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USDA Conservation Programs Past, Present & Future

**Otto Doering
Purdue University**

**USDA Agricultural Outlook
Forum Presentation 2010**

Conservation is a Wicked Problem!

**(As Are Environmental
Preservation, Sustainability,
Ecological Health, Etc., Etc., Etc.)**

Tame Problems are Easy (Linear and Subject to Normal Science-Scopeable)

**Putting a Man on the Moon
Repairing the Hubble Telescope**

Summary of Differences between Tame and Wicked

Starting from the Problem Itself;

Tame

**Clear Problem Definition
Pointing to Solution**

**Outcome definitive
Solved or Not Solved**

Problem Stable

Wicked

**No Agreement
Attempted Solution
Changes Problem**

**No Solution
Better or Worse**

Morphs over Time

The Role of Stakeholders

Tame
Causes Determined
by Experts
(Science)

Wicked
Stakeholders have
different Views of
the “Real” Problem

Tame
Task Completed =
Problem Solved

Wicked
No definitive solution
or End Point
(political forces,
resources, and
values stakeholders)

Nature of the Problem

Tame

**Science Based
Protocols Define Choice
Of Solutions**

**Low Uncertainty as
To System Components
And Outcomes**

Wicked

**Solutions based on
Multiple Stakeholder
Judgments**

**High Uncertainty as
to System Components
and Outcomes**

Outcomes

Tame

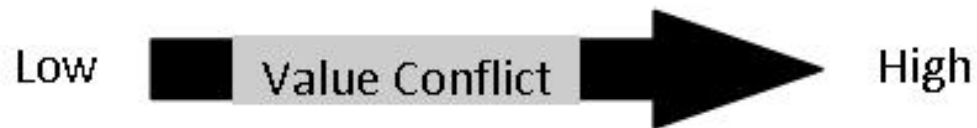
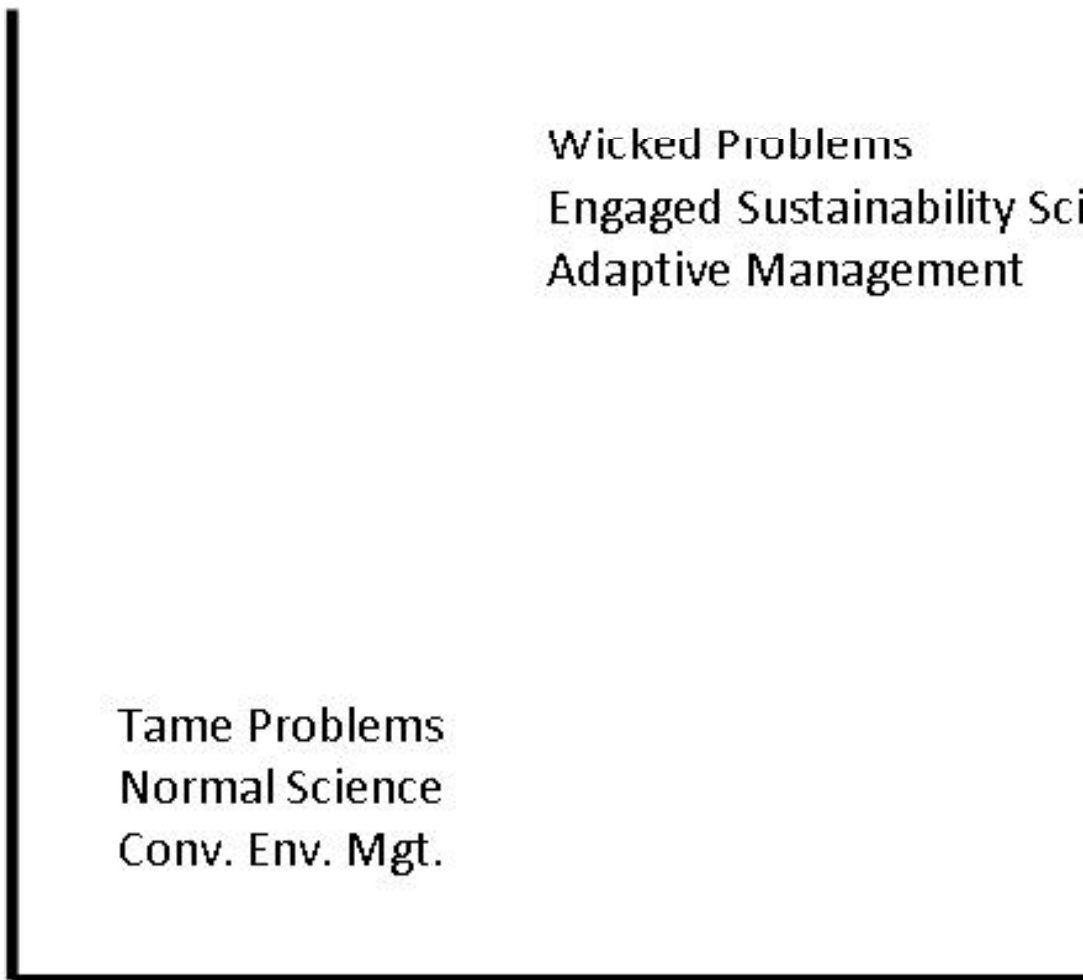
**Shared Values as to
Desirability of
Outcomes**

