

DECISION PROTOCOL

VERSION 2.0

PROCESS CYCLE

NOTE:

The Decision Protocol is intended to be a tool to help US Forest Service decision teams work through complex business and environmental decisions. It is an administrative aide that introduces the professional to the principles of decision science, outlines useful steps, and provides sources of information and techniques for improving decision quality. The Protocol is not and should not be viewed as formal Forest Service guidance or policy. Forest Service teams are not required to use the Protocol; its recommendations are not legally binding. Members of the public or other agencies are welcome to participate in Protocol-based projects or use the Protocol or any of its concepts or parts, but their use is strictly voluntary. The Forest Service is not responsible for the consequences of applications or misuse of the Protocol outside the agency.

DESCRIPTION

PURPOSE

- * Develop a process plan to be followed by the decision team (deciding officers and analysis staff).
- * Clarify the nature of the decision to be made and the roles of the decision team members.

PRODUCTS

- * A list of who will be involved and their roles and responsibilities.

- * Contract between analysis staff and deciding officer about the involvement expected of each other, including any instructions to the staff from the deciding officer or higher officials.

- * Description or "roadmap" of the process that will be followed. This includes any special features or constraints that must be dealt with as the process moves forward.

- * Description of the decision(s) to be made.

- * Description of any legal or policy requirements that must be integrated.

- * Evaluation of the geographic and time scales for judging potential outcomes and for the variables under the decision team's control.

This cycle brings the analysis team specialists and deciding officers together as a decision team to work through the plans for the decision process. The emphasis of this cycle is process, roles, and expectations--not content. A productive decision team, that also may include major stakeholders.

You may want a smaller "executive" group to name the team and work through most of the PROCESS cycle. However, you need to represent the thinking of the specialties in some of the key questions about process. Specialists who are not involved may act as "constraints" on the process after it gets moving.

A good startup requires an environment where people can talk candidly about past experiences and their desires and concerns about the decision they may be embarking on. Because some members may hold back on remarks for fear of premature commitment, the group needs to understand that anything developed in this phase can be revisited and revised.

INITIAL ASSESSMENT QUESTIONS

Put a check beside each statement that is true about the process plans you have made so far. For each question unchecked, work through the CORE QUESTION suggested and/or describe what should be done to bring this part of the process design "up to grade". Otherwise, you can work sequentially through all the questions. Generally, high stakes,

highly complex and visible decisions benefit from careful process design.

____ The decision has already been; the decision process merely a formality or a gathering of information to justify a choice already made. If true, describe its elements in PROBLEM CORE QUESTIONS 1-4. If not, work through the questions "from scratch".

____ Some or all of the process steps are already prescribed by law or policy. It very regimented. If true, go directly to PROBLEM CORE QUESTIONS 6-7.

____ This is a routine decision with which your organization has a lot of experience. In other words you do not need detailed process design. If yes, go directly to PROBLEM CORE QUESTIONS 6-8.

____ The decision is likely to be very complex. There a wide variety of interest groups interested in the final choice. If yes, go to PROBLEM CORE QUESTIONS 5-7.

____ The responsibilities of the decision team's members are clearly defined? If yes, record them in the SUMMARY TABLES and go on the PROBLEM cycle.

____ The consequences of making a mistake are likely to be very serious? If yes, go directly to the PROBLEM CORE QUESTIONS 5 and 7.

____ This decision will have to be explained to a large number of people. The details of the decision process will be open to detailed scrutiny? If yes, go to Problem Questions 5 and 8.

CORE QUESTIONS

PROCESS Question 1. Why are we here? What decisions have to be analyzed and made?

(Note: for questions 1-4, discuss each question and then record results of your discussion in Problem Summary Table 1 which follows Question 4.)

Describe the decision(s) that are being made in this process.

