

UNITED NATIONS  
ECONOMIC  
AND  
SOCIAL COUNCIL



47503

Distr.  
LIMITED



E/CN.14/CP/4  
6 November 1962

ENGLISH  
Original: FRENCH

ECONOMIC COMMISSION FOR AFRICA  
Meeting on Comprehensive Economic Planning  
Addis Ababa, 15 - 20 October 1962

COMPREHENSIVE ECONOMIC PLANNING  
IN UPPER VOLTA

(J.M. CAILLARD)

**PREAMBLE**

It would be pointless and academic to try to decide whether planning in Upper Volta has adopted the "programming approach" or the "sectoral approach". For while some assumptions as to overall targets had previously been roughly determined by a co-ordinating group (groupe de synthèse) some preliminary sectoral planning was done in order to set partial targets which were then reviewed and compared with the first overall assumptions: this comparison therefore gave rise to several movements back and forth and successive adjustments.

This memorandum is above all an attempt to give an account of this empirical process, a task which was not made easier by the scheme laid down for the document, which - if it has been properly understood - separates into two distinct chapters the overall aspect (Ch. I) and the sectoral aspect (Ch. II) of planning.

Note

It was felt that it would be useful to annex to the memorandum some enclosures giving the make-up of the accounting tables presented in the planning document. A more detailed publication of the model is in preparation.

The reader's attention is drawn to the fact that this was the first plan worked out in Upper Volta and that a still embryo planning team was only set up in that State in the second half of 1961.

THEMATIC

I. GENERAL OBJECTIVES OF DEVELOPMENT

1. Qualitative objectives

A. The overall qualitative objectives

These were determined in October 1961. They were explained to the members of the specialized planning commissions (then in the process of being set up), and to local government representatives, by a circular from the President of the Republic.

This determination was based on:

The complete economic accounts for the years 1956 and 1959 accompanied by some sampling from the intermediate years, thus presenting a schedule of development 1954-1959.<sup>1/</sup>

A preliminary study proposing two assumptions to guide planning up to 1975.<sup>2/</sup>

A certain number of political choices set by the government.

B. The basic objective

The basic objective (both qualitative and quantitative) which served as the key assumption for many economic calculations, particularly the distribution of sectoral targets, is as follows:

Priority given, during the first planning period, to the rural production sector, which is essentially primary (principal motive, policy of income distribution).

Minimum objective arising from them, the doubling of agricultural production in fifteen years (several variations were studied: indexes of 200, 250, in the fifteenth year etc.).

---

<sup>1/</sup> Reference: "Economic Accounts of the Republic of Upper Volta for the years 1954-1959", SEDES, Paris (published in January 1962).

<sup>2/</sup> "Memorandum on the economic policy of Upper Volta", December 1960.

C. Other qualitative objectives

- Overall survey of natural resources (particularly underground: water, minerals), so as to have a complete inventory available when the second plan is worked out.

Infrastructure: long-term diversification of the channels of foreign trade ;

Industrialization: priority for industries having a link with the agricultural sector, thus avoiding imports of mass consumption goods.

2. Quantitative objectives

The basic aggregate used was not net national income but gross domestic product (hereinafter called GDP).

The tables of figures annexed to this document (Table R3 and R4) give an overall picture of these objectives: they concern essentially (in the order in which they were determined):

the rate of investment<sup>1/</sup>

the overall rate of growth of the economy, calculated in relation to the GDP.

the indices of final consumption per capita (see last column in Table R-4)

the rate of monetization of the economy

an average of the first two rates was worked out for each five-year period and for the whole of the long period of fifteen years, 1963-1978.

These objectives call for the following comments.

---

<sup>1/</sup> Ratio of net investment over total available resources (GDP plus net contribution from abroad).

A. Role of the investment rate

The aggregate presentation highlights the role of investment as a key factor in growth. This does not mean that it is intended to ignore or even to underestimate the need for technical and human training, for a change in peasant mentality with regard to technical progress and many other matters, but the aim was to consider the possible increase in production and consumption in relation to the investment effort of the country and of the contributions which may be received from abroad.

B. Procedure used

Using the key assumption mentioned above, (doubling of rural production in fifteen years) an a priori (and approximate) determination was made of the total volume of investment needed, first in fifteen years and then for the period of the first plan.

This determination entailed the empirical choice of a probable overall marginal capital output ratio: this was done the first time "by guesswork" before being corrected subsequently.<sup>1/</sup>

The assumption adopted was decided upon after various processes of trial and error, and required a choice between five or six rough models proposing a different volume or annual distribution of investment. It was considered that the choice of volume of investment should be restricted within two limits:

A lower limit consisting of the volume needed to achieve the key assumption (considered as a minimum);

an upper limit consisting of the volume of inroads on total resources compatible with the maintenance, or rather a slight increase (at first), of final consumption per capita.

The rate of monetization was evaluated last. To do this, the basis adopted was the value of GDP per capita previously determined: and this

---

<sup>1/</sup> This correction will be referred to in connexion with sectoral targets.

value was fixed in relation to the curve of the various values of local consumption in accordance with the figure of GDP per capita in the different states of French West Africa.

### C. Annual targets

The fact that the tables mentioned above refer to annual targets as well as five-year targets calls for an explanation.

The setting of annual targets, particularly at this degree of aggregation, is inevitably a somewhat arbitrary procedure. Actually the desire to facilitate the supervision of the satisfactory implementation of the plan was not the only reason for the care taken to specify the timing of the five-year targets.

It was also desired to introduce and specify an additional assumption, considered to be very important:<sup>1/</sup> that of a very slow expansion at the beginning of the planning period, followed by a progressive acceleration. In fact a variant consisting of equal distribution of the total volume of investment over the years, studied among others, showed up some elements which would not have been feasible, particularly with regard to government accounts (the volume of recurrent expenditure at the beginning of the period implying a tax rate incompatible with the maintenance of the level of living).

### D. Aggregate investment

Both the increases in stocks needed for production and the material equipment were regarded as capital. Also, of course, the total volume of investment agreed upon includes investment by households and enterprises as well as government investment;<sup>2/</sup> among other things a certain amount of

---

<sup>1/</sup> This correction was in fact made rather late, when the sectoral targets were known, and led to a readjustment of the projects (see chapter II).

<sup>2/</sup> On the other hand, mainly for the sake of compatibility with the previous definitions, some development expenditure in principle directly productive, but which was not capital expenditure (for example in the field of expenditure for rural improvement) was not included in the calculation of investment.

investment of the traditional and non-monetary type (construction of wells by local techniques, etc.) are included in it.

The consequence of this aggregation of investment taken into account by the plan was that all the investment could not be treated in the same way: the first step<sup>1/</sup> towards breaking down the total volume of investment, taken before the final determination of the sectoral targets, was to try to make a distinction between those for which satisfactory forecasting data were likely to be obtainable (called "concerted")<sup>2/</sup> and those for which it was only possible to make conjectures (called "free").

The detailed evaluation of concerted investments fell within the purview of sectoral planning (see chapter II). On the other hand, the empirical estimation of free investments was based on the extrapolation of economic accounts, corrected for trends which appeared probable (for example, a rise in investment in the private "building" branch, on the basis of the considerable increase in contracts which was likely to follow from the volume of concerted investment in this field). Indeed, in practice the estimates thus made, bearing in mind the minimum volume of the "concerted" plan which it was desired to safeguard, entailed a (slight) increase in the aggregate volume of investment which had at first been decided.

### 3. Category of the plan

This follows from what has been said above: it is a five-year plan in the context of a fifteen-year perspective.

---

<sup>1/</sup> The first in logical sequence; in fact the evaluation of the "free" investment was made rather late.

<sup>2/</sup> This is not quite the classic distinction between public and private investment; in fact in this category were included not only public investments but all those for which the government considered it had sufficient policy instruments "to concert them"; they included all the industrial projects which, after consultation with the private sector, seemed likely to be implemented.

No formal provision was made at the national level for the formulation of Annual Programmes as separate documents (however, highly simplified programmes of this type are provided for at the regional level (see chapter VI). Nevertheless it is probable that the problems of implementation will make them appear necessary.

## II. PLANNING OF PRODUCTION

(Note: we were not able to follow the scheme indicated in the document received from the Secretariat. That document assumed that the sectoral targets could be derived from an estimate of demand by categories of goods; these estimates could not have been made in Upper Volta where most of the data needed for establishing consumption trends are lacking).

### 1. Sectoral planning: its links with overall targets

It would be incorrect to deduce from chapter I that we tried to use the programming approach to define sectoral and partial targets by a simple distribution of the overall targets.

In fact:

Side by side with the work described in chapter I, which was carried out in the horizontal commission called "Finance Commission", eight specialized commissions had been requested to define sectoral investment programmes, (a list of which will be found in the table entitled document C annexed to this memorandum) and to work out figures for partial targets, at least in physical units of commodities.

Once this preliminary sectoral planning had been done, it was obviously necessary to make reciprocal adjustments with the overall objectives. Some idea of the very empirical way in which this back and forth movement was carried out may be given by the following:



A. Preliminary instructions

In order to limit the amount of readjustment necessary, the commissions responsible for this preliminary planning had received instructions which included a request to integrate their partial targets with the key assumption of the doubling of rural production in fifteen years, to be considered as a minimum. On the other hand, we refrained from setting any precise ceiling on their investment proposals, considering it preferable to make those choices which proved essential subsequently, at the level of the Finance Commission.

B. First rough distribution of overall targets

When examining the projects arising from the preliminary planning, the Finance Commission laid down for itself, as a likely assumption for guiding its work, a first very rough distribution of the total volume of investment among the principal basic sectors, i.e.:

50 per cent for production, including 40 per cent for rural production and 10 per cent for industrial production.

40 per cent for the infrastructure, including 20 per cent for the economic infrastructure and 20 per cent for the social infrastructure.

10 per cent for general surveys (including an inventory of the nation's resources).

It was understood that those percentages were to apply to the selection of projects arising from planning by the specialized commissions (so called "concerted" investment) and not to free investment, the volume of which was determined in another way (see Chapter I).

It is to be noted that these percentages were not fixed only to guide investment to the productive sectors; they had also been calculated<sup>1/</sup>

---

<sup>1/</sup> Based on the empirical idea which had been acquired of probable sectoral coefficients by reference to those of other states which were known.

in order to increase the probability of the assumption as to the overall marginal capital output ratio adopted during the determination of the overall targets and in order to avoid having to readjust it radically when the table of sectoral **targets** was known.

C. Common method of choice among investments<sup>1/</sup>

In assessing the projects, the Finance Commission had available the figures which will be dealt with in Chapter III-1.

The choice between the different projects was based, insofar as the data permitted, on the following figures:

- (c1) proportion value added  
recurrent charges
- (c2) proportion recurrent charges  
new revenue
- (c3) proportion value added  
investment

(Attention is drawn to the importance given to budget considerations in the choice of these criteria, on the basis of the Volta budget situation).

The choice was also based on certain human or psychological criteria (training impact on the masses, possibilities of popular participation etc.) or economic criteria (effect on the balance of trade etc.) all these factors being non-quantifiable and only being taken into consideration after a preliminary classification of projects established on the basis of the figures mentioned above.

---

<sup>1/</sup> This method is particularly mentioned here as a search for a working method, the outline indicated not having been applied in all cases owing to gaps in the documentation supplied by the preliminary planning of these specialized commissions.

However, as the data with figures supplied by the commissions frequently related to programmes concerning partial sectors<sup>1/</sup> rather than individual investments, the classification made led most often to the determination of a simple percentage earmarked for each of those programmes; the choice of individual investment to be retained within that percentage being left to the care of member of the specialized commission who made the initial report on the project.

## 2. Determination of sectoral targets and capital output ratios

In most cases it was the investment programmes and hence the sectoral targets which were readjusted in order to correspond to the total volume of investment determined in Chapter I and the rough distribution of that volume as indicated above in II-1-B.

However, the procedure was slightly different depending on the principal sectors concerned.

### A. Rural Production Sector

The planning of this sector was dominated by the key assumption (mentioned in Chapter I) of which the specialized commission was aware. It was therefore relatively easy for the commission to break down this objective of the doubling of rural production in fifteen years into partial objectives by crop and by type of cattle, these objectives being set out in physical units of commodities which were subsequently turned into figures of value added by the team making the synthesis.

---

<sup>1/</sup> For example, there was an overall programme for small agricultural dams and production targets evaluated in total for all those dams, but there were no individual figures for each one of them; there was an overall programme for an improvement in cattle raising, and an estimate of the additional value added expected for the whole herd, but no separate evaluation of the effects of each investment contemplated, etc. Therefore the criteria mentioned could only be applied to the whole of the programme concerned and indicate the degree of importance to be allocated to it in relation to other programmes, but it did not enable the finance commission itself to make a duly reasoned choice within each of the programmes.

In this sector, it can therefore be considered that it was the partial targets which were adjusted to the overall objective, and the investment programmes which were adjusted to these partial targets.

The readjustment of the projects after the sorting carried out by the Finance Commission raised few problems, and the volume of investment thus determined was very close to the 40 per cent of total investment mentioned in II-1-B.

The sectoral capital output ratio for the whole of the primary sector was derived naturally from the programme formulated.

B. Sector of industrial and handicraft production

In this sector, where the particular conditions of the economy of Upper Volta and the few studies available made it likely that there would be a shortage of projects, each project was studied individually and an overall sectoral target was determined on the basis of those projects.

In fact, as the review of sound projects had given rise to an amount of investment greater than the proportion of 10 per cent first assigned to it by the Finance Commission, here it was the total volume of investment contemplated which was readjusted, and increased on the basis of the data supplied by the preliminary planning.

There was no difficulty in determining the sectoral capital-output ratio as the individual projects were still very few and furnished sufficient data for the calculation.<sup>1/</sup>

C. Sector of infrastructure

A particular survey by a specialized corporation had made it possible to determine the sectoral target, comprising the possible reduction in the cost of road transport, and, in relation to that target, the

---

<sup>1/</sup> Disregarding handicraft, for which the amount of investment agreed was negligible.

volume of investment which it would be profitable to devote to that sector.

In the absence of similar data relating to the whole of the economy, the other infrastructure programmes were adjusted so that the total would be in conformity with the semi-aggregate percentage of 20 per cent defined above.

#### D. Social Sectors

In this field the sectoral targets cannot but be more or less independent of the other production targets. Nevertheless an attempt was made to relate them to the planning as a whole:

by apportioning the efforts in this field among urban and rural programmes in a proportion which took account of the priority given to the increasing of production;

by setting the targets for secondary education on the basis of the needs for trained personnel deduced from the summary study of employment which had been made;<sup>1/</sup>

by endeavouring to reduce the volume of recurrent expenditure, which is always considerable in this field, as far as possible to a correct percentage of public operational expenditure;

by reducing the total volumes of these programmes to roughly the semi-aggregate percentage of 20 per cent mentioned above.

Since the amount of investment which had been proposed by the specialized commissions was more than double the amount contemplated, it was in this field that the choice between the different elements of the programmes was found to be the most difficult.

---

<sup>1/</sup> On the other hand the relation between the employment to be created and the programmes of primary education was not obvious, mainly because of the already abundant number of certificates at this level of education in relation to demand.

