INTRODUCTION TO POLICY ANALYSIS

1. THE NATURE OF PUBLIC PROBLEMS

In the public sector, problems:
- ❑ are fuzzy and ill-defined;
- ❑ have political as well as purely technical aspects;
- ❑ often lack a good cause-effect knowledge base;
- ❑ may be solved only by producing new problems;
- ❑ often involve tradeoffs between cost and effectiveness;
- ❑ may be hard to measure adequacy of results;
- ❑ may be hard to measure fairness of results.

CLASSICAL RATIONAL PROBLEM SOLVING MODEL
In theory, problems can be approached using a rational, comprehensive problem solving model. The demands of this model are:
- ❑ Define the problem
- ❑ Determine important social values
- ❑ Identify all alternatives
- ❑ Assess all alternatives
- ❑ Select optimal alternative
- ❑ implement optimal alternative

LIMITATIONS IN THE PUBLIC SECTOR

Theoretical Model	Public Sector Limitations
1) Define the problem	1) Problems are interlined
2) Determine important social values	2) No agreement on social values
3) Identify all alternatives	3) Limited time, knowledge
4) Assess all alternatives on all values	4) Limited resources, lack of predictability
5) Select optimal alternative	5) Pressure to select the first good solution
6) implement optimal alternative	6) Short time horizon to produce results

With these limitations, there is a need for the development of a model of policy analysis that can address public sector problems. But policy analysis differs from traditional research as well. Traditional research is concerned with broad, theoretical, complex questions. It uses explicit scientific steps and invariant procedures. Policy analysis, on the other hand, is practical, situational and flexible. It addresses local problems and focuses on making

decisions. It is more craft or art than science.

Traditional Research	Policy Analysis
Seeks "truth"	Is practical
Explicit steps and procedures	Flexible, situational
Addresses broad questions	Addresses local problems
Focus on complexity	Focus on decision-making
Science	Craft

CASE STUDIES IN POLICY ANALYSIS

Problems in the public sector are multi-faceted and difficult to pin down. As if that was not bad enough, the knowledge domain of public policy is ill-structured. This means that there is no "one best way" to solve all problems. Giving policy analysis only one methodology is like giving a home owner only a hammer to solve all household problems.

A new approach is needed to learning in this area. This approach is offered by case studies. Case studies link problems to a reality; they offer the opportunity for the application of policy analysis techniques in a concrete context.

The way information is remembered and use is linked to the way it is learned. Case studies provide cues to the types of techniques that are needed to approach a solution to the problem. These cues help policy analysts learn multiple approaches to learning and to problem solving.

Use of case studies will help to:
- ❑ recognize situations where analysis is appropriate and productive;
- ❑ become competent in the application of different approaches and methods;
- ❑ learn how to communicate the results of policy analysis.

TIPS FOR PRACTICAL POLICY ANALYSIS

1) Quickly identify the central decision criterion of the problem. (What is the most important factor?)
2) Identify what types of public sector actions can be taken. (Taxing, spending, sanctions, incentives, education?)
3) Avoid the "one best way" approach. (Have many tools in the tool box, not just one)
4) Learn how to deal with uncertainty . (Admit it, estimate its possible effects)
5) Say it with numbers. (Charts, graphs, tables, maps, etc.)
6) Make the analysis simple and transparent. (Provide details in a technical appendix)
7) Check and re-check the facts. (Use multiple sources of facts, triangulation)
8) Learn to anticipate the objections of opponent. (Improves the ultimate product)
9) Give analysis, not decisions. (Distinguish between analysis and advocacy)
10) Push the boundaries of the envelope. (Expand the problem definition; introduce novel solutions)
11) Policy analysis is never 100% complete, rational, and correct. (How much time, money, and personnel is available to do the job?)

THE POLICY ANALYSIS PROCESS

ALTERNATIVE POLICY ANALYSIS MODELS

1) Quade
      a. Policy formulation
      b. Search for alternatives
      c. Forecast the future
      d. Model the impacts of the alternative
      e. Evaluate, compare, and rank the alternatives
2) MacRae and Wilde
      a. Define the problem
      b. Determine criteria
      c. Generate alternatives
      d. Choose course of action
      e. Evaluate policy after implementation
3) Stokey and Zeckhauser
      a. Determine the underlying problem
      b. Determine the objectives
      c. Generate alternatives
      d. Predict consequences of each alternative
      e. Determine criteria for measuring achievements
      f. Choose course of action
4) Urban Institute
      a. Define the problem
      b. Identify objectives
      c. Select criteria
      d. Specify the client
      e. Calculate the cost of each alternative
      f. Assess the effectiveness of each alternative
      g. Present the findings
5) Weiner and Vining
a. Problem analysis
      a.1. Understand the problem
      a.2. Choose goals and constraints
      a.3. Choose method of solution
b. Solution analysis
      b.1. Choose evaluation criteria
      b.2. Specify alternatives
      b.3. Assess alternatives
      b.4. Recommend solution
6) Hill

a. Define problem
b. Identify alternatives
c. Quantify alternatives
d. Apply decision aids
e. Choose alternative
f. Implement solution

7) Patton and Sawicki
a. Verify, define and detail the problem
b. Establish evaluation criteria
c. Identify alternative policies
d. Assess alternative policies
e. Display and distinguish among alternatives
f. Implement, monitor, and evaluate the policy