Consider whether:

- * A decision must be made at all
- * Decisions (about this issue) were made in the past.
- * Stakeholders and superiors expect that a decision will be made.
- * Delaying this decision has serious consequences.
- * This decision depends on the outcomes of a decision(s) made elsewhere first.
- * This decision is important in relation to other priorities.
- * This decision is part of implementing strategic direction or plans.
- * An action has already been proposed.
- * Analyses have already been done, but decisions were not made.
- * Implementation of decisions was incomplete.

PROCESS Question 2. What are the appropriate scales for this analysis?

Some understanding of the scale of the decision is important in designing the process and determining who should be involved. The decision team should have a clear understanding of the range of consequences and authority they have to work with.

There are many possible scales at which to analyze the decision you are about to embark on. These scales can be geographic, that is describe the area within which the consequences will be felt and the variables shaped by the decision. For environmental decisions, geographic scale could be: national, regional/ecoregion, province, sub-basin, watershed, or site. Scale can also be described as a managerial sphere of authority, the organizational scope within which the decision controls variables in the organization. Managerial scales might be national, regional, multiple-forest, forest, district, or project.

Consider:

- * What geographic (or managerial) scales are relevant for the variables under control of the decision maker.

* What geographic scales are relevant for the possible consequences of any action. These scales can be larger or smaller than the scales of the decision variables. Different consequences will play out at different scales, so there may be multiple effect scales.

* What it will take to align the managerial scale and the consequences scales. The decision process should help the team evaluate consequences and design actions at scales that make sense. There is poor alignment if control variables have no noticeable influence at the scale(s) through which consequences occur. Poor alignment can also mean trying to avoid or reduce localized or site-level consequences by unnecessarily imposing restrictions or constraints on activities in several geographical and/or organizational units.

* What are the ongoing trends and conditions at higher and lower scales? How does this decision seem to link to larger societal, economic, or other problems.

* Whether the scale is appropriate to the kind of decision being made. Large-scale analysis is essential to: establish context; provide guidance; define analysis units at smaller scales; allocate budgets and expertise; establish analysis schedules and accountability; and addresses issues that cross organizational unit boundaries. Analysis of larger scales may also evaluate portions of the situation that are unique, highly valued, or risky (e.g., key watersheds, domestic water supplies, endangered species, toxic waste routes, landslides).

* Mandates to consider the contributions of this decision to combined effects at multiple scales.

PROCESS Question 3. What is the appropriate time scale for this analysis?

Describe the future period of time for which you want to evaluate the proposed actions and their consequence predictions.

Consider:

* What time scales are relevant for implementing management options.

* What time scales are relevant for predicting possible consequences.

* Whether the decision process aligns managerial and consequence scales. Activities may have no noticeable influence on the situation during their implementation, but create serious changes over a longer period.

PROCESS Question 4. What criteria will likely be used to design solutions to problems in this situation?

Consider as sources of criteria:

* The deciding officer and other responsible official. Invite deciding officers to explain personal criteria. Reach past the "company line" of mandated or politically correct criteria and find what may be the true drivers of decision.

* Expected responses from stakeholders

* Team members' professional opinions

PROCESS SUMMARY TABLE 1. Description (Process Questions 1-4)

	Decision A	Decision B
Description (P1)		
Geographic scale (consequences) (P2)		
Geographic scale (management) (P2)		
Time scale (consequences) (P3)		
Time scale (management) (P3)		
Possible Criterion A (P4)		
Possible Criterion B (P4)		

PROCESS Question 5. Who should be involved?

Describe the people, positions, and specialties that will make up the decision team. If appropriate, include stakeholders who might be able to contribute to the team.

Record your answers in PROCESS Summary Table 2.

Don't let the decision team get too big. Effective teams are large enough to handle the task, but small enough to get things done and maintain cohesion among team members. An ideal team might consist of no more than 7 members.

PROCESS SUMMARY TABLE 2. Who should be involved? (Process Question 5)

	Decision A
Deciding Officer:	

Responsibilities:

Analysis Team Member A:

Analysis Team Member B:

Supporting expert A:

Supporting expert B:

Stakeholder A:

Stakeholder B:

PROCESS Question 6. What special features or constraints might determine how you proceed?

