INTRODUCTION

1. To define the field, settlement schemes are taken as "projects involving the planned and controlled transfer of population from one area to another" (2) This includes refugee settlements where Government or an agency exercises some degree of control, but does not include spontaneous settlements where there is no such control.

2. Thinking about settlement schemes in terms of phases has a number of possible uses:
   (i) drawing attention to the time dimension and making it easier to see schemes as the evolving wholes that they are,
   (ii) providing a framework for describing and analysing schemes, with pegs upon which facts and experience can be hung, making comparison and classification easier,
   (iii) providing a frame of reference for evaluating a scheme at any given state of its development,
   (iv) assisting planning and the anticipation of problems and needs,
   (v) in training and helping managers, by making comparative information about schemes available in an easily organised form which could show them that their problems are not unique, and that solutions have been found to them elsewhere.

None of these possible uses is fully worked out here, but by implication or directly all are touched on later in this paper.

3. The use of phases has a suspect origin. It resulted from the need to organise into chapters historical material collected about the New Irrigation Settlement in Kenya (2) and then the need to give titles to the chapters. In this process I found I was trying to identify a theme for a period, and then collecting together for the treatment of that period, evidence of the theme from both earlier and later periods. The effect was an illusion that the phases were neater, more self-contained, and less overlapping than they had been in reality.
4. The next stage was to draw up a chart of phases and their characteristics, based mainly on Mwea. This had additional disadvantages:

(i) appearing to separate phases even more completely,

(ii) being based upon controlled irrigation, which has its peculiarities as a scheme type,

(iii) being derived from a scheme of recent origin,

(iv) taking little account of the settlers' feelings and behaviour, since the evidence on which the phases were based derived almost entirely from management sources.

5. Having produced the original chart (which had only five phases) it began to appear that what defined the characteristics of different periods in schemes were, to borrow from critical path analysis, activities and events: activities such as carrying out a soil survey, selecting settlers, building houses, and growing crops; and events such as the decision to implement the scheme, the arrival of the settlers on site, and the completion of the development works. But this approach presents difficulties. For any scheme, many activities overlap; for instance, development works, settler selection, and cropping experiments may well take place simultaneously. Equally, events are difficult to pin down; decisions sometimes emerge gradually without ever being "taken", and cannot therefore be tied to exact dates without distorting the facts; and the edges of phases are usually blurred. A further problem arises because different parts of a scheme may be at different stages. A pilot project may be at an advanced phase when the main scheme is at an earlier one. Similarly, an extension to a scheme may be at an earlier phase than the original scheme. While activities and events are useful guides and landmarks, it emerged that the further dimension of physical data was needed. It might not be possible to identify the phases of a whole scheme, but it might be possible to identify the phases of its different geographical parts. The suggestion is, therefore, that for any given area in a scheme there is a general sequence of phases - ideas, surveys, planning, development, settlement, production, and so on; through other areas within the same scheme may we at different phases of development.

A PHASE MODEL

6. Thinking in terms of geographical areas has led to looking at schemes in terms of environment, inputs, internal activities and changes, and outputs. Initially there is a physical and human environment. Activities and changes in that environment produce inputs which make the scheme whatever it is at any stage: an idea, report, map, a plan, and so on. As a result the scheme acquires a geographical definition, and the history of the scheme becomes the story of what goes into the area, what happens within it, and what comes out. To be comprehensive in an analysis of a scheme it would be necessary to examine all the inputs, including such varied items as social relations, sunlight, credit, machinery, people and know-how; all the multifarious physical and social activities and
changes which take place within the scheme; and all the outputs, including such varied items as social relations, crops, cash, political activity, taxes and communications. This is, of course, impossible, and it is a matter of judgment to assess which elements are the most significant. This approach has limitations, but has been behind the thinking in choosing the vertical categories in Table I. Although it seems to the writer to be the best approach when trying to see a scheme as an intelligible whole, it is not essential to an examination of phases.

