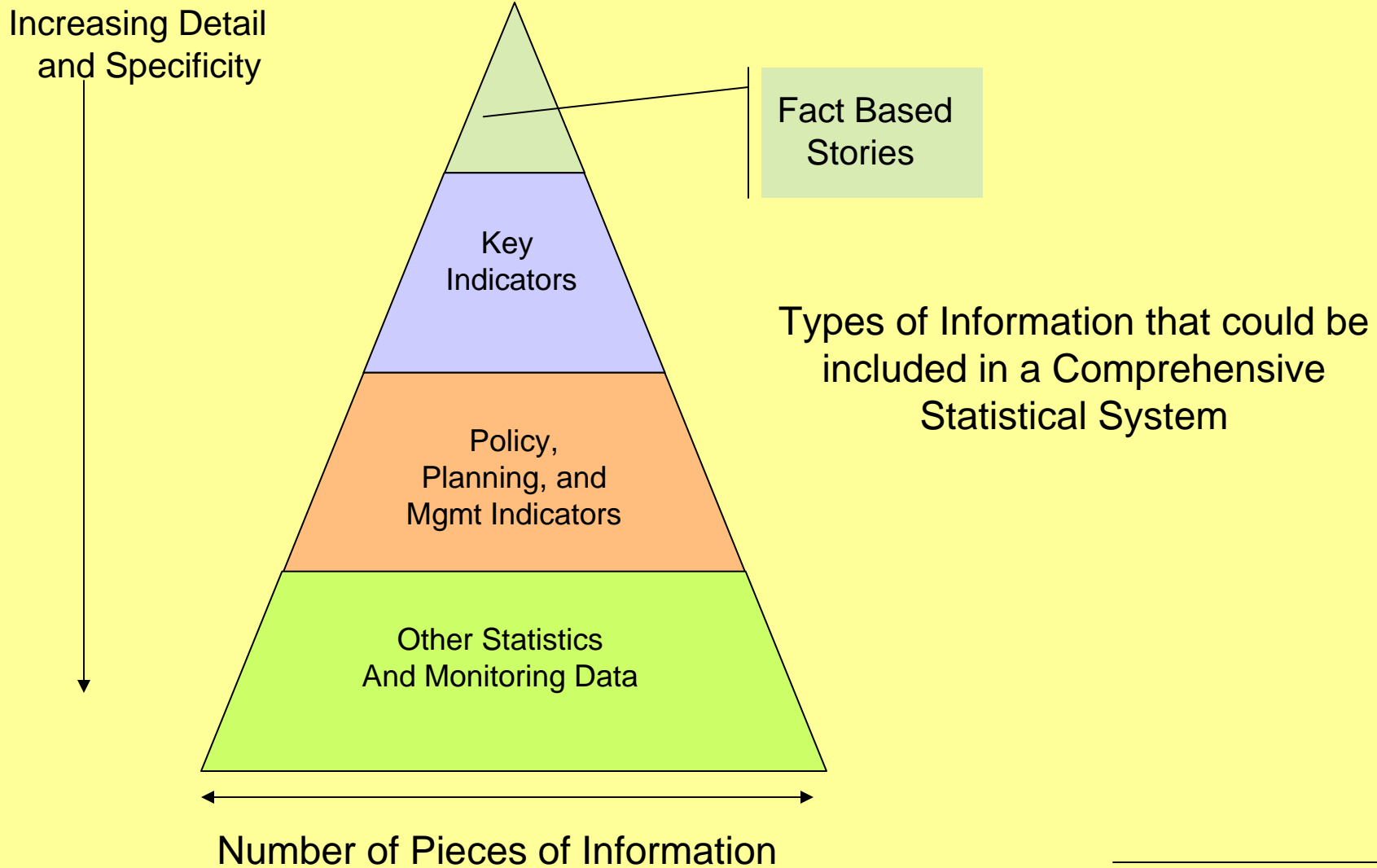


# Thinking Across Scales in Designing A National Environmental Information System

Robin O'Malley  
Director, Environmental Reporting  
The Heinz Center

# The Information Pyramid



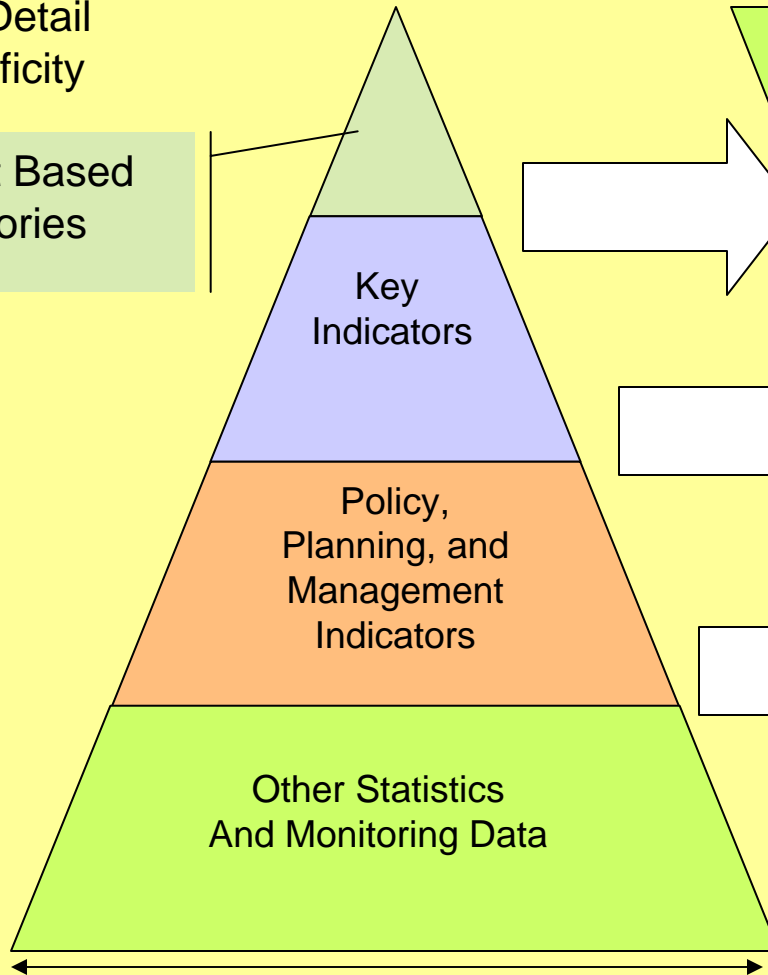
# Types of Information and Functions

Types of Information From  
A Comprehensive System

