Judges Training

ENVIRONMENTAL LITIGATION

EVIDENCE

OUTLINE OF PRESENTATION

ENVIRONMENTAL EVIDENCE GENERALLY

SCIENTIFIC EXPERT EVIDENCE

MANAGING EXPERT EVIDENCE

STANDARDS OF PROOF

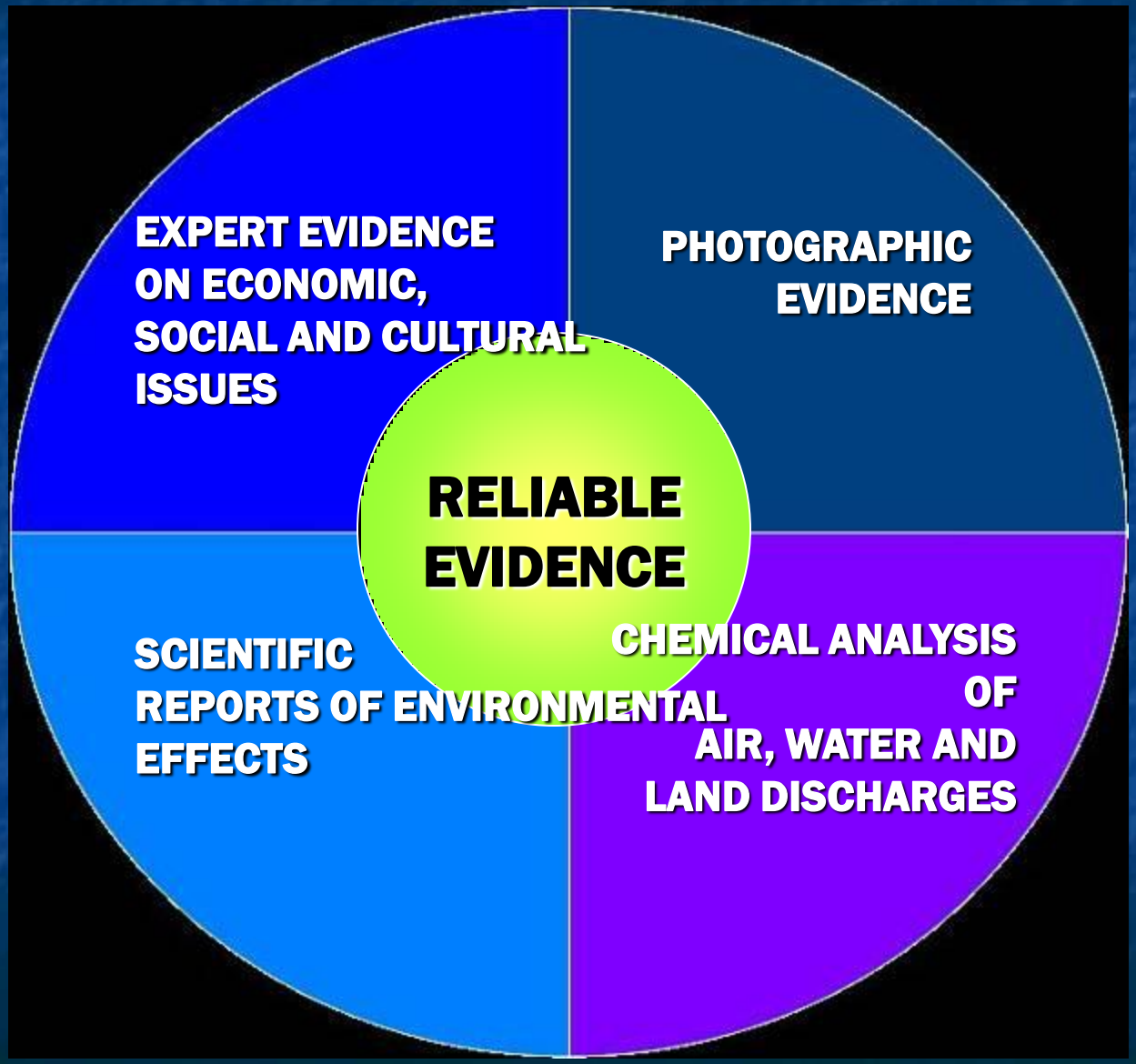
DECISION MAKING AND UNCERTAINTY

EVIDENCE IN ENVIRONMENTAL CASES GENERALLY

- Technical evidence must be understood
- Courts can appoint experts and make site visits to assist their understanding of the case



EVIDENCE IN ENVIRONMENTAL CASES



EXAMPLES OF WATER POLLUTION EVIDENCE

- Pollutants in the water
- Discharge pipes
- Dead fish
- Chemical analysis
- Medical evidence

EVIDENTIARY ISSUES IN ENVIRONMENTAL CASES

- Authenticating technical proof
- Evaluating technical evidence

AUTHENTICATION – WHY A NOTEWORTHY ISSUE?