7. Table I is an expanded and modified version of the original chart. It is based partly on Mwea, partly on information about other schemes, and partly on a priori considerations. The intention is to provoke comment, correction and discussion, not to present some sort of Divine Revelation. The chart sets out to describe some aspects of what happens, or may happen; it does not set out to state what ought to happen. Nevertheless, there is a certain logical necessity about the order of inputs for any given type of scheme, and it is these inputs which appear to define the start of phases and which are mainly responsible for transforming the scheme into something new. Thus, for a medium-capital scheme, we have:

<table>
<thead>
<tr>
<th>PHASE</th>
<th>TYPICAL MAJOR NEW INPUT</th>
<th>WHAT ADDITIONAL THING THE SCHEME COMES TO RESSEMBLE PARTLY AS A RESULT OF THE INPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Thought</td>
<td>A Proposal</td>
</tr>
<tr>
<td>II</td>
<td>Surveys</td>
<td>Reports and Maps</td>
</tr>
<tr>
<td>III</td>
<td>Planning</td>
<td>A Plan</td>
</tr>
<tr>
<td>IV</td>
<td>Development Work</td>
<td>An unoccupied farm</td>
</tr>
<tr>
<td>V</td>
<td>Settlers</td>
<td>A labour camp/estate</td>
</tr>
<tr>
<td>VI</td>
<td>Cultivation</td>
<td>A farm in production</td>
</tr>
<tr>
<td>VII</td>
<td>Management Rational-</td>
<td>A commercial organisation</td>
</tr>
<tr>
<td>VIII</td>
<td>Withdrawal</td>
<td>A community</td>
</tr>
</tbody>
</table>

Strictly "management" and "withdrawal", could be regarded as outputs from the scheme. Many other qualifications should be made about the contents of the chart, but only the most important will be outlined here.

QUALIFICATIONS

8. First, it is arguable that there should be two extra phases: one before phase I, including the crisis, problem or policy responsible for initiating the thought, and another after phase VIII, covering change and development in the community after withdrawal is complete.

9. Second, there is a danger that a chart of this sort will be regarded as the norm, and "variations" will be pointed out. It is quite possible, however, that such deviations will prove to be more normal than the supposed norm. The schemes described in the chart are meant to be mainly medium-capital schemes. With very high capital schemes, there tends to be close supervision of settlers to ensure an output that will justify and repay the heavy investment, and phase VIII, withdrawal, may be either delayed or never intended to take place. In low capital schemes, such as the Sukuma settlement of Geita District, where only simple surveys, minor services and advice are provided for the settlers, phases II and III, survey and planning, may be run together, and phase IV,
development, may take place mainly after phase V, settlement, as a result of the work of the settlers. In addition, in such schemes, the management may be virtually non-existent after phase V, settlement. Again, in the controlled grazing schemes in Kenya in Samburu and West Pokot Districts, the "settlers" were on the land before the schemes started, and although their movement became planned and controlled, they were not usually settled in the normal sense of the word, but rather subject to organised nomadism. Phase V settlement was, therefore, more or less antecedent to phase I, a fact which had considerable implications for management style. Again, in refugee settlements, the initial movement of the would-be settlers (equivalent to selection) is usually the crisis and stimulation for phase I, ideas. Doubtless, there are many other exceptions of this sort. But while the weaken this chart as-a generalisation, these variations and exceptions can be used to compose other charts, as a result of which, mainly by means of the introduction of the time dimension, fresh light may be thrown on the nature and problems of different schemes, and indeed on what characteristics can most usefully be taken to define types of schemes.

10. Third, in any scheme there is likely to be a great deal of overlapping of the inputs and activities which are typical of phases. In any given phase, some of the characteristics of earlier phases are likely to continue. This may be true not only for a scheme as a whole, but also, to a lesser extent, for any particular geographical area within the scheme. Table II shows this overlapping for a hypothetical medium-capital scheme. Associated with this overlapping is the blurring at the edges of phases that has already been mentioned. Even when a phase is defined by management for the end of a recognised phase, this may not in practice mark the end of the activities characteristic of the phase. A clear, financially determined deadline for a completion of development work on Nkwa was set for 30th Jun, 1960. The deadline was met, and the Ministry of Works machines and men who had been involved left the scheme. But in fact for some time Prison labour was employed on "tidying up", work similar to that characteristic of development. In this case, as in almost all cases, the phase was not the watertight compartment it appeared on paper. To say, therefore, that a scheme is at a particular phase is to make not a precise statement about the characteristics that will be found in it but rather a general statement about the range of characteristics that may be found in it.