(Note: For questions 6-8, discuss each question and record results of your discussion in Process Summary Table 3, which follows question 8).

List critical factors that should be considered in planning this process. Consider:

* Budget limits

- * Time limits
- * Seasonal restrictions
- * Political motivations and expectations
- * Direction from higher level management, policy, or organizational strategy
- * Availability of expertise to serve on the team
- * Total workload of the agency unit and the team members assigned to this decision
- * Managerial style, strengths and weaknesses of the deciding officer and team leader
- * Relative importance of the decision in the total scheme of priorities
- * Organizational culture and expectations for behavior and performance

PROCESS Question 7. What provisions for legal compliance should be integrated in the process?

Consider legally mandated processes or process milestones. For environmental decisions, these will be found in the National Environmental Policy Act (NEPA), Administrative Procedures Act (APA), Federal Advisory Committee Act (FACA), Endangered Species Act (ESA), Clean Water Act (CWA), Clean Air Act (CAA), National Historic Preservation Act (NHPA), civil rights and union requirements and other federal, state and local requirements.

Describe the following:

- * What arrangements have to be made for these requirements to be integrated.
- * When during the process the integration should occur.
- * Who must be involved at what times.

Look for process considerations here. For example: (a) lead times and the level of complexity required for agency liaisons such as technical evaluations, (b) mandated expertise, (c) length and timing of comment periods, (d) approval steps, (e) officials that must be kept informed, and others.

PROCESS Question 8. What is your plan for proceeding through this decision?

Describe the process you will follow. Include:

- * The responsibilities of individual team members.

- * What the analysis team expects of the deciding officer in this decision

- * What deadlines must be met

- * How often the team should meet

- * At what points should the analysis team and the deciding officer meet

- * What parts of the analysis should be done by individual specialists

- * What external groups and individuals expect of the decision team

- * The responsibilities of external groups and individuals in this decision process

The deciding officer on your team should be explicit about the following areas:

- * His/her responsibilities in this decision process.

- * How decisions such as this should be made: officer discretion vs. consensus of team or public; intuitively vs. analytically; agency discretion vs. interagency coordination vs. public debate; other dimensions?

- * What he/she expects of the team. What parts they should play in designing or recommending the choice of action.

- * How much time, effort, and money the organization can afford in making this decision.

- * How important is this decision relative to other projects and decisions.

PROCESS SUMMARY TABLE 3. Process Design Features (Process Questions 6-8)

Process Design Features

Description

Constraints (P6)

Budget

Time limits

Political requirements

Organizational policy requirements

Outside expertise

Relative priority in the organization workload

Deciding officer's special requirements

Legal Requirements (P7)

Process considerations (P8)

Meeting and product deadlines

Stakeholder involvement

Special considerations in choosing the action

Other features

AUDIT QUESTIONS

The audit process is a tool for finding out if you have developed an effective process plan.

Put a check beside each statement below that is true. For each question you leave unchecked, go back and revisit the PROCESS CORE QUESTION and/or describe what should be done to improve this part of the process plan. If you are

not sure how to modify your process plan, record and implement the recommendations you have so far and go on to the PROBLEM cycle. Be ready to make adjustments if problems arise.

(1) How much does the analysis and decision process contribute to overall decision quality? The process you have designed will:

- _____ Help the decisionmaker understand the alternative designs and their expected consequences.
- _____ Encourage clear and consistent through all its phases and steps.
- _____ Stimulate creative thinking in the design of an action.
- _____ Set up early consultations with partner agencies.
- _____ Conform to procedural requirements of important laws such as NEPA and APA.
- _____ Encourage members to work together as an interdisciplinary or cross-functional team.
- _____ Encourage the deciding officer and the analysis team to work together through the decision process.
- _____ Use the talents and knowledge of team members.
- _____ Encourage clear and open communication among team members.
- _____ Elicit and address the different views of what the problem is or should be.
- _____ Identify and deal with biases that could influence the analysis and selection of an alternative.
- _____ Prepare the decision team to consider complaints, appeals or defend the decision in possible litigation.

Improvements: _____

2) How well will the process allow the team to respond to public values and concerns? The process will:

- _____ Keep the public involved through the entire process.
- _____ Use information contributed by the public.
- _____ Identify and address public issues.

Improvements: _____

(3) How well will the analysis use available information and confront the most important sources of uncertainty and missing information? The process will:

___ Describe new information that could influence implementation of the selected action.

___ Allocate wisely the dollars and time to be invested in information collection and analysis.

___ Match the scale of the analysis to the geographic scale of variables under the authority and influence of the deciding officer.

___ Integrate published scientific information with knowledge of professional managers, specialists, and the public.

___ Describe missing information, unknowns, and assumptions and their implications in the decision.

Improvements: _____

(4) Does the process encourage learning by individuals and the organization? The process will:

___ Interpret and use experiences from similar projects.

___ Document the analysis and decision so that future managers can learn from them.

___ Encourage other members of the organization to learn from this decision?

Improvements: _____

(5) Will the process design an action that is clearly defined, defensible, and legally compliant? The action designed from this process will:

___ Meet clearly stated criteria.

___ Be accompanied by an understandable and defensible rationale for its development and choice over other alternatives.

___ Meet requirements established by law, regulation, or policy.

___ Respond to strategic direction set down in higher level plans, goals, and objectives.

___ Be legally implemented by the agency.

Improvements: _____

TEAM LEADER TIPS AND TOOLS

Starting the Decision Protocol

This Protocol is designed to bring the decision team together to work through the plans for the decision process. The facilitator and team leader need to create and maintain a work environment where people can talk freely about past experiences and candidly express their desires and concerns about the decision they may be embarking on.

Make sure the group understands that anything developed in this phase can be revisited and revised. The emphasis is on process, roles, and expectations, not content. Be tuned to relationships among the participants. Ask a few questions to see if there are any serious unresolved differences, strong ulterior motives, or autocratic leadership styles that might detract from the openness you are trying to achieve. It may be better to get some of these issues out in the open before you start into the decision appraisal questions.

Emphasize that every team member's opinion and judgment are valued. Encourage members to question each other across disciplines. Their thinking contributes as much as a source of professional and scientific thinking as a representative of a discipline.

Display the protocol cycles as a poster throughout all the meetings. At the beginning and ending of each meeting and cycle remind team members where they are and how their progress relates to cycles and questions that will follow.

Observers on the team deliberations are OK, but do not let the observers formally and openly evaluate the protocol, the team's performance, or the substance of the discussions unless the team asks them. The team should work toward feeling comfortable and confident working together and with the Protocol and should stay focused on the problem. This is difficult if they are looking over their shoulders for gratuitous advice or criticism.

Throughout the Protocol are references to summary tables. Use flip charts or a computer projection system to record the ID team answers and responses in these tables. Display this record so the team can check the pattern of their responses. However, do not let the discussions turn into a game of racing to fill in tables without completely thinking through and agreeing on the responses.

The team should bring all the materials (manuals, maps, plans, texts, literature, etc.) about the situation, area, or proposed action to the first meeting. The team should view the area together either before the first session or during the

first session, using the Protocol questions in the first two cycles to guide the field trip.

Following are some tips and aides for working through selected CORE QUESTIONS in each of the cycles. Not every CORE QUESTION has a tip or tool, but as the Decision Protocol matures and your experience with it grows, we hope to add to the repertoire.

PROCESS CYCLE

Note: There are no tips or tools for PROCESS questions 3 and 7.

PROCESS Question 1. Why are we here? What decisions have to be analyzed and made?

An issue or problem that has been around a long time usually has many proposed solutions, some with long time supporters and opponents. Probe for insights about the history and the "maturity" of this decision. Has the organizational unit or others dealt with this before? Were the issues clearly defined in these earlier deliberations? Has the problem to be solved with the decision previously surfaced as a different issue? Why is it on the agenda now? Why is there urgency about getting the problem resolved?

Avoid:

- * Starting off to make a decision that really does not have to be made.
- * Starting off to make a decision that has already been made.
- * Not being open about what decision is being made in this process.
- * Committing to or giving preferential treatment to a favorite proposal by describing the decision in terms of the proposal.
- * Defining the decision in terms of producing the analysis or an environmental document. The decision should be directed at solving some resource problem, not at analyzing or documenting as ends in themselves.

PROCESS Question 2. What are the appropriate geographic and organizational scales for this analysis?

Display a two-dimensional matrix to help people think about the scale issue. Rows would be labeled "Control" and "Consequences" and the Columns would be labeled "Site," "Landscape," "Watershed," "Forest," "Ecoregion," or "District," "Forest," "Region," "National" or some other breakdown. Use the matrix to guide the discussion. If the scale of the consequences and control seem to be larger than the team can address, consider involving teams from adjacent forests and organizations.

PROCESS Question 4. What criteria will likely be used to design solutions to problems in this situation?

With this list, the team can get a feel for possible conflicts, tradeoffs, and compromises, and design a decision process accordingly. Developing the list will help establish a habit of being candid and clear about criteria and other judgments.

Being explicit about criteria gets people in touch with their own values and assumptions, assures clarity among team members, creates an impartial "distance" from alternatives already proposed, builds a nucleus for negotiation and consensus, and stimulates creative thinking about designs for alternatives. Team members must eventually agree on criteria before they can agree on a final design. This may be the best time to get the deciding officer's candid expectations and wants.

Stay general at this point. Try brainstorming or nominal group technique to develop a large list. This is not the final set of criteria. In the PROBLEM cycle there will be an opportunity to refine, focus, and reconfirm the criteria through establishing objectives and consequence measures. .

Avoid premature criticism of possible criteria or letting one person dictate the criteria. It is important to discuss criteria before people buy into an alternative or get ingrained on unspoken criteria.

PROCESS Question 5. Who should be involved?

Don't concentrate on technical skills to the exclusion of problem-solving, interpersonal skills, or just plain enthusiasm and energy. Personal attributes are important. Such factors include: (a) experience with similar projects, (b) knowledge of specific tools (if you think they will be used), (c) knowledge about the implementation environment of activities that might be planned in the decision, (d) problem-solving ability, (e) availability, (f) initiative and energy, and (g) communications skills. Katzenbach and Smith (1993) delineate these qualities into technical or functional expertise, problem-solving and decision-making skills, and interpersonal skills.

The team should blend creative, iterative thinking with linear, rational analytical processes. Represent different thinking or learning styles in the team. A team whose members have only analytical, thing-oriented styles does not allow for creativity and flexibility in problem identification and alternative generation.

Different individuals may play different roles. Like cast and crew in a play, there are (a) backers - management, producers, and investors, (b) the director - the deciding officer, team leader, and facilitator, (c) the main players - decision team members, (d) bit players - people who come in for specific functions or roles and leave, and (e) cameo players - high-profile stakeholders or managers who add luster and legitimize to the process and the decision (Lientz and Rhea 1995).

Think of an "extended" decision team with "players" from outside the unit or agency, along with the deciding officer and the interdisciplinary team. Possible criteria in choosing specific people include:

- * Knowledge of divisive controversies or deeply held values.
- * Representing viewpoints probably important in the decision.
- * Signers of any required documents.
- * Special needs for geographic scale of decision and the consequences.
- * Expertise and experience to address the expected uncertainties and issues.
- * Prospective members' biases and limitations.
- * Preconceived opinions about the problem or about a proposed action.

PROCESS question 6. What special features or constraints might determine how you proceed?

Encourage the team to remember similar decisions. Ask members to focus on the process aspects of these decisions and to recollect constraints on the process mapping, problem framing, solution design, and action. Even though the decision will be "political" or "negotiated", it may still be worth this analysis to help the team negotiate better. The team will better express its own findings and recommendations.

Avoid:

- * Viewing too narrowly what the team can and can not do, or putting imaginary constraints on the process. Beware of

this in teams that are weary of overwhelming schedules or of being whipsawed by political forces or fickle administrative directions.

* Basing constraints on unexamined fears. Expecting stakeholder involvement to be complex and confounding or appeals and litigation on the decision may be inaccurate. Check the facts.

The team may want to discuss how to work within or to "flex" the organizational culture to open up process opportunities. Culture is comprised of norms that prescribe how members will operate and get work done. These norms, or ground rules, may be unwritten, perhaps unstated, but they are the basis of habit and sacred beliefs. Culture can vary with organizational unit as well as agency. Recurrent, predictable patterns of behavior are preferred ways of coping with complexity, surprise, deception, and ambiguity.

Culture consists of (a) rules - written policies and unwritten learning methods (heuristics), (b) habits, (c) traditions, (d) taboos, (e) symbols and artifacts, (f) stories, (g) philosophies, and (h) theories.

Clarifying the constraints or preferences created by the organizational culture can help the team decide whether the process should be:

- (a) Driven by policy (top-down) or broad scale involvement (bottom-up)
- (b) Open or closed to participation in certain cycles
- (c) Linear or iterative in sequence
- (d) Rigorous or flexible
- (e) Comprehensive and systematic or rapid and approximate
- (f) Focused on problem framing or analysis
- (g) Directed at optimal solutions or satisfactory solutions
- (h) Directed at efficiency or at fairness in the process

PROCESS Question 8. What is your plan for proceeding through this decision?

Use the Protocol structure as a basic anatomy to design your team's process. Elements include problem framing, action design, consequence analysis, and action (choice and commitment) stages. Use the Protocol questions to develop tasks

on which to set timelines and plan different types of involvement.

List the tasks and outline a simple timeline with milestones and responsibilities. The timeline can consist of "Who", "What" (task and goal), "How", and other important elements. Try a schedule that balances team meetings with work time for independent information gathering and analysis. But build in enough group time for team members to interact and build interdisciplinary problem solving ability.

Consider carefully the costs and benefits of the analysis and deliberation. Outlays include expertise, time, information collection, and meetings. These can be viewed as investments whose returns include less delay, fewer repeat analyses, fewer appeals and litigation, and greater success in court. But you can spend too much time analyzing. Remember that there are alternative uses of the team's time and effort.

Consider similar situations that have been analyzed or decided lately. Evaluate the decision team's process, using an easel sheet with "Positive" (Good) and "Change" columns. Circle those elements from either column that best apply to the current process design. Or you can use the audit questions in each cycle of the Protocol and write out improvements the team wants to include in the current design

FOR FURTHER READING .

Bazerman (1986) : 165-190 Group decision making and coalitions.

Bradford (1976) : 8-19, 51-64 Group leadership roles and qualities

Doyle and Strauss: 148-211 Team leadership, meeting structures and planning

Heifertz and Laurie (1997): Leadership of adaptive teams.

Katzenbach and Smith (1993): p 1-26, 43-128 General findings about team function and roles; 130-148 Team member roles and leadership tasks; 268-291 Q&A's about teams.

Leintz and Rhea (1995): p 67-96 task definition; 97-114 team leadership in project management; 115-130 team development, 135-197 project management, scaling, tracking, and troubleshooting.

Schein (1987): p -38. Role of manager in process.

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Lientz, Bennet P., and Kathryn P. Rea 1995. Project Management for the 21st Century. Academic Press, Inc. San Diego, CA. 308 pp.

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