A/AC.25/6

UNITED NATIONS CONCILIATION COMMISSION FOR PALESTINE

FINAL REPORT OF THE UNITED NATIONS ECONOMIC SURVEY MISSION FOR THE MIDDLE EAST

An Approach to Economic Development in the Middle East

PART I. THE FINAL REPORT AND APPENDICES

UNITED NATIONS
Lake Success, New York
28 December 1949

Note. For convenience in handling and consultation, the Report of the Economic Survey Mission for the Middle East is published in two parts:

Part I. The Final Report and Appendices;

Part II. The Technical Supplement.

A/AC.25/6

28 December 1949

UNITED NATIONS PUBLICATIONS

Sales No.: 1949.IIB.5. Part I

FOREWORD BY THE SECRETARY-GENERAL

At the request of the Chairman of the Conciliation Commission for Palestine, the Secretary-General has the honour to transmit herewith to Members of the United Nations the second and final report of the United Nations Economic Survey Mission for the Middle East. Such comments on the report as the Conciliation Commission may wish to make will be communicated in due course.

In the present report is included the first interim report of the Mission, dealing with the problem of Palestine refugees, which was transmitted to the General Assembly in November 1949 at the request of the Palestine Conciliation Commission. On the basis of that interim report and of the Secretary-General's report on the work of the United Nations Relief for Palestine Refugees (UNRPR), the General Assembly, on 8 December 1949, unanimously adopted resolution 302 (IV), the full text of which follows:

ASSISTANCE TO PALESTINE REFUGEES

"*The General Assembly,*

"*Recalling* its resolutions 212 (III) of 19 November 1948 and 194 (III) of 11 December 1948, affirming in particular the provisions of paragraph 11 of the latter resolution,

"*Having examined* with appreciation the first interim report of the United Nations Economic Survey Mission for the Middle East (A/1106) and the report of the Secretary-General on assistance to Palestine refugees (A/1060 and A/1060/Add.1),

"1. *Expresses* its appreciation to the Governments which have generously responded to the appeal embodied in its resolution 212 (III), and to the appeal of the Secretary-General, to contribute in kind or in funds to the alleviation of the conditions of starvation and distress amongst the Palestine refugees;

"2. *Expresses* also its gratitude to the International Committee of the Red Cross, to the League of Red Cross Societies and to the American Friends Service Committee for the contribution they have made to this humanitarian cause by discharging, in the face of great difficulties, the responsibility they voluntarily assumed for the distribution of relief supplies and the general care of the refugees; and welcomes the assurance they have given the Secretary-General that they will continue their co-operation with the United Nations until the end of March 1950 on a mutually acceptable basis;

"3. *Commends* the United Nations International Children's Emergency Fund for the important contribution which it has made towards the United Nations programme of assistance; and commends those specialized agencies which have rendered assistance in their respective fields, in particular the World Health Organization, the United Nations Educational, Scientific and Cultural Organization and the International Refugee Organization;

"4. *Expresses* its thanks to the numerous religious, charitable and humanitarian organizations which have materially assisted in bringing relief to Palestine refugees;

"5. *Recognises* that, without prejudice to the provisions of paragraph 11 of General Assembly resolution 194 (III) of 11 December 1948, continued assistance for the relief of the Palestine refugees is necessary to prevent conditions of starvation and distress among them and to further conditions of peace and stability, and that constructive measures should be undertaken at an early date with a view to the termination of international assistance for relief;

"6. *Considers that,* subject to the provisions of paragraph 9(d) of the present resolution, the equivalent of approximately $33,700,000 will be required for direct relief and works programmes for the period 1 January to 31 December 1950 of which the equivalent of $20,200,000 is required for direct relief and $13,500,000 for works programmes; that the equivalent of approximately $21,200,000 will be required for works programmes from 1 January to 30 June 1951, all inclusive of administrative expenses; and that direct relief should be terminated not later than 31 December 1950 unless otherwise determined by the General Assembly at its fifth regular session;

"7. *Establishes* the "United Nations Relief and Works Agency for Palestine Refugees in the Near East":

(*a*) To carry out in collaboration with local governments the direct relief and works programmes as recommended by the Economic Survey Mission;

(*b*) To consult with the interested Near Eastern Governments concerning measures to be taken by them preparatory to the time when international assistance for relief and works projects is no longer available;

"8. *Establishes* an Advisory Commission consisting of representatives of France, Turkey, the United Kingdom of Great Britain and Northern Ireland and the United States of America, with power to add not more than three additional members from contributing Governments, to advise and assist the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East in the execution of the programme; the Director and the Advisory Commission shall consult with each Near Eastern Government concerned in the selection, planning and execution of projects;

"9. *Requests* the Secretary-General to appoint the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East in consultation with the Governments represented on the Advisory Commission;

(*a*) The Director shall be the chief executive officer of the United Nations Relief and Works Agency for Palestine Refugees in the Near East responsible to the General Assembly for the operation of the programme;

(*b*) The Director shall select and appoint his staff in accordance with general arrangements made in agreement with the Secretary-General, including such of the staff rules and regulations of the United Nations as the Director and the Secretary-General shall agree are applicable, and to the extent possible utilize the facilities and assistance of the Secretary-General;

(*c*) The Director shall, in consultation with the Secretary-General and the Advisory Committee on Administrative and Budgetary Questions, establish financial regulations for the United Nations Relief and Works Agency for Palestine Refugees in the Near East;

(*d*) Subject to the financial regulations established pursuant to clause (*c*) of the present paragraph, the Director, in consultation with the Advisory Commission, shall apportion available funds between direct relief and works projects in their discretion, in the event that the estimates in paragraph 6 require revision;

"10. *Requests* the Director to convene the Advisory Commission at the earliest practicable date for the purpose of developing plans for the organization and administration of the programme, and of adopting rules of procedure;

"11. *Continues* the United Nations Relief for Palestine Refugees as established under General Assembly resolution 212 (III) until 1 April 1950, or until such date thereafter as the transfer referred to in paragraph 12 is effected, and requests the Secretary-General in consultation with the operating agencies to continue the endeavor to reduce the numbers of rations by progressive stages in the light of the findings and recommendations of the Economic Survey Mission;

"12. *Instructs* the Secretary-General to transfer to the United Nations Relief and Works Agency for Palestine Refugees in the Near East the assets and liabilities of the United Nations Relief for Palestine Refugees by 1 April 1950, or at such date as may be agreed by him and the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East;

"13. *Urges* all Members of the United Nations and non-members to make voluntary contributions in funds or in kind to ensure that the amount of supplies and funds required is obtained for each period of the programme as set out in paragraph 6; contributions in funds may be made in currencies other than the United States dollar in so far as the programme can be carried out in such currencies;

"14. *Authorizes* the Secretary-General, in consultation with the Advisory Committee on Administrative and Budgetary Questions, to advance funds deemed to be available for this purpose and not exceeding $5,000,000 from the Working Capital Fund to finance operations pursuant to the present resolution, such sum to be repaid not later than 31 December 1950 from the voluntary governmental contributions requested under paragraph 13 above;

"15. *Authorizes* the Secretary-General, in consultation with the Advisory Committee on Administrative and Budgetary Questions, to negotiate with the International Refugee Organization for an interest-free loan in an amount not to exceed the equivalent of $2,800,000 to finance the programme subject to mutually satisfactory conditions for repayment;

"16. *Authorizes* the Secretary-General to continue the Special Fund established under General Assembly resolution 212 (III) and to make withdrawals therefrom for the operation of the United Nations Relief for Palestine Refugees and, upon the request of the Director, for the operations of the United Nations Relief and Works Agency for Palestine Refugees in the Near East;

"17. *Calls upon* the Governments concerned to accord to the United Nations Relief and Works Agency for Palestine Refugees in the Near East the privileges, immunities, exemptions and facilities which have been granted to the United Nations Relief for Palestine Refugees, together with all other privileges, immunities, exemptions and facilities necessary for the fulfilment of its functions;

"18. *Urges* the United Nations International Children's Emergency Fund, the International Refugee Organization, the World Health Organization, the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization and other appropriate agencies and private groups and organizations, in consultation with the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East, to furnish assistance within the framework of the programme;

"19. *Requests* the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East:

(*a*) To appoint a representative to attend the meeting of the Technical Assistance Board as observer so that the technical assistance activities of the United Nations Relief and Works Agency for Palestine Refugees in the Near East may be coordinated with the technical assistance programmes of the United Nations and specialized agencies referred to in Economic and Social Council resolution 222 (IX) A of 15 August 1949;

(*b*) To place at the disposal of the Technical Assistance Board full information concerning any technical assistance work which may be done by the United Nations Relief and Works Agency for Palestine Refugees in the Near East, in order that it may be included in the reports submitted by the Technical Assistance Board to the Technical Assistance Committee of the Economic and Social Council;

"20. *Directs* the United Nations Relief and Works Agency for Palestine Refugees in the Near East to consult with the United Nations Conciliation Commission for Palestine in the best interests of their respective tasks, with particular reference to paragraph 11 of General Assembly resolution 194 (III) of 11 December 1948;

"21. *Requests* the Director to submit to the General Assembly of the United Nations an annual report on the work of the United Nations Relief and Works

Agency for Palestine Refugees in the Near East, including an audit of funds, and invites him to submit to the Secretary-General such other reports as the United Nations Relief and Works Agency for Palestine Refugees in the Near East may wish to bring to the attention of Members of the United Nations, or its appropriate organs;

"22. *Instructs* the United Nations Conciliation Commission for Palestine to transmit the final report of the Economic Survey Mission, with such comments as it may wish to make, to the Secretary-General for transmission to the Members of the United Nations and to the United Nations Relief and Works Agency for Palestine Refugees in the Near East."

It will be noted that paragraph 19 of the General Assembly's resolution provides for close co-ordination between the technical assistance activities of the United Nations Relief and Works Agency for Palestine Refugees with the expanded programme of technical assistance for economic development through the United Nations and the specialized agencies set forth in resolution 222 (IX) A of the Economic and Social Council and approved by the General Assembly on 16 November 1949 (resolution 304 (IV)). In addition to such technical assistance as the United Nations and the specialized agencies may be in a position to provide to Middle East Governments in response to their requests when funds necessary for carrying out the expanded programme have been contributed, the Secretary-General is ready and able to help forthwith with existing appropriations under the authority of General Assembly resolutions 200 (III) and 58 (I).

TABLE OF CONTENTS

APPENDICES

INTRODUCTION

This is the Final Report of the Economic Survey Mission for the Middle East. It follows and expands the interim report, signed by the Mission on 6 November 1949 and transmitted to the United Nations Conciliation Commission for Palestine for consideration by the United Nations General Assembly (see appendix I, A). The Mission's interim report, published under the authority of the United Nations on 18 November 1949, recommended a programme of public works to employ Palestine refugees, start them on the road to rehabilitation and bring an end to their enforced idleness and the demoralizing effect of a dole.

The recommendations of the interim report were enacted by the General Assembly of the United Nations in resolution 302 (IV) of 8 December 1949 (see appendix I, B), and if all goes well the works programme for the refugees proposed by the Mission should be under way at an early date.

This final report, "An Approach to Economic Development in the Middle East", does not deal directly with the problem of the refugees from Palestine. Yet the obstacles in the way of economic development in the Middle East are much the same as those hampering the rehabilitation of the Arab refugees.

The Arab refugees are chiefly agricultural workers, of varying degrees of skiil and experience, now landless and unemployed; others of their kin, normally serving their daily needs, are consequently also without means. But this is also the case with many of the regular population of those Arab countries to which the refugees have fled.

The solution of the problem of the poverty and unemployment of the refugees is, therefore, inseparable from a solution of the problem of poverty and hunger as that already affects a large section of the population of the Middle East.

Hunger is a basic disease in many parts of the world. The hand-to-mouth existence of millions is a challenge to the technical and scientific knowledge of, and to the wealth possessed by, those peoples whose standard of living is a measure of the goal to which the people of the under-developed areas may aspire.

The contrast between poverty and plenty within a single country, like the contrast between the so-called rich and poor regions of the world, is a source of envy, a stimulant to unrest, a basis for fear and an incitement to wars—both cold and hot.

How simple, therefore, to suppose that could the poorer people and the poorer regions but acquire from those more blessed materially a *pro rata* share of the world's goods, poverty would be eradicated and a great cause of strife would disappear.

But comparative differences in standards of living cannot be adjusted so easily. Indeed, the different values for which human beings expend their energies illustrate the lack of agreement on the validity of purely material standards as a measure of advancement—or even of content. One should be slow to condemn the peasant who eschews a tractor for a nailboard plow, because he may not covet the leisure the tractor would afford. He may find a greater value in inefficiency, as judged by western standards, than in an idleness to which he is unaccustomed, or a leisure which he knows not how to use. Speculation about what he might do with his leisure, if he had it, begs all sorts of controversial questions. Perhaps his children, or his children's children, will come to think differently about these things.

Technical and scientific knowledge can contribute to increasing material standards of living in under-developed areas. The better use of water and land, the control and eradication of disease and pests, an increased manufacture and flow of goods and the spread of education, require the application of what man knows or can find out about the productive capacity of men and things.

But higher living standards cannot be bestowed by one upon another like a gift. An improved economy does not come in a neat package sold or given away in the market place. A higher standard of living must grow out of the application of human skill and ingenuity to the physical resources of a country or a region.

The highly developed nations of the world did not make their way by wishing. By work and risk they forced the earth, the soil, the forests and the rivers to yield them riches. They pooled their energy and resources by taxation and mutual

enterprise to discover new ways of doing things. They worked, they invented, they educated and trained their children, and they invested in their national and in their private enterprises. This they must continue so to do, if they are to maintain the standard of living they have achieved.

There is no substitute for the application of work and local enterprise to each country's own resources. Help to those who have the will to help themselves should be the primary policy guiding and restraining the desire of the more developed areas of the world to help the less developed lands.

The judgments formed by the Economic Survey Mission for the Middle East from its examination of the economic potentialities of the countries of the Middle East point unequivocally to this conclusion.

There is no easy short cut to a balanced economy or to material prosperity. Time can be shortened by sharing knowledge and providing, where invited, friendly technical and financial assistance. The rate, the objectives and the strength of development should be geared to the growth of competence of the people and of the Governments who dwell among the resources awaiting development.

In its interim report the Economic Survey Mission said:

"Many of the small works projects envisaged in the public works programme for the employment of refugees . . . can be the prelude to larger developments. For the immediate future, the refugees are viewed as a reservoir of idle man-power; of greater service to themselves and to the lands giving them asylum, if given work. The administration of the relief and public works programme for refugees . . . can, in the considered judgment of the Economic Survey Mission, become a contributing factor for peace and economic stability in the Near East."

In this, the Mission's final report, the beginning of productive works recommended in the interim report is assumed as a prelude to the proposals made herein, which, in the opinion of the Mission, if translated into action, can lead the way to a fuller development of the resources of the countries of the Middle East. Such development is essential to stability. Such development can help to assure and maintain peace. At the same time, since economic and political questions inevitably mingle in human affairs, economic development cannot of itself make peace or progress where the political will to peace is lacking.

Each country of the Middle East will, sooner or later, learn that the resources of its neighbours have an important and frequently determining influence upon the economic growth of each individual country. And, where physical resources, especially water, are not abundant to start with, the interdependence of the countries of a geographic region is an elementary fact which cannot be evaded indefinitely.

Economic growth among inter-dependent countries requires peace among neighbours. Thereby only can the full complement of nature's gifts to man be organized to produce a creative system of life and living.

11

CHAPTER I

WATER, LAND AND PEOPLE

The Economic Survey Mission was instructed "to examine the economic situation in the countries affected by the recent hostilities" between Arabs and Israelis, and it was requested "to make recommendations for an integrated programme ... to promote economic conditions conducive to the maintenance of peace and stability in the area".[1]

The Arab world, from the frontiers of Turkey and Iran to the Atlantic Ocean, contains many countries, all of which have to a greater or lesser degree been affected by the recent hostilities in Palestine.

But the national economies and standards of living of the Arab lands in Africa, from Egypt through Libya to Morocco, differ considerably, and none is inseparably linked to the Middle East.

The countries of the Arabian peninsula, Saudi Arabia, Kuwait, Oman, the Hadhramaut, Aden and Yemen, have a common practice of life, more closely related to standards of earlier days than those of other Arab-speaking lands. There may be room in those countries for economic development and social reform, but it cannot be said either that their national economies have close economic ties to their neighbours or that they have been much affected by the recent hostilities.

There remains a group of countries around Palestine—Lebanon, Syria, Iraq and Jordan—all of which have been deeply disturbed by the fighting in Palestine. The standards within these countries may differ somewhat the one from the other, but their economic inter-relation is clear and determined by geography, culture and aspirations. Israel, now a Member of the United Nations, is a new State occupying a major portion of Palestine, a new force in an Arab world, aiming at a wholly different economic structure.

These countries[2] comprise nearly 750,000 square kilometres and are inhabited by about 12 million people, of whom some 7.5 million, or nearly 70 per cent, are supposed to gain a livelihood by agriculture, omitting many others who minister to the essential needs of an agricultural community or live by marketing its produce. Yet, when the area is regarded as a whole, the total produce of the land only offers a bare maintenance of life to many. The social and economic structure is generally characterized by a high degree of concentration in the ownership of land, widespread illiteracy, a striking gap between the standard of life for rich and poor and the small size of a middle income group which, in Western societies, usually furnishes professional and technical skill and initiative, enterprise and civic leadership.

All are principally agricultural countries, traversed by rivers, large and small, whose waters are the peoples' life-blood. Yet vast areas of all but Lebanon are desert. Cultivation barely suffices to grow food enough to keep life in the people. Petroleum, found only near the eastern borders of Iraq and exported through hundreds of miles of pipelines to the Mediterranean coast, phosphates in Jordan and potash in the Dead Sea are the principal known sources of mineral wealth. Of these, oil alone is presently significant; but the production and export of oil can give work to but a handful. As a source of energy and an export to gain hard currencies, oil is the outstanding economic link between the West and the Middle East.

Basically the area is, and for a long time to come will remain, agricultural. The first requirement for the area is to equip itself to feed its own peoples and to provide exports to other lands, by these means paying for imports of those manufactured goods necessary to modernize agriculture and raising the very low standard of life to which the mass of the people are now forced down by existing conditions.

There are some small manufacturing industries; more are needed. A modernized agriculture would allow for industrial crops as well as foodstuffs. The soil and climate are well suited to this in many places where now, from sheer necessity, coarse grains alone are grown; but to talk or plan now of the industrialization of any of the five

[1] The terms of reference appear in full attached to the interim report incorporated herein as appendix I, A.

[2] Appendix II attached gives a brief financial survey of the five countries in the area covered by the Economic Survey Mission.

countries in terms appropriate to the great industrial centres of the world would be to fly in the face of nature and common sense. Technical investigation, greater skill and experience based on research, the development of better water supplies and the creation of electric energy are among the most important requirements for future industry as well as for agriculture.

The achievement of a more efficient agriculture, and the industrialization which can be built upon that base, cannot be realized immediately. But at one time in man's history the Middle East led the world in what was then the modern way. The deserts themselves offer the evidence, displaying the ruins of once great cities and abundant relics of an ancient civilization. No sudden cataclysm of nature, nor a gradual alteration of climate is responsible for the change. The cause of decline is betrayed by the traces of the past.

In Syria, in Jordan, in Iraq and in southern Palestine can still be seen ruins of one-time waterworks: great cisterns dug out of the rock below the earth to treasure the spring rains; stone headworks and channels to preserve the natural springs and dole their water out on to the land; irrigation canals of mud and brick, once filled from the perennial rivers by primitive but effective waterwheels.

Old-time wars destroyed these things. The land has dried up and the people have gone. Cisterns are silted up, springs filled in and fouled, irrigation works broken down. Yet the land remains, the rain still falls, the rivers flow. If the water be once more saved and spread upon the land, crops will grow again. Men, now unemployed for lack of soil to till, living on the verge of starvation, gathering elsewhere one precarious catchcrop of poor cereals a year, could once more find a modest acreage which, if irrigated and properly cultivated, would redeem them from penury and give them a chance to achieve that measure of prosperity which makes for stability and peace.

This report suggests that all this can be done, but all cannot be done at once. A good living for the present population will not be achieved easily or quickly. The important first step is to begin—to break with the habit of inertia. The principle must be to start with reality, with things as they are; then, with the help of modern science and technical skill, to help the peoples of the Middle East to help themselves in rebuilding what they have lost and forgotten for a time but can still regain.

The land and water of the Middle East, properly developed and used, can support greatly increased populations and at a higher standard of living than now prevails. This may come to pass if the rain-fed areas of Syria and the vast plains of Iraq forming the valleys of the Euphrates and Tigris come into their own, and if Lebanon makes use of its beautiful and powerful Litani River. But Palestine—Israel and Arab Palestine—and Jordan cannot individually, or through combination of their physical resources, achieve or long maintain western material standards without economic ties in the adjacent geographic areas, or unless someone else makes up for the natural deficiencies inherent in those lands.

Because the present standard of living is very low, the natural resources available in Jordan, with Arab Palestine, can, if properly developed, help to raise the standard of living for its increasing population. But Israel, with its higher standard of living, faces a different situation: even if Israel did include the whole of Palestine, the land and water resources thus available, however ingeniously arranged and exploited, could not offer hope of supporting the present standard of living for the existing population, much less a greater one. Indeed, with the high capital costs of development entailed for Israel, in keeping with its higher standard of living, this additional land area carrying with it the necessity of development would more probably make Israel's present economic plight more difficult.

In the future, as in the past, land and water and what is done with them, and the interchange of goods and services among neighbours, will determine the life and living of the Middle East.

There are many obstacles to be overcome in the forward drive for a better standard of living in the Middle Eastern countries. These are discussed below.

CHAPTER II

PRESENT OBSTACLES TO ECONOMIC DEVELOPMENT

Much has been written about the possibility of reorganizing the land and water resources of the Middle East. At the beginning of its task the Economic Survey Mission cherished a hope—a faint hope to be sure—that several large development projects, devised on the basis of the numerous surveys and reports already made by government missions, private engineers and other experts, could be recommended for immediate exploitation by large capital outlays. The Mission's hope has not been realized. The region is not ready, the projects are not ready, the people and Governments are not ready, for large-scale development of the region's basic river systems or major undeveloped land areas. To press forward on such a course is to pursue folly and frustration and thereby delay sound economic growth.

Appendix IV lists various development projects which the Mission is informed have received consideration from the Governments of the Middle Eastern countries concerned. The list is long but not exhaustive.

Most of these schemes are the outcome of valuable work done by persons and firms of high repute, at the request and expense of the Middle Eastern Governments concerned. Many of them aim at making new land available for agriculture through irrigation. Some combine with this the production of electricity by water power. Others, equally important, are concerned with the development of the country's communications by road, rail, sea and air.

Work has actually begun on but few of these projects. The reason usually given is the lack of available capital. There is truth in this.

Low *per caput* national income in Middle Eastern countries is accompanied by low levels of savings, and these savings cannot in existing circumstances be mobilized for economic development.

Except in Israel, the wealth of these countries, from which Governments derive little revenue, is concentrated in the hands of relatively few individuals who show, at the moment, little disposition to lend their money for long-range economic projects yielding a relatively small return. So long as interest can be obtained on private loans ranging as high as 30 per cent, the lower rate of return to be anticipated from public development investments will not be attractive. Another deterrent to resident private investors is their apparent unwillingness to regard their Governments as stable and prudent custodians of public enterprise.

Taxation yields also are low, but no great increase in revenue from indirect taxation can be obtained without pressing unbearably upon the great mass of the poorer sections of the population. Indeed, any considerable increase in revenue in these countries requires reform in taxation which will shift a larger share of the obligation upon the wealthier groups. Such reforms, however, will not come soon, though it is encouraging to note that Egypt has just passed legislation to impose a tax on incomes.

Nor is there much prospect of substantial foreign credits on a business basis, public or private. The Governments of each of the countries studied by the Mission suggested many useful economic projects, believed by the Governments concerned to offer opportunity for foreign investment. Cement mills, phosphate production, vegetable oil refineries, soap and leather factories, are typical. Some of these industrial ventures would improve the foreign exchange position of the countries concerned—a factor prerequisite to obtaining foreign credits; but the prospective contribution of such small ventures as may prove attractive to foreign investors is small indeed in relation to the basic development requirements of the area.

This is well illustrated in the case of Israel, where a certain degree of industrial development has helped somewhat to reduce exchange requirements. But there seems little possibility of further extensive industrial development that would pay for itself by major import savings or improvements in exchange earnings. Moreover, commercial as distinct from sentimental investment in Israel is further discouraged by the existing high cost of labour in Israel in terms of dollars and sterling.

However, lack of capital is not the only, nor is it the most immediate, difficulty. Were unlimited funds available, no beginning could at present be made upon some of the most promising development schemes for various reasons.

Rivers show little regard for man-made boundaries. Thus the development of water resources frequently involves prior international agreement. The widely publicized plan for the development of the Jordan River system is, for the Middle East, a tragic illustration of the inseparability of political and engineering planning of a major water resource. The waters of the Jordan run partly through territory occupied by Israel and partly through the Hashemite Kingdom of Jordan. The Yarmuk River, the Jordan's most important tributary, is partly in Jordan territory and partly in Syria.

The Mission's engineering staff analysed the Hayes engineering plan[1] for the development of the Jordan River system and found that, at most, 15 per cent of the work contemplated could go forward without taking water from neighbouring countries. Diversion of a portion of the Yarmuk River as contemplated would require an agreement between Israel, Jordan and possibly Syria. Likewise the use of the Hasbani's waters would require an agreement with Lebanon. Use of the Jordan River proper would involve Arab Palestine and Jordan. In the absence of a peace settlement between Israel and adjoining countries on outstanding issues involving repatriation and compensation of Arab refugees and territorial boundaries, it is unrealistic to suppose that agreement on the complex question of international water rights could be negotiated among the parties. Moreover, an engineering plan has yet to be devised for the Jordan River and its tributaries which treats the system as a whole without prejudging specific political interests. Until that is done the countries concerned will not be aware of the possible alternative costs, losses or benefits any particular scheme for development might involve.

Whatever promise the full development of the Jordan River system may hold for better living and economic productivity in the Middle East, this must await a mutual desire to create and share benefits from a better use of waters now denied to all parties. Engineering, technical and financial assistance in this problem must assume peace and co-operation before men and money can be applied to the development of the Jordan River system as a whole.

In the case of those river development projects upon which prior international agreement is unnecessary, few of them have reached a stage at which construction could begin.

For example, the Litani River, lying wholly within Lebanon, presents an attractive source of great potential value for irrigation and hydroelectricity for Lebanon's dense population. Engineers have prepared general studies of the Litani many times, and its full development offers promising prospects for the benefit of Lebanon. But an intensive survey of the whole Litani watershed, viewing the river and its hinterland as a unit, has not been made.

The Litani is one of Lebanon's most precious assets. Piecemeal development of the river would be wasteful and unwise. The engineering plans to support credits or loans for construction have not been made, or begun. Geologic investigations to test feasible dam sites, calculations based on stream flow records, reservoir areas, and alternative hydro capacity assumptions need to be checked by competent engineers who know from experience what a river can be made to do. These investigations take time and cost money—substantial sums in relation to the present revenues and budgets of the Middle Eastern countries. Thus, for want of the precise engineering studies beyond the stage of reconnaissance surveys and generalized analyses, a potential asset remains relatively idle.

Important but piecemeal technical studies covering several rivers have already been competently carried out by private firms of consultants, both English and French. In order to save time and money, these valuable studies will have to be utilized. But in many cases they are relatively out of date and must be revised and modernized by the use of the most recent methods of investigation and operation. In any case, previous surveys to be brought up to date and any new ones still to be carried out will need preliminary technical investigation on a wide scale before they can be used to support a well-founded application for loans and credits. These preliminary investigations will require the services of technical experts of high competence, as well as experts in economics and social science.

A complete investigation of this type requires not only cartographers, geologists, engineers, but also the help of agricultural and economic advisers. The whole enquiry must be subject to decision by the Government of the country wherein the

[1]For a detailed analysis of the Hayes proposals, see the Economic Survey Mission's final report, part II, technical supplement, section B, Engineering Report on the Middle East. Bound separately.

project lies, which, with the advice of any experts it may have or procure, must gauge who will benefit from the project; who will own the new land brought under cultivation; what crops can most usefully be grown thereon, taking due account of home demand and export. The Government must also study and decide what measures it will have to take to spread profits equitably; what new taxes or charges it may justly impose upon those who benefit from the completed work; how any loan obtained to finance the project can be funded or repaid; what laws and regulations must be passed to reap the greatest benefit for the nation.

Research is also needed to discover what types of profit-making crops can best be grown upon the soil under the new conditions to be created by a particular development. Forest trees, fruit trees, industrial crops and foodstuffs must be examined in their turn. Men must be interested and trained in the cultivation of the selected crops.

If a project is planned to supply electricity, in addition to providing water for irrigation, thought must be given to the uses and sale of power; how it can best be distributed to the country's industrial, agricultural and social benefit.

If new land becomes available for cultivation, roads and transport will be needed to open up the area to trade and commerce.

Many other aspects of the economic life of the country in which the project is located will come under review.

For such widespread plans, made so that the future prosperity of a great undertaking of this kind can be reasonably assured, it is essential for the responsible Government to be assisted by the best advice procurable. If, as in Middle Eastern countries, there are yet but few sufficiently skilled men among the inhabitants of those countries competent to give this advice, skilled technical help must be hired.

The latent skill of Middle Eastern peoples could be realized, in time, by sending picked men and women to universities and technical colleges in more advanced countries. The cost in money would be small, but the time lag greater than the urgency of the problem allows. The unemployed of the Arab States in the Middle East, whether born therein or immigrants, unemployed because there is no land for them to cultivate, cannot wait for years before a serious attempt is made to solve their problems. The young people of the Middle East must indeed be given the opportunity to become skilled technicians of all kinds, both by education abroad and by the expansion of opportunity at home. Meanwhile, a way must be found to start at once developments in the Middle East which will offer work to all who have none and, by that natural means, lay the foundation of stability and peace.

The United Nations Economic Survey Mission for the Middle East is fully aware of the many obstacles to the economic development of the region. But there are important things that can be started now. The way these beginnings are made, the methods used and the procedures by which outside assistance and internal execution are assured, will have important effects upon the later course of large development.

The Economic Survey Mission believes that it can suggest an approach to these problems—an approach that contains promise. The proposals which follow—a series of "pilot demonstration" projects—may not seem ambitious; in the judgment of the Mission they fit the realities of the present situation.

The financial aid needed for this approach is relatively small; enough to prime the pump and to set going normal operations of gainful effort, preceded by careful planning in small but significant areas where water, land and people can be joined in a productive demonstration of self-help with friendly technical assistance at their elbow. These small beginnings can start the process of building up the natural resources of the countries. Men and Governments learn by doing, by experience. These projects will provide that practical experience for the bigger tasks necessary for larger river schemes which will demand the highest modern skill in planning and execution, if waste and loss are to be avoided through piecemeal development.

The pilot projects described in the following chapter have this further advantage: they are feasible—now.

CHAPTER III

PILOT DEMONSTRATION PROJECTS

From the projects included in the plans of the individual countries considered by the experts of the Mission, four have been selected as "pilot demonstration" projects, one each in Jordan, Arab Palestine, Lebanon and Syria. The Economic Survey Mission has chosen these by appraising their characteristics in the light of the following criteria:

(i) They are high on the list of projects which the Government of the country concerned would like to undertake;

(ii) They are of a size and cost which is either limited by the very nature of the project itself or which can be limited without doing violence to possible future expansion of the project;

(iii) They are capable of completion within a few years and will exemplify in a practical manner, and in a relatively short time, the steps required to turn ideas into action;

(iv) They are varied in their nature and require in handling some interesting differences in technique;

(v) They will demonstrate technical team-work on a small but important scale;

(vi) They will give the Governments of the countries concerned experience in planning and execution;

(vii) They will employ labour and lead to the permanent employment of other labour when completed, through the settlement in newly opened areas of families engaging in agricultural pursuits;

(viii) They can be included among, or become the logical extensions of, the short-term programmes of relief works recommended by the Economic Survey Mission in its interim report;

(ix) They can lay the basis for more important and larger development schemes.

The Economic Survey Mission also considers that these selected pilot projects, in addition to contributing towards the development of the countries in which they are located, would be specially educative in nature and give experience in over-all planning to the Governments, officials and technicians of Middle Eastern countries.

With the co-operation of the Governments concerned, these pilot projects can serve to instruct not only Middle Eastern Governments and their officials engaged on the work, but others whom the Governments might select to observe and learn, and so build up a skilled cadre of technicians among their own peoples.

Though no essential feature of the scheme, it would certainly help future development in the Middle East were Governments of countries, wherein pilot projects are carried out, to allow officials, technical men and students from other Middle Eastern countries to visit the works, to observe and learn from the technique employed.

After due consideration, the Economic Survey Mission has not felt itself able to recommend the initiation of a "pilot demonstration" project in Egypt. The knowledge and skill available in that country are already on a high level. Moreover, no development scheme possessing the special characteristics set out above is in view. Egypt indeed has a problem of unemployment among its agricultural population at least as great as that of any Middle Eastern country; but Egypt is, in fair measure, able to tackle this problem for herself, and already has plans to do so.

Nor does the Economic Survey Mission recommend a "pilot demonstration" project in Israel-held territory. The reasons which have led the Mission to this decision are very similar to those relating to Egypt.

Israel already has available technical men of all kinds and of the highest skill, knowledge and experience in modern scientific methods. Moreover, the Israeli Government has already begun, on its own initiative, with the relatively large funds placed at its disposal from abroad, to develop irrigation and to employ modern agricultural methods in an endeavour to find employment for the continuing stream of immigrants. In addition, Israel possesses, in the Weizmann Institute and other research stations and laboratories, a means of enquiry, education and progress which is not only superior to anything available in the neighbouring Arab States, but may compare favourably with similar institutions throughout the world.

Iraq, with a standard of life and economic problems corresponding to those of other Arab countries in the Middle East, undoubtedly forms part

of that area with which this report is concerned. However, the Economic Survey Mission is informed that, on the initiative of its own Government, Iraq is in negotiation with the International Bank for a loan wherewith to finance the completion of two schemes for flood control on the Euphrates and Tigris respectively. One of these two projects—that connected with the Euphrates and known as the Habbaniyeh project—is already under way. Lack of funds prevents its completion. Work on the Wadi Tharthar to control the Tigris floods has not begun. Until the outcome of negotiations between the Iraqi Government and the International Bank is known, the Economic Survey Mission feels unable to recommend the construction of a "pilot demonstration" project in Iraq.

Should the Governments of Egypt, Iraq or Israel request the help or advice of the international community or friendly Member Governments in the prosecution of their plans, there is every reason to believe that technical assistance could be made available.

A brief description of suggested pilot demonstration projects follows. A more complete discussion of each project, together with preliminary estimates, is contained in appendix V.

Jordan

The Wadi Zerqa Project

The Jordan Valley is by far the greatest land asset in the Hashemite Kingdom of Jordan for development under irrigation farming. At present only a small proportion of the land there is intensively cropped or irrigated.

For some years the Hashemite Kingdom of Jordan has considered the possibility of developing the Eastern Jordan Valley by use of the combined waters of the Jordan and Yarmuk Rivers and the several wadis which lie wholly within Jordan. Surveys to determine these possibilities have already been carried out, but lack of funds and the need for agreement on the share of water which will fall to Jordan will almost certainly defer extensive development of the Jordan River as a complete system.

There are no such difficulties, however, with the waters of the wadis rising in Jordan. They belong to Jordan alone. Should the major irrigation scheme from the Jordan and Yarmuk Rivers prove to be feasible later, work done previously on the wadis will not be wasted. The waters of the wadis on both sides of the Jordan River will still be required to the maximum extent to which they can be developed. Full development of the wadis demands storage of the winter floods, much of which now pour unchecked and wasted, laden with silt, into the Jordan River.

The basin of the Wadi Zerqa is the largest of those drained by the Jordan wadis. Small areas on the Zerqa valley floor and in the Jordan Valley are at present irrigated, but the amount of land under irrigation is limited by the minimum flow of the stream which can be counted upon in the dry season of the year. The rest of the water is now wasted.

It is proposed that this watershed area be developed completely and as a unit. Roads would be constructed to make the area easily accessible; a dam of rock and earth, about 35 metres high, would be built across the wadi to control the floods in the rainy season and to save some of the surplus water for release in the summer, thereby doubling the land to be irrigated; small check dams on principal gullies in the upper watershed would be built to reduce silting; forest trees would be planted in the rim above the reservoir; terraces on the hillsides and fruit trees would be established where this proves to be feasible. Construction of a central village would be included as part of the development in order to provide adequate housing facilities for construction workers and, in the future, to satisfy, in part, the permanent housing requirements of the area.

Where the wadi enters the Jordan plain an additional "headworks" would be built to lead the water into the irrigation canals which would allocate the water to the various users on the land.

With more water available, changes in the present cereal agriculture of the Jordan Valley would be possible, thereby providing an unusual opportunity to test and demonstrate a fundamental reform in the use of land and water in the area.

Because the Jordan Valley lies some hundreds of feet below sea level, its crops ripen for the market earlier in the season than in the plateaux above the valley, and thus would command premium prices. A change from cereals production to intensive cultivation of more profitable crops, such as sugarcane and cotton, with accompanying industrial possibilities, or vegetables, fruits, and possibly forage crops if dairying should prove profitable, would comprise a new and more profitable system of agriculture and be a great boon to Jordan and the whole area.

Research and experiment carried on concurrently with the physical developments will show the way to these important results and will constitute an outstanding part of the whole demonstration.

Thus the Wadi Zerqa project can be of great importance to the future of Jordan and, by dem-

onstration and imitation, to the whole area. Irrigation, flood control, engineering and construction, crop experiments in new systems of agriculture, including afforestation and the several aspects of soil and water conservation and land use, combined in one project, would provide an unusual opportunity for a new experience for the people; and a chance for the Government of Jordan to gain knowledge and confidence in the future development of the country's idle resources.

Arab Palestine

The Wadi Qilt Project

In the hills north-east of Jerusalem a deep, narrow gorge reaches into the Jordan Plain near Jericho. This is the Wadi Qilt in the central part of Arab Palestine. As in the Wadi Zerqa, the surplus water runs in wasted flood in the rainy season and land otherwise useful is denied sufficient water for the rest of the year. Here again, construction of a dam will permit efficient use of the water, and this in turn will increase the usefulness of land now idle.

This development, like the Wadi Zerqa demonstration, can start as a works project, employ refugees and give them an opportunity to settle on the State-owned lands their work enriches. But the Wadi Qilt has important value as a demonstration project for other reasons. Some of the experience gained by the research required to meet the agricultural problems of the Wadi Zerqa can be applied to the planning of the Wadi Qilt and *vice versa*, thus demonstrating how forethought and careful planning can save expense in overheads, make one pound serve to do the work of two; while the results achieved in a relatively short time, patent for all to see and appraise, will stimulate similar action on the other wadis—not a few in the Jordan Valley, both east and west of the river—and so bring work and prosperity within the grasp of many.

Lebanon

The Litani River Investigation Project

In many respects the Litani River is the key to the economic future of Lebanon. It has great possibilities as a source of low-cost electric power useful to urban and rural life, to pump water for irrigation, to process and conserve the seasonal surplus of fruits and vegetables and to encourage the growth of industry. The Lebanon mountains give to this important river an annual average rainfall of some 27 inches—an advantage enjoyed by few areas in this part of the world.

The mountain valley, through which the Litani flows as it leaves the fertile Beqaa Plain in central Lebanon, drops the river more than 2,500 feet to the sea in the short distance of some eighty miles. To an engineer this means power—power from falling water—captured by dams to regulate and stabilize the flow of the river, to release it through turbines on its way to the sea. The engineering experts of the Mission estimate that a series of storage dams on the Litani could develop as much as 200,000 kilowatts of power, capable of producing 750 million kilowatt hours of electricity each year. In addition, these storage dams would increase the water supply for irrigation far above even the maximum needs of the irrigable land along the coast from Tyr to Sidon.

But before any dams are built on the Litani a complete investigation of the whole river and its drainage area should be made. The Litani is too precious an asset to be developed in piecemeal, unplanned fashion. Its full development will require a relatively large capital expenditure. If properly studied and planned the Litani can be developed step by step and thus set the pace for an intensive economic growth of Lebanon, accompanied by substantial financial and social benefits.

It is proposed that the task of making a complete study and technical investigation of this river and its watershed be undertaken as a pilot demonstration project. A more complete description of the scope of the proposed field investigation is presented in appendix V.

The Middle East needs a first-hand demonstration of how to plan a river's development and use as a whole. The experience of the Middle East countries has for the most part been limited thus far to general descriptive surveys, inadequate to determine the economic or engineering feasibility of river developments, or else to investigations of a part of a river seeking a fair site for a single project unrelated to any others that might later be built. Countries learning to think about the development of their rivers need to understand and experience the necessity of combining adequate preliminary engineering, geologic, economic, agricultural and financial studies and investigations as a part of the process of wise planning.

Here is an opportunity to demonstrate the value of technical assistance, the need for competent engineers and experts. Here is an opportunity to teach the process of making plans for immediate action and proceeding step by step toward actual development.

The prosecution of this investigation and study would provide an opportunity for training and experience for local engineers and technicians,

under the guidance of experienced experts from outside.

A demonstration of the modern way to plan a river system will furnish a valuable example to other Middle Eastern countries as they become practically interested in the development of their rivers.

The completed investigations would make it possible for Lebanon to decide how to proceed—where to build dams, how to finance them and how to realize the great benefits latent in its priceless asset—the Litani River.

Syria

The Ghab Valley Project

In prehistoric time a volcanic flow filled up the channel of the Orontes River below Karkour and formed a great lake in north-west Syria, near what is now the Turkish border. Then, with the passing of time, silt from the Orontes and from the adjacent mountains filled the lake, forcing the river to drive a new channel to the Mediterranean. The new course of the river carried the waters slowly through great, flat, fertile plains, which eventually became a swamp. This is the Ghab Valley.

Through the years a number of comprehensive studies have been made of this area by French engineers and others. Each plan has proposed a scheme for drainage, a dam for flood control and canals for irrigation. The flood control dam might also produce electric power. The fertile plain would thus be restored for use and habitation, and a rain-fed area and its river would be added to the productive economy of Syria and the Middle East.

The construction of roads to connect the new land with the populous cities nearby, and the creation of a central village would also be included as part of the development.

This pilot demonstration project would thus consist of a complete engineering-agricultural and economic plan for the development of the valley as a whole. The problems of drainage, highways, housing, malaria control, public health, village organization, flood control, irrigation, hydro-electric power and agriculture would combine in a single project a veritable small-scale model of the problem of Syria as a whole. This pilot project would provide a rare opportunity to devise practical plans and test them in actual experience.

Through such a unified development programme the potentially fertile Ghab Valley would be transformed from an unproductive swampy area into one of the most productive areas in Syria. Perhaps the much planned and discussed development of the more remote areas of the Khabur River and the savannahs of the Jezira would appear more feasible than at present, if experience could be gained first in the development of the Ghab. These are the most important unsettled areas of the great spaces of Syria—future, profitable living space for Syria's people.