3. Back to the aggregate - Final determination of the capital-output ratio

Once the sectoral programmes had thus been determined, there remained to be tested the assumption as to the overall marginal capital-output ratio which had been accepted at the beginning of the work in order to prepare an outline model. In other words, it was necessary to complete table R2 (see enclosures, Annex 1).

As we have seen in 2, it had been possible to determine directly a certain number of sectoral ratios. Others, however, were lacking (mainly for the infrastructure and services<sup>1/</sup>); in the absence of quantitative targets for value added determined by sectoral plans, these ratios had to be guessed by reference to ratios already achieved in other countries, and then applied to the volume of investment of the sector concerned.

It is quite evident that an overall marginal capital-output ratio set in this way can only be regarded as a probable order of magnitude, necessary in order to determine the growth assumption agreed upon; the efficiency of investment will depend on how the programmes are carried out and are administered, this factor assuming special importance because of the priority of public investment in the plan.

Moreover, the ratio should normally vary over time; it is indeed one of the aims of comprehensive planning to induce changes in structure likely to affect this factor. However, we used the same ratio for the whole duration of the 15-year perspective, in order to avoid the complication of assumptions which would in any case have been rather arbitrary in the present state of our information.

---

<sup>1/</sup> The latter represented a special case, since except for some comparatively small programmes of marketing by quasi-governmental institutions, they had not been the subject of any preliminary planning, and the volume of investment relating to them, considered as "free investment" had been set according to the process indicated in the paragraph. Hence there was no preliminary project to give any idea of the value added to be expected.

If the results of the first five-year period are followed up with sufficient care and accuracy, the authors of the second plan should be able to take advantage of more reliable data on the sectoral ratios suitable for use by Upper Volta.

With regard to the marginal coefficient of depreciation, which had to be estimated separately because the capital-output ratio was calculated in relation to net investment, the figure arrived at was 0.03, which responds to an average life of 33 years; the basic figure assumed for depreciation in 1963 was 3,000 million, after examination of the economic accounts, the results of other work concerning various countries close to Upper Volta, and the budget expenditure on renovation and heavy maintenance.

#### 4. Completion of the process of establishing the model

Determination, based on the foregoing elements, of the final annual forecasts<sup>1/</sup> concerning the GDP and the net contributions from abroad (the latter after a review of the index cards on individual projects as to sources of financing, and a revision of the totals obtained on the basis of overall feasibilities of each source of financing).

Final choice of the level of taxation, bearing in mind the new annual total of recurrent charges resulting from the modified individual projects and the figures of GDP; apportionment of this tax burden between households and enterprises; complete establishment of the government account.

Addition of the missing elements in the projection, particularly the ultimate transition from sectoral accounts to accounts by branch of industry so as to establish the table of resources and uses.

---

<sup>1/</sup> It is only at this point that the choice of progressive increase in investment mentioned in I-2-C enters the picture: hence the need for re-casting of the individual projects arising out of the preliminary planning, on the instructions of the Finance Commission.

## 5. Manpower problems

We have not yet dealt with the problems of the organization of manpower.

There was a particular scarcity of accurate data in this field. However:

A. In the rural sector, an estimate of the number of days' work required to achieve the agricultural production targets was made during the preliminary study on that subject.<sup>1/</sup>

An attempt was made to determine, on the basis of rural data and population projections, the actual number of production units;<sup>2/</sup> and, based on the farming calendar of Upper Volta, the number of days' work actually supplied by these production units; then the number of man-days available, as thus determined, was distributed by crop and by activity (sowing, weeding, etc.) bearing in mind the technical progress and the saving of working time that could be achieved through the mass dissemination of the topics for which guidance was to be provided under the plan. By examining these various problems it was possible to determine at what period of the crop season the labour bottlenecks occurred and at what period there was unemployed labour capacity. It was thus possible to relate the output targets for the main industrial or export crops to the estimated number of working days left available by the work on food crops.

B. Since the under-employment of the labour potential in the rural population outside the crop season is a specially acute problem in Upper Volta and gives rise to large seasonal emigration to foreign countries, another aim of our research was to relate the number of working days so lost to the human investment capacity in Upper Volta.

---

<sup>1/</sup> Reference: "Guidelines of rural development", SEDES, February 1962.

<sup>2/</sup> On the following basis: 1 adult male = 1 production unit; 1 adult female = 0.7 PU; 1 child = 0.3; 1 old man = 0.2 PU.



Actually the data thus supplied were not used for any testing of consistency, as the very modest amounts of human investment included in the sectoral investment projects were negligible in comparison with these theoretical potentialities.

We should point out that an interesting problem of valuation was raised by the fact that what small amount of participation by the population in the work was provided for in the plan was assessed by value and not by working days. The value adopted for the working day supplied under those conditions was distinctly lower than the official minimum rural wage rate, on the assumption that the productivity of the work so supplied was lower than that of a normal wage-earner. In fact the value adopted was based both on the customary remunerations among villagers and on the output value of a rural day's work.

C. With regard to industry, the specialized commission had been instructed to aim at intensive use of labour rather than intensive use of capital in its investment projects. In fact the forecasts of value added and of the creation of new employment made it possible to estimate the average increase in productivity per worker in that sector. However, in the absence of a thorough study of the present productivity of labour in Upper Volta, it was clearly impossible to outline a real productivity policy.

### III. METHODS OF CO-ORDINATING THE PLANS

#### 1. Evaluation of individual projects

This evaluation was made in the form of a series of six index cards containing figures concerning:

Details of investments

The possible source of financing (this in three parts)

The implications for the budgets of the public authorities

Repercussions on employment

The capital goods to be imported and possible exports

The expected value added of the investment.

As some of the information to be supplied was beyond the competence of certain rapporteurs of specialized projects (for example with regard to the determination of goods to be imported or the incidence of taxation) or required an assessment which was not within their functions (for example with regard to the sources of financing to be sought) these index cards were completed during work sessions held jointly with the synthesis group of the Finance Commission.

#### 2. Co-ordination of the Projects

##### A. Co-ordination at the stage of preliminary planning

An overall co-ordination of the projects was automatically ensured by the interplay of transmission of reports among the specialized commissions; the reports being transmitted from one to another either for an opinion only or for action where the secondary effects of a project would directly influence the establishment of another project.

The general table entitled "Programmes to be studied and reports to be made" (document C annexed to this memorandum) shows the overall machinery of these contacts.

It will suffice here to select a few examples at random: the programmes of vocational education and of industrial infrastructure were only

prepared after the individual industrial projects were fully known<sup>1/</sup>; a joint rapporteur was chosen (the Director of a semi-private specialized corporation) to prepare the project for the processing industry for agricultural commodities and the project for cotton growing; the project for highway infrastructures of rural interest was prepared after examination of the stock raising service programme for evacuation of cattle, etc. There would be no point in multiplying the examples.

However, a comment is in order here relating to research on the capital-output ratio: although an attempt was thus made to take account of the interactions between projects due to the secondary effects of the investments, these secondary effects were not generally stated directly in figures as such or added to their primary effects for the calculation of sectoral capital-output ratios, as the induced investments (for example in the services) are supposed to be included in the total volume of investment (and more particularly in the estimate of "free" investment) on the same basis as the other capital equipment.<sup>2/</sup>

Lastly, we would add that two points in the process adopted were of a nature to promote the chances of co-ordination:

First of all, the fact of including in the same commissions the representatives of the public sector and the private sector (particularly representatives of the banking system in the Finance Commission, entrepreneurs and traders in the Industrialization Commission, and representatives of the Chamber of Commerce in several commissions).<sup>3/</sup>

---

1/ Hence the delay in formulating these programmes which were not known until the work of synthesis.

2/ This does not mean that these induced effects were not taken into account when there was need to make a separate judgement on the profitability of a particular project.

3/ Nevertheless the members of the private sector remained in a distinct minority and were not always fully aware of the importance of planning; it would be a mistake to suppose that the effort made in this way to ensure the participation of the private sector was sufficient to reverse the natural tendency towards the predominance of the public sector.

Secondly, the fact that, with regard to the statement of partial programmes, the wording of the planning document deliberately abandoned the traditional classification by classical sectors: thus "the rural plan" includes both agricultural projects and infrastructure projects or social projects intended to assist the rural population; the same applies to "the urban plan" etc. This new arrangement had the disadvantage of forcing some departments reporting on a specific sector (education, health, road works) to divide their overall programme into several projects (efforts in the joint national interest, those of urban interest, rural interest etc.): but the system had the specific aim of highlighting the secondary effects and the interactions of the different projects located at the same level of implementation, and of combating the natural tendency of the public services to operate in watertight compartments.

B. Co-ordination at the stage of final synthesis

An idea of this co-ordination has already been given in the course of the problems raised in the preceding chapters, which were mainly concerned with the consistency of the various parts of the plan; nevertheless it may be of interest to consider rapidly how far the principal known tests as to the feasibility of a plan were taken into account.<sup>1/</sup>

(a) Overall feasibility for the economy

This criterion was applied in particular:

- through the link established between the overall level of investment and the overall level of consumption to be maintained (cf. I-2-B);
- through the very fact of having reduced (cf. II-1-C) the original programmes by about 40 per cent, and this not uniformly throughout the sectors which is a tendency too

---

<sup>1/</sup> The list of these tests adopted here is in the order given by ECA document No. E/CN.14/ESD/01.

frequently observed, but by a greatly varying percentage, as a result of the methods of selecting investment explained above;

by the fact that financial policy was taken into consideration in setting the overall targets and distributing the investment;

by the method of gradual progression adopted for the expansion;

by the fact that, since the trend in imports of capital goods could be determined by reviewing the index cards concerning individual projects, the amount of imports of consumer goods was limited to the difference remaining available out of the total resources of the nation.

(b) Foreign exchange feasibility

This test raised no problems, both because Upper Volta belongs to the franc zone and because the balance of payments is at present in equilibrium: this is due to the fact that the deficit in the balance of trade has always been offset by government transfers and transfers by emigrants, and that nothing in the projections formulated would appear to threaten that equilibrium (see structure of table R 15, external account).

(c) Capital shortage feasibility

See in chapter 4 the financial policy which was followed.

(d) Food supply feasibility test

No serious problem, as the present equilibrium is almost satisfactory. However, the industrial crop targets took into account the slight increase in food production which must be provided for (bearing in mind the population projections).

(e) Fiscal feasibility test

The same comment as for capital shortage feasibility applies.

### 3. Details of the methods used

We do not propose to give an overall account of this matter, but would request the reader to refer to the structure of the tables (document A annexed to the memorandum).

Nevertheless, certain points are worth mentioning:

The system of economic accounting adopted is not the standardized UN - OECD system, but the French system formulated by the SEEF (Service des études économiques et financières) and adapted by Mr. COURCIER in his economic accounts.

The fact that the last year for which accurate economic accounts were available, which could be called the base year (1959), was so remote from the first year of implementation of the plan (1963), made the extrapolation of the accounts from 1959 to 1962 inclusive of special importance. In the absence of other information, an exponential curve<sup>1/</sup> representing a constant relative annual increase was adjusted to the 1954-1959 figures, in order to obtain extrapolated accounts for 1962. (This constant increase was for the **GDP of 3.3 per cent**).

All the figures were calculated in constant 1962 francs. To adjust the previous accounts to 1962 francs, it was impossible at the beginning of 1962 to make an accurate correction, based on indexes by class of goods, for 1959 francs; thus it was necessary to estimate the price variations, based on the few data known, at roughly a 10 per cent increase over 1959.

Since the progressive increase in GDP was derived from the investment, it is implicitly assumed that the new production units will function correctly at a normal percentage of their production capacity. This identification of production capacity with actual

---

<sup>1/</sup> of the shape  $y_n = y_0 (1 + r)^n$

production presupposes, of course, that the problems of organization, markets, supplies etc. are suitably dealt with.

The fact that the totals of resources and uses must be the same indicates that the final consumption includes, as does the Gross Domestic Product itself in the accounting system adopted, the value of government services calculated from the total amount of government salaries. The concept was kept in terms of Gross Domestic Product so as to keep in line with the studies already made, but with the recognition that, owing to this definition, an increase in GDP due to an increase in Government salaries would be purely nominal and would bear no direct relation to an increase in production.

A problem arose with regard to evaluating intermediate business consumption in order to transpose the gross output targets into value added by sector. Economic accounting certainly provided some rough aggregate ratios, the value of which had to be regarded with caution in view of the small number of annual accounts which had been prepared. With regard to industry, the projects formulated were sufficiently specific to enable a direct evaluation of these ratios to be attempted. With regard to agriculture, the projects furnished some guidance as to the utilization of fertilizers, insecticides, etc. which agricultural extension work would attempt to encourage: hence the estimation of a very distinct tendency for the ratio of intermediate consumption to rise in the early period, which explains why the index of increase in value added for that sector is less than the same index for gross output.

#### IV. FINANCIAL PLANNING

##### 1. National budgeting

In view of the financial position of Upper Volta, special care had to be devoted to this question. For the projection of the budget in 1967 many estimates were needed. It has been seen in paragraph 3 that the rapporteurs of every individual investment project were required to supply a budget index card; this card concerned all the direct implications

(including fiscal and customs implications) of their project, both with regard to the Government budget and the local budgets.

A. In connexion with expenditure, a functional and economic classification of current expenditure has been made and entrusted to a survey corporation; further, it has already been seen that investment policy <sup>1/</sup> had been considerably influenced by the desire to reduce the recurrent charges to the minimum consistent with normal functioning and below which inadequate maintenance in fact entails a disinvestment. The ratio of recurrent annual charges in the whole of the planned public investment is finally only 8.7% of the total investment. On the other hand, as the last known budget was for 1961, and as the first year for the implementation of the plan is 1963, it was also necessary to include in the budget projection the recurrent charges resulting from the investment of 1961 and from the known programmes for 1962; for this purpose the departments were asked to relate their appropriation estimates for the years 1963-1968 to the 1961 budget. With regard to the amount of public expenditure relating to departments not directly concerned with development, an agreed estimated amount was attributed to it as a percentage of the total public expenditure.

Further in order to reduce the volume of public expenditure (the public debt section), it was decided not to resort to a large amount of borrowing for public investment. Naturally, an assessment of the financial charges arising out of the small amount of borrowing retained for individual projects was included in the budget projection.

Lastly, an attempt was made to determine what savings were possible through the structural reform to be made in the operation of the government services.

B. On the revenue side, a tax-by-tax extrapolation of public revenue was made up to 1967, based, according to the taxes, on the rate of increase

---

<sup>1/</sup> For example by the application of the quantified criteria mentioned in II.C. in the selection of projects.



of the gross domestic product, on population projections or on the expected amount of imports. This extrapolation assumed that the tax system would remain stable. An additional fiscal burden, needed in order to balance the budget projection of 1967, was determined in the aggregate and merely divided between taxes on households and taxes on enterprises. A more detailed tax study at present being conducted will determine the most suitable steps for carrying out this measure.

2. Utilization of possible sources of investment financing  
(see tables R-8 and R-9, document A)

Care was taken to define the balance between resources and operational needs not only with regard to investment properly so called but also with regard to the frequently-neglected question of working capital of various kind (including short-term credits for industry and commerce, and farming season loans to which the nature of the planning projects was likely to given considerably increased importance).

The different sources of financing contemplated are the classical sources, with the limitation that, in applying the policy of cutting down public expenditure, an attempt was made to restrict as far as possible the role of the national budget.

With regard to the estimating of requirements, there were three index cards available for each project (completed jointly by the rapporteurs and the Finance Commission) setting out the most desirable sources and methods <sup>1/</sup> of financing.

As against this assessment of requirements, the Finance Commission had available a technical report regarding the probable availabilities and the terms of each source of financing.

It must be stressed that the apportionment among the sources of financing (the final result of the work as set out in table R-8) only represents in the minds of those formulating the plan a likely assumption

---

<sup>1/</sup> By "method" of financing we mean here the distinction between non-repayable funds, short-term loans (for working capital) and medium and long-term loans (for investment).

represents in the minds of those formulating the plan a likely assumption which has to be adapted to the flexible implementation of the plan (if only because of the annual examination by public foreign aid agencies of their programmes). However, the detailed formulation of these assumptions was absolutely necessary for the construction of the model, and particularly for the reasoned determination of the net annual foreign contributions and the government accounts, and also to test whether the level of savings and the effort demanded of the banking system were mutually consistent <sup>1/</sup>.

On this latter point, due regard was paid to the rediscounting rules at present in force, and to the present volume of bank deposits and public deposits.

As to whether an attempt was made to "overstate" the most likely assumptions concerning financing capacity for the purpose of providing incentives, we may sum up by saying that:

the "domestic" sources of public financing were in fact most stringently assessed.

The "foreign" sources of public financing were slightly overestimated.

The private sources of financing were slightly overstated as regards self-financing by enterprises, because of the effects hoped for from the investment code: on the other hand it was considered advisable to keep a margin of safety with regard to the available funds from the banking system, for two reasons:

- (a) the relative reduction in the resources of households, as a result both of the rapid rise in the national rate of investment and of tax increases, made it unlikely that there would be an appreciable increase in private

---

<sup>1/</sup> Using table R-9 which was specially drawn up for that purpose.

savings <sup>1/</sup>before the second five-year plan.

- (b) "Free" investment was assessed empirically than the other type; since, if the forecasts in that respect were exceeded, the resulting increased financing requirements were likely to affect only the banking system (apart from possible transfers of foreign capital).

3. These who drew up the plan did not speculate how far it was possible to co-ordinate financial planning with the other plans. They regarded this co-ordination as one of the major requirites of sound planning.

#### V. ECONOMIC MEASURES

A special section of the planning document entitled "The control of development" was devoted to administrative and economic measures to promote the implementation of the plan.

We will not deal here with purely administrative measures except to point out that an attempt was made to ensure the continuity of the planning process (for instance by making the planning commissions a permanent institution).

Without attempting to mention all the economic measures of varying importance which may have been undertaken, we would note the following as being the most important:

1. Establishment of a National Development Bank

The advantages of this type of institution are so well known that there is no need to stress them, the statutes of the Bank of Upper Volta having no special feature important enough to be mentioned.

2. Creation of a favourable climate for private investment

In this connexion we would mention:

---

<sup>1/</sup> We would mention here that priority (as to time) was given to the balancing of the public finances as opposed to increasing savings.

The issue of an investment code, providing for two systems of approval for recipient corporations, the A system, which is simply a stabilization of the present tax system; and the B system, under which the Government reserves the option of taking any favourable fiscal or other suitable measure to assist the enterprise.

The contemplated institution of a quasi-public corporation for industrial surveys, intended for the purpose of assembling the data and, upon request, of carrying out or having carried out the necessary surveys regarding the location of industry.

A law to assist new industries, which provides for the establishment of a fund for repayable advances.

### 3. In agriculture:

A law concerning development corporations. The aim of this law was to set up a very flexible legal system for the purpose of encouraging the participation of private or corporation capital under Government supervision, in order to fill the gap created by the abolition of the former Provident Societies and carry out the action which they should have completed themselves (supervision of co-operatives, agricultural extension work, distribution of agricultural credit, and if necessary, the undertaking of agricultural improvements). It is also hoped through these corporations to achieve a greater decentralization of the rural operations of the plan.

In general, measures aiming at the more extensive use of agricultural credit (decentralization of credit agencies and simplifying of procedure for granting credit etc.) <sup>1/</sup>

---

<sup>1/</sup> We might also mention, although this has not yet been the subject of specific measures, an appreciable effort at co-ordination with neighbouring States (participation in the Niamey conference, the purpose of which was to co-ordinate the location of industries in fields where the market needed to make an enterprise profitable transcends the boundaries of a single State).

## VI. REGIONAL DISTRIBUTION OF PLANS

### 1. Planning stage at which this regionalization is carried out

The setting of regional and local targets can be envisaged at two different stages:

At the time of preliminary planning: consultation of local authorities with a view to sounding the people as to the measures which would seem to be the most necessary and on the most strongly-felt needs, as well as on the production targets (particularly agricultural ones) which the people feel they could achieve: these proposals are then reviewed in connexion with the departmental projects.

After the national plan has been formulated, by the distribution of the quantitative targets set by the plan.

It was first intended to use the former method in Upper Volta, at least with regard to consultation with regional committees set up on as wide a basis as possible. In fact, owing to the demands of a very tight planning time-table, it was impossible to set up these committees in time. However, at the time when the specialized commissions were formulating the projects, a meeting entitled "meeting of Commandants de Cercle" was organized; in fact the participation at this meeting had been envisaged on a wider basis than the title would indicate, as the local political party representatives had been included, as well as certain local technicians selected for their contacts with the people. In preparation for this meeting there was a detailed questionnaire on the structures, targets and means of implementation of the plan, and the results of that questionnaire were intended to be transmitted to the commission.

We will now deal with the second stage of regionalization (regional distribution of the measures contemplated by the existing national plan).

### 2. Defining the problem

The draft national plan deliberately refrains from indicating the geographical location of investment and production wherever their

distribution did not raise problems connected with the general balance of the plan or did not affect the implementation of other projects: in practice, only the industrial projects, the infrastructure projects concerning communication networks or works of national importance, the large farming irrigation areas and the work done in the town planning context <sup>1/</sup> were the subject of precise geographical location. Thus the plan does not contain a review of investment and targets by regional or by administrative district.

Thus the decentralized planning still to be done is mainly concerned with the plan to increase rural output (i.e. about 40 per cent of the total concerted investment and of the expected value added). In this field the type, the mechanism and the total volume of the operations were defined, but the specific list by region, the distribution among districts and the location within the districts remains to be decided.

There are two levels which could be chosen to carry out this work:

The cercle, which has the advantage of being the setting of the local administrative life and the normal level of contact with the people;

The economic region, which has the advantage of constituting a definite entity precisely because of its economic homogeneity, and of being a sufficiently large unit to justify an attempt at complete regional planning.

3. The regionalization of the plan at the cercle level

The cercle <sup>2/</sup> level was selected for a first time to carry out the allocation of rural investments and targets.

Immediately after the national plan has been approved, the commandants de cercle will be asked to make a list of documents for which a

<sup>1/</sup> Relating to a restrictive list of agglomerations regarded as being essentially urban, the development of which is the subject of the "urban plan".

<sup>2/</sup> There are 39 cercles in Upper Volta.

standard model has been carefully prepared after a test in one of the districts.

These are:

- the cercle plan properly so called
- an economic monograph on the cercle, to be compiled every 5 years following the same timing as the cercle plan
- the annual programme of execution concerning the first year of the plan.

They will be assisted in their work by a Comité de cercle, consisting of representatives of the people and of the technical departments concerned; the text setting it up is under consideration.

#### 4. Regionalization at the level of the economic regions

The economic regions, called programme regions, were delimited and established by decree. But there has not yet been time to set up the agencies intended to provide leadership for them (for example the Technical Committee responsible for assisting the cercles in their current work and for preparing the future regional plans).

It is understood that later on, as soon as the situation with regard to regional documentation and numbers of technicians permits (probably during the second five-year period) regional plans (more complete than the present cercle plans, backed if possible by regional economic accounting) will supplement and replace the cercle plans.

### VII. PRINCIPAL PROBLEMS

In general these problems are not confined to Upper Volta, but relate to the stage of development reached by its economy. We may briefly mention<sup>1/</sup>:

---

<sup>1/</sup> Since we are dealing with the obstacles met with in carrying out a truly scientific planning effort, and not with the more general and wider problems which hamper rapid development.

- Since the documentation is still incomplete and above all too recent, it is often impossible to establish reliable trends (the most obvious gaps are certainly in the field of consumption, employment and productivity, inventories and actual savings);
- the inadequate economic vitality of the modern private sector, which makes balanced planning difficult; and the still very inadequate participation by its representatives in planning, the necessity of which has perhaps not yet been entirely accepted by that sector;
- the too great burden which Government consumption (and its propensity to increase more rapidly than that of households) places on the country's economy, thus making balanced programming difficult; the lack of time and shortage of personnel felt by an administration too severely understaffed to be able to make a detailed study of long-term projects;
- the obvious difficulty felt by all concerned in acquiring the habit of working day by day within the planning framework; this is the natural consequence of the fact that the effort made in this field is very recent.

To this must be added a factor of specific importance to Upper Volta: the highly mobile nature of much of its labour force, owing to emigration towards the coast (seasonal or multi-annual); this feature means that any forecast regarding the rural labour force, or even the development of cultivated areas, is most uncertain.

Despite all these problems, it may be concluded that the decision to draw up the first national plan of Upper Volta was by no means premature; in any case the handicaps mentioned would probably have taken several years to remedy, and the planning process is likely to promote an advance in most of these areas.

Those who drew up the plan are aware of the simplifications applied to the model, and of the areas of uncertain forecasting caused by those estimates which had to be speculative. Nevertheless, they feel that, by



comparision with previous programmes, the formulation of the plan has enable notable progress to be made in the following directions, which are essential to any kind of planning:

the drive towards an overall advance in accordance with the nation's possibilities;

an overall awareness of the problems;

co-ordination of the sectoral projects among themselves, and efforts to counteract the tendency to work in watertight compartments;

the search for long-term perspectives.

- - - - -