- Many environmental cases hinge on sampling and analysis of various environmental media
- Integrity of samples and laboratory practices is significant
- Environmental cases can involve new forms of technical proof (e.g., satellite imagery)

AUTHENTICATING SAMPLING DATA

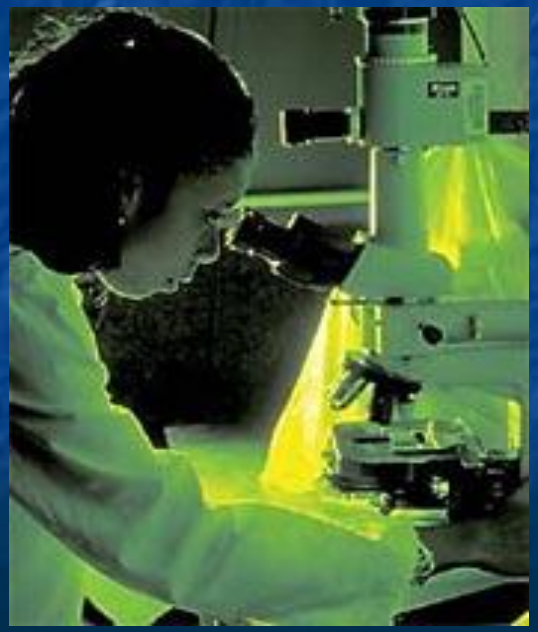
- Samples properly captured
- “Chain of custody” of samples, cradle to grave
- Transportation and storage of samples in manner preserving integrity
- Analysis pursuant to good laboratory practices, including properly calibrated and clean equipment

AUTHENTICATING SAMPLING DATA: EASING THE TRIAL BURDEN

- Stipulations of fact
- Allowing opposing party to analyze “split samples”
- Self-impeachment limitations

GENERAL RULE OF EVIDENCE AS APPLIED IN ENVIRONMENTAL CASES

- Facts, not opinions
- Direct observation of facts
- Court can thus receive the most reliable evidence

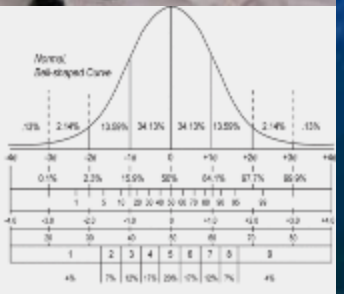


EXCEPTION FROM THE GENERAL RULE OF EVIDENCE

- Matters calling for special knowledge – Here, opinion evidence can be sought

What plant is it?

TYPES OF EXPERT EVIDENCE



A) PHYSICAL

- Chemistry
- Toxicology
- Epidemiology
- DNA
- Medical
- Engineering
- Satellite Imagery

B) ECONOMIC & SOCIAL

- Economic Benefit/Loss/Damages
- Natural Resource Valuation
- Social Cost/Benefit
- Environmental Impact
- Cultural, Historical, Aesthetic

C) METHODS

- Statistics
- Multiple Regression
- Survey

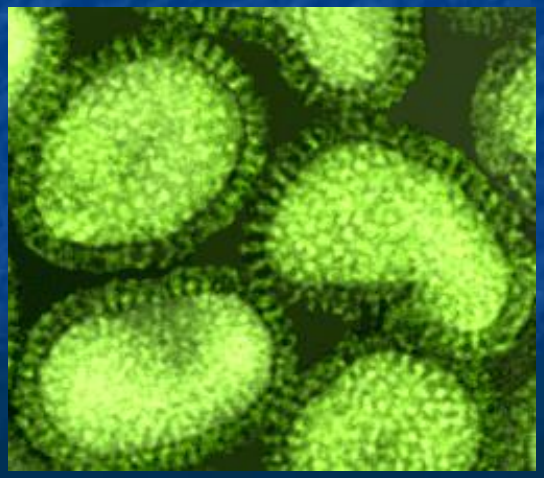
TOXICOLOGY

- The study of the adverse effects chemicals have on living organisms - symptoms, mechanisms, treatments and detection of poisoning.
- Toxicological evidence may be offered when there are claims that chemical exposure caused a disease or injury.
- Toxicology attempts to determine at what doses chemicals cause disease or injury.
- Toxicology answers this question: What risk or probability of injury is associated with different doses of exposure?