PRACTICAL APPLICATIONS

11. Phase analysis could have a number of practical applications for those working on settlement schemes. It could help in planning, anticipation, evaluation, and the training of managers. These uses will not be dealt with separately, since the discussion which follows often applies to several or all of these uses. Of the many aspects which might be discussed here, I shall confine myself to what can be called the planning of overlaps, the viability crisis, departmentalism, the changing roles of management, the problems of withdrawal, and pegs for experience.

THE PLANNING OF OVERLAPS

12. At first sight, overlapping of inputs and activities from phase to phase might appear undesirable. However, taking a broad cost-benefit approach, including social and political as well as economic costs and benefits, it can be seen that many overlaps are beneficial. In the first place, costs may be reduced and benefits increased through feedback from later activities to earlier: the
information being collected in the surveys may be modified in
view of the practical experiences of the planners; the form of
farm development may be altered in the light of settler reactions
and performance; selection procedures may be varied as a result of
the experience with settlers already selected. These examples
underline the value of a pilot project approach, which is all too
often limited to the technical aspects of the scheme. The greatest
unknown in most schemes is, however, not what crops will grow or
what fertiliser to apply, or any other agro-economic factor, but
how the settlers will react; ironically, this is usually the least
carefully assessed of all the factors making for viable schemes,
though there are signs, particularly in Tanzania, that this
shortcoming is being tackled more resolutely and imaginatively than
used to be the case. Secondly, overlapping and a certain degree of
apparent confusion may save money, though there are likely to be
social and political costs that could be avoided with more careful
scheduling and coordination. In situations of confusion there is of
course always a danger of poor financial control and reckless
expenditure. But against this must be set the relative speed of
negotiations and adjustments, and the pressure of demand for
decision and decisive action. These combine to get action taken
quickly, reducing overheads. There is also often a high degree of
feedback, as already mentioned. Above all, in such situations, one
man tends to emerge as the operational commander. He can hold
committee meetings of one with himself, and these may be held in
bed at night or while shaving in the morning. This constitutes an
efficient use of scarce trained manpower which, in East Africa at
present, has a very high opportunity cost, particularly when the
training is in agricultural extension or management.

13. On the other hand, many overlaps are clearly undesirable.
This is particularly so when there is excessive pressure for speed
leading to confusion of activities, or premature introduction of
inputs, or when there are excessive delays. Omitting full survey
and planning phases in the Groundnut Scheme exacted a price which
needs no elaboration. Telescoping phases in the early days of Mwea,
when development sometimes preceded survey and planning left
the scheme with some works whose value now is only archeological.
When the production phase is delayed, as with the Volta River
Resettlement, settlers may be demoralised and develop attitudes
of dependence which in time will saddle a scheme with economic as
well as social and political costs.

14. A dilemma of any settlement agency is, therefore, to judge
the socially, politically and economically optimum degree of
compression and overlapping of activities. The argument for
"confusion" is really an argument for pressure for action after
phase II, for freedom from over-planning and over-centralisation,
and for using the full potential of scarce staff through placing
them in situations of near crisis. It may well be that the balance
of speed commonly emerging from the tug-of-war between political
impatience and technical caution is near this optimum. The best
combination may be close financial control, particularly during
phases III and IV, with a minimum of other forms of control.
Unfortunately financial control and accounting tend to be the
weakest elements in rapidly implemented schemes, and the analysis
of the time spent by managers on different activities at different
stages of development is rarely carried out. If the results of such
an analysis were known it would be less difficult to assess the
optimum speed of implementation.
15. Thinking in terms of phases may be useful for certain aspects of evaluation. Comparison of the performance of one scheme with another may be most effectively carried out in relation to the phase reached. Further, having identified the phase of a scheme, it is a simple matter to look for the problems and characteristics that have been found in other schemes at that phase. One example is what may be called the viability crisis. In very successful schemes this may never occur. In disastrous schemes it may prove fatal. In many schemes somewhere between the two classes, the crisis occurs and the scheme manages to weather the storm. Table III illustrates the crisis from Mwea. The initial targets and costs were optimistic. After the scheme had been started on the ground there was a period of grace (phases II-V) during which the Treasury was tolerant of the scheme. In the latter part of 1957, in phase VI, total costs were very high in relation to acres developed and tenants settled. There was increasing stringency followed by a Treasury cut of 40% in the 1958/59 estimates. But an additional £250,000 for development was eventually obtained, and spent largely in 1959/60. A similar crisis occurred in Kenya with the Perkerra Irrigation Scheme, again at about Phase VI, in 1959, as a result of which the scheme was put on a care and maintenance basis for three years, followed by a further crisis in 1962, as a result of which moderate expansion took place. Yet another similar crisis occurred in the Groundnut Scheme in 1948 and 1949 and led to closing down.

The point of interest is that those crises tend to occur in phase VI, at the time when teething troubles - with settlers, with production routines, with various unknowns in the environment - are at their highest, and coincide with continuing heavy development expenditure much of which may not have yet become productive. For managers, it may be useful to anticipate and recognise this crisis when it comes; and those who try to evaluate schemes might do well to make their assessment of viability not on actual production in relation to investment at phase VI, but on estimated performance in phase VII when handling, processing and marketing, as well as production, will have received more managerial attention. None of this should, however, be taken as a defence of settlement schemes as against other forms of development which may have lower costs and greater benefits, nor as in any way advocating the very strange accounting and costing devices (concealing costs in another ministry's votes, writing off capital expenditure as grant, seconding officers who are not shown against the schemes books) which can be used to make settlement schemes appear more viable forms of development than they are.

16. Where several departments are involved in implementing a scheme, it is useful for purposes of anticipation to recognise that there may be certain problems and areas of conflict or negotiation that are typical of the different phases. Some of these, which emerge from a study of Mwea are: in the planning phase, between the planners whose main concerns are technical requirements and those who are to manage the scheme; in the development phase between those responsible for the physical work and the managers, the former having an interest in low capital costs, and the latter in low operating costs; in the settlement phase, between the settlers' representatives or those who consider themselves to represent the settlers (the Provincial Administration in the case of Mwea), and the agricultural management, who will be involved in supervising and advising.
the settlers in their agricultural activities. It is as well to
recognise, too, that with vigorous and ambitious officers there is
a tendency for control over an activity in one phase to be followed
through into control in the next. The planners tend to become the
developers; in irrigation, the hydraulic engineers tend to take an
interest in controlling water distribution after they have construct-
ed the dams; the organisation that selects the settlers may tend
to continue to have an interest in influencing and controlling them
after they have arrived on the scheme. In most cases these various
problems can be anticipated and overcome either by giving the
conflicting functions to the same person or organisation (e.g. settler
selection to the manager), or by providing for negotiation and coordin-
ation well before the problems arise.

THE CHANGING ROLES OF MANAGEMENT

17. Through the phases there are radical changes in the roles of
the management which require major adjustment and considerable
adaptability. (There are also, of course, major, but possibly less
difficult, changes in the roles of settlers). A scheme manager may
start his scheme career as the god who has a large part in deciding
whether a settler will be accepted or not. He may then become the
commander of the settlement operation, with junior staff and,
effectively, settlers under his orders. He may enforce discipline
(that word that so often crops up in management literature about the
eyearly days of schemes) in cultivation activities, hygiene, house-
building and communal labour. He may exercise the supreme sanction
of eviction, albeit visually through a parajudicial process. But
with time, there are pressures for his role to change. Gradually
his area of command shifts from cultivation to crop-handling, from
crop-handling to processing, from processing to marketing, and
control of the earlier or central areas of command and decision is taken over by
junior staff and settlers. He has to learn to abdicate much of his
authority and accept negotiation with the settlers in place of
orders, becoming something like the temporary coordinator of a
cooperative factory, combined with sales manager, who acts as
broker and broker on behalf of the settlers with the outside
commercial world. Finally, he may have to content himself with merely
advising, and even himself out of his job. These changes are a
great deal to ask of any man. It is not surprising that there is a
common syndrome of jealousy for the scheme’s initiation with the
settlers, impatience with other departments, apoplexy with the
head office, and a strong urge to put in writing views which fall
short of the balance and tolerance required by his post. Given
these difficulties inherent in the manager’s situation, there is a
strong case for regular meetings of managers to exchange experience,
air their problems, and visit other schemes, and for training courses
or seminars to enable them to see the importance of the changes of
role required of them and to understand the stresses these changes
will bring about. The writer believes that the costs of such
measures would be many times covered by the benefits resulting.