* * *

These, then, are the pilot demonstration projects which, in the opinion of the Economic Survey Mission, could begin the long and complex process of basic resource development in the countries of Lebanon, Jordan and Arab Palestine and Syria. These projects could command the interest of local people, once the work was started. The meaning of "potential resources" would be demonstrated by the work of their own hands. The experience and pride which come from successful execution of work could stimulate enthusiasm for next steps, other projects.

Pilot projects, skilfully spot-lighted by the national Government, could be the beginning of the dynamic process which brings hundreds and finally thousands of small reforms and changes of benefit to peoples and their Governments. The cumulative educational effect of the many small facets in a single unified development project would influence social, economic and administrative practices in neighbouring lands. Local educators and teachers, observing and studying the demonstration, could relate the occupational requirements of the work to the educational programmes of their schools. They could play a part in exploiting the training possibilities inherent in the construction of the dams, the reclamation and development of new land.

The experience of other countries has shown that the power of example and demonstration as an aid to progress cannot be denied. If properly carried out and interpreted, these demonstrations can help to build democratic opportunity for emulation and initiative reaching into villages and countrysides and into municipal and national Governments.

These projects, to be most useful, must command major leadership and participation by the national Governments of the countries carrying them on. Unity in planning and executing the development project itself will require some instrument for uniting administrative and technical resources within the Government.

These observations suggest that the first essential for carrying into practice the idea of "pilot

projects", once the Governments concerned accepted the suggestion in principle, would be for each Middle Eastern Government in whose country a project was to be undertaken to set up its own national "development board". This board, appointed by and serving the Government which sets it up, would have a permanent character, relatively independent of political changes, though naturally accepting and obeying the instructions of the Government of the day. Through this organization that essential continuity of purpose, without which the enterprise can hardly succeed, should be largely ensured.

It is not intended that development boards would consist entirely of officials and technical men. For example, certain Ministers might be *ex-officio* members of the board, such as the Minister of Finance, the Minister of Public Works (or whichever Minister is charged with corresponding duties), the Minister of Agriculture, and the Minister for Foreign Affairs.

These development boards would not only serve to ensure continuity, but also to focus liaison and negotiation between the Government of the country, on the one hand, and, on the other, any external body, advisory or executive, international or otherwise, through which technical or financial assistance might be made available or requested.

It might well be desirable to provide for the co-option on to the Board—as a temporary measure and from time to time—of other authorities. For example, at certain stages the Ministers responsible for National Health, Education and Social Welfare, who would certainly have to be consulted, might usefully be represented. Nevertheless, it would be advisable to adhere to the principle that an unwieldy committee tends rather to slow down progress than speed up action. The object to be attained would be thoroughness and competence in technical planning and speed in decision and administration, combined with an assurance that the best interests of the nation, as seen by the Government, were being duly served.

The national development boards envisaged above would be appropriate bodies to co-ordinate all plans and action relating to the development of a country's resources, in accordance with the terms of reference given to it by the government of that country. It is therefore assumed that a development board would concern itself, not only with development by cultivation of the land through irrigation works and the application of other forms of modern engineering and agricultural science, but also with the development of housing, of communications by road and rail, and, yet further, with the development of industry where need and opportunity were found to exist. It might also usefully handle certain questions relating to public health, education and social services.

It therefore seems inevitable, and is certainly desirable, that a national development board should be set up as soon as possible in each Arab State temporarily harbouring refugees from Palestine where a programme of relief works giving temporary employment to those refugees is to be started.

But, since funds for financing relief works will come largely from the United Nations, through the Relief and Works Agency for Palestine Refugees, established by a resolution of the General Assembly, it follows that the development boards should be the agents of Government for contact and negotiation with that body.

This last-named agency, being the United Nations trustee for the expenditure of United Nations funds, whether on direct relief for Palestine refugees or for relief works, will be bound to act on the basis of an agreement drawn up between itself and each Middle Eastern Government concerned. These agreements, while similar in principle, may differ in detail according to circumstance.

The negotiation of such agreements with the United Nations Relief and Works Agency for Palestine Refugees would be among the first tasks of a national development board.

Similarly, the choice and prosecution of a pilot demonstration project, its detailed planning and definition, provision for its execution, the co-ordination of the various types of technical assistance required and used on the project would be determined under the auspices of the development board.

Assurance that pilot demonstration projects provide training and experience for the younger technical personnel locally available, leadership in relating educational systems to the training of additional people, interpretation of the purpose, progress and results of the projects to the national leaders and the public—all are necessary functions appropriate to the national development board sponsoring the project within its country.

Some of the Governments of the Middle Eastern countries, recognizing the importance and need thereof, have already established or are in process of establishing a development board. They will thus be in a better position to proceed quickly with their part of the work relief programme for Palestine refugees.

Moreover, it is probable that those Governments that have set up a development board will find greater and more effective opportunities to draw upon technical assistance from the United Nations, the United Nations specialized agencies and individual Member Governments ready to provide technical and financial assistance when specifically requested.

A further task of the highest importance devolving upon the national development boards would be the institution and prosecution of research—in agriculture, engineering and any activity contributing to the more profitable development of the countries' national resources. Research is a continuous process, which can only be carried out through research establishments and by experiment involving the employment of trained scientists and technicians and the use of apparatus and material which at present can only be made available to Arab States from abroad.

While not demanding an outlay comparable to that required for the actual construction of a great development project, research costs money for land, buildings, scientific apparatus, experiments and the highly paid services of highly skilled men. The conduct of research is a matter for but a few people. Research will not of itself employ refugees from Palestine, however much it may contribute indirectly to their eventual successful rehabilitation. Therefore but little of the cost of research, if any, can legitimately be charged against United Nations funds earmarked for the direct relief of Palestine refugees, or even for works projects designed to give those refugees employment.

Part of the essential expenditure should properly fall upon the governments for whose benefit and under whose jurisdiction research is carried on. Certain of the Governments should be able to find some money for this purpose from their own internal resources. The cost of providing land and buildings, and the wages of unskilled or semi-skilled labour should be borne, save in exceptional circumstances, by the Government. On the other hand, the cost of apparatus, scientific instruments and other similar needs, together with the salaries of foreign experts, may be beyond the immediate means of certain interested Governments to provide, in view of the many other claims upon the exiguous funds at their disposal.

Yet the need for modern research on Middle Eastern technical problems is urgent. This has long been recognized by all Governments concerned. It is the more urgent if the best value is to be obtained, even from things as they are or from schemes proposed as work relief projects for Palestine refugees; still more so if pilot demonstration projects are to be undertaken, as recommended by the Economic Survey Mission in this report, or if Governments find other means for themselves of beginning work on different projects for the development of their own countries.

The urgency of this problem has persuaded the Economic Survey Mission that special funds for research should be made available at once from external sources. The United Nations disposes, at present, of no fund expendable for this purpose. The Mission therefore appeals to the Governments of the countries, Members of the United Nations, charged by the General Assembly in its resolution of 8 December 1949 with appointing their representatives to constitute and serve upon the Advisory Commission of the Relief and Works Agency for Palestine Refugees, jointly to make available to the Advisory Commission a sum not exceeding 10 million dollars in all, this fund to remain available until expended by the Advisory Commission for the promotion of research activity in those Middle Eastern countries where, in the opinion of the Advisory Commission, it is most needed. This capital fund would be made available as grants, reimbursable or otherwise, as might be determined by the Advisory Commission, upon application made by a Middle Eastern Government and upon terms to be negotiated between the Advisory Commission and the Government concerned.

In addition to serving as an aid to the founding of research establishments and experimental work, this fund could also be drawn upon to assist in the completion of pilot demonstration projects where and when United Nation funds were not available for that purpose.

By this means the Economic Survey Mission seeks to provide against the collapse of a pilot demonstration project through lack of funds to carry it to its planned conclusion, and to stimulate the spirit of enquiry and research in those Middle Eastern countries whose hopes are set on this essential need but which have hitherto lacked the means to achieve their just and purposeful desires.

CHAPTER IV

CONCLUSIONS AND PROPOSALS

The approach to economic development in the Middle East proposed by the Economic Survey Mission thus includes the following elements:

1. *Recognition* by the Governments of Middle Eastern countries, by the United Nations and by the Member Governments which desire to proffer friendly assistance to the Middle East:

(i) That peace and stability cannot be achieved in the Middle East until the masses of its peoples are able to enjoy a higher standard of living than at present;

(ii) That the path to a higher standard of living for the population of the Middle East is a long one;

(iii) That, through the efforts of Middle Eastern peoples and Governments themselves, a higher standard of living can only be achieved through the development of the natural resources of Middle Eastern countries which, to begin with, should be reflected in an improved and modernized agriculture, without which substantial industrial opportunity is denied them;

(iv) That the obstacles to economic development leave few opportunities, if any, for the immediate prosecution of large-scale schemes or the fruitful application of large long-term credits for productive, self-liquidating developments;

(v) That the proposed public works programme to provide temporary employment for Palestine refugees, as recommended in the Economic Survey Mission's Interim Report (adopted and approved by the General Assembly of the United Nations, by resolution 302(IV) dated 8 December 1949), by mobilizing a great body of man-power, now idle, will improve the productivity of the countries where the refugees now reside and can be the start of larger developments;

(vi) That several of the Governments of the countries most directly affected by the recent hostilities between Arabs and Israelis need an opportunity to learn, by doing, the art and skill of planning, organizing and carrying out a development project, conceived on a small enough scale to be within the competence of those Governments, important enough to affect the country's economy favourably, and comprising a sufficient variety of problems and technical requirements to afford overall training in a broad field, while being simple enough to assure success;

(vii) That the process by which the greater resources of the international community and the individual aid of friendly Governments are made available to the Middle Eastern countries must respect the sovereignty while strengthening the competence and independence of the country receiving assistance.

2. *Prosecution* of the programme of work relief for refugees to be inaugurated by the United Nations Relief and Works Agency for Palestine Refugees (established by the resolution of the General Assembly dated 8 December 1949) in such a manner as to shift more and more responsibility for the execution of the programmes on to the shoulders of the individual Governments and to ensure that these programmes for temporary employment include those projects which can add to the productivity of national and regional economies and lay the basis for subsequent larger developments offering a permanent livelihood to more people in the years to come.

3. *Establishment* by each of the Middle Eastern Governments of a national Development Board, fully contained within the sovereign jurisdiction of its governmental administration, charged with responsibility for planning balanced, overall development, defining and recommending individual projects, and providing for their execution, with the help of such technical and financial assistance from the international community or friendly Governments as each Middle Eastern Government concerned may seek.

4. (*a*) *Prosecution* by the Government of Lebanon of a pilot demonstration project to achieve a complete survey, field investigation and technical report, preparatory to the ultimate development of the Litani River as a unit;

(*b*) *Encouragement and technical assistance* by the international community, or individual friendly Governments, to the Republic of Lebanon in the

definition and prosecution of the Litani investigation with an assurance that, should the Government of Lebanon find itself unable wholly to finance this investigation from internal resources, a request for external financial aid would receive careful and friendly consideration.

5. (*a*) *Prosecution* by the Hashemite Kingdom of Jordan of a pilot demonstration project on the watersheds and stream bed of the Wadi Zerqa, and a pilot demonstration project on the watershed and stream bed of the Wadi Qilt, which will achieve the full and unified development and use of the waters of these wadis flowing into the Jordan River from the east and west respectively; by building storage dams, to stabilize the downstream flow of the wadis and thereby increase the year-round water supply, reduce the damage of floods and add to the areas under irrigation and cultivation; by using the development of these wadis as an opportunity to employ Arab refugees and as an encouragement for them to establish themselves as permanent and productive residents on the lands they thus bring into use; and by using these pilot demonstration projects as a special opportunity to provide technical and administrative experience in the overall planning and actual execution of public works.

(*b*) *Financial and technical assistance* to the Jordan Government by the international community, through the funds to be made available by the Member Governments of the United Nations for the refugee works relief programme, in order to begin these projects; together with an assurance that later requests for credits or grants with which to complete these pilot projects will receive careful and sympathetic consideration by the United Nations or by individual friendly Governments, prior to the conclusion of the refugee works programme.

6. (*a*) *Prosecution* by the Syrian Government of a pilot demonstration project on the Orontes River in the Ghab Swamps, to reclaim, by drainage and other devices, potentially fertile lands now useless and uninhabitable, and to provide homes and other facilities needed for the people who will be required to populate and till the land thus reclaimed.

(*b*) *Encouragement and technical assistance* by the international community, or individual friendly Governments, to Syria in the planning and execution of this project by the Syrian Government, with an assurance that, should the Syrian Government find itself unable wholly to finance this development from internal resources, a request for external financial aid would receive careful and friendly consideration.

7. *Creation of a fund,* not to exceed $10 million, by the Governments which, by action of the General Assembly, are called upon to appoint their representatives to form the Advisory Commission of the United Nations Relief and Works Agency for Palestine Refugees; this fund to be available to the Advisory Commission, until expended, for allocation to Middle Eastern Governments as grants, reimbursable or otherwise as may be determined, for the purpose of facilitating research, technical studies and investigations in agriculture, engineering and other modern scientific aids to development, and assisting in the completion of pilot demonstration projects approved by the Advisory Commission, upon application made by the Middle Eastern Government concerned.

8. *Preparation* by the Governments of the Middle Eastern countries concerned, in consultation with the Advisory Commission of the United Nations Relief and Works Agency for Palestine Refugees and in connection with the functions of that body as laid down in paragraph 7 (*b*) of the resolution of the General Assembly of 8 December 1949, of plans and recommendations for the further development of the economic and natural resources of the Middle East, with particular reference to those involving economic arrangements between two or more of the countries concerned.

* * *

This approach to the economic development of the Middle East and the policies and actions set forth herein are recommended for the early and careful consideration of the United Nations and the Governments whose active implementation of this approach will bring the Middle East into a hopeful and significant era of economic, social and political advance.

Signed at Paris, France
on 18 December 1949

Gordon R. CLAPP
Chairman

H. Cemil GÖKÇEN
Deputy Chairman

Eirik LABONNE
Deputy Chairman

Desmond MORTON
Deputy Chairman

APPENDIX I

A. First Interim Report of the United Nations Economic Survey Mission for the Middle East

Letter from the Chairman of the United Nations Conciliation Commission for Palestine to the Secretary-General

New York, 16 November 1949

On behalf of the United Nations Conciliation Commission for Palestine, I have the honour to communicate to you, for transmission to the General Assembly, the first interim report of the United Nations Economic Survey Mission for the Middle East. The establishment of this Mission was described in paragraph C of the fourth progress report of the Conciliation Commission to the Secretary-General (A/AC.25/PR.4).[1]

The Conciliation Commission considers that this report constitutes a constructive approach to the Palestine refugee problem and believes that the General Assembly will wish to give urgent consideration to it. The Commission is of the opinion that the Assembly will wish to obtain additional information concerning certain of the findings and recommendations contained in the report. In this connexion, in the light of the arrangements made by the Secretary-General with the International Red Cross organizations and the American Friends Service Committee (A/1060), particular reference is made to the recommendation that the number of rations issued should be reduced by one-third as of 1 January 1950.

(*Signed*) Hussein C. YALCIN
Chairman, United Nations Conciliation Commission for Palestine

United Nations Economic Survey Mission for the Middle East

TABLE OF CONTENTS

Foreword

More than a year ago the United Nations embarked upon a programme of relief for the Palestine refugees. Acting upon the appeal of the late Count Bernadotte, the United Nations Mediator in the hostilities between Arabs and Israelis, and the report of his successor, Mr. Ralph Bunche, the General Assembly of the United Nations, through the Secretary-General, Mr. Trygve Lie, called upon the nations of the world to contribute funds to feed, clothe and provide temporary shelter for more than half a million homeless people. The appeal was answered and the funds obtained have averted added disaster in the Near East. But the funds so far subscribed will not last through the winter.

In the face of this emergency, the United Nations Economic Survey Mission, deputed by the Conciliation Commission for Palestine to examine economic conditions in the Near East and to make recommendations for action to meet the dislocation caused by the recent hostilities, has found it essential to concentrate first upon the refugees and to report without delay upon this distressing subject,

[1] Reproduced at Lake Success as A/992.

leaving for a subsequent report other matters of longer term.

Recognizing that the plight of the refugees is both a symptom and a cause of grave economic instability, the Mission recommends in this report that steps be taken to establish a programme of useful public works for the employment of able-bodied refugees as a first measure towards their rehabilitation; and that, meanwhile, relief, restricted to those in need, be continued throughout the coming year.

These recommendations are intended to abate the emergency by constructive action and to reduce the refugee problem to limits within which the Near Eastern Governments can reasonably be expected to assume any remaining responsibility.

These measures, together with those which the Mission, in a subsequent and final report, will suggest for the greater use by the peoples and Governments of the Near East of the still undeveloped riches of their own lands, will not alone bring peace. But if the Palestine refugees be left forgotten and desolate in their misery, peace will recede yet further from these distracted lands.

Signed at Beirut, Lebanon,
on 6 November 1949

Gordon R. CLAPP
Chairman
H. Cemil GÖKÇEN
Deputy Chairman
Eirik LABONNE
Deputy Chairman
Desmond MORTON
Deputy Chairman

The Problem

The Arab refugees—nearly three-quarters of a million men, women and children—are the symbol of the paramount political issue in the Near East. Their plight is the aftermath of an armed struggle between Arabs and Israelis, a struggle marked by a truce that was broken and an armistice from which a peace settlement has not emerged.

Before the hostilities in Palestine these families lived in that section of Palestine on the Israeli side of the present armistice lines. Abandoning their homes and villages, their fields and orange groves, their shops and benches, they fled to nearby Arab lands. Tens of thousands are in temporary camps; some are in caves; the majority have found shelter in Arab towns and villages, in mosques, churches, monasteries, schools and abandoned buildings. Some seventeen thousand Jewish refugees, too, fled from their homes in and around Jerusalem and territories on the Arab side of the armistice lines. They entered into Israel where most of them have now been absorbed.

The worsening plight of the refugees as an obstacle to peace in Palestine prompted the General Assembly of the United Nations, in November 1948, to appeal to the nations of the world for funds to provide food, clothing and shelter for the refugees.[1] This emergency relief programme was established with great despatch. Governments contributed in the hope that conciliation would produce peace and lay the basis for a permanent solution for the refugees.

On 11 December 1948 the General Assembly adopted a resolution stating: ". . . that the refugees wishing to return to their homes and live at peace with their neighbours should be permitted to do so at the earliest practicable date, and that compensation should be paid for the property of those choosing not to return . . ."

The same resolution established a Conciliation Commission for Palestine to negotiate a settlement of outstanding differences between Israel and the Arab States of Egypt, Iraq, Jordan, Lebanon, Saudi-Arabia, Syria and Yemen.

No settlement has been reached.

The Arab refugees have not been able to return to their homes because Israel will not admit them. Israel has to date offered to repatriate only 100,000, and only as a part of a general peace settlement of all other issues.

The Arab refugees have not been able to gain a livelihood in the Arab lands where they are because there is insufficient opportunity for them to do so.

The Arab refugees have not received compensation for the property they abandoned, nor have the Jewish refugees in their turn.

The refugees are still on relief.

United Nations funds so far subscribed for the feeding of refugees will not last through the winter.

The Economic Survey Mission

In these circumstances the United Nations Conciliation Commission for Palestine established the Economic Survey Mission on 23 August 1949:

". . . to examine the economic situation in the countries affected by the recent hostilities, and to make recommendations to the Commission for an integrated programme:

"(*a*) To enable the Governments concerned to further such measures and development programmes as are required to overcome economic dislocations created by the hostilities;

[1] Thirty-three Governments made voluntary contributions amounting to $32 million, and the United Nations established an emergency organization, the United Nations Relief for Palestine Refugees, with Stanton Griffis, then American Ambassador to Egypt, as its director. The UNRPR purchased and scheduled materials and supplies, and through contracts with the International Red Cross Committee, the League of Red Cross Societies, and the American Friends Service Committee, supplied the refugees with food, shelter and other services. Many other charitable, religious and social agencies assisted in substantial ways.

"(*b*) To facilitate the repatriation, resettlement and economic and social rehabilitation of the refugees and the payment of compensation pursuant to the provisions of paragraph eleven of the General Assembly's resolution of 11 December 1948, in order to reintegrate the refugees into the economic life of the area on a self-sustaining basis within a minimum period of time;

"(*c*) To promote economic conditions conducive to the maintenance of peace and stability in the area."

The Economic Survey Mission assembled at Lausanne on 8 September 1949, where it received its terms of reference from the Conciliation Commission and met with each of the delegations representing the Governments of Egypt, Israel, Jordan and Lebanon. The Mission proceeded to Beirut, Lebanon, where it began its work in the Near East on 12 September 1949. The heads of the Mission have discussed the problems covered in its terms of reference with the members of the Governments in Alexandria, Egypt; Baghdad, Iraq; Tel-Aviv, Israel; Amman, Hashemite Kingdom of Jordan; Beirut, Lebanon; and Damascus, Syria. The experts attached to the Mission have studied in the field the problem of the refugees, the economy of the areas in which the refugees are now centred, and, in extensive discussions with technical committees established by most of the above Governments, have considered measures which might remedy the "economic dislocations created by the hostilities".

Interim Findings

As a result of the Mission's studies, discussions with Governments and investigations in the field, the Mission finds that:

1. The refugees themselves are the most serious manifestation of "economic dislocation" created by the Arab-Israeli hostilities. The refugees represent about 7 per cent of the population in the countries in which they have sought refuge. About 65 per cent of the refugees fled to Arab Palestine and Gaza, almost doubling the population. Resolution of the demoralizing, unproductive and costly problem of the refugees is the most immediate requirement "conducive to the maintenance of peace and stability in the area".

2. The continuing political stalemate in the relations between the Arab countries and Israel precludes any early solution of the refugee problem by means of repatriation or large-scale resettlement.

3. The relief supplied by the United Nations Relief for Palestine Refugees (UNRPR), the United Nations International Children's Emergency Fund (UNICEF), the World Health Organization (WHO), and the many local and foreign voluntary agencies of charity operating in the Near East has averted a worse calamity. Were all direct relief to be cut off now, many refugees would face a winter of disease and starvation. Were charity alone to be provided for another year, it would be more difficult and costly to take constructive measures later. Nevertheless, the extent of direct relief provided through United Nations funds should be stringently cut within the next two months. There is no doubt that, however commendable it may be to extend international charity to the needy, rations greatly in excess of the number justifiable within the original intentions of the General Assembly of the United Nations have been and are being issued.

4. Work in place of relief cannot be provided immediately for all. One thing, however, is clear. Rather than remain objects of charity, the refugees who are idle must have an opportunity to go to work where they are now: work which would increase the productive capacity of the countries in which they have found refuge. Until such work has been found, those refugees who are idle must remain a burden upon others, the United Nations, charitable societies supported by voluntary contributions, or the countries in which the refugees now find themselves.

5. Useful, gainful employment can, however, be found for all the refugees able and willing to work. There are many potential opportunities for useful and productive work to improve and reclaim the land, increase the supply and use of water, strengthen and extend road systems and improve sanitation and shelter. Suitable employment for the refugees can be provided in many places, especially in Jordan and Arab Palestine, where nearly half the refugees are located (see appendix C).

6. This and other similar work could begin as soon as funds can be found to finance it. But the resources of the Arab countries sheltering most of the refugees are inadequate to cope unaided with the present cost of emergency relief alone, much less to finance the cost of putting the refugees to work. Money for this purpose must be found from outside sources.

7. The inability of the refugees rapidly to find for themselves gainful employment in the Arab countries is but a symptom of the need for development of the unused resources of the Near East, where lack of available capital is responsible for much idle man-power. This is a task for the Near Eastern Governments to do in their own way, and in due course, with the help of competent counsel and substantial financial credits.

Recommendations

In the light of these findings, the Economic Survey Mission makes the following recommendations, which are explained later in the report.

1. The emergency relief for refugees made possible by voluntary contributions from Member Governments of the United Nations should be

continued through the winter months, and until 1 April 1950, under the present UNRPR system; the present minimum ration should not be reduced, but the number of rations issued should be reduced by 1 January 1950 from the present rate of 940,000 to 652,000 (for an analysis of the number eligible for relief, see appendix B). This would cost $5.5 million for the three months beginning 1 January 1950. Thereafter, further reductions should take place as men become employed in gainful labour and thus become ineligible for direct relief.

2. A programme of public works, calculated to improve the productivity of the area, and such continuing relief as will be needed should be organized as an integrated operation, in co-operation with the governments of the countries where the refugees are located. This programme should be planned and arrangements negotiated with the appropriate Near Eastern Governments to begin 1 April 1950.

No more rations should be supplied by the United Nations after 31 December 1950, unless otherwise ordered by the United Nations at the fifth session of the General Assembly, at which Near Eastern Governments concerned would have an opportunity to present appropriate proposals.

Meanwhile, the agency handling direct relief on behalf of the United Nations should be empowered to negotiate with Near Eastern Governments for the latter to take over as soon as possible, and at latest by 31 December 1950, responsibility for the maintenance of such refugees as may remain within their territories.

This programme, for the nine months from April through December 1950, would require $27 million, which sum would include such relief as might be needed.

The United Nations should be prepared to continue the works programme until 30 June 1951 (subject to review at the fifth session of the General Assembly).

The works programme for the six months of 1951 would require $21.2 million.

Of the total of $53.7 million for the cost of relief and works projects for the eighteen months' programme, the Mission estimates that approximately 25 per cent, or $13.3 million, represents the cost of the necessary work materials, tools and equipment. The Mission considers that a considerable proportion of this sum, perhaps up to one-half in certain cases, might be supplied by governments of the countries in which the refugees are now concentrated.

This would reduce the amount required from outside sources for eighteen months from 1 January 1950 for a programme of relief and public works to approximately $48 million, or an average of $2.7 million per month. This is the same as the present monthly rate of expenditure by the United Nations upon direct relief alone[a] (see appendix A).

3. An agency should be established to organize and, on or after 1 April 1950, direct the programmes of relief and public works herein recommended. As a minimum requirement to the successful implementation of the relief and works programmes, the Economic Survey Mission urges that:

(*a*) Subject to rendering such reports of its activities and accounting for its expenditure to the General Assembly of the United Nations as may be required of it and within the policies established in its terms of reference, the agency should have full autonomy and authority to make decisions within the sphere of activities entrusted to it, including the selection of its subordinate staff and the administration of funds made available to it.

(*b*) The agency should be located in the Near East.

(*c*) The personnel and assets of the UNRPR should be turned over to the new agency on 1 April 1950, or as soon thereafter as possible, in order that the functions of direct relief may be directed by the new agency in appropriate relation to the works programme.

(*d*) The agency should be authorized to counsel with such Near Eastern Governments as may so desire concerning measures to be taken by such Governments in preparation for the time when United Nations funds for relief and works projects shall no longer be available.

Guiding Policies for Administration of Proposed Programme

The purpose of the proposed programme of relief and public works is four-fold: it will halt the demoralizing process of pauperization, outcome of a dole prolonged; the opportunity to work will increase the practical alternatives available to refugees, and thereby encourage a more realistic view of the kind of future they want and the kind they can achieve; a works programme properly planned will add to the productive economy of the countries where the refugees are located; the chance to earn a living will reduce the need for relief and bring its cost within the ability of the Near Eastern countries to meet without United Nations assistance.

[a] Should the United Nations decide to bring about a gradual reduction from 940,000 rations per day to 652,000 on 1 April 1950, through monthly reductions of 100,000, beginning on 1 February 1950, the cost of the alteration in schedule would amount to $1.2 million. If the United Nations should prefer to maintain the present rate of 940,000 rations per day, except as affected by work relief, throughout the calendar year 1950 and thus provide charity to many thousands who are not refugees, the cost of this alteration in schedule would amount to $7 million.

With these purposes in mind, the work-relief programme, to be successful, must be planned and carried out in the closest possible co-operation with Near Eastern Governments concerned. Specific works projects should be selected and planned through negotiation and agreement between the national Government and the agency charged with administering the programmes. The actual execution of the programmes should devolve upon the national Government to the fullest degree possible, with agreement for audit, inspection and general supervision by the international agency. This arrangement will help to strengthen the administrations of the Near Eastern Governments concerned by the responsibility they thus accept and discharge. In this course lies the only possibility that the need for international relief will pass and that the refugees will ultimately be rehabilitated.

In pursuing this course it will be important to remember that no Government of the Near East, or any government anywhere, can indefinitely provide special benefits to a particular group, transient in its domain, while there is substantial unemployment among its own nationals. Negotiations of works programmes will have to take this into account.

The opportunities for employment on works projects will vary in quantity and duration according to local circumstance. Where refugees are unusually congested, individuals may be employed on an alternating part-time basis so that more may work. An understanding of the value of work as a chance to earn and restore self-respect together with concern for the low morale and debilitation condition of men long idle and undernourished will suggest policy and practice.

The amount of relief and the amount of employment in each family or village group should have a direct relationship. The formula is more work and less relief. Humanitarian considerations should temper administrative decisions, but the success of the works relief programme will inevitably be measured by the speed with which direct relief diminishes, as men and their families begin to earn a living.

The League of Red Cross Societies, the International Red Cross Committee and the American Friends Service Committee have, hitherto, by contract with the UNRPR, distributed relief supplies provided by the UNRPR from funds or equivalents supplied by voluntary contributions collected by the Secretary-General of the United Nations from Member countries. In addition, many unheralded charities have supplemented this United Nations relief.

None of these organizations is qualified to administer a works relief programme or to negotiate thereon with Near Eastern Governments. Such tasks require an agency of a different kind, equipped to plan in the field works projects in engineering and agriculture, and to visualize the relationship between these projects and the plans of each country for its own future development. Moreover, since the results of the work entailed will have an immediate effect on the policy of the agency organizing the distribution of food and other forms of direct relief, the Economic Survey Mission considers it imperative that the two activities be under the same direction. Since the programme of works relief must take precedence over that for direct relief, the latter decreasing as the former grows, the Economic Mission proposes that supervision and control of direct relief be a function of the agency undertaking the works relief programme.

Discussion of Findings and Recommendations

The Palestine Refugees

Their number. No one knows exactly how many refugees there are. After considering all available information, the Economic Survey Mission estimates that the total number of refugees does not exceed 774,000, including 48,000 in Israel, of whom 17,000 are Jews. Of this 774,000 it is estimated that 147,000 are self-supporting or otherwise provided for. This leaves 627,000 refugees at present dependent upon United Nations relief. In addition, the Mission recommends the inclusion of some 25,000 Arabs who, though living in their original homes in Arab territory, are destitute through being separated from their lands by the armistice agreements. This would bring the total figure of persons who are eligible for relief from the United Nations to 652,000 (see appendix B).

Their location. Where did the refugees go when they left their homes? About 70,000 crossed the Jordan River to the east and are now in the Hashemite Kingdom of Jordan. About 97,000 fled into Lebanon, just north of Galilee. Some 75,000 are clustered near the south and western boundaries of Syria, and in and around Damascus and other towns. About 200,000 are crowded into the tiny coastal desert area called the Gaza strip, at present held by Egypt. About 280,000 are in that part of Palestine not occupied by Israel—west of the Jordan—from Jenin in the north to Jericho and the Arab portion of Jerusalem and on beyond to Bethlehem in the south. About 4,000 crossed the desert to Baghdad in Iraq, far to the east. In addition, some 31,000 Arabs and 17,000 Jews, classed as refugees by the international relief agencies, are in Israel.

The influx of these destitute families into already crowded areas, notably Arab Palestine, the Gaza strip and the western part of the Kingdom of Jordan, has aggravated the already depressed standard of life in these regions. This may help to account for the 940,000 rations now issued daily, as against the 652,000 recommended in this report.

Their effect on local resources. The effects of the influx of the refugees upon the resources of the Arab States can be suggested by comparing the numbers of refugees to the total population of the areas where they are now chiefly concentrated.

The population of the Gaza strip, before the Arab-Israeli hostilities, was about 70,000. Refugees have swelled the population to about 270,000 in an area of less than 150 square miles. Gaza is now cut off by the armistice lines from its normal trade area; most of the farmlands normally tilled by the villagers in the Gaza strip are now inaccessible to them, because the armistice line separates the farmer from his land. He can see his land across the line, but he enters upon it to tend his orange groves or harvest his crop at the peril of his life.

Arab Palestine, that portion of eastern Palestine not occupied by Israeli troops, had an estimated population of 460,000 before the outbreak of hostilities. To this has been added about 280,000 refugees, an increase of 60 per cent.

The refugees were able to bring few assets with them, and many of those who did have since used them up. They claimed and, in general, received the help of the countries to which they fled. For the first few months the Governments of the Arab States where the Palestine Arabs sought refuge provided relief as best they could. Nor have their efforts ceased since the United Nations relief programme started. Of the $32 million provided by contributions to the United Nations for relief, $6 million is credited to the Arab States.

An addition to the population, similar to that which has occurred in the Near East as a result of the influx of refugees, would imply, if occurring to the United Kingdom, an addition of 3,500,000 people, if occurring to the United States of America about 10 million, if to France nearly 3 million.

The refugees' dilemma. Why do not the refugees return to their homes and solve their own problem? That is what the great majority of them want to do. They believe, as a matter of right and justice, they should be permitted to return to their homes, their farms and villages, and the coastal cities of Haifa and Jaffa whence many of them came.

They are encouraged to believe this remedy open to them because the General Assembly of the United Nations said so in its resolution of 11 December 1948. For purely psychological reasons, easily understandable, the refugees set great store by the assurance contained in this resolution. Most men in their position, given a choice between working in a foreign land or returning to their homes and to conditions understood and experienced from youth, would strain towards their homes, even were they told that, in their absence, conditions had so changed that they would never be happy there again. They would be reluctant to believe it. They would suspect a trap to hold them in exile until it was too late for them to return. Even if they were told their houses had been destroyed, they would still claim that the land remained. This seems a final argument to farm people.

But, the repatriation of Arab refugees requires political decisions outside the competence of the Economic Survey Mission.

Why do not the refugees go somewhere else? Why not resettle them in less congested lands?

There are several reasons. The refugees do not take kindly to moving again—unless it be a return to their homes, a prospect they cling to because of the General Assembly's resolution. Moreover, the Arab Governments have made it clear to the Mission that they feel bound to respect the wish of the refugees. Resettlement of the refugees outside of Palestine is a political issue poised against the issues of repatriation, compensation of the refugees and a final territorial settlement. Finally, less congested lands are not available for the settlement of additional population until much money has been spent and work done to make the land suitable for cultivation or for industrial development.

In these circumstances, the only immediate constructive step in sight is to give the refugees an opportunity to work where they now are.

Prospects for Employment

Direct consultations between the Economic Survey Mission and Near Eastern Governments established that Governments were ready to support the principle of trying to find gainful employment for the refugees in place of relief. The Governments of Iraq and Israel had already begun to develop this idea in practice. The Government of Syria had recently passed a decree granting refugees equal rights with Syrians to be employed in that country. The Government of Jordan already had plans under active consideration with the same objects in view and has already offered to grant a Jordan passport to any Palestine refugee applying for one.

All Governments gave their assent to a visit by the technical experts attached to the Mission for the purpose of examining, in collaboration with the experts of the Governments concerned, existing or additional projects of a local nature which might afford a further opportunity for employing refugee labour.

The results of the general examination by the experts attached to the Mission of a number of possible projects in the different countries visited by them are summarized as appendix C to this report.

Conditions differ in each country. Egypt offers no opportunity for the employment of refugee labour, save in the Gaza strip. Ample labour for the great works already planned by the Egyptian

Government for the development of the land of Egypt is immediately available from the ranks of Egyptian unemployed. On the other hand, certain works might usefully be undertaken in the Gaza strip. Unfortunately, this is the most congested area. Possible relief works in this small area can employ only a very small proportion of the refugees accumulated there, but soil and water conservation projects, important in their effects and value, can provide useful work for some. The Mission recognizes that the problem of the refugees in the Gaza area will not be solved, save by permitting the excess to farm their adjacent lands from which they are now cut off by the armistice lines, or to move to other regions where more work opportunities may be open to them.

In Jordan, relief works are envisaged which would soon absorb more than the breadwinners among the 70,000 refugees actually in Jordan territory. The Economic Survey Mission has learned with satisfaction that His Majesty's Government in the United Kingdom has already made to the Government of the Hashemite Kingdom of Jordan an interest-free loan of one million pounds sterling. This loan is to be expended by the Jordan Government on development projects considered by the Jordan Government to be of value to their country and to the benefit of Arab refugees from Palestine. The Economic Survey Mission expresses the hope that the two Governments concerned will find it possible to begin work at an early date.

The Governments of Iraq and Israel are both engaged in finding work for the relatively small number of refugees within their territories, and advised the Mission that they do not immediately need external assistance to this end.

In Syria and Lebanon works projects are available, if means can be found to finance them, which would contribute materially to the solution of the immediate problem of finding gainful employment in lieu of relief.

The execution of such works projects, leading to improvements in the productive capacity of the areas in which they are undertaken, is bound to have a dynamic and cumulatively beneficial effect on the whole situation. It will gain time during which it may be hoped substantial progress will be made towards a settlement of the outstanding political issues by the agencies entrusted with that task.

Many of the small works projects envisaged in the public works programme for the employment of refugees, as noted in appendix C, can be the prelude to larger developments. For the immediate future, the refugees are viewed as a reservoir of idle manpower—of greater service to themselves and to the lands giving them asylum, if given work. The administration of the relief and public works programme for refugees, brought together under the initiative of one agency, can, in the considered judgment of the Economic Survey Mission, become a contributing factor for peace and economic stability in the Near East.

APPENDICES

(A) Cost of Programme

The estimated cost of the total programme of direct relief and work schemes for refugees considered eligible for aid from the United Nations, as recommended by the Economic Survey Mission, for the eighteen months from January 1950, is $48 million.

This estimate includes $29 million to finance works projects for the eighteen months, including wages, administration and 55 per cent of the cost of materials, tools and equipment. The remaining 45 per cent of the cost of materials, tools and equipment ($6 million) it is assumed will be made available by the local Governments.

The cost of direct relief for the calendar year 1950 (see recommendation 2) is estimated at $19 million. This includes the cost of food, clothing, tents, necessary health measures, administration and a small reserve.

These estimates are based on the assumption that, for the quarter beginning 1 January 1950, the present ration load of 940,000 will be reduced to 652,000, thus eliminating refugees not in need and non-refugees. If it were decided to continue distributing rations to these ineligibles, the additional cost in 1950 would be $7.2 million.

It is assumed that the wages paid to refugees employed on work schemes, whether in cash or in kind, will be the locally prevailing rate, and that this wage will enable the worker to provide for three dependents, for whom no separate relief will be needed.

It is assumed that 25 per cent of refugees are able-bodied men and that the numbers available for work are therefore: in Jordan and Arab Palestine, 78,000; in the Gaza strip, 48,000; in Syria, 15,000; and in Lebanon, 22,000.

With regard to the amount of employment which can be provided, the Economic Survey Mission is satisfied that work can be found, on schemes of the types described in appendix C, for substantially all the able-bodied refugees in Jordan, Arab Palestine and Syria. In Gaza it appears that the schemes described in appendix C exhaust the possibilities. In Lebanon, employment of refu-

gees on schemes of an agricultural nature is at present excluded. It is believed, however, that a substantial amount of employment can be found on engineering works. The actual amount of employment (at the peak) assumed for the purposes of estimating the cost is: in Jordan and Arab Palestine, 75,000; in the Gaza strip, 2,300; in Syria, 15,000; and in Lebanon, 8,000.

No account is taken in the estimates of refugees who may find gainful employment outside the works programme as a secondary effect of expenditures on that programme and who would, therefore, become ineligible for relief. In addition, it is to be assumed that some may obtain employment not generated by the works programmes, as many in the total figure of 726,000 have already done. The estimates do not attempt to take account of this possibility.

Of the total cost of $48 million, $5.5 million falls in the first quarter of 1950. This is all for direct relief because work schemes will not have started.

During the remainder of 1950, it is estimated that the number of people engaged on work schemes will increase steadily until it reaches 65,000 at the end of the year. The total cost for the period is estimated at about $25 million, made up of a diminishing expenditure on direct relief and a rising expenditure on work schemes.

In the first half of 1951, the cost is estimated at $17.6 million, entirely due to work schemes since direct relief is assumed to cease at the beginning of the year.

Table I shows estimates of the numbers of refugees on work relief and direct relief, and table II shows estimates of the cost of work relief and direct relief, for each of the six quarters of the period from 1 January 1950 to 30 June 1951.

Table I. Estimated numbers of refugees on work schemes and direct relief in Arab countries

(In thousands)

	Number for whom work can be provided	*Dependents of workers removed from relief*	*Maximum number eligible for direct relief*
1950 (quarters)			
1st	—	—	652
2nd	13	39	600
3rd	40	120	492
4th	65	195	392
1951 (quarters)			
1st	88	264	300[a]
2nd	100	300	252[a]

[a] If the recommendations of the Economic Survey Mission are adopted, direct relief from United Nations funds will end at the end of 1950. The works programme would continue and such direct relief as may be required would become the responsibility of the local Governments.

Table II. Estimated cost of programme

(In millions of dollars)

Estimated cost	*1950 Quarters* I	II	III	IV	*1951 Quarters* I	II	*Total*
1. Direct relief	5.5	5.1	4.5	3.9	–	–	19.0
2. Work schemes:							
(*a*) Labour and administration	–	0.9	2.8	4.6	6.2	6.9	21.4
(*b*) Materials, tools and equipment	–	0.6	1.8	2.8	3.8	4.3	13.3
(*c*) Total cost to United Nations and local Governments	–	1.5	4.6	7.4	10.0	11.2	34.7
(*d*) Less 45 per cent of item 2 (*b*), assumed to be made available by local Governments	–	0.3	0.8	1.3	1.7	1.9	6.0
(*e*) Cost to United Nations	–	1.2	3.8	6.1	8.3	9.3	28.7
3. Direct relief and work schemes:							
(*a*) Total cost to United Nations and local Governments	5.5	6.6	9.1	11.3	10.0	11.2	53.7
(*b*) Less item 2 (*d*), assumed cost to local Governments	–	0.3	0.8	1.3	1.7	1.9	6.0
(*c*) Cost to United Nations	5.5	6.3	8.3	10.0	8.3	9.3	47.7

(B) Analysis of Refugees and Relief Recipients

A. Number of Refugees

The number of refugees, in the sense of persons who have fled from Israel and are unable to return, is estimated, from the most up-to-date data available, at 726,000. This figure is arrived at by taking the former non-Jewish population of the territory at present held by Israel and deducting therefrom the present non-Jewish population of that territory. Details of the calculation are given in section B below.

To this figure of 726,000 should be added some 25,000 people who still live at home, but are without means because they are separated from their lands by the armistice lines, the so-called "borderline cases". Therefore, the refugees considered by the Mission to be within its terms of reference number 751,000.

Not all these are in need. It is estimated that 20,000 are in employment and capable of supporting another 60,000. In addition, there are some 19,000 refugees who are presumed not to be receiving UNRPR rations (of whom 15,000 are of independent means and 4,000 are supported by the Iraqi Government). There are, therefore, 652,000 genuine refugees in need (including the borderline cases).

