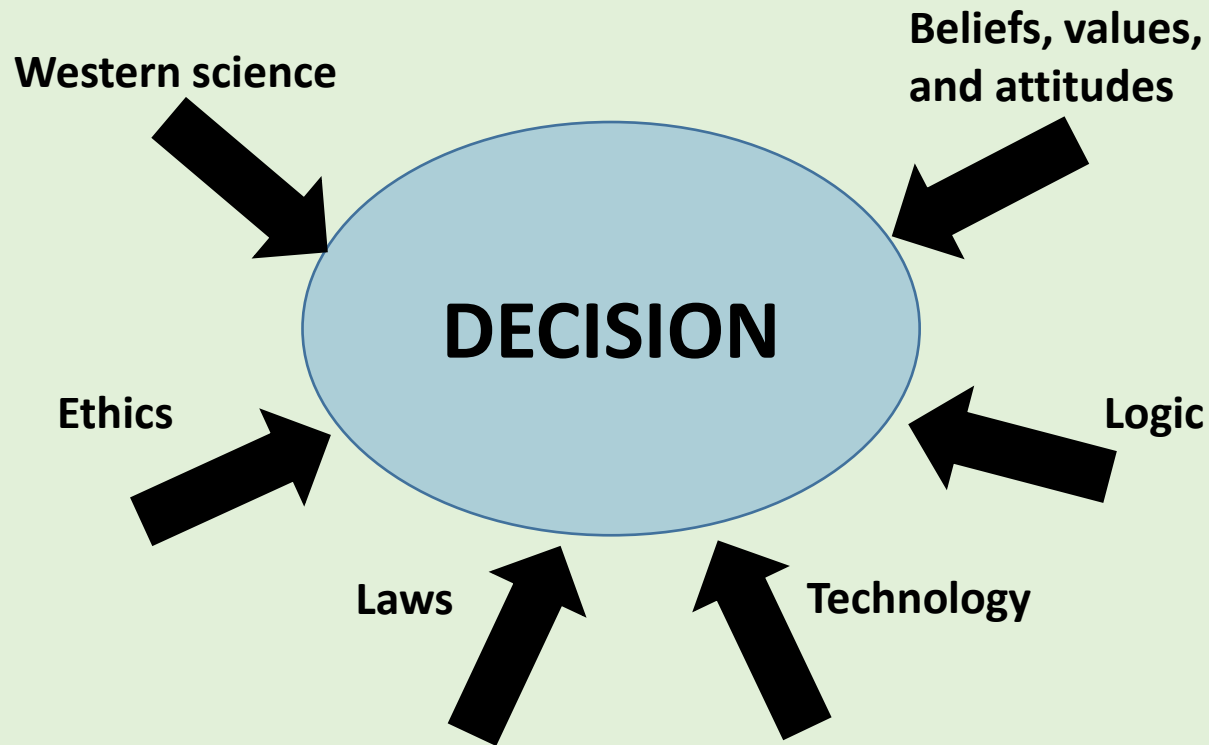
## Definitions

Preventing wasteful use, decay, injury or loss

Supervised protection from damaging effects of human activity

Careful and necessary use of nature to ensure constant availability in future

# Science often at the core of conservation, but Conservation