Wicked

**Few Shared values
Shifting Societal Goals**

Tame problems can be solved by experts who produce workable solutions using the analytical approaches of their disciplines. These follow the linear model of “normal” Science having extremely high internal validity.

Wicked problems cannot be categorized into disciplinary boxes. Hard to divide into manageable parts because this assumes clear causal paths. Difficult to decide what facts to gather without first discussing values.



Helms and Sampson Show That Conservation Has Always Been Wicked!

- **Bennett's Career As A Wicked Problem Solver**
- **New Institutions To Deal With The Attributes of Wicked Problems**

How Do We Deal In The Future?

- **Wicked Problems Still Need Science**
- **Need Multi-disciplinary Approaches**
- **Still Need Rules and Institutions**

**(Often Different From Those
For Tame Problems)**

But, At The Same Time We Will Need To;

- **Reflect Societal Desires
(Long Term Values?)**
- **Engage A Broad Scope Science Perspective**
- **Actually Practice Adaptive Management**
- **Learn to Live with Multiple
Stakeholders& High Uncertainty**
- **Reflect the Changes In the Physical and
Human/Social Landscape**
- **And Be Forced To Rub Our Noses
In The Problem**

Reflecting What Society Wants

- **Clean Water, Not More Program Participants, BMPs or Enrolled Acres**
- **The Metric Rules –
We Get What We Measure –
A Pity If That Is Not What We Want**

Science for a Purpose (CEAP) – Answering Critical Questions, Not Just “Solving” Problems

- **What Are the Effective Interventions**
- **Where To Intervene On The Landscape**
- **How to Monitor Outcomes Cost Effectively**

Practicing Adaptive Management (Admitting It Isn't As Good As You Thought)

- **Having Science In Hand That Identifies Viable Alternatives**
- **Administrative, Institutional & Political Flexibility**
- **Financial Flexibility**

Conservation Institutions Evolved With Stakeholders Of That Day

- **Who Are Our Stakeholders Today?**
- **Who Will Be Our Stakeholders?**
- **Whom Do We Have to Please (Or Appease)
Now And In The Future?**

Can We Reflect Changes On The Landscape In Programs And Ground Level Implementation;

- **In Actual Land Use Patterns – Now And Future?**
- **In Whom We Deal With?**
- **In How We Approach Them?**

How Can All Participants In The Process Be Forced To Rub Their Noses In The Problem?

**(Henry A. Wallace
And The Cotton Plow Down)**

Questions For The Future

Will The Actual “Entitlements” Of Commodity Program Payments Continue To Grow Relative To Expenditures On Conservation?

**Will Some Conservation Standard
Be Required As A Basic
Responsibility For All On The
Land?**

Will Conservation Be A More Strongly Held Value In The Future (A Moral Imperative)?

**Will We Reintroduce Conservation
Compliance With Teeth Where
Those Providing Technical
Assistance Are NOT The
Enforcers?**

Will We Successfully Harmonize Accountability, Accounting, and Economics With What Needs To Be Done On The Ground?

**Will We Be Allowed To Target
Resources Where They Can Be
Most Cost Effectively Used?**

Will We Be Allowed To Combine The Stick With The Carrot For Maximum Impact?

What Are Our Options For The Future If All Preceding Questions Are Answered Negatively?