The UNRPR ration strength is now 940,000, but rations are in fact issued by the agencies to 1,019,000 recipients. Rations are allocated in bulk to the agencies, who stretch them to cover destitute and other needy persons as well as refugees. These figures are set out below:

1. Refugees who fled Israel and are in need....	627,000
2. Plus borderline cases.....	25,000
Refugees in need	652,000
3. Plus refugees in gainful employment and not in need	99,000
Total refugees	751,000
4. Minus refugees presumed not to be receiving rations	19,000
Refugees receiving rations in Arab countries	732,000
5. Plus non-refugees in Arab countries receiving rations	160,000
Total ration strength in Arab countries	892,000
6. Plus Arab and Jewish refugees in Israel....	48,000
Total UNRPR ration strength	940,000
7. Plus ration receivers in excess of UNRPR ration strength	79,000
Total ration receivers	1,019,000

The number used by the Mission in estimating the cost of the recommended programme is 652,000, the estimated number of refugees in need, including the borderline cases.

The figure of 751,000 designated as "total refugees" in the above table is composed of 726,000 refugees plus 25,000 borderline cases.

B. Estimate of Number of Arab Refugees from Israeli-held Territory

(Prepared on the basis of population estimates by villages and religion as of 31 December 1946)

	Thousands
1. Estimate of total non-Jewish population of Palestine on 31 December 1947	
Settled non-Jewish population on 31 December 1946	1,230[a]
Nomadic population	127[b]
Total non-Jewish population on 31 December 1946	1,357
Plus natural increase in settled population from 31 December 1946 to 31 December 1947	31[c]
Total non-Jewish population estimated as of 31 December 1947.....	1,388
2. Estimate of total non-Jewish population who could have fled Israel (assuming that births since 31 December 1947 were offset by increased mortality)	
Settled non-Jewish population as of 31 December 1946 within boundaries of territory held by Israel Defence Army on 1 May 1949	736[d]
Plus natural increase 31 December 1946 to 31 December 1947	18[e]
Total as of 31 December 1947.....	754
Plus estimate of nomads.....	105[e]
Total non-Jewish population within 1 May 1949 boundaries	859[g]
Less: non-Jewish population still in Israel...	133[g]
Total refugees from Israeli-held territory....	726

[a]Obtained by subtracting 7,600 for non-Jews said to have been overstated in official estimate of 1,238,000, through under-registration of deaths.

[b]Estimate of total Bedouin population of Palestine based on the partial enumeration which took place in May 1946. Figure taken from "Note on Bedouin Population of Palestine" presented by the representative of the United Kingdom.

[c]Computed at 25 per 1,000 population, a conservative estimate of the natural increase rate based on observed average of previous years.

[d]Obtained by subtracting 52,000 nomads from total non-Jewish population as of 31 December 1946 in villages within boundaries held by Israel Defence Army on 1 May 1949. List of villages so held is given in appendix B of document Com.Tech./7/Add.1, and populations were obtained from map of villages. Sub-district totals are not strictly comparable with those given in "Supplement to Survey" because latter are "revised *de facto*" estimates, but total differs by only a fraction.

[e]Of 127,000 estimated Bedouins (based on partial enumeration of May 1946), approximately 22,000 were said to have been normally resident in areas allocated to Arab State under UNSCOP (United Nations Special Committee on Palestine) majority plan, leaving 105,000 in Jewish State. Since boundaries of 1 May 1949 include a larger area than UNSCOP, it is estimated that 105,000 Arabs may be included. Loftus estimates 95,000 remaining within boundaries. If this figure is used, total "refugees" becomes 716,000 instead of 726,000.

[f]Assuming no natural increase since 31 December 1947, this 31 December 1946 estimate would be the probable number of non-Jews who could have fled.

[g]In the *Statistical Bulletin of Israel*, vol. 1, No. 2, for

August 1949, a total of 108,000 non-Jews in Israel is given, based on the results of the census of 8 November 1948 and an additional registration during January 1949 in the areas of Nazareth, Acre, Beersheba, and in the town of Majdal. This estimate is said not to include Arabs in remaining areas of the Negeb, the Arab villages in the Sharon, or non-Jews accrued since registration. It is assumed here, however, that Arabs in these areas tended to flee, and that natural increase has been offset by increased mortality. An allowance of 25,000 is made for Arabs said to have entered Israel since the end of 1948, the figure having been taken from the answer made by Jewish authorities as to the questionnaire circulated by the Technical Committee, 3 July 1949. This figure is given also in the Jewish Agency's *Digest of Press and Events*, No. 49.

C. Geographical Distribution of Refugees and of Relief Recipients

Estimates are available of the geographical distribution of the 1,019,000 relief recipients and of the 726,000 refugees. They are given in the table below.

Area	Alleged relief recipients 30 September 1949		Adjustment factor[a]		Persons who have fled from Israel	
	Number	Source	Per cent	Source	Number	Per cent of total
Arab Palestine	431,500	(1)	35	(5)	280,000	39
Egypt	–	–	–	–	7,000	1
Gaza	210,987	(2)	10	(2)	190,000	26
Iraq	4,000	(3)	0	(3)	4,000	1
Jordan	100,905	(4)	30	(6)	70,000	10
Lebanon	140,448	(4)	30	(7)	100,000	14
Syria	83,403	(4)	10	(5)	75,000	10
Total	971,243				726,000	
In Israel (31,000 Arabs, 17,000 Jews)	48,000					
Grand Total	1,019,243					

[a]Based on the probable percentage of duplicate registrations, destitute persons and other non-repatriable relief recipients in the different areas.

Sources

(1) ICRC report dated 30 September 1949.
(2) AFSC, Schedule of refugee population, 30 September 1949, and information obtained 26 October 1949.
(3) UNRPR, as of 30 September 1949.
(4) LRCS report dated 30 September 1949.
(5) UNRPR, 1 August 1949. (For Arab Palestine 155,000 out of 432,000 consisting of 69,157 villagers being fed in Palestine and a 20 per cent duplication in remainder.)
(6) Report of the Technical Committee on Refugees of the Conciliation Commission for Palestine, 20 August 1949.
(7) Conservative estimate based on UNRPR estimate of 1 August 1949.

D. Characteristics of the Recipients of Relief

1. *Family units*

The average size of family among all recipients of relief, including non-refugees, is almost six persons. This would result in approximately 170,000 family units,[1] or 121,000 family units of genuine refugees but only 109,000 family units of refugees in need of relief.

2. *Employables*

Although no accurate figures are available for the proportion of employable males among those eligible for relief, estimates range from 14 to 45 per cent. A conservative estimate would be 25 per cent. Females employable under certain circumstances might constitute an additional 10 per cent.[2]

For comparison it can be noted that the total settled Arab labour force in Palestine was given as 300,000, or 25 per cent of the total non-Jewish population in 1944.[3] The census of 1931 reported that the ratio of earners to dependants was about 1 to 3 in the settled Arab population.

Of the employable males, 75 per cent is estimated to be able to undertake heavy labour. This estimate, derived from sample surveys conducted in camps, is based on the assumption that sufficient calories will be provided to permit heavy labour.

[1]This and subsequent estimates, except where otherwise indicated, are based upon figures provided by UNRPR and the three operating agencies and checked by field visits to camps and other refugee concentrations.

[2]These estimates, based on samples taken in various camps and upon opinions given by the operating agencies and refugee leaders, include a certain number of older children and adults over 50, as well as some persons listed as dependants.

[3]Under-estimated by omission of part-time family workers. *National Income of Palestine, 1944* by P. J. Loftus, Government statistician. No. 5 of 1946. Government Printer, Palestine.

3. *Occupation*

Very little information is available as to the occupational capacities of the relief recipients. A census of population which included an investigation of occupation was conducted in 1931, but changes have taken place in the economy of Palestine since that time, which make it difficult to estimate the present situation. A survey of the occupations of skilled tradesmen conducted in 1943[4] among 14,631 non-Jewish workers showed that 62 per cent of the skilled and semi-skilled were distributed as follows:

	Per cent
Mechanics and fitters	17
Carpenters	13
Shoemakers	8
Weavers	8
Blacksmiths	5
Tailors	5
Tinsmiths	3
Masons	3
	62

A survey conducted in June 1949 among 22,692 refugees in the Gaza area, which is well known to shelter mainly agriculturalists, gave the following percentage distribution by occupational categories:

	Per cent
Professional and proprietary	16
Clerical and supervisory	1
Skilled and semi-skilled	18
Unskilled	65
	100

Another survey, taken by the League of Red Cross Societies in the Zerqa camp in May 1949, analysed the occupations of 1,000 families. The results were as follows:

	Per cent
Government service and trade	13
Agriculture	28
Building	11
Craftsmen	7
Street vendors	9
Food salesmen	9
Motor trade	8
Public services	10
Other	5
	100

The low proportion of agriculturalists in this sample may well be unusual in that the refugee families came from villages near Lydda.

It may be said that the majority of the refugees are unskilled workers, but that there exist a number of skilled and semi-skilled workmen,[5] the probable distribution of whom, by detailed occupations, can be roughly estimated from the first table given above. It may also be noted that, according to P. J. Loftus,[6] the pattern of employment among the Arab population changes according to the needs of the time and season, for example, much of the unskilled labour is supplied for construction work by the Fellaheen in the off season.

4. *Rural-urban distribution*[7]

	Per cent
Rural settled Arab population (1944)	64
Urban settled Arab population	36

5. *Age groups*

	Per cent
Under 1	5
1-15	45
16-50	40
Over 50	10

6. *Number of dependants*[8]

	Per cent
Children (0-15)	50
Aged (over 50)	10
Ill and infirm	5
Nursing and pregnant women	12

7. *Religion*

	Per cent
Moslem	93[9]
Christian	5
Jewish	2

[4] *Survey of Skilled Tradesmen, 1943,* compiled by the Department of Statistics on behalf of the Controller of Manpower No. S.2 of 1945. Government Printer, Palestine.

[5] *Survey of Skilled Tradesmen, 1943,* compiled by the Department of Statistics on behalf of the Controller of Manpower No. S.2 of 1945. Government Printer, Palestine.

[6] *National Income of Palestine, 1944, by* P. J. Loftus, Government Statistician. No. 5 of 1946. Government Printer, Palestine.

[7] Census of Palestine 1931 gives 65 per cent rural, 35 per cent urban for settled non-Jewish population, and 68 per cent rural and 32 per cent urban for total non-Jewish population.

[8] A number of these dependants are employable, including some children under 15, and persons over 50.

[9] UNRPR report, 30 September 1949.

(C) Illustrative Outline of Works Projects

(This is a brief summary omitting calculations and technical detail contained in two extensive reports, one by Sir Herbert Stewart and associates, the other by William L. Voorduin and associates. The estimates of work project costs and employment loads in appendix A are based upon the data in these reports. The complete reports will be made available with the final report of the Economic Survey Mission.)

The first task of the agricultural and engineering consultants to the Mission has been to examine schemes which can provide early employment for the maximum number of refugees. This appendix embodies the principal conclusions of the consultants resulting from their examination.

1. Purpose

The purpose of the examination made by the consultants has been, in the limited time available and in harmony with the constituted Government authorities, to seek out useful works projects which might relieve the present situation of the Arab refugees. The aim was to select typical projects, to examine them in accordance with the criteria set out below, make an estimate of the funds required and ascertain approximately the amount and duration of employment which can reasonably be expected. The projects were thus approached with the object of ascertaining those categories of schemes which could be utilized. The references to specific projects made in this present appendix do not therefore indicate that these are the only ones either examined or contemplated, but that they exemplify the type of project which should be developed.

2. Scope

The survey made by the consultants has been restricted in scope in two ways:

(*a*) Since the prime object is the finding of temporary work for Palestinian Arab refugees, the examination has not covered the whole of the Near East but has been limited to those countries or areas in which substantial numbers at present find shelter. These territories are Jordan, Arab Palestine, the Gaza Strip, Lebanon and Syria.

(*b*) Since the matter is extremely urgent and cannot await long-term decisions, attention has been concentrated on short-term projects.

There has been a natural division of the task of examination: the engineering consultants have considered projects which will employ labour usefully on road construction, housing schemes, water conservation structures and similar public works. While the agricultural consultants have examined the possibility of employing refugee labour on such phases of development as terracing and afforestation. But the survey has been joint throughout, and the two types of projects have been inter-related.

3. Procedure

The procedure adopted has been that the groups of engineering and agricultural consultants first visited the capitals of the countries concerned to discuss with senior and technical local officials the possible work projects in which these countries were interested, and to make further suggestions. After general tours of the principal areas concerned further discussions were held with these officials in order to reach agreement on individual or typical projects, obtain data, and estimate the cost and absorptive capacity of schemes. Co-operation with the constituted authorities has therefore been continuous, and in particular existing plans and needs have been taken into account.

4. Criteria of Selection

The main object has always been kept in mind, *viz.*, the provision of short-term engineering or agricultural projects which would provide opportunities for refugee employment and contribute to the welfare of the different countries, without conflicting with any long-term projects formed by individual States as the basis for a more complete economic development. Special criteria applied in selecting type projects were:

(*a*) The presence of a high labour factor in the cost of the scheme, and the probability of the absorption in the work of a large number of persons over the whole period under review;

(*b*) The possibility of early commencement;

(*c*) The susceptibility of the projects to a unified development, i.e., the likelihood of constituting satellite and contributory projects round a nuclear development;

(*d*) The place which the short-term works projects can take in leading to a more complete economic development.

5. General Considerations

The principal industry of the Near Eastern countries is agriculture, which is affected and restricted by certain major factors in the two great basic natural resources—soil and water. The former, except in the saline areas, is, in general, in the Near Eastern countries, highly productive, and the limiting factor is therefore frequently water supply. Rainfall in the Near East is normally sparse and is unevenly distributed; but other moisture sources may be found by the better utilization of surface waters or the exploitation of those underground. It is clear that

no country in the Near East has sufficiently taken, in the past (except perhaps in remote antiquity), nor is taking at present, adequate measures for conserving either of its great basic resources. Consequently the soil is being eroded; water, which is the life-blood of agriculture, is wasted; land is not being used to the best advantage, nor for the purpose to which it is best suited, and the financial returns which are being obtained from it are insufficient.

It is evident that two directions in which refugee labour can be employed in a manner which will also give very material aid to the economy of the countries concerned are: conservation of the soil and the natural moisture in it, and the better utilization of existing water resources. Schemes of this type have the great advantage that labour forms an extremely high percentage of the total cost involved. Such schemes have the support of the Governments concerned.

It is considered, therefore, that the four major ways in which temporary refugee labour can be employed in quantity and at the same time promote the economic development of the Near Eastern countries by striking at the root of their greatest problems are:

(*a*) The terracing of sloping land so as to retain the natural rainfall, protect the soil from erosion, and allow the growing of better crops or the planting of fruit trees, more particularly the latter;

(*b*) The afforestation of land not suited to other purposes, partly as an erosion control measure and partly to contribute additional fuel and timber supplies;

(*c*) The development of good roads to open up the area so as to allow materials for the construction of irrigation and similar works to pass in, and agricultural products, particularly fruits and vegetables, to pass out;

(*d*) The construction of irrigation projects and water conservation works on a moderate scale.

Certain other projects not falling into these four categories have been specially selected, either because they are well advanced and it would be uneconomical not to complete them or for some special economic importance and labour absorptive power.

6. General Discussion of Types of Project

(*a*) *Terracing*

Terracing is not an innovation in Near Eastern countries; indeed, in many places it is already practised. The work to be done, therefore, is of two types—the reconstruction of existing terraces in a state of disrepair, and the construction of terraces on new ground. It is considered that in some cases, even on new land, relatively inexpensive terracing will be sufficient. Many areas to be planted with fruit trees will, however, require terracing with at least a single row of stones, and in really steep country stone walls will be required; such terracing is expensive but well justified because of the greater productive capacity of the treated land. As the effects of this work will last for many years it fits readily into any long-term economic development scheme. Moreover, terracing has the additional advantage that it can be commenced early.

(*b*) *Afforestation*

Very little practical action has been taken in the Near Eastern countries to extend the area under forest, although the importance of afforestation is now gradually becoming recognized. Afforestation can be carried out either by direct sowing of seeds (which results in large areas being treated in a short time), or by the planting of seedlings from a nursery. This is a comparatively slow process since seedlings may require two years to develop, and nursery production is thus a principal limiting factor in the rate of this type of afforestation. It is considered that schemes should include the "Gradoni" system of tree-planting, which is simple and effective, and offers good scope for the employment of labour. This, like seed sowing, has the advantage that it can be begun almost at once. Afforestation must be undertaken with the advice and guidance of forestry specialists, and the new plantations must be rigidly closed to grazing, and in particular be protected against the inroads of man for fuel and goats for fodder.

(*c*) *Roads*

Adequate highway communications are unquestionably necessary for full economic development in any country, the more so in an agricultural country, since produce must move freely to the markets. Road making is clearly a suitable work project, for the labour forms a high element in its total cost. It can be begun quickly and the materials are generally present in all too abundant quantities on the spot.

However, highways by themselves do not necessarily bring about an improvement in an economy. There must first be a sound base of agricultural development or some other economic reason before highways can be of much value. In some of the areas traversed by the highways proposed in plans drawn up by countries visited, such development has not yet reached the stage which will make highway construction economical.

The road projects selected are, therefore, of two types:

(i) Highways which are missing or defective in the present system and which do have an economic justification since lack of them strangles the flow of normal traffic;

(ii) New roads required for the unified developments discussed in the next paragraph.

(*d*) *Utilization of water resources*

Schemes considered for the utilization of water resources fall in general into two types, of which the second is based on a special concept, regarded as fundamental.

The first type of project consists in the construction, at various points, of irrigation and water supply works already planned or commenced. Projects of this nature include canals and drainage works in the Lebanon and in Syria. Such projects in the main involve construction works, but are also for the most part already planned so that they can be embarked on without undue delay. In many cases incomplete works already exist.

The conception of the second type of project stems from the view that such engineering developments as highway construction or dam building cannot be economically justified in isolation. Highways must be built simultaneously with improvements in agriculture, and agriculture cannot be improved without the simultaneous conservation and better distribution of water resources. It is, therefore, proposed for the short-term programme, to develop certain comparatively small areas intensively instead of proceeding with extensive programmes of highway development and the like. A typical area considered suitable for such development is the catchment basin of the Wadi Zerqa, the largest of the wadis east of the Jordan River. It is proposed that this area should at one and the same time be provided with roads, dam constructions, terracing, afforestation, etc.

(*e*) *Other engineering schemes*

Other engineering schemes selected include the improvement of certain airports. These have the advantage that plans can be prepared in a short time and that the work has a significant effect on the general economy of the Near East and may be of outstanding long-term importance. Work on a harbour has also been recommended for somewhat similar reasons.

7. Types of Projects Recommended, by Countries

(*a*) *Jordan and Arab Palestine*

The economy of Jordan is almost entirely agricultural, and crop production is dependent on winter rainfall, which rarely exceeds eighteen inches even in the best areas. An important physical feature of the country is the series of deep wadis running into the valley floor of the Jordan, which is far below sea level. The rain-fed areas produce cereals, but where the land is terraced and planted with horticultural crops it is highly productive.

Agriculturally, the present Arab area is probably not the best land in Palestine. It consists of a collection of hills, some eroded down to rock skeleton and others carrying shallow patches of soil which, somewhat surprisingly, produce cereal crops. The rainfall is in the main adequate in the hills, though in Jericho in the Jordan Valley it is only six inches and is replaced by artificial irrigation. The region is predominantly fruit-growing.

Approximately half the refugees at present find shelter in Jordan and Arab Palestine, and in addition the refugee population in the latter so closely approaches the number of local inhabitants that it may be necessary for some to find work east of the Jordan river. It is necessary, therefore, to recommend extensive work projects in both areas. The types of such projects recommended are as follows:

(i) *Unified developments*

A specific area selected for such development is, as stated above, the catchment basin of the Wadi Zerqa, which is located north of Amman. It is recommended that this area be developed completely as a unit, that is to say, that action be taken to build all necessary roads in the area, to provide water for perennial irrigation, to build the necessary small check dams on the principal gullies to minimize siltation, and to do all necessary afforestation work, etc. A centrally located village should also be made a part of the scheme in order to provide adequate housing facilities for the temporary refugee construction workers. At least four roads are recommended for improvement under this scheme; and surveys should be undertaken at once and completed within three months for the construction of a dam at a suitable site which exists in the deep valley of the river. It is considered that this dam can be of such a type as to provide for the maximum employment of hand labour, and that it can be raised as required. More intensive geological surveys can proceed parallel to construction, which should be well advanced before the high flow begins in December 1950. There is a suitable storage area in the wider part of the wadi above the dam site. At the same time a headworks structure, already envisaged by the Jordan Government as part of a scheme for completing headworks on several wadis—a scheme which it is now recommended should be revised—will be required where the wadi enters the Jordan Plain. Parallel to this engineering development, priority should be given to the terracing and afforestation of the area.

The experience gained in planning this first unified development will be invaluable in developing several other wadis both in Jordan and Arab Palestine. The limiting factor, however, is the capacity of the Jordan and Arab Palestine Public

Works Departments to absorb these heavy additional work loads, and to some extent the rate of progress will depend on the expansion which can be achieved by these Departments.

(ii) *Highway development*

Considerable highway development can be undertaken in Jordan and Arab Palestine, provided the Public Works Departments can handle the heavily increased load.

(iii) *Other irrigation projects*

A scheme is now being investigated west of the Jordan for temporary refugee settlement on land irrigated from water obtained by pumping. It is considered that the irrigation water for this tract of land can better be obtained by conserving the surplus waters of the Wadi Qilt, and that this may, therefore, become a project similar to that described in (i) above.

(iv) *Airport improvement*

This work is also considered as a short-term project and it is believed that improvements to Amman Airport, to Class D international standard, would not far anticipate the need.

(v) *Afforestation*

There are 2 million nursery seedlings available in Jordan for afforestation purposes, and it is proposed that this should proceed, but, at the outset, be concentrated in the catchment area of the Zerqa basin. At the same time there should be an extension of the present area under forests in Arab Palestine and restoration of several of the existing forest reserves. A scheme has been drawn up and is proposed covering fourteen such areas.

(vi) *Terracing*

It is proposed that terracing in Jordan should commence as part of the unified development scheme. In Arab Palestine there are already some good practical examples of terracing. The area is essentially a fruit-growing one. It is proposed, therefore, that extensive terracing should be carried out in Arab Palestine, continuing the policy of the former government, a work which will provide ample scope for the useful employment of refugee labour. Such work can make a valuable contribution in the preparation of land for new orchards and in the improvement of land already under fruit. The only limiting factor is the maximum labour force which can be controlled and supervised, which is said to be about 16,000 labourers a day.

(*b*) *Lebanon*

Lebanon is a mountainous country in which only a quarter of the land is cultivable, and most of this is already utilized. Taking into account the high existing utilization of the cultivable area, the importance of agriculture to the country and the possibility of further fruit-growing, it will be seen that it is vital to protect the soil against erosion and that an important means of increasing agricultural productivity is by better utilization of the water resources (which at the same time may create opportunities for industrial development by providing low-cost hydro-electric power). Some consideration is now being given to re-afforestation and several irrigation schemes are either commenced or planned.

It was understood that the Government did not wish to concentrate on employment of refugees on projects closely identified with the land; and for this reason alone, and not because there is no outstanding need for projects of afforestation, have the consultants concentrated on engineering works projects.

The following schemes for the employment of refugee labour are therefore visualized; these are all of the irrigation/water supply type. Harbour and railway improvements, which were suggested by Government officials, have, for the purpose of this report, been considered as long-term projects.

(i) *Irrigation and drainage in the South Beqaa*

Here detailed plans are almost completed and construction problems are simple; there is good land well situated for irrigation, and this project should be made an early priority.

(ii) *Akkar Plain irrigation*

It is planned that this area in North West Lebanon will utilize water from each of the four rivers which cross it. This can also be made an early priority, for construction work is simple and consists mainly of concrete lined canals.

(iii) *Completion of Tyr/Saida irrigation project*

Most of the major works are already completed in this scheme for the irrigation of the strip of land adjacent to the sea coast in the Tyr/Saida area. The main source of water supply is the Nahr el Litani. Mainly secondary canals remain to be built.

(iv) *Chekka/Tripoli project*

This is a more costly project involving tunnel construction to utilize an underground source of water supply for irrigation of the coast south of Tripoli and for eventual potable water for the Tripoli area. The project is partly planned and is recommended to be proceeded with.

(v) *Minor water supply projects*

In addition labour might be employed on a development of water supply systems for numerous villages in Lebanon.

(c) *Syria*

Syria, the largest of the countries under consideration, is divided physically into a number of rainfall and agricultural zones. In the mountain regions on the shores of the Mediterranean the rainfall is high, and there is a further zone of cultivable rain-fed land beginning at Jebel Druze and the Nauran, becoming very narrow or disappearing entirely east of the Anti-Lebanon, and reappearing as a broad band in the Aleppo area. Further east is a third zone where there is no rainfall and which is suitable for grazing only. To the north of this belt lies the Jezireh, where the rainfall is higher and cultivation is possible. There are many areas of hilly country with steep slopes.

Bearing in mind these considerations, the size of the country, and the fairly well advanced development projects of the Syrian Government, the consultants visualized works projects of the following types in Syria for the employment of refugees:

(i) *Terracing*

In some places terracing already exists but what has been accomplished is only a fraction of what is needed. Projects are, therefore, recommended for the terracing of a considerable area of land (up to 85,000 hectares) which can be used both for forest purposes and for growing fruit trees, particularly olives and figs.

(ii) *Afforestation*

Large areas in such regions of Syria as Mount Hermon, the Anti-Lebanon and part of the mountains of the Latakia area are unsuitable for cultivation for field or orchard crops, but would become, in time, a source of much economic value to the country if entirely planted under forest trees. Of the terracing programme above, 50,000 hectares are intended for afforestation. This should be done both by planting seedlings and sowing seeds. The utilization of the former method will be limited by the capacity of Syrian nurseries, and it is recommended that these be extended; the latter, while simple as an operation, is unfortunately unimportant for the absorption of labour.

(iii) *Road construction*

Work is ready to start in Syria on a good many short-term projects of road construction, and the consultants have examined and selected a number of schemes for road construction and improvement which will greatly assist the linking of several important towns.

(iv) *Irrigation and drainage*

The consultants consider that the reclamation of the Madkh swamp, which is partly completed, should be proceeded with as a works project for the employment of refugee labour.

(v) *General public works*

A number of public works have been examined and it is considered that a considerable portion of refugee labour can be employed on the improvement of the Mezze Airport, the construction of Latakia harbour (which should, however, first be further studied), and the works for the Aleppo water supply.

(d) *Gaza Strip*

Of the former Gaza district of Palestine, an area of only about 50,000 acres now remains in Arab control in the form of a long narrow coastal strip, a few kilometres wide, extending from a little north of Gaza to the Egyptian border. Within it some 200,000 refugees and the 70,000 normal inhabitants are concentrated. A small proportion of the area is irrigated by wells from which are watered certain portions of intensive cultivation; but the greater part of the strip consists either of sand dunes along the sea coast or of a rain-fed area producing cereals as a winter crop.

It is clear that in the small area concerned there is no possibility of finding works projects to employ more than a small proportion of the large number of refugees concentrated there. Two types of projects are however considered advisable:

(i) Sand fixation of the dunes by the planting of trees to prevent further encroachment on the arable land. This should be a continuation of a scheme introduced by the Palestine Forestry Department, which in 1947 brought into effect a ten-year programme for fixing 1,000 hectares of sand dunes per year. This project should be revived, as it will confer an important long-term benefit on the agriculture and people of the tract.

(ii) Certain minor engineering works can be undertaken, *viz.*, asphalting of roads and the possible installation of drainage systems in Gaza.

From the foregoing summary it will be seen that useful projects, meeting the criteria set out above, can be initiated in every country. These projects will absorb a very substantial portion of the refugees in each area, with the exception of the Gaza strip. A summary of the numbers which can be absorbed even in the specimen schemes outlined above (all of which must be regarded as type schemes susceptible to expansion or repetition) and of the estimated probable cost is given in appendix A. It will be remembered however, in outlining the rate at which proposed projects can

be brought into operation, that a number of other factors are involved.

* * *

Apart from the general organization required to supervise and carry on the whole programme for the Arab refugees taken together, changes will be required in the organization of the services of the Governments, to ensure adequate local execution of certain projects. It is strongly recommended in this connexion that terracing and afforestation be considered as one, and in conjunction with the conservation of water resources. The best course will probably be, therefore, for the Governments concerned to set up a soil conservation or land use division, either independent or under the appropriate existing Ministry.

(D) Terms of Reference of the Economic Survey Mission

The Conciliation Commission for Palestine, desiring further to implement paragraphs 10 and 11 of General Assembly resolution 194 (III) of 11 December 1948, and to obtain information which will serve as the basis for recommendations for further action by the General Assembly, Member States, appropriate specialized agencies, and interested organizations, and

Having noted the declarations of representatives of Israel and the Arab States with respect to repatriation, resettlement and compensation of refugees:

1. Pursuant to the authorization granted to it under paragraph 12 of the foregoing resolution hereby establishes, under its auspices, an Economic Survey Mission to examine the economic situation in the countries affected by the recent hostilities, and to make recommendations to the Commission for an integrated programme:

(*a*) To enable the Governments concerned to further such measures and development programmes as are required to overcome economic dislocations created by the hostilities;

(*b*) To facilitate the repatriation, resettlement and economic and social rehabilitation of the refugees and the payment of compensation pursuant to the provisions of paragraph eleven of the General Assembly's resolution of 11 December 1948, in order to reintegrate the refugees into the economic life of the area on a self-sustaining basis within a minimum period of time;

(*c*) To promote economic conditions conducive to the maintenance of peace and stability in the area.

2. Instructs the Economic Survey Mission to include in its recommendations an operational plan for carrying out the recommended programmes together with the estimated costs and methods of financing.

3. Authorizes the Mission, pursuant to paragraph 14 of the General Assembly's resolution of 11 December 1948, to invite the assistance of those Governments, specialized agencies and international organizations which may be able to facilitate its work.

The Conciliation Commission recommends that the Survey Mission approach its task along the following lines;

In collaboration with the Governments concerned:

(*a*) Explore the measures which can be taken by the Governments concerned without outside financial assistance to achieve the objectives of paragraph 1 above;

(*b*) On the basis of existing plans and surveys, examine proposals submitted by the Governments concerned for economic development and settlement projects requiring outside assistance which would make possible absorption of the refugees into the economy of the area on a self-sustained basis in a minimum time with a minimum expenditure;

(*c*) Examine other economic projects which can, with outside assistance, provide temporary employment for the refugees not employed on the development and settlement projects of paragraph (*b*);

(*d*) Examine such other development and settlement projects requiring outside assistance which, though not associated directly with the employment and settlement of refugees, would serve to achieve the objective of paragraph 1;

(*e*) Estimate the number of refugees who cannot be supported directly or indirectly through the employment envisaged under paragraphs (*a*)-(*d*), together with the estimated period during which direct relief will be required and the cost thereof;

(*f*) Study the problem of compensation to refugees for claims for property of those who do not return to their homes, and for the loss of or damage to property, with special reference to the relationship of such compensation to the proposed settlement projects;

(*g*) Study the problem of rehabilitation of refugees; including matters concerning their civil status, health, education and social services;

(*h*) Propose an organizational structure to achieve the objectives of paragraph 1 within a United Nations framework; to co-ordinate, supervise and facilitate measures for relief, resettlement, economic development and related requirements such as community service facilities, bearing in mind the interests of all Governments concerned.

1 September 1949

B. Resolution 302(IV) adopted by the General Assembly at its 273rd plenary meeting on 8 December 1949

The General Assembly,

Recalling its resolutions 212 (III) of 19 November 1948 and 194 (III) of 11 December 1948, affirming in particular the provisions of paragraph 11 of the latter resolution,

Having examined with appreciation the first interim report of the United Nations Economic Survey Mission for the Middle East (A/1106) and the report of the Secretary-General on assistance to Palestine refugees (A/1060 and A/1060/Add. 1),

1. *Expresses* its appreciation to the Governments which have generously responded to the appeal embodied in its resolution 212 (III), and to the appeal of the Secretary-General, to contribute in kind or in funds to the alleviation of the conditions of starvation and distress amongst the Palestine refugees;

2. *Expresses* also its gratitude to the International Committee of the Red Cross, to the League of Red Cross Societies and to the American Friends Service Committee for the contribution they have made to this humanitarian cause by discharging, in the face of great difficulties, the responsibility they voluntarily assumed for the distribution of relief supplies and the general care of the refugees; and welcomes the assurance they have given the Secretary-General that they will continue their co-operation with the United Nations until the end of March 1950 on a mutually acceptable basis;

3. *Commends* the United Nations International Children's Emergency Fund for the important contribution which it has made towards the United Nations programme of assistance; and commends those specialized agencies which have rendered assistance in their respective fields, in particular the World Health Organization, the United Nations Educational, Scientific and Cultural Organization and the International Refugee Organization;

4. *Expresses* its thanks to the numerous religious, charitable and humanitarian organizations which have materially assisted in bringing relief to Palestine refugees;

5. *Recognises* that, without prejudice to the provisions of paragraph 11 of General Assembly resolution 194 (III) of 11 December 1948, continued assistance for the relief of the Palestine refugees is necessary to prevent conditions of starvation and distress among them and to further conditions of peace and stability, and that constructive measures should be undertaken at an early date with a view to the termination of international assistance for relief;

6. *Considers that,* subject to the provisions of paragraph 9 (*d*) of the present resolution, the equivalent of approximately $33,700,000 will be required for direct relief and works programmes for the period 1 January to 31 December 1950 of which the equivalent of $20,200,000 is required for direct relief and $13,500,000 for works programmes; that the equivalent of approximately $21,200,000 will be required for works programmes from 1 January to 30 June 1951, all inclusive of administrative expenses; and that direct relief should be terminated not later than 31 December 1950 unless otherwise determined by the General Assembly at its fifth regular session;

7. *Establishes* the "United Nations Relief and Works Agency for Palestine Refugees in the Near East":

(*a*) To carry out in collaboration with local governments the direct relief and works programmes as recommended by the Economic Survey Mission;

(*b*) To consult with the interested Near Eastern Governments concerning measures to be taken by them preparatory to the time when international assistance for relief and works projects is no longer available;

8. *Establishes* an Advisory Commission consisting of representatives of France, Turkey, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, with power to add not more than three additional members from contributing Governments, to advise and assist the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East in the execution of the programme; the Director and the Advisory Commission shall consult with each Near Eastern Government concerned in the selection, planning and execution of projects;

9. *Requests* the Secretary-General to appoint the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East in consultation with the Governments represented on the Advisory Commission;

(*a*) The Director shall be the chief executive officer of the United Nations Relief and Works Agency for Palestine Refugees in the Near East responsible to the General Assembly for the operation of the programme;

(*b*) The Director shall select and appoint his staff in accordance with general arrangements made in agreement with the Secretary-General, including such of the staff rules and regulations of the United Nations as the Director and the Secretary-General shall agree are applicable, and to the extent possible utilize the facilities and assistance of the Secretary-General;

(*c*) The Director shall, in consultation with the Secretary-General and the Advisory Committee on Administrative and Budgetary Questions, establish financial regulations for the United Nations Relief and Works Agency for Palestine Refugees in the Near East;

(*d*) Subject to the financial regulations established pursuant to clause (*c*) of the present paragraph, the Director, in consultation with the Advisory Commission, shall apportion available funds between direct relief and works projects in their discretion, in the event that the estimates in paragraph 6 require revision;

10. *Requests* the Director to convene the Advisory Commission at the earliest practicable date for the purpose of developing plans for the organization and administration of the programme, and of adopting rules of procedure;

11. *Continues* the United Nations Relief for Palestine Refugees as established under General Assembly resolution 212 (III) until 1 April 1950, or until such date thereafter as the transfer referred to in paragraph 12 is effected, and requests the Secretary-General in consultation with the operating agencies to continue the endeavour to reduce the numbers of rations by progressive stages in the light of the findings and recommendations of the Economic Survey Mission;

12. *Instructs* the Secretary-General to transfer to the United Nations Relief and Works Agency for Palestine Refugees in the Near East the assets and liabilities of the United Nations Relief for Palestine Refugees by 1 April 1950, or at such date as may be agreed by him and the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East;

13. *Urges* all Members of the United Nations and non-members to make voluntary contributions in funds or in kind to ensure that the amount of supplies and funds required is obtained for each period of the programme as set out in paragraph 6; contributions in funds may be made in currencies other than the United States dollar in so far as the programme can be carried out in such currencies;

14. *Authorizes* the Secretary-General, in consultation with the Advisory Committee on Administrative and Budgetary Questions, to advance funds deemed to be available for this purpose and not exceeding $5,000,000 from the Working Capital Fund to finance operations pursuant to the present resolution, such sum to be repaid not later than 31 December 1950 from the voluntary governmental contributions requested under paragraph 13 above;

15. *Authorizes* the Secretary-General, in consultation with the Advisory Committee on Administrative and Budgetary Questions, to negotiate with the International Refugee Organization for an interest-free loan in an amount not to exceed the equivalent of $2,800,000 to finance the programme subject to mutually satisfactory conditions for repayment;

16. *Authorizes* the Secretary-General to continue the Special Fund established under General Assembly resolution 212 (III) and to make withdrawals therefrom for the operation of the United Nations Relief for Palestine Refugees and, upon the request of the Director, for the operations of the United Nations Relief and Works Agency for Palestine Refugees in the Near East;

17. *Calls upon* the Governments concerned to accord to the United Nations Relief and Works Agency for Palestine Refugees in the Near East the privileges, immunities, exemptions and facilities which have been granted to the United Nations Relief for Palestine Refugees, together with all other privileges, immunities, exemptions and facilities necessary for the fulfilment of its functions;

18. *Urges* the United Nations International Children's Emergency Fund, the International Refugee Organization, the World Health Organization, the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization and other appropriate agencies and private groups and organizations, in consultation with the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East, to furnish assistance within the framework of the programme;

19. *Requests* the Director of the United Nations Relief and Works Agency for Palestine Refugees in the Near East:

(*a*) To appoint a representative to attend the meeting of the Technical Assistance Board as observer so that the technical assistance activities of the United Nations Relief and Works Agency for Palestine Refugees in the Near East may be co-ordinated with the technical assistance programmes of the United Nations and specialized agencies referred to in Economic and Social Council resolution 222 (IX) A of 15 August 1949;

(*b*) To place at the disposal of the Technical Assistance Board full information concerning any technical assistance work which may be done by the United Nations Relief and Works Agency for Palestine Refugees in the Near East, in order that it may be included in the reports submitted by the Technical Assistance Board to the Technical Assistance Committee of the Economic and Social Council;

20. *Directs* the United Nations Relief and Work Agency for Palestine Refugees in the Near East to consult with the United Nations Conciliation Commission for Palestine in the best interests of their respective tasks, with particular reference to paragraph 11 of General Assembly resolution 194 (III) of 11 December 1948;

21. *Requests* the Director to submit to the General Assembly of the United Nations an annual report on the work of the United Nations Relief

and Works Agency for Palestine Refugees in the Near East, including an audit of funds, and invites him to submit to the Secretary-General such other reports as the United Nations Relief and Works Agency for Palestine Refugees in the Near East may wish to bring to the attention of Members of the United Nations, or its appropriate organs;

22. *Instructs* the United Nations Conciliation Commission for Palestine to transmit the final report of the Economic Survey Mission, with such comments as it may wish to make, to the Secretary-General for transmission to the Members of the United Nations and to the United Nations Relief and Works Agency for Palestine Refugees in the Near East.

APPENDIX II

Financial Survey

General Summary

The six countries surveyed by the Mission—i.e., Egypt, Iraq, Israel, Jordan, Lebanon and Syria—are all very young States in terms of autonomous government and administration. Egypt, the oldest of the group, has had no more than twenty-seven years of self-government since its re-emergence as a sovereign State in 1922. Iraq achieved its independence upon termination of the British Mandate in 1932. Syria and Lebanon, after having been joined under a French mandate, became distinct sovereign States in 1946, although continuing to maintain a customs union. In that same year of 1946, Jordan also became independent while Israel did not come into existence until 1948.

In view of the relatively limited experience of these States in managing their economic and financial affairs, the progress already achieved in certain instances is noteworthy. Nevertheless, in most of the countries surveyed by the Mission, the statistical and other economic data required to make a thorough appraisal of economic and financial conditions are not yet available. Lack of factual information on the national income, budgets, balance of payments, etc., of the Middle East economies has prevented a detailed study of each country's economic position. Severe limitations of time have further closely restricted the survey undertaken by the Mission.

But from even this brief study, we believe that certain broad conclusions may justifiably be drawn as to the general nature of the Middle East economic problem and the obstacles to its solution.

First, it is only too clear that the Middle East suffers from poverty in the extreme. None of the countries concerned has as yet succeeded in measuring by means of national income studies even the approximate degree of its impoverishment. The FAO has ventured, on the basis of unstated statistical techniques, comparative estimates of income in various Middle Eastern countries.[1]

These estimates are undoubtedly subject to a considerable margin of error, which would render it hazardous to attempt any close comparison of one national standard of life with another. But we hardly need wait upon precise studies of national income or even of caloric availabilities for proof of the pervasive incidence of crushing poverty throughout nearly all the Middle East area. One should of course note the exception of Israel where the contributions of world Jewry precariously support a standard of life far above that attainable from local production. Elsewhere in the Middle East, however, most of the population—perhaps as much as 90 per cent—lives virtually on the margin of subsistence. Conspicuous examples of extravagant spending may of course be found in the cities. But while such maldistribution of income obstructs economic progress in a variety of ways, it is secondary to the basic problem in each country of grossly inadequate output in relation to the total population. This is the central fact of economic life in the Middle East.

Estimated annual income per capita:

Country	*U.S. $ equivalent*
Afghanistan	50
Egypt	100
Ethiopia	40
Iran	85
Israel	395
Lebanon	125
Saudi Arabia	40
Syria	100
Turkey	125

From this fact of poverty, which everywhere springs to the eye, there inevitably follows a familiar chain of economic and institutional problems that have so far defied effective solution.

Under such conditions of intense pressure of hungry populations upon closely limited resources, consumption naturally tends to absorb all available output. As a consequence, the rate of savings inevitably falls far short of the rate of investment required to produce significant improvements in output and resource utilization. A Lebanese representative in the United Nations Economic and Social Council has cogently described the problem:

"The Middle East provides an excellent example of what is described as a hand-to-mouth economy. Gentlemen, it is literally hand-to-mouth. This being the case, the Middle East can never provide internally the capital with which to develop investment goods as all its energy is spent on the production of consumption goods. Yet again, when such production is considered on a *per capita* basis it is revealed that the productivity per man-hour is much lower than in more developed economies. . . . The plight of the Middle East is

[1] "Review of Food and Agricultural . . . Outlook in the Near East" (1949).

truly a vicious circle. To increase its consumption goods it needs to increase its investment goods, but to increase its investment goods it need to increase its consumption goods. . . . The process will inevitably be lengthy, strenuous and painful."

This basic problem of capital accumulation is rendered all the more acute by the present inability of most of the Middle East Governments to mobilize, through public loans, even such savings as now materialize. Private savings are attracted by high rates of interest into even more lucrative profit ventures or some form of usury, or run to seed in the form of gold hoards.

Nor have the several Middle Eastern Governments succeeded in devoting any significant share of their budgetary revenues to basic developmental activities. Expenditure requirements, frequently inflated or misdirected, are currently being financed from an exceedingly narrow tax base which exempts the broad area of non-monetary income and covers only a relatively minor portion of monetary income. Existing fiscal techniques, which have not succeeded in tapping the incomes of the wealthy, are grossly inadequate to finance any large-scale programme of economic development.