SIX STEP POLICY ANALYSIS

1) Verify, define and detail the problem
2) Establish evaluation criteria
3) Identify alternative policies
4) Assess alternative policies
5) Display and distinguish among alternatives
6) Implement, monitor, and evaluate the policy

1) VERIFY, DEFINE AND DETAIL THE PROBLEM

- State the problem meaningfully:
- Determine the magnitude and extent of the problem
- Continually re-define the problem in light of what is possible
- Eliminate irrelevant material
- Question the accepted thinking about the problem
- Question initial formulations of the problem
- Say it with data
- Locate similar policy analyses
- Locate relevant sources of data
- Eliminate ambiguity
- Clarify objectives
- Resolve conflicting goals
- Focus on the central, critical factors
- Is it important? Is it unusual? Can it be solved?
- Identify who is concerned, and why?
- What power do concerned parties have?
- Make a quick estimate of resources required to deal with the problem

2) ESTABLISH EVALUATION CRITERIA

- What are the important policy goals, and how will they be measured?
- Identify criteria central to the problem and relevant to the stakeholders
- Clarify goals, values and objectives
- Identify desirable and undesirable outcomes

- ❑ Is there a rank order of importance among the criteria? What will be the rules for comparing alternatives?
- ❑ Administrative Ease
- ❑ Costs and benefits
- ❑ Effectiveness
- ❑ Equity
- ❑ Legality
- ❑ Political acceptability

3) IDENTIFY ALTERNATIVE POLICIES

- ❑ Consider a wide range of options
- ❑ Consider the status quo, or no-action alternative
- ❑ Consult with experts
- ❑ Brainstorming, Delphi, Scenario writing
- ❑ Redefine the problem if necessary

4) ASSESS ALTERNATIVE POLICIES

- ❑ Select appropriate methods and apply them correctly
- ❑ Estimate expected outcomes, effects, and impacts of each policy alternative
- ❑ Do the predicted outcomes meet the desired goals?
- ❑ Can some alternatives be quickly discarded
- ❑ Continue in-depth analysis of alternatives that make the first cut

5) DISPLAY AND DISTINGUISH AMONG ALTERNATIVES

- ❑ Choose a format for display
- ❑ Show strengths and weaknesses of each alternative
- ❑ Describe the best and worst case scenario for each alternative
- ❑ Use matrices, reports, lists, charts, scenarios, arguments

6) IMPLEMENT, MONITOR, AND EVALUATE THE POLICY

- ❑ Draw up a plan for implementation
- ❑ Design monitoring system
- ❑ Suggest design for policy evaluation
- ❑ Was the policy properly implemented?
- ❑ Did the policy have the intended effect(s)?

ROLE OF THE POLICY ANALYST

Policy analysis is a systematic evaluation of the technical and political implications of alternatives proposed to solve public problems. Policy analysis refers to both the process of assessing policies or programs, and the product of that analysis. A policy analyst:
- ❑ uses qualitative and quantitative data;
- ❑ uses a variety of approaches to the problem;

❑ applies appropriate methods correctly.

Who does policy analysis? Is public policy analysis a calling? A vocation? A service? A guild? A cult? the role of the policy analyst is to:

❑ Produce arguments for debates about public policy
❑ Produce evidence for decisions about public policy
❑ Act as internal organizational consultants
❑ Act as external policy consultants
❑ Handle both technical and people aspects of policy analysis

All policy represents the distribution of power and resources. These policies are an expression of values. Values and beliefs are often used as short-cuts to decision-making. What code of ethics should the policy analyst adopt? What about the professional values of obligation, responsibility, discretion, and citizenship? What about published professional codes of ethics, such as ASPA, ICMA, AICP, NASW, NSPE, etc.?

The policy analyst has responsibilities, to the client, the customer, the self, the profession, the public interest, fairness, equity, law, justice, efficiency, effectiveness, and the practice itself. Who is to define what is good? Whose values or goals should be pursued? What is the right thing to do? Who or what is ultimately to be served? Should the analyst try first and foremost to do good, or to do no harm? Should the analyst give neutral advice, or normative advocacy? Should the analyst be supportive or adversarial?

Bias is inevitable in policy analysis. To mitigate the effects of bias, the analyst can:

❑ identify all underlying assumptions
❑ keep accurate records
❑ use multiple sources of information
❑ use replicable methods and models
❑ identify the client's goals and values
❑ identify the formal and informal actors and institutions
❑ address relevant professional and ethical considerations

CROSS-CUTTING METHODS

Selecting Techniques
Cross-Cutting Methods
Identifying and gathering data
Library search methods
Interviewing for policy data
Quick surveys
Assessing information quality
Basic data analysis
Communicating the analysis

SELECTING TECHNIQUES

Selecting the appropriate techniques to use in policy analysis depends on a variety of factors:

❑ what the client wants to know
❑ the time available
❑ knowledge of the decision criteria
❑ complexity of the issue
❑ available data

Some techniques commonly used in various stages of policy analysis include:

1. Verifying, Defining, and Detailing the Problem
   - Back-of-the-envelope calculations
   - Quick decision analysis
   - Creation of valid operational definitions
   - Political analysis
   - Issue paper/first cut analysis