EPIDEMIOLOGY

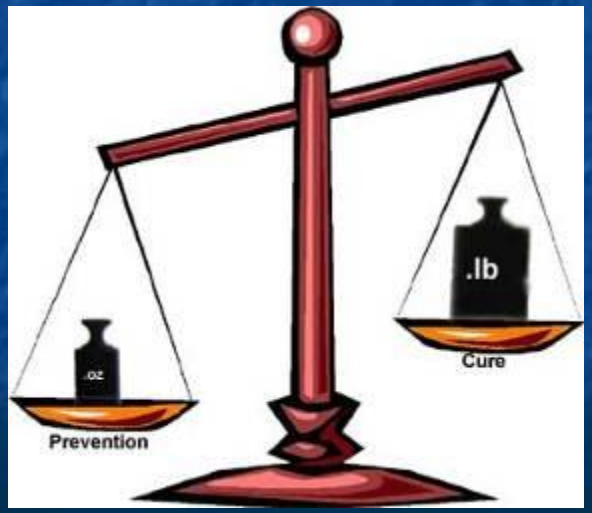
- Studies the occurrence, distribution, and progress of disease in human populations.

- Epidemiology identifies factors that are associated with increased risk of disease.



ECONOMIC LOSS/DAMAGES

Seeks to determine the difference between the value after the damage causing event and what the value would have been if that event had not occurred.



NATURAL RESOURCE DAMAGE (NRD)

- Compensation to the public for the loss, or lost use, of natural resources or the services they provide
- Underlying goal is to reverse loss to the “public trust” (the nation’s natural heritage)
- Question is how to restore, replace, rehabilitate, and/or acquire equivalent natural resources.

NRD – Valuation Methods

- Contingent Valuation
- Travel Cost
- Hedonic
- Combined Travel Cost / Contingent Value
- Habitat Equivalency

Statistics

- Statistical evidence may be part of many kinds of cases, including part of expert evidence of toxicological, epidemiological, economic and natural resource damage.

- Judges must be prepared to learn the terminology of statistics and to discern the strengths and weaknesses of a given statistical approach.

COMPETING SCIENTIFIC EVIDENCE: WHO IS CORRECT?

PRINCIPLES FOR ASSESSING SCIENTIFIC EVIDENCE

- Can the results be tested or verified?
- Has it been peer reviewed? Published?
- Is it widely accepted?
- Is there an identified error rate?