Such paucity of internal financial resources is parallelled by even more acute shortages of foreign exchange for financing capital imports. At present, the exchange receipts of nearly all of the Middle Eastern economies are devoted almost entirely to financing consumption imports. This is not intended to imply that, in certain countries, considerable amounts of exchange could not, under favourable circumstances, be diverted to capital purposes by cutting down upon luxuries imported for the benefit of a few. But such mobilization of exchange resources for the general economic welfare would encounter no less opposition from powerful private interests than that confronting reform of the tax structure. And in the cases of Lebanon and Syria, governmental efforts to impose controls upon the exchange markets might well result in a drying up of the substantial hard currency earnings which now depend upon unrestricted trading. Egypt and Iraq might, by a further tightening of exchange and trade controls, attempt to divert to capital account a considerable proportion of current sterling receipts, but one encounters here the familiar obstacle of sterling inconvertibility. Finally, the balance of payments of most Middle Eastern countries is acutely vulnerable to the frequently extensive variations in domestic output and to fluctuations in foreign market demand for their closely limited range of exports.

These exchange difficulties have in turn discouraged private investment from abroad, even within the relatively narrow range of development ventures promising to amortize themselves through import savings or increased export earnings. Moreover, in all the countries concerned, the exchange mechanism itself—ranging from the rigidly controlled system operated by Israel to the floating rates permitted by Syria and Lebanon—operates as a major deterrent to any significant influx of private capital from abroad.

In general, therefore, the Middle Eastern economies find themselves on dead centre and, in their efforts to move on to a dynamic phase of development, encounter at every turn obstacles created by the very fact of their poverty.

Syria affords a striking example of the broad range of these developmental problems. Here one finds in no more than rudimentary form the basic monetary institutions upon which any developmental programme must rely. Such savings as may be eked out of an oppressively low national income yield only a trickle of deposit funds to the *Banque de Syrie* and the few other institutions that now handle the banking requirements of Syria. Far more significant as a medium of savings are private hoards of sovereigns and other gold coins, which further serve as an accepted standard of value and often as a means of exchange. The availability of loan funds for productive enterprise is further sharply restricted by the competition of high-profit commercial ventures, which can apparently afford interest charges of 20 per cent or more. Such shortages of credit facilities bear heavily upon the agricultural community and also check the growth of infant industries.

On the budgetary side, the Syrian Government is currently allocating only a negligible proportion of its public revenues for developmental purposes. Broad possibilities undoubtedly exist for economies in current outlay and the development of greater and more progressive taxation. But progress in this direction will probably tend to proceed concurrently with, rather than to lead, economic development. Similarly, mobilization of private savings by governmental loan offerings for capital investment will remain out of the question until the current value of savings is very substantially enlarged and prevailing rates of interest reduced to more reasonable levels. Meanwhile, the Syrian Government can do much to prepare for the basic budgetary reforms that must eventually be undertaken, by informing itself, and the general public, more precisely and promptly as to the nature of its actual budgetary operations.

On the exchange side, the Syrian authorities have no detailed knowledge of their balance of payments position. The current rate of imports appears to depend mainly on three key exports, wheat, wool and cotton, together with miscellaneous receipts arising out of a variety of brokerage transactions. Although the Syrian Government might have attempted to divert a certain percentage of these exchange receipts to capital require-

ments, it has, in fact, recently chosen to remove virtually all import licensing controls as well as the remaining exchange restrictions. Government officials explain such final abandonment of earlier control efforts in terms of the impossibility of effective administration and the risk of losing brokerage transactions dependent upon a free exchange market. However, this policy amounts to a confession of inability to secure more exchange for development purposes than the sterling derived from the Iraq Petroleum Company and the dollar expenditures of the Trans-Arabian Pipeline Company.

Moreover, the availability of Trans-Arabian Pipeline dollar receipts for developmental purposes is further restricted by the Government's current efforts to strengthen the gold reserve backing of the currency which is at the moment based primarily upon franc balances accumulated during the war years. Although a modicum of exchange stability has prevailed during recent months, the decision to reinforce the currency backing would seem a wise one. The sooner adequate reserve backing is provided, the sooner will Syria be able to effect an official stabilization of the present floating exchange rate and thereby render its market more attractive to foreign investors.

Syria's long-term development possibilities are impressive. Her boundaries include territories which are thinly inhabited to-day, but were rendered fertile in antiquity by irrigation and could be again. The existence of these highly promising resources lays upon the Syrian Government the imperative duty of exploiting such possibilities to the fullest on behalf of the Syrian people.

Iraq possesses a potential of economic development holding greater promise than that of any other country surveyed by the Mission. Alone among the Middle East countries, Iraq has both undeveloped resources in the form of water and potentially fertile land, and substantial exchange earnings from oil royalties accruing directly to Government account, with which capital development might be financed. In brief, the economic problem of Iraq is one of translating oil revenues into the rehabilitation of the Tigris-Euphrates valley.

Until now, however, the financial resources available to the State not only from oil royalties but also from wartime-accumulated sterling balances, have been very largely devoted to financing consumption imports and the ordinary operating expenses of the State. Such dissipation of irreplaceable capital assets upon current consumption demands is largely explainable in the terms of the same basic difficulties that retard progress elsewhere in the Middle East. Thus the Iraqui economy has as yet been unable to develop any substantial flow of monetary savings. Even the use of money is confined to a relatively small proportion of the population. The budgetary system of the country is primitive, the tax base narrow and the Government's credit position is weak. Scarce exchange resources are allowed to go to waste on luxury imports. To compensate for these failings, the Government has been forced to draw heavily upon its capital assets.

If Iraq is ever to allocate a significant share of its oil royalties to economic development, therefore, the Government must first seek to cover a much higher percentage of its operating expenses from a broadened and more productive tax base. The growth of deposit banking and other institutional expressions of a monetary economy should be encouraged. Public confidence in the governmental financial position should be strengthened by reform of present budgetary techniques. Luxury imports must somehow be reduced and the exchange resources so released diverted to capital account.

Iraqi resources have been well surveyed and, with the important exception of basic agricultural research, there is sufficient knowledge of many technical possibilities to warrant the early inauguration of a development programme. It is unlikely, however, that this programme will ever gain momentum without the initial stimulus of foreign assistance and technical advice. But with adequate reform of its finances, Iraq might at a relatively early date succeed in fully financing its exchange requirements for capital imports through the earmarking of oil royalties for this purpose. In this connexion, the degree of convertibility into local currencies of its sterling receipts from oil royalties will unquestionably prove of crucial importance.

Jordan is by far the least developed of any of the Middle East economies surveyed by the Mission. All of the shortcomings of the Syrian and Iraqi economies with respect to income, savings, exchange earnings and developmental progress apply with much greater force to Jordan. For years the country has relied upon British subsidies for coverage of a major proportion of its import requirements. And now Jordan must be considered for all practical purposes as one with Arab Palestine. Into this new geographical unit of Jordan-Arab Palestine there have fled refugees numbering from one-third to one-half of a total population now swelled to nearly a million. In other Middle East countries, this refugee problem can be dissociated from long-term development considerations. Not so in Jordan, whose Government appears to contemplate the settlement not only of the refugees it is harbouring today, but even of more, provided the necessary means can be supplied from abroad.

During the past year, the annual British subsidy has been supplemented not only by United Nations relief assistance but also, and perhaps most im-

portant of all, by the redemption against sterling of Palestine Currency Board notes brought in by the Palestinian refugees. But this last-named resource, which has reportedly provided Jordan with approximately £12 million, is rapidly approaching exhaustion. Unless additional exchange resources can be found, Jordan will face the inevitable necessity of severe import cuts with consequent deepening of its present poverty, and a possible heavy toll of human suffering. Jordan's immediate problem is to adopt short-term measures of economic survival which may lead into progressive economic development.

Lebanon. In comparison with Syria, Iraq and Jordan, the Lebanese economy undoubtedly provides a significantly higher standard of living for its population. Although agriculture is a basic source of income as in the other Middle East economies, Lebanon's relatively advantageous position has been primarily achieved through the extensive service transactions which Lebanese merchants undertake on behalf of foreign markets. Transhipments through the well-equipped port of Beirut to neighbouring countries, gold brokerage fees, exchange and commodity arbitrage, etc., all contribute to comparatively substantial earnings of hard, as well as soft, currencies.

The merchant tradition of Lebanon has in turn encouraged a much more extensive growth of modern financial institutions than may be found in Syria, Iraq or Jordan. Money savings are higher, interest rates tend to be lower, and the general flow of credit to productive enterprise less restricted. But here again one encounters the familiar difficulty that the State cannot yet command any part of such internal financial resources through public loan offerings for purposes of economic development. Nor does the present heavy reliance of the Lebanese budget upon consumption taxation encourage hope of major allocations of public revenues to capital investment in the near future.

On the exchange side, the Lebanese Government abandoned even earlier than Syria all quantitative controls over exchange and import transactions. Exchange receipts passing through official channels are now virtually limited to payments by the Iraq Petroleum Company and the Trans-Arabian Pipeline, which, currently at least, are inadequate to finance any substantial development programs, such as that required to utilize the promising developmental possibilities of the Litani River. As in the case of Syria, moreover, the Lebanese Government has authorized the *Banque de Syrie et du Liban* to utilize part of the dollar receipts accruing to governmental account for strengthening the gold reserve. It is to be hoped that this policy will eventually enable Lebanon to effect a firm stabilization of the present floating rate of exchange which currently discourages foreign investors from assisting Lebanese development.

Egypt. Frequent reference has been made in earlier pages to two major obstacles to development, namely, the inadequacy of savings and the difficulty of mobilizing such savings as there are. While these obstacles continue to impede the development of the Egyptian economy, there has, nevertheless, appeared in Egypt an impressive growth of modern financial institutions which neighbouring countries may advantageously study. Thus, Egypt has succeeded in developing a governmental bond market, in converting much of its external indebtedness into domestic obligations, in substituting governmental paper for exchange assets in the currency reserve, and even in introducing income tax legislation. This institutional progress on the financial side has been facilitated by a concurrent growth of national output and has in turn contributed to the rise in the national income.

But such striking developmental gains have apparently failed to yield any perceptible improvement in the individual standard of life. Thus, despite major increases of national output during the past century, the "marginal" group in the Egyptian population, i.e., those afflicted by poverty, illiteracy and disease, is commonly estimated at around 90 per cent. For example, the vast irrigation works carried out during the last two generations in Egypt have been followed by corresponding increases in population and truly appalling growth of debilitating diseases, such as bilharzia and malaria.

It would seem reasonably clear, therefore, that an effective solution of the social problem created by such population pressure cannot be entirely assured by further expansion of output and national income. Education and more diversified opportunities for employment must also assist in bringing about a gradual release from ancestral habits, long ingrained in an economy which has so far offered but little choice to the individual.

Israel. The case of Israel is *sui generis.* There one finds a western civilization of the most modern type which is making prodigious efforts to draw life from the barren soil of Palestine. On the financial side, Israel possesses a reasonably well-equipped and excellently managed banking system, a remarkably high rate of savings, and a smoothly operating budgetary mechanism, which has so far succeeded in financing very substantial outlays for developmental and military purposes as well as current operating expenses. In the absence of this vitally important machinery for mobilizing national economic resources, Israel could not possibly have sustained its effort of the past year.

But the basic problem now confronting Israel is whether, even with further improvement of its

financial machinery, it can safely absorb immigration at the rate currently contemplated. The stark fact is that incoming immigrants create, at least initially, heavy demands on both domestic output and foreign exchange resources, while contributing little or nothing to either.

Thus, the Israeli balance of payments is currently maintained only precariously in equilibrium by foreign contributions, investments, and other capital transfers covering more than 75 per cent of current exchange outlay. Furthermore, the most crucial item on the receipts side, the contributions by world Jewry, evidence a pronounced tendency to decline while foreign exchange requirements for support and absorption of incoming immigrants continue to mount. Even if the contributions of world Jewry do not further decline, the arrival of 150,000 immigrants during 1950 might well open up an exchange deficit approximating 25 per cent of total exchange requirements. To a very considerable extent, this prospective gap in the Israeli exchange accounts for 1950 could be as satisfactorily closed by partial release of its frozen sterling balances of 25 to 30 million pounds as by larger dollar receipts. But whether the British Government will find it possible, particularly in view of the pressing repayment demands of its other creditors, to release sterling on the scale required by Israel remains a matter for negotiation between the two Governments concerned.

The exchange outlook for 1951 is even more grave. Although the Israeli authorities express strong hope that rising exports and a growing influx of commercial investment will prevent a further broadening of the exchange gap, foreign investors have so far evidenced but little interest, while Israel's export potential remains highly uncertain.

General financial outlook. With the exception of Iraq and possibly Egypt, the prospect of early improvement in the domestic and external financial position of the various Middle Eastern countries thus does not appear encouraging. However, promising the possibilities of resource development that engineering surveys may reveal, it is most unlikely that major projects can be financed without substantial outside assistance.

But so long as the Middle Eastern countries remain economically prostrate, the risks confronting potential foreign investors are likely to outweigh the prospective returns. We believe it improbable, therefore, that private investment from abroad will supply the generating power required to initiate the developmental process. In this connexion, one often encounters the belief that undeveloped countries such as those in the Middle East could attract investment capital simply by undertaking a thorough financial house-cleaning. But it is perhaps insufficiently appreciated that the major deterrents to foreign investment, i.e., low and erratic foreign exchange earnings, vulnerable exchange rates, ineffective budgetary policies, etc., are all rooted in the basic fact of their poverty and can never be entirely overcome so long as this poverty remains. This is a vicious circle common to all undeveloped States; because they are poor they cannot attract foreign investment and because they cannot attract foreign investment they remain poor.

There is, of course, the possibility of breaking the vicious circle through foreign assistance in the form of grants, or loans on especially favourable terms, for the initial financing of carefully selected development projects. A dynamic process of development will not be generated, however, unless the Governments receiving foreign aid arouse their peoples to work and hope for a better future. Governments must seek to enlighten the public as to its stake in economic development and thereby deliberately expose themselves to the political demands from which effective reform action will then spring. With such a revival of national effort and rising national income, it may then prove possible gradually to remove the present institutional obstacles to progress. But effective and lasting financial reforms can only stem from a truly national realization of their necessity and purpose.

The institutional problem naturally varies from country to country, and only a detailed study of each case in the light of specific plans for development could show in precise detail the policies and administrative reforms required. It is possible, however, to indicate the general lines along which all these countries could mobilize more fully their own resources in support of economic development.

First, the diversion of some portion of currently earned foreign exchange from expenditure on luxury consumption to capital imports.

Second, preparation of exchange stabilization plans with a view to reducing risks to foreign investment.

Third, tax reforms designed to broaden the tax base and to raise a larger proportion of revenue from the higher income groups.

Fourth, the establishment of development budgets providing a concrete expression of an agreed development policy and constituting a high priority charge upon the national revenues and receipts.

Fifth, improvement of budgetary procedures, including the adoption of cash accounting, and the prompt publication of results.

None of these changes can come quickly, nor can they be expected to yield dramatic returns. They will inevitably encounter determined political and social opposition which will subject governmental leadership to a searching test. Nevertheless, beginnings in these directions are within the competence of all the countries concerned. They are a prerequisite of economic progress.

Having rapidly reviewed the whole field in the foregoing sections, we will now go, in some detail, into certain financial problems confronting the individual countries, taken one by one. These problems have an important bearing upon development prospects.

Grants cannot supply all the funds which the countries believe they could usefully employ for development purposes. If the Governments decide to proceed with their plans, they may one day be seeking foreign loans on commercial terms. But the extent to which loans can be found abroad for development projects, however well prepared and justified economically these may be, will be largely determined by the borrowing countries' capacity both to service loans in hard exchange and to meet local-currency expenditure on these projects out of their own resources. It is here that the development problem links up with that of public finance throughout this area. When considering the drawbacks of prevalent fiscal systems, except in Israel and to some extent Egypt, it may be tempting to condemn these systems root and branch. Certainly, changes making for a more equitable distribution of charges could and should be introduced. It would be well, however, to proceed with caution in this matter. Hasty reforms might result in a dangerous falling off of receipts at a critical juncture. There is virtue in a tax that is understood, easy to collect and difficult to evade. The French saying that a good tax is an old tax deserves to be pondered. The whole question should be gone into exhaustively, and innovations tried out in practice, as far as possible, before reliance is placed upon income-tax as the main source of receipts, capable of taking the traditional place of customs duties and taxes on consumption. The same may be said of other administrative reforms which are being urged upon Governments: not too much at a time; and remember that changes are not always necessarily for the better.

Moreover, when assessing the probable results of development works in this area, it should not be forgotten that if such projects were to attract a considerable portion of available labour, greatly increased spending habits, rather than a solid improvement in the standard of living, might result, swelling imports and impeding exports by making for higher production costs. A somewhat precarious equilibrium, such as has been achieved in countries like Syria and Lebanon, might be compromised by this process if care were not taken to control it. Much will depend on the quality and continuing availability of the advice Governments receive in this connexion.

The following studies are based on published documents, supplemented by consultation with responsible officials in the capitals which it has been possible to visit for the purpose: i.e., Damascus, Amman, Beirut and Tel Aviv.

Syria

Syria has a customs union with Lebanon. The system is frequently criticized. But on balance, official opinion in both countries appears to be in favour of maintaining it, while recognizing that reconciliation of the divergent development plans of the two countries may sometimes be difficult.

Public Finance. Like Iraq, Jordan and Lebanon, Syria's traditional policy is to achieve a budget surplus wherewith to feed a reserve fund out of which emergency expenditure may be met. As in the other countries named, money is still too dear for the State to be able to borrow from the public.

Definitive budget accounts are published after audit by the Court of Accounts and Approval by Parliament, which normally involves a delay of several years, the most recent now available being those for 1945, when the reserve fund stood at £S49 million. No provisional returns are made public, useful and illuminating as these would be. Estimates are published, and always forecast expenditure and receipts in equilibrium: at £S125.8 million for 1947, £S127.9 million for 1948, and £S130.7 million for 1949. In 1945, the last year for which accounts have been published, actual expenditure on the ordinary budget amounted to £S99 million, and actual receipts to £S119 million, leaving an accounting surplus of £S20 million. It is estimated that in 1946 this surplus declined to roughly £S13 million, and in 1947 to perhaps £S6 million; that a deficit will probably materialize for 1948; but that 1949 will produce a surplus, once more. It will be remembered that expenditure not provided for in the budget is currently being met out of the reserve fund, as to the amount of which, at any given time, no conclusions should be drawn from these figures. It should also be realized that extra-budgetary expenditure so financed is just as inflationary from the monetary point of view as Government borrowings from the *Banque de Syrie*, although far less harmful from a psychological point of view.

There is a dual system of accounts: (*a*) on an accrual basis, including extra-budgetary items (audited by the Court of Accounts but not submitted to Parliament); and (*b*) on a cash basis, comprising the budget period (the calendar year) plus a complementary period of four months (or more if prolonged by Parliament), audited, and submitted to Parliament.

Military expenditure is normally included in the ordinary budget. But an extraordinary military budget, with expenditure totalling £S90 million, rendered necessary by the recent fighting, was laid before Parliament in August 1946, and is to be included in the ordinary budget for 1950, in deference to the principle of budget unity. The greater part of the expenditure thus provided for has already been paid out, and has been met from cash balances and advances by the *Banque de*

Syrie. Its inflationary impact has been considerably alleviated, however, by the fact that the greater part of the outlay has been spent, not on the local market, but abroad via French francs, and pounds sterling supplied from the reserves of the *Banque de Syrie*. Definitive cover for the whole amount has not yet been found.

Charges in addition to those figuring in the ordinary budget may fall upon the State in respect of the railways, some of which are owned by the State; of the Post, Telegraph and Telephone (an autonomous enterprise, but which on occasion receives State support); of the Grain Office; of the Agricultural Bank and of the Foreign Exchange Office. Further, there are "annexed budgets" for the Arab Academy, the Service of Antiquities and the Syrian University, whose deficits figure in the ordinary budget. Occasional loans are made by the Treasury to municipalities, which also borrow (with maturity not exceeding ten years) from the *Banque de Syrie* with the State's guarantee, the relevant recognizances of debt being eligible for inclusion in the cover for the note issue.

Aside from its borrowings from the *Banque de Syrie*, the State has no debts, foreign or domestic, other than its obligation to pay pensions (figuring in the budget) to retired officials. It is planned to set up an autonomous Pensions Office (with a State subvention) to handle expenditure under this heading.

The municipalities' budgets are published in the *Statistical Bulletin*. Receipts are provided from local surcharges on ordinary State taxes, as in France. No State subsidies are granted to the municipalities, but these may obtain the State's guarantee on loans from the Bank of Issue (*Banque de Syrie*).

The Syrian State's budget estimates balanced at £S125.8 million in 1947, the last year for which figures for the municipalities are available; these then amounting to £S21.7 million on the revenue side, and £S18.7 million for expenditure. Neglecting the relatively small fraction of receipts represented by income from public property, and also the fact that actual receipts are usually rather in excess of estimates, the Syrian people thus appear to have contributed £S147.5 million for public purposes in 1947, or less than £S50 *per caput* of population. State receipts for 1949 are estimated as £S130.7 million, or about 4 per cent more than for 1947. If it is assumed that municipal receipts increase in like proportion, the total charge still works out at a shade over £S50, or between $15 and $16 *per caput* of population. Even if, in 1950, somewhat more has to be demanded from the taxpayer to cover the extraordinary military expenses referred to above, the resultant burden is not a heavy one, even when considered in relation to a national income estimated by FAO at only $100 *per caput*.

The State possesses large landed estates, chiefly agricultural, most of which it farms out under various systems of tenure, with promise of sale after a stipulated period of tenancy.

Foreign Exchange Régime. As in Lebanon, the legal parity of the U.S. dollar is £S2.185. But exchange-control restrictions designed to support this rate have gradually been relaxed; until two months ago exporters were permitted to retain the foreign exchange proceeds of their sales abroad without surrendering any part of these to the Exchange Office, importers being left to provide themselves with exchange, to pay for the goods they purchase abroad, on the open market, through authorized dealers. Allotments through official channels are now limited to French francs and some other European soft currencies. It is noteworthy that customs duties are still calculated, as in Lebanon, on the basis of the official parity (£S2.185). This results in substantial reductions in the tariff schedule, in real terms.

In these circumstances, the activities of the Exchange Office have greatly fallen off, now being practically restricted to operations effected for the State's account at the legal parity of £S2.185, out of resources made up by receipts from foreign oil companies, whose local currency purchases take place as to 80 per cent at the official parity (cf. Lebanon). However, there is no legal restriction on the State's right to buy such foreign exchange as it may need on the open market, through the Exchange Office, which is at present in course of transformation into a Stabilization Fund, devised to fit the changed situation now that exchange dealings have been largely set free.

Transactions involving movements of capital still require special permit, and must take place through authorized dealers. It is recognized that these restrictions are not in fact operative at the moment. The purposes for which exchange is purchased are not strictly scrutinized. The view appears to be that if a flight of capital were taking place on a dangerous scale, this would soon be apparent. Repressive action might then be called for; but unless and until such a problem arises, it seems preferable not to incur the expense of setting up the complicated organization that would be required in this connexion.

At present, residents in Syria are not required to report their exchange holdings, nor are there any restrictions on sales and purchases of exchange inside the country, or on transfers of interest on foreign investments in Syria. Purchases of dollars appear to take place directly through Syrian pounds and not by way of a third currency.

This lifting of foreign exchange control is alleged to have stimulated export, and thus to have made for an approach to equilibrium in foreign trade. Imports are still heavily in excess of exports, but this difference is entirely compensated

by invisible items and drafts upon reserves. Indeed, it is asserted that the balance of payments is favourable, although no official or semi-official attempt at working it out appears to have been made. Brokerage, commission and exchange transactions out of which profits accrue to Syrians are being carried on the world over, if not on as large a scale as in the case of Lebanon. The Syrian pound has strengthened on the open market, in terms of the U.S. dollar, since transactions have been free. However, a slight discount substitute *vis-à-vis* the Lebanese pound.

No official estimate of gold hoards is available, but their total is believed in some well-informed quarters to be not less than $150 million. This is probably more than they amount to in Lebanon, where there are more inducements to put such money to work. In Syria, there is little dishoarding, so far. To hoard gold is an ancestral habit in this country, accustomed as it is to see wealth in other forms lose its value. Indeed, many Syrians prefer to have recourse to bank overdrafts, for which they pay heavy rates of interest, rather than to invest capital that lies idle in gold. For the moment, moreover, the alarm caused by the recent disturbances in this area has not altogether subsided. Contracts may not legally stipulate payment in gold; but the gold clause (payment in local currency at a rate based on the open market quotation for gold) is permitted.

The retention of the £S2.185 official parity is regarded as important, on the ground that the psychological effect of any departure from it would be incalculable. All prices are highly sensitive to changes in the dollar quotation, and this would apply even to the official rate, which everyone knows no longer obtains in ordinary foreign trade transactions.

Bank of Issue. The agreements in force between the State and the *Banque de Syrie* confer upon the latter an exclusive privilege of issuing currency notes, until 1965. This bank also holds all the State's free balances, including the reserve fund, and on occasion makes disbursements on the State's account, though the Finance Ministry normally acts as the State's cashier, except as regards the Railways, the Post, Telegraph and Telephone, the Agricultural Bank and the Grain Office.

The *Banque de Syrie* is also the chief institution engaged in commercial banking. Apart from the operations of the Stabilization Fund, which is managed by it, the *Banque de Syrie* is said to transact some 60 per cent (in value) of the country's exchange deals (at a free rate), and about the same percentage of advance, besides the bulk of short-term bank credit to farmers, the Agricultural Bank's business being confined to long-term loans, and farmers living in parts of the country not served by any of the *Banque de Syrie*'s eleven branches having little or no access to credit other than that supplied by moneylenders. The *Banque de Syrie* also handles discounts for the larger houses, these perhaps representing some 20 per cent of Syria's total volume of discounts.

The *Banque de Syrie*'s discount rate varies from 5 to 7 per cent for three months' bills and advances up to 9 to 12 months, and 3½ to 4½ per cent for rediscounts. It appears that other banks' charges range appreciably higher than these, and that 30 per cent or more is currently paid on unsecured loans.

Under its agreements with the State, the *Banque de Syrie* aims at accumulating gold, as and when circumstances permit, to provide cover for the note circulation (£S240 million at November 15) in a proportion of 30 per cent. A beginning has been made towards this goal, to the extent of about 5 per cent, the balance now being represented by some 11 to 12 billion French francs, holdings of which are being gradually reduced in agreement with the *Banque de France*, and by Treasury Bills of the Syrian State, short-term but renewable; these are, however, not to represent more than 40 per cent of the total cover. The gold in the cover is valued at the official parity of $1 = £S2.185, the difference caused by application of this rate being made up to the bank by the State.

As in Lebanon, it is not open to the Bank to acquire dollars with the French francs released under the agreement above referred to, but only such European currencies as the *Banque de France* may designate.

Syria receives approximately 3 million pounds sterling annually from the Iraq Petroleum Company. For the time being, these receipts appear somewhat in excess of open market demands.

It has been noted that, since exchange transactions have been practically free (the subsisting obligation to deliver 10 per cent of hard exchange purchases to the Fund at the official parity applying actually to a very small proportion of deals), the Syrian pound has rather strengthened on the open market, in terms of dollars. This is held to be attributable to the following factors:

(1) Gold movements are free;
(2) Exports are increasing;
(3) Relatively large sterling receipts;
(4) Relative budgetary and monetary stability;
(5) The existence of gold hoards in Syria amounting perhaps to the equivalent of some 150 million dollars. Virtually no bank notes being hoarded, and bank deposits being very small, Syrians preferring to pay interest on overdrafts for current needs rather than part with gold, there are no loose masses of Syrian currency at the mercy of speculation, or which might slide about dangerously at uneasy moments.

This state of affairs, contributing though it

does to exchange stability, has its serious drawbacks in that it obstructs the mobilization of wealth for productive purposes.

It should be remembered, however, that when oil begins to flow through the Trans-Arabian Pipeline, dollars in respect of transit and guard fees will accrue to the Syrian Government at a rate which it would be rash to attempt to estimate at the present time.

Foreign Trade. Returns for the Syro-Lebanese customs union from 1938 to 1948 inclusive will be found attached.

The key for the distribution of customs receipts: 56 to Syria, 44 to Lebanon, is regarded as unfair by each country. But no attempt to work out a more acceptable method of calculation, or indeed to ascertain precisely the facts of the case, has so far succeeded. This would be no easy undertaking, in the circumstances, it must be admitted.

It will be recalled that visible exports play a much larger part in Syria's balance of payments than in Lebanon's. Syria, indeed, is an exporter of primary produce, especially wheat. Syrian raw cotton also commands a good price on the market; an increase in it has done something towards offsetting this year's decrease in receipts from sales of wheat, due to readjustment of prices. Exports for 1949 promise to reach a satisfactory total. Skins and hides contribute, and to a lesser extent cotton goods and worked leather.

A rough and ready calculation, believed in Syria not to be far from the mark, sets the two countries' imports at 50 per cent of the total each, and Syria's exports at 75 per cent as against Lebanon's 25 per cent. Lebanon has attempted to further the setting up of some industries since the war, but Syria has gone much farther in this direction, and is on the whole better equipped for the purpose, although some enterprises have not turned out to be justified economically, and indeed are considered as failures, not meriting the protection that has been granted to them.

In one important branch, i.e., cement, new works now being set up at Aleppo are expected shortly to start producing at a rate of 200 tons daily, which added to an even quantity produced at Damascus should supply Syria's normal needs at the present rate. The price at works is £S110 the ton, and delivered in the country is £S119 the ton. This position compares favourably with that ruling in Jordan, for instance.

Cotton goods are exported, in some coarser grades, mainly to Iraq; but fine qualities have to be imported. Syria produces only a very small quantity of raw silk, importing the bulk of the thread it spins.

It is believed in Syria that smuggling, inevitable, given the country's long and open frontiers, mainly brings in manufactured goods via Jordan, in order to avoid the Syrian tariff: a further argument, in some eyes, for lowering the rates of numerous duties.

State of Business, and Prospects. Deflationary pressure is at work on prices in Syria. Wheat deserves special mention. A drop, said to amount to 60 per cent from the wartime peak, has occurred in adjustment to present world prices; but the new price still permits the producer to cover his expenses. Moreover, this decline seems to have provided a healthy stimulus to export. Less severe price declines are occurring in other fields, tending to create some unemployment and wage-rate cuts. But the present situation is not viewed with alarm by the authorities.

Taking a longer view, there are difficult problems to be tackled before more opportunities for gainful employment can be given to a population whose current standard of living represents an ever-present threat of political and social instability.

Public works for development on a large scale would be required in order to increase the cultivated area. There is no lack of land which might be made fertile, of water for the purpose; or of rain-fed areas which only require mechanization. The question is: where to find money for capital outlay? It has been seen that interest rates range high, and that there is an inveterate habit of salting away profits by hoarding gold, not a few people apparently managing to run their business on the margin between the high rates paid for borrowed money and the return obtained from it. In these circumstances, chances of tempting Syrians to invest in agricultural development projects must look remote.

Given Syria's potentialities, and an exchange position that has improved and may well improve still further when dollars from the Trans-Arabian Petroleum Company start coming in, foreign capital might in favourable circumstances seek employment here. Money wages in industry are low, it is true, but so is the individual worker's output. Strikers in the Aleppo cotton mills have been demanding that no individual worker should be required to tend more than one loom, as against three at present (and an average of forty in the U.S.A.). In terms of production costs, factory labour is dear in Syria. Also, the workers, organized in unions, can press their demands in an effective manner. These demands might be expected to become even more insistent were there to be a substantial influx of foreign capital, with resultant threats to the present precarious balance between wages and prices, and an equally fragile equilibrium in the balance of payment.

Given these conditions, new industry requires tariff protection, in order to make a beginning, at a rate which in its turn makes for excessive prices even for internal consumption, let alone

competing on foreign markets. The well-worn argument seeking to justify high prices at home on the ground that they permit export at competitive rates is hardly convincing in Syria's case.

Development plans appear to be limited at present to projects for building a modern port at Latakia, draining works in the Ghab marshes (Orontes valley) and an electric-power station on the Yarmuk. Even these plans are in an early stage of preparation.

Visible trade of the Syro-Lebanese customs union, 1938 to 1948

(Values in Syrian or Lebanese pounds)
(000 omitted)

Year	Imports		Exports		Balance	
	Quantities	Values	Quantities	Values	Quantities	Values
1938	2,848	107	2,668	66	179	40
1939	2,692	113	2,481	75	211	38
1940	1,283	83	1,090	46	192	37
1941	311	77	67	48	244	29
1942	579	174	99	91	479	83
1943	1,083	246	707	168	375	78
1944	441	98	121	46	320	51
1945	522	135	146	45	376	89
1946	394	268	107	86	286	182
1947	413	361	150	87	263	284
1948	804	491	125	79	678	411

Iraq

A visit to Baghdad could not be arranged for the purposes of this study, which therefore had to be based on published material, unsupplemented by fuller and more recent information such as was made available in the capitals of other countries.

Iraq attained full national status in 1932, being the second of the countries now under review to achieve it. Its currency unit, the Iraqi dinar, is linked to the pound, and of the same official parity. The foreign exchange receipts, amounting to some 9 per cent of its budget in 1946-1947, which the State derives from the companies exploiting Iraq's rich oil deposits, are in sterling. Pending the setting up of a central bank, now in course of formation, the currency is administered by a Board, meeting in London; and note circulation is covered by sterling securities.

Petroleum production is capable of being greatly expanded; prospective reserves ensure Iraq a place of increasing importance among the oil countries of the world. Also, the rain-fed area of the North is only partially exploited, and the alluvial soil of the Mesopotamian plain is fertile. If the country can adequately utilize and control its immense water resources, its potential as an exporter of food appears great indeed in relation to the present quantities exported. The same applies to the possibility of its supporting a far larger population than the present. This was found by the first real census ever taken in the country to be only 4.8 million in 1947, for an area of 435,228 square kilometres. The rate of natural increase may be about 1 per cent per annum. Both birth and death rates, and especially infant mortality, are believed to be high. Of all the countries in this area, Iraq seems to be the one whose natural conditions and resources hold out the greatest promise, provided the loss of cultivable land caused by ages of neglect can be made good. But at present the standard of living of its people is exceedingly low, national income *per caput* being estimated by FAO at $85, as against $100 for Syria and $125 for Lebanon. At least 60 per cent of the national income is estimated to be derived from agriculture. The peasant is burdened by taxes and an inequitable profit-sharing system.

Public Finance. Iraq has an ordinary budget, and an extraordinary one, including development schemes only, financed chiefly by oil royalties. In addition, there are several State-owned enterprises, e.g., the railways, having independent budgets of their own. The aggregate expenditure of these cannot be given, but is stated not to be relatively large. Full information is not available as to the extent to which the State may be called upon to make good their losses. Estimates require parliamentary approval, and accounts are audited by a semi-independent department.

Cash results of the ordinary and extraordinary (development) budgets have been seen in published form down to and including 1946-1947 (the financial year ending on March 31 as in the U.K.). Estimates only can be given for 1947-1948 and 1948-1949:

Year	Ordinary			Extraordinary			Combined increase or decrease
	Receipts	Expenditure	Increase or decrease	Receipts	Expenditure	Increase or decrease	
	(Millions of Iraqi dinars)						
1938-39	5.8	5.7	+0.1	2.0	2.4	−0.4	−0.3
1942-43	11.6	10.6	+1.0	2.2	1.0	+1.2	+2.2
1943-44	14.4	13.8	+0.6	3.7	1.6	+2.1	+2.7
1944-45	18.9	19.0[c]	−0.1	[a]	[a]	[a]	−0.1
1945-46	17.3	19.8[c]	−2.5	2.9	1.5	+1.4	+1.1
1946-47	22.7	22.4[c]	+0.3	2.3	3.1	−0.8	−0.5
1947-48[d]	21.6	23.1[c]					
1948-49[d]	25.0	25.0[c]	—	2.2	2.8	−0.6	−0.6

[a] In 1944-1945 extraordinary receipts and expenditure (about 2.9 and 2.0 millions respectively) were merged with the ordinary budget accounts.

[b] Including emergency expenditure (cost of living allowance) of about 4 millions per annum.

[c] Including emergency expenditure of about ID 6 million.

[d] Estimates.

Receipts appear to be derived 60 per cent from taxation, chiefly indirect, and the balance from other sources, the most important of which is oil. Taxes are estimated to absorb 22 per cent of the national income. National defence and police together account for just under one-third of expenditures, before the recent fighting.

No audited cash results or even provisional returns are available for the last two years listed. Serious strain was imposed upon Iraq by the Palestine war. The closing of the Haifa pipeline caused a heavy fall in receipts from oil royalties. The difficulty of budgeting in these circumstances led the Government to proceed, in 1948-1949, by two-monthly estimates. It appears that by May 1949, the Iraqi Government had incurred a debt amounting to several million dinars, including an internal loan authorized in 1947. The chief lenders were the banks. Also, advance payments on oil royalties have been obtained. Negotiations are in progress for loans from the International Bank for Reconstruction and Development and other sources. As in other countries in this area, the Government is unable to borrow on any significant scale from its own public, the rates of interest obtainable on private loans being so high as to attract all available capital.

The end of hostilities has doubtless brought some relief. A relatively light charge is incumbent upon Iraq in respect of Palestinian Arab refugees, whose numbers appear not to be in excess of 4,000. The long-range view is brightened by the prospect of increasing oil royalties. However, the sums devoted to development in the extraordinary budget are as yet inconsiderable in relation to the task of equipping the country on a scale worthy of its unparallelled potentialities.

Foreign Trade. According to Iraqi statistics, the value of exports (not including oil) is normally less than one-half of imports, but this difference appears to be partly accounted for by over-valuation of imports (at internal wholesale prices rather than on a c.i.f. basis). However, when all allowances for this practice have been made, there remains a large import balance, which is covered chiefly by receipts from oil companies.

Exports consist mostly of foodstuffs and raw materials: barley, dates, hides, wool, and live animals; imports of textiles, machinery and vehicles, construction materials and equipment. Prior to 1939, the U.K., U.S.A., Japan and Germany accounted for 50 per cent of the foreign trade. During the war, these countries' shares were heavily reduced, or discontinued altogether, their places being taken by India and other Middle Eastern markets. Since the war, India has maintained its share; those of the other Middle Eastern countries have fallen off; and the U.K., U.S.A. and Italy are in process of recovering their earlier positions. Transit trade with Iran was formerly half as large as Iraq's whole foreign trade; but it has decreased sharply of late.

According to the *Iraq Statistical Abstract, 1947*, foreign trade may be summarized as follows, in millions of dinars:

Year	Imports	Exports			Balance
		Local	Re-exports	Total	
1938	9.4	3.5	0.2	3.7	− 5.7
1941	6.9	3.9	0.3	4.2	− 2.7
1943	15.7	9.1	0.3	9.4	− 6.3
1946	28.0	12.7	0.4	13.1	−14.7
1947	39.9[a]	13.8	0.9	14.7	−25.2

[a] C.i.f. valuation.

Balance of Payments. For several years before the war, this had been calculated (the period being the financial year), and the work was resumed in 1947, to cover 1946, now on a calendar year basis. A calculation has been made for 1947, but is withheld, apparently for security reasons.

The three pre-war years showed import surpluses amounting to roughly ID 2.9 million,

ID 4.6 million and ID 5.2 million respectively, and a deficit on services and interest, partly offset by profits and brokerage on transit and export trade, transport fees, British military expenditure, pilgrim traffic and tourist expenditure, and above all by oil royalties, which rose from ID 900,000 in 1936-1937 to ID 1,968,000 in 1938-1939. But a current account deficit still persisted: ID 2.3 million in 1937-1938 and ID 1.4 million in 1938-1939. It was covered by investments of the Iraq Petroleum Company, a governmental loan of 1 million pounds sterling negotiated in the U.K. and drawings upon short-term assets in London.

The balance of payments for 1946 may be summarized in Iraqi dinars as follows:

Item	*Credits* (*000's omitted*)	*Debits*
A. Goods and services:		
(1) Merchandise[a]	15,171	24,878
(2) Interest and dividends	424	1,048
(3) Other services	14,521	6,403
Deficit on current account	— 2,213	
B. Gold movements:		
Gold coins and bullion	1,593	3,181[b]
Deficit on current account	— 3,801	
C. Capital items:		
Amortization of State debts		18
Advances by oil companies, and repayment of previous advances	500	116
Long-term investments	50	148
Decrease in Iraqi balances abroad; decrease in foreign dinar balances in Iraq	2,815	182
Total capital transactions	3,365	464
Balance on capital transactions	+ 2,901	
Errors and omissions	+ 900	

[a]Adjusted for over-valuation of imports and with allowance made for a contraband estimate.
[b]Separate item, as being of doubtful accuracy.

The deficit on visible trade is offset chiefly by port-dues, British military expenditure, receipts from pilgrims, oil royalties and oil-companies' local expenditure. There is nevertheless a deficit on current account, and adverse gold movements, largely covered by drawing down Iraq's sterling balances to the extent of nearly ID 3 million. This process has been accelerated until the total of Iraq's sterling balances in May 1949 is believed to have been some 9 million pounds only in excess of the amount required for a 100 per cent currency cover.

The sharp rise in money incomes during the war, unaccompanied by an expansion in the supply of goods, resulted in a rapid increase of prices, despite a variety of measures designed to combat inflationary pressur . After the end of the war, a moderate decline in prices occurred; but crop failure and a rise in world prices reversed this movement during 1947. Although there has since been some improvement, the wartime dislocation of the price and cost structure has by no means been rectified.

Problems and Prospects. Broadly speaking, it may be said that oil developments in Iraq are in the hands of the companies. Agriculture, on the other hand, provides the livelihood of the great mass of the population; and here the Iraqi Government is responsible for devising and carrying out an appropriate policy, capable of raising a standard of living which is deplorably low. So far, few minerals other than oil have been discovered in Iraq, apart from some indications of copper in the north-east part of the country. Industry cannot make a great contribution to the national wealth, at any rate for a long time to come. Prospects of improvement depend largely upon increasing the area under cultivation, and by cultivating a larger area *per caput*, e.g., by mechanization. At present, only one-fifth of Iraq's territory is cultivable, and of this only a small part is cropped in any one year.

The Irrigation Development Commission, working from 1946 to 1949 under the presidency of Mr. F. F. Haigh, made a general survey and prepared detailed plans for many projects in the first stage of development. These projects are set forth in appendix IV. Hydro-electric power may be developed by some of them, the estimated total cost being over ID 90 million.

If these works could be finished, an appreciable betterment of the Iraqi people's lot would doubtless be the result. The total involved is a relatively large one and completion of the schemes would require many years. Increases in Iraq's exchange receipts might expedite the process. But in any case, questions would arise as regards Iraq's capacity to produce its own currency to meet the very large part of the expenditure that would be spent on wages and otherwise, locally, without incurring danger of inflation; and also to earn hard currency to service loans to pay for such equipment as it might have to purchase outside the sterling area.

The Hashemite Kingdom of Jordan and Arab Palestine

The Refugees. In Jordan, there is no getting away from the refugee problem. It dominates the scene at every turn. No plans can be made without taking account of it. Also, whatever the formal position may be, from a practical point of view, Jordan and Arab Palestine must be considered as a whole.