2. Establishing Evaluation Criteria
   - Technical feasibility studies
   - Economic and financial feasibility studies
   - Political viability studies
   - Administrative operability studies

3. Identifying Alternatives
   - Researched analysis
   - No-action analysis
   - Quick surveys
   - Literature reviews
   - Comparison of real-world experiences
   - Passive collection and classification
   - Development of typologies
   - Analogy, metaphor, and synectics
   - Brainstorming
   - Comparison with an ideal
   - Feasible manipulations
   - Modifying existing solutions

4. Assessing Alternative Policies
   Extrapolation
   - Theoretical forecasting
   - Intuitive forecasting
   - Discounting
   - Cost/Benefit analysis
   - Sensitivity analysis
   - Allocation formulas
   - Quick decision analysis
   - Political feasibility analysis
   - Implementation analysis
   - Scenario writing

5. Displaying Alternatives and Distinguishing Among Them
   - Paired comparisons
   - Satisficing
   - Lexicographic ordering
   - Non-dominated alternatives method
   - Equivalent alternatives method
   - Standard-alternative method
   - Matrix display systems
   - Scenario writing

6. Implementing, Monitoring, and Evaluating Policies
   - Before-and-after comparisons
   - With-and-without comparisons
   - Actual-versus-planned performance
   - Experimental models
   - Quasi-experimental models
   - Cost-oriented approaches

7. Cross-Cutting Methods
- ❑ Identifying and gathering data
- ❑ Library search methods
- ❑ Interviewing for policy data
- ❑ Quick surveys
- ❑ Basic data analysis
- ❑ Assessing information quality
- ❑ Communicating the analysis

CROSS-CUTTING METHODS

Cross-cutting methods are techniques of policy analysis that can be used at nearly any stage in the analysis. They are useful tools for the policy analyst to know how to use. They include:
- ❑ Identifying and gathering data
- ❑ Library search methods
- ❑ Interviewing for policy data
- ❑ Quick surveys
- ❑ Assessing information quality
- ❑ Basic data analysis
- ❑ Communicating the analysis

IDENTIFYING AND GATHERING DATA

Policy analysts need to know how to search for existing information, such as
- ❑ academic journal articles
- ❑ archives
- ❑ census records
- ❑ hearings
- ❑ legislative history
- ❑ news media reports
- ❑ past policy analyses
- ❑ public agency reports
- ❑ public records

People are also good sources of information, including
- ❑ advocacy groups
- ❑ experts
- ❑ issue networks
- ❑ personal contacts
- ❑ professional colleagues

Even personal observation can be a source of data. Personal observation can furnish data on usage patterns, compliance patterns, insights into the problem, anecdotes, and innovative suggestions. However, observation is time consuming and may suffer from problems with accuracy, bias, limited samples, and difficult to quantify data. Observational methods include "sidewalk surveys," mechanical counting devices, measures of erosion, satellite images, etc. Other sources of information include:
- ❑ federal agencies
- ❑ libraries
- ❑ local agencies
- ❑ non-profit agencies
- ❑ private organizations
- ❑ research institutes
- ❑ state agencies
- ❑ think tanks

          ❑   universities

Policy analysts should seek information from multiple sources ("triangulation"), especially on controversial data. Problems with sources of data include:

- ❑ outdated statistics
- ❑ irrelevant data
- ❑ misleading data
- ❑ poor quality data
- ❑ biased data

Looking for documents that may be helpful in doing the policy analysis is important. But three questions that must be asked are:

- ❑ do such documents exist?
- ❑ can they be obtained in a reasonable time?
- ❑ when is additional searching no longer worthwhile?

LIBRARY SEARCH METHODS

Libraries are excellent sources of policy-related information. To make the most of library resources, follow these strategies:

- ❑ look up basic policy-related terms and definitions in encyclopedias, dictionaries, or a subject-related thesaurus; each policy issue area has its own terms and jargon
- ❑ develop a list of search terms for searching computerized bibliographic data bases, electronic guides to library holdings, and Internet access;
- ❑ identify key journals in the field and skim their table of contents for the past 1-2 years;
- ❑ check guides to current periodicals, newspapers, news magazines, trade journals, and guides to the literature
- ❑ check annual reviews in the policy subject area; conference proceedings on the subject; government hearings on the subject, etc.

The federal government offers a wide variety of sources:

- ❑ Congressional Directory
- ❑ Government Yearbooks
- ❑ Guide to Federal Statistics
- ❑ International Statistics
- ❑ Population Reports
- ❑ Statistical Abstract of the U.S.
- ❑ U.S. Census
- ❑ U.S. Government Printing Office catalogues
- ❑ U.S. Government Manual

Many sources of legal information have bearing on policy issues:

- ❑ Adjudication and case law
- ❑ Agency regulations
- ❑ Code of Federal Regulations
- ❑ Federal and State statutes
- ❑ Federal Register
- ❑ Legal Periodicals
- ❑ Municipal ordinances
- ❑ Nexus-Lexis (on-line system)
- ❑ Supreme Court decisions

INTERVIEWING FOR POLICY DATA

Interviewing is typically conducted with either mass, elite, intensive, or focus group methodologies. Interviewing is typically used:
- ❑ to gather historical background, context, and evolution of the policy
- ❑ to gather basic facts about the problem
- ❑ to assess political attitudes and resources of major players
- ❑ to gather ideas about the future, trends, and forecasts
- ❑ to generate additional contacts and materials (snowball technique)