WITHDRAWAL

18. Withdrawal and the devolution of activities is in some
respects the most challenging and difficult phase, and is also
usually the last anticipated. From a planner’s point of view,
however, one of the most important dividing lines should be between
schemes which can eventually be devolved, and those which will of
their nature always have to be a continuing commitment to the
agency. Those which it may never be possible to devolve include
large scale irrigation schemes, some technically and organisationally complex schemes, and schemes that are centred on a processing factory. It is important, however, not to be too dogmatic: even these schemes may be devolved in the very long term. Those schemes which can be withdrawn from are typically those which reproduce an agrarian system already in uncontrolled use elsewhere; most of the million or more settlement schemes in Kenya; the Geita District settlements in Tanzania; some of the refugee and tsetse barrier settlements in Uganda. But what is at first sight remarkable is the difficulty experienced by agencies in withdrawing. There are perhaps four main reasons for this difficulty:

(i) concern for the welfare of the settlers,
(ii) the psychological problems of voluntary abandonment of power,
(iii) the need to ensure the repayment of loans and capital by the settlers,
(iv) the difficulties of persuading other bodies (local government, central government, the settlers' own organisations) to take over and perform efficiently the functions formerly carried out by the settlement agency.

19. This problem of persuasion has several facets. It is in the nature of settlement agencies to be identified with their creations and to be regarded by other organisations already operating in an area as intruders and rivals with special prestige and privileges, able to convey on the settlers a higher standard of services than is common in the surrounding area. The settlers may be politically weak locally, either because they are alien, or because they are regarded as a rural elite, the favoured sons of Government who have already received more than their fair share of the national cake. Further, the bargaining position of the settlement agency with the local authority (which might maintain the new access road, provide recurrent expenditure for the dispensary, maintain the water supply, etc.) is often weak since it is common for local authority taxes and cesses to be paid by the settlers before this sort of bargaining takes place. Persuasion is made even more difficult by the desire of the agency to ensure that high standards are maintained and that the agency will not be discredited as a result of lack of interest and resistance from other bodies after withdrawal. As a result, withdrawal seems always to take longer than the stated target. This may be partly because in order to achieve any withdrawal at all, the agency has to set impossible targets. It is also because it is profoundly difficult for any state (and some agencies are pseudo-states) voluntarily to wither away.