There are varying estimates of the numbers of refugees in this area. But whether they represent one-third or one-half of the total population does not signify so much as that they are mostly destitute, and deteriorating in every way as time goes on. The territories they are living in are barren and the Government lacks the means to keep

them on a relief basis, let alone the capital outlay that would be necessary to enable them to earn a livelihood. It is calculated that absorption would cost £P700 for each family of five persons. Incidentally, this works out at about $400 *per caput*, as against the Israeli estimate of $2,500: a difference, however, which is understandable given the respective backgrounds. Thus, for example, 50,000 Jordan-Arab Palestine families, a minimum number to be considered, whether or not refugees go elsewhere, would require about £P35 million, to which it is said that a further sum of say £P5 million would have to be added for hospitals, schools and other public services.

Opinions differ as to how many refugees the Jordan-Arab Palestine area could take, given the necessary outlay on development. But there seems to be a general willingness to try to absorb all those who cannot go elsewhere. This is an important factor in the whole refugee situation, whatever reserves may have to be made as to the possibility of securing funds for the purpose.

There is insistence in Jordan on the wastefulness of spending at the present rate on mere relief, thus leaving the future as black as before, when a relatively modest outlay on definitive settlement might mean some real progress, and gradually reduce the need for relief. It is argued that if an initial sum of say from £P6 million to £P10 million could be provided as a grant, much might be done towards supplying a production basis for later borrowing on commercial terms, which it is realized is out of the question as things stand at present. An interest-free loan of one million pounds sterling recently granted by the U.K. is not large enough to enable a serious beginning to be made in this direction. But its importance is by no means underrated in Jordan, in the present situation, when there is urgent need for spending more than can be supplied by the budget for such purposes as public health, schools and irrigation. It is claimed, however, that the present budget marks some improvement over previous years, in this respect.

Jordan's Finances. Jordan's finances are being managed largely without reference to the refugees. It must be admitted that it would be hopeless to attempt to budget on the assumption that Jordan would have to support the refugees by its own unaided efforts. There is, however, outside the budget, a Jordan refugee fund, fed by a special stamp-tax, occasional contributions from other Moslem States, and a vote of £P70,000 in Jordan's current budget itself. Altogether, it is estimated that Jordan's refugee expenditure is running at an annual rate between £P170,000 and £P200,000. This, of course, is an insignificant amount in comparison with the U.N. contributions from other sources. But it should be recognized that the disruptive impact of the influx of refugees cannot be measured in terms of state expenditure.

Jordan's ordinary budget (estimates for the year to 31 March 1950) balances at roughly £P2.3 millions. The last year for which closed accounts (audited by a department of the Finance Ministry) are available is 1947-1948. It produced a surplus of £P500,000. The ordinary budget for 1948-1949 is said to have ended with a surplus also, though a smaller one. The actual Treasury position, within the narrow limits of its application, is described as not causing anxiety at present. But in order to give a more comprehensive view of the country's financial position, even if the refugee problem is left aside, it must be added that since Jordan forces have been occupying Arab Palestine, there has been a separate budget for that area, which balances for this current year at £P1.1 million (estimates), and that the U.K. is subsidizing the Arab Legion (except for the Hashemite regiment, provided for in the budget) at an annual rate of £P2.5 or £P3 millions. Thus out of total state expenditure of about £P6 millions, the U.K. seems still to be contributing over 40 per cent.

The Government treats its budget surpluses as an emergency fund out of which, *inter alia*, it buys crops which farmers are otherwise unable to market, selling them as occasion offers. No accounts of these transactions are published.

Balance of Payments. When it comes to attempting to cast a balance of payments, Jordan's dependence on the U.K. becomes even more striking than appears from the budget. As against some £P9 millions imports for which foreign exchange is being provided by the Jordan authorities, there seems, according to official estimates, to be a small fraction of £P1 million only representing exports. Together with expenses of foreign legations and other minor items, exchange incomings may perhaps amount to something in the neighborhood of £P1.4 millions to be added to say £3 millions contributed by the U.K. for the army, leaving about £P4.5 millions, which during the past year has been made up by depletion of sterling balances, latterly swollen by large amounts of Palestinian currency imported by refugees, backed 100 per cent by sterling.

There seems to be little prospect of this position being rapidly changed for the better by improved administrative methods. Whatever can be done gradually in that direction will require a solution of the refugee problem, and also increased educational opportunities, and will hardly affect the immediate position. As things stand at present, not only can Jordan make no appreciable financial contribution towards tackling its refugee problem, but it needs help on a relatively large scale to become self-supporting, on the lowest level, and will go on needing it for a long time even if the financial burden represented by the refugees is carried by others.

Demands for allotments of import exchange are being pressed, which, if yielded to, would increase imports from the present level of £P9 millions yearly to £P12 millions, while it is wished to reduce the figure first to £P8 millions, and then gradually to £P6 millions. As indicated above, current levels of imports are being largely financed by depletion of sterling balances acquired against redemption of Palestinian currency brought in by the refugees. Imports thus financed have been primarily of the consumers' goods variety and, although temporarily alleviating inflationary pressure, have contributed little or nothing to the production capacity of Jordan. The important capital assets represented by the sterling balances acquired by redemption of Palestinian currency has thus been largely wasted. Despite the approaching exhaustion of Jordan's sterling balances available for financing import surpluses, there appears to be continuing pressure for even more liberal allocations of exchange. It is not generally realized that the Palestine Arabs, instead of paying Jordan for its produce in exchange thereby making for a balanced foreign trade, as formerly, have increased the number of mouths that must be fed inside the country, which now includes the wretchedly poor parts of Palestine that are still Arab, without adding to productive capacity. It is argued in official circles that resumption of trade with Israel, in present circumstances, would create grave problems, as the intercourse would tend to develop spending habits in Jordan, which are already excessive in the light of what the country can reasonably afford, burdened as it is by the adverse factors enumerated above, and by the expense of keeping up the apparatus of a state based on so small a productive population.

Before passing on, it will be recalled that termination of the British Mandate involved Jordan's exclusion from the sterling area. The Government plans to introduce a new currency in 1950, the dinar, equal to the pound sterling, and hopes to re-enter the sterling area at the same time. This position largely determines Jordan's economic policy. It is indeed clear that, dependent as it is for its living on the U.K., Jordan must conform, to the required extent, with the pattern that prevails in the sterling area. But its circumstances are such that the question arises whether it is necessary or desirable that this struggling little country should attempt to impose regulations which are not and cannot be enforced. The aim is to curb imports and stimulate exports. But this system subsidizes imports by allotting exchange at cheaper than commercial rates, and penalizes lawful export by demanding that the exchange proceeds be surrendered at a corresponding rate, the result being that exports leak out across frontiers which are too long to be effectively patrolled, and the "fisc" never sees the resultant exchange. It is difficult to discern in what respect complete liberty would not be preferable to, or at least less wasteful than, the present state of affairs.

Prospects. In a situation such as Jordan's, the official mind, harassed as it is by problems pressing in from all sides on so small a community, readily turns to broader horizons. There is a tendency to assert that no radical improvement can be brought about unless Jordan forms part of a union comprising Syria and Iraq, and eventually Lebanon as well. This aspiration raises political issues falling outside the scope of the present inquiry, which must take for granted the frontiers that exist to-day.

If consideration be limited to economic factors and to Jordan and Arab Palestine alone, it will be seen that development designed to make the state viable should proceed on four lines:

(1) Expansion of agricultural production to absorb refugees, give a higher standard of living to the local population and provide certain cash crop exports. This in turn involves the setting up of processing industries.

(2) Such development of minor local industries as seems possible, partly with a view to providing some exports, but more in order to reduce imports.

(3) Development of transport facilities, since transportation is at present a very heavy item in the cost of imports and a bottleneck for both imports and exports.

(4) Export of such raw materials as the country possesses, a development with which transportation is closely linked.

In addition, the development of a primitive industry is desirable in order to give work to the population of Amman, which has risen from 25,000 before World War II to about 100,000 to-day, and thus gradually to train experts and engineers of whom there is a great dearth in the country.

The economy of Jordan and Arab Palestine is essentially agricultural; in the main, cereals are grown and in certain years the country is an exporter of these. But a cereal economy can be adversely affected by climatic conditions and the alternation of bad and good years. It has, therefore, been strongly recommended by various specialists that Jordan should develop its agriculture by substituting fruit growing—olives, grapes, etc.—on a considerable scale, for cereal cultivation, particularly on land which is in any case obviously marginal for ordinary crop production. The soundness of such a policy is illustrated by what has already been accomplished in this direction in north Jordan and in parts of Arab Palestine. Only by such means can much of the poor land throughout the country support a larger population or even provide a reasonable livelihood for those already depending on it for their existence.

The development of fruit growing and intensive

cultivation of vegetables and fruits in the Jordan Valley can be made possible by a number of schemes already in plan for the better utilization of the country's waters. With these must be coupled the expansion of governmental horticultural stations and nurseries and the development of processing industries, which (like better road facilities) are necessary in order to utilize the products of a more developed agriculture.

Among such industries, vegetable canning is considered a promising investment. At the present time transportation difficulties result in the loss of large quantities of perishable crops which, if preserved, might help to keep down prices in the off season. It is thought also that a sugar industry might be developed in the Jordan Valley and that there is room for expansion in the utilization of dairy products. The parts of Palestine which have not been occupied by Israel are on the whole poor and barren, but vines and olives grow there. Industries must, therefore, be developed to utilize their product, particularly since these fruits are excellently suited for an expansion of planting on terraces, the building of which is already planned. It is not likely that the local wine will ever compete internationally, but grapes can also be turned into non-alcoholic grape juice, for which there is a market. For olive oil there is always a demand; pressing plants would be remunerative. Still larger use of the product of the olive tree could be found by the modernization and expansion of the existing soap industry at Nablus. Here comparatively good grade soap is already produced. With technical assistance and some capital, the industry might become a large one. It does not seem probable that the existing tobacco industry can be greatly expanded.

In the second field, that of the development of local industries with a view to reducing imports, the most important item is unquestionably cement. None is made in Jordan at present; it has to be imported from such far away countries as Czechoslovakia or Yugoslavia via Beirut. At Amman it is sold at an official price of £P22 per ton, mostly made up of freight. As middlemen often manage to corner the supply, it is said, cement may change hands at as much as £P40 per ton. Suitable stone is available near Amman and some progress has been made towards setting up a company. This should have an important effect in reducing Jordan's imports. It may also be possible to develop brick-making and tanning.

In connexion with these industries, transport facilities must clearly be developed. Plans exist for the improvement of a road net-work throughout the country designed to draw off the products of agriculture and provide access to industrial sites (in particular to minerals), and to open up the remarkable antiquities of the country in order to develop tourism. Comparatively minor expenditure on locomotives and workshops would greatly improve the railways.

The crucial point, however, is the siting of a port. At the moment, the cost of transport via Beirut is a heavy handicap. There is support in Jordan for substituting a North-South axis (Amman-Aqaba, in Jordan territory) for the East-West one (Aqaba-Beirut) upon which the country now depends. Although the distance between capital and port is roughly the same in both cases, it is evident that what would be spent on the Amman-Aqaba haul (in addition to port dues and landing charges) would remain in Jordan instead of being spent abroad as it is on the Amman-Beirut line. Fish-canning could be developed at Aqaba. The difficulty is that the railway from Amman is built only as far as a point some 50 miles north of Aqaba and that this last section would be costly to build and to double by a modern road because of mountainous country and bad climatic conditions. However, a road to Aqaba is included in the road development scheme of the Jordan Government. State ownership of small vessels to ply between Aqaba and the Suez Canal is already contemplated.

An important source of raw materials for Jordan may be her minerals; and it is clear that a very early priority in the country's development must be a detailed geological survey. One mineral, however, is already well known. Within 18 kms. of the capital, and also on the railway further south, there are vast deposits of phosphate which are already exploited, on a small scale. For the large-scale export of unprocessed phosphate (on which negotiations have been proceeding for some time), the limiting factor is the high cost of transport. It is said that with an outlay of from £P150,000 to £P200,000, super-phosphate could be produced locally, thereby largely solving the transport problem. The other raw material within reach of the Jordan Government is potash. It may be recalled that an Anglo-Palestine Company was operating two potash plants on the Dead Sea before the recent troubles: one at the south end, one at the north, the product being barged up from the southern to the northern plant, and trucked thence to the rail-head at Jerusalem. The southern plant is on the Israeli territory, and is intact, but is not working because there is, at present, no way of moving the product out. The northern plant lies on Arab territory; but it was completely wrecked during the recent hostilities. Keen regret is expressed over this wanton destruction of plant needed to manufacture a valuable product, but there appear to be no plans at present for repairing the damage.

Lebanon

Need for Development. Lebanon's population is increasing rapidly. Estimates vary: according

to some, the present figure of about 1,200,000 will be doubled in ten years; others say twenty years. There is unemployment already. The trend threatens to deteriorate dangerously unless increased opportunities for earning a livelihood are provided in time, which will require outlay on a relatively large scale. This would be the case even if all the Palestinian refugees now in Lebanon were moved elsewhere. Their continued presence in the country, however, would aggravate a situation which exists independently of them. The Lebanese Government is indeed contemplating a six-year programme, thus recognizing the importance of this problem.

Finance may be forthcoming to carry out some projects on terms that do not make it necessary to inquire closely into Lebanon's ability to obtain a long-term loan abroad, and then to service it. But the extent to which such prospects can be counted upon is uncertain. It appears urgent to consider what the country could do, by its own efforts, to improve its chances of successfully addressing itself to the market.

Lebanon's financial capacity is remarkable, relatively, although it has not operated hitherto so much to the advantage of the State as to that of private individuals. The Lebanese have proved their ability to turn their little country into an active and efficient centre for exchange, gold dealings, brokerage and trade involving many currencies besides their own, and the movement of goods which may never touch Lebanese territory. In November 1948, the authorities encouraged these activities by removing in practice the remaining restrictions on sales and purchases of exchange. While an official parity of 218.50 Lebanese piastres (2.185 Lebanese pounds) to the U.S. dollar has been maintained, and is still applied to certain governmental transactions, the rate is left to take care of itself where private business is concerned, and now stands at about $1.00 = 320 Lebanese piastres.

Under the Syro-Lebanese customs union, it appears to be impossible to determine the respective shares of the two partners in visible trade with the rest of the world. There are no official returns illustrating the size of Lebanon's invisible dealings. Profits earned on them go to private firms and individuals and not to the State, and largely escape taxation. No balance of payments estimate having an official or even semi-official character is available. But some notion of the invisible items' relative importance may be gained from a passage in the *Bank of Issue's Report* for 1948 where it is stated that Lebanon's excess of visible import over export values, huge as it is, constitutes "a minor factor in the balance of accounts, which is substantially favourable".

Lebanon's State budget has shown a surplus of receipts for several years past; this however is a fact from which it would not be safe to draw conclusions as to the country's financial policy. The note circulation stands at about £L170 million, having declined slightly over the past year. Provisional estimates indicate that upwards of £L93 million in budget receipts were collected in 1948. It appears that the fiscal effort demanded of the country in 1949 and 1950 will be less heavy, to allow for a business recession, on the degree of which there is no general agreement, but which is indicated by a contraction of the note-issue. In these circumstances, it might at first sight be tempting for a Government to try to collect a share of the hard exchange earned by Lebanese nationals and residents. But this could only be done by coercive measures, which would have the effect of driving lucrative transactions away. Lebanon has attracted this business from other centres where skills, economic information and experience may not be equal to those possessed in Beirut, but which would undoubtedly recover the trade if Lebanon attempted to apply exchange control.

It is doubtless wise to permit these profits to be made, and to regard the fact that the State cannot directly tap them as a lesser evil. But the Government, without harming invisible trade, could do more towards building up a financial position that is sound and carries conviction as such because the key facts are readily available. Two things might greatly help towards the development projects needed to give work to its increasing population. Lebanon might: (1) put itself in a position to finance some local currency expenditure under development projects out of its own resources, partly out of current receipts, partly by borrowing internally, and (2) prepare to devote its future hard-currency earnings to servicing foreign loans for the purchase of the equipment required by these projects.

Public Finance. This is the first problem in order of urgency, and one which it lies within the power of Lebanon itself successfully to solve. The fact that a surplus is being produced does not mean either that the fiscal system is well adapted to the country's needs, or that the State's finances are being managed in the way best calculated to foster the confidence that would prompt Lebanese citizens and residents to invest their savings in bonds expressed in Lebanese currency, and attract capital from abroad.

The undertaking ought not to be discouragingly difficult. A certain degree of confidence in the currency exists already: there is less reluctance to hold domestic bank notes in Lebanon than in some other countries in this area. A bond market does not seem to be an impossible development, here. What is needed is to make the facts available to public opinion by applying the appropriate principles and mechanism, and to improve the fiscal system so as to tap wealth where it can be

reached, while increasing the efficiency of the community as a whole by helping its weaker sections to reach a reasonable standard of living themselves.

The Lebanese Budget. This is subject to approval by Parliament, as are also yearly statements showing how the budget has been executed. The system, however, works very slowly. At present, the most recent year for which "definitive results" are available is 1947. Those for 1948 still await Parliamentary approval. The accounts are not audited outside the Finance Ministry, although there is a Bill before Parliament providing for an independent audit authority. It is difficult, indeed impossible, to form any opinion on the current trend from the estimates, because (*a*) these are prepared on an accrual basis, "expenditure" often including credits which are not spent and "receipts" including debts to the State which are unlikely to be collected, and (*b*) recourse has frequently been had to additional credits voted at odd times during the fiscal year. Further, some public services are not included in the State budget at all, and their accounts are not published, although the State is liable for any losses they may incur and should receive any profits they may make. Expenditure for Palestinian refugees and receipts from taxes imposed for this purpose are also outside the budget, and have so far not been published.

It would greatly contribute both to strengthen confidence in the currency and to encourage foreign capital to regard Lebanon as a good risk if the principle of budget unity were applied and returns on a cash basis were made available with the least possible delay. It would probably be well, during an initial period, to prepare estimates of cash receipts and expenditures and to publish the corresponding results, on a quarterly or even a monthly basis. This could be done, given the size of the territory, within a short time of the end of each period once an adequate mechanism had been introduced for determining the respective shares of Lebanon and Syria in customs receipts.

Improvement of the budget mechanism might advantageously be accomplished by a revision of the purposes to which expenditure is devoted. This is a question on which hasty judgments would be dangerous; it requires careful study before action is decided upon. But at first sight it is striking that well over one-third of budget expenditure is absorbed by national defence, gendarmerie, police and security, taken together. Further, it appears that the number of public employees has trebled over the last ten years. While making due allowances for the increased tasks assumed by Government, and for a growing population, it seems probable that numbers could be reduced without loss of efficiency. Given the political difficulties that always attend such operations, especially when publicized, and the pensions and separation indemnities that would have to be paid to dismissed employees, the least vexatious and most effective way of dealing with this problem might be to work gradually and unobtrusively towards an appropriate establishment, the number of posts in which would be determined having a strict regard to requirements, and to exercise a vigilant control to ensure that, as present officials in excess of this establishment die off or are retired, their posts are effectively discontinued.

The same remarks probably apply to the municipal budgets, equally if not more, given that they get less publicity than the State budget.

Fiscal Policy. It appears difficult at present to estimate the fiscal burden *per caput* of the Lebanese population. The State budget is given as amounting to some 75 million Lebanese pounds, and those of the municipalities to about one-half that sum. This would mean about £L113 million for public expenditure. It would be prudent to allow for additions to this sum in respect of outlay for refugees, losses on public services or other charges on the State; subject to these reserves, the *per caput* charge would appear to amount to at least £L94, or roughly $30.

This is a considerable charge, given Lebanon's wealth and earning capacity, especially if it is not equitably distributed according to the capacity of the various classes of tax-payers. Urban real estate and unfinished buildings get off lightly, as do inheritances, gifts or sales of property, and luxury expenditure, e. g., automobiles. On the other hand, duties on mass consumption goods appear to be heavy.

Without advocating hasty measures aimed at bringing about radical changes in a minimum of time, or discouraging initiative, and while making allowances for the fact that Lebanon has a customs union with Syria, it seems that the total proceeds of taxation could be increased, and the burden on the poorer sections of the community relieved, by a careful revision of the system, devised to make the wealthy contribute in a fuller measure to the cost of running the Government. Some Lebanese economists advocate a fiscal reform based mainly on income tax. But it may be doubted, in local conditions, whether income tax could be made to yield on a satisfactory scale in a short time. It would perhaps be safer to rely upon taxes on visible property and the like that are better understood, easier to collect and harder to evade, at least during a transitional period.

The *Banque du Liban,* which possesses the sole right of note issue, is not a central bank in the full sense of the term. It does not have custody of all State balances. This question needs consideration, as does that of prompter and more frequent publication of the significant facts of the bank's position. A desirable solution might require re-negotiation of contracts.

Prospective dollar earnings of the Lebanese

Government, out of which eventual hard-currency loans for development purposes might be serviced, are scanty for the time being, but may increase if and when the flow of oil through the Trans-Arabian Petroleum Company's pipelines begins. The present position seems to be that the Lebanese Government has bought gold with dollars it has so far received from the Trans-Arabian Petroleum Company and has turned this gold over to the *Banque du Liban* towards building up a backing for the note circulation. The company is committed for over a year more to paying for 80 per cent of the Lebanese currency it needs at the official rate of $1 = £L 2.18. Appreciable amounts of dollars may be expected from this source, which appears to have produced $3.6 million (part of which goes to Syria) since the company started operations in 1947. As from the time when oil starts to flow through the line, dollars for transit and guard fees should accrue to the Lebanese Government at a minimum annual rate of over $240,000, and these receipts might increase considerably with a greater flow of oil.

It is stated that if delimitation and affranchisement of the land required could be promptly finished, construction could be completed and the line put into operation by the end of 1950. If the company decided to build a refinery at Saida, a further source of dollar receipts would be opened up.

The Iraq Petroleum Company cannot be looked to by Lebanon for hard-currency earnings. The fees it pays are in sterling, and are earmarked to buy imports from the sterling zone. Formerly, its requirements in Lebanese currency provided sterling which was available for other purposes, but receipts from this source have have been spent, and now that the refinery at Tripoli has been completed, it appears that local sales of petroleum products will produce all the Lebanese currency this company needs.

There are doubtless other quarters from which dollars may accrue to the Lebanese State, but they are uncertain and, at the best, unlikely to make a significant addition to what is received from the Trans-Arabian Petroleum Company. And receipts are, to a great extent, dependent on the new pipeline being set to work, which, even assuming that the Lebanese authorities show the greatest desire to carry out their part of the operation, and that no delays are caused outside Lebanon's borders, can take place only towards the end of 1950.

Conclusion. There seems to be about one year to run before Lebanon will have assured hard-currency receipts on a scale making it worth while to explore the possibilities of obtaining a loan from some institution which has to consider repayment prospects. There is much to do, in this interval, in order that Lebanon should be able to make the most of its opportunity; and the necessary steps can, and indeed must, be taken by Lebanon itself. An attempt has been made above to outline the problem. The essential points are that Lebanon cannot hope to borrow abroad for development projects unless:

(1) It can prove its ability to provide the requisite local currency out of its own resources;

(2) Its own State finances are run on the lines best suited to the country's needs;

(3) Its State financial position can be determined at any moment by means of up-to-date returns on a cash basis;

(4) The projects for which it tries to borrow are realistically chosen and prepared, and are not over-ambitious in relation to Lebanon's size.

Many other things might be done in order to improve conditions in Lebanon. It would be prudent, however, not to pursue too many objectives at the same time, but to concentrate on what must be accomplished in order that the country may carry conviction as a good credit risk.

Egypt

Egypt is distinguished, in this area, for the promptness with which information on public finance and economic matters is made available. The National Bank publishes a quarterly bulletin giving not its own position at the end of the preceding month only, but the essential data on the execution of the budget, note circulation, bank deposits, prices and foreign trade. A statistical yearbook, being on a very comprehensive scale, appears long after the end of the relevant period; the last volume now out is that for 1943-1944, but a fairly complete *Annuaire de Poche* is available down to and including 1947, and the National Bank's publication suffices for main purposes. Egypt's financial and economic position is briefly commented upon in the following notes, mainly for the sake of comparison with the other countries dealt with.

Public Finance. Recent returns of budget expenditure and receipts, which include those of the Railway, the Post, Telegraph and Telephone, and State enterprises, appear in the *Bank Bulletin*, these are communicated by the Ministry of Finance, quarterly, and now available up to the close of the financial year 1948-1949 (ending February 28, 1949). Moreover, the Audit Department (an independent body) works faster than in many other countries: the findings of its report on results for the financial year 1947-1948 were included in the *Bank Bulletin* for the first quarter of the (calendar) year 1949.

The last two years before the war, when expenditure was running at roughly £E 48 million, produced deficits (£E 3.6 million for 1938-1939, and £E 2.5 million for 1939-1940). Since then revenue each year has exceeded expenditure, and a reserve fund has been built up, which is officially stated to have totalled £E 76 million at the close

of 1947-1948, and may have increased since then, as there was a surplus of £E 12.7 million for 1948-1949, revenue for that year having risen to £E 170 million. At this rate, the burden represented by the State budget alone, without the municipalities, amounts to over £E 9 *per caput*, as compared with a *per caput* income which has recently been estimated by FAO at roughly $100. The war and post-war period has also seen the accumulation of sterling balances. Those on No. 1 Account, which is free, amounted to £E 77 million on July 2, 1949, and fell off considerably after that because of traders' anxiety to place orders before sterling prices rose following devaluation, but stand at about £E 70 at present. Those on No. 2 Account (£E 256.3 million at July 2, 1949) are blocked, subject to periodic releases, negotiated between the interested Governments. Although Egypt is not in the sterling area, to quote the *Bank Bulletin*, Vol. II, No. 3: "There was no free choice for Egypt when she was put before the alternative to follow suit or not, a few hours before the decision (to devalue) was made public in London. In the circumstances of Egyptian economy the alternative to the devaluation at the same rate would have been a free-currency. This would have brought Egypt into conflict with the regulations of the I.M.F. as well as with the Anglo-Financial Agreement. Moreover, Egypt's foreign currency resources are mainly in sterling . . ."

Indeed, the National Bank's position at September 30, 1949, shows that, as cover for a note circulation of £E 151 million, this institution then published gold holdings valued at £E 6.3 million (practically unchanged since 1939), the balance, £E 144.6 million consisting of Egyptian and British Government treasury bills and securities.

Formally, Egypt's foreign-exchange control system is similar to the United Kingdom's. In practice, circumstances make for greater elasticity in Egypt. It is not without significance that travellers are allowed to bring in and take out £E 20, and that the Egyptian pound note has strengthened of late, in relation to sterling, on the Beirut free market.

The total circulation increased by leaps and bounds during the war, from £E 31 million in 1939 to £E 150 million in 1945, since when there have been minor movements up and down only. Allowing for the increase in population that has taken place in the interval, circulation *per caput* appears to have risen since 1939 from under £E 2 to over £E 8. The wholesale-price index (June-August 1939=100) rose from 122 for the year 1939 to 333 for 1945. Since then, there have been small rises and falls, the most recent figure available (July 1949) being 296. Thus, circulation appears to have increased five-fold since before the war, and wholesale prices roughly two and one-half times, the relation between money and wholesale prices having, however, shown no great change since 1945.

The National Bank's *Bulletin* published in July, 1948 contains an interesting study of Egypt's balance of trade for 1945, 1946 and 1947, which is summarized as follows, reserves being made as regards the completeness of the figures available:

	Millions of Egyptian pounds		
	1945	*1946*	*1947*
Sterling area	+53.3	+ 8.4	+12.2
Non-sterling area	— 8.8	—27.8	—43.9
	+44.5	—19.4	—31.7
Of which known increases (+) or decreases (—) of:			
Sterling balances	+45.3	—11.8	—35.1
Foreign currencies	—	—	+ 3.9

Allowing for some capital expenditure resulting in increase of capital assets abroad or reduction of debt, a net balance is obtained:

	Millions of Egyptian pounds		
	1945	*1946*	*1947*
A. Known capital items:			
Government investments	3.5	3.8	1.0
Redemptions of public debt held abroad	0.4	0.8	12.3
Acquisition of gold for I.M.F.	—	1.4	—
Total	3.9	6.0	13.3

	Millions of Egyptian pounds		
	1945	*1946*	*1947*
B. Balance of payments:	+44.5	—19.4	—31.7
Net balance of payments (A + B)	+48.4	—13.4	—18.4

The link between Egypt and the sterling area comes out clearly in these figures. Differences between trends in the two cases would be difficult to illustrate from published material, but are no less remarkable for that.

Problems and Prospects. Egypt's great problems are maldistribution of wealth, population pressure, and the decline in cotton prices over the last thirty years. It should perhaps be noted, however, that the relation between cotton prices and wholesale prices, or costs of living, as reflected by the official indices, although it has deteriorated since the peak prices reached in 1948, appears to be more favourable now than it was just before the outbreak of World War II.

At over 18 million, the country's population is excessive in relation to existing possibilities of earning a livelihood. As for prospects of increasing these possibilities, it is estimated that the upper limit of cultivation in Egypt would be reached if the area were increased by about one-

quarter, and that this would cost hundreds of millions of dollars. Even if ample allowance is made for a possible increase of dry farming, as well as other improvements, and for such industrialization as the country's circumstances permit, there remains the limiting factor of the narrowness of Egypt's own market, due mainly to maldistribution of wealth.[1]

In the presence of this position, the Egyptian Government has appropriated, since 1946, a total of £E 35.6 million for a five-year plan consisting of a long list of public works projects. The National Bank Bulletin published in July 1949 (Vol. II, No. 2), in commenting on this plan, states that actual expenditure on it had so far amounted to £E 12.5 million only out of the £E 35.6 million appropriated, difficulty having been encountered in importing requisite material.

Given the rate of spending on the five-year plan and the size of the reserve fund, it does not look as if Egypt's main trouble lay in meeting the local currency requirements of development projects. If a foreign loan were needed to buy equipment abroad prospects would be influenced by Egypt's ability to produce hard currency for service. This does not seem to be large, judging by the balance-of-payment estimates referred to above. The State's funded debts are not in themselves of a size likely to constitute an obstacle according to the latest figures available at the moment (1943-1944). Foreign debts, all in sterling, amounted to £E 90 million, and domestic to £E 93.4 million. Since then, foreign debt does not appear to have increased. Additions to the domestic debt have taken place; but even if it were assumed that its total had doubled since 1943-1944, the figure would not be alarming.

Israel

The Main Problem. Israel's present population numbers approximately 1,150,000 souls, of whom some 150,000 are Arabs and 1,000,000 Jews. About one-third of the latter have entered the country since the end of World War II. On 1 November 1949, there were 90,000 accumulated in immigrant camps. 24,000 new-comers are expected during November and December. With 41,000 leaving the camps during these two months, there should remain a net accumulation of 73,000 on 1 January 1950. 26,000 new immigrants are expected between January 1st and April 1st of 1950, and 105,000 between April 1st and November 1st, making a total estimated immigration for the first ten months of 1950 of 131,000. When this figure is added to the 73,000 estimated for January 1st, the total number of immigrants to be absorbed by 1 November 1950 amounts to 204,000. Allowing for those who settle themselves and do not go to camps, the net number for whom housing must then be provided would appear to be 165,000. The Minister of Labour and Social Welfare states that 50,000 new housing units will be completed by then. In addition, the housing programme demands 12,000 units for earlier immigrants who have been in Israel five years or more and are living in excessively congested quarters. Construction of these 12,000 additional units will release some 3,000 rooms for the use of new immigrants.

On the basis of past experience, Israeli officials estimate the *per capita* cost of immigrant absorption into the economy at $2,500. Although stated in dollars, this figure does not represent the dollar outlay superimposed on the existing balance of payments for each new immigrant. It indicates, in fact, merely the relation of investment to the number of people over an indefinite period. It includes local expenditure for housing ($700), investment in new enterprise for immigrant employment, as well as tools and equipment for labourers and farmers in addition to the immigrants' own contribution, if any, to his resettlement. In fact, of £I 86 million estimated investment for the current year, 45 per cent is being raised locally and 55 per cent from abroad.

Without the above explanations, this figure of $2,500 *per caput* might give rise to erroneous conclusions as to hard-currency requirements for the absorption of new immigrants in 1950. However, the financing of immigrant absorption does confront Israel with a formidable problem.

No official estimates were available showing how it is expected to finance this operation, the relative magnitude of which may be measured by what is disclosed of the State's present expenditure. This falls into three categories:

(*a*) Ordinary budget, balancing at $112 million (£I 40 million);

(*b*) Security budget, undisclosed;

(*c*) Development budget, said to amount to roughly $154 million (£I 55 million).

No figures for the security budget were supplied. However, it was stated that the recent hostilities cost the country "over £I 100 million", and that not more than 25 per cent of this expenditure was met out of ordinary budget receipts. This might mean some £I 75 million from extra-budgetary sources, including some £I 25 million stated to have been provided by world Jewry. Military expenditure is said to have decreased since the armistice, but to remain a heavy load, even now. Supposing, in order to make a rough guess at Israel's task, that the security budget may amount to about one-half of the ordinary budget, we arrive at an over-all budget figure of $322 million, as follows:

[1] A valuable study on these problems by Charles Issawi: *"Population and Wealth in Egypt"* appeared in the Millbank Memorial Fund Quarterly, Vol. XXVII, No. 1 (January 1949).

	Millions of dollars
(*a*) Ordinary budget	112
(*b*) Security budget (about one-half of $112 million—a guess)	56
(*c*) Development budget	154
Total	322

Of this total of $322 million, not more than one-third is covered by ordinary receipts at their present rate. It may be that the above guess of £I 56 million for the security budget is too high. But Israel's financial position would remain precarious even if the figure were greatly reduced.

It is possible that Israel can continue financing its extra-budget security outlay, as at present, by placing treasury bills with the banks and the public, and by gifts from abroad, without causing disastrous inflation. There remains the over-all cost of immigrant-absorption including the $154 million budgetary outlay earmarked for this purpose, and secondly a sufficient amount of other investment, domestic and foreign, required to complement Government outlay to absorb the immigrants.

Israel's officials, in forecasting the balance of payments for 1950, estimate that cash requirements for financing imports will amount to $140 million (£I 50 million), as compared to $112 million (£I 40 million) for the current year, representing a net increase of $28 million (£I 10 million). On the receipts side, there is in prospect a falling off of exchange availabilities of over $20 million. The uncovered exchange gap may amount to approximately 40-55 million dollars equivalent in 1950. A detailed examination of this aspect of the question is appended. As a means of closing the gap, Israel's officials place high hopes upon foreign investment in productive enterprises in the country. So far, however, the results have been disappointing, primarily owing, on the economic side, to a serious discrepancy between the wage line and the official exchange rate. In terms of dollars, Israeli wage rates appear excessively high to the foreign investor.

A second possibility of closing the gap would lie in a further compression of domestic consumption, either by more severe taxation or by a higher rate of voluntary savings. While Israeli officials tend to discount the possibilities of additional taxation, they express hope that savings may be further expanded, citing in this connexion the Jewish people's habit of saving methodically for investment. Thus, banking officials estimate accumulated savings *per capita* at roughly £I 50 for 700,000 savers.

The most important sources from which means of closing the exchange gap might be derived are contributions from world Jewry and releases of sterling balances. Further examination of these crucial aspects of Israel's exchange position is undertaken in the appended study.

The preceding comments on the prospective foreign exchange position of Israel assume, mainly for lack of evidence to the contrary, that the existing disruption of trade between Israel and its neighbours will subsist. Obviously, however, a restoration of normal commercial relations would significantly relieve the pressure upon the Israeli economic position, and also the general outlook for the Arab countries.

Without touching upon any of the political problems involved, further factors to be taken into consideration are:

(1) Israel, with its strict system of control, has so far been forced to forego the opportunities for international exchange and brokerage business which can be so profitable where transactions are free, and for which many Israelis have the requisite training and aptitude;

(2) There is evidence that the Israeli pound is considerably over-valued at the current rate of $2.80, with resultant adverse effects on exports. In an effort to render export prices more attractive, and to counter inflationary pressure, the Government has launched a deflationary programme which, over a period of six months, has resulted in a decline in the cost-of-living index from 371 in April to 329 and in wholesale prices from 491 in March to 397. Money wage rates of industrial workers have been reduced by an average of 10 per cent; and over-all wages by 7½ per cent;

(3) In appraising these spectacular results, it should be borne in mind that in so rigorously controlled an economy, the significance of a decrease in the price index is not what it would be in a market economy. Thus an enforced reduction in prices may result in further intensification of the inflationary potential;

(4) There is not full employment in Israel at present; jobs are rationed like everything else; and immigration is constantly adding to the supply of labour. Production per man-hour is not impressive by Western standards;

(5) There is some evidence of latent inflationary pressure. The note circulation has risen from £I 28 million to £I 48 million during the past year. The Government has increased the rates of taxes, partly for revenue, but partly in order to reduce the pressure of money in circulation on prices. The Government's greatest asset in this connexion is its people's firm confidence in the currency;

(6) Israel has already contracted a $100 million loan from the Export-Import Bank. Assuming that this total is allocated, service will reach substantial proportions within three years in relation to prospective availabilities. The Government's programme will require other investments in substantial volume. The question arises whether the country can attract enough capital for its settle-

ment—absorption purposes without contracting to pay more dollar debt service than it can manage. Its chief prospective market for its present main export, citrus fruit, is the United Kingdom.

Prospects. A cool examination of the relevant figures (and of the fact that certain crucial data are withheld), is apt to provoke wonderment at the magnitude of the task Israel's Government has set itself. But there are forces which cannot be measured in figures, and these forces sometimes decide issues in apparent defiance of reason. Israel has accomplished astonishing things already. It would be as rash to predict that it will not succeed as that it cannot fail. Much depends on the extent of help from abroad.

Among the factors working in Israel's favour more potently than in that of other countries, the following deserve mention:

A relatively large proportion of expenditure goes to education and public health.

There is, among many of the Israelis who have already found a place in the country as well as among newcomers, a high level of education and/or craftsmanship. These people can turn to almost any pursuit to which a planned economy will direct them.

Next to instruction, public health and welfare are the Government's chief care. In spite of an acute housing shortage and an austerity diet, the people in general look strong and well; the mortality rate is very low.

There is a spirit of national-racial solidarity, a willingness to make sacrifices in the common interest, a faith in Israel's ability to overcome all obstacles, the like of which it would be hard to find elsewhere.

In the eyes of its leaders, Israel is running along a one-way road carrying heavy traffic, on which it cannot turn back, or even slow down, without disaster; a road leading to the absorption of all Jews who, for whatever reason, find life in their present abodes intolerable. The idea that any selection should be made among those wishing to come is utterly rejected. "When one's relatives are faced with misery or destitution, one does not stop to consider whether one can afford to take in all or any of them. One shares what one has with them." In varying forms, this sentiment is expressed at every turn. There is, however, recognition in some quarters that the rate of influx of immigrants must not be allowed to cause an economic breakdown.

Immigrants have reached Israel from almost all over the world. But although the present inflow comes chiefly from Arabia and North Africa, the Israeli way of life has already been set along Western lines, largely by Jews from Central Europe with some experience of, and admiration for, the U.S.A. There is every prospect that this pattern will prevail, and that the immigrants from primitive regions, and especially their children, will be absorbed rapidly. Standards of urbanism and public service are high, given the difficulties, and realization is improving at a sharp rate.

Jewry the world over has its eyes fixed on Israel, and will doubtless make great efforts to give it the help it demands. Exchange difficulties are certainly a grave obstacle. About three-quarters of total contributions now come from the dollar area. The USSR and its satellites, where the bulk of Jews surviving outside the U.S.A. live, permitted some transfers up to last year. Now, no longer. But it is said that Latin America is a ready giver, and even in the case of the exchange-control countries it is not impossible to work out legal means to enable aid to reach Israel.

Finally, it may be that the very magnitude of the task, and of the disaster that would attend failure, are the stimuli needed, at so critical a time, to spur on well-wishers abroad to redouble their efforts, and indeed that the Israeli Government itself regards its chances of survival as better in an atmosphere of peril than they would be if prospects appeared more assured.

BALANCE OF PAYMENTS OF ISRAEL

1. *Summary and conclusions*

The attached memorandum endeavours to pull together some of the material that has been made available to the Mission upon the balance of payments position of Israel in 1949 and upon the prospects for 1950. With respect to the 1949 position, most of the basic data supplied by the Israeli authorities regarding civilian imports, exports, rates of contribution by world Jewry, release of sterling balances etc., are based upon published data. Although any forecast for 1950 must necessarily be based upon a number of more or less arbitrary assumptions, the assumptions chosen are believed to be on balance optimistic and to understate rather than to exaggerate the exchange difficulties likely to be encountered by Israel in 1950. The broad conclusions reached are as follows:

A. Israel is currently dependent to the extent of more than 75 per cent upon extraordinary external aid—cash contributions, donations in kind, Export-Import Bank financing, and release of sterling balances—for covering its balance of payment requirements.

B. Even in the absence of further immigration, this exchange situation could not be expected substantially to improve during 1950.

C. The actual prospect of an immigration of at least 150,000 during 1950 threatens to open up an exchange gap of £I 15 to 20 million or about 40 to 55 million dollars equivalent. This estimate

assumes no further decline in the annual rate of contributions by world Jewry, forecasts a 30 per cent increase in export values, and takes full account of Export-Import Bank financing now available to Israel.

D. Although the Israeli authorities express confidence that new commercial investment may be counted upon to narrow the gap to manageable proportions, foreign investors are unlikely to venture any substantial placements in Israel so long as Israeli wage costs remain so exorbitantly high in terms of dollars and sterling.

E. Nor does there seem to be a reasonable possibility of further reducing the standard of living via exchange depreciation, taxation, or forced savings to the degree required to yield significant exchange economies.

F. Against this background, the problem of the appropriate rate of release in 1950 of the 25 to 30 million of frozen sterling balances held by Israel assumes more critical significance than may be generally realized. To a very considerable extent, the prospective gap in the Israeli exchange accounts for 1950 may be as satisfactorily closed by additional sterling availabilities as by larger dollar receipts. But whether His Majesty's Government will find it possible, particularly in view of the repayment demands of its other creditors, to release sterling on the scale required by Israel remains a matter for negotiation between the two Governments concerned.

2. *Historical dependence of Palestine upon foreign aid*

The central fact in the present economic position and prospects of Israel is that the area now occupied by the Jewish State would probably remain heavily dependent upon a continuing flow of foreign aid for some years to come, even if (*a*) no further immigration were accepted, and (*b*) the present obstacles to trade with the Arab world were swept away. Thus, the former Mandate area of Palestine, of which Israel now constitutes an uneconomically isolated segment, was basically a parasite State, largely supported by foreign contributions, by capital inflows induced by political rather than commercial considerations, and by the local expenditures of the British military forces. Even in 1939, less than 40 per cent of Palestinian exchange expenditures of about £P 14 million were covered by current earnings on export or service account. The residual sum of about £P 8.7 million, or more than 60 per cent, was almost entirely supplied by foreign donations, investments, and other capital transfers. During the war and immediate post-war years, moreover, the economy of Palestine became geared to an even more seriously adverse balance on current account. And since the emergence in May 1948 of the new Israeli State, the exchange-earning capacity of the former Mandate area has still further deteriorated, while exchange requirements have continued to mount.