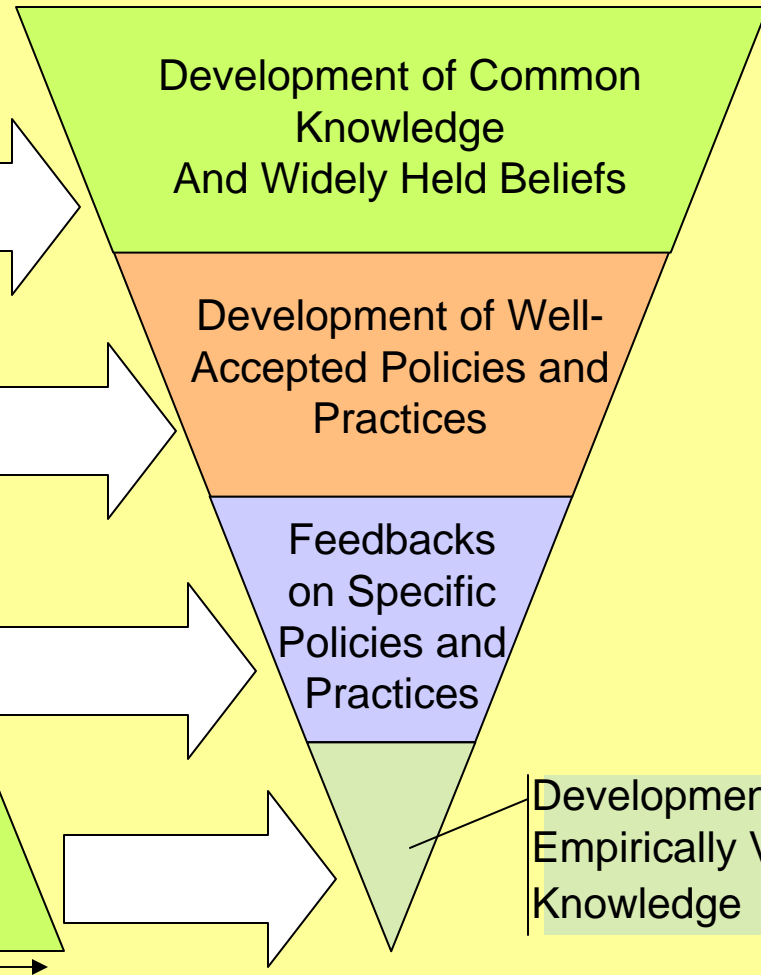
Functions Performed  
Using Information

Increasing Detail  
and Specificity

Fact Based  
Stories



Number of Pieces of Information



Development of Common  
Knowledge  
And Widely Held Beliefs

Development of Well-  
Accepted Policies and  
Practices

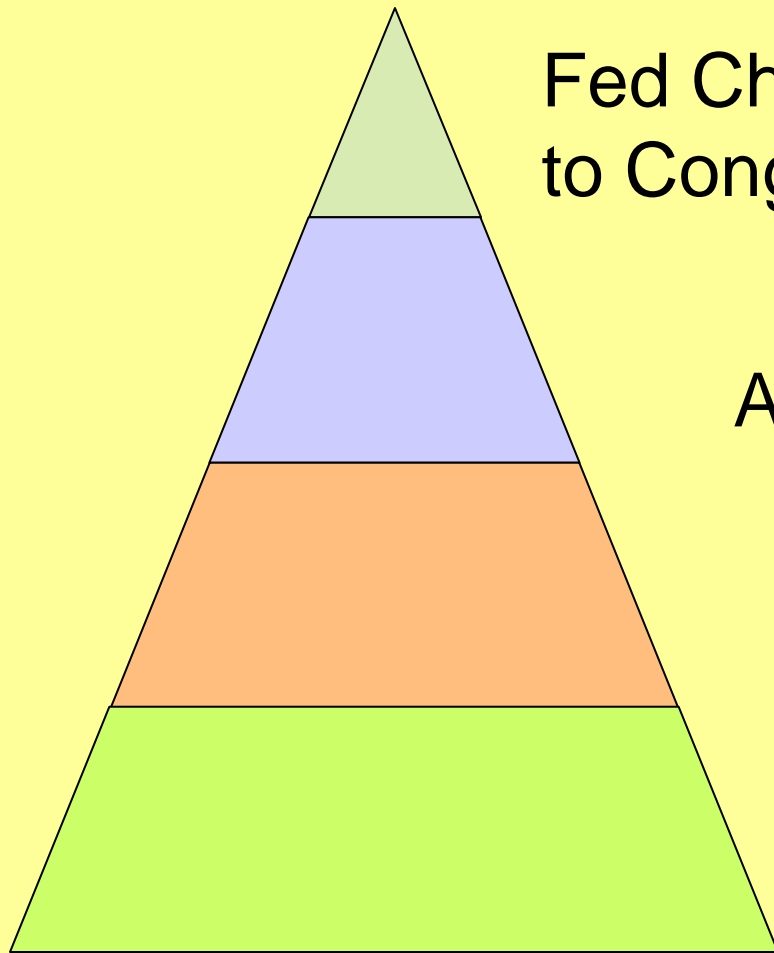
Feedbacks  
on Specific  
Policies and  
Practices

Development of  
Empirically Validated  
Knowledge

Number of People Using  
Each Piece of Information

Credit: Ted Heintz, CEQ

# The Economic Information Pyramid



Fed Chair: Semiannual Report to Congress

Aggregators: BEA, BLS, etc.

- state level, city level, industry sector, demographic breakouts

Firms, Households, Local data (e.g., unemployment office)

