

**1 THE OPERATIONAL PLAN: A USEFUL TOOL FOR IMPROVING
MANAGEMENT OF PROTECTED WILDLANDS,,**

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INTRODUCTION: BACKGROUND AND PROBLEM

Juan Pérez has recently been named superintendent of a large national park. The park is considered to be a "high priority area" by the park service of Juan's country, since it is near the capital city and receives over 50,000 visitors each year. A general management and development plan or master plan and interpretive plan for the area were prepared several years ago by teams of nationals and international specialists. A regional development bank is funding the implementation of those plans. Suddenly Juan, a biologist who has never had a course in public administration in his life, finds himself in charge of the park, its twenty rangers, and a considerable physical plant. Juan also has to deal not only with recreational and scientific users, but others of the more difficult variety: poachers, squatters, and gold placer miners. Although the master plan lists as activities such things as "carry out on a continual basis patrols to sectors of the park where poaching and mining occur", that level of detail is not sufficient to assist Juan in determining which of his rangers will do what, where, when and with what human and material support on a weekly, monthly, trimestral and even yearly basis, given existing resources and limitations.

Cecilia Gómez is superintendent of a small biological reserve in the same country, with only five rangers and minimal equipment. Although the area receives insignificant visitation because of its isolated location, it has small but persistent poaching and archaeological site looting problems, due in part to strained relations and mistrust between reserve personnel and the inhabitants of neighboring communities. Since Gómez' area is not considered a high priority by her country's park service, no master plan will be prepared for her reserve for another 5-10 years. Cecilia's problem: how to effectively implement a modest yet effective management program for her area oriented toward solving the reserve's immediate protection and public relations problems and maximizing productivity given scarce human, material and financial resources.

Maria Sánchez is chief of the Interpretation and Environmental Education Department of the park service for which Gómez and Pérez work. As with all the other technical departments at the park service's central office level, the principle function of her's is to provide strong support to the 25 national parks, biological reserves and national recreation areas which make up the service's system. She constantly gets requests from Gómez, Pérez and most of the other superintendents for assistance in planning and carrying out interpretive programs in the system's units and educational and extension programs in communities surrounding protected wildlands. She and her staff of two technicians can not possibly meet all the demands for assistance. How can she budget the time of the staff and the department's other resources to best meet the demand for their services and best contribute to the overall protection and management of all areas managed by her agency?

Alfonso Quesada is the director of the same park service. The system covers almost 10% of the country's total land area, virtually one third of all forested areas remaining, thus being an extremely important part of the national heritage and base for sustained development. In existence for only twelve years, the system has grown steadily, and in large part due to its success has more than doubled in number of units and tripled in total area included in only the past four years. However, only about a third of the units have master plans and several of those are out-of-date. Even with the service's very experienced planning department staff of three it is clear from past experience that it will take 8-10 years to complete master plans for all units, not to mention periodic revisions of such plans and those for any new areas established. In response to the many needs of the twenty-five units in the system, the service has established a number of technical departments in the past few years: planning, training, interpretation and environmental education, research, etc. However, although their principle reason for existence is to provide technical assistance and support to the areas there is a tendency in several of the departments (especially the newer ones) to expend far too much effort and time on "national level", self-aggrandizing activities and far too little on the areas needs. Little time is spent in the units and communication between the units and departments and among the departments is poor. To complicate matters, human and financial resources for the system's management are becoming ever more stretched since the country has entered a prolonged

economic crisis. The director's problem is two-fold. First, how to best consolidate the existing system and strategically manage and develop it in the medium and long-term, including new potential additions. Much of that can be guided by a system plan and strategy which will be completed within 2-3 years, which will set major priorities for activities and action among areas and within individual units in the system. However, as experience to now in many countries has shown, that system plan and strategy will give such priorities and guidelines only in broad terms, because of its very nature. That raises Quesada's second, related and more immediate problem. Both "to fill the gap" until the system plan and strategy are available, and then to enable implementing it on a year to year basis in a detailed manner once it is available, how to most efficiently and effectively utilize the limited human and financial resources of the entire service (technical and administrative departments and all management units) to insure the best possible management of all units in the system. What type of planning could both give the detail needed to guide management and development in the short-term and maximize the degree of integration and collaboration required among departments and units?

These four examples point out some important reasons why master plans and systems plans and strategies, alone, although both are extremely important, can not serve as all-inclusive guides to management and development of individual wildlands and systems of such areas, respectively. The rest of this paper will concentrate on the case of master plans for several reasons: 1) in order to not overly complicate and lengthen this first presentation of these ideas and results; 2) to more clearly and concisely illustrate why this conclusion has been reached and what solutions have been and are being developed to the problem; and 3) less testing and experimentation has been done in the case of systems plans and strategies because they are a newer breed. However, all the evidence indicates that the analysis of the problem and the real and potential solutions as presented here for the case of master plans, have direct analogs in that of the systems plan and strategy case. This will be briefly touched upon again at the end of the paper, but mostly left for later further development.

ANALYSIS OF THE PROBLEM

Some of the reasons as to why master plans can not serve as such all-inclusive guides are based on the content and context of the master plan. According to Linn (1976), master plans usually consist of studies of the natural and cultural resources of an existing or proposed park or reserve and the region surrounding it; a definition of objectives and limits for the studied area; some type of use zoning within its limits; management programs covering resource protection, public use and administration; and a general development scheme indicating the location and specifications for the infrastructure and personnel needed to manage the area.

Master plans, also known as general management and development plans, are designed to cover long time periods, and tend to be quite conceptual, especially regarding routine activities such as guard patrols, maintenance, daily or weekly interpretive programs, etc. Also they usually do not specify dates for carrying out activities and instead include recommendations on "phasing" of the most important activities included in the plan. Ideally, they are prepared by multidisciplinary, interinstitutional teams and due to their scope require considerable amounts of time, money, and trained personnel to be done right. They also tend to be ambitious, and include proposals for infrastructure and facility construction and other aspects which often require special funding outlays or loans which may or may not be obtained.

In Latin America, such plans have gained widespread acceptance during the last decade. Much of their increase in popularity and use can be attributed to the role played by FAO, U.S. Peace Corps and similar advisors during the formative years of many of the parks and reserves agencies in the region. Since there was little experience in wildland planning in Latin America at the time, these advisers and their host country counterparts adapted the existing North American master planning methodologies. This was not done, however, without introducing some major changes in these methods to take into account cultural and socioeconomic characteristics in the region.

Through the 1970's the number of protected wildlands in Latin America increased dramatically. For example, MacFarland and Morales (1981) report

that in Central America alone, between 1969 and 1981 the number of protected wildlands grew from 25 to 149 and the total protected area increased from 1,935,316 ha to 6,149,550 ha. However, the only written guidelines for park master planning published in Spanish and devised for the region were included in a short booklet on the topic published by FAO (Moseley et al, 1974). Also, a number of master plans prepared with FAO technical assistance were widely distributed in the region to serve as examples for planners.

By the end of the 1970's, there was clearly a need for a comprehensive document on park planning specifically designed for Latin America. This need was met by Miller (1980), whose Planning National Parks for Ecodevelopment in Latin America, published in Spanish, is the first comprehensive guide in that language for wildlands planning*, both at the level of the master plan for the individual management unit and at the level of the wildlands system plan and strategy. The book has been fairly widely distributed in the region, and is being used as a text in workshops and university courses on wildlands planning in several countries in Latin America.

The growth in the number of protected areas, coupled with the widespread distribution and acceptance of a methodology for preparing master plans for such areas, has had one desired effect: the number of master plans completed or in preparation for protected areas has increased dramatically. However, there has also been an undesired and troublesome effect: the vast majority of these plans have been only superficially implemented and many simply shelved.

The obvious question is, "why?". If a comprehensive methodology exists for preparing master plans, based on many years of experience in Latin America, why are most such plans collecting dust or being only superficially executed? Why the gap between plan preparation and implementation? And what can be done to bridge it?

*Particularly focused on planning of national parks and similar management categories

The four examples given at the beginning of this report, based on real cases from Central America, illustrate some of the major limitations of the master plan (Barborak, 1981b)*:

1) Because of the amount of baseline information, time, trained personnel and funds required for their preparation, many parks and reserves do not have master plans nor will have for some years to come:

2) The plans where prepared, because of their long term focus, tend to be conceptual. While they include excellent information on such topics as zoning and general physical plant specifications, they do not provide enough detail on routine and other activities to allow a park or reserve superintendent to translate plan directives into actions in the field.

3) The plans apply specifically to wildlands management units and do not address the need for some type of document to guide the detailed activities of administrative and technical departments and sections which provide support services to protected wildlands.

4) Likewise they do not address the need for an overall summarizing document which integrates and guides the detailed activities of the entire agency (director, technical and administrative departments, superintendents and their staffs) for management of the whole system.

* These same limitations in slightly altered form apply to the system plan and strategy. When they exist, the system plan and strategy in a general way addresses the needs pointed out in limitations 3) and 4). The problem is that it covers principle priorities and activities but still at a very general or global level. That is as it should be but the need for more detailed, short-term guidelines to implement such a system plan and strategy is strongly evidenced by the difficulty that directors, technical department staffs and superintendents (i.e. agencies) have in translating them into action.

PRINCIPLE ACTIVITIES AND RESULTS

In light of these limitations, several wildlands management agencies in Central America have been testing the use of short term operational plans as a tool to complement master plans and improve management of protected wildlands, technical and administrative departments of wildlands management agencies, whole management agencies and thus entire wildlands systems.

The use of short term work or operational plans is nothing new in public administration: scores of countries produce some variation of plans using this name. However, these plans usually are "operational" only if one uses a very stretched definition of that word. These plans are often prepared by desk-bound bureaucrats in planning offices of ministries and departments. Many times they consist of hazy statements of goals and objectives without including details on the activities which will be undertaken to meet such goals. The specific responsibilities of individual staff members are almost never mentioned. Often in countries with centralized planning, these operational plans consist of nothing more than a rehash of sectorial goals included in national development plans. Even where this type of operational plan includes specific descriptions of activities, seldom are the agencies or their employees held accountable if goals are not reached or activities are not carried out.

The operational plans now being prepared in the Central American wildlands management agencies bear little resemblance to their above-mentioned distant cousins. They are extremely practical and concise documents based on political, economic, human resources and administrative realities and in large part prepared by the same personnel responsible for carrying them out.

The following sections present the principle experiments conducted with operational planning over the past few years in Central America, including examples of the methodologies developed and main results derived.

The Case of Complete Operational Planning: the Costa Rican Park Service (CRNPS)

The Central American wildlands agency with most experience in operational planning is the Costa Rican National Park Service. Since its birth in 1970, the agency has grown to the point where its nearly 400 employees manage more than 25 national parks, biological reserves, national recreation areas and one archeological monument, representing over 400,000 ha., over eight percent of Costa Rica's land area (Boza, 1980). The CRNPS main office, although base for only fifteen percent of the park service's staff, has evolved to the point where it now includes small technical departments and sections dedicated to providing support services to field management units in such areas as planning, training, interpretation/environmental education, investigation, and construction/maintenance. With considerable international technical assistance, primarily from FAO, CATIE and the Peace Corps, nine master plans have been completed for different areas in the park system of Costa Rica, and several others are at various stages of preparation. However, only one master plan, that of Volcan Poas National Park, has been substantially implemented, thanks to a loan made by the Central American Bank for Economic Integration (BCIE). More than a dozen areas still do not have master plans, and the process of preparing them will not include for at least 6-10 more years (Barborak, 1981a).

In 1979, the CRNPS decided that a comprehensive operational planning strategy was needed to order short term priorities, improve management of all parks and reserves, and increase coordination between field areas and central office departments, especially in light of an increasingly difficult economic situation facing Costa Rica and specifically the CRNPS. So it was that in that year, with technical assistance from the Mesoamerican Wildlands and Watershed Program (PASC) of the Tropical Agronomic Research and Training Center (CATIE), that the CRNPS began to develop and implement an operational planning methodology.

From the beginning, several guidelines were developed to avoid the previously mentioned pitfalls involving traditional operational plans:

- 1) The plans, with little difference in content, would be prepared for all management units, both those having an approved master plan and

those without, as well as for all technical and administrative central office departments. Highlights from these plans would be included in an overall operational plan for the CRNPS, and the individual plans would form the detailed annexes to the latter plan.

2) The elaboration and implementation of the plans would be the direct responsibility of management unit superintendents and department chiefs, but all personnel of management units and departments would participate in plan elaboration, and department and protected area plans would be compatibilized, via a rigorous review process to insure that full integration was achieved.

3) The plans would be written to cover a two year period but would be revised and extended early each year as soon as final budget figures were released. Activities and responsibilities described for the second year of the plan because they would not be based on a known budget, would necessarily be more tentative, but would serve to aid in elaboration and justification of the next year's budget request.

4) The terminology and structure of the plans would closely correspond to that utilized in the Miller methodology used by the CRNPS in master planning, to enable park administrators from areas with master plans to easily insert in their area's operational plans those activities of the master plan that can be implemented more immediately.

5) For management units without approved master or specialized plans, operational plans would serve as the principal guiding document until master plans could be prepared. These operational plans would be much more conservative than those for management units with master plans: no major physical plant improvements or new management activities that encourage increases in public use of the areas would be included. Without the detailed resource inventories and environmental impact analyses associated with master plan preparation, it was park service policy to not initiate in any area activities or physical developments with potential yet unstudied negative environmental impact. Thus, for example, proposed new infrastructure would be only of light weight, easily movable materials with minimum or no impact.

6) For management units for which master plans have been prepared the operational plans could be far less conservative, and would basically include all those activities and developments included in the master plan and any other existing specialized plans, such as interpretive or fire control plans, which could be carried out in the short term given funding, personnel and physical plant limitations, and in line with the phased priorities delineated in the master and specialized plans.

The operational planning process has been conducted for three years (=three rounds of planning) by the CRNPS. Although the overall process must still be considered as somewhat experimental because of its newness, the three applications have allowed extensive testing and refinement of the methodologies. The following subsections present the principle methodologies developed and other key results:

Operational Planning Methodology for National Parks, Biological Reserves and National Recreation Areas.

The methodology as applied in the CRNPS consists of 22 steps. Each of the first 17 steps corresponds to a written section or subsection in the final plan:

Step 1: Prepare a brief description of the regional context within which the area lies: natural and cultural resources, socioeconomic and development characteristics and plans; summarize these on a base map

Step 2: Prepare a brief description of the natural and cultural resources of the management unit: highlights; summarize these on a base map

Step 3: Prepare a description of the actual land and resource use of the unit; summarize these on a base map

Step 4: Prepare a description of the current use of the management unit by authorized visitors (recreational users, school groups and scientists)

- Step 5: Prepare a description of the principal management problems of the area (unauthorized uses and impacts of authorized uses); show location of major problems on a base map
- Step 6: Detail the grade of implementation of the preceding year's operational plan and any existing master, interpretive or other specialized plans
- Step 7: Prepare a list of existing personnel, their position and training, possible short-term changes, and their location in the area along with a map showing distribution of personnel in the area and an organizational diagram for the management unit showing the chain of command
- Step 8: Describe the existing infrastructure, equipment and vehicles of the area, their condition and possible short term changes; show location of buildings, roads, trails, etc. on the base map
- Step 9: Prepare a list of the objectives for the management unit.
- Step 10: Prepare a section on the principle limitations which will affect the ability of the area's personnel to fulfill objectives for the unit's management over the next two years and how to limit their impact
- Step 11: Prepare management programs and subprograms for the area. In the CRNPS, for each protected area three management programs must be prepared: resource management and protection, public use and operations. A minimum number of subprograms and activities are mandated for each area, according to its staff, physical plant, public use and management problems. These subprograms may include some or all of the following: resource protection; investigation, monitoring and scientific cooperation; resource management; interpretation; environmental education; public relations and extension; recreation; administration; maintenance;

inter and intrainstitutional cooperation and collaboration; and training. For each activity described in the subprograms, information is given on when it will be carried out; by whom, where, why, what equipment, materials and special resources will be needed, and how much it will cost

Step 12: Prepare a list of indispensable acquisitions and infrastructure projects needed to implement management programs and their cost

Step 13: Prepare a section on the division of personnel in teams which correspond to management programs and mentioning any needed changes or additions in the area's personnel absolutely necessary to implement the plan

Step 14: Prepare a section on the assistance which central office departments can provide to aid management of the unit during the next two years

Step 15: Prepare a similar section on actual and potential assistance or collaboration to be provided by and to other local, regional or national institutions

Step 16: Prepare a detailed cronogram showing the distribution of all activities and the work load over time

Step 17: Prepare a budget summarizing all costs for all activities, infrastructure, equipment, materials, etc

step 18: Consult with unit personnel, regional supervisor and central office departments to assure that the plan is functional and is acceptable to all involved in its implementation

Step 19: Incorporate necessary changes in the plan and publish it

Step 20: Implement the plan

Step 21: Carry out periodic revisions in the plan with all those involved in its implementation: incorporate necessary changes in plan.

Step 22: Complete a comprehensive revision and extension of the plan every 12 months.

It should be pointed out that although steps 1-17 are the direct responsibility of the area superintendent, that individual must consult frequently with all other individuals involved in the plan's implementation during all steps of its preparation, not only in step 18. However, it is at step 18 that the unit's operational plan is made compatible with all technical and administrative departments' plans and vice versa, in a process which involves reviewing all plans of all units and departments.

It should also be clearly understood that Steps 1-4 involve only a review of existing information, not new information gathering or inventory. They are intended to give a basic, brief summary of the existing, known situation and to point out major information gaps, as a basis for carrying out step 13, not to be a full-fledged inventory and analysis as is conducted when preparing a master plan.

In the instruction manual which is distributed to all park and reserve superintendents to aid them in preparation of their operational plans, each step is described in much more detail and examples of how to complete each step, especially step 11, are given (Barborak, 1981a., revised by Rojas, 1982).

Annex 1 gives a schematic table of contents for a typical management unit operational plan.

Operational Planning Methodology for Central Office Departments of Wildlands Management Agencies.

The CRNPS methodology for preparation of operational plans for central office departments consists of 18 steps. The first 14 steps correspond to major written sections of the plan:

- Step 1: Define the objectives of the department
- Step 2: Define the responsibilities of the department
- Step 3: Define department priorities by general major activity and by management unit, guided by the agency's over policies and priorities
- Step 4: Describe the principle limitations of the department in meeting objectives and fulfilling responsibilities and how to live with them
- Step 5: List department personnel, their specific positions and responsibilities, their training and experience, and prepare an organizational chart showing individual responsibilities and the chain of command in the department.
- Step 6: List the specialized equipment the department possesses to enable it to fulfill its responsibilities.
- Step 7: Discuss the grade of implementation of the preceeding year's operational plan and the factors which negatively influenced its implementation and how to reduce their impact in the future.
- Step 8: Discuss master and specialized plans prepared by the department, their implementation to present, problems affecting their implementation and whether or not they need revision.
- Step 9: Revise requests for assistance from each management unit and other departments to determine the feasibility of granting such assistance given the agency's and department's priorities and limitations.
- Step 10: Define specific activities programmed for the next two years by type of activity and by management unit, giving programmed dates and individuals responsible for each activity, listing human and material support and equipment needed to carry them out and estimating the cost of each activity.

- Step 11: Describe and justify any indispensable equipment and personnel absolutely necessary to carry out programmed activities and not currently available and their cost.
- Step 12: Describe actual and potential assistance and collaboration to be provided by or to other institutions.
- Step 13: Prepare a detailed cronogram showing the distribution of all activities and the work load over time.
- Step 14: Prepare a budget summarizing the costs of all activities, equipment, materials, personnel, etc.
- Step 15: Review draft plan with other departments and management units; compatibilize and publish plan.
- Step 16: Implement the plan.
- Step 17: Carry out periodic revisions of the plan during its implementation and introduce any necessary changes.
- Step 18: Complete a comprehensive revision and extension of the plan early each year.

Once all unit and department plans have been prepared, reviewed and fully compatabilized, the only remaining step is to prepare a summarized, integrated version giving the main highlights. That then serves for the director and all other personnel at all levels, in order to have an overview of the entire agency's two years plan. Each employee can thus see where his/her unit or department fit within the entire scheme and process, what their individual roles are, and where the agency is headed. The detailed individual unit and department plans form a large set of annexes to this "overview" plan. To date, throughout the three operational plan rounds, the CRNPS has only partially completed the production of such a summarized version, and has instead relied on using the entire set of detailed plans as the main

reference base at the level of director, departments and areas.

The first round of operational planning by the CRNPS took almost eight months to complete. It terminated with one (out of five) departments and four units (out of 24) without appropriate, completed plans. However the time needed for the second and third rounds was notably reduced to four months and 2 1/2 months respectively. And, in those cases plans were completed for all departments and units. Also, there has been a notable improvement in the quality of the plans in each successive cycle of the process. Likewise implementation of the plans was fairly restricted after the first round of planning but has improved notably after each successive round.

During the first round, the CRNPS did not have written operational planning manuals and held only a very brief (2 days) workshop for area superintendents and department chiefs to give basic instruction in the methodology and its application. This involved a brief visit of less than one day to a park to practice some steps of the methodology; however, a full model (laboratory) or on-the-ground operational plan was not prepared as a practical exercise. In rounds two and three both the instruction manual mentioned previously was provided and more intensive workshops (3-4 days) were held just before each year's revised operational plans were to be prepared, including practical exercises during which workshop participants, after having been instructed in the basics of the planning methodology, had to apply it through preparation of a model operational plan, proceeding through all steps of the methodology.

Other Cases of Operational Planning

Based on the rather notable success and positive experience of the CRNPS with operational planning (see next section), other agencies in Costa Rica and neighboring countries have begun to use the methodologies, with technical cooperation and advice provided by PASC, CATIE and several Peace Corps and other wildlands specialists:

1. Individual Management Units Operational Plans are also now being used for the Río Plátano Biosphere Reserve and Copan Ruins National Monument and World Heritage Site in Honduras (Erazo et al, 1981; Instituto Hondureño de Antropología e Historia, 1982), and the Darien National Park and World Heritage Site in Panama (Morales and MacFarland, 1979; Alvarado, 1981 and 1982). In the first and latter case the plans have been being prepared for several years and have been implemented regularly and with good success each year. Until that was done the master plans for the two areas were languishing, with little implementation, and notably inefficient management of the areas. In all three cases brief training sessions were held with the superintendents and other personnel involved and since then the plans have been prepared regularly. The Copan operational plan was prepared immediately after completing the master plan and implementation has been proceeding rapidly and very well for six months.
2. Departments and Systems of Wildland Units. In 1981, individual operational plans were prepared for the first time for all 18 Forest Reserves and Protectorates managed by the Costa Rican General Forest Directorate. A comprehensive operational plan was prepared for the Directorate's Forest Reserves Department as well, which is in charge of managing those units. This planning effort is considered of great importance because until it was undertaken none of the units nor the department had any type of plan, yet they make up some 15% of Costa Rica's total land area and almost one-half of all remaining forests and are gradually being lost due to deforestation caused by various factors. On-the-ground management has been very inefficient and ineffective in the best case and virtually nil in most of the units. Moreover, the department has been traditionally very weak. The methodologies used were basically the same as for the CRNPS, with some adaptations, particularly in the management programs and subprograms, to take into account the different type of management unit involved (= very different management objectives). An instruction manual (Solórzano and Morales, 1981) was provided and a week long, intensive training workshop held, during which all the superintendents and departmental staff prepared the operational plan for a

forest reserve, in situ, as a practical exercise. The rest of the process, elaborating all the unit's plans, the departmental plan and compatibilizing all of them required only five months, even though each superintendent had to prepare 2-3 plans (each is responsible for several units). The plans in general were of very good quality. Most important of all probably was the great interest that has been sparked in the superintendents and departmental professionals and technicians, to begin truly managing their areas, beginning in most cases with activities like basic boundary surveys, basic patrolling, determining conflict and critical points and areas, etc. Implementation has lagged somewhat due to a variety of factors, including, principally, an election and change of government during the process and problems of overlap, coordination and collaboration with the other five departments of the Directorate, none of which have operational plans.

Finally, such plans were prepared for the first time in 1982 for all national parks, wildlife refuges, national recreation areas and one forest reserve (nine units in total) and for the Wildlife and National Parks Department of Panama, using an instruction manual and training workshop approach, based on the positive experience with Darien National Park and the Costa Rican successes. The process worked well and rapidly (2 months) but it is too early to judge further results.

DISCUSSION AND CONCLUSIONS

An analysis of the operational planning process per se, based on the CRNPS and the other indicated experiments in Central America, brings to light several key points:

- 1) The methodology for preparing individual wildland management unit operational plans is clear, concise and works well. Also, it should be very feasible to adapt it for virtually any management category. Although originally developed for national parks and biological reserves with relative ease it has been adapted to and functions well for archeological monuments, national recreation areas, wildlife refuges, forest or watershed protectorates and forest reserves.

(= national forests or multiple use management areas). It should be noted that the more different the category from a national park, then the more modifications that must be included in that adaptation, and the more cautious effort required.

- 2) The methodology for operational planning of central office departments is likewise concise, clear and functions well. It requires very little or no modification to be used in virtually any agency regardless of the type of management categories for which it is responsible. It is important to note that this methodology can easily be slightly modified and utilized in small agencies that do not have separate departments for activities such research, training, planning, interpretation or extension, due to their small size. In this case, one operational plan for the entire central office can be prepared, describing the entire range of activities carried out by its staff. That is what was done for the Department of Forest Reserves in Costa Rica and more recently the Department of Wildlife and National Parks in Panamá.
- 3) If an overall agency or system strategy plan or policy document exists, the definition of priorities and responsibilities should be derived from it and not improvised. If such a document does not exist, it is very important that agency and department priorities and responsibilities be clearly defined with the agency director before beginning an operational planning program. This was not done by the CRNPS prior to or at the beginning of the first round of operational planning and caused considerable delays and confusion. Once done the whole process was much smoother and faster.
- 4) Overall agency-system operational plans, made up of the detailed individual plans of all areas and departments, are definitely the best to aim for, because they clarify and prioritize responsibilities and priorities for all elements and personnel and promote the greatest efficiency and effectiveness. However they are, initially at least, the most complex to prepare because they require considerable compatabilization and collaboration amongst all elements, the more

so the more units and departments in the system. However, the CRNPS case has shown that such planning, though slow at first, rather quickly becomes efficient and not very time consuming. To not eventually take this approach can cause notable problems: many of the difficulties in implementing the forest reserve system operational plans in Costa Rica have been due to the overlap in functions and difficulties of coordination and collaboration with other departments in the Forestry Directorate. Since those departments do not have operational plans, priorities, responsibilities, activities, coordination and collaboration have never been clearly defined as part of an overall planning process. A note of caution however; the solution in the short-term may not be to try to push operational planning on all departments in an agency at once, as that may create confusion if those departments are not ready to enter the process, for whatever reasons. An intermediate solution in those cases, as will be tried next round in the Costa Rican Forestry Directorate case, could be to clearly define responsibilities, priorities and collaboration with the director and those other departments and then operationally plan the (for example) forest reserve department and system (units).

- 5) If possible a summarizing document, covering or being the overall agency-system operational plan in synthesized form, should be prepared. The CRNPS has experienced the lack of such both for promoting better understanding amongst all elements and personnel in-house, as well as for demonstrating the approach and its value to decision makers, other planning and management institutions and international and bilateral financial and technical support agencies.
- 6) It is extremely important to emphasize the need to adequately train management unit superintendents and central office staff regarding the operational planning methodology before initiating its use, and periodically (best annually) to refresh existing personnel's knowledge and train new personnel. An instruction manual is virtually vital and a workshop involving a full, practical operational plan preparation in situ on-the-ground in a management unit is by far the most effective training means. Most of the slowness of round one of the

CRNPS's efforts were due to not adequately covering those necessities, whereas the Forestry Departments superintendents and staff produced relatively good plans in a shorter time, even though their formal educational level and experience on the average was notably less than for their CRNPS counterparts.

- 7) Considerable assistance from central office planning department or similar staff to area superintendents and other central office departments during operational plan preparation will help insure that practical documents, in line with overall agency policy and priorities, are produced. This has been a key to the CRNPS success. If an agency is small, this may be only one person who gives guidance throughout the process.

A preliminary analysis of the success in implementing the CRNPS operational plans was completed in 1981 (Calderón), after two rounds of the process. The general conclusion of this document was that the operational planning program had aided very substantially to improve management of protected wildlands units and central office departments. However, this and subsequent studies (Méndez, in preparation) have pointed out five major problems which have had a negative impact on the implementation of operational plans, decreasing their effectiveness:

- 1) Lack of assigned budget for each management unit and department
- 2) Lack of adequate supervision of the degree of implementation of the plans
- 3) Lack of coordination and collaboration between technical and administrative departments and management units
- 4) Lack of administrative and planning ability on the part of management unit superintendents and central office department heads
- 5) Lack of stability of field and central office staff due to frequent transfers

The CRNPS has since taken several steps to reduce these problems. The first was to adopt a CRNPS policy to maximize stability in a given position among central office and field personnel --a minimum in most cases of one year for most personnel and two years for supervisory employees (superintendents, department professionals, etc.). The second change was to name four regional superintendents. Each serves as direct supervisor of the management unit superintendents in each region, and actively participates in the elaboration of operational plans for these areas. The regional superintendents also serve as a link between their management units and the central office and between different management units in their region. This linkage helps to maximize cooperation and utilization of scarce human and material resources. The regional superintendents also help insure compliance by park superintendents with activities stipulated in their operational plans, and the success in implementing each area's operational plan serves as a major element in preparing annual evaluations of personnel performance for the Costa Rican Civil Service Commission.

The problem of collaboration and coordination between technical and administrative departments and management units has been eliminated in large part through installation of a new radio network which makes communication between field and office personnel much easier. The regional superintendents have also helped insure that knowledge of management unit problems reaches the central office staff.

The lack of administrative and planning ability on the part of the management unit superintendents and department heads continues to be a problem, but its impact is decreasing. This is due to the experience which most such individuals now have with operational planning and due to the positive results of the previously mentioned training workshops and cooperation given by planning department specialists.

The lack of assigned budgets for individual departments and management units continues to be a major problem. The administrative department of the CRNPS is trying to reduce its impact by using priorities listed in operational plans to determine where to assign new equipment, materials, infrastructure, etc.