3. *Estimated balance of payments of Israel in 1949*

The current balance of payments position in Israel, as estimated by the local authorities, may be outlined as follows:

A. *Payments Requirements*

1. *Imports.* With respect to the visible balance of trade, recorded import arrivals in Israel during 9 months of 1949 amounted to £I 59.8 million. Of this total, the Israeli authorities estimate that foodstuffs, raw materials, and other imports for current consumption accounted for 75 per cent, i.e., £I 45.2 million. The balance of £I 14.6 million, or 25 per cent, was comprised of machinery, building material and other capital supplies, reflecting the remarkably high rate of capital investment currently in progress.

Composition of imports[a] January—September 1949

Category	*Millions of Israeli pounds*	
1. Imports for current requirements:		
(*a*) Food	10.111	
(*b*) Industrial raw materials	16.638	
(*c*) Agricultural raw materials	3.389	
(*d*) Fuel	1.879	
(*e*) Other	12.523	44.540
2. Capital imports:		
(*a*) Industrial equipment	3.780	
(*b*) Agricultural equipment	3.696	
(*c*) Other equipment	.614	
(*d*) Building materials	3.290	
(*e*) Transport	3.269	14.649
Total		£I 59.189

[a]Excludes unclassified items amounting to about £I 600.000.

More than 37 per cent of Israel's imports during the first 9 months of 1949 were purchased in Western Hemisphere markets.

Distribution of imports by countries of origin

Countries of origin	*Millions of Israeli pounds*	
1. *Western Hemisphere*		
(*a*) U.S.	16.3	
(*b*) Other Western Hemisphere	6.2	22.5
2. *Europe*		
(*a*) UK	5.9	
(*b*) Other Europe	21.3	27.2
3. *Asia*		2.5
4. *Africa*		4.6
5. *Australia*		1.9
6. *Other*		1.1
Total		£I 59.8

It would seem probable, however, that such unusually heavy recourse to Western Hemisphere markets is not entirely attributable to rigid import requirements that could not be, at least partially, satisfied in the sterling and other soft-currency markets. There may well exist a rather extensive range of import requirements for which sterling would provide virtually as effective a purchasing power as dollars. With a resumption of normal commercial relationships with the Arab countries, this range would be further substantially enlarged. Such substitutability, potential as well as actual, of sterling for dollars should be borne in mind when considering the prospective exchange requirements of Israel, during 1950 and subsequent years.

Of total import arrivals during the first nine months of 1949, approximately £I 44 million, or an annual rate of £I 58.6 million were financed by exchange allocations granted by the Israeli exchange control authorities. Although deliveries of capital equipment financed by the Export-Import Bank did not exceed an estimated £I 800,000 during this period, shipments during the closing months of the year are expected to raise the annual figure to about £I 6 million.

The residual £I 15 million of total import values, an annual rate of £I 20 million, were provided by commodity imports requiring no exchange payment. Thus, in addition to donations in kind and the personal belongings brought in by immigrants, the Government has permitted foreign investors to transfer capital to Israel in the form of commodity imports for resale on local markets.

In terms of modes of financing, therefore, the import trade of Israel during the first nine months of 1949 may be broken down roughly as follows:

Category of financing	*Jan.-Sept. 1949 Millions of Israeli pounds*
1. From the exchange receipts of the Israeli Government.....	44.0
2. Donations, etc., in kind.....	15.0
3. Export-Import Bank loan.....	0.8
	59.8

For the purposes of calculating a balance of payments for Israel during 1949, the estimates presented above of import arrivals in the form of donations and investments in kind and shipments financed by Export-Import Bank funds, may be utilized without serious distortions of the current exchange position of Israel. With respect to these import arrivals financed out of the exchange resources of the Israeli Government, however, one encounters the familiar technical problem that import arrivals, so financed, do not reflect the current rate of exchange commitments but rather commitments made months before. Thus, import arrivals in the early months of 1949 probably correspond to exchange commitments made in the closing months of 1948, or even earlier. This time lag would not be of serious consequence if the rate of exchange commitments remained unchanged during the period under consideration. But since, in the case of Israel, the rate of exchange commitments has sharply varied during the past eighteen months, a balance of payments estimate for 1949 cannot rely upon recorded import arrivals without seriously misleading results.

Thus, the Israeli authorities report exchange allocations during the first nine months of 1949, of nearly £I 32 million, or an annual rate of about £I 42.5 million. This compares with actual import arrivals, similarly financed, during the same period, of £I 44 million (£I 58.6 million annually), a strikingly severe cutback of £I 16 million annually, or nearly 30 per cent, in the rate of exchange allocations. Since the Israeli Government is reportedly not accumulating reserves, this cutback presumably reflects developing exchange scarcities of grave significance to the Israeli economy.

To the extent of perhaps £I 6 million, this reduction in exchange allocations will be cushioned by rising deliveries of basic capital imports, financed by the Export-Import Bank loan. The Export-Import Bank loan is providing, in effect, a partial replacement of declining contributions from world Jewry. But since Export-Import Bank funds may not be freely allocated to exchange requirements in general but must instead be reserved for specified projects, the Israeli Government has apparently no alternative but to cut back imports requiring payment in free exchange by about £I 10 million, representing a net reduction of more than 15 per cent from the annual rate of import arrivals during the first nine months of 1949. Here is a highly significant reflection of the austerity programme which is rendered all the more severe by the continuing growth of the population and resultant compression of the individual share of the national income.

To recapitulate, it is estimated that, for balance of payments purposes, the debits on import account during the calendar year 1949 may be estimated roughly as follows:

Estimated debits on import account 1949

Category of financing	*Jan.-Sept.*	*Jan.-Dec.*
	Millions of Israeli pounds	
1. Exchange commitments	31.9	42.5
2. Donations, etc., in kind.....	15.0	20.0
3. Export-Import Bank loan.....	.8	6.0
	47.7	68.5

2. *Invisible Payments.* Invisible payments reported by the Israeli authorities amount to £I 8.2

million for the first nine months of 1949, suggesting an annual rate of £I 10.9 million for the entire calendar year. Of this total, freight payments and remittances reportedly constitute a major fraction. Service payments on previous investments amounted to no more than £I 500,000 during January-September 1949. In 1953, however, service charges on the Export-Import Bank loan of $100 million at 3 per cent, repayable in twenty-four annual instalments, will cause this particular charge upon the balance of payments to rise by approximately $11 million or nearly £I 4 million.

B. *Receipts*

1. *Exports.* On the receipts side, reported exports during the first nine months of 1949 amounted to no more than £I 8.3 million, less than 14 per cent of import values during the same period. However, nearly 90 per cent of such export values were concentrated within only three items—citrus fruits, diamonds, and fruit juices—reflecting the exceedingly narrow range of Israeli export availabilities at the present moment.

Israeli exports
January-September 1949

Category of export	*Millions of Israeli pounds*
Citrus	5.1
Diamonds	1.4
Fruit juices	.8
Other	1.0
	8.3

For purposes of balance of payments calculations, however, it is preferable to employ the slightly lower figure of £I 7.7 million in actual exchange reecipts from exports reported by the Israeli Government.

2. *Tourism, etc.* With respect to invisible receipts, tourist expenditures, etc., provided approximately £I 5.7 million during January-September, an annual rate of £I 7.6 million. The exchange assets of arriving immigrants reportedly provided only a negligible share of this total.

3. *Imports without Payment.* Corresponding to imports without payment running at about £I 15 million during January-September, there must, of course, be noted an offsetting credit on the receipts side. Of this general category of imports financed without actual cash payment, the Israeli authorities have provided the following breakdown:

Imports without payment
January-September 1949

Category	*Millions of Israeli pounds*
Gifts	1.6
Personal assets of immigrants	3.7
Transfer of capital	3.8
Unclassified	5.9
	15.0

Perhaps the most significant aspects of this breakdown are, first, the comparative impoverishment of the immigrants now flowing into Israel, and, secondly, the failure to attract any substantial volume of commercial investment from abroad, despite the Governmental concessions, noted above, of capital imports in kind for purposes of resale on local markets. Of total capital transfers in kind of £I 3.8 million during January-September, Israeli officials admit that the major proportion is comprised of so-called "sentimental" rather than commercial investment. At the present moment, the early purely commercial venture reported to be in reasonable prospect appears to be that of an electrical fixtures plant to be financed by the Philips Company, of the Netherlands. This situation is unlikely to improve so long as Israeli wage rates and productivity remain so far out of line. Thus, at the $2.80 exchange rate, Israeli labour appears exorbitantly expensive to any foreign investor concerned about making money.

4. *National Institutions and Funds.* The most crucial factor in the exchange position of Israel, however, is the rate of contribution by world Jewry to the various national institutions and funds, such as the United Jewish Appeal. Here one may note two sharply divergent trends. On the one hand, total contributions by world Jewry for assistance to Jews outside of as well as within Israel evidence an abrupt falling off. On the other hand, with the transfer of refugee Jews in Europe to Israel, the percentage share of Israel in the total of Jewish contributions is rising.

On balance, however, the trend of donations actually received by Israel, as distinct from allocation of Jewish relief funds to other areas, appears to be sharply downward. Thus, donations to Israel during the 11 months' period October 1948 to August 1949, amounted to £I 36 million, an annual rate of roughly £I 40 million. In striking contrast, donations during January-September 1949 amount to only somewhat more than £I 20 million, an annual rate of approximately £I 27 million. This sharp decline in the rate of contributions constitutes a most serious threat to the economic stability of the Jewish State.

5. *Release of Sterling Balances.* Finally, a significant share of Israeli imports during 1949 is being financed by releases of sterling balances granted by the United Kingdom. Thus, for the ten months' period January-October, the U.K. has released sterling in the equivalent of about £I 8 million, of which £I 6.5 million were spent or committed during the first nine months of the year. Residual sterling balances of Israel are variously estimated between £I 25 and 30 million. Negotiations regarding future releases of these blocked balances are reportedly soon to be initiated.

In this connexion, it may be noted that as of 14 November 1949, the Issue Department of the

Anglo-Palestine Bank of Israel recorded nearly £I 24 million of such sterling assets as backing of the note issue. The Israeli authorities clearly intend, however, to substitute domestic obligations as fully as possible for such idle exchange assets, in the conviction that popular confidence in the currency is so strong as to require relatively little psychological support in the form of gold or other exchange reserve backing for the currency.

To recapitulate, the foregoing rough estimate of the major balance of payment items may be summarized in tabular form as follows:

Estimated Balance of Payments of Israel for 1949

	Jan.-Sept.		*Jan.-Dec.*	
	Millions of Israeli Pounds			
Payments:				
Imports:				
(*a*) Exchange commitments	31.9		42.0	
(*b*) Donations, etc., in kind	15.0		20.0	
(*c*) Export-Import Bank: actual shipments	0.8		6.0	
		47.7		68.0
Invisibles		8.2		10.9
Total		55.9		78.9
Receipts:				
Exports	7.7		10.3	
Tourism, etc.	5.7		7.6	
Donations, etc., in kind.....	15.0		20.0	
National institutions & funds	20.2		27.0	
Release of sterling balances..	6.5		8.0	
Export-Import Bank loan...	.8		6.0	
Total		55.9		78.9

Of total payments requirements currently approximately £I 79 million annually, receipts from exports, tourism, and various services thus cover no more than £I 18 million, or roughly 23 per cent. The residual balance of more than £I 61 million, or 77 per cent, is only precariously financed by foreign contributions and other capital inflows. In terms of the national income, such capital transfers probably account for more than 25 per cent of the total flow of goods and services currently available to Israel.

Balance of Payments Prospects for 1950 and 1951

Unfortunately, there is little if any prospect of an early improvement in this dangerously unbalanced exchange position. Even in the absence of further immigration, it is doubtful that any significant economies could be effected in the consumers' goods import programme, which has been already compressed to severely austere proportions. On the contrary, internal political pressures may well force a relaxation of the present austerity programme with consequent heavier demands upon the exchange resources of Israel. While additional consumption imports might be financed by cutting back the investment programme, such action would, of course, only delay still further the ultimate achievement of economic viability.

But by far the most dangerous element in the balance of payments outlook of Israel is the continuing inflow of immigrants. In many Jewish quarters there apparently exists an absolute conviction that Israel can absorb no less than 1 million further immigrants, thereby doubling its present population, within the brief space of four years. But in recent months, the present Government has apparently concluded that immigration during 1950 and 1951 cannot safely exceed more than 150,000 annually. In view of the severe political pressures upon these officials to permit an unrestricted influx, however, the figure of 150,000 immigrants annually may well prove a relatively optimistic forecast of the burden of additional population to be suddenly thrust upon an economy already strained to the utmost.

With respect to the prospective cost of immigrant absorption, Israeli officials repeatedly cite an estimate of $2,500 *per caput,* allegedly based upon the cost experience of earlier years.

If by absorption, the Israeli Government means that immigrants when fully "absorbed" should contribute to exchange earnings, directly or indirectly, as much as they increase import requirements, more precisely, that the entire economy, including the new population, should earn as much exchange as it spends, the capital investment required to render the new immigrants self-supporting in this sense would probably far exceed the $2,500 estimate. Thus, as noted above, even the existing population of about 1 million is currently earning no more than 23 per cent of its current exchange outlay.

But even if the $2,500 estimate is accepted, one immediately encounters the further difficulty that no breakdown of this figure between foreign exchange and local currency costs is available. There is here involved, of course, the delicate issue of the value of Arab property expropriated by Israel. Moreover, Israeli officials are reluctant to provide even a rough estimate of the time period over which such immigrant cost outlays must be effected. While it would seem obvious that, given an influx of say, 150,000 immigrants in 1950, the Israeli Government could not possibly spend at a rate of $2,500 per immigrant in a single year, even if it possessed the cash required, there is nevertheless no basis for choosing between the relatively more reasonable time periods of 3, 5, 10 or even 15 years required for full absorption. And it is obvious that as the time period lengthens, the

entire absorption operation becomes progressively less economic, i.e., the carrying cost of providing for the current exchange requirements of the immigrants will constitute an increasing share of the entire absorption cost. Thus, if the average absorption period should prove to be, say, ten years, the exchange requirements of the immigrants for purely consumption purposes might approach or even exceed the cost of machinery and other capital imports required to ensure their ultimate self-sufficiency.

In general, it would seem probable that the Israeli officials have been unable to make, even for their own confidential purposes, any reasonably useful estimates of the overall absorption cost and of its distribution over time. It is accordingly suggested that the $2,500 estimate be disregarded entirely and attention focused instead upon the more limited but somewhat less hopeless task of estimating the prospective cost of providing the 150,000 immigrants with reasonably adequate housing, State services, and more or less productive employment.

On this basis, the Israeli Ministry of Finance estimates that import requirements in 1950, exclusive of deliveries financed by the Export-Import Bank loan and donations in kind, will be increased by roughly £I 10 million in the event of 150,000 immigrant arrivals. This estimate implies an increase of roughly 24 per cent in cash-financed imports, primarily of consumers' goods, as compared with a population increase of 15 per cent, and a probably lesser percentage increase in the gross national product available for consumption. Pending further investigation, the £I 10 million estimate would appear to be a reasonable approximation.

Whatever additional capital requirements may be occasioned by the annual 150,000 immigrants should be more than taken care of by Export-Import Bank financing already provided. As a very rough guess, the Israelis might succeed in putting to use in 1950 as much as $35–40 million of capital equipment so financed, leaving a residual of $45–50 million available for 1951–1952. Invisible outlays during 1950 should not markedly increase, if at all, nor is there in firm prospect any significant rise in invisible receipts.

Under favourable harvesting and marketing conditions, export yields from citrus and other shipments might expand export earnings during 1950 to, say, £I 13 million, roughly 30 per cent above the current rate. But the crucial item on the receipts side is, of course, the donations from the National Institutions and Funds to be expected. As noted above, Israel is currently faced with an ominous decline in the rate of donations from the National Institutions and Funds. In seeking to forecast the balance of payments position of Israel in 1950, therefore, an assumption that 1950 donations will not decline further below the 1949 annual rate would probably tend to err on the side of optimism rather than pessimism.

On the basis of the assumptions outlined above, the Israeli Government would be faced in 1950 with exchange requirements for essential imports of roughly £I 52 million, and for services of about £I 11 million, or a total of £I 63 million, against exchange availabilities that will probably fail to exceed £I 48 million. This would suggest a minimum exchange gap of about £I 15 million, or somewhat more than $40 million. In view, however, of the relatively optimistic assumptions made with respect to the rate of immigration and the contributions of world Jewry, the deficit to be actually incurred in 1950 may very well approach £I 18–20 million, or about $50–55 million equivalent.

It is of considerable significance that this prospective deficit in 1950 is not necessarily a dollar gap, as distinct from shortages of other currencies. As noted in an earlier connexion, extensive possibilities unquestionably exist for diverting purchases hitherto made in hard-currency markets to the sterling and other soft currency areas. Thus, it is entirely possible that most of the gap now in prospect might be closed by additional sterling becoming available to Israel.

When and if consideration may be given to extraordinary means of financing this prospective deficit in Israel's exchange accounts in 1950, therefore, the problem of the appropriate rate of release of the £I 25–28 million in frozen sterling balances currently held by Israel will unquestionably become of crucial significance.

APPENDIX III

Research and Technical Survey Requirements in the Middle East Countries

The pre-requisite for executing any development scheme is technical survey, whether of the area and raw materials on the potential of which the scheme is based, the technique of carrying it out, or the resultant effect on the regional or national economy. The degree to which such survey is necessary varies with the amount of previous study of a country; in some there is no need for investigation of geology or geography, for these are already well known; in others no data exist even on the basic climatic conditions. The countries of the Middle East, in the main, fall into the latter class.

Advance technical survey is therefore particularly necessary for any development scheme in this area. Without such survey the practicability of the scheme itself may be doubtful; and even if, by the employment of suitable executants, the construction and similar work are adequately completed so that the project *per se* is not a failure, there is yet no guarantee that it has been taken in its proper priority from a regional point of view, or even that it is of any national value at all. Technically unsurveyed developments bear the same relation to those properly surveyed as does the growth of wild fruits to those properly cultivated in an orchard.

For such surveys an adequate supply of competent technicians is required. Unfortunately, the Middle East countries (excepting Israel) have a serious lack of this type of trained specialist, not only on the higher but on the technical foreman level. To say this is not to minimize the efforts made by all these States—where this dearth of technicians is clearly recognized—to train their promising young men both at home and abroad over the last decade or more. Secondment to Western countries, and more particularly to the United Kingdom and the United States, is now a well-established part of higher education policy. Much has been done by the universities in Egypt and Beirut, the colleges in Baghdad, and higher teaching institutions elsewhere. But the supply is pitifully inadequate to the demand; it is much less in proportion to the population than in the Western countries; yet the requirements, owing to the lack of previous surveys and the need for development, are infinitely greater. Moreover, there is often a lamentable failure in the countries of the Middle East to employ their expensively trained local technicians on the subjects in which they are qualified. This is due in part to a lack of education (not in the strict, but in the broadest sense) whereby the "how" and "why" of utilization of such men are not clearly recognised. Qualified architects, for example, in at least one country, complain that they are not asked to design even large buildings, since the general public tends to confuse such design with the work of the constructing engineer or contractor (the same Arabic word is often used for both). Inadequate salaries paid to technicians in government service also result in the moving of able and ambitious men from their own field to general government administrative posts, since this is the only way in which they can receive promotion.

It is clear, therefore, that although more use can be made of local ability, most of the technicians to survey, plan and design the development schemes essential for the Middle East will have to come from abroad. Not only will such help be necessary to meet the existing deficiency and provide greater practical experience, but decisions of international bodies on the granting of loans are often made more readily if the "bankability" of the project is certified by an outside agency.

The fields in which such technical assistance is required can, for convenience, be divided into six major heads:

(1) Study of the basic elements soil and water, and their products, the basic industry of agriculture in its broad sense;

(2) Examination of the second primary source —mineral wealth;

(3) Survey of industrial development;

(4) Technical advice on transportation;

(5) Study of economic and administrative implications of development;

(6) Advice on the social effect of development.

(1) The great natural assets of the Middle East are its soil, so frequently fertile yet so frequently wasted, and the water, scanty in quantity, which alone can waken this soil to life. From the union of the two spring those agricultural products the cultivation of which is the basic industry of the entire region. The first priority in technical survey must always be given to that which leads to development in this field.

The types of technical surveys which are re-

quired in some or all of the Middle East countries, for some or all of the development projects in the land, water, and agricultural fields, may be divided into four.

(*a*) The primary surveys are those of the land itself.

The basic survey of this nature is, of course, the investigation of the country's geographic layout, i.e., cartographic survey. Such mapping is partially complete in every country but adequate in almost none. It should be remembered that the modern technique of air survey can readily be applied to the Middle East countries, and that this form of map making may be the answer to much of the need.

Secondly, it is necessary to know the kinds of soil; surveys by qualified soil chemists are an essential preliminary to both irrigation and agricultural development. On such surveys it is possible to decide, for example, the relation of irrigation to drainage in the light of the danger of salting-up; and on the chemical composition of the soil the choice of crop frequently depends.

Thirdly, attention must be paid to the waste of the soil by water and wind erosion, which is so widespread—and, in many places, so chronic a disease of the lands of the Middle East. Hence many areas must be examined by erosion control experts, and the implications of schemes from the erosion point of view must be carefully considered. Such soil conservation survey is integrally related with forestry and is often best carried out by experts in both subjects.

Finally, it is necessary, before embarking on large agricultural development schemes, to consider the present utilization of the land and to map out, with the assistance of data of the second and third studies above, the present and future uses to which the land can be put. At the same time, it will be necessary to examine the land from the legal aspect of land tenure, a type of survey which is perhaps better carried out by local rather than by foreign experts. This is of fundamental importance, for some reform of the land tenure system will be needed before development can proceed freely and unhampered and its fruits made available to rich and poor alike.

In carrying out such surveys and in the planning which results from the new knowledge of the geology, chemistry, conservation and utilization of the land, attention should be paid to the need for advice on the setting-up of co-ordinated departments of land use, whose function it will be to survey and develop this basic asset.

(*b*) The second great natural asset—and that which, in the Middle East, plays the part of its life blood—is water, whether in the form of rainfall, of streams fed by more copious precipitation at one point and flowing to give life to arid areas elsewhere, or of concealed and as yet untapped underground resources. In this field, five types of survey are necessary:

First, while certain Middle East countries possess a meteorological organization, this is, in many cases, conditioned by the needs of aviation, and full studies of the meteorology and climatic factors of nearly all countries have yet to be made.

Secondly, even if the climatic situation and, in particular, the moisture which falls upon the earth are known, the country's water resources cannot be developed without full investigation of the surface flow or the subsoil waters. Hence technical investigation of the stream flow and underground water resources must be made, not merely for a short time but (as with climate) over a period, by properly qualified hydraulic engineers. Some scheme may have to be started either on the inadequate data already existing or on the results of tests taken over a short period; but, in general, such recordings must be carried on over a period of years, and technical assistance may be concentrated on the setting-up of an organization to do this. At the same time special attention must be paid to floods, for the control of these and the elimination of the destruction which they cause will be one of the major objects of many developments.

Thirdly, it is fairly obvious that the design of construction works, themselves involving vast expenditures and even the possibility, in the event of failure, of major disasters, must be very carefully made in advance by the best available technicians. In particular, in addition to the general engineering aspects, the closest attention must be paid to geologic enquiry into the nature of the foundations of dams and the possibility of seepage from the storage reservoirs.

Fourthly, before water development schemes are undertaken, the utilization of the controlled or stored water must be considered by competent irrigation engineers; and assessment must be made, by them in conjunction with agriculturists, not only of the canal network which will carry the water to the land, but of the water duties of each area, bearing in mind the crops envisaged and the results of the work of soil chemists. At the same time, as irrigation is technically surveyed, so also must drainage schemes be surveyed, for the latter are essential corollaries of the former.

Finally, another aspect of the utilization of water resources—the development of hydro-electric power—must be considered as part of engineering planning, and hydro-electric specialists must survey not only the technical aspects of electricity generation but also the methods of distribution and the demand. The development of thermal production of electricity must be considered at the same time.

(*c*) Of major importance is the work of agricultural specialists; and just as the technical assessment of the water resources and their

development must be related to the examination of the land itself, so both must be related to agricultural production, to stimulate which is the main object of the joint development of land and water resources.

Firstly, in the field of crop husbandry, specialists must examine the area and define the types of crops which are most suitable either for the irrigated or non-irrigated lands; they must estimate fertilizer requirements; advise on crop rotation; test and suggest the specific strains which are best cultivated and aid the production and distribution of improved seed; design better methods of cultivation; and advise on an ex- sion service for teaching such methods. Horticulture must likewise be covered by such technical advice.

Secondly, since much of the Middle East has been, from time immemorial, and will always be, a pastoral land, the services of animal husbandry specialists are of great importance.

In the third place, it will be seen that there is little value in the elaborate development of an area's crops or herds if they are to be destroyed by the sudden plagues—locusts, the destructive diseases—which have for so long penalized the eastern farmer. Hence research must be undertaken in plant pathology, and the control of animal diseases, as well as on the methods of combating insect pests.

Further, the methods of distributing crops must be surveyed from the point of view of agricultural economics, and it may be desirable for study to be undertaken of the possibility of co-operative marketing.

Finally, technical assistance will be needed to determine the number, type, location, and equipment of the agricultural research stations necessary to cover the climatic and other conditions of the area.

(*d*) Special technical survey is needed in the Middle East on the possibility of developing fisheries. More important work (though also more widely begun) is in the field of forestry. Forestry, in its soil conservation aspect, has been mentioned above; but much can be done by qualified forestry specialists in making technical surveys of the actual utilization of the forest production, the proper control and regeneration of the forests regarded as timber producers, and even on the setting-up of the trained forestry organization, in itself a specialized accomplishment.

(2) While a geological survey has been briefly mentioned as a forerunner of large construction works, and the work of the soil chemist has been seen to be a necessary preliminary to irrigation and agricultural planning, nothing has been said of the other great primary resource—the mineral wealth of the region. It is known that many areas of the Middle East contain minerals; and, in remote or historical antiquity, mines flourished where now the very sites of the workings are almost forgotten. It is probable that the Middle East could again become a producer of considerable quantities of ores and chemicals. Therefore, an early and valuable technical survey in most countries would be an intensive general geological examination. Following this, specialist mining engineers should examine the possibilities of the exploitation of specific minerals, bearing in mind the power which may be developed as a result of the researches of the water engineers, and the transportation facilities of the country. In one field alone has the mineral wealth of the Middle East been subjected to detailed technical survey and research. On the exploitation of the enormous oil resources, great industries have been based having a decisive effect on the regional economy. Yet, even in this field, further exploration is possible, and technical researches on behalf of the Governments themselves may not be unproductive.

(3) If the primary production of a country is developed without proper attention being paid to secondary industry, the result may be an unbalanced economy. The rise in the standard of living, or at least in the purchasing power, of a community, which may result from development schemes will also increase the demand for consumption goods.

Yet it will be necessary for a higher proportion of imports, for some time to come, to consist of capital goods for development purposes. The increased purchasing power resulting from development and expenditure thereon must, however, be absorbed, or inflation will result. It is therefore desirable that the secondary industries of the Middle East countries should be developed; and for this purpose technical surveys covering the available raw material, the labour possibilities, power, transportation, and the potential market must be made by specialists in industrial planning. The erection of factories, and probably the early management, will require planning and supervision by industrial experts from abroad. In particular, specialists will be required to plan those processirg industries which can convert, to a convenient transportable and exportable form, the products of an intensified agriculture. Technical surveys might, for example, be directed towards sugar refining, cotton ginning, and textile production; the wine, spirit and fruit juice industries; the extraction of vegetable oils; canning and packing industries; the processing of dairy products; and the like. Other specialized surveys may be made by chemical engineers with a view to the utilization, for chemical manufacture (and particularly the production of fertilizers) of the countries' minerals.

(4) The development of the economy of the Middle East will be strangled if adequate means of transportation are not provided. One or two

Middle East countries have an adequate railroad system, or have at least one or two harbours; some (Iraq and Egypt) have an elaborate system of inland waterways; none has a completely impossible road system. But no country would boast that its transportation facilities are either perfectly planned for its present needs, or at all likely to meet the demands of its economic development or demographic growth. Lack of the means to introduce into the country, and distribute through it, the necessary machinery and supplies will strangle development at birth; and inadequate facilities for distributing and exporting the products will stifle development in its childhood.

Hence the services of technical experts, who can survey the existing transportation network and advise on its improvement, will be necessary at a very early stage in Middle East development. Special attention should early be paid to port facilities, since it is through these that the capital goods must enter; almost of equal priority is the planning and detailed surveying of road development. But the alignment and economic planning of railways and even specialized surveys of airfield facilities must not lag far behind.

(5) Technical advice, surveys and research under the four previous heads are concerned with concrete matters; but in three important and inter-related fields the work of the technician is actually equally practical and no less essential. These are: (*a*) statistical surveys; (*b*) economic study; and (*c*) administrative reform. Without attention being paid to these matters the general co-ordination of development will be a failure, and individual schemes, however successful in themselves, will not play their proper part in the national life.

(*a*) All planning is based on known facts; and the collection of certain categories of such facts is one of the main objects of the technical surveys and research listed above. Statistics are simply facts expressed in numerical form, and statistical calculations represent, in a sense, the maps on which the economist and the government official can base their judgments and assess the justification and priority of development schemes.

Statistical data in the Middle East vary greatly in quality and quantity; in no country are they complete, and though in several statistical information is in course of improvement it is, in general, vague, inadequate, and untrustworthy. Technical assistance is being and must be further given to the Middle East countries in the form of surveys of the existing statistical systems, and aid in the building up of the statistical organizations.

Such technical assistance should, in particular, be concentrated on the improvement of the statistics of population, mortality, morbidity, labour and employment; on the assessment of agricultural production by sampling techniques and the like, and the design and interpretation of field experiment; on the taking of censuses of production; on the improvement of the already existing trade statistics; and on the production of clear and accurate statistics of transportation. Of special importance are such economic statistics as the national income calculation, the balance of payments, the cost of living index, and the wholesale price index. In the minor but highly specialized field of mechanization of statistics, expert assistance is also necessary.

(*b*) Economic research and economic advice will play an essential part in the development of the Middle East countries. It is not too much to say that no development board should be set up by any country without a secretary-general possessing a broad knowledge of economic problems, plus a specialized and highly qualified economic advisor. In addition, specialists in various fields of economics will be required to study particular problems. Among other things, production must be studied in terms of wages and costs as well as the man-power resources and the available skills; at the same time careful attention must be given to the whole field of distribution, to the price structure, the organization of retail trade, the marketing system, the need for co-operatives, and the possibility of export. Inflationary threats, already a serious problem in the area, must be closely studied, particularly the pressures likely to be generated by the process of development itself. In the field of finance, budgeting, the financial market, credit, and the like must be dealt with; the taxation system and in particular the incidence of taxes on different levels of the population and their utility as a means of financing a public works programme must be examined. And the external financial situation of any country, its balance of payments situation, will require the most careful study.

(*c*) Finally, development, which cannot be imposed on a country by an outside agency, but can only be aided and guided by it, presupposes the existence of a governmental machine competent to play its part in expansion and operate the new schemes when they have been created. To assist such a machine, specialists in public administration will be required to advise on governmental organization in general, and to arrange, either through private or governmental channels, for the secondment of officials to more efficient administrations abroad and possibly for the establishment of training facilities. Special attention may have to be paid to such matters as the survey and reform of taxation systems, to ensure that taxes are spread equitably over all strata of the population. It may even be necessary to call in advice on legal and constitutional reform.

(6) It cannot be over-emphasized that even if all the above surveys are made and economically integrated, development will not achieve its true aim of eliminating human suffering and raising the living standards of the great mass of the poverty-stricken people of the Middle East, if it is not accompanied by widespread social reforms. Hence technical advice will be required in the fields of labour and social affairs, of medicine and the like. Widespread public health measures must be taken—and these will entail detailed technical surveys by high ranking experts, and prolonged research into the main endemic diseases. The level of education in the Middle East countries is generally low, and great developments will take place which must be properly advised. In particular, educational research has scarcely been turned, in most countries, towards the specific aptitudes of the local child, and too often the educational system is an inadequate imitation of a European one. Even in the fields of police and traffic control there is room for technical survey and advice.

It will be seen that none of these technical surveys, the need for which has been sketched above, can either be made or achieve any result, *in vacuo*. The soil chemist's labours are of little value unless they are used by the agriculturist; and the agriculturist in turn may plan crops without result unless his work is linked with that of the irrigation expert. The economist may analyse a problem with the utmost acuteness, but unless his labours are given a local habitation and a name by the technical specialists, they will remain an academic exercise. Thus, not one or a few, but the majority of such surveys must take place together and at the same time. National development boards and any international technical agency which is set up, in conjunction with the specialized agencies of the United Nations and other bodies of a similar type, should therefore at an early date develop a full prospectus of research priorities.

76

APPENDIX IV

Annotated List of Certain Development Projects in the Middle East

In the following pages an attempt is made to set out, in tabular form, some of the development projects which have either been noted on the spot or in discussion with Government officials by members of the Mission or are covered by documents in its possession. To include all the schemes which have ever been adumbrated for the Middle East countries would be a virtually impossible and, in the circumstances, fruitless task. Some have been conclusively abandoned; others are mere tentative suggestions; and many are indicated only by name in comprehensive general studies. Some schemes of the last type may never be realized and almost no information on them exists. Nor, in many cases, is it possible or desirable to enter into details, even on a major scheme which is seriously contemplated, owing to the lack of preliminary surveys.

In general, the schemes selected in this appendix cover the more important or probable development plans for the Middle East countries. Selection has been made on a number of criteria. Schemes which have already been begun, but are not completed, are included, and so also are the principal projects planned by Governments for early execution. Major schemes recommended as foundation stones of the development structure in various general reports are mentioned, and certain others have been included where specific recommendations have been made by the Mission or some technical body in an earlier survey.

Thus, though the appendix is far from being comprehensive in its treatment, schemes included do give a reasonably satisfactory general picture of the lines on which development might proceed in the countries under review. Particular attention has been paid to plans related to agriculture, the primary industry of the whole area, and to the conservation of the two natural resources of land and water.

It must be emphasized that the list is not exhaustive and that many of the estimates of time required and finances are necessarily tentative. The tables do not pretend to a high degree of accuracy: there are certainly omissions and there are doubtless errors.

In the case of two countries, *viz.*, Egypt and Israel, the treatment is not in such detail nor based on such direct sources as with others. It has not been possible to discuss development plans in detail with the Egyptian Government, and material for this section has been drawn only from available sources. No pilot schemes are included in the Mission's report for either of the two countries for reasons explained in the main body of the report. For these reasons, therefore, the sections of this appendix on Egypt and Israel have been included more for the sake of completeness in giving a conspectus of the whole region and to indicate where the schemes of various countries overlap or require co-operation, than as a working list.

Attention is specially directed to column 5, "further surveys necessary". This column at times, by its very incompleteness, is significant. It tries to show on the basis of the best available information the preliminary work which must yet be done before the schemes concerned can begin. Even for the construction of this column information has been found to be scanty; and while it is known that, for most projects, further technical data are required, sometimes it is not even possible to indicate the stage reached in meeting this need.

The abbreviations used are thought to be self-explanatory, e.g., M. means million, m. means metre etc. Costing has normally been given in the local currencies, of which types and conversion rates are:

£E1 (one Egyptian pound) equals $2.87;

£I1 (one Israeli pound) equals $2.87;

ID1 (one Iraqi dinar) equals $2.80;

£P1 (one Palestinian pound) equals $2.80;

£L1 (one Lebanese pound) equals free market rate, approximately 32 cents;

£S1 (one Syrian pound) equals free market rate, approximately 30 cents.

It is hoped that this appendix will at once indicate the scope of the Mission's observations and provide a useful check list for future planning work.

78-79

EGYPT

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Nile Waters Project	There are three main interdependent schemes, or rather series of schemes, for the control and utilization of the Nile waters. The three schemes together provide water for 1 to 1½ M. acres of agricultural land in Egypt alone. Uganda, the Sudan, and later Ethiopia will also benefit. Of the three schemes (1.1, 1.2, 1.3) 1.1 is divided into four major projects. These great plans are the largest single contribution ever made to the development of Egyptian agriculture. It is believed they represent the ultimate exploitation of the Nile waters. They may not be fully effective for twenty years.	Plans for all the schemes already exist. The result of a detailed examination by the Egyptian Ministry of Public Works was set out in vol. VII of the *Nile Basin* by Hurst, Black and Simaika (1946). In the spring of 1948, technical experts from Uganda, the Sudan, and Egypt agreed that all these schemes should be executed for the common benefit of their three territories. This was endorsed by the Egyptian Government in February 1949. A detailed agreement between U.K. and the Egyptian Government was reached on the Owen Falls Dam in May 1949. International negotiations are in progress on all other schemes.	The schemes not yet begun are more or less ready for the detailed engineering and contracting stages.					*N.B.* No precise estimates of cost or time actually exist. The figures in columns (7) and (8) have therefore been compiled on the basis of unofficial estimates. The Sudan will also contribute to the Equatorial Nile and Lake Tana projects, and other countries also share.
1.1	Equatorial Nile Projects								
	1.1a Owen Falls Dam				October 1949.	5	£E3.1M. (+£7.5M. from Uganda)	May 1949	The Egyptian Government have voted£ E4.5M. for the Owen Falls Dam, i.e., more than the estimate in column (8). The Uganda Government will spend £7.5M. on this.
	1.1b Lake Kyoga Regulator				Soon.	4	£E1.75M.	May 1949	
	1.1c Lake Albert Dam				Soon.	5	£E11M.	May 1949	
	1.1d Jonglei Cut				Soon.	20	£E32M.	May 1949	
1.2	Lake Tana Project				Soon.	10	£E15M.	May 1949	
1.3	Main Nile Project				Soon.	4	£E10.5M.	May 1949	The total Egyptian Government share of the cost may be of the order of £E57M.
2	Quena Basin Pump Irrigation Scheme (and later Aswan Basin)	To provide extra and controlled water for 250,000 acres of land now watered only by flood. Large increases are anticipated in the production of wheat, barley, millet, and green fodder. Jute may also be grown to meet Egypt's needs. *N.B. Low period Nile* water supplies at the moment do not permit conversion of all basin irrigation (1 M. acres) to pumps. Moreover, until the great upstream works are complete, the basins must remain as safety valves in years of	Stage 1, Qena Basin, provides for installation in a 125,000 acre area, of 500 pumping units to be served by a power station at Qena. Stage 2, Aswan Basin, provides for further 500 units serving 125,000 acres, powered by the Aswan Dam. Pumping units will draw from tube wells and tap underground waters.	Apparently ready for detailed engineering and execution.	Soon.	5	Possibly £E6M.	May 1949	The Egyptian Government has estimated £E8M., of which £E5M. is external expenditure.
					Presumably when the dam electrification approaches completion.	5			

Egypt (*continued*)

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3	Aswan Dam Electrification Scheme *The two following schemes (4 and 5) are connected with 3 above*	To utilize the fall of water at Aswan Dam (built 1902) for production of hydroelectric power to allow nation-wide industrial development. In 1947 Egypt's electric power production was 600M. kwh. The Aswan project should give 1500 M. kwh.	Estimates have been presented by consulting engineers, and tenders have been accepted for work and machinery.	In hand.	Now commencing.	Up to 10.	£E15M. (may be excessive).	May 1949	Egyptian Ministry of Public Works' first estimate was £E11M. British, French and American consulting engineers estimated £E9M. to £E11M.
4	Iron Ore	In 1937 iron ore deposits estimated at 1,000 M. tons of high-grade ore were found near Aswan. It is thought this might be smelted by electric power from the proposed Aswan generators. One plan envisages a steel works with an output of 91,500 tons per annum.	In February 1949 an international commission visited Egypt to study this plan. (Some opinion favours ordinary blast furnaces, with the works on or near the coast.)	The stage reached is not clear, but further industrial engineering survey will no doubt be required as 3 approaches completion.	Not known; but must follow scheme 3.	Not known.	Not known.	Not known.	Not known.
5	Fertilizer Factory at Aswan	Utilization of Aswan power for production of nitrogenous fertilizers (estimated capacity of works 435,000 tons per annum of calcium nitrate). Like the factory at Suez (below), the scheme is designed to improve the productivity of existing cultivated areas (as are schemes for conversion of basin irrigation to perennial); the Nile water schemes are intended to increase the area under cultization.	This scheme has been considered for many years. An international commission was asked in 1947 to report on the possibilities. The Government appears to have decided in principle that the scheme be realized, but no plans have been elaborated.	Presumably further industrial engineering survey will be necessary as 3 approaches completion.	After completion of scheme 3.	5	£E6M.	May 1949	
6	Nitrogenous Fertilizer Factory at Suez	A scheme for large-scale manufacture of fertilizer. This plant should go a long way towards making Egypt independent of imports of fertilizers. Cereal yields are said to have	Already begun.	Now in hand.	Already begun.	2-3	Not available.	—	The Export-Import Bank has granted a loan of $7M. for this project.

90-91

		fallen in recent years owing to lack of these. Pre-war imports of fertilizers were ½M. tons super-phosphates and nitrates on the average per annum.							
7	Rural Water Supplies	A scheme for widespread improvement of water supplies in Egypt. Large schemes in the Delta are complemented by well boring and power pumps elsewhere—2,000 pumps eventually being needed, plus 12,000 wells equipped with hand pumps. This project will have an important effect on the health of the rural population, and will lessen the risk of cholera epidemics such as that which occurred in 1947. The percentage of rural population supplied with pure drinking water is said to have risen in the last two or three years from 25 per cent to 40 per cent.	Already begun. This scheme may be executed in stages. A contract was recently placed for completion of one of five large waterworks, with its network of mains, in the Delta.	Now in progress: presumably each section of the scheme will be surveyed in detail as it comes up.	Already begun.	10	£E21M.	May 1949	A sum of £E3.25M. was allocated in 1946.
8	Minor Irrigation Schemes:		The stage reached is not known, but in general these schemes are under consideration only.	Presumably further detailed surveys will be necessary before the contracting stage is reached.	Not known.	Not known.	Not known.	—	—
8.1	Coastal Wells	The sinking of wells in coastal areas of the Western Desert.							
8.2	Western Desert Irrigation	Irrigation of areas in the Western Desert by canals cut from the Nile.							
8.3	Kharga and Dakhla Oases	Tapping and control of artesian and sub-artesian water in these oases, which have a total area roughly equal to the cultivated area of Egypt.							
8.4	Farafra and Baharia Oases	As above.							

Serial No.	*Name of scheme*	*Purpose and short description of scheme*	*Origin and present stage*	*Further surveys required*	*When actual work started or starting*	*Estimated time to complete work (yrs. from starting date)*	*Estimated cost*		
							Amount	*Date*	*Comments*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
9	Housing								
9.1	Workers' city at Embabeh	To build a workers' city of 6650 houses at a Cairo suburb.	About 600 completed by June 1949; 1,000 estimated by October 1949.	In hand.	End of 1947.	Not known.	£E4½M. to date.	June 1949	—
9.2	Major Housing Schemes	To construct 40,000 town and 100,000 country houses annually. Houses in towns would be allocated to families with incomes below £E9 per month.	Ministry of Social Affairs has drawn up a 10-year plan.	More detailed survey of programme, especially with regard to availability of labour and materials, and the control of luxury.	Not known.	10	£E16M.	1949	It is not clear whether this is an annual or a total figure. Expenditures might be financed by a Government loan.
10	Public Health Facilities	To construct one 500-bed hospital in each province HQ; a 100-bed hospital in each district HQ; and a rural health centre for each 15,000 persons (1,200 village health centres).	This is the programme of Ministry of Public Health. It is in operation, and excellent hospitals have already been built. Eighty Health Centers were constructed by the end of 1948, and thirty were in progress in 1949.	—	Already begun 1947-48.	Not known.	Annual budget of Ministry is £E12M.	—	—
11	School buildings	Large programme of building new schools.	In progress.	In hand.	Now begun (continuous).	5-10	£E10M.	—	—

Note. In 1946 the Egyptian Government approved a five-year plan, which includes some but by no means all of the above projects. This is a development plan consisting of classes of desirable work, with some named projects, for which funds are regularly provided in the Egyptian Budget. The plan originally included the Aswan electrification project (see above); establishment of an Industrial Bank; electrification of some railway lines; and general improvement of transportation, many health measures, new schools, etc. It was prepared in 1945 and approved in 1946. Certain sections are executed each year, but details are not available. The Palestinian campaign, the cholera epidemic, and the establishment of large separate projects have probably led to some modification of the plan.

Work was started in 1946, and was estimated to last for five years. The cost was estimated at £E96 million, of which £E46 million was out of General Reserve and £E10 million in each of 5 years from current revenue.

In 1946 £E22 million was allocated out of General Reserve as follows:

(1)	Roads	£E 4,000,000
(2)	Reclamation of swamps	2,000,000
(3)	Cairo main drainage	2,000,000
(4)	Schools and hospitals	1,500,000
(5)	Irrigation and drainage	6,000,000
(6)	Pure drinking water supplies	3,250,000
(7)	Agriculture	1,700,000
(8)	Other projects, etc.	2,000,000

Subsequent additional funds voted have been £E7.8 million (general reserve) in 1947; £E4 million in 1946; £E5.2 million in 1948; with reductions in 1948 of £E3.6 million. These items are all from General Reserve; current revenue allocations in 1947/48 were £E8.5 million (not fully utilized), 1948/49 £E9.4 million; and in 1949/50 £E12.4 million.

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Estimated cost: Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Habbaniyah Scheme	To control the floods (and also store the waters) of the Euphrates by diverting high water into Habbaniyah Lake. Work will be in two stages, with a barrage in the later stage. The scheme will store water for irrigation of over one million acres and control the frequently destructive Euphrates floods. Flood control in Iraq is a first necessity in any development programme; apart from the damage to crops which will be prevented, flood control is an essential preliminary to the important irrigation and drainage schemes further downstream. Damage to crops and property in a bad year may cost several millions of ID, and in addition large government expenditure is incurred annually at present in relief and stopgap measures.	Fully described in detail in the reports of the Haigh Commission. Work has now begun, Messrs. Balfour, Beatty and Co. being contractors. The inlet and outlet channels are under construction, but the barrage has not yet been built.	This work is in progress, but there are financial delays which may have to be resolved.	1948	2	ID2 M.	1949	(Another ID1.375 M. may be needed for later stage).
2.	Wadi Tharthar								
2.1	Stage 1	A project to draw off the surplus waters of the Tigris by a channel into the vast Wadi Tharthar depression north of Baghdad, thus controlling the disastrous Tigris floods. The depression will be adequate to control almost any conceivable high water peak.	Fully outlined in the reports of the Haigh Commission. The British consulting engineers to the Iraq Government are now drawing up specifications.	Now in hand. The source of finance is not yet finally determined.	Soon.	5	ID7 M.	1949	
2.2	Stage 2	Use of Wadi Tharthar storage waters for irrigation, involving further channels back to the river, etc. Both these schemes are on a major scale.	Outlined by the Haigh Commission.	Not yet planned in such detail as stage 1, and will presumably require detailed engineering plans if decided on. Other schemes may be a higher priority than this stage 2.	—	—	ID4.5 M.	1949	Estimate.

Iraq (continued)

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3	Diyala Dam ("Gibraltar" site).	A dam on the Diyala River for water storage for irrigation, and flood control. This should provide water for irrigation of over one million acres, and supplement the flood control of the Wadi Tharthar scheme. This is also an important project.	The Haigh Commission made a first survey in much detail. Geological surveys are now in progress, and the consulting engineers are reporting.	Completion of geological survey and consulting engineers' detailed plans and specifications.	Haigh Commission recommended 1951 but development might be even earlier, as it leads to early irrigation development by the Diyala Canal.	3	ID2.5 M.	1949	Sources of finance are under exploration.
4	Bekhme Dam	A project exists for a dam on the Greater Zab River in the Bekhme Gorge, intended for storage of water for irrigation and to some extent flood control.	This project has been studied both by the Haigh Commission and the consulting engineers.	It is not clear whether this dam will be proceeded with, and further detailed surveys, especially of the geology of two alternative sites, will be required.	Not known.	5	ID9 M.	1949	—
5	Dam on the Lesser Zab	A scheme has also been mooted for a flood control, storage, etc. dam on the Lesser Zab River. It would provide water for the irrigation of over one million acres.	This has been considered by the Haigh Commission.	Further detailed surveys will be necessary. Other schemes are apparently taking priority.	Not known.	—	ID3 M.	1949	—
6	Development of the Hilla Canal System	An irrigation project for use of water from 1 above. This canal scheme will extend the existing irrigated ara by 160,000 acres and provide for another 150,000 acres within the existing area.	Planned in detail by the Haigh Commission.	Source of finance will have to be explored, and final contracting specifications made.	Not begun.	4	ID1.4 M.	1949	—
7	General Irrigation and Canal Schemes	Plans exist for extending the existing irrigated area widely. *N.B.* Larger irrigation long-term schemes in the Haigh Report envisage doubling the irrigated area of Iraq. These are estimated to cost ID35 M.	Preliminary plans have been made by the Haigh Commission.	Detailed plans require to be worked out.	Not begun.	Within 10	ID3.3 M.	1949	—

96-97

8	Land Drainage Programme	Drainage of irrigated land parallel to irrigation, an essential step. *N.B.* Larger drainage long-term schemes in the Haigh Report might cost ID24 M. In addition, as mentioned above, there may be hydro-electric power and navigation betterment schemes costing several million dinars.	Included in general outline in the schemes of the Haigh Commission. Approval of Iraq Government is awaited for a trial drainage project, as a result of which detailed plans for the main project can be drawn up.	The trial project will have to be carried out first, and detailed plans then prepared.	Not known.	10	ID3 M.	1949	—
9	Mechanization of Agriculture	A project to mechanize agriculture in an area of over 1 million acres to increase the output of the existing cultivated land.	An Iraq Government project. A law has been passed controlling all import, sales and distribution of agricultural machinery.	Finance will have to be sought, and in establishing the project special attention must be given to the need for a servicing organization.	Some mechanization of agriculture has been proceeding for some years, but this specific scheme has not yet been started.	10	ID3.4 M.	1949	—
10	Jebal Sinjar Development	Possible development of a rain-fed area west of the Jebel Sinjar, a mountain range which divides Iraq's Jezireh from Syria's. There are already roads in the area, which is well within the rainfall belt.	Only a suggestion and not yet fully explored. A large area might be developed.	A detailed survey of the area, its soil, climate and agricultural potential will be required. Attention must be paid to existing grazing rights.	—	—	—	—	—
11	Afforestation	Schemes exist for the improvement of Iraq's forests, and protection of an area of about 23,000 km.² of existing complete or partial forests.	A Forest Law and Policy have been passed, and the Chief Forestry Officer has drawn up plans.	Further detailed survey of forest area, training of staff, and establishment of protected areas will be required.	Work begun	—	Not known	—	—
12	Road Development Programme								
12.1	Stage 1	Baghdad-Basra road, via Kut and Amara.	An outline programme only has been drawn up by the Chief Roads Engineer to the Iraq Government.	Detailed plans and engineering will now be required. The work will have to be carried out by proper contractors with competent supervision.	Soon.	10	ID14.5 M. Of this, stage 1, ID4 M.	Spring 1949	Roads Engineer's estimate.
12.2	Stage 2	Reconstruction of existing roads, particularly Baghdad-Kirkuk, and Kirkuk-Mosul.							
12.3	Stage 3	Construction of roads to Holy Cities (Nejf and Kerbela).							

Iraq (continued)

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
13	Railway Development			Further financing is required, as the railway funds, partly accrued from World War II, may not cover all the need.					
13.1	Tigris Bridge	To link the two main parts of the railway system, Baghdad-Basra (on the west side of the Tigris) and Baghdad-Kirkuk (on the east side).	Almost completed.		1948				
13.2	Erbil Extension	A 70-mile extension of the line from Kirkuk to Erbil in northern Iraq, including a bridge over the Lesser Zab River.	Work well advanced.		1948		ID10 M.	May 1949	Out of this ID4.5 M. had already been spent in May 1949.
13.3	Baghdad Station	Construction of a new railway station and layout at Baghdad.	Work well advanced; may be held up for lack of funds.		1948				
13.4	Purchase of Rolling Stock	Purchase of new rolling stock in the U.K.	Not known.						
13.5	Long term Plans	Large internal expansion and lines to Turkey and Syria.	Scheme of commission of experts to consider these plans was not proceeded with.	These schemes require detailed expert consideration, particularly in conjunction with road and water facilities.	—	—	£34 M.	1949	Of this £15 M. on equipment from abroad.
14	Mineral Development	There are good indications of certain minerals in the northern mountains, which may justify large scale development.	First surveys have been made by the Iraq Government geologist.	Detailed surveys and drilling are necessary, as well as a study of marketing, economic and transportation problems.	—	—	—	—	—
15	Airfields	Construction of a new airfield at Baghdad.	Plans for a new airfield at Baghdad were prepared for the Iraqi Government by Sir Alexander Gibb and Partner (ancillary development of the full new railway layout may reduce the utility of the existing airport). The airport was, however, recently reconstructed.	An examination of the economic need specifications, and consideration of Basrah airport, which carries a heavy international traffic, seems required.	The scheme appears dormant.	—	—	—	—

Note. Only the more readily separable and earlier schemes devised by the Commission which worked in Iraq, under Mr. F. F. Haigh, have been shown in this appendix. The total cost of all the schemes outlined in the Commission's reports, to control floods, raise the irrigated area from 7 M. acres to 16 M. acres, provide power, and improve river navigation, will be ID 91.515 M., divided:

Flood control and storage	ID 22.375 M.
Irrigation development	ID 35.26 M.
Drainage	ID 23.88 M.
Power	ID 6.35 M.
Navigation	ID 3.65 M.

This may be spread over as much as fifty years.

ISRAEL

In summarized form, the principal development projects in Israel are understood to be as follows:

I. Irrigation Projects

1. The major plan for development of the water resources of Palestine is described in the report "Proposals for Irrigation and Hydroelectric Development in Palestine", by James B. Hays, June 1948. In this report the development of the water resources in Palestine is planned for execution in eight stages. These stages, which include the Mediterranean-Dead Sea power canal, are too well known to necessitate detailing here; most, however, involve international co-operation in one form or another. The project for a power canal is not excluded from governmental calculation; but, for the moment, attention seems to be chiefly concentrated on those parts of the plan which, together with other projects, are included in the list in 2 below. The total construction cost of the Hays plan was originally estimated at $251,198,000.

2. The following immediate projects are either under consideration or begun:

	Estimated cost in thousands of Israeli pounds
(1) The proposed Yarkon reservoir	700
(2) Project for utilisation of Yarkon water to the south	9,000
(3) The Beisan project	3,600
(4) Western Galilee water supply project	1,000
(5) Gishon reservoir project	800
(6) Reclamation of the Na'aman River and utilisation of the Halazon flood waters	1,000
(7) Jordan Valley water supply project for settlements	300
(8) The Harod Valley water supply project	400
(9) Conservation of winter floods from wadis along the coastal plain	2,000
Total	18,800

II. Industrial Programme

Israel is encouraging industry, and the main investments envisaged in Jewish industry in the five years commencing 1946 were:

Industry	*Thousands of dollars*
(1) Metal (mainly light metal-working industries)	16,000
(2) Textile (importation of machinery and development of a new form of nylon)	26,000
(3) Building materials and woodworking (includes expansion of Nesher cement works and completion of Shimshon works)	6,000
(4) Glass (expansion of annual production from 720,000 m2 of sheet glass to 2 M. m2)	1,000
(5) Paper, packaging, printing	2,000
(6) Chemicals (expansion of factories producing pharmaceuticals and chemicals, with particular reference to the manufacture of sulphuric acid and superphosphates)	4,500
(7) Food (food processing, beverage and tobacco industries, including particularly citrus concentrates)	11,500
(8) Miscellaneous (includes electrical equipment, optical, dental and surgical supplies, household appliances, precision instruments)	3,500
Total	70,500

III. Other Developments

The following are the principal further development programmes envisaged:

	Cost in thousands of dollars
Telecommunications programme, 1st stage	12,000
Motor transport (truck and bus services: large numbers of new buses are arriving and more will be needed)	20,000
Railroad (includes Tel Aviv-Hedera line: there is also the possibility of a Negeb extension, and reconstruction of the Jerusalem line)	9,000
Harbour works (project costed at $20 M. at Tel Aviv is not proceeding but works will be undertaken at Haifa, of which the cost may be up to 50 M.)	20,000
Ship acquisition	5,000
Air transport	Not known
Total	66,000

In addition, schemes exist for the following:

1. Revival of the Palestine Potash Company; at present the northern works is destroyed and the site in Jordanian territory. The southern works lacks easy access but a road may be constructed.

2. Large increases in the capacity of the existing thermal electric plants.

3. Afforestation (a four-year programme covering 800,000 dunums, together with the lining of highways with trees). The eventual aim is to plant 2 million dunums.

5. Road construction, including an arterial highway eventually stretching from Tel Aviv to Haifa, and access to the Negeb.

6. An extensive housing programme and hotel and industrial construction. The need for housing immigrants makes the housing programme of major importance: 50,000 units is the target for 1950.

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Yarmuk Canalization Project	A project to draw the waters of the Yarmuk down the Jordan Valley by a canal parallel to the main river. This would allow turning the Jordan Valley to a fruit and vegetable economy as has been suggested. As originally conceived, this scheme included the diversion of the Yarmuk winter floods into Lake Tiberias for use in the summer. A smaller version of the scheme is possible.	This scheme was fully dealt with in the report in 1938 of M. G. Ionides; it has been further developed since that date. A survey by consulting engineers has just been finished.	(*a*) Consideration of international water rights concessions, etc., a problem of magnitude in this scheme; (*b*) Considerat[illegible] of land tenure difficulties; (*c*) Detailed pre-construction survey.	Not certain.	5	Survey report £P20,000. £P15 M. (less £P.5 M if no Lake Tiberias diversion)	Nov. 1949 May 1949	An estimate for the whole Jordan-Yarmuk scheme.
2	Jordan Canalization Scheme	A general scheme exists to conduct water from the Jordan on to the land on the Palestine bank by a low storage dam 15 km. south of Beisan, and an irrigation canal parallel to the river. This might be combined with the dams on Wadi Qilt (see also 3 below) Wadi Faria, Wadi Auja.	This plan is similar to that in stage 7 of the Hays plan.	As above.	Not certain.	—	£P5.5 M. Further technical study would cost £P50,000.	Nov. 1949	
3	Unified Development Schemes	The engineering consultants to the Mission propose that the Wadi Zerqa area be developed as a unit, by building a storage dam on the wadi, check dams on gullies, afforestation, terracing, planting of fruit trees, house building, etc. The neighbouring road network would be improved. A suitable dam site exists, and the scheme appears most feasible.	Proposed by the Mission as a short-term works project for Arab refugees.	Further examination of geology and topography will be necessary, and these surveys could be complete in three months. Stream flow is not well known so that the dam should be built to a minimum height in such a manner that it can be raised. This final elevation will require several years of record for its determination. A competent geologist should be employed throughout construction.	Suggested for 1950.	2	£P1.455 M.	Nov. 1949	On the basis of £P355,000 dam. Headworks and first canal, £P100,000; check dams, £P50,000; roads £P700,000; village, £P250,000.

1/2-13		A headworks structure and canal network will be required when the wadi enters the Jordan Valley. It is believed the scheme would double the water available for irrigation as compared to present low flow conditions, in addition to developing the whole area.							
		This scheme will serve as a test for the development of other wadis, e.g., Wadi Qilt.	Suggestion only.	Utilization of Wadi Zerqa experience and detailed surveys.			£P360,000 (Wadi Qilt only), cost not known for other wadis. A survey might cost £P20,000.	Nov. 1949	Dam, £P300,000; headworks, £P40,000; canal, £P20,000.
4	Sheraa Project	A dry-farming project in the Sheraa area, said to be suitable for 7,000 persons (270,000 dunums).	Detailed plans have been drawn up by the Jordan Government's Department of Land Surveys.	The suitability of the area is not yet completely established according to some authorities, and a further examination of the land, the grazing rights of the Howeitat tribe and the economics of extensive cultivation may be necessary.	Was planned to start soon.	3	£P.675 M.	May 1949	Cost includes housing, implements and animals.
5	Azraq Scheme	A minor irrigation scheme in the Azraq area utilizing springs. Pumps will be used and the area covered will be 5,520 dunums. There are possibilities however of agricultural development and afforestation over 100,000 dunums.	Fully planned, but only the initial survey has been made.	For the larger scheme topographical, soil and underground water surveys will be necessary.	Soon.	4	The larger scheme may cost approximately £P1 M.	May 1949	A smaller sum was estimated for the minor scheme only.
6	Jordan Valley wadi schemes.	A project to build headworks for the better control of irrigation from the waters of wadis on the east side of the Jordan River.	This group of works was planned by the Jordan Lands Department. The headworks on the Wadi al Arab (northernmost) are finished. No plans apparently exist for storing and conserving surplus water.	These schemes are planned but their progress must now be considered in relation to the unified development projects of the type in (3) above.	Begun. Headworks are now in construction on the Wadi Ziqlib.	4	£P410,000 (the Wadi al Arab cost £P34,000).	May 1949	Development including expropriation might cost £P2 M. if these schemes were made full scale.

Serial No.	*Name of scheme*	*Purpose and short description of scheme*	*Origin and present stage*	*Further surveys required*	*When actual work started or starting*	*Estimated time to complete work (yrs. from starting date)*	*Estimated cost*		
							Amount	*Date*	*Comments*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	Pump Irrigation (the Zors)	Irrigation by pumps of an area on the left bank of the Jordan near the Allenby Bridge. This may provide water for 4,600 dunums.	Under consideration.	It is possible that the Wadi Qilt may be found to be a better source of water. The relation of this scheme to the Yarmuk water project is not clear. The land is State domain. It will require to be cleared of scrub and levelled. Bunds must be built and the bank will require erosion protection.	—	—	Possibly £P31,000 for works. £P93,000 if full development.	—	
8	Musa Bey Alami Scheme	A scheme sponsored by an Arab relief organization and in particular by Musa Bey Alami, for irrigation by pumps and wells of land on the right bank of Jordan near the Allenby Bridge. This is intended to settle refugees on a voluntary basis.	Bore holes have been sunk and one has produced a good water supply.	It is possible that the Wadi Qilt may be found to have a better source of water.	Begun.	—	—		—
9.1	Road Development	The roads of Jordan are, in the main, poor. The Government has developed plans of which the aim for Jordan is to service agricultural areas which cannot get their products to market (and which may be developed) and to open up tourist sites (as the tourist industry may also be developed). The proposals for Arab Palestine are intended to replace communication lines which have been cut.	The Jordan Government plan is drawn up and includes (*a*) for Jordan, a north-south road in the Jordan Valley (agricultural) and a road from Madaba to Ma'an (agricultural and tourism). These will be complemented by a series of transverse roads, including one to Azraq; (*b*) in Arab Palestine many new links to join the severed parts of the communications system, are envisaged.	The usual detailed road engineering survey will be required as construction proceeds.	Soon.	—	(*a*) £P3.75 M. Survey may cost £P25,000.	1949	Construction cost estimate is £P4,000 per km. The annual maintenance charge may be about £P50,000.
							(*b*) Between £P.5 and £P1.0 M. depending on extent of scheme. Survey may cost £P3,000.	1949	Based as above maintenance may, however, be £P25,000 annually.

9.2	Aqaba Roads	(*a*) To rejoin the Naqb Ashtar-Aqaba road especially in the interrupted stretch in the Wadi Yutm, and (*b*) to make the Naqb Ashtar-Amman road a fair weather route.	These are included in the Jordan Government's road scheme noted above, but to some extend depend on the development of the port of Aqaba.	If Aqaba port is developed (*a*) will be essential. The line of (*b*) is served by the railway, but this route also is considered desirable by the Jordan Government. Detailed survey is now required and an economic examination in conjunction with the Aqaba development.	Not known.	?1	(*a*) £P46,000-£P100,000, (*b*) £P34,000-£P50,000.	June	Estimates vary.
114-15									
10	Royal Hashemite Railway of the Jordan	This line (Dera'a—Amman—Ma'an—Naqb Ashtar) is of 105 cm. gauge, and its Haifa connexion is cut both by the Israeli frontier and the blowing of a bridge in the Yarmuk Gorge. As a result some rolling stock is cut off. Much of the present rolling stock and locomotives are obsolescent, yet Jordan depends for its Beirut imports on this channel to a considerable degree. Repairs are done in Syria. It has been suggested (*a*) that track from unused lines in Palestine be utilized as permanent way spares; (*b*) that new locomotives be purchased; (*c*) that a railway workshop be set up in Jordan.	(*a*) Is a suggestion only.	Examination of the possibility of (*a*) and planning of (*c*) by a competent technical expert are required. In general, expert assistance may be needed.		—	(*a*) Not known.	—	—
			(*b*) Is under negotiation with a British company.		In hand.	—	(*b*) £P75,000	1947	For three locomotives but more may be purchased. At present locomotives are hired at a cost of about £P10,000 per annum.
			(*c*) Has been considered, and a site may be available.				(*c*) £P75,000	1949	Estimate only.
		N.B. A scheme exists for the restoration of the Ma'an Medina railway. About one-third of this length (Ma'an to Mudawwana) is in Jordan.	A tentative scheme only.	Further survey will be necessary.	—		Not known. Whole Ma'an Medina scheme is estimated to cost £P4,5M.	1949	
11	Port of Aqaba	To develop Aqaba, 240 miles from Amman, as Jordan's port. It is estimated that this will reduce freight charges as against import *via* Beirut, even on goods having to traverse the Suez Canal, and that in any case most of the expenditure will be within Jordan.	A tentative idea which is now being discussed by Jordanian Ministers and businessmen. The scheme for developing Aqaba dates back to its use by Feisal and Lawrence as a base in World War I, and by the British on a small scale in World War II. Since then the proposal to ship phosphates via Aqaba has directed attention again to the port and caused studies to be made.	An economic study of justification and a technical harbour survey should be undertaken. Detailed study has been given to some aspects of the problem by a consulting engineer on behalf of the Jordan Phosphate Co. in 1947. Road development must proceed parallel to the port work, and locomotives capable of the Ma'an-Naqb Ashtar haul must be placed on the railway.	No concrete position yet.	?1	£P10,000. A study might cost £P5,000.	June 1949	Dredging. Breakwater cost is not determined.

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
12	Amman Airport	This airport is not suitable for large planes, and its improvement to a Class D international standard has been recommended.	Recommended by the engineering consultants to the Mission.	Technical survey and costing of this improvement will be necessary. There is no real economic value at the moment in making the airport up to a high standard.			£P200,000.	1949	Estimate.
13	Terracing	The Jordan Government has in mind various terracing schemes both in Jordan and Arab Palestine, particularly in the Ajlun, Nablus, Tulkarm, Jenin, and Ramallah areas. This is intended for the development of fruit growing.	Projects have been examined and suggested by the agricultural consultants to the Mission covering an area of (*a*) 105,000 dunums in Jordan and (*b*) 320,000 dunums in Arab Palestine (for fruit).	Survey of the area to be treated and its determination.	Soon.	2	(*a*) £P 1.6 M.	Nov. 1949	Mission estimate.
							(*b*) £P 5 M.	Nov. 1949	Mission estimate.
14	Afforestation	(*a*) A project exists for planting out 2,000,000 seedlings in Jordan. The work is limited by nursery production. 20,000 dunums may be reafforested.	Projects have been examined and costed by the agricultural consultants to the Mission.	Further survey and especially encouragement of seedling production.	Soon.	2	(*a*) £P64,000.	Nov. 1949	Mission estimate.
		(*b*) Sowing of seed in an area of 25,000 dunums and planting on 15,000 dunums in Arab Palestine.					(*b*) £P150,000.	Nov. 1949	Mission estimate.
15	Agricultural Development	In order fully to exploit the new land brought under cultivation by the water schemes and to develop intensive cultivation in the Jordan Valley, the Jordan Government proposes certain developments in its Agricultural Department, e.g., resumption of Jericho horticultural station, Khadouri Agricultural School, establishment of an olive and vine culture station at Qabatiya, and a horticultural station at Jiftlik, citrus and vegetable nurseries, and large olive planting schemes in Arab Palestine, etc.	In plan only.	Apparently design is well advanced but no doubt further technical detail must be worked out.	Not known.	Soon after starting.	£P7,000 (Jericho). £P36,000 (Jiftlik). £P2,500 (Khadouri). £P27,000. (Qabatiya). Olive planting scheme £P920,000.	1949	First year figures only. Some revenue would accrue.

	ment of Agricultural Processing Industries	to develop or initiate industries to utilize the products of an intensified agriculture.						
16.1	Soap Factory at Nablus	Nablus has long been the centre of an industry manufacturing soap from olive oil, of which there is an export. The industry is suitable for development by the erection of a modern factory, since the oil is a leading local product. Such a factory, it is thought, might employ 500 persons and by modern methods produce 7,000 tons of soap per annum.	Investigation has been made into this question. It may be that the capacity of the factory is set rather high: for such a production over 5,000 tons of olive oil is required, and the present annual production is estimated at 7,000-10,000 tons, of which 4,000 is for food consumption. However, it is intended to extend olive cultivation.	Further survey on a technical level will be necessary as follows: (1) costing and planning of a suitable factory; (2) research into methods of improving the quality, appearance, and foaming powers of the soap; (3) examination of sources of caustic soda and the possibility of local production; (4) research into export markets. Capital and technical management will be needed.	In plan only.	?2	£P500,000.	1949	
16.2	Sugar Factory	A project for a factory in the Jordan Valley to treat sugar-cane and provide a constant market for cultivation in an irrigated area of 30,000-40,000 dunums. Jordan at present imports large quantities of sugar at considerable cost. The factory capacity is estimated at 15,000 tons per annum, which would allow a surplus for a fruit preserving industry. By-products would assist the economy in various ways, e.g., molasses in animal husbandry, cane residue as fuel, alcohol for industrial use.	It is stated that an American company has made a general survey of the possibility of growing and treating the cane.	The following further study is required: (1) technical survey in detail and examination by an expert of the existing plans; (2) a study of the possible utilization of by-products from the economic aspect.	In plan only.	2 or more.	£P4 M.	1949	An estimate only, which appears to include some land and irrigation costs and wages.
16.3	Fruit Processing	Consideration is being given to the setting up of such industries in conjunction with the development of intensive agriculture.	Not planned in any detail. Some work, e.g., production of samneh (melted butter) and olive oil is already carried on as local or household industry.	Full survey is required with a detailed expansion plan.	Suggestion only.				
16.4	Grape Juice Production	To set up a small grape juice factory on the Palestine side of the Jordan. There is ample raw material and a market for the product.	This is a suggestion only.	Technical survey will be needed as production should be on a modern system for economy.	Suggestion only.	Very short.	£P10,000.	1949	

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work starts or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
17	Aqaba Fisheries	To develop these to meet rising internal demand and possible export to neighbouring countries. Shark fishing for production of Vitamin A may be feasible.	Fisheries are already in operation as a private enterprise. During World War II the Palestine Government operated fisheries at Aqaba, and some of their installations have been taken over by the private companies.	A study of the fishing projects and the shark-oil possibility should be made. Further shipping and refrigerated lorries may be necessary.	Operating.				
18	Phosphate Extraction	To expand the mining of phosphate, of which vast deposits of high quality exist at Roseifa, north of Amman, and Al Hassa on the Amman-Ma'an railroad.	The Jordan Phosphate Co. already mines phosphate on a small scale. There are two schemes: (*a*) junction of the Jordan Company with an Italian company (already achieved), to undertake large-scale extraction of raw phosphate. This scheme involves shipment to Beirut (where at one time a super-phosphate factory was envisaged) or via Aqaba to the East, if markets can be found in India, etc.[a]; (*b*) a later project to overcome the high cost of transport to Beirut suggests that super-phosphate be manufactured by the sulphuric acid process in Jordan.	Detailed transport, etc. surveys were made for the Jordan Company by a British consulting engineer in 1947. These should be brought up to date. A chemical engineer should examine further the super-phosphate scheme.	(*a*) Unknown owing to various delays. (*b*) Unknown.		(*a*) Nominal capital of the Italian Jordan Joint Company is £P1.5M. paid up £P660,000.	1948	
19	Mineral Development	There are indications in Jordan of many minerals, including manganese, gypsum, and marble. These might be exploited.	Under general consideration only, save that marble of a decorative type is now being worked.	A detailed geological survey of the country is of importance.	Marble now being exploited.				

20	Cement Factory	Cement is of much importance in Jordan, partly owing to the present building boom and partly for the needs of irrigation development. It is wholly imported and is expensive, mainly owing to transport costs. A scheme exists for the construction of a cement works. In addition, development may be necessary in the fields of housing, electric power, and water supply. Surveys in these three fields might cost £P10,000, £P20,000 and £P10,000 respectively.	Two companies have been formed, one in Jordan, one in Arab Palestine. A works (suggested capacity 150 tons daily) is contemplated, but the site is not decided on, nor are the companies at the moment amalgamated. Existing capital is not all readily available.	After rectification of any financial and similar difficulties the following are the needs: (1) technical planning of the factory; (2) choice of site adjacent to transport and raw materials; (3) capitalization; (4) arrangements to import any necessary coal.	Not known.	Not known.	£P.5 M.	1949	An estimate only.

118-19

[a] In 1947 it was estimated that 300,000 tons raw phosphate per annum could be produced at Roseifa if £P700,000 were spent on development, and 900 tons per annum at Al Homa if £P3 M. were spent. Export under scheme (*a*) would require more rolling stock on the railways. The southern (Aqaba) route was at one time considered for a ropeway.

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Irrigation and Drainage Schemes	Many schemes exist for the utilization of the water which is one of Lebanon's chief natural assets. It is clear that the maximum use must be made of water resources for irrigation, domestic purposes, and the development of electric power. The proportion of the cultivated land which is irrigated is not high, and must be raised to allow more intensive cultivation of the limited existing area. Among the schemes in progress or contemplated are 1.1 to 1.5 below.	The schemes may be found in various general plans for Lebanese development, in particular in the Gibb Report (report on Economic Development of the Lebanon, by Sir Alexander Gibb and Partners).	The engineering consultants to the Mission recommend continued detailed surveys of schemes of this type.	—	—	£L50,000.	1949	Consultants' estimate for survey costs. Apart from the schemes below, the Lebanese Government estimate a credit need of over £L5 M. for projects in the irrigation-drainage category.
1.1	Lake Yammouneh	This scheme contemplates utilizing the water of a lake above the Beqaa Valley by tunnelling and irrigation works.	This was recommended, *inter alia*, in the Gibb Report. The tunnel is operating, and some works are built.	Apparently fully planned, but further study of the effect on the water regime of the country may be necessary.	Already begun.	Shortly.	£L3 M.	1949	Estimated by the Lebanese Government for completion.
1.2	South Beqaa	A scheme in two stages for drainage of the rich but frequently flooded lands of the South Beqaa, followed by irrigation development, which will utilize river flow and subsoil water.	Work on the drainage is well advanced, e.g., river channelization, general drainage. Irrigation work is apparently not begun.	Studies for drainage are complete, and detailed plans, which are about half complete for irrigation, can be finished in three months. Subsoil water and water rights must be included in the examination.	Stage 1 begun. Stage 2, shortly.	3-5 in all.	£L4 M.	Recent	
1.3	Qasmiyeh Irrigation	A project to irrigate the coastal plain from Saida (Sidon) to 10 km. south of Sour (Tyre), about 4,500 hectares in all, with water from artesian wells at Ras al Ain and from the Nahr al Litani (called near the mouth, the Qasmiyeh). 3,000 hectares depend on the latter. The area is fertile and eminently suited to such cash crops as bananas.	A long-standing scheme endorsed by the Gibb Report, this project is well advanced. Construction of some tunnels and aqueducts is finished.	Studies are complete, and the remaining works are mainly secondary canals and distributaries.	Begun.	Shortly.	To complete, £L3 M.	1949	Estimate of engineering consultants: Lebanese Government have a proposed credit of £L1.5 M.

130-31

1.4	Akkar Plain Irrigation	A scheme in two stages for spring irrigation of over 10,000 hectares and summer irrigation of 5,000 hectares of this North Lebanon plain from the waters of four rivers: Nahr al Bared, Nahr al Arka, Nahr al Kabir, Nahr al Ostouene. The first stage utilizes the Bared and Arka.	Work has already begun on stage 1; canals from the Bared already irrigate part of the Plain.	Stage 1 has been studied in detail. Stage 2 will require some further study of stream flow, underground water, and water rights before it is carried out.	Begun.	3-5	£L7.6 M.	1949	
1.5	Tripoli-Chekka Project	A project for the utilization of an underground source of water supply by construction of a tunnel, giving first domestic water to the Tripoli area and then irrigation on the coast south of Tripoli to a point 4 km. south of Chekka.	Not begun.	Plans for the irrigation portion of the scheme are not fully established and will depend on the amount of water development by the tunnel.	Not known.	Possibly 1-2 years.	£L1.5 M.	1949	Estimate covers part of the scheme.
2	Electric Power Development	Such development is very necessary, bearing in mind the need to aid agricultural and industrial expansion.	Outlined in the Gibb Report.	—	—	—	To be determined.		
2.1	Lake Yammouneh	A project for the installation of a hydro-electric station utilizing the fall of water from the Yammouneh tunnel. The head will be 220 metres.	The original scheme proposed using the fall after the Yammouneh water project is complete.	A detailed survey of generating equipment is required.	Not begun.	3-5	—	—	
2.2	Nahr al Bared	The scheme is for the construction of a small barrage on the lower part of this river to hold 1 M.m/3 at a height of 235 m., with a canal to a point above the 90 m. level and a power station. Estimated capacity will be 7,000 kw. and firm output 3,000 kw.	Recommended in the Gibb Report but not begun.		Not begun.	3-5	—	—	

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost		
							Amount	Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2.3	Nahr Ibrahim	Completion of station 3 and installation of station 2 on the Ibrahim. Station 3 will have a head of 66 m., maximum output of 3,000 kw., and firm output of 1,500 kw. Station 2 requires a barrage with a storage capacity of 5M.m/3, and a canal 12 km. long. It would give firm output of 11,750 kw. and a maximum of 23,500 kw.	Already begun.	Studies seem already to be far advanced.	Work on station 3 is advanced.	3-5	—	—	
2.4	Litani River Scheme	Projects exist for the development of the Litani for hydro-electric purposes. This is the most important source of the future electrical supply of the Lebanon. The Litani drops 850 m. in 100 km. between the Beqaa and the sea, and of this 650 m. is concentrated in a 40 km. stretch. Despite major geologic faults, there are numerous possibilities below the Beqaa plain for dam construction and water storage, and the available power, after allowing for all losses, is estimated at 750 m. kwh. per annum. Only a part of the available flow can be used for irrigation on the coastal plain. It has been suggested that with international co-operation some of the flow, after hydro-electric utilization, might provide additional income to the Lebanon by being diverted to the Jordan Valley (giving another 550 m. fall to Dead Sea level).	A detailed hydrological study of the Litani has been published (*Etude Hydrologique*, Abd al Al) and there is a general feeling that the scheme must be proceeded with.	A thorough hydro-electric study should have a high priority. It should deal with the river as a whole, since full development of the Litani is of great importance to the country	Not known.	Not known.	£L750,000	1949	Estimate of the cost of study only, by the consultant engineers to the Mission.

3	Minor Drainage and Water Supply Schemes	Studies are under way for the general improvement of domestic water supply systems for numerous cities, towns, and villages of the Lebanon. Sources of supply will be rivers, springs, wells, and cisterns.	Plans and surveys are available for some 800 km. of pipeline for village water supply systems.	Completion of detailed surveys for schemes, allocation of priorities, and ascertaining of availability of equipment, e.g., pipes.	Some schemes may be under way.		£L30 M. £L50,000	1949 1949	An estimate of total cost. The Lebanese Government now considering a lower estimate for credits of £16.8 M. For survey only, estimated by engineering consultants to Mission.
4	Afforestation	Lebanon is suffering from the effects of erosion, and should be restored to its previous position as a great forest area and timber producer. A start could be made with the 8,000 hectares of the Mount Kneisse area.	No precise scheme exists but the Forestry Department has made studies and devised some schemes. Some Gradoni terracing and sowing of cedars by plane has been carried out.	Further survey and determination of areas to be afforested, training of supervisors, solution of the goat problem, and a proper forest policy are all necessary.	Part begun.	Unknown	Possibly about £75 per hectare.	1948	
5	Khalde Airport	Construction of a first class international airport south of Beirut, to receive aircraft of the main airlines.	Work started in 1948. One main runway is partly completed. This runway may be finished by February 1950. The airport will then still require lights, alternative runways, and buildings. Much levelling has been done.	In progress. This scheme may not be of the same economic importance as water schemes, but it would be wasteful not to complete it now.	1948	4-5	£L30 M. upwards.	1948	
6	Beirut Harbour	To enlarge Beirut Port, which handled 763,000 tons imports, and 96,000 tons exports, in 1948. It is proposed to enlarge the port area substantially by the extension of the main breakwater and the addition of a new eastern jetty. Beirut traffic today is large, and the 1948 import figure was 80 per cent more than that for 1947. This may however be due to the closing of the Haifa route to the Arab countries, especially Jordan.	A private development scheme of the company which operates the port.	Further survey is necessary, especially of the economic justification in view of plans for other Middle East ports.	Not begun.		£L70 M.	1949	
7	Road Development	The road system of the Lebanon is good, though it is not perfectly aligned for economic needs. A modest programme of maintenance, improvement and extension is contemplated.	Under way. Special projects concern the entrances to Beirut and Tripoli, boulevards, etc.		Already in progress (e.g., extensive works on Beirut-Damascus road).		£L6.5 M.	1949	Lebanese Government estimate for special projects only.

Lebanon (continued)

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost		
							Amount	Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
8	Railway Development	Railroad communications are on the whole inadequate, and rolling stock obsolescent. Plans exist for the construction of a standard gauge line from Beirut to Rayak to connect with the Homs line. The coastal line, which is Government owned, also requires improvement.	Plans for the Beirut-Rayak line are of long-standing. An adjustment has been recently completed in Beirut itself.	A full survey for the betterment of railway communications should be made. The economic justification of the Beirut-Rayak line requires further study.			£L100,000.	1949	Estimated cost of study recommended (engineering consultants).
9	Industrial Development	Lebanon may have to develop light industries to assist in preserving its economic balance, provided markets can be found.	It is not clear whether a co-ordinated plan has been drawn up.	The engineering consultants to the Mission recommend a general industrial survey.			£L75,000.	1949	Survey only.
10	Super-Phosphate Factory	A factory in Beirut to produce 300,000 tons of super-phosphate annually.	This was projected by the Italian Company which came to an agreement with the Jordan Phosphate Co.	The project appears to be in abeyance and transportation costs render taking out of raw phosphate from Jordan, at least *via* Beirut, a matter for considerable examination from the economic angle.	Apparently in abeyance at the moment.	3	£L6 M.		
11	Government Buildings	Various projects exist for the construction of a presidential palace, law courts, schools, government centres in holiday resorts, new Ministry offices, a modern prison, etc.	A programme is under consideration by the Government.		Not known.		£L19 M.	1949	

Note: In addition, schemes exist for the extension of the existing thermal plants at Beirut and for the inter-connexion of all stations on a grid system.

SYRIA

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Jezireh Development								
1.1	Expansion of Cultivation	Development, partly by mechanical cultivation, of 1 to 1.75 M. acres non-cultivated cultivable rain-fed land in the Syrian Jezireh.	The area was exploited for some cereal growing during the war. Since then development has been advocated in various reports. A definite or immediate plan does not apparently exist.	Investigation of such matters as land tenure, soil surveys, rainfall tests, and the like.	Could start at any time.	4	£S40 M.	1948	Expenditure would of course be reduced in proportion to the area developed.
1.2	Road Development in the Jezireh	There are no real roads in this area, and road construction must proceed parallel with agricultural development. Probably roads from Raqqa to Tel Abiad, Hassetche to Ras-al-Ain, Qamlichiye to Tel Kotchek, and Mayadine to Abu Kemal would be necessary (600 kms.).	Not begun or planned in detail.	Detailed engineering planning of roads, taking the economic justification into account.	Not known.	5	£S23 M.	1947	Based on an estimate of £S30,000 per km. for construction, plus reconditioning, etc. Maintenance may be £S500 per km. per annum.
2	Irrigation and Drainage Schemes								
2.1	Khabur River Irrigation	Irrigation of an area up to 83,000 acres with the waters of the Khabur River, an east bank tributary of the Euphrates. This is planned in eight steps of which one was completed for Assyrian resettlement before the war. The project connects with scheme I, as the irrigable area is partly in the Jezireh.	Originally planned by the French Mandatory Authority before the war. The scheme is covered in the Gibb Report (*Economic Development of Syria*, by Sir Alexander Gibb and Partners). Some work is already done.	Further study of remaining canal areas and soil survey. These surveys may cost up to £S50,000.	1947-48 on present scheme.	5 or longer	£S3.5 M.	1949	

No. Serial	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2.2	Euphrates River	To irrigate substantial areas on the banks of the Euphrates by the use of large pumps.	Two schemes exist—a large-scale project providing for irrigation of land to suit the needs of 200,000 persons in the Deirez-Zor/Abu Kemal area; and a scheme on a smaller scale. The first is planned in detail. Though not begun, works could be started early.	May have reached a stage when contracting could begin. But further surveys of all the Euphrates schemes are recommended, by the engineering consultants to the Mission, at a cost of £S 500,000.	Not known.	First scheme 3.	£S40 M. (larger scheme).	1949	Includes construction of canals, villages, pumps, etc. (an estimate).
2.2a	Pump Irrigation, Deir-ez-Zor/Abu Kemal					Second scheme 6.	£S20 M.	1947	With 2.2b.
2.2b	Euphrates Valley-Halabiyah Weir	Irrigation of valley lands from a weir in the Halabiyah Gorge.	Recommended in Gibb Report as follows: stage 1, detailed investigation for site of derivation weir; stage 2, execution of weir and first stages of irrigation; stage 3; extension of irrigation system.		Not known.	Not known.	£S20 M.		With 2.2a.
2.3	Orontes Valley Schemes	A project to drain the Ghab marshes in the Orontes Valley and institute controlled irrigation. The project should produce a large area of new land for cultivation and grazing.	French engineers have completed a detailed survey as recommended by the Gibb Report, covering the engineering aspects. The Syrian Government intends to proceed with this scheme mainly for cotton growing.	An agricultural study and a soil survey have still to be made.	Possibly soon.	6	Over £S4.5 M.	1949	
2.3a	Ghab Drainage						£S100,000	Nov. 1949	Survey only.
2.3b	Canals from the Orontes	A considerable area—possibly 40,000 hectares—might be irrigated by new canals from the Orontes upstream of Acharnee.	General plans only exist.	Further survey must be made in detail.	Not known.	Not known.	£S4.5 M.	1949	
							£S50,000	Nov. 1949	Survey only.
2.4	Yarmuk (Mzerib) Scheme	Irrigation from the Yarmuk to deal with 3,000 hectares.	More or less completed, but there may be further works to be carried out.	Outstanding work should be surveyed and completed.	Almost complete.	—	£S340,000.	Nov. 1949	For completion.
							£S10,000.	Nov. 1949	For remaining technical surveys.