PEGS FOR EXPERIENCE

20. A final aspect of phase analysis is that it can be used to provide pegs on which comparable experience can be hung. Information about schemes that is classified according to its phase is immediately easier to handle and to compare with other information. This means that quite large numbers of examples of a particular problem might, without much difficulty, be collected. Some examples of sorts of problems are given over:
In the interests of further understanding of the nature and phases of settlement schemes, it is most desirable that more comparable information should be obtained about different schemes. If this were done, it might be possible to provide for those involved in the day-to-day work of settlement with a book or handbook of collected experience, perhaps strung together on some realistic theory. Judging from the frequency with which the same mistakes are made and the same problems arise in settlement, this might be a very valuable service to perform. The sort of phase analysis outlined here may not be that theory; but if it stimulates someone else into working out a more realistic one, so that such a handbook can be compiled, it will have served its purpose.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>COMMON PROBLEM OR MISTAKE</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Over-enthusiasm, leading to excessive speed and mis-judgment</td>
<td>Kokwa, Nigeria, Rusinga Low Country Grazing Schemes, Kenya.</td>
</tr>
<tr>
<td>II, III and IV</td>
<td>Too quickened through haste, leading to mistakes in development work</td>
<td>Nwoa.</td>
</tr>
<tr>
<td>III</td>
<td>Inadequate budgeting of farmer returns in relation to expectations and returns immediately outside the scheme</td>
<td>Kokwa</td>
</tr>
<tr>
<td>IV</td>
<td>Development slower and more expensive than estimated</td>
<td>Nwa Parkorr, Kenya</td>
</tr>
<tr>
<td>V</td>
<td>Settlers not employed immediately on arrival, resulting in dependency and demoralization</td>
<td>Refugee Settlements, Ugand. Volta River Re-settlement, Ghana.</td>
</tr>
<tr>
<td>VI</td>
<td>“Treasury” pressure for economy in development and increased returns to financial agency (the viability crisis)</td>
<td>Nwoa Parkorr</td>
</tr>
<tr>
<td>VII</td>
<td>Management-settler crisis of confidence over proportion of gross returns to be paid to settler</td>
<td>Parkorr</td>
</tr>
<tr>
<td>VIII</td>
<td>No prior planning for devolution of services provided initially by agency</td>
<td>Volta.</td>
</tr>
<tr>
<td>PHASE</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td>TYPICAL MAJOR INPUTS OR NEW ACTIVITIES EXCEPT FINANCIAL</td>
<td>MAIN STAFF ACTIVITIES</td>
</tr>
<tr>
<td>I IDEAS</td>
<td>THOUGHT Inspection</td>
<td>Thought Inspection</td>
</tr>
<tr>
<td>II SURVEY</td>
<td>SURVEYS (topo, water, soil, rainfall, etc.) Crop experiments</td>
<td>Gathering information</td>
</tr>
<tr>
<td>III PLANNING</td>
<td>PLANNING</td>
<td>Consultation Estimating Planning</td>
</tr>
<tr>
<td>IV DEVELOPMENT</td>
<td>DEVELOPMENT WORK Management staff, Machinery, Labour</td>
<td>Clearing, moving and constructing things e.g. fields, roads, buildings.</td>
</tr>
<tr>
<td>V SETTLEMENT</td>
<td>Selection of Settlers. SETTLERS Credit, Working capital</td>
<td>Selection Explanation Training</td>
</tr>
<tr>
<td>VI PRODUCTION</td>
<td>CULTIVATION by settler labour imported labour machinery</td>
<td>Supervision Crop-handling accountancy operational research maintenance marketing processing devolution to settlers</td>
</tr>
<tr>
<td>VII CONSOLIDATION</td>
<td>MANAGEMENT Activities of rationalisation concentrating on</td>
<td></td>
</tr>
<tr>
<td>VIII WITHDRAWAL</td>
<td>&quot; (Management withdrawal)</td>
<td>Negotiation with outside organisations Advice to settlers Withdrawal</td>
</tr>
</tbody>
</table>
| DOMINANT DEPARTMENT OR ORGANIZATION | STAFF PROBLEMS | WHO APPLIES PRESSURE ON WHO
|-------------------------------------|----------------|---------------------------------|
| Depends on the causes of the idea. Often a "political" organisation or Agriculture Department | Acceptance of ideas Finance for surveys and planning | Ideas men on responsible men
<p>| The &quot;political&quot; organisation, or the surveyors | Land negotiation Finance for scheme. | Ideas men plus responsible men on surveyors. Also surveyors (e.g., Soil) choose other surveyors (e.g., Topo). Planners on surveyors. Managers on planners (= convenience vs. beauty and technical excellence). |
| Technical planners | To be or not to be Finance Speed | Developers on planners Users on Developers (agriculturists vs. engineers = low recurrent vs. low capital) |
| The Developers KOM, PWD, etc. | Delays, Costs Labour problems Machinery breakdowns. | Settler representatives on managers |
| Selector of settlers and management | Who runs the scheme? And how? Settler teething troubles | |
| Management | Treasury alarm (Visibility crisis) Payments to and debt collection from the settlers | Managers on settlers |
| Management and settler organisations | Scheme and other organisations esp. marketing | Management + settlers on outside organisations |
| Settler organisations | Obtaining adequate take over of activities/services previously carried out by management | Settlers on settlers Settlers on other organisations |</p>
<table>
<thead>
<tr>
<th>Staff Criteria of Success</th>
<th>Focus of Settler Attention</th>
<th>Non Financial Outputs and Their Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related to larger problem or policy</td>
<td>-</td>
<td>Nil</td>
</tr>
<tr>
<td>Accuracy; Speed</td>
<td>-</td>
<td>Trial crops sold for general revenue</td>
</tr>
<tr>
<td>Practicability; Cost and benefits anticipated</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Speed and quality of development</td>
<td>Inspection and assessment of scheme</td>
<td>crops from direct labour cultivation</td>
</tr>
<tr>
<td>Settler satisfaction (presence - absence), etc.</td>
<td>Food, Housing; Food production; Credit; Cash crop production</td>
<td>Settler pays if any</td>
</tr>
<tr>
<td>Productivity</td>
<td>High production in relation to labour inputs and other sacrifices. Share of gross returns</td>
<td>From settler production to: loan repayments, payments for services, &quot;scheme&quot; revenue, returns to settlers and later taxes cesses</td>
</tr>
<tr>
<td>Returns</td>
<td>Consumption; Security; Land tenure</td>
<td>End of loan repayments</td>
</tr>
<tr>
<td>Efficiency/stability in relation to degree of autonomy of scheme</td>
<td>Stability of returns; Standards of services</td>
<td>Payments for cost of settlers' organisations</td>
</tr>
</tbody>
</table>

Notes:
1. For some qualifications, please see paragraphs 8 - 10 of the main text.
<table>
<thead>
<tr>
<th>NEW OUTPUTS OR STRUCTURAL CHANGES</th>
<th>WHAT ADDITIONAL THING THE SCHEME COMES TO RESEMBLE</th>
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<tr>
<td>IDEAS</td>
<td>PROPOSAL</td>
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<td>NEW INFORMATION</td>
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<td>PLANS AND ESTIMATES</td>
<td>PLAN</td>
</tr>
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<td>PHYSICAL CHANGE AND CONSTRUCTION</td>
<td>AN UNOCCUPIED FARM</td>
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<td>HOUSING SETTLER ORGANISATIONS</td>
<td>A LABOUR CAMP/HOUSING ESTATE</td>
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<td>TRAINED SETTLERS</td>
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<td>CROPS</td>
<td>A FARM IN PRODUCTION</td>
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<tr>
<td>RELATIONSHIPS WITH ENVIRONMENT</td>
<td>A COMMERCIAL ORGANISATION</td>
</tr>
<tr>
<td>&quot;SELF-GOVERNMENT&quot; AND ASSIMILATION INTO ENVIRONMENT</td>
<td>A COMMUNITY</td>
</tr>
</tbody>
</table>

2. Horizontal lines have been drawn between phases for the sake of clarity, but should not be taken as implying sharp breaks. Where horizontal lines are omitted there is particularly marked merging between phase characteristics as outlined.
# TABLE II
OVERVIEW OF THE ACTIVITIES TYPICAL OF PHASES FOR A THREE-STAGE SETTLEMENT SCHEME

<table>
<thead>
<tr>
<th>PHASES</th>
<th>Pre</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
<th>Post VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>I IDEAS</td>
<td></td>
<td>Thought</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II SURVEY</td>
<td></td>
<td>Surveying</td>
<td></td>
<td>Crop experiments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III PLANNING</td>
<td></td>
<td>Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV DEVELOPMENT</td>
<td></td>
<td>Development by an agency</td>
<td></td>
<td>Development by settlers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V SETTLEMENT</td>
<td></td>
<td>First settlers</td>
<td></td>
<td>Second settlers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI PRODUCTION</td>
<td></td>
<td>Cultivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII CONSOLIDATION</td>
<td></td>
<td>Management</td>
<td></td>
<td>Rationalisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIII WITHDRAWAL</td>
<td></td>
<td>Withdrawal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sometimes</td>
<td>never</td>
</tr>
</tbody>
</table>

**NOTES:**
1. If there is a pilot project, its phases I to VI may precede or coincide with phase II and onwards for the main scheme.
2. The start and ends of activities are often blurred, although usually shown sharply here.
3. Please also see remarks in paragraphs 10, 12, 13 and 14.