decisions only consider science



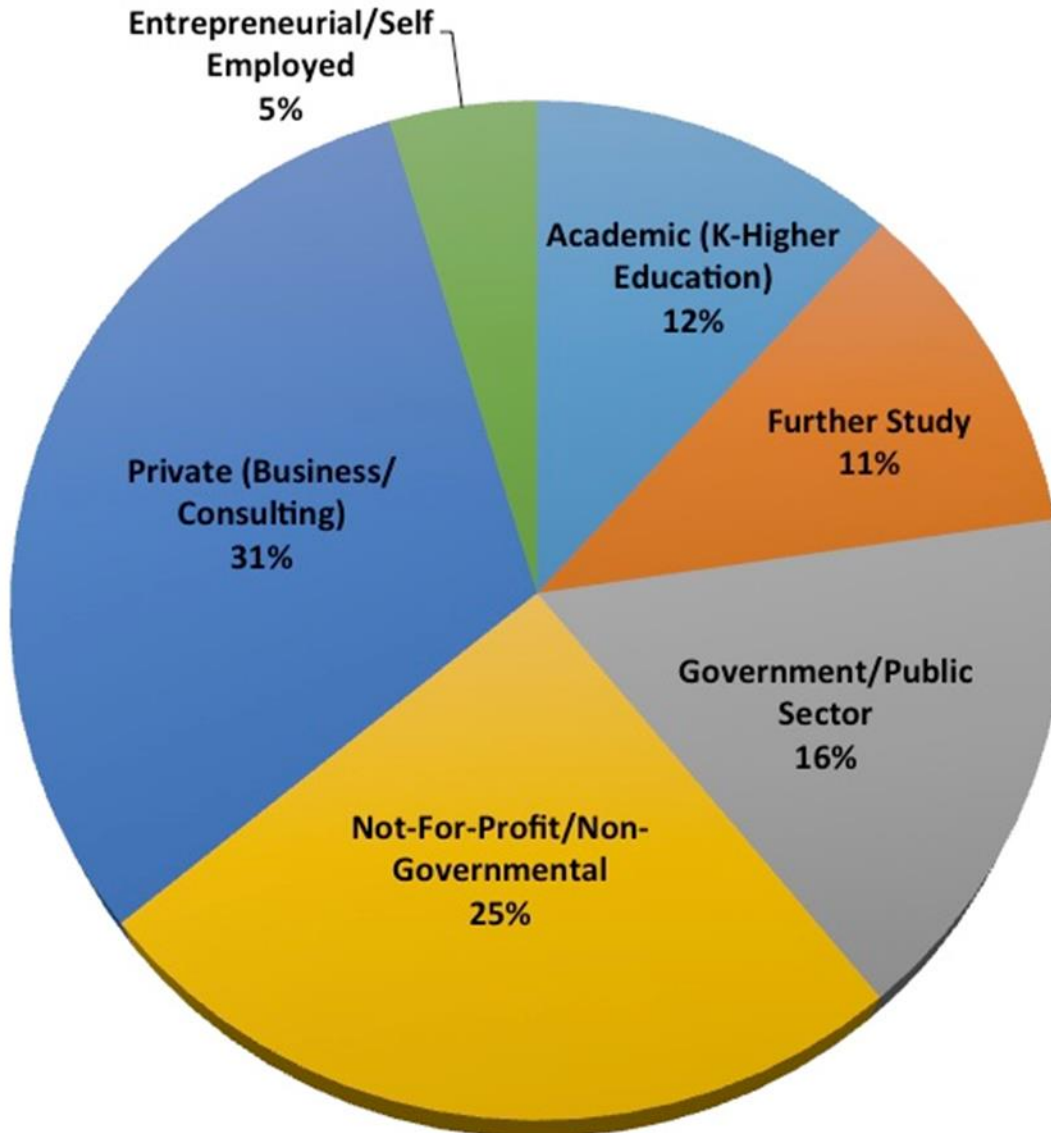
# **Science often at the core of conservation, but Conservation decisions only consider science**

## **Precautionary Principle**

A duty to prevent harm when it is within our power to do so, even when all the evidence is not in.