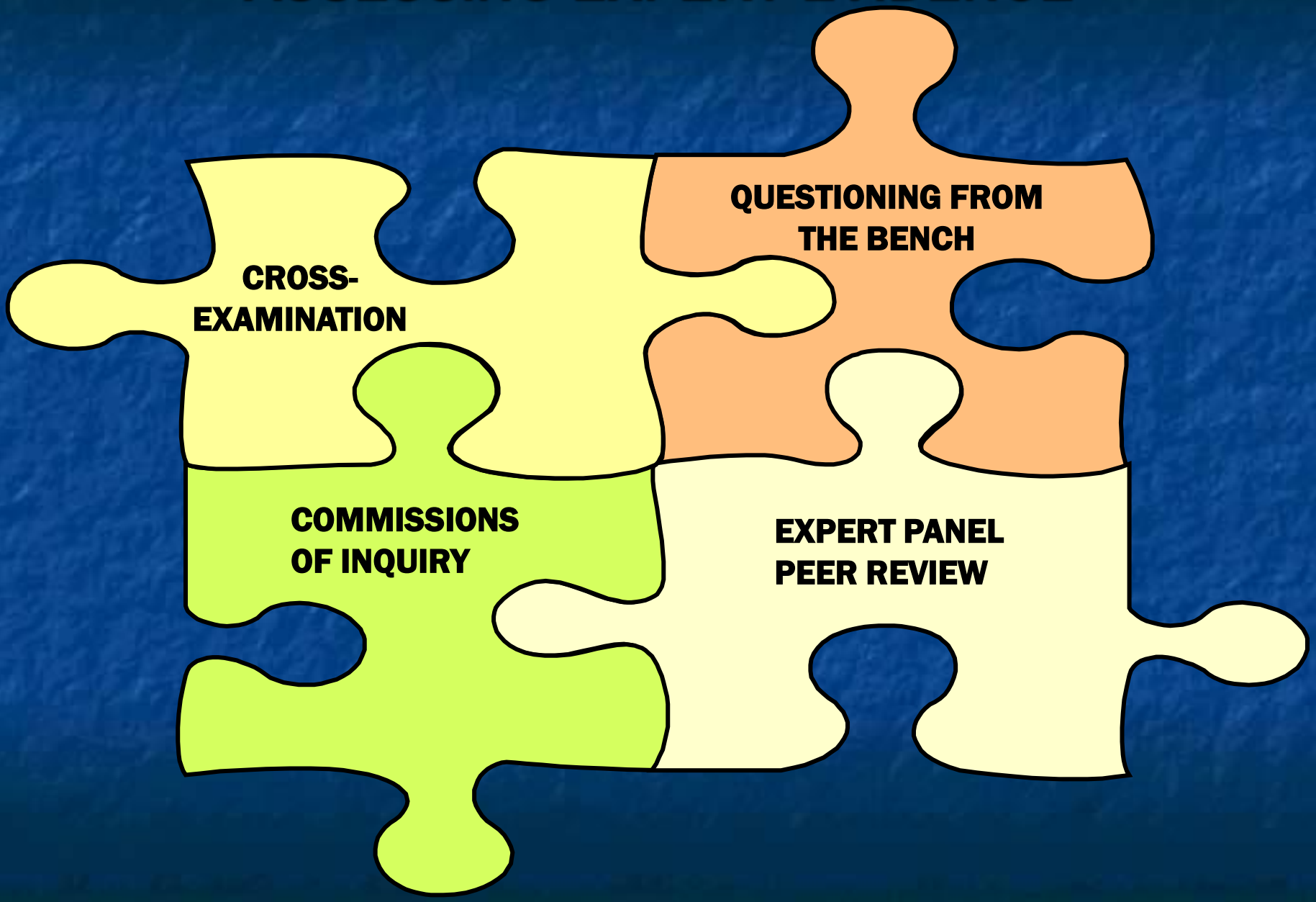
REFERENCE GUIDES

The Court may seek out and use any available reference guide that has been prepared to help judges and lawyers understand the science of particular fields of study.

The U.S. Federal Judicial Center has one available on the Internet:

http://www.fjc.gov/public/pdf.nsf/lookup/sciman00.pdf/$file/sciman00.pdf

ASSESSING EXPERT EVIDENCE



DUTY OF THE EXPERT WITNESS

- Expert must provide “the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the judge or jury to form their own independent judgment”

METHOD FOR DEFINING ISSUES: EXPERT REPORTS

- Concept: Requiring the experts to prepare a detailed written report stating the expert's qualifications, the expert's opinion, and identifying the basis or reasons for the opinion, and supporting data or studies, as well as all information, even if not supportive, considered by the expert.
- Order for Disclosing Reports – the one bearing burden of proof should disclose first.
- Follow-Up Pre-trial conference
- Prohibit Admission of Undisclosed Testimony

WHY REQUIRE EXPERTS' REPORTS?

- Compels parties to focus on the strengths and weaknesses of their own case
- Exchange of reports helps the court learn and helps the parties narrow issues
- Identifies areas of agreement
- Compels improved preparation for trial
- Disclosure may encourage early settlement

COURT APPOINTED EXPERTS

Where the expert scientific evidence is difficult or incomprehensible, the court may consider:

- Appointing a neutral expert to advise the court
- Appoint a panel of experts to look at an issue and prepare a report

The court must define parameters of the court-appointed experts' communication with the court and with the parties.

COURT MANAGEMENT OF EXPERT TESTIMONY

- Restricting areas of expert testimony
- Structuring trial to group expert testimony by topic
- Determining methods for the “vetting” of expert testimony
- Court appointed experts

PLACING LIMITS ON EXPERT EVIDENCE

- Orders limiting expert evidence may be needed to prevent abuse.
- Cumulative evidence may be prejudicial.
- Expert evidence on undisputed issues may be intended to overwhelm a litigant with fewer resources.

RULINGS BEFORE TRIAL

- Motions to exclude expert testimony based on lack of qualifications, insufficient scientific agreement, unusual or inappropriate methods, etc.
- Motions for judgment based on the Experts' Reports.

CONDITIONS FOR ADMISSIBILITY OF EXPERT OPINION EVIDENCE

- Four questions:
  - **Relevance to proceedings?**
  - **Is it an area in which expert evidence can be called?**
  - **Is the witness qualified?**
  - **Is it otherwise admissible?**

MANAGING SCIENTIFIC EVIDENCE AT TRIAL

- Consider grouping issues and requiring scientific evidence on the issues to be presented back-to-back by way of concurrent evidence.
- Set time limits on presentation of evidence, or limit the number of witnesses.

SCIENTIFIC AND LEGAL PROOF COMPARED

Science is defined by application of the scientific method

Judicial decisions turn on legal standards of proof

Results in potential dissonance between scientific and legal proof

Judges must understand make judgments on how “certain” the science is on a given point in order to properly evaluate the evidence in the case.

CONCLUSION

- Scientific issues are a central part of much environmental litigation
- Special rules and practice directions are needed for hearing of expert evidence
- Court-appointed experts may be one solution to alleged bias in expert evidence

- JUDICIAL FAMILIARITY WITH TECHNICAL STANDARDS AND EVIDENCE
- UNDERSTANDING OF DIFFERENTIATED STANDARDS OF PROOF
- INNOVATIVE FACT-FINDING AND ASSESSMENT TECHNIQUES
- PRINCIPLES FOR DEALING WITH FACTUAL UNCERTAINTY