Elite (specialist) interviewing is most typically used when:
- ❑ it is a short-term policy project
- ❑ it is on a new topic
- ❑ there is a lack of existing literature
- ❑ informants are reluctant to put information into writing
- ❑ no quantitative data are available
- ❑ it is not feasible to use hired interviewers

To set up interviews, the policy analyst usually:
- ❑ arranges appointments in advance
- ❑ makes formal or informal requests (letterhead, telephone)
- ❑ sends a reminder letter and follows up with a phone call
- ❑ gives the name of a mutual friend or influential person as a reference
- ❑ collects background information prior to the interview
- ❑ will conduct a telephone interview if a face-to-face interview is not possible

When conducting the actual interview, it is usually accepted behavior to:
- ❑ ask before using any recording device
- ❑ promise anonymity and/or confidentiality of information
- ❑ take notes during the interview
- ❑ keep to the allotted time
- ❑ thank the person for the interview
- ❑ send a follow-up letter

QUICK SURVEYS

Surveys can be conducted by mail, in person, or by telephone. Survey methodology is described in many standard research texts. Cross-sectional interviews are conducted at one point in time across a wide sample of the population. Longitudinal interviews are conducted repeatedly over many time intervals (months, years, decades) with the same individuals. A comparison of the advantages and disadvantages of the most typical surveys is displayed below.

Type of Survey	Response Rate	Sample Concerns	Staffing	Other concerns
Mail	15%	May not be representative	Least staff time required	Response rate improves with gifts
Telephone	50%	Limited to those with telephones	Moderate staff time required	Short and simple questions
In-Person	75%	May be needed for less-educated	Most intensive; most supervisors	Can cover complex issues

ASSESSING INFORMATION QUALITY

When collecting information and data for policy analysis, the analyst must assess the quality of the information and data collected.

Document Analysis:

- ❑ When was the document generated?
- ❑ What was the original purpose of the document?
- ❑ Is there an obvious bias in the document?
- ❑ What is the pattern of word usage?
- ❑ Does the document omit important information?
- ❑ Are there errors in the document?

Assessing Interviews:

- ❑ Was the information plausible?
- ❑ Was the information consistent?
- ❑ Does the information diverge from accepted facts?
- ❑ Did the respondent report direct experience?
- ❑ Did the respondent have ulterior motives?
- ❑ Did the respondent operate under some constraints?
- ❑ Was the respondent candid?
- ❑ Did the respondent acknowledge areas of ignorance?
- ❑ Was the respondent self-critical?

Data quality:

- ❑ Are multiple sources of information consistent?
- ❑ Were data collected independently, from separate sources?
- ❑ Is the data original or re-organized?
- ❑ Do the data pertain to a particular geographic locale?
- ❑ Were the data collection methods systematic?
- ❑ For what purpose were the data originally collected?
- ❑ How old are the data? Were they affected by timing?
- ❑ Was there bias or special motivation in the collection of the data?

BASIC DATA ANALYSIS

Data are not generally useful in their raw form. Instead, they must be analyzed. Data are most often analyzed using descriptive and/or inferential statistics. Descriptive statistics search for patterns in the data and look for relationships to gain insight into the problem. Inferential statistics attempt to estimate a characteristic of a population from data gathered from a sample.

Descriptive univariate statistics look for patterns in the data. They are best presented in graphical form, using frequency distributions, cumulative distributions, bar charts, histograms, pie charts, and frequency polygons. Statistics include the mean, median, and mode, as well as the range, stnadard deviation, and variance.

Descriptive bivariate statistics look for relationships in the data. They are best presented in tables, plots, scattergrams, and time series graphs. Measures of association include Lambda, Gamma, and Pearson's r.

Inferential statistics make probabilistic statements (or inferences) about a whole population based on the results obtained from a partial sample. Measures of statistical significance are used to estimate whether two groups differ from one another, or whether there is a chance that a relationship observed in a sample also exists in a population. These

measures include Chi Square, Z-scores, t-tests, and F-tests.

COMMUNICATING THE ANALYSIS

Written Communication:
- ❑ Work from an outline--keep separate folders for each section of the analysis
- ❑ Work from goals and deadlines--generate a complete draft and then fill in the holes
- ❑ Get help--with editing of rough drafts; revise for clarity; incorporate new ideas
- ❑ Include a Table of Contents--sections include Executive Summary; Problem Definition; Decision Criteria; Alternatives; Comparison of Alternatives; Conclusions and Recommendations;
- ❑ Use graphics--charts, graphs, flow charts, tables, maps, pictures, diagrams, drawings, etc.
- ❑ Use geographic information systems (GIS)--to generate maps of data distributions
- ❑ Simplicity--use the active voice for verbs
- ❑ Accuracy--verify facts; triangulate; check all calculations
- ❑ Documentation--note all formulas used and assumptions made
- ❑ Fairness--use references and give credit to your sources of data
- ❑ Neatness--use good grammar, spelling, punctuation, syntax, etc.