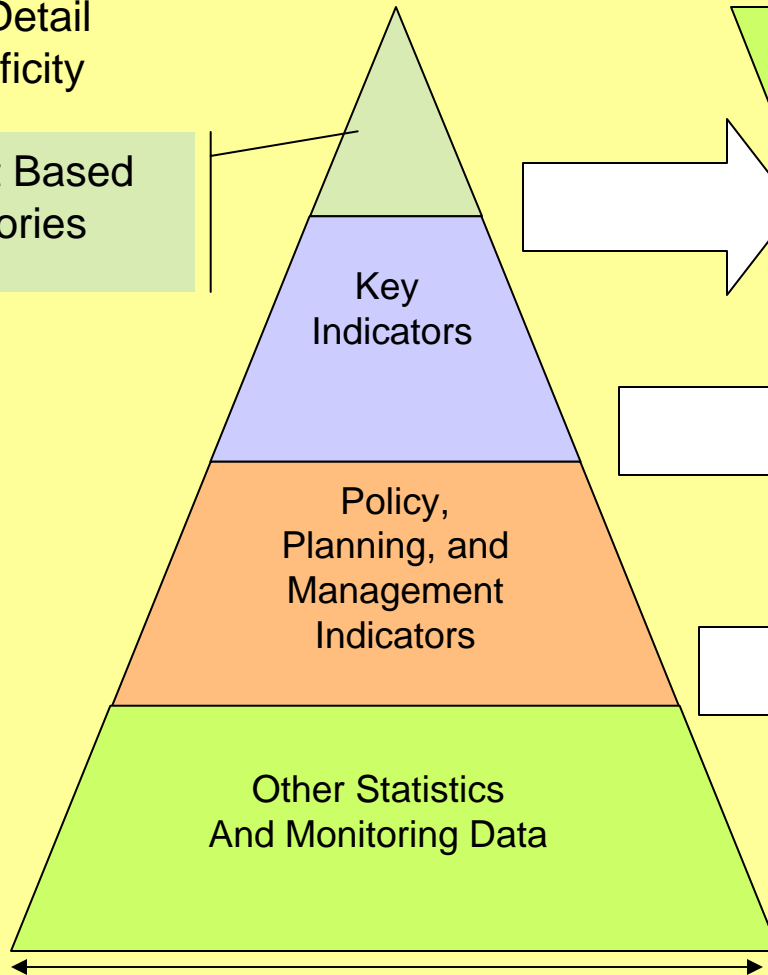
# Types of Information and Functions

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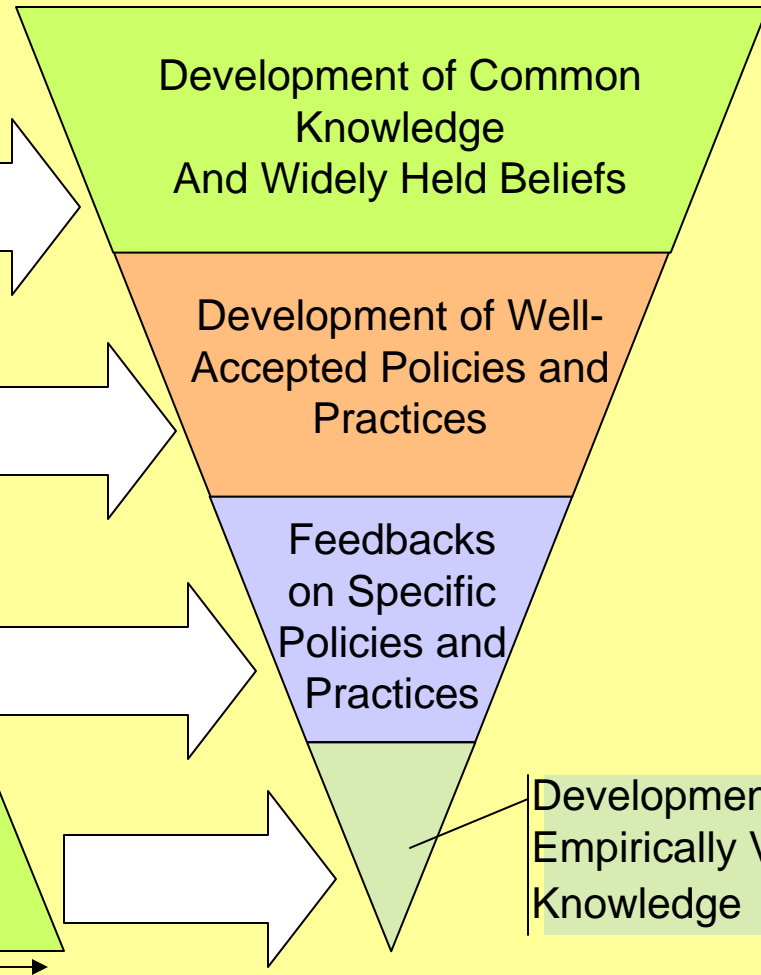
Functions Performed  
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Increasing Detail  
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Fact Based  
Stories



Number of Pieces of Information



Number of People Using  
Each Piece of Information

Credit: Ted Heintz, CEQ

# Major Functions / Purposes

## Broad knowledge and beliefs

- *How are we doing overall?*
- *e.g., SOTNE, KNII*

## Medium-scale management / evaluation

- *Is problem X common? Is Area A affected more than Area B? How are conditions changing?*
- *e.g., NAWQA, FIA, NRI. (EPA-ROE)*

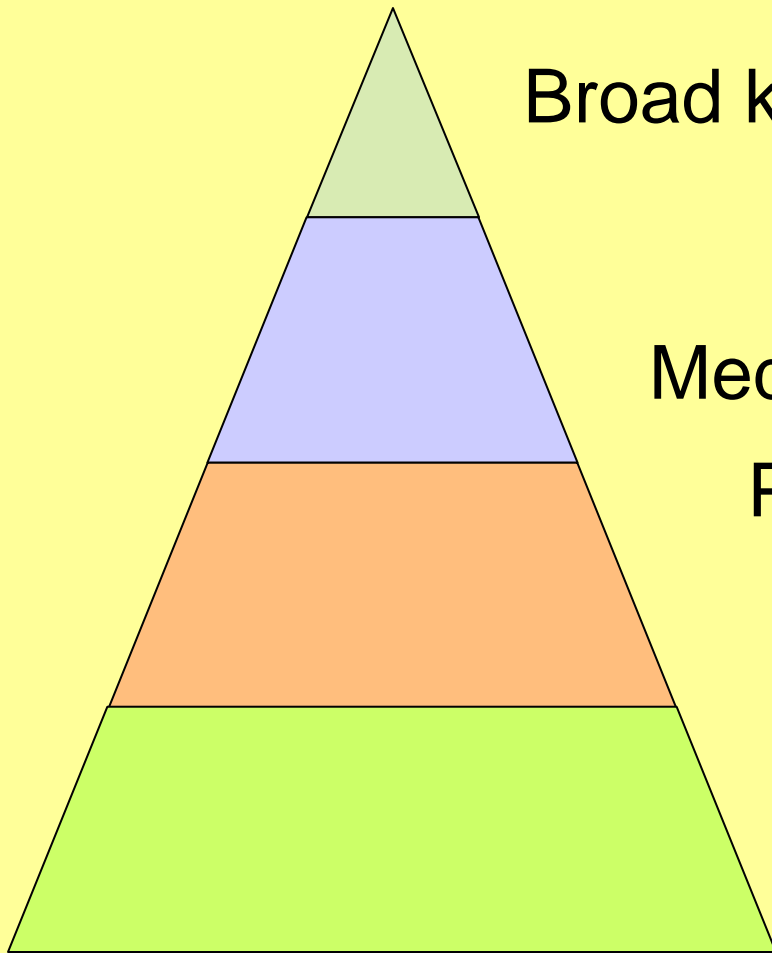
## Program evaluation

- *Is Program Z “doing its job?”*
- *e.g., EPA-ROE*

## Local scale decision making / evaluation

- *What are current conditions and trends at Area C?*

*(Research, Surveillance)*

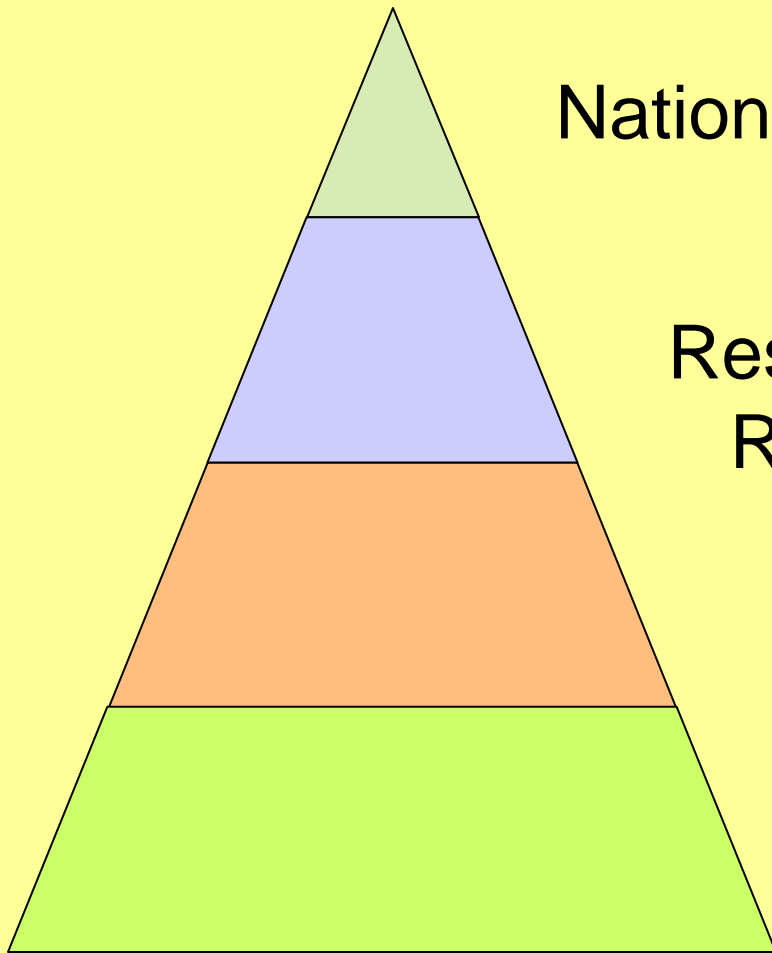


Broad knowledge and beliefs

Medium-scale management  
Program evaluation



Local scale decision-  
making / evaluation



National (scale, government)

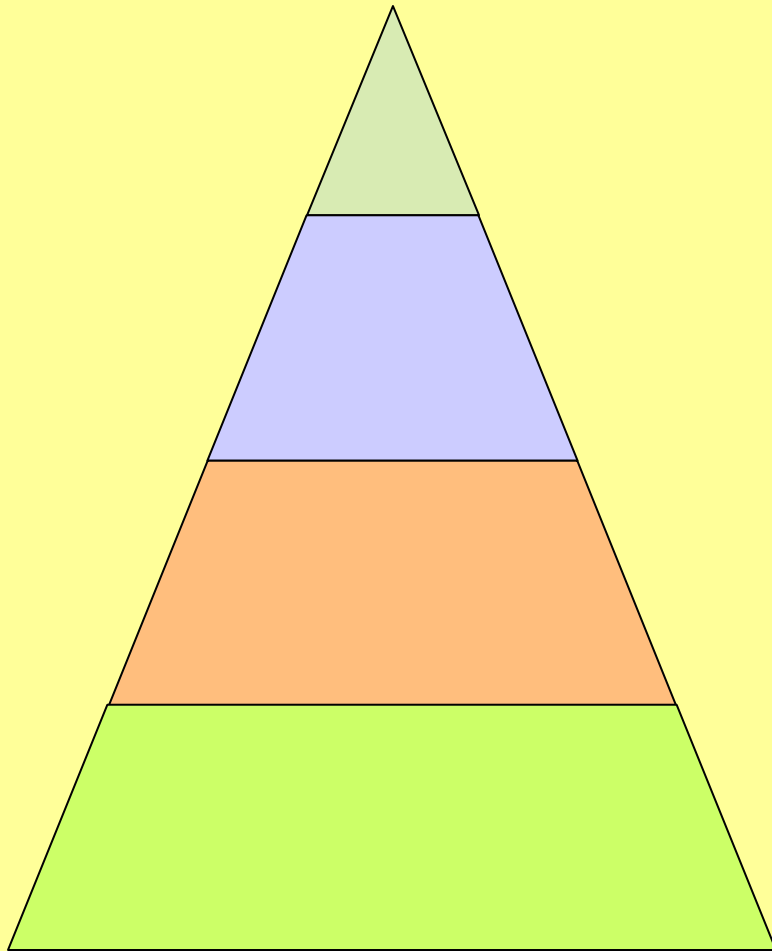
Resource  
Region

Agency / program



Local (scale,  
government)





## Three examples

- Nitrogen in water
- At risk species
- Sprawl

# What holds the pyramid together?