2.5	Minor Drainage/ Irrigation Schemes	All these schemes are principally drainage projects.	Gibb Report recommended a detailed survey of all three projects, and the proceeding with 2.5b thereafter.	No surveys have been made but detailed technical survey will now be required.	Not begun.	Not known.	£S1 M.		Cost of survey might be £S20,000.
2.5a	Awai River								
2.5b	Roudj Swamps						£S100,000.		Main scheme not known. Figure is cost of survey. Cost of survey might be £S20,000.
2.5c	Barada River						£S1 M.		
2.6	Qouaik Marshes (Madkh Swamp)	A project for drawing off water to irrigate some 15,000 hectares, and limitation of the swamp area etc.	About 60 per cent of the canal construction for this project is already completed.	Further technical study of the later stages will be required.	Now in progress.	Less than 2 years for present stage.	£S2 M. (completion of present stage) £S5 M. (later stages).	Nov. 1949	Cost of technical survey is £S50,000.
3	Electric Power Projects			Further survey of all these schemes in technical detail will now be required.	Not started.	Stage 1 5-6.	Possibly about £S100 M.		A survey may cost £S200,000.
3.1	Euphrates Barrage (Yusef Pasha)	Construction of a barrage on the Euphrates at Yusef Pasha, to provide electric power for Aleppo and storewater for irrigation of an area of 750,000 acres in the Euphrates Valley.	Sir Alexander Gibb and Partners have surveyed the site and prepared general plans and estimates. They consider the project feasible. They recommend detailed investigations, construction of the barrage and first stage of plant installation, as stage 1, and later extension of generation as stage 2.						
3.2	Yarmuk	Possibilities exist (e.g., Zeizoun Falls).	Recommended by Gibb Report in later stages.	Detailed investigation.	Not started.	—	Not determined.	—	
3.3	Orontes	(*a*) Extension of existing installations at Al Ghaja and (*b*) detailed investigations at Kharkour and Derkouche, in conjunction with Ghab drainage.	These are suggested in the Gibb Report.	Detailed investigation.	Not begun.	—	—	—	
3.4	Thermal Plants	To double capacity of plants at Aleppo and Damascus.	Proposed by Gibb Report in two stages.	—	Not begun.	Suggested by 1952.	—	—	

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost: Amount	Estimated cost: Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4	Aleppo Water Supply	To provide domestic water for Aleppo, and also irrigate 20,000 acres in the area. The scheme includes a lift from the Euphrates, an aqueduct, purification plant, etc.	General plans and estimates were made in the Gibb Report, and a French firm of engineers has prepared detailed specifications. The Syrian Government desires to proceed with the construction of the gravity section of Euphrates-Aleppo aqueduct (73 km.).	Contract and detailed specifications for the aqueduct should now be prepared.	Possibly in six months.	4 (for whole scheme, possibly less for aqueduct as planned).	£S12 M. £S28 M.	Nov. 1949 1949	Aqueduct as stated. Whole water supply scheme.
5	General Water Supply Schemes	Domestic water supplies throughout Syria are unsatisfactory. Certain areas suffer from perennial shortages, e.g., the Jebel Druze, Hauran, etc. Increases of present supply, extension of the distribution system, or investigations for a new supply have been suggested for Homs, Hama, Latakia, and Damascus. Development of supplies in rural areas will be necessary.	All these plans are recommended in the Gibb Report; many minor schemes are adumbrated, and could be developed.	A detailed survey will have to be made and plans drawn up.	—	—	Possibly about £S30 M. £S100,000	1949 Nov. 1949	A general estimate. Cost of survey.
6	Terracing	Terracing for the utilization of poor land for olive and vine growing is very necessary. A programme of terracing 850,000 dunums is envisaged.	This programme is recommended by the agricultural consultants to the Mission, as an Arab refugee works project.	Exact definition of area to be terraced.	Soon.	2	£S24.7 M.	Nov. 1949	Consultants' estimate.
7	Afforestation	Large areas of Syria, unsuitable for cultivation or fruit growing, should be planted under forest trees. Planting of seedlings is restricted by lack of nurseries, but the sowing of seed on 20,000 dunums is envisaged.	This programme is recommended by the agricultural consultants to the Mission, as an Arab refugee works project.	Further planning will be necessary, and a fuller forest programme, together with education of public opinion, will be required.	Soon.	2	£S82,000.	Nov. 1949	Consultants' estimate.

138-39

8	Railway Development	The present railway system does not serve the country well. Damascus and the south have no through rail connexion with Aleppo and the north. (The only method is to travel by the 105 cm. Damascus-Beirut line and change to the standard gauge line at Rayak in the Lebanese Beqaa.) The links between the west, and Iraq and eastern Syria, pass through Turkey. Suggestions have been made for a direct link with Baghdad, along the line Damascus-Homs-Palmyra-Abu Kemal-Baghdad. The Jezireh must be served by a line further north (Aleppo-Raqqa-Deir ez Zor).	Recommended in the Gibb Report as set out herewith.	Extensive technical surveys and alignment will be required for all railway projects.			£S2.5 M.	Nov. 1949	Estimated cost of surveys.
8.1	Damascus-Homs	A 200 km. line from Damascus to Homs.	The Gibb Report recommends investigation and execution at an early stage.	Detailed investigation as above.	Not begun.	Not known.	£S28 M.	1947	
8.2	Aleppo-Latakia	If development of Latakia port is decided on, a 220 km. line to Latakia.	As above.	As above.	Not begun.	Not known.	£S34 M.	1947	
8.3	Aleppo-Raqqa	200 km. line to Raqqa on the Euphrates.	The Gibb Report recommends investigation at an early but completion at a later stage.	As above.	Not begun.	Not known.	£S31 M.	1947	Includes a Euphrates bridge costing £S5 M.
8.4	Raqqa-Hassetche-Tel Kotchek	To open up Jezireh, a line of 310 km.	This is recommended for later survey and still later completion by the Gibb Report.	As above.	Not begun.	Not known.	£S44 M.	1947	
8.5	Raqqa-Deir ez-Zor	To open up Jezireh and Euphrates Valley, a 290 km. line.	Suggested for late survey and execution in the Gibb Report.	As above.	—	—	£S41 M.	1947	
9	Port Development	Development of Latakia as Syria's deep-water port. (Tartus and Banias are also possibilities.) Syria has no first class deep-water port within the State. Plans for improvement include a main breakwater 1,500 m. long to enclose the roadstead, a subsidiary breakwater, quays, etc.	This project was recommended in the Gibb Report and this firm has made some studies at Latakia. This scheme may go forward. Plans now exist for better warehouses, and other facilities. The engineering consultants to the Mission propose building part of the breakwater as a works	Tenders must be called for based on preliminary plans. While this is happening, a study to clarify the economic justification of the improvements should proceed. (Pipeline developments may result in the expansion of Tartus and Banias.)		Less than 2 for stage proposed by Mission; possibly 4 in all now.	£S8.5 M.	Nov. 1949	Stage proposed by Mission.
						About 10 months if begun	£S28 M.	1949	Full scheme.

Syria (continued)

Serial No.	Name of scheme	Purpose and short description of scheme	Origin and present stage	Further surveys required	When actual work started or starting	Estimated time to complete work (yrs. from starting date)	Estimated cost		
							Amount	Date	Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
10	Road Development	The Syrian road system is adequate, but requires improvement of surfacing, in easing curves, and widening. An addition of about 1,100 km. is, however, contemplated.	This development is recommended in the Gibb Report, and certain roads were suggested by the engineering consultants to the Mission as works projects for Arab refugees.	A detailed engineering survey will now be necessary.	Soon.	2 (on short-term schemes).	£S35-40 M. The short term schemes out of this may cost £S20.8 M.	1948 Nov. 1949	Technical survey may cost £S200,000
11	Airports	(a) The airport at Mezze, near Damascus, is well situated and already carries much international traffic. It requires improvement, however, and schemes are in hand to lengthen the runways and taxi tracks.	This is recommended as a refugee works project by the engineering consultants to the Mission.	Contracting specification and commencement of work.	Soon.	Within two years.	£S1.8 M.	Nov. 1949	Consultants' estimate. (Larger estimates for more extensive schemes exist.)
		(b) Internal airports are required at least at six points.	Landing grounds exist but much improvement is needed.	More detailed technical study is now required.	—	—	£S50,000	Nov. 1949	Estimated cost of a reconnaisance report.
12	Telecommunications Development.	(a) Installation of the automatic telephone system at Damascus, Aleppo, Homs, Hama and Latakia plus a network of circuits. (b) Construction of two broadcasting stations.	A contract has been given and the Damascus exchange is complete.	—	1948-1949	—	£S10 M. (about).	May 1949	The Gibb Report envisaged an expenditure of £S32 M. in all.
13	Industrial Development.	Syrian industry is growing, and the expansion of cement and cotton works seems desirable.	The engineering consultants to the Mission suggest an industrial survey.	An industrial survey should now be undertaken.	—	—	£S200,000	Nov. 1949	Survey only.

150-51 14	Public Buildings	An extensive programme of public building appears justified in Syria. Plans or requirements include: a presidential palace, a Prime Minister's residence, three Ministries, a Parliament library, courts, official buildings of various kinds, hospitals, schools and colleges.	Several plans exist.	Detailed plans and costing should proceed.	£S70 M.	1947

NOTE

It will be remembered tnat in additon to the above projects many developments are occurring in the sphere of utilization of oil resources, which is controlled by private companies. The construction of pipelines is a development of a special sort in that it affects several countries at once. The Tapline from Saudi Arabia to Lebanon, the I.P.C. 30 inch line from Kirkuk to Banias in Syria, the duplicate I.P.C. line to Tripoli (and partial duplication of the now closed Haifa line) and the M.E. Pipelines Ltd. line from Abadan and Kuwait to Tartus, together with refinery developments, are all either just completed, in hand, or likely to begin soon. These lines may make a substantial difference to the economy of the countries through which they pass, as well as increasing the oil royalties of the producer States.

157

APPENDIX V

Description and Preliminary Estimates

Pilot Demonstration Projects

Members of the Economic Survey Mission have conferred with government officials in Jordan, Arab Palestine, Lebanon, Syria, Iraq, Egypt and Israel, and the technical staff has inspected sites for development in all of these countries with the exception of Iraq and Egypt. As a result, areas were selected for development as pilot demonstration projects.

In Egypt and Iraq, as well as in Israel, resource development programmes are already under way, and plans are either completed or are being made by the respective Governments for further expansion of their programmes. The type of project selected in the other countries varies, yet there are elements of similarity in each. Each is centrally located and relatively near centres of population. Each deals with an area as a whole, will require the effort of many people, and will serve in the training of personnel for further development projects of even greater magnitude.

In view of the varying nature of the projects each country or area is discussed separately. Following discussion of the projects in each country is a tabulation giving an estimate of the cost and time required for completion of each of the pilot demonstration projects.

Jordan

The Wadi Zerqa Project

The Jordan Valley is by far the greatest land asset in Jordan for development under irrigation farming. Rough estimates have led to the belief that some 375,000 dunums[1] of land in the valley are irrigable. Of this total 188,000 dunums are stated to be under irrigation at present. The extent of the area actually irrigated annually does not seem to be known. Only a small proportion of the land is intensively cropped, and it is probable that the annually irrigated area is only of the order of 100,000 dunums.

For some years the Government of Jordan has had in contemplation the possibility of developing the Valley to the full extent which the combined waters of the Rivers Jordan and Yarmouk and the several wadis will allow. Surveys to determine these possibilities have already been carried out. Other neighbouring States have rights in the waters of these rivers and agreement on the share of their waters which will fall to Jordan may take time to decide.

There are no such difficulties, however, with the waters of the wadis as they belong to Jordan alone and, even if the major irrigation scheme from the Jordan and Yarmouk Rivers should materialize in time, the waters of the wadis will still be required to the maximum extent to which they can be developed. This maximum can only be obtained by storage of the winter floods much of which now pours down them from their catchment areas to the Jordan River unutilized.

Irrigation is done at present almost entirely from the series of 9 or 10 wadis which flow into the Valley from the east and of which the Wadi Zerqa is one. The drainage basin of the Wadi Zerqa is the largest of all the wadis east of the Jordan River. Its total area at its confluence with the Jordan River about midway between Lake Tiberias to the north and the Dead Sea to the south, is about 2,100 square kilometres or 810 square miles. Located just north of Amman, the capital of Jordan, the watershed of this wadi consists largely of barren hills, with steep denuded slopes. Only small areas on the valley floor are at present irrigated and about 30,000 dunums in the Jordan Valley itself are irrigated annually by the uncontrolled flow of this wadi. Although water is essential for cultivation in this arid area, there is no storage at present to conserve the higher stream flows and permit the use of that water during the dry season for irrigation and water supply. So at present a great part of the annual flow finds its way to the Jordan River and thence to the Dead Sea without use.

It is proposed to develop this watershed area completely as a unit, that is, to construct the necessary roads into the area; to provide water for perennial irrigation through the development of storage; to build the necessary small check dams on principal gullies to minimize siltation and to do all necessary afforestation work, terracing and planting of fruit trees where this seems to be feasible. A central village is also to be included as part of the development in order to provide adequate housing facilities for construction workers and in the future to partially satisfy the permanent housing requirements in the area.

In order to conserve the waters of the Wadi Zerqa a dam will have to be constructed, probably immediately upstream from the Sueleh-Jerash

[1] A dunum is one-fourth of an acre in area.

road-crossing. One year of stream flow records is available[2] and maps to a scale of 1:50,000 cover the entire area. As seen from the Jerash road the wadi flows in a deep valley. An apparently sound dam site is located approximately 1 kilometre upstream from the highway bridge. Rock outcrop (apparently of hard sandstone) was observed on the right bank and rock outcroppings could also be seen on the opposite bank. No geological information on the dam site is available at present, and additional topography for the site and reservoir would have to be obtained. In view of the inadequate information available about the stream flow and the silt content of Wadi Zerqa, it is proposed that the dam be constructed initially to a minimum height with adequate provision for a future increase in height. The final top elevation of the dam can only be determined after a record of several years of stream flow and silting has been obtained. From the information now available a dam approximately 35 metres high should provide sufficient capacity for the initial operation of the project for a period of about ten years. It seems quite possible that in the future the dam may have to be raised by as much as 10 metres.

The dam should be of the rock-fill type with an impervious random-rubble masonry upstream face, backed by a layer of hand-laid rock-fill, while the lower portion of the dam may be dumped rock.

A competent geologist should be employed during the construction of the dam and the construction superintendent should also be thoroughly experienced in heavy construction work on foundations where considerable grouting may be required in order to make the foundation watertight.

In addition to the storage dam, a headworks structure will be required where the wadi enters the Jordan plain. This structure would lead the water into the main irrigation canal and thence into the secondary and tertiary canals. The capacity and plan for these canals will depend on the agricultural programme, which will be fully determined only after some years of research, but will gradually develop from the outset.

It is roughly estimated that by means of storage and regulation the volume of water for irrigation purposes can be approximately doubled as compared with present low flow conditions.

Thus by construction of essential highways, housing and the conservation of water from the Wadi Zerqa drainage basin, an expanded agricultural programme in the area is possible.

The present agriculture of the Jordan Valley is essentially a cereal-growing economy. Cereals preponderate over all other crops whose combined area is small in comparison. Some vegetables are grown and in the northern end of the valley bananas have been introduced. The use of irrigation water for cereal production in this valley is a waste of opportunity in the use of an asset such as Jordan does not possess elsewhere. The valley lies some hundreds of feet below sea level and its agricultural produce is ready for the market well in advance of similar produce from the surrounding areas. It can thus seize the advantage of high prices which an early market usually possesses.

It is proposed, therefore, if a major irrigation scheme should materialize, and even if only the waters of the wadis should be fully developed, to convert to the maximum degree possible the present cereal-growing economy in the valley to one of intensive cultivation of much more profitable crops which may be (1) industrial, such as sugarcane and cotton, or (2) food crops, such as vegetables and fruits or (3) forage crops if dairying should prove a profitable introduction, or (4) more probably all these aspects combined.

It is only by research and experiment that a final decision can be taken as to the most profitable lines on which to develop the agriculture of the Jordan Valley and to utilize the valuable waters of these wadis and rivers to the maximum advantage and efficiency.

The present Wadi Zerqa project is of great importance to the future of this area. It has been conceived with the threefold purpose of experiment, demonstration and development. The first aspect will determine how best to use the irrigation supplies of the locality, the crops to grow, the water requirements of the selected crops, the intensity of cultivation which the water resources and other considerations will permit, the best cultivation practices and the economies of fertilizing. As a demonstration it will cover, on the agricultural side, the several aspects of soil and water conservation and land use, and in its various phases will be a guide for the future development of other areas. As a development project it will bring more land under cultivation, and will increase production not only on land to be newly cropped but on the area already cultivated. According to existing records 56,000 dunums of land on this wadi are registered as irrigated but, owing to the system of cropping, it is considered that no more than 28,000 to 30,000 dunums are irrigated annually. The total irrigable area is not known at present but during an inspection trip through the area it was obvious that a considerable area of land is available for irrigated farming in or within a reasonable distance of the Wadi Zerqa land.

Immediate agricultural activities will concern themselves chiefly with:

(1) The establishment of a temporary research station in the valley area commanded by the Wadi Zerqa. At this station essential field experiments will be conducted in order to provide basic information on the various problems already indicated;

(2) Practical action connected with soil and water conservation in the catchment area of the

[2] *The Water Resources of Jordan and their Development*, by M. G. Ionides.

wadi. This will be concerned mainly with land terracing and afforestation with forest, fuel or fruit trees as may be most suitable and gully-plugging to check soil movement and reduce silting.

Research activities will necessitate:

(*a*) The recruitment on a temporary basis from a foreign country of a competent agronomist with a knowledge of fruit growing and, if possible, of farming under irrigation. He will require two assistants of degree status for agriculture and fruit and vegetable investigations;

(*b*) The acquisition (in preference to the long lease) of an area of land in the valley for the experimental station, unless suitable state-owned land is available;

(*c*) The provision of the necessary equipment and buildings. Since the station is being proposed only to fill a temporary need, the buildings should be as simple and cheap as possible.

A period of five years will elapse before reliable data may be expected from the experiments on field crops, though indications, possibly enough to justify development action along some lines, may be forthcoming earlier. Fruit trees will only have begun to come into bearing after five years, but it is probable that research information may be available already from the existing horticultural stations at Baqura in the north of the Jordan Valley, and at Jericho, just outside the valley, to indicate the varieties of fruit most suitable for local conditions.

The extent of the necessary soil and water conservation measures cannot be determined until a survey of the catchment area is made. Probably at least five years may be required to complete operations within it since its area is considered to be about half a million acres.

Through such a unified development programme the watershed of the Wadi Zerqa would serve as a pilot demonstration project for the further development of natural resources in Jordan.

Arab Palestine

The Wadi Qilt Project

The Wadi Qilt flows easterly from the hills north east of Jerusalem through a deep, narrow gorge, reaching the Jordan plain near Jericho. It is located in the central part of Arab Palestine and is crossed by the main highway passing through Jericho to the north. Its watershed consists of exceptionally steep, rocky, barren hills. At present the ground water flow is diverted by an upper canal and utilized for irrigating a small area of the Jordan plain near Jericho. There is no conservation or storage of the flood waters for use in the dry season. However, storage could be accomplished by a high but short rock-fill dam similar to that described for the Wadi Zerqa in Jordan.

The Water Research Bureau of Palestine has estimated that the run-off from Wadi Qilt would average just over 10 per cent of the rainfall or 4,300,000 cubic metres per annum, this being in addition to the flow of the springs in the drainage basin.

In addition to the storage dam, a headworks structure would be required where the water enters the Jordan plain. This structure would channel the water to the main irrigation canal and thence into the secondary and tertiary canals. However, the capacity and general plan of these canals will depend on results obtained from agricultural research.

A large tract of government-owned land west of the Jordan River and immediately on both sides of the Jericho road lacks only an adequate water supply, together with agricultural research, for its development. As in the proposed development of the Wadi Zerqa the development of storage and efficient use of the water of Wadi Qilt, will provide a basis for an expanded agriculture in this area.

Before the agricultural system to be adopted for the development of the land awaiting use is determined finally it will be necessary both to study what is already known of possibilities in the locality and to collect additional information through field experimentation.

There already exists, in close proximity to the undeveloped land, a good horticultural station on the outskirts of Jericho The investigations carried out on it by the former government of Palestine have shown that many varieties of fruit, including olives, bananas, grapes, pomegranates, papaya, citrus and date palms can be grown successfully under the soil and climatic conditions of the tract, provided a suitable water supply is available. The knowledge thus gained will be a useful guide as to the horticultural potentialities of the project.

Information on field crops is less exact at present, though within a short distance of the tract vegetables and other crops are being grown successfully under irrigation. It is desirable to add to this knowledge, however, by further experimentation. The conditions which maintain in the area intended for development do not appear to differ greatly from those on the Wadi Zerqa land except in regard to altitude. The soil of the Wadi Qilt area may also prove to be more alkaline: possibly it may require ameliorative treatment to suit it for a full range of field crops. This aspect of the scheme is about to be investigated through a soil survey which has just been arranged.

In view of the extent of the similarity with the Wadi Zerqa it would not seem necessary to undertake large-scale field research on the Wadi Qilt and it should suffice on this area merely to undertake trials to determine the applicability on it of the results obtained at the agricultural research station which has been proposed on the Wadi

Zerqa. For such work very little expenditure will be involved. Special buildings will not be required as accommodation can be provided in Jericho. The specialist agronomical staff at the Wadi Zerqa station can conveniently supervise the field trials which would be the responsibility of the agricultural staff appointed for the development of the area.

The desirability of adding to present knowledge of the agricultural possibilities of the area before determining the final system of agriculture to be adopted will not hold up development meantime. As already indicated, sufficient knowledge exists of fruit and vegetable possibilities to warrant development on those lines, as soon as an irrigation supply becomes available. The final intensity of cultivation to be adopted will depend, however, both on the quantity of irrigation water available and the actual crops to be grown. In view of the close proximity of the area to Jericho the growing of forage crops for dairy animals, coupled with fruit and vegetable production, may readily prove to be very profitable.

The extent to which the catchment area of the Wadi Qilt requires treatment against soil erosion and silt deposit has to be determined by survey. The locality is particularly devoid of trees and vegetation. A policy of afforestation and of soil coverage and fixation will be adopted in so far as the survey shows it to be required and possible under local rainfall conditions.

Apart from the educational merit of this project as an object lesson of how other similar natural resources should be utilized and developed, its execution will provide for the permanent settlement of a number of homeless people, since the land to be developed is State domain. Whether this area can ever be developed satisfactorily or economically by other means is open to doubt. Irrigation is essential. The possibilities of developing sub-surface water supplies, which are under examination at present, do not appear to be exceptionally good, whilst the difficulty and cost of irrigation by pumping from the River Jordan would be great. From the point of view of alternatives, therefore, the present project has much to commend it as the best method of developing this area for habitation and cultivation.

Through such a unified development programme the watershed of the Wadi Qilt would serve as a pilot demonstration project for the further development of Arab Palestine.

Lebanon

The Litani River Investigation Project

Unquestionably the major natural resource of Lebanon is the Litani River. Its waters properly conserved and efficiently utilized could provide an abundant supply of low-cost electric power—power to light and facilitate development of water supplies for homes in all the cities, towns and villages—power to increase pumped water supply for irrigation and provide for the preservation of food, thus enlarging agricultural opportunities, and finally power for industrial expansion to provide more jobs for more people.

The Litani River is in fact the key to the future of Lebanon. Some 80 per cent of its total drainage area of 2,168 square kilometres is above the 800 metre contour. The average annual rainfall in the basin is about 690 millimetres or 27 inches. In its lower course, after it leaves the Beqaa Plain, the Litani River drops from an elevation of 850 metres to sea-level in a distance of about 100 kilometres. The steepest drop of about 650 metres occurs in a river distance of only about 40 kilometres.

On the lower reaches of the river below the Beqaa Plain, there are numerous possibilities for construction of dams, although there are major geologic faults in the area. It seems entirely feasible that sufficient storage could be developed below the Beqaa Plain to regulate the flow of the river. This is important. It means that, depending upon a more complete study, there is the possibility that between the Beqaa Plain and the coastal strip the stored water would be sufficient to instal in the neighbourhood of 200,000 kilowatts, which could produce an estimated 750 million kilowatt hours per year. It means, depending upon a more complete study, that between the Plain of Beqaa and the bend where the river turns sharply west from a general southerly direction, approximately 150,000 kilowatts of capacity could be installed that might reasonably produce an estimated 550 million kilowatt hours per year. In addition to the generating of electric power the water in storage would be far in excess of possible water requirements for the irrigable area along the coast from Tyr to Saida.

The hydro-electric projects could be located within easy transmission distance from the major cities of Lebanon. The straight line distance (from the nearest dam site) to Beirut is only between 40 and 50 kilometres. Hence, the importance of the Litani; its full development could provide electric power for 250,000 customers, roughly four times the present number, each consuming 2,000 kilowatt hours per year or approximately five times the present residential consumption. This would utilize only about two-thirds of the potentially available amount of electric power, and the remainder would be available for expansion of agriculture and industrial development.

Because the Litani River is important, it should be studied and treated as a whole. Its development will call for a relatively large capital expenditure. If properly studied and planned to ensure the maximum possible return it should prove both sound and exceptionally remunerative. This pilot demonstration project would consist of

a complete study of this river. The study should deal with the watershed as a whole, in order that its full potential may be achieved. If the river is developed piecemeal without first planning it as a whole, it may never be possible to realize the full value of this asset to Lebanon.

The study of the whole river should produce a technical report with specific recommendations. This technical report would establish and recommend a system of dams, identify individual dam sites, volume of storage and the capacity of generating units for electricity. The economics of each project, as well as the economics of the entire system, would be clearly defined. The study would also provide detailed information on power rates and utilization as well as revenues to be derived from that source. Finally, it would outline the recommended suggestions for construction with schedules defining each stage. Such an over-all study with specific determination of structures, economics and finance, would clearly define the economic feasibility of the entire co-ordinated plan. There would only remain the detailed designs for the first stage before the start of actual construction.

This study for the unified development of the Litani River should include the following:

1. *Geology*

The geology of the Litani Valley is predominantly limestone. Through geologic periods of hundreds of years, it is soluble. There are also major geologic faults in the Valley structure which have resulted from earthquakes in the past. Present day experience in engineering and geology has successfully overcome these obstacles through new equipment, and techniques in foundation exploration and treatment. In the Tennessee Valley, for example, extremely difficult limestone conditions were overcome in building the large TVA dams. Geologists experienced in investigating foundations for hydraulic structures on limestone would be essential in carrying out this study. The geologic investigation carried out by such experienced personnel should include a regional investigation embracing the entire watershed with more detailed investigations for each reservoir area. It should also include the detailed investigation of each dam site under consideration, complete with core drilling data. In addition, geologists should investigate the possibilities for power tunnel location, as well as the location for the diversion and spillway tunnels. The need for geologists experienced in limestone cannot be over-emphasized.

2. *Hydrology and meteorology*

A complete review of the basic hydraulic and meteorologic data, including rainfall and run-off records, storm records, average flow records, flood and minimum flow records, would be essential. The determination of the design flood should also be carefully computed, for upon it and the plan of reservoir operation would depend the determination of the spillway capacity.

3. *Investigation of dam site location*

Depending upon core drilling and the geologic investigations, sites for dams would be determined to fulfil the storage requirements. Preliminary designs for dams would be made for each of the sites under consideration, additional topographical surveys at these locations would be required to better define structures. The spillway capacity at each site and the reservoir pool levels with both head water and tail water elevations, would be determined. From the preliminary designs, quantities of materials required for the construction of the project would be computed and a preliminary study of the dam site and reservoir under consideration would be made to determine its economic feasibility as a unit of the over-all development.

4. *Reservoir investigations*

When dams are built, the water, of course, backs up. The effect of backwater from each proposed dam would be studied, mineral investigations in the area to be flooded would be made, as well as a study of the reservoir rim to determine the need for sub-surface treatment. Also, any adjustment in existing highways and relocation of population would be determined through this reservoir investigation.

5. *Silt investigations*

An estimate of the rate of silting based on an investigation carried out during periods of high stream flow would be undertaken. Terracing, check dams, afforestation and other measures would be recommended to protect the reservoirs. In the determination of reservoir volumes due allowance would be made in the storage recommended to care for the effect of siltation.

6. *Outline of construction features*

At the conclusion of the investigation pertaining to the individual dam sites the number and location of the units of the system would be defined and their order of priority established. A study of the construction features with construction schedules for each project would be included. These schedules would become an integral part of the unified development report.

7. *Estimate of cost*

Estimates of cost for each dam would be in-

cluded, giving in detail the cost of land and land acquisition, highway location, the dam, diversion and spillway tunnels, water conductors, power facilities and the total cost. These estimates would be based on the preliminary designs and actual quantities of materials and equipment thereby required.

8. *Power*

Operation of the reservoirs of the system would be studied and integrated to produce the greatest possible power production. The plan of reservoir operation would be outlined in the report. The estimated effect of each reservoir on the potential system output would thus be determined and defined in the report. An analysis of the capacity requirements of each project as a unit of the system would also be clearly defined in the report. Power utilization and marketing studies would also be conducted, together with a possible rate structure and an analysis of revenues to be derived from the various rates of classifications.

9. *Economics of project*

A complete study of the economics of each project of the system would be included in the report, together with a plan for financing the various stages of construction. For the purpose of the economic studies, the entire cost of the development would be studied from the point of view of its contribution first to power supply, second to irrigation and water supply. The benefits would be weighed against the cost of each project and a determination of its economic feasibility made.

The determination of the location of individual dams, volume of storage, capacity of generating units, and the plan of reservoir operation are all basic factors influencing the economics of the system as a whole. Therefore, the recommendation that the entire watershed be studied as a whole and a plan for its integrated development be evolved. The study and development of such a plan dealing with a resource of such importance should only be the responsibility of qualified personnel experienced in dealing with problems of this magnitude and complexity.

10. *Engineering for an entire river system*

A study of the whole Litani River system and its watershed requires the special ability of many technicians. It requires the effort of a co-ordinated team of specialists, including geologists, hydraulic, civil, mechanical, electrical and architectural engineers, economists, cost estimators, construction engineers and specialists in the financing of such projects. It is probable that at least a year would be required for the complete study.

Syria

In the development of Syria's two basic resources—land and water—the Ghab Valley is given high priority. It is one of the country's greatest potential assets. Located near the centres of large population its development could well be the first step in an extensive programme for the economic development of Syria. It is for this reason that this area was selected as a pilot resources development project.

The Ghab Valley Project

The Ghab Valley is a large swampy depression in northwest Syria. It starts with the outflow of the River Orontes from the Sedjar gorge into the Acharne plain and ends at Karkour about 9 kilometres upstream from Djisr ech Choghour. The length of the valley between these two points is about 68 kilometres, while the length of the Orontes channel is about 125 kilometres between the same points.

In this valley located within easy access of the more densely populated areas of Djisr ech Choghour, Homs, Hama and Latakia, are available some 34,000 hectares of rich lands awaiting reclamation and development. The Ghab Valley is located in one of the few areas in Syria where a complete development of the land and water resources would be near centres of surplus population which could assist in cultivation and thus directly benefit as the result of such a project.

In some remote period a volcanic flow filled up the channel of the Orontes River below Karkour. Subsequently a great lake was formed. Then with the passing of time sedimentation from the Orontes and erosion from the adjacent mountains filled the lake. The river then created a channel to Djisr ech Choghour and thence followed its ancient route through Derkouche and Antioch to the Mediterranean. When the river resumed its flow its gradient was flat and as a result it did not create a channel with a capacity adequate for the discharge of the flood waters. Thus the plain between Sedjar and Karkour became inundated and the fertile lands of the valley floor became a swamp.

The first step in the development of the area would relate to drainage. The entire area has an annual rainfall of from 600 to 1,000 mms. or from 24 to 40 inches. With this ample rainfall a large area of land, at present in a swampy condition, either part or all of the year, would be, when drained, expected to produce crops. After completion of this first stage and prior to the start of the second would come research in agriculture, water requirements and a comprehensive study of stream flow and flood control, including a determination of the effects of drainage of the Ghab on the floods of the Lower Orontes.

It is proposed to develop this valley completely as a unit. This will require construction of the necessary roads into the area, the provision of drainage works and canals, construction of a dam, if studies indicate it essential, to provide a reservoir for flood control storage during the periods of high stream flow and water for irrigation during periods of low flow, and if possible provide an additional source for the generation of hydro-electric power. A central village is also to be included as part of the development in order to provide adequate housing facilities for construction workers and in the future to partially satisfy the permanent housing requirements in the area.

Through the years a number of comprehensive engineering studies have been made of this area by French engineers and others. The main elements of each plan involved first drainage, then flood control and irrigation.

The proposals for reclamation included a canal system for draining the swampy area below Acharne, a tunnel at Kfeir for assisting in the disposal of flood waters and regulating works from the Orontes River to the tunnel. To assist in the control of floods the plan included a dam at Acharne to form a reservoir with sufficient capacity to store excessive flood waters and then release as required for summer irrigation and the possible generation of hydro-electric power. This dam will also prevent higher floods in the Lower Orontes Valley which would otherwise occur as a result of the drainage of the Ghab swamps. In addition headworks and canals would be required for irrigation.

Before the start of construction a complete review of all past studies should be made, supplemented where necessary by new investigations, surveys and designs, and should include a study of the economics of pumping versus gravity flow for irrigation. This pilot demonstration project would then consist first, of a complete engineering-agricultural economic study which would form the basis of a plan for the unified development of the valley as a whole and secondly, the implementing of the plan by a well co-ordinated construction programme. Thus through the planning and construction of essential engineering works including drainage, highways, housing, flood control, irrigation and hydro-electric power facilities, an expanded agriculture in the Ghab Valley is possible.

Agriculturally, this area, after reclamation, should be a very valuable asset to Syria in two main directions:

(*a*) As an outlet for some of the dense population in the neighbouring district;

(*b*) For the production of raw materials which Syria requires for the development of its industries.

After drainage and under irrigation the land should be highly productive and should be suited to a system of farming by small holdings. Under such a system and providing 8 to 10 hectares of land per holding, the area of 34,000 hectares (85,000 acres) should suffice for the settlement of some 4,000 families or 20,000 persons.

It will be necessary to determine by experiment the crops best suited and most profitable under the conditions which prevail. Possibilities may well prove to be long staple cotton, sugar-cane and oilseeds, all of which are needed for the development and expansion of Syria's industries. Fruit growing is unlikely to be a major activity. The place of mixed-farming in the economy of the area requires consideration.

For this purpose it will be necessary to set up a small temporary experimental station for field investigations. An area of 100 acres should suffice and sufficient information should be obtained in a period of five years to meet the needs of the area. No expensive buildings need be provided. Syria does not at present possess a suitably qualified agronomist to conduct these investigations. It is recommended that a first-class agronomist be recruited from abroad for general agronomical research in Syria and a man of lower grade who will also have to be obtained from an outside country placed in charge of the Ghab experimental station under his control.

Through such a unified development programme the fertile Ghab Valley would be transformed from an unproductive swampy area to one of the most productive areas in Syria and serve as a demonstration project for the further development of the basic natural resources of that country.

Preliminary estimate of cost and time required
Resource development pilot demonstration projects in the Middle East

TABLE A

Country	Project	Estimated cost in U.S. dollars[a]				
		Agricultural research	Agricultural programme — erosion control and afforestation	Engineering investigation and planning	Construction	Total
Jordan	Wadi Zerqa	210,000	420,000[b]	50,000	4,150,000	4,830,000
Arab Palestine	Wadi Qilt	17,000	56,000	28,000	980,000	1,081,000
Lebanon	Litani River development study	—	—	250,000	•	250,000
Syria	Ghab Valley	60,000	400,000	250,000	15,750,000	16,460,000
Total estimated cost....		287,000	876,000	578,000	20,880,000	22,621,000[f]

TABLE B

Country	Project	Est. time regd. for completion (years)	Estimated annual finances required in U.S. dollars[a] (years)				
			1	2	3	4	5
Jordan	Wadi Zerqa	5[e]	2,254,000	2,219,000	119,000	119,000	119,000
Arab Palestine	Wida Qilt	5[d]	1,026,000	17,000	16,000	11,000	11,000
Lebanon	Litani River development study	1	250,000	—	—	—	—
Syria	Ghab Valley	5	4,000,000	3,750,000	2,910,000	2,900,000	2,900,000
Total estimated cost.....		—	7,530,000	5,986,000	3,045,000	3,030,000	3,030,000

(*a*) For simplification U.S. currency used as basis of estimat

(*b*) Includes cartographical and agricultural survey of drainage area with soil erosion and re-afforestation programme extending over 5 years.

(*c*) It is estimated that the engineering development programme would be completed within two years.

(*d*) It is estimated the engineering development will be completed within one year and the agricultural research in three years. The cost of agricultural research for this project is based on the assumption that similar work is planned for the Wadi Zerqa project and need not be duplicated.

(*e*) Estimate of construction cost unknown until engineering study has been completed.

(*f*) A schedule of financing is not included in the Economic Survey Mission's report. It should be noted, however, that the interim report included work on the Wadi Zerqa and the Wadi Qilt as part of the proposed work relief programme. Funds available through that programme would provide for completion of Wadi Qilt construction and two-thirds of Wadi Zerqa construction.

SALES AGENTS OF THE UNITED NATIONS PUBLICATIONS

ARGENTINA
Editorial Sudamericana S.A.
Alsina 500
BUENOS AIRES

AUSTRALIA
H. A. Goddard Pty. Ltd.
255a George Street
SYDNEY, N. S. W.

BELGIUM
Agence et Messageries de la Presse, S. A.
14-22 rue du Persil
BRUXELLES

BOLIVIA
Librería Científica y Literaria
Avenida 16 de Julio, 216
Casilla 972
LA PAZ

CANADA
The Ryerson Press
299 Queen Street West
TORONTO

CHILE
Edmundo Pizarro
Merced 846
SANTIAGO

CHINA
The Commercial Press Ltd.
211 Honan Road
SHANGHAI

COLOMBIA
Librería Latina Ltda.
Apartado Aéreo 4011
BOGOTÁ

COSTA RICA
Trejos Hermanos
Apartado 1313
SAN JOSÉ

CUBA
La Casa Belga
René de Smedt
O'Reilly 455
LA HABANA

CZECHOSLOVAKIA
F. Topic
Narodni Trida 9
PRAHA 1

DENMARK
Einar Munksgaard
Nørregade 6
KØBENHAVN

DOMINICAN REPUBLIC
Librería Dominicana
Calle Mercedes No. 49
Apartado 656
CIUDAD TRUJILLO

ECUADOR
Muñoz Hermanos y Cía.
Nueve de Octubre 703
Casilla 10-24
GUAYAQUIL

EGYPT
Librairie "La Renaissance d'Egypte"
9 Sh. Adly Pasha
CAIRO

ETHIOPIA
Agence éthiopienne de publicité
P. O. Box 8
ADDIS-ABABA

FINLAND
Akateeminen Kirjakauppa
2, Keskuskatu
HELSINKI

FRANCE
Editions A. Pedone
13, rue Soufflot
PARIS, V^e^

GREECE
"Eleftheroudakis"
Librairie Internationale
Place de la Constitution
ATHÈNES

GUATEMALA
José Goubaud
Goubaud & Cía. Ltda.
5a Av. Sur No. 6 y 9a C. P.
GUATEMALA

HAITI
Max Bouchereau
Librairie "A la Caravelle"
Boîte postale 111-B
PORT-AU-PRINCE

ICELAND
Bokaverslun Sigfusar Eymundsonnar
Austurstreti 18
REYKJAVIK

INDIA
Oxford Book & Stationery Company
Scindia House
NEW DELHI

IRAN
Bongahe Piaderow
731 Shah Avenue
TEHERAN

IRAQ
Mackenzie & Mackenzie
The Bookshop
BAGHDAD

LEBANON
Librairie universelle
BEYROUTH

LUXEMBOURG
Librairie J. Schummer
Place Guillaume
LUXEMBOURG

NETHERLANDS
N. V. Martinus Nijhoff
Lange Voorhout 9
'S-GRAVENHAGE

NEW ZEALAND
Gordon & Gotch, Ltd.
Waring Taylor Street
WELLINGTON

United Nations Association of New Zealand
P. O. 1011, G.P.O.
WELLINGTON

NICARAGUA
Ramiro Ramírez V.
Agencia de Publicaciones
MANAGUA, D. N.

NORWAY
Johan Grundt Tanum Forlag
Kr. Augustgt. 7A
OSLO

PAKISTAN
Thomas & Thomas, Booksellers,
Fort Mansion,
Frere Road,
KARACHI

PERU
Librería Internacional del Perú, S.A.
Casilla 1417
LIMA

PHILIPPINES
D. P. Pérez Co.
132 Riverside
SAN JUAN, RIZAL

POLAND
Spoldzielna Wydawnicza
"Czytelnik"
38 Poznanska
WARSZAWA

SWEDEN
A.-B. C. E. Fritzes Kungl. Hofbokhandel
Fredsgatan 2
STOCKHOLM

SWITZERLAND
Librairie Payot S. A.
LAUSANNE, GENÈVE, VEVEY, MONTREUX, NEUCHATEL,
BERNE, BASEL

Hans Raunhardt
Kirchgasse 17
ZURICH I

SYRIA
Librairie universelle
DAMAS

TURKEY
Librairie Hachette
469 Istiklal Caddesi
BEYOGLU-ISTANBUL

UNION OF SOUTH AFRICA
Central News Agency
Commissioner & Riesik Sts.
JOHANNESBURG and at CAPETOWN and DURBAN

UNITED KINGDOM
H. M. Stationery Office
P. O. Box 569
LONDON, S.E. 1
and at H.M.S.O. Shops in
LONDON, EDINBURGH, MANCHESTER
CARDIFF, BELFAST, BIRMINGHAM and BRISTOL

UNITED STATES OF AMERICA
International Documents Service
Columbia University Press
2960 Broadway
New York 27, N. Y.

URUGUAY
Librería Internacional S.R.L.,
Dr. Hector D'Elía,
Calle Uruguay 1331,
MONTEVIDEO

VENEZUELA
Escritorio Pérez Machado
Conde a Pißango 11
CARACAS

YUGOSLAVIA
Drzavno Preduzece
Jugoslovenska Knjiga
Moskovska Ul. 56
BEOGRAD

Printed in the U.S.A. Price in the United States: $1.00 49—29952—Jan. 1950—7,000