Oral Presentations
- ❑ Know your audience
- ❑ Keep it short and simple
- ❑ Use visual aids and handouts
- ❑ Allow time for questions, comments and criticisms

VERIFYING, DEFINING, AND DETAILING THE PROBLEM

Problem Definition
Developing Problem Statements
Back-of-the-Envelope Calculations
Quick Decision Analysis
Political Analysis
First Cut Policy Analysis

PROBLEM DEFINITION

The first thing the policy analyst must do is to ask:
- ❑ Does a problem exist?
- ❑ Can anything be done about it?
- ❑ Does the client have the power?

If the answers are no, then there is no point in doing a policy analysis.

Pitfalls in public policy problem definition:
- ❑ accepting the client's definition of the problem
- ❑ looking only for the simple and obvious
- ❑ thinking that any and all problems need a public solution
- ❑ confusing the need for short- versus long-term solutions
- ❑ confusing the values of individuals versus collectivities

Don't Need Public Policies	Do Need Public Policies
Individual problems	Social problems
Widespread problems	Serious problems
Relative problems	Absolute problems

DEVELOPING PROBLEM STATEMENTS

In developing problem statements:
- ❑ think about the problem
- ❑ delineate the boundaries of the problem
- ❑ develop a fact base
- ❑ list goals and objectives for policy solutions
- ❑ identify the policy envelope (key players)
- ❑ develop preliminary costs and benefits
- ❑ review the problem statement

BACK-OF-THE-ENVELOPE CALCULATIONS

   One of the first things a policy analyst will do is to try to get a handle on the possible dimensions of the problem and potential solutions. The analyst may ask,
- ❑ How many people are we talking about?
- ❑ What is the likely cost per unit of service?
- ❑ How much of the target population can we serve?
- ❑ How much do we have available to spend?
- ❑ Will more staff be needed?
- ❑ Will this impact the budget/tax rate?
- ❑ What are the trends in this area?
- ❑ What will happen if we do nothing?

   For example, try to estimate these parameters if half the children in the state are not receiving the required immunizations before beginning school. Start with the number of children in the state up to age 5. Which immunizations are required? How much does each one cost? How many children could realistically be reached? How much do we have available to spend? Could we get more from the Federal government? Will more state staff be needed, or can this be handled by the private/non-profit sector? Will this impact the budget/tax rate? What are the trends in this area--is the problem increasing or decreasing over time? What will happen if we do nothing?

The information for doing back-of-the-envelope calculations can come from
- ❑ reference works
- ❑ experts
- ❑ past studies or quick research
- ❑ informed guesses, extrapolation, rules of thumb, estimation, parallel reasoning, triangulation, etc.

QUICK DECISION ANALYSIS

Quick decision analysis is a variation on the technique of making decision trees. Decision trees are ways of diagraming a problem, when the problem has more than one solution. It is a tool to help policy analysts see the logical alternatives to a problem.

POLITICAL ANALYSIS

Policy analysts recognize that politics is important at all stages of the policy process, including policy analysis. There are a number of ways to communicate about potential political influences or factors that may impinge on the policy analysis. These techniques attempt to allow political factors to be treated like any other important considerations in policy analysis.

The analyst may draw up a list of issues involved in defining the problem, and identify a number of potential political actors who have taken positions on those issues. A table can display the likely support or opposition of each group to each issue.

For example, what are the issues involved in raising the age at which teens can get a driver's licence to 18? Which groups are likely to support (+) or oppose (-) problem definitions that focus on these issues?

Groups	Lower teen auto accident, death & injury rates	Hardship for teens who work or commute to school	Lower insurance rates for family cars
M.A.D.D.	+	?	?
Parents/Voters	+	-	+
Insurance Lobby	+	-	-

FIRST CUT POLICY ANALYSIS

An issue paper is a study that is conducted in preparation of making a decision on whether or not to do a policy analysis. It describes the problem, the attendant issues, the political groups involved, and concludes whether or not a policy analysis will be feasible.

A first cut policy analysis concentrates on identifying preliminary recommendations. It is a mini-policy analysis, conducted in a short period of time, using simple techniques. It forms the basis for a much more in-depth, complex, and thorough full-fledged policy analysis.

Researched analysis refers to a more traditional research project, perhaps conducting a pilot study of several policy alternatives to generate concrete data on which to base recommendations. However, policy analysts rarely have the luxury of the time and resources needed, nor do they often work for someone who is far enough removed from the problem to resist pressures for a quick solution.

ESTABLISHING ANALYSIS CRITERIA

What Are Criteria
Reliability and Validity
Economic Criteria

WHAT ARE CRITERIA

Every time a policy problem is identified, some statement of goals is adopted. The goals are what the adopted policy alternative should accomplish. Goals are broad, formal, long-term problem-solving achievements that are desired. An example might be to make sure that all rivers are safe, clean, and usable.

Goals are translated into objectives. Objectives are more concrete statements about desired end states, with time tables, target populations, and resource limits. An objective might be to make the Colorado River safe for swimming and fishing.

Criteria are the measurable dimensions of objectives. Criteria are used to compare how close different proposed policy alternatives will come to meeting the goals of solving the problem. Criteria set the rules to follow in analyzing and comparing different proposed policy alternatives (solutions).

Sample criteria for improving river water quality might be:
- *effectiveness*--how much of an improvement in water quality will this alternative produce?
- *cost*--how much will it cost to improve the quality of the river using this alternative?
- *technical*--do we have the equipment and know-how to use this alternative?
- *political*--is this alternative politically acceptable?

Measures are the actual measurements that will be taken of each proposed policy alternative. For example, measures such as the following might be employed:
- *effectiveness*--how many milligrams of pollutants per liter of water will this alternative clean up?
- *cost*--how many dollars will be required to implement this alternative?
- *technical*--is the necessary equipment for this alternative available and are people trained to use it?
- *political*--what percentage of the voting-age population will favor this alternative in a statewide poll?

One difficulty in specifying criteria and measures is that many problem statements have vague, fuzzy, or even conflicting goals. This is often necessary in order to get consensus on taking some action about the problem. But this complicates the selection of criteria.

If dirty rivers are a problem, and the goal is to have clean rivers, what is the most important considerations in choosing between different ways of cleaning up the rivers? Is it cost? Is it effectiveness? Is it equity?

What do we mean by "clean"? It is impossible to get rivers 100% clean. Do we use Federal, State, or local standards on admissible levels of toxicity? How will we measure the level of cleanliness that different policy alternatives are likely to produce?

15

RELIABILITY AND VALIDITY

The criteria and their measures must be unambiguous. They should be relatively straightforward and simple to measure. Their application should produce uniform results, no matter who does the measuring of different alternatives. And repeated measurements of the same alternative should produce the same results, again, no matter who does the measuring.

Criteria and measures should be appropriate to the unit of analysis. That is, if the goal of a proposed policy alternative is to change the investment strategies of cities, the unit of measurement is cities, not individuals. Be sure to specify whether the unit of measurement is households or families, census tracts or neighborhoods, school children or school districts, etc.

ECONOMIC CRITERIA

Most policy analysis involves at least one economic criterion. These include impacts on the economy, on expected public sector revenues, on government spending, etc.
The most common economic criteria are costs. These may include:
- *borrowing costs*--the costs of borrowing funds
- *decreases in net worth*--decreases in assets and/or liabilities
- *direct costs*--directly attributable to the policy alternative
- *indirect costs*--additional impacts not included in the goals
- *intangible costs*--costs that cannot be counted or quantified
- *monetarizable costs*--can be expressed in dollars
- *one-time fixed costs*--new capital expenditures, equipment, training, etc.
- *operations and maintenance costs*--ongoing costs of the alternative
- *opportunity costs*--other things that could have been done with the same resources instead
- *tangible costs*--can be counted and quantified

Costs need to be counted. One cannot assume that the money was going to be spent anyway. Costs should be identified as completely as possible, eliminating unpleasant surprises down the road.

Another type of cost criterion that is often employed is marginal cost. That is, if some good or service is already being produced, how much more will it cost to produce one additional unit of output?
The types of costs that are considered in marginal analysis are:
- *fixed costs*--these do not vary in the short run, no matter how many units are produced
- *variable costs*--these vary directly with the volume of output of goods or services
- average costs--the total of units of output divided by the total costs of output
- *marginal costs*--the costs of producing one additional unit of output
- *sunk costs*--these are costs that can be ignored as they have already been spent in the past

Another type of economic criterion is benefits. Benefits are the opposite of costs. Benefits are ways in which the policy actors will be better off. Benefits can be measured in many of the same ways as costs, including:
- *direct benefits*--directly attributable to the policy alternative
- *increases in net worth*--increases in assets and/or liabilities
- *indirect benefits*--additional benefits not included in the goals

- *interest earned*--interest that will accrue or be paid
- *intangible benefits*--benefits that cannot be counted or quantified
- *monetarizable benefits*--can be expressed in dollars
- *one-time benefits*--one-time reduction in the problem
- *ongoing benefits*--continuing decreases in the problem
- *tangible benefits*--can be counted and quantified

Benefits are often more difficult to quantify than costs. One alternative is to use "shadow prices," or the value of the benefits in a perfectly competitive market, for example, free recreation facilities, wilderness areas, parks, etc.

EQUITY CRITERIA

Efficiency and effectiveness are technical and economic questions, but equity is a public question. Equity asks about the social allocation of burdens and benefits. Equity asks the questions of "who pays?" and "who benefits?"

A proposed policy alternative may impact equity if it will change the distribution of burdens and benefits in society. There is no universally approved optimal or right answer for how benefits and burdens should be distributed in society. That is a continuing area of contention, and essentially a political decision.

However, there are guidelines for equity, such non-discrimination, and the same treatment for those equally situated and different treatment for those unequally situated.

Horizontal equity asks whether burdens and benefits are being shifted among groups in society which are relatively equal.

Vertical equity asks whether burdens and benefits are being shifted among groups in society which are relatively unequal.

Inter-generational equity asks whether burdens or benefits are being shifted from one time period to another, whether younger generations will have to pay more and receive less than older ones, or vice versa.

Groups are often identified on the basis of:
- residence
- income
- citizenship
- race or ethnicity
- sex
- age
- family status
- home ownership
- educational status
- veteran status
- criminal record
- substance abuse
- health

Problems in assessing equity include:
- how should the population be sub-divided?
- how should groups be defined?
- should historical criteria, the status quo, or desired states be used?
- what is a burden?
- what is a benefit?
- what is a degree of need?
- what is an ability to pay?

POLITICAL CRITERIA

Many times the client for the policy analysis will hold a political office. In that case, the policy analyst must often include political criteria in the assessment of proposed policy alternatives.

