



Handout C Data Collection Techniques

Now that we've identified the priority indicators, Forest Service officials will now determine what methods will be used to collect the information on the indicators. These are often referred to as Data Collection Techniques or Inventory Techniques.

Generally, there are three categories of techniques:

- Quantitative – larger scales studies, such as surveys or user trials, aimed at finding out how much, how often or to what extent
- Qualitative – smaller scale studies, such as focus groups, aimed at finding out why, how, or in what way
- Or, a combination of the two.

The following paper outlines the benefits and limitations of each category as well as including possible data gathering techniques.

Benefits of Quantitative methods

Assuming that studies are conducted well (by trained/experienced scientists), quantitative approaches:

1. Use transparent methods that can be reviewed and critiqued by others.
2. Provide defensible statistics that have been useful in court settings.
3. Minimizes potential biases and quantifies many potential sources of error.
4. Meet requirements of OMB Information Quality guidelines.
5. Inform stakeholders and public of the “true” range of public opinion to improve outreach and collaboration.
6. Counters “spin” from media, “squeaky wheels,” or advocates.
7. Provides measurable information about public opinion; goes beyond “content analysis.”

Benefits of Qualitative methods

Assuming that studies are conducted well, qualitative approaches:

1. Capture information that is not easily quantified (e.g., attitudes, beliefs, and values).
2. Enhance understanding of meanings and help describe “intangibles” such as experiences, ideas, beliefs and values.
3. Qualitative methods are flexible and provide insight into the attitudes, beliefs, opinions, and values of targeted populations which in turn provides insight into core issues.
4. Documentation of attitudes, beliefs, and values observed through qualitative data collection reveals information that affect the outcome of management decisions.
5. Focus Groups in particular:
 - a. Provides rich data that paints a broad picture



<ul style="list-style-type: none"> 8. Allow plans to address important user groups and their values/attitudes; links between actions and public opinion may minimize opposition letters and response efforts in the latter stages of planning efforts. 9. May provide managers with key information to develop proactive outreach and education 	<ul style="list-style-type: none"> b. May highlight issues not previously considered or information that is useful for interpreting quantitative data collected through other methods c. Small focus groups may increase the comfort level of participants 6. Content Analysis in particular: <ul style="list-style-type: none"> a. Offers data tailored to objectives/issues b. Saves on evaluation time and costs
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Quantitative Limitations	Qualitative Limitations
<ul style="list-style-type: none"> 1. May be more expensive (depends on sample frame and size) 2. May require more time (particularly with OMB approval requirements) 3. May be complex (depends on sample frame, number of strata, degree of resolution needed) 4. Implementation through RFP/Contract, FS research or University 	<ul style="list-style-type: none"> 1. Implementation through RFP/Contract, FS research or University 2. Manpower needed and cost associated 3. Focus Groups – <ul style="list-style-type: none"> a. Can be difficult to elicit participation from individuals who have time constraints, or who have already been interviewed for similar reasons b. Interviews and large focus groups may intimidate some participants c. Documentation and analysis can be time consuming d. The skill and integrity of the focus group leader is critical to the quality of the data collected. 4. Content Analysis - <ul style="list-style-type: none"> a. May not be available or applicable for some objectives/issues



Mixed Method Benefits:

1. It increases the validity of your findings by allowing you to examine the same phenomenon in different ways. This process of using different data collection methods -- sometimes called triangulation -- is often cited as the main advantage of the mixed-method approach.
2. Provides statistically defensible unbiased data, methods are repeatable, defensible in court and meet the requirements of OMBs Information Quality guidelines.
3. It can result in better data collection instruments. For example, it is often helpful to conduct focus groups to inform the development or selection of a questionnaire.
4. It promotes greater understanding of your findings. Quantitative data can show that change occurred and how much change took place, while qualitative data can help you understand why.
5. It offers something for everyone. Different stakeholders have different needs and/or interests. Different projects call for input in different ways
6. Most of the benefits of using quantitative data collection methods also applies to using qualitative methods.
 - b. Knowing the true range of public opinion will improve outreach efforts, collaboration and public meetings.
 - c. Provide a true characterization of the range of public opinion on key planning issues. Not hostage to gauging public opinion based on media, squeaky wheels and content analysis alone.
 - d. Project level work this information can support: Landscape, fire salvage, large scale restoration, oil and gas, grazing, OHV & ATV, special uses outfitter and guide services, just to name a few.

Mixed Method Limitations:

1. May increase cost.