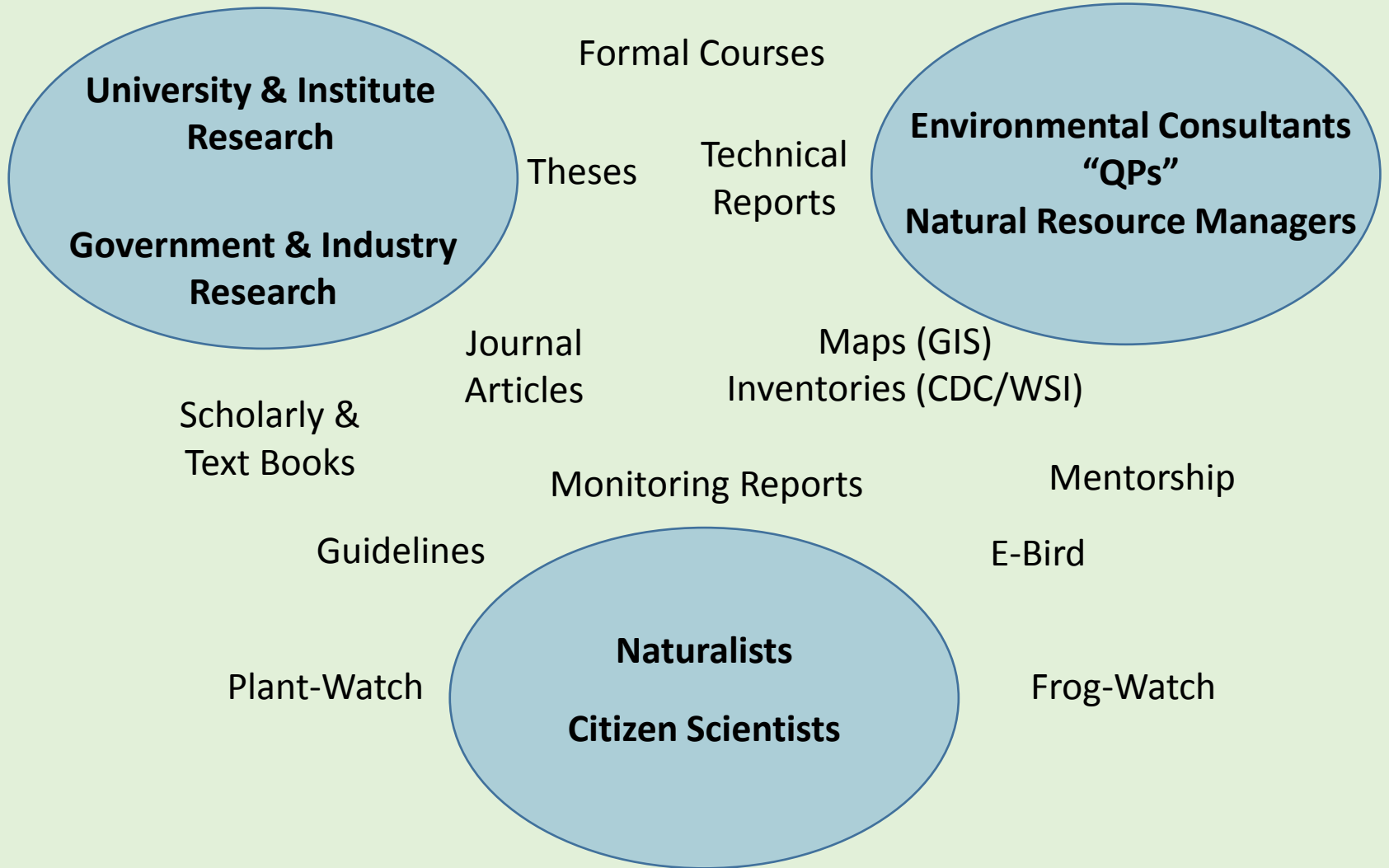
Consequences of failing to take conservation action may result in losing something forever.

# Who are the scientists?



2014 Yale School of Forestry  
and Environment  
employment of recent  
graduates

# Who are the scientists?



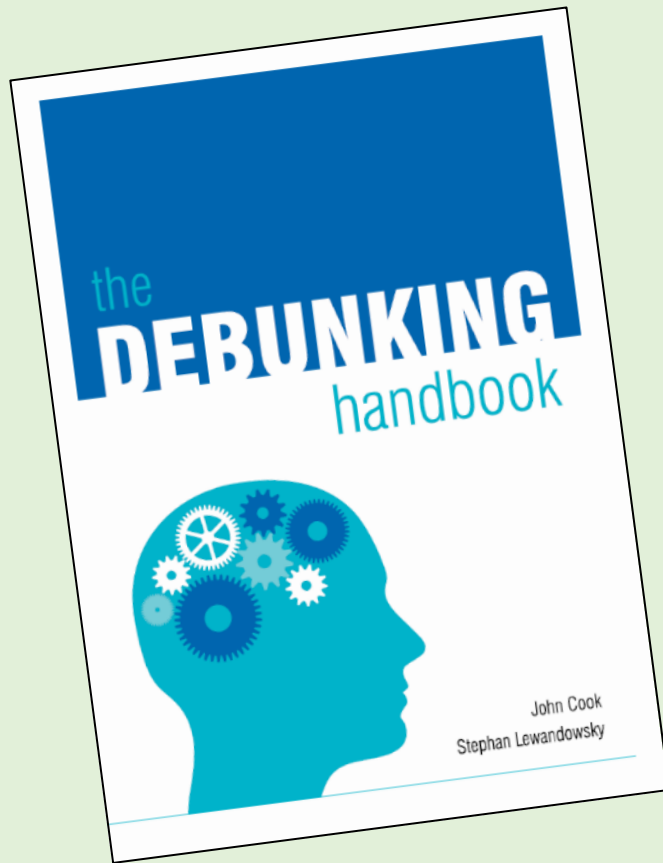
# Communicating Conservation Science



<i>Ranked by All Voters % Total Trust</i>	<b>All Voters Total Trust</b>
Firefighters	<b>92%</b>
Nurses and other health professionals	<b>86%</b>
Biologists	<b>85%</b>
Farmers and ranchers	<b>84%</b>
Scientists	<b>83%</b>
Your state department of natural resources	<b>75%</b>
Professors at a major research university	<b>74%</b>
Conservation organizations	<b>74%</b>
Hunters and fishermen	<b>73%</b>
Your local church or place of worship	<b>71%</b>

<b>Bad Words to Avoid</b>	<b>Good Words to Use</b>
<i>Environment</i>	<i>Land, air and water</i>
<i>Ecosystems</i>	<i>Natural areas</i>
<i>Biodiversity / endangered species</i>	<i>Fish and wildlife</i>
<i>Regulations</i>	<i>Safeguards/protections</i>
<i>Riparian</i>	<i>Land along lakes, rivers and streams</i>
<i>Aquifer</i>	<i>Groundwater</i>
<i>Watershed</i>	<i>Land around rivers, lakes and streams</i>
<i>Environmental groups</i>	<i>Conservation groups / organizations protecting land, air, and water</i>
<i>Agricultural land</i>	<i>Working farms and ranches</i>
<i>Urban sprawl</i>	<i>Poorly planned growth / development</i>
<i>Green jobs</i>	<i>Clean energy jobs / jobs protecting water quality / etc.</i>
<i>Ecosystem services</i>	<i>Nature's benefits</i>
<i>Landscape-scale conservation</i>	<i>Large, connected natural areas</i>
<i>Landscape</i>	<i>Lands / mountains / etc.</i>
<i>Resilience</i>	<i>Creating prepared communities (for flood, fire, etc.)</i>
<i>Nutrient loading</i>	<i>Harmful levels of nutrients like nitrogen and phosphorous</i>

# Communicating Conservation Science



- Bring forward a few core facts about the truth, do not overkill or it will backfire.
- Provide an explicit warning something is false before you mention the myth, or you might reinforce it.
- Provide alternative causal explanations why a myth is wrong, don't leave it hanging.
- Use graphics and avoid too much text or jargon.



# Communicating Conservation Science

## Probability, Likelihood, Error, Chance

- Honest dealing by environmental scientists
- Creates sense of uncertainty in non-scientists
- Feeds myths about unlikely, improbable phenomena



$P=0.5$



$P=0.17$



$P=0.95$

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