Political viability asks whether or to what extent a proposed policy alternative will be acceptable to relevant powerful groups, decision makers, legislators, administrators, citizens, neighborhoods, unions, or others.

Other ways of assessing political viability include:
- *acceptability*--is the proposed alternative acceptable to policy makers, policy targets, the general public, voters, etc.?
- *appropriateness*--is the proposed alternative appropriate to the values of the community, society, the legislature, etc.?
- *legal*--is the proposed alternative legal under current law, or will statutes have to be amended or enacted?
- *responsive*--will the proposed alternative meet the real or perceived needs of the target group, the public, etc.?

ADMINISTRATIVE CRITERIA

Many public policies are implemented by public agencies. Therefore, administrative operability or administrative ease are often used as criteria for judging proposed public policies.

Questions that may be addressed include:
- *authority*--does the agency have the authority to implement the proposed policy?
- *commitment*--does the proposed policy have the commitment of top managers, field staff, and support staff?
- *capacity*--does the agency have the resources to implement the proposed policy, in terms of staff, skills, money, training, expertise, etc.?
- *support*--are the facilities, equipment, and other support available for the proposed policy?

IDENTIFYING ALTERNATIVES

Generating Alternatives
Sources of Alternatives
Pitfalls

GENERATING ALTERNATIVES

Before alternatives can be generated,
- the problem must be correctly identified, and
- relevant criteria for judging alternatives must be specified

At first, the policy analyst can generate a large number of alternatives, but later reduce them to a manageable size (between four and seven). Consider alternatives like the status quo, but also radically different. Consider what may be possible under different circumstances.

Some criteria that are often used in judging the suitability of alternatives include:
- cost--can we afford it; will it be cost-effective?
- reliability--does it have proven success, or is it subject to failures?
- stability--will it still work if conditions change?

❑ invulnerability--will it work if one of its component parts fails?
❑ flexibility--can it accomplish more than one thing?
❑ riskiness--is there a high chance of all or nothing?
❑ communicability--is it easy to understand?
❑ merit--does it address the problem?
❑ simplicity--is it easy to implement?
❑ compatibility--is it congruent with existing norms and procedures?
❑ reversibility--can we return to our prior state if it fails?
❑ robustness--can it succeed in different future states?

SOURCES OF ALTERNATIVES

1) the status quo or no action alternative
This means that current efforts will continue at the same level. It is important to consider how effective any different alternative will be at changing the status quo.

A baseline analysis: identifies clear trade-offs with the present; clarifies project objectives; underlines whether there is a need for action or not; provides linkages to existing efforts; identifies problems likely to emerge; and confirms that no optimum solution exists.

2) experiences of others with similar problems, from reported research findings, experts, laws, public opinion polls, new technology, etc.

3) re-define the problem from others' points of view, including opponents of any change

4) consider the ideal, then apply political, economic, and other constraints

5) start from generic, to modified, to custom-made alternatives

6) Quick Surveys by telephone, fax, or e-mail, of peers, old MPA classmates, people in the policy issue network, public meetings or hearings, content analysis of editorials, letters to the editor, etc.

7) Literature review of professional and academic journals, government reports, collected proceedings from conferences, on-line services (lexis-nexus, first search, article first etc.).

8) Case studies of real world experiences: why was the alternative adopted, what were the circumstances, what other alternatives were considered and discarded, how did it eventually work out, what modifications were made after implementation.

9) Passive collection and classification: keep a folder for collecting interesting policy solutions on a regular basis, even if no problem exists at the moment, from clients, superiors, advocates, media, interest groups, etc. Then refer to the folder in emergencies.

10) Develop Typologies: identify all the types of persons likely to be affected by any policy alternative, and what the probable reaction of each group would be to each type of alternative suggested; then develop alternatives that can overcome the objections of most of the groups.

11) Use analogies: 'new' problems are really just like other 'old' problems.
    Personal Analogy: pretend to be someone affected by this problem, identify with the problem to see what types of policy alternatives suggest themselves;

Direct Analogy--look at solutions to other problems to see if they can be applied to this one;
Symbolic Analogy--imagine the most aesthetically satisfying solutions rather than merely technologically sound ones;
Fantasy Analogy--image the ideal solution, and try to preserve as much of it as possible when working backwards through real world constraints.

12) Brainstorming--can be oral, written, or electronic. Brainstorming has two phases, first a pure idea-generation phase, where no judgements are made about any ideas; and second, an evaluation and ranking phase, to help arrive at concrete solutions.

13) Feasible Manipulation--takes existing policy activities and develops alternatives based on limited, moderate, or wide manipulation of the range of possible activities.

14) Modify existing solutions:
- ❑ Magnify--do more, more often, larger, longer, exaggerate, add new components, new resources
- ❑ Minify--do less, less often, smaller, shorter, omit, remove, split apart, under use, fewer resources
- ❑ Substitute--switch components, apply in different order, use different materials, try a different location or different sponsor
- ❑ Combine--blend approaches, combine units, combine purposes, combine sponsors
- ❑ Re-arrange--reverse, invert, change sequence, speed up, slow down, randomize
- ❑ Location--use single or multiple locations, node versus scattered, temporary versus permanent
- ❑ Timing--accelerate, lag, stagger, run concurrently, shorter span, longer span, time sharing
- ❑ Finance--provide, purchase, tax, user fee, subsidy, co-pay, deductible, voucher, contract out
- ❑ Organization--centralized versus decentralized, mandated versus voluntary, regulated, prohibited, enforced, inform, implore
- ❑ Decision Sites--individual, unit, organization, elected, appointed, advisory, binding
- ❑ Influence Points--users, providers, intermediaries, beneficiaries, payers
- ❑ Risk Management--guarantees, insurance, remedial correction

PITFALLS

1) Too much reliance on past experience
2) Failure to capture ideas and insights (listen, write them down, record them)
3) Too early closure on problem definition
4) Sets a policy preference too soon before all the alternatives are known
5) Criticizing new ideas as they are offered
6) Some alternatives are ruled out too early on
7) Failure to re-consider discarded alternatives if conditions change

IMPLEMENTATION, MONITORING, & EVALUATION

Implementation Analysis
Policy Monitoring
Policy Evaluation

IMPLEMENTATION ANALYSIS

The full policy process is often described by the following steps:
- ❑ problem definition
- ❑ alternative generation
- ❑ analysis of alternatives
- ❑ policy adoption
- ❑ policy implementation
- ❑ policy evaluation

While this course has focused on the first three steps, the last three steps are equally important. A thorough policy analysis will include some consideration of policy implementation, monitoring, and evaluation.
- ❑ The policy analyst can sketch out an implementation plan for the most highly ranked alternative(s) that considers:
- ❑

  relevant actors and their interests
  required resources and who might provide them
  facilitators and barriers likely to be encountered
  reasonable time frame
- ❑

Implementation analysis might involve writing a "best-case" scenario and a "worst-case" scenario for each policy alternative, as well as the "most likely" outcome. The idea is to think systematically through the implementation process, identify potential problems, and develop actions that can be taken to either avert catastrophes or reduce losses.

POLICY MONITORING

Policy maintenance refers to keeping the policy or program going after it is adopted. Policy monitoring refers to the process of detecting how the policy is doing.
To monitor a policy, some data about the policy must be obtained. A good implementation plan will suggest some ways in which ongoing data about the policy can be generated in the regular course of policy maintenance, for example, from records, documents, feedback from program clients, diary entries of staff, ratings by peers, tests, observation, and physical evidence.

POLICY EVALUATION

Policy evaluation is the last step in the policy process. It may ask deep and wide-ranging questions, such as:
- 1) was the problem correctly identified, or was the correct problem identified?
- 2) were any important aspects overlooked?
- 3) were any important data left out of the analysis? did this influence the analysis?
- 4) were recommendations properly implemented?
- 5) is the policy having the desired effect?

6) are there any needs for modification, change, or re-design? what should be done differently next time?

When policies fail to have the intended effect, it is usually due to one of two types of failure: theory failure, or program failure.

A theory failure occurs when the policy was implemented as intended, but failed to have the desired effect. This may occur when, for example, a school adopts school uniforms to curb violence in the school, but the violence remains at the same level. The policy was implemented (uniforms were adopted) but the expected change did not occur. The theory that violence occurs due to style of dress is wrong. There must be some other cause of school violence, which would require a different policy to address.

An implementation failure occurs when the policy is not implemented as intended. For example, the school may adopt a uniform policy, but the majority of the students ignore it. The level of violence in the school does not change. We still do not know whether adopting school uniforms would lower the level of violence in the schools; we only know that uniforms were not adopted.

FORMATIVE EVALUATION

If adequate monitoring processes are in effect, it should be fairly easy to detect whether a policy has been implemented as intended. This type of policy monitoring has been referred to as formative evaluation. Formative evaluation documents and analyzes how a policy is implemented, with the objective of making improvements as the implementation process unfolds.

SUMMATIVE EVALUATION

Summative evaluation is conducted after a program has been fully implemented. It looks at whether the program is meeting its objectives, and why or why not.

Evaluations may be unpopular for many reasons:
      1) the program is controversial;
      2) there are strong political interests in seeing it succeed or fail;
      3) there are difficulties in measuring program accomplishments;
      4) those involved may be uncooperative;
      5) program effects may be influenced by outside developments.
To decide whether an evaluation will be helpful, the answer to the following questions should be "yes":
      1) will the evaluation be accepted by politicians, administrators, and/or participants?
      2) has an evaluator been involved from the beginning?
      3) are there measurable objectives?
      4) are data available?
      5) are multiple evaluation methods plausible?
      6) has the program remained stable over time?
      7) can program staff become involved in the evaluation?
      8) will the findings be made widely available?

EVALUATION DESIGN

Policy evaluation applies accepted social science research methods to public programs. The same research designs used in laboratory experiments are not always practicable in the field, but the same principles can guide the planning and execution of policy evaluation.

Before-and-After Evaluation: a policy is evaluated for the changes it has produced since its implementation; the situation is controlled to exclude other possible influences on the outcome.

With-and-Without Evaluation: a policy is evaluated for producing changes in the target population, compared to another population without the policy.

After-Only Evaluation: the extent to which the policy goals were achieved, compared to the state of affairs before the policy was implemented; but the situation is not controlled to exclude other possible influences on the outcome.

Time-Series Evaluation: the changes produced by the policy, tracked over a long time period.