It is too early to tell exactly how useful or important operational planning for wildlands (units, systems, agencies) as herein described should or will be in the future outside the CRNPS, except of course for individual wildland unit cases such as the Darien National Park and Rio Platano Biosphere Reserve where its value has been proven. For other cases such as the Costa Rican forest reserve system and national parks and similar reserves system in Panama it is too early in the process to determine, although the preliminary indications are very positive that it will substantially improve management at both system-agency and unit levels.

Two Master of Science degree candidates at CATIE are currently preparing theses which should shed more light on the usefulness of operational plans. One (Méndez, in preparation) is finalizing a comprehensive review of the operational planning process of the CRNPS, both the planning portion per se and an evaluation of plan implementation to detect key bottlenecks. The other (Solórzano, in preparation) has almost finished an analysis of the operational planning of the Costa Rican Forest Reserves Department and units, of which he designed, tested and guided the process.

Another experimental case that needs to be tested and has not been yet is the application of all-inclusive agency-system-unit operational planning as a complement in a country where a system plan and strategy already exists. By analogy with the master plan - operational plan case for individual management units, it should substantially improve implementation of systems plans and strategies.

Obviously, some changes in the structure and content of operational plans from that described in this report will be necessary if the methodology and concept are to be widely adopted by wildlands management agencies in other countries with differing administrative structures. However, the experience of the CRNPS and other Central American agencies has shown that operational plans can be a useful tool to improve the management of protected areas and the operation of the agencies which manage them. Especially for small agencies in developing countries without a short-term planning program, or that manage areas and systems not having master plans and/or systems plans and strategies, operational plans deserve trial application.

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ANNEX 1

SCHEMATIC TABLE OF CONTENTS FOR A

WILDLAND MANAGEMENT UNIT OPERATIONAL PLAN

(example for a national park, biological reserve or similar area)

1.0 INTRODUCTION

2.0 BACKGROUND AND CONTEXT

- 2.1 Regional Natural and Cultural Context
- 2.2 Highlights of the Natural and Cultural Resources of the Unit
- 2.3 Actual Land and Resource Use in the Unit
- 2.4 Actual Use by Visitors and other User Groups
- 2.5 Principle Management Problems of the Unit
- 2.6 Implementation of the Previous Operational Plan, General Management and Development Plan and other Specialized Plans which Exist
- 2.7 Existing Human Resources in the Unit
- 2.8 Existing Infrastructure, Vehicles, Equipment in the Unit

3.0 GENERAL MANAGEMENT OBJECTIVES FOR THE AREA

4.0 PRINCIPLE LIMITATIONS FOR MANAGEMENT OF THE UNIT

5.0 ENVIRONMENTAL MANAGEMENT PROGRAM

5.1 Resource Management Subprogram

- 5.1.1 Objectives
- 5.1.2 Activities

5.1.2.1 Activity #1

- a. Title
- b. Objective(s)
- c. Description
- d. Requisites
- e. Personnel Responsible
- f. Cronology
- g. Cost

Note: this same scheme is used for every activity.

5.1.2.2 Activity #2

etc....

5.2 Research, Monitoring and Scientific Cooperation Subprogram

- 5.2.1 Objectives
- 5.2.2 Activities

6.0 PUBLIC USE PROGRAM

6.1 Tourism and Recreation Subprogram

6.1.1 Objectives

6.1.2 Activities

6.2 Interpretation and Environmental Education Subprogram

6.2.1 Objectives

6.2.2 Activities

6.3 Public Relations and Extension Subprogram

6.3.1 Objectives

6.3.2 Activities

7.0 OPERATIONS PROGRAM

7.1 Protection Subprogram

7.1.1 Objectives

7.1.2 Activities

7.2 Administration Subprogram

7.2.1 Objectives

7.2.2 Activities

7.3 Construction and Maintenance Subprogram

7.3.1 Objectives

7.3.2 Activities

7.4 Cooperation and Coordination Subprogram

7.4.1 Objectives

7.4.2 Activities

7.5 Training Subprogram

7.5.1 Objectives

7.5.2 Activities

8.0 NECESSARY EQUIPMENT, MATERIALS, INFRASTRUCTURE, ETC.

9.0 TECHNICAL ASSISTANCE ACTIVITIES EXPECTED FROM CENTRAL OFFICE DEPARTMENTS

10.0 COOPERATION AND COLLABORATION WITH LOCAL REGIONAL AND NATIONAL INSTITUTIONS AND GROUPS

11.0 CRONOGRAM OF ACTIVITIES

12.0 BUDGET

13.0 ANNEXES