

THE FUNCTION AND PREPARATION OF WORKING PLANS

K. F. Andersen

THE PRESENT WORKING PLAN:

The amount of work laid down in the preparation and presentation of periodic working plans for the forest divisions is impressive. Compared with similar plans in most other countries the East Pakistan working plans are undoubtedly of a very high standard. They contain a wealth of information and are sources frequently sought for details of the forests not easily found elsewhere.

Working plans in their present form date back to mid 19th or even late 18th century German forestry. The ideas and concepts of Central European classic forestry has spread over most of the world, and the methods and techniques developed have served the forestry of several countries for better or worse for generations. But with the changing position of forests in national economics, in land use policy and as producers of raw material for industry, a more dynamic approach also to planning in forestry is under way.

This raises the question of working plans in the future East Pakistan forestry business. In this paper it is attempted to examine how the working plans of to-day are related to the forestry of to-morrow, and some tentative lines of development are suggested.

The Objectives of a working plan : The purpose of a Working Plan has, since the early days of management planning, been threefold. To provide the best possible decisions on all major forest operations; to forecast

with realism and accuracy the results of activities implemented according to these decisions; and to provide a control on the forest activities.

Decision making is not possible without a clear picture of what is the actual situation at the moment of planning. This leads to the collection of "facts upon which prescriptions are based". It is equally necessary to know the effect of any operation, activity or process, that can be considered relevant as for instance : The effect on the standing stock of different kinds of fellings; the effect on timber supply in the future of a certain regeneration pattern; the effect of rotation age, thinning regime and site on timber dimensions and assortments; the effect of extraction methods on costs, etc. The knowledge of a multitude of causal relationships is a prerequisite for rational planning. And finally it is obvious that the purpose, the ultimate goals of forestry, must be clear in the mind of the planner. Planning without facts is possible; planning without a goal is not.

The second part of the working plan, the forecast as opposed to planning in the strict sense of the term is the prediction of management results expressed in relevant terms, which in forestry will mean: Cubic feet, acres, Rupees, man-hours, road-miles etc. Inputs and outputs, in physical and monetary units, will have to be calculated, estimated or guessed.

The third part of the working plan, the control part, is not necessarily written in plan text and figures as a separate chapter of the formal working plan. Rather it is another point of view which the planner has to employ in his preparations. The plan must be constructed

in such a way that the ends it strives to achieve can be compared with what is actually achieved in implementation. If this is not done the plan will, sooner or later, lose connection with reality and become a historical document, tucked away in a corner of the office. Only actual data related to plan data can measure success and can make possible the current or periodical revision of plans. The explicit plan itself must allow and improve the control possibilities.

The principal ideas of a working plan: If it is assumed that the three vital purposes of a working plan are to provide the manager with decisions, with forecasts and with a control basis, how do present day working plans meet the demand? Regrettably the answer must be that they do not or do it insufficiently.

There are probably several reasons for the apparent inadequacy of our planning efforts: Convention is extremely deeply rooted when working plans are concerned, likely because of a strong historical tradition; often the process of forest planning is not acknowledged as an essential management discipline - probably the most important - but as a routine activity; thirdly it is far easier to continue along the beaten track than to introduce major changes; fourthly the attitude towards forestry itself has only recently changed from a stationary conservation- exploitation concept to a business approach; fifthly, it is openly admitted, the efficient, goal-oriented planning process is difficult, still uncertain and demanding more than professional skill and ability of the planning officer.

Some of the inadequacies of the orthodox working plans can be

listed without much comment:

1: They are large and bulky. They should not be, because a working plan is something to be used in everyday management easily accessible whenever the occasion arises. A good working plan will inspire frequent consultations. The demand for brevity, compactness and accessibility may involve the omission of otherwise useful details, which of course should find their proper place, outside the working plan document.

2: The conventional plans quite often are found to lack in coherent and rigid thinking. Essentials should not be mixed with non-essentials, recorded information not with subjective evaluation, prescriptions not with suggestions, and realistic forecasts not with hopeful projections. It is later discussed what should, in the author's opinion, be the standard procedure of reasoning.

3: Even the best of working plans are less than adequate in respect of the kind, the amount, and the quality of data. Too many "facts" are more in the nature of generalities, assumptions and irrelevant information, while data on the most important aspect of forestry, the forest as a production system, are too little emphasized. An accumulation of administrative and historical records is a poor substitute for operational data.

4: To establish an efficient management of the forests it is imperative that the data which are critical for the choice of an action involving change are compiled, and that the evaluation of these data take a central place in the working plan procedure. Particularly the working plans in countries with a very long and stable management tradition are lacking in this respect. To recognize and identify the major problems,

to examine their implications critically, and to arrive at sound, unbiased conclusions make some heavy demands on the ability of the working plans officer.

5: There is a tendency to make the prescriptions of a working plan either too rigid or too vague. Detailed, inflexible prescriptions seldom suit the conditions as they are found in the field or in the market. Ill-defined directives or guide-lines, on the other hand, may allow line personnel to deviate too far from the agreed and required development path.

6: Finally one finds in the conventional plans too little attention paid to control, follow-up, and feed-back. The plan should not be considered an isolated document, but part of an integrated flexible management. And it is important that plans are changed as soon as change is desirable, which is not possible without a steady flow of information on performance in relation to programme.

THE LAY-OUT OF A WORKING PLAN:

If working plans are less than satisfactory in their present state it may be worth while to propose how and where improvements are possible. Several avenues are open. The one followed here is to try and establish primarily a consistent framework for working plan operations, what may be called the working plan concepts. They are set out in the chart over-leaf which provides a sequence supposed to be logical and rational. It next (second column) describes briefly and in general terms the content of each major activity, sector and gives lastly the very barest outline of what an average working plan should provide for the parties concerned: the top management, the executive officers, and "third parties" who may have a deep interest in the plan.

GENERAL PRINCIPLES OF WORKING PLAN:

Main activities	Operative steps	Forest Working Plan Programme
1	2	3
Information.	Collect and compile data from internal and external sources on important aspects of enterprise (operative data). Process data for evaluation purposes, process and present data for information. Refer to sources and state reliability. Add assumptions explicitly when necessary; state objectives and relate them to situation and resources.	Prepare map; stratify area according to topography and vegetation; compile area register. Prepare and conduct stratified survey; classify sites; compile volume register; construct (or add) volume tables. Study or add assumptions on yield and other important aspects of actual and potential production. Compile information on availability of labour, administrative resources, market, cost & revenue, silvicultural factors a.s.o.
Analysis.	Evaluate forest conditions; Determine possible courses of action.	Consider objectives in relation to forest enterprise and establish criteria for decisions. Determine possible plans for: felling extraction and marketing, regeneration, other silvicultural operations, organization, supporting investments or operations; other activities. Evaluate alternative plans on basis of established criteria.
Decisions.	Select appropriate course of action and evaluate.	Determine basic general plan for integrated forest activities over plan period. Calculate (or estimate) period and post-period consequences of basic programme. Review uncertainties and bottlenecks and evaluate consequence of (major) deviations from programme.
Prescription.	Express selected activities in imperative detailed planning; establish authority for execution and control.	Derive detailed plans for major forest operations and indicate how, when and where to execute. Determine flexibility of planning, distinguish between prescriptions, directives, and guide-lines. Make targets explicit.

1	2	3
Budget.	Calculate input and output in relevant terms. Determine if compatible with stated objectives. If yes, finalise budget in details, if no, change decision and repeat process.	Calculate (or estimate) effect of plan on: Output, revenue, growing stock, future production and revenue, requirements of labour and capital, planting stock, administration, etc. Examine if consistent with objectives and other plans and make necessary amendments in plans.
Control.	Establish control and feedback system.	Prepare a recording system with immediate reflection of deviation from plans and expectations. Establish mechanism for change of plans when threshold values are reached. Revise plans accordingly.

The working plan procedure :

The logical next step would be to provide a complete working plan code with all essential details of working plan operations prescribed. But this would involve more space and also much more knowledge of the actual conditions than can be expected here. There is, however, one essential set of considerations which must precede any attempt to construct a working plan code or manual. Which method to use in planning ? Which techniques to be employed ? Which tools are available and useful ?

The question of methods, techniques and tools will effectively determine the execution and the context of the stages in planning as they are described in principle above. It is necessary to have at least some ideas concerning the MTT situation before embarking on actual work.

Let us start with the basic tools. By a planning tool we mean "physical or conceptual instrument" used in the planning procedure from the informative stage on to the final writing of the formal plan. Tools, therefore, cover the whole range of equipment and facilities employed, determined partly by the

techniques decided, partly by the available technology and knowledge. They may be sophisticated or crude, ranging from top precision photogrammetric equipment and electronic computers, to manual devices, and from elaborate statistical and production tables to few and simple concepts.

Techniques is used to express the way in which the tools are used: aerial photos for mapping, sampling techniques for inventory, operational analysis for decision making, budget techniques for plan prediction etc. The choice of techniques to be employed in forest planning will obviously depend on the available tools and skill in handling tools, but also on the problems raised in a particular planning project and the relative cost of employing a certain technique in preference to another. It would obviously be uneconomic and inconsistent to employ a refined and precise technique for determination of annual fellings, if the data for standing volume and growth are crude estimates only.

Planning methods on the other hand are something quite apart from techniques and tools. We could also talk about planning systems, i.e. the conceptual framework of the procedure of planning. The methods are chosen to fit the objectives of the forestry enterprise as a whole. If it is attempted to use the forest as a physical resource for continuous supply to industry the planning method must accordingly become a kind of rationing system, distributing yield evenly or with a predetermined growth rate over a foreseeable future. If the forest is considered an investment object with the objective to renew or transform the existing productive capacity, the planning method will be based on areas and classification of areas in combination with data for available capital and labour resources, aiming at an optimum path of expansion of the forest enterprise as a whole.

And if, what may be more relevant, the enterprise is considered an income earning business subject to certain constraints, then the planning method will become an effort to maximize the net stream of income over time, taking not only the physical but also the financial aspects of forest operations in consideration.

THE CHOICE OF PLANNING METHOD:

It is inevitable that the selection of the planning method must have highest priority in the preparation of a working plan. It must be derived from and determined by the objectives of forestry and it will affect the techniques and the tools employed in the planning procedure. Some thought should therefore be given to a systematic evaluation of the explicit and implicit objectives. This is particularly important in a multipurpose public forest estate with gradually changing emphasis on different aspects: Supply to different consumer sections, preservation of adequate reserves, requirements for new products, requirements for movements of capital into other spheres of activity than forestry, land use consolidation, employment opportunities and income or revenue. The most important source of variability as also the main cause for uncertainty is the distribution over time of the forest activities: Is the present, our main concern or is the distant future more important ?

As a general principle the planning methods will be one attempting a maximization of one kind or another subjected to one or more constraints, demanding regularity, limitation of certain activities, or expansion of others up to a predetermined level. This process of maximization may involve different techniques, ranging from "guesstimates" to complicated mathematical

programming and simulation models. But the core of the matter should always be made clear. That an objective choice between feasible alternatives is made, that the consequences of the choice are calculated, and that the costs of deviation from the optimum solution are stated as explicitly as possible.

It is evident that the basic difference between the conventional approach to forest planning and the present trends is a difference in method. The trend is a development from attempts to regulate forest activities over time and area towards attempts to optimize these activities in light of a set of defined objectives, quite often conflicting objectives.

The new approach demands more from the forest planner, because it involves a change in scope and methods in planning. The techniques and tools required in the development will have to be acquired simultaneously, but should not be a major problem.

....