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PROSPECTIVE DEVELOPMENT  
OF THE  
AGRICULTURAL INSTITUTIONS  
IN THE  
OCCUPIED PALESTINIAN TERRITORIES

PROPOSED ACTION PROGRAMME  
FOR THE RESTRUCTURING  
OF THE  
PALESTINIAN AGRICULTURAL PUBLIC  
INSTITUTIONS

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## ABBREVIATIONS

ADCC	Arab Development and Credit Company
ADIC	Animal Disease Investigation Centre
EEC	European Economic Communities
EU	European Union
ESCWA	United Nations Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GNP	Gross National Product
IPM	Integrated Pest Management
JNEA	Joint ESCWA/FAO Agriculture Division
MCM	Million Cubic Metres
NGO	Non-Governmental Organization
NIS	New Israeli Shekel
PARC	Palestinian Agricultural Relief Committee
PECDAR	Palestinian Economic Council for Development and Reconstruction
PIARTT	Palestinian Institute for Agricultural Research and Transfer of Technology
PLO	Palestine Liberation Organization
PT (OPT)	Palestinian Territories - Occupied Palestinian Territories
UAWC	Union of Agricultural Work Committees
UNDP	United Nations Development Programme
UNCTAD	United Nations Conference on Trade and Development

### Measures

1 Dunum	= 0.1 Hectare = 1,000 sq metres
1 MCM	= 1 million cubic metres

### Currency Equivalents

NIS	= New Israeli Shekel
	NIS 1.00 = US\$0.361
	US\$ 1.00 = NIS2.764

## INTRODUCTION

### 1. *Background*

A joint ESCWA/FAO mission on the rehabilitation of the agricultural sector in the occupied Palestinian territories took place during February/March 1993. The mission undertook a critical review of the main issues in the agricultural sector in the occupied Palestinian territories and identified priority programmes and projects for rehabilitating this sector (E/ESCWA/AGR/1993/9). The outstanding issues facing the agricultural sector in the occupied territories, as concluded in the mission report, were grouped under the following six headings: (a) land confiscations and restrictions; (b) insufficient agricultural support services; (c) lack of infrastructure; (d) market constraints; (e) weak public institutions; and (f) absence of planning and coordination.

In several meetings the Joint ESCWA/FAO Agriculture Division discussed the above issues with the former Economic Affairs and Planning Department of the Palestine Liberation Organization (PLO). The discussions emphasized the urgency of the above issues but considered the development of the agricultural institutions the most urgent issue to be treated, as it constituted the main obstacle facing the prospective development of the agricultural sector in the occupied Palestinian territories.

Accordingly, a second ESCWA/FAO mission visited the occupied Palestinian territories during the period 12-19 November 1993, to review the status of the agricultural institutions and propose actions for their development and strengthening. The mission proposed the framework of a plan for organizing and strengthening agricultural institutions in the occupied Palestinian territories, and suggested the implementation of the plan in two consecutive phases. The proposed plan was formulated under the assumption that the whole of the Palestinian territories in the West Bank and the Gaza Strip were to continue under occupation.

However, the recent political developments have changed the political situation fundamentally and created new realities. The conclusion of the Cairo Agreement in May 1994 between the Government of Israel and the Palestinian Authority have led to the establishment of self-rule territories in the Jericho area and the Gaza Strip and the formation of the Palestinian National Authority (Government), and will eventually lead, in the next few years, to the expansion of the self-rule territories to cover the rest of the presently occupied Palestinian territories in the West Bank.

In the light of the present and future political situation of the Palestinian territories, the Joint ESCWA/FAO Agriculture Division has taken the initiative to send a second mission to study the prospective development of the agricultural institutions in the Palestinian territories under the new conditions.

### 2. *Objective of the study*

The main objective of the study was to assist the newly established Palestinian National Authority in building up national public institutions and capacities by proposing a general organizational scheme for the restructuring of the Palestinian public agricultural institutions, together with an operational programme of action for implementing the proposed scheme.

The detailed terms of reference of the mission included the following tasks:

- (a) Undertake an overall review of the current situation of the agricultural sector in the Palestinian territories;
- (b) Make an overall assessment of the existing agricultural institutions in the Palestinian territories;

(c) Propose a general organizational scheme for the restructuring of the Palestinian agricultural public institutions;

(d) Propose an operational programme of action for the implementation of the proposed organizational scheme;

(e) Identify priority areas which require technical and financial assistance from the international donor community for the rehabilitation of the public institutions concerned with Palestinian agriculture.

### *3. Composition of the mission*

The joint ESCWA/FAO mission to study the prospective development of the agricultural institutions in the Palestinian territories was formed of:

- ◆ Mr. Sami J. Sunna, Chief of the Joint ESCWA/FAO Agriculture Division, JNEA (team leader)
- ◆ Mr. Mohamed A. Gabr, First Economic Affairs Officer, ESCWA/JNEA (member)
- ◆ Mr. M. Rashad Bilbeisi, Field Programme Officer, FAO headquarters (member)

### *4. Activities of the mission*

The mission visited most parts of the West Bank (Jericho, East Jerusalem, Bethlehem, Hebron, Ramallah, Nablus, Tulkarm and the western Ghor of the Jordan Valley), and made a one-day visit to the Gaza Strip.

The mission had a good opportunity to exchange views with senior officials of the Palestinian Economic Council for Development and Reconstruction (PECDAR) on the prospective development of the Palestinian economy in general, and of the agricultural sector in particular, as well as on the prospective role of the Palestinian Government in the agricultural sector.

The mission had extensive consultations with a number of senior Palestinian staff in the departments of Agriculture and Veterinary Services in the West Bank and the Gaza Strip, and with the directors of the regional Departments of Agriculture in Jericho, Hebron, Nablus and Tulkarm.

The mission visited the faculties of agriculture at Al-Najah University in Nablus and Hebron University and discussed with the deans the foreseen role of the two universities in agricultural research, extension, education and training activities, and the proposed modalities of cooperation with the public institutions concerned with Palestinian agriculture. In this context, the mission also made visits to the Khadoury Agricultural Institute (Tulkarm) and to the agricultural research stations of Askar (Nablus) and Fara'a (Jordan Valley), and discussed with their managers the possibility of rehabilitating and reactivating these institutes and stations, which became un-operational under the occupation.

In regard to the private and non-governmental organizations operating in the Palestinian territories, the mission held meetings with:

- ◆ The General Manager of the Agricultural Cooperative Union in Nablus
- ◆ The Chairman and the Manager of the El-Tawfiq Fishermen's Cooperative in Gaza

- ◆ The General Manager and senior staff of the Arab Development and Credit Company (ADCC)
- ◆ The Deputy Director and senior staff of the American Near East Refugee Aid (ANERA)

Issues related to the role of the private sector, the cooperative movement and non-governmental organizations in the development of the Palestinian agricultural sector, and to the coordination and collaboration between the public institutions and private organizations concerned with Palestinian agriculture, were intensively discussed.

The mission received the full support of the UNDP office in East Jerusalem, which provided valuable assistance in organizing meetings and arranging field visits throughout the West Bank and the Gaza Strip.

The mission collected valuable information and the most recent statistical data on the agricultural sector in the West Bank and the Gaza Strip.

### *5. Limitations of the study*

The mission strictly followed its terms of reference and conducted the study with a view to achieving its objectives as outlined in paragraph 2 above. The proposals for the restructuring of the Palestinian agricultural institutions focused on the existing and proposed public institutions which deal with agricultural planning and policy, organization and direction of agricultural activities, external agricultural relations and the provision of support services to farmers in the form of extension and veterinary services.

Certain important areas have not been covered by this study, among them:

- ◆ Agricultural education and training
- ◆ Agricultural marketing
- ◆ Agricultural credit and rural finance
- ◆ Agricultural cooperatives
- ◆ The role of private organizations in the agricultural sector

The mission believes that in order to formulate specific proposals for the structuring and/or restructuring of Palestinian public institutions in each of the above five areas, the following two essential prerequisites are needed:

(a) Definite decisions should be made by the Palestinian National Authority concerning the prospective future role of the Palestinian Government and its affiliated public institutions and agencies in each of the above five areas;

(b) Comprehensive, in-depth analytical studies should be undertaken in the above five areas with a view to making an overall critical review and assessment of the present situation in each area and to making recommendations concerning the most effective systems and structural/institutional set-ups suitable for each area.

This report is based on the findings of the above joint ESCWA/FAO mission and consists of two chapters:

- I. An overview of the agricultural sector in the Palestinian territories
- II. Restructuring the Palestinian public agricultural institutions



## I. AN OVERVIEW OF THE AGRICULTURAL SECTOR IN THE PALESTINIAN TERRITORIES

### A. THE ROLE OF THE AGRICULTURAL SECTOR IN THE PALESTINIAN ECONOMY

The agricultural sector has historically played an important role in the economy of the Palestinian territories, comprising the West Bank and the Gaza Strip. Although other economic sectors, such as industry, construction and trade, have recently started to assume an increasing role in the gross domestic product (GDP) of the Palestinian territories, the agricultural sector is still the backbone of the Palestinian economy.

Annex table 1 shows GDP, agricultural production and the relative share of agriculture in the GDP of the Palestinian territories (the West Bank and the Gaza Strip), for the period 1968-1992 calculated at 1986 prices.

In the West Bank, the relative share of agriculture in GDP declined from 40 per cent in 1969 to 23 per cent in 1985, and increased after that, to reach 44 per cent in 1991. During the period 1968-1992, the value of agricultural production and its share in GDP fluctuated biennially due to the biennial fluctuations in olive production, which alone constitutes around 25-30 per cent of the value of agricultural production in the West Bank.

In the Gaza Strip the relative share of agriculture in GDP over the period 1968-1992 increased from 31 per cent in 1968 to 35 per cent in 1974, later decreasing a minimum of 20 per cent in 1986, after which it rose only very slightly to reach 26 per cent in 1992.

The data presented in annex table 1 indicate that the value of agricultural production and the relative share of agriculture in GDP in the West Bank and the Gaza Strip have both increased since 1986.

A World Bank study considered the upswing in agricultural production in the Palestinian territories since 1986 as a paradox in that agricultural production has been expanding despite an environment of declining external markets, a constrictive regulatory framework, the declining level of public services available to the agricultural sector and restricted access to natural resources.<sup>1</sup> This paradox might be explained, according to the study, by increasing sector employment. The increase of the number of the people forced to work in the agricultural sector because they lost their jobs in Israel and in the Gulf, especially Kuwait, induced production growth. During the *intifadah*, the agricultural sector proved to be a solid backbone of the Palestinian economy through its contribution in raising the food self-reliance of Palestinians and by providing employment opportunities despite the many restrictions imposed by the Israeli occupation on this sector. This tendency was in line with one of the *intifadah* objectives of decreasing the food dependency of the Palestinians on Israeli resources, which encouraged people to utilize even their backyards for vegetable and livestock production.<sup>2</sup>

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<sup>1</sup> The World Bank, *Developing the Occupied Territories: An Investment in Peace*, vol. 4, *Agriculture* (Washington, D.C.; 1993), p. 2.

<sup>2</sup> FAO, "Report on the Palestinian agricultural sector" reproduced in *Agriculture and Development in Western Asia*, No. 14 (E/ESCWA/AGREB/XIV), November 1993, pp. 17-43.

The agricultural sector is also a major employer in the Palestinian territories. The Palestinian population residing in the West Bank and the Gaza Strip stands at about 1.7 million people, of which about 70 per cent live in rural areas.<sup>3</sup> In 1992, the total Palestinian labour force was around 319,000, of which around 104,000 were working in the West Bank and Gaza Strip, and 115,000 in Israel.<sup>4</sup> Around 26.2 per cent and 9.0 per cent, respectively, were working in agriculture.

Employment levels in agriculture in the Palestinian territories have historically been high. The sector has played the role of residual claimant of labour. Agriculture has shed labour in periods when abundant labour opportunities existed outside the sector, as in the early 1980s when the relative share of agriculture employment declined quite sharply. It has alternatively absorbed excess labour, notably during the past six years.<sup>5</sup>

Agriculture played a relatively significant role in the external trade of the West Bank and Gaza Strip prior to the Israeli occupation in 1967. During the period 1968 to 1985, agricultural exports increased considerably, reaching a peak in the early 1980s. In 1981 agricultural exports of the West Bank amounted to US\$ 82.0 million and represented about 40 per cent of total exports, while agricultural exports of the Gaza Strip amounted to US\$ 55.3 million and represented about 28 per cent of the total exports of the Strip. However, the value of agricultural exports and their relative share in total exports began to decrease rapidly after 1982, especially in the West Bank. In 1987, agricultural exports of the West Bank amounted to US\$ 41.5 million and represented about 18.1 per cent of total exports, while in the Gaza Strip agricultural exports decreased to US\$ 32.4 million, representing about 20.6 per cent of total exports. However, on average for the period 1981 to 1987, agricultural exports accounted for 31.9 per cent of total exports in the West Bank and 25.9 per cent in the Gaza Strip.<sup>6</sup> The relative significance of agricultural exports from the West Bank and Gaza Strip for selected years during the period 1973 to 1987 is presented in annex table 2.

## B. THE AGRICULTURAL PHYSICAL RESOURCE BASE

### 1. Land resources<sup>7</sup>

The total land area of the Palestinian territories is estimated at 6,245 square kilometres (6,245,000 dunums), of which 5,880,000 dunums are in the West Bank and 365,000 dunums are in the Gaza Strip. Only one third of the total land area, approximately 1,980,000 dunums, is considered as cultivated land, of which 1,793,000 dunums are in the West Bank and 188,000 are in the Gaza Strip. The area under irrigation is about 205,000 dunums, of which 95,000 dunums are in the West Bank. The irrigated area in the Gaza Strip increased from 60,000 dunums in 1967 to 110,000 dunums in 1991, while it remained around 95,000 dunums in the West Bank. Overall, the area under cultivation has declined by about 6 per cent, all rain-fed

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<sup>3</sup> ESCWA and FAO, "Major aspects of the agricultural sector in the occupied Palestinian territories", *Agriculture and Development in Western Asia*, No. 14 (E/ESCWA/AGREB/XIV), November 1993, p. 10.

<sup>4</sup> Israel, Central Bureau of Statistics, *Statistical Abstract of Israel 1993*, No. 44, taken from tables 27.22 and 27.23.

<sup>5</sup> *Developing the Occupied Territories*, p. 22.

<sup>6</sup> UNCTAD, "The Agricultural Sector of the West Bank and the Gaza Strip" (UNCTAD/DSD/SEU/MISC 5), October 1993, p. 15.

<sup>7</sup> Data on land resources are taken from the following sources: PLO Department of Economic Affairs and Planning, Development Programme for the Palestinian Economy for the period 1994-2000, Tunis, July 1993, chapter 1, part 3, published in *Samed Economist*, vol. 16 (April-May-June 1994) (in Arabic), pp. 5-6.

land. Some 1.5 million to 2.0 million dunums of non-cultivated land have traditionally been used for grazing. However, the area available for grazing, most of which is in the eastern part of the West Bank, has been restricted as closed military zones.

According to official Palestinian sources,<sup>8</sup> about 60 per cent of the total cultivated land of the West Bank and 30 per cent of that of the Gaza Strip has been confiscated by the Israeli Military Authority to serve the purposes of the occupation under different pretexts, such as military security, establishing Jewish settlements and public use (for example roads).<sup>9</sup>

The Palestinian territories can be classified from an agro-ecological point of view into five distinct regions:<sup>10</sup>

(a) The coastal region which is known as the Gaza Strip. It has a semi-arid Mediterranean climate of long hot summers and mild winters with fluctuating rainfall of 300-800 mm between November and March. The cropping pattern is dominated by fruit trees, primarily citrus and vegetables;

(b) The semi-coastal region, which lies in the north and north-western corner of the West Bank. It has a relatively high average yearly rainfall of 600 mm. Owing to its fertile soil, this region is suitable for field crops;

(c) The central highland region, which extends from Jenin in the north to Hebron in the south. This region is mostly mountainous and enjoys a high annual rainfall ranging from 400 mm in the south to 700 mm in the north. Olive trees and field crops prevail in this area;

(d) The eastern slopes region, which includes the area between the eastern parts of Jenin in the north to the Dead Sea in the south. Steep mountains with little rainfall (150-350 mm) predominate in this region and make it almost semi-arid to desert. This region is mainly used for grazing and to a certain extent for marginal field crops;

(e) The western side of the Jordan Valley, which lies about 200 to 300 metres below sea level and has an average yearly rainfall of 100-250 mm. The climate of this region is characterized by hot summers and warm winters, which makes it suitable for off-season vegetables and semi-tropical fruit trees. Due to the low rainfall, irrigation is a must for all crops.

Annex table 3 shows the use of cultivated land for selected years. In the West Bank, the total cultivated area under both rain-fed and irrigated agriculture has remained fairly stable since 1968. Only the distribution of land among major crop categories has changed. There has been a significant reduction in the areas cultivated with field crops and vegetables, and a substantial increase in the area of fruit trees (including olives).

As for the Gaza Strip, there has been a decline in the area cultivated with field crops, compensated for by a substantial increase in the areas cultivated with vegetables and fruit trees (mainly citrus).

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<sup>8</sup> *Developing the Occupied Territories*, p. 19.

<sup>9</sup> Development Programme for the Palestinian Economy, ESCWA, "Rehabilitation of the agricultural sector in the occupied Palestinian territories" (E/ESCWA/AGR/1993/9), p. 7.

<sup>10</sup> For more details see: Society of Austro-Arab Relations: Development Perspectives for Agriculture in the Occupied Palestinian Territories, Jerusalem—Vienna, 1992, pp. 19-20 and pp. 64-66.

The main crops in the Palestinian territories are vegetables, citrus, olives and other fruits. The West Bank is noted for its olive production, which covers some 42 per cent of the total cultivated area, about 75 per cent of the area planted with fruit trees. Since 1979, the level of production has steadily increased in years with good harvests. While there has been an increase in the production of vegetables, including potatoes, the volume of citrus production has remained fairly stable. In the Gaza Strip, the notable increase over the past few years has been in the production of vegetables, while there has been no significant changes in the production of other crops.<sup>11</sup>

## 2. *Water resources*

The potential water resources of the Palestinian territories appear to be in the vicinity of 900 million cubic metres (MCM) per annum.<sup>12</sup> However, this figure does not include the Palestinian share in the waters of the Jordan River, which is estimated at 150 MCM per annum.<sup>13</sup> Since the West Bank is still denied rights to surface water from the Jordan River, rainfall over the West Bank and Gaza Strip remains the only renewable source of freshwater in the Palestinian territories.

In the West Bank, the available water resources, which are estimated at 850 MCM, come from different sources as follows: groundwater (wells) 640 MCM; springs 105 MCM; eastern valleys 35 MCM; and western valleys 70 MCM. In the Gaza Strip the available water resources are estimated at 60 MCM, out of which about 45 MCM represent the portion of rainfall that infiltrates the surface and replenishes the groundwater basin annually, with 15 MCM being water recharge from irrigation.<sup>14</sup>

About 640 MCM, or 75 per cent of the water resources available to the West Bank, are under Israeli control and use, as follows:<sup>15</sup>

- (a) 560 MCM is consumed by Israel within the Green Line;
- (b) 80 MCM is consumed by Israeli settlers in the West Bank.

Water consumption of the Palestinians in the West Bank amounts to about 120 MCM as follows:<sup>16</sup>

- (a) Agriculture           84 MCM
- (b) Domestic uses       31 MCM
- (c) Industry uses        5 MCM

In the Gaza Strip, the total estimated consumption of freshwater is 109 MCM, of which about 10 MCM is consumed by Israeli settlers and 89 MCM by Palestinians for the following purposes: agriculture 64 MCM; domestic uses 22 MCM; and industrial uses 5 MCM. The difference between the current

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<sup>11</sup> "Rehabilitation of the agricultural sector in the occupied Palestinian territories", p. 8.

<sup>12</sup> *Ibid.*, p. 9.

<sup>13</sup> Development Programme for the Palestinian Economy, p. 19.

<sup>14</sup> *Ibid.*, p. 22.

<sup>15</sup> *Ibid.*, p. 20.

<sup>16</sup> *Ibid.*

consumption of freshwater in the Gaza Strip (109 MCM) and the volume of available water resources (60 MCM) represents a deficit amounting to 49 MCM in the water resources balance of the Strip.<sup>17</sup>

The quality of the underground water in the West Bank is generally very good, although there are some areas where sewage infiltration causes considerable pollution. In the area of Gaza town the groundwater quality is rather poor because of over-exploitation over several decades, which has led to sea-water intrusion, and because of the infiltration of sewage and agricultural chemicals. Only the northern and southern sections of the Gaza aquifers are reported to be of good quality.<sup>18</sup>

### C. AGRICULTURAL PRODUCTION

Agricultural production in the West Bank and Gaza Strip is plainly diversified. In the West Bank, around 50 per cent of the rain-fed cultivated area is covered by olives. Field crops are second in importance. Vegetables and citrus are predominant in the irrigated areas. In the Gaza Strip citrus and vegetables occupy more than 90 per cent of the total irrigated area. In the rain-fed areas of the Gaza Strip, the predominant pattern consists of field crops and fruit trees.

Annex table 4 shows values and quantities of the agricultural production in the West Bank and Gaza Strip.

#### 1. *Field crops*

Field crops production witnessed major changes in area cultivated and productivity. While productivity has been increased through the last decade, areas planted with field crops dropped sharply from 770,000 and 53,000 dunums in 1966 to around 400,000 and 30,000 dunums in 1992 in the West Bank and Gaza Strip, respectively. The reasons for this development could be the following:<sup>19</sup>

- (a) A gradual shift towards relatively higher value crops like vegetables and medicinal plants whenever supplementary irrigation was available;
- (b) Expanding the area planted with olive trees, which unlike field crops, entail minimal cash expenses;
- (c) Constraints on cultivating the field crops areas owing to land confiscation and closure by the Israeli occupation as indicated earlier.

Table 1 shows the area and production per dunum of the major cereal crops, namely wheat and barley, by agricultural district for the cropping season 1992/1993. The table shows that the production of field crops is higher in the areas of Jenin and the Gaza Strip, owing to better rainfall; and that although Hebron had the largest area planted with field crops, it was lowest in production.

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<sup>17</sup> *Ibid.*, p. 22.

<sup>18</sup> *Developing the Occupied Territories*, p. 54.

<sup>19</sup> "The agricultural sector of the West Bank and Gaza Strip", p. 28.

## 2. Vegetables

Vegetable production in both the West Bank and Gaza Strip has undergone major changes in a process that has been expanding since the 1960s. The West Bank expanded the area planted with vegetables after 1967 to cope with the increased demand for vegetables in the markets of Jordan and the neighbouring countries. After the Israeli occupation, and with the adoption of new technologies, vegetable production witnessed major increases in the area planted with vegetables, and in productivity per dunum. This process was accelerated because of the expanding foreign demand for vegetables. During the *intifadah*, vegetable production was affected by the harsh Israeli practices which kept farmers in many cases from working their farms and marketing their products properly and at the right time. After the Gulf war, the occupied Palestinian territories lost their markets in that area, damaging severely the production capacities of areas planted with vegetables, which were forced to lie fallow. The centres for vegetable production are Gaza Strip (50,000-60,000 dunums), Jordan Valley (35,000 dunums), Jenin (12,000 dunums), and Tulkarm (10,000 dunums).

**Table 1. Wheat and barley production for the 1992/1993 season**

Agricultural districts	Wheat		Barley	
	Dunum	Production/dunum (kg)	Dunum	Production/dunum (kg)
Jenin	28 940	200	19 565	220
Tulkarm	30 677	180	18 110	200
Nablus	30 250	130	7 325	170
Ramallah and Bethlehem	34 800	178	16 000	182
Hebron	45 775	65	93 415	70
Jordan Valley	8 714	250	1 796	200
Gaza	19 400	250	11 000	260

*Source:* Data collected from the Departments of Agriculture in the West Bank and Gaza Strip.

## 3. Fruit trees

The area planted with fruit trees in the West Bank tended to expand even after the Israeli occupation. It increased from 749,000 dunums in 1963 to 808,000 dunums in 1966 and reached more than 1 million dunums in 1990.<sup>20</sup> According to the figures collected by the joint ESCWA/FAO mission for the year 1993, the fruit tree area in the West Bank amounted to 1,051,000 dunums, of which 1,024,000 dunums are rain-fed and 27,000 dunums are irrigated. Olive trees occupy around 75 per cent of the area planted with fruit trees and are concentrated in Jenin, Tulkarm, Ramallah and Nablus. The plantation of olive trees is also expanding in the Hebron area, especially in the newly reclaimed land.

The area planted with fruit trees in the Gaza Strip increased until 1978. It increased from 93,000 dunums in 1966 to 129,000 dunums in 1978 and then started to decrease, reaching 95,000 dunums in 1993. The breakdown of the last figure is as follows:

<sup>20</sup> For more details see "The agricultural sector of the West Bank and Gaza Strip", pp. 31-36.

Irrigated fruit trees	70,000 dunums
Thereof: Citrus	55,000 dunums
Others	15,000 dunums
Rain-fed fruit trees	<u>25,000 dunums</u>
Total	95,000 dunums

The area planted with citrus trees in the Gaza Strip decreased over the last two decades owing to increasing water salinity, higher prices for water for irrigation, and the problems of marketing the citrus abroad. It decreased from 71,000 dunums in 1968 to 55,000 dunums in 1993. The distribution of the major fruit trees in the agricultural districts in the West Bank and Gaza Strip can be summarized as follows:

Olive trees: Tulkarm, Ramallah, Nablus and Jenin  
Citrus: Gaza Strip, Tulkarm and Jordan Valley  
Almonds: Jenin, Tulkarm, Nablus and Gaza Strip  
Grapes: Ramallah and Nablus  
Banana: Jordan Valley

#### 4. *Livestock production*

The share of livestock production in the total value of agricultural output was around 49 per cent in the West Bank and 36 per cent in the Gaza Strip in 1992. The development of livestock shows different trends according to type of animal. Cattle of local breed decreased from around 37,000 head in 1966 to 4,400 in 1993, cattle of Friesian stock, mainly imported from Israel, increased from 0 in 1966 to 740 in 1993 in the West Bank. In the Gaza Strip the number of cattle of local breed dropped from 1,400 in 1978 to 200 in 1989, while the figures for Friesian cattle increased from 120 in 1978 to 3,300 in 1989. The major concentrations of cattle are in the areas of Nablus, Tulkarm, Jenin and Hebron.

Head of sheep decreased from 376,700 in 1966 to 220,000 in 1978 and then started to increase slowly to reach 279,000 in 1987 and 365,000 in 1993. The *intifadah*, by adopting self-sufficiency measures in many agricultural products, contributed to the increase of the sheep population, especially for small-scale production. In the Gaza Strip there is a small sheep population of 15,000 head. Goats decreased from 389,400 in 1967 to 196,000 in 1993 in the West Bank and from 44,000 in 1978 to 25,000 in 1993 in the Gaza Strip. The major concentrations of goats are in Hebron, Jenin and Nablus.

Poultry fluctuated. In 1993 there were around 765 layer farms with 1.2 million layers and 3,836 broiler farms with a total capacity of around 3 million broilers. The major areas for layers are Ramallah, Tulkarm and the Gaza Strip; those for broilers are Hebron, Jenin and Ramallah.

#### 5. *Fish production*

Fish production in the Gaza Strip during the period 1967 to 1993 fluctuated from one year to another. It reached a maximum of 5,100 tons in 1976/1977. In 1993 fish production amounted to 2,185 tons.<sup>21</sup>

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<sup>21</sup> For more detail see: ESCWA, "Project proposal for the rehabilitation of the fishery sector in the Gaza Strip" (E/ESCWA/AGR/1994/1), p. 3.

#### D. THE AGRICULTURAL INSTITUTIONAL SET-UP

In addition to private merchants who provide inputs and buy and market agricultural products, there are three types of institutions that support agricultural development in the Palestinian territories. These are: Public agricultural services (the Departments of Agriculture); professional farmers' organizations, mainly agricultural cooperatives; and Palestinian non-governmental organizations (local NGOS).

##### 1. *Public agricultural services (Departments of Agriculture)*

There are two main public Departments of Agriculture in the Palestinian territories. These are:

(a) The Department of Agriculture in the West Bank with its six sub-offices in Hebron, Jenin, the Jordan Valley, Nablus, Ramallah/Bethlehem and Tulkarm. The structure of this Department was inherited from the Jordanian Ministry of Agriculture;

(b) The Department of Agriculture in the Gaza Strip, which was inherited from the Egyptian administration.

These two departments are organized into specialized services with very restricted activities owing to their limited and ever-decreasing means and to administrative constraints. The total number of the staff in the West Bank, for instance, was reduced from 437 in 1977 to only 141 in 1993 as indicated in table 2. The departments still provide some extension services and some veterinary health services but on a much more modest scale than a decade ago. The research sections within the departments had no staff in 1992, and activities in the 10 experimental stations have been cancelled.

Nearly two thirds of the staff of the departments have a B.Sc. degree; very few possess a M.Sc. degree in agriculture or veterinary science. This staff, which has not been renewed for a long time, has a mean age of almost 50 years, without any possibility of being replaced once they leave. Due to the lack of continuous training, this staff needs extension retraining. However, they possess good knowledge of the natural, human and agricultural environment and have a great deal of experience in the management, rules and procedures of public institutions. They may therefore continue to be useful in this type of institution and could transmit their experience to the younger agents who will take their place upon their retirement in a few years.

**Table 2. Employees of the Department of Agriculture in the West Bank**

	1977	1983	1993
Extension planning	92	68	42
Experimental stations and research	50	37	11
Forestry	44	42	27
Veterinary	63	53	34
Administration	26	40	27
Daily paid workers	275	—	—
Total	437	241	141

*Source:* Field collection of data through visits to the Department of Agriculture in the West Bank.

*Note:* An em dash (—) indicates that the item is nil.



## 2. Agricultural cooperatives

Almost 75 agricultural cooperatives are registered in the occupied Palestinian territories, of which 69 are in the West Bank and 6 are in the Gaza Strip. These cooperatives were established long ago according to the Jordanian laws of the 1950s.

Besides these registered cooperatives, there are another 34 informal cooperatives, of which 30 are in the West Bank and 4 are in the Gaza Strip. These cooperatives were initiated by the rural people to provide essential services to the farmers and their families. The Israeli Civil Administration did not clear or register such cooperatives.

The activities of the agricultural cooperatives are declining continuously and most of them have become obsolete. They lack skilled staff, and their budgets are very limited.

The whole agricultural cooperative system needs to be reorganized within a revised and modern legal and regulatory framework in order to be able to better promote both local initiatives and the effective participation of the farmers in running them.

It is therefore necessary first to undertake an analysis of existing cooperative legislation as well as of existing cooperatives. Based on this analysis it would be possible to propose improvements and adjustments to the legislation. A programme of assistance needs to be elaborated including technical assistance for developing structural set-ups, staff training and material inputs, in order to enable the cooperatives to provide adequate services to the farmers.

## 3. Local NGOs

Palestinian NGOs were created on the basis of private initiative and are mainly composed of high school and university graduates. They are partially based on voluntary activities with the objective of compensating for the shortcomings of the Israeli Administration by providing multifaceted support to farmers. Their activities cover extension, provision of information and advice to the farmers, land reclamation and processing of produce. The magnitude of these activities depends on the external aid received by each NGO. In any case, they remain rather limited in comparison with the farmers' needs.

The most important NGOs are:

- ◆ The Palestinian Agricultural Relief Committee (PARC);
- ◆ The Union of Agricultural Work Committee (UAWC);
- ◆ The Agronomists Association.

A comprehensive list of NGOs is attached in the annex table 5.<sup>22</sup>

Except for a few attempts to coordinate their activities, these NGOs operate independently of each other, following different approaches. Their activities tend to overlap, while a good distribution and coordination of efforts would have enabled them to help a greater number of farmers in many more subject areas. Due to the weakness of official Departments of Agriculture in certain cases, the NGOs tend to take their place by assuming the role of public services.

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<sup>22</sup> See Agriculture Relief Committee and Arab Thought Forum, *Directory of Agricultural Development Institutions in the West Bank and Gaza Strip*, vol. 1, No. 4 (1992), Agricultural Data Base, Jerusalem 1992.

On the other hand, the NGOs represent a human potential of motivated and well-educated young people. They constitute an interesting nucleus of young, unemployed graduates who are mobilized in favour of agricultural development. It is therefore necessary to clearly predetermine the roles and prerogatives of the NGOs, to help them revise their approaches to development and their methods of intervention at the farm level, reorganize accordingly and henceforth carry out their work based on pre-determined programmes and objectives. The financial contribution provided to these NGOs should be estimated based on their programmes and objectives.

The objectives and programmes of these NGOs should be defined and elaborated, and follow-up actions should be taken, with the effective participation of the farmers, and within a flexible institutional framework that could coordinate and cooperate with the Departments of Agriculture and other public authorities concerned.

#### E. AGRICULTURAL SUPPORT SERVICES

The Israeli Administration for the occupied Palestinian territories did not pay any attention to developing or even to encouraging the development of support services for the agricultural sector. Marketing, credit and extension were confined to the private sector, which was not in a position to establish and carry out such activities. Besides its lack of funds and expertise, the private sector in the occupied Palestinian territories was hindered by the occupation from organizing and running the institutions that could provide the agricultural sector with credit facilities, marketing services, and timely and adequate extension services, owing to Israeli practices against the Palestinians, such as group punishments, curfews, military orders for confiscating land and clear instructions and orders controlling the export of agricultural produce to Jordan.<sup>23</sup> The following paragraphs provide an overview of the status and problems of agricultural support services.

##### 1. *Agricultural marketing facilities*

The lack of a free and efficient marketing system in the occupied Palestinian territories is considered to be a major hindrance to rehabilitating the agricultural sector.

The internal agricultural market of the occupied Palestinian territories is characterized by a limited marketing infrastructure. It lacks facilities for temporary storage, locally made packing materials and efficient administrative organs with appropriate supervision and control instruments. In addition to this, the occupied Palestinian territories suffer from the absence of policy directives for the marketing of agricultural products, specifically in regard to food safety regulations and quality control services; ineffectiveness is an acute problem, notably regarding livestock products.<sup>24</sup>

On the other hand, the many constraints facing the development of the external marketing of agricultural produce can be summarized in the following points:<sup>25</sup>

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<sup>23</sup> For more details see, for example, "Economic and social consequences of the establishment of settlements by Israel in the Palestinian territory, including Jerusalem and the Syrian Golan: report of the Secretary-General" (A/47/294-E/1992/84), 7 July 1992.

<sup>24</sup> The World Bank, *Developing the Occupied Territories*, pp. 11-12; "Rehabilitation of the agricultural sector in the occupied Palestinian territories", pp. 17-18.

<sup>25</sup> "Rehabilitation of the agricultural sector in the occupied Palestinian territories", pp. 17-18.

(a) The present services for the sorting, grading and packing of agricultural products are inadequate, with the exception of citrus-grading and packing in the Gaza Strip. Even these facilities, which were established in the early 1960s, are facing technical problems. There is no factory for manufacturing cartons; thus Israel is the sole source of supply. However, as neither Jordan nor the Gulf countries permit the packing of fruits and vegetables in Israeli-made cartons, the produce must be packed in wooden boxes which are not of good quality;

(b) The existing cold-storage facilities are technically inferior and have limited capacity. An enormous amount of capital is required to overcome this critical problem. Although there is a willingness to improve and expand these facilities, the lack of access to credit at reasonable rates precludes this course of action;

(c) Considerable difficulties were encountered in transporting the produce across the Jordanian border. Apart from the high cost of truck-loading, there are additional fees imposed by Israel for crossing the border. Moreover, there are strict security checks on the returning trucks, which must do so within 24 hours and at the cost of the truck owner. One source estimates that the cost of each return truck trip from the occupied Palestinian territories to Amman amounts to US\$ 267.00, of which 84 per cent consists of payments to obtain the exit permit;

(d) Although Jordan and the Gulf States remain ideal markets for the agricultural produce of the occupied Palestinian territories, competition from other sources in the importing markets, especially from Greece, Spain and Turkey, would be a major challenge for Palestinian exporters. This affects not only the exports of vegetables, citrus and fruits but also of olive oil, which faces competition from Tunisia. The problem is exacerbated by the lack of strict quality control on exports, especially perishables. Added to this is the high cost of water for irrigation in the face of falling export prices. As a result, farmers are reluctant to plant new fruit trees; in fact, they are already uprooting citrus orchards;

(e) Non-tariff barriers have also hindered the export market. Following the cancellation of its legal and administrative ties with occupied Palestinian territories in July 1988 and to protect its own producers, Jordan issued a new ruling by which agricultural products entering Jordan from the occupied territories for sale in Jordan would be treated on a case-by-case basis. Likewise, Israel has introduced quotas on agricultural imports from the occupied territories, lifting them only during shortages in Israel or when the export demand for its own agricultural produce exceeds supply. With these unpredictable events, it is difficult for exporters from the occupied territories to plan ahead.

Exports to the European Economic Community (EEC) were a new and promising development when, in December 1989, the EEC agreed to accept direct shipments from the occupied Palestinian territories under most-favoured-nation terms. The agreement specified the periods when various agricultural products would be allowed to enter the EEC market. As a result, several shipments were made during 1988-1989 and 1990-1991, and the products of the occupied territories were sent by air and sea to France, the Netherlands, Norway and the United Kingdom of Great Britain and Northern Ireland. In 1991, an agreement was reached with Italy for the shipment of 6,000 tons of olive oil. However, only about 1,000 tons were actually sold, at US\$ 2.40 per kilogram. Except for citrus (30,000 tons), exports to the EEC have been small, with exportation taking place only through an Israeli port or airport. Although direct exportation to the EEC has been a positive step and has introduced Palestinians to the practices of international trade (including the need to create new facilities in the occupied territories), the financial profitability of this experience is less encouraging owing to the high cost of marketing. In addition, it is not yet certain that the occupied territories would be able to compete in the EEC market with other sources of supply (for example, Israel, Africa, Latin America, and the EEC countries themselves).

It should be possible for the occupied territories to gradually regain their traditional share of the Arab market. This, however, would require considerable planning and preparation, especially as the traditional importing countries themselves are facing problems with surpluses in some key commodities, especially vegetables.

## *2. Agricultural credit*

The absence of a formal agricultural credit system in the occupied Palestinian territories presents a major obstacle to rehabilitating the agricultural sector. The Israeli occupation did not encourage the establishment of such a system. NGOs tried to fill the gap, but owing to their limited financial and administrative resources, they could provide only limited facilities to the agriculture of the occupied Palestinian territories. Among the four NGOs specialized in offering limited loans to the Palestinian economy, the Arab Development and Credit Company (ADCC) is the only institution that offers agricultural loans to farmers. The ADCC was established in September 1985 as a non-profit organization and started its operations from East Jerusalem in 1986. Annex table 6 shows the ADCC loan distribution by type till May 1994.

The ADCC provides short-term loans (two years) and medium-term loans (five years). The rate of repayment is 40 per cent.

Some other NGOs like PARC and UAWC also provide very limited loans to farmers.

## *3. The agricultural infrastructure*

The visitor to the occupied Palestinian territories readily notices that while Israel has been providing its settlements in the West Bank and the Gaza Strip with modern infrastructure, the Palestinian towns and villages have to make do with very poor infrastructure, almost all of which was built before the occupation in 1967. Even this poor infrastructure has not been maintained during the occupation. Establishing a modern infrastructure capable of servicing a modern Palestinian economy will be the real challenge facing the new Palestinian administration.

## F. CONCLUSIONS

As a result of its occupation of the West Bank and Gaza Strip in June 1967, Israel gained full control of these areas and tried to form its destiny in accordance with Israeli interests. One of the primary Israeli interests was in gaining full control over land and water resources in the West Bank and Gaza Strip, and so the agricultural sector was the first to suffer from measures imposed by the Civil Administration, which is a military authority belonging to the Israeli Ministry of Defence.

The first impact of such Israeli practice was the rapid decline and deterioration of Palestinian agricultural institutions. For instance, the Israeli Civil Administration narrowed the scope of agricultural extension services in the occupied Palestinian territories owing to budgetary constraints. Obviously, the closure of the agricultural experimental stations and the drastic reduction in the extension personnel of the Departments of Agriculture in the West Bank and Gaza Strip led to the deterioration of the agricultural sector.

It is worthwhile for the purposes of this study to conclude the following:

- (a) At present, there is a total absence of planning in the Palestinian agricultural sector;

(b) The existing Departments of Agriculture and of Veterinary Services in the West Bank and Gaza Strip are virtually paralysed due to reductions in technical staff, lack of funds and the elimination by the Israeli Civil Administration of all agricultural development budgets;

(c) Since the occupation in 1967 there has been a drastic reduction in adaptive agricultural research essentially owing to tight budgets. At present, no adaptive agricultural research takes place in the Palestinian territories, and research stations and experimental farms—with the exception of those at Jericho and al-Arub—are now used for commercial purposes. Technical research staff have either been transferred or dismissed;

(d) At present, some agricultural extension activities are being carried out on a reduced scale by the Departments of Agriculture in the West Bank and the Gaza Strip. Since 1976, the staff of the extension service has been reduced by more than 50 per cent, and demonstrations in farmers' fields have been abandoned. Some local NGOs try to provide extension services to Palestinian farmers, but the staff of the NGOs who do the actual extension work appear to have inadequate experience;

(e) No pre-college agricultural education takes place at present in the Palestinian territories. Following occupation, the situation at Khadoury Agricultural Institute (in Tulkarm) and at al-Arub Agricultural School (near Hebron) deteriorated. Very recently the Khadouri Institute was abolished. Its premises now host a polytechnic institute;

(f) The agricultural education programmes of the Faculties of Agriculture at Al-Najah University (Nablus) at Hebron University (Hebron) have so far not developed into serious efforts with an impact on Palestinian agriculture, owing to scarcity of financial resources and the lack of adequate technical staff and expertise;

(g) There are no indigenous Palestinian institutions which offer short-term, middle-level practical training courses in many fields of agriculture and related branches, although there is a severe shortage in the number of middle-level agricultural technicians;

(h) There is, at present, a complete absence of institutional credit in the Palestinian territories, although some local and non-local private organizations provide some form of financing or financial assistance to farmers. The great majority of Palestinian farmers have no access to credit, especially medium- and long-term credit;

(i) The marketing of Palestinian agricultural produce, particularly with respect to export markets, encounters serious constraints. In addition to the weakness in marketing facilities and infrastructure, there are obstacles such as permit fees, border fees, taxes, high transport costs and other non-tariff barriers;

(j) There are numerous agricultural cooperatives in the West Bank, but most of them suffer from serious weakness in their organization, management and operations, and they carry out their activities without any supervision or control from a central public institution;

(k) At present, there are numerous local and foreign voluntary NGOs working in the agricultural sector. Most of these NGOs are small, ill-equipped and understaffed, and because of scarcity of financial resources they try to attract funds from a number of donor Governments in Western Europe and North America;

(l) There is a complete lack of harmonization or coordination between the various types of public and private institutions and organizations working in the Palestinian agricultural sector.

## II. RESTRUCTURING THE PALESTINIAN PUBLIC AGRICULTURAL INSTITUTIONS

### A. THE PROSPECTIVE ROLE OF AGRICULTURE IN THE PALESTINIAN ECONOMY

The present role of agriculture in the Palestinian economy was reviewed in chapter I of this report.

In view of its strategic importance to the national economy, as well as to the life of the rural population, Palestinian agriculture should have a dynamic role aimed at achieving the following major objectives:

(a) **Food security:** Supplying the Palestinian population with essential food commodities, with the aim of attaining national food security and improving the nutritional standards of the population. This objective would have top priority particularly in the light of the anticipated growth of the Palestinian population;

(b) **Employment:** Generating the maximum possible number of employment opportunities, with a view to reducing the dependency of the Palestinian labour force on the Israeli labour market and to securing work for the increasing numbers of the population. In this regard, it should be noted that the potential role of agriculture in the Palestinian labour market goes far beyond absorbing the residual labour force. Since the capacity of the other Palestinian economic sectors to absorb more labour is still weak, agriculture is viewed as one of the main sectors where more employment could possibly be generated;

(c) **Improving the living standards of farmers:** Another high priority for agricultural development in the Palestinian territories, possibly more for social and political than economic reasons. The ultimate goal is to discourage the massive migration of farmers and the rural population to urban centres and to secure the permanent physical presence of Palestinian farmers on their land;

(d) **Export earning:** Increasing the share of agriculture in Palestinian GDP and GNP, and improving the balance of trade by increasing the foreign currency earnings from agricultural exports. Palestinian agriculture should take maximum advantage of the unique climatic conditions in the Jordan Valley, which has become a vast natural greenhouse producing large quantities of off-season vegetables, fruits and flowers.

### B. THE ROLE OF THE PALESTINIAN GOVERNMENT IN AGRICULTURE

During discussions held with senior staff in the Palestinian Economic Council for Development and Reconstruction (PECDAR), the Departments of Agriculture and Veterinary Services in the West Bank and the Gaza Strip, as well as in the Agricultural Cooperative Union at Nablus, the Faculty of Agriculture of Al-Najah University at Nablus, and in some active local and foreign agricultural NGOs, there was general consensus on the following:

(a) The future role of the Palestinian National Authority (the Palestinian Government) in the agricultural sector should concentrate on the development of agriculture and on the organization of the agricultural sector through the formulation and monitoring of development plans and policies, the issuance and enactment of laws and regulations to govern the economic activities and services in this sector, and the provision of basic support services to farmers;

(b) The actual activities and operations related to the production of and trade in the various agricultural inputs and outputs should as a general rule be left to the private sector, which should operate within the framework of general development plans, policies and regulations.

On the basis of this common understanding of the future role of the Palestinian Government in the agricultural sector, and in the light of the prospective role of agriculture in the Palestinian economy, it is suggested that the future role of the Government in agriculture be confined in principle to exercising the following functions:

(a) Preparing a national agricultural development strategy and general medium-term and annual development plans, identifying the development priorities, programmes and projects of the agricultural sector, and monitoring and evaluating their implementation;

(b) Formulating general policies for the agricultural sector, identifying means for their implementation and evaluating their results and impacts;

(c) Organizing the various economic activities and services in the agricultural sector, including:

(i) The production of and trade in agricultural inputs (seeds, seedlings, fertilizers, pesticides and veterinary drugs);

(ii) Forming agricultural cooperatives, farmers' unions and agricultural marketing boards;

(iii) Organizing the supply of short- and medium-term agricultural credit, especially to small farmers;

(d) Providing farmers with basic support services, including:

(i) Transfer of modern agricultural production technologies and farming techniques through extension services and by training farmers;

(ii) Providing information and advice on foreign markets;

(e) Protecting the agricultural and livestock resources through the control and eradication of: plant diseases; epidemic diseases of animals; and pests;

(f) Conserving and improving the forests and rangelands;

(g) Providing support to the agricultural cooperatives, farmers' unions and rural development organizations;

(h) Issuing and enacting laws and regulations to organize the agricultural sector, including the production of and trade in agricultural produce, animal produce and the various agricultural inputs;

(i) Organizing the external relations of the Palestinian Authority with foreign countries regarding the trade in agricultural products through the conclusion of agreements aimed at:

(i) Protecting the interests of Palestinian farmers and exporters;

(ii) Promoting Palestinian agricultural exports.

### C. PROGRAMME OF ACTION FOR THE RESTRUCTURING OF THE PALESTINIAN PUBLIC AGRICULTURAL INSTITUTIONS

A proposed programme of action for the restructuring of the Palestinian public agricultural institutions will be presented in detail in this chapter of the report. This proposed programme of action has been formulated taking into consideration the following factors:

- (a) The prospective role of agriculture in the Palestinian economy;
- (b) The anticipated role of the Palestinian Government in agriculture;
- (c) The gradual transfer of sovereignty over all the Palestinian territories to the Palestinian National Authority;
- (d) The need to continue, without any interruption or decline in the quality, the provision of basic support services to Palestinian farmers and agricultural producers;
- (e) The existence, at present, of numerous and different local and foreign private NGOs operating in the Palestinian agricultural sector and providing different services, and the need to guide, coordinate and supervise the activities of these NGOs;
- (f) The necessity, at this stage, to maintain the existing Palestinian agricultural public institutions operating in the Jericho area and the Gaza Strip, and to strengthen their capabilities and improve their efficiency;
- (g) The top priority that should be given to agricultural development planning and policies and the urgent need to establish a high-level Palestinian public institution to handle all matters related to agricultural planning and policies.

On the basis of the above-mentioned considerations, it is proposed to implement the programme of action for restructuring the Palestinian agricultural public institutions in three consecutive phases, as follows:

- ◆ Phase I (9 months, from October 1994 to June 1995): Immediate actions for the Self-Rule Areas in Jericho and the Gaza Strip.
- ◆ Phase II (12 months, from July 1995 to June 1996): Intermediate actions and arrangements for the Self-Rule Areas in Jericho and the Gaza Strip and for the rest of the West Bank.
- ◆ Phase III (one year, from July 1996 to June 1997): General organizational scheme for the restructuring of the Palestinian public agricultural institutions.

The starting dates and durations of the proposed three phases for implementing the programme of action could be changed at any time, according to the occurrence of unanticipated political developments in the Palestinian territories.



**PHASE I. IMMEDIATE ACTIONS FOR THE SELF-RULE AREAS IN  
JERICHO AND THE GAZA STRIP**  
*(Nine months: October 1994 to June 1995)*

In view of the fact that the Palestinian National Authority has already gained sovereignty over the Jericho Area and the Gaza Strip, and has become responsible for guiding and monitoring economic activities and also for administering and operating social services in these two areas, the following actions are suggested for immediate implementation regarding the public agricultural institutions in the two areas:

**A. AT THE POLICY AND DECISION-MAKING LEVEL**

The present formation of the Palestinian National Authority includes the post of Minister of Agriculture. However, at the time of the mission's visit and the drafting of this report, the incumbent of this post had not yet been nominated.

Since the Palestinian National Authority is responsible at this stage for the agricultural sector in the Self-Rule Areas in Jericho and the Gaza Strip, and since this Authority should collaborate with the official authorities in the neighbouring countries (Israel, Egypt and Jordan) regarding the trade and movement of agricultural produce and animal products, it is proposed to establish the basic nucleus of the Palestinian public agricultural institutions, which should handle matters related to agricultural development, planning and policy.

At the policy and decision-making level, the following institutional arrangements are proposed for implementation during Phase I.

*1. Establishment of a technical and executive office for the Minister of Agriculture*

In order to assist the Minister of Agriculture in carrying out his duties and in directing and monitoring the activities of the Departments of Agriculture in Jericho and the Gaza Strip, and also to coordinate and supervise the activities of the private agricultural organizations operating in the Self-Rule Areas, it is proposed to establish a technical and executive office for the Minister of Agriculture.

The Minister's office could be composed of two separate sections: a technical section and an executive section.

The technical section should initially be composed of the following essential staff:

- ◆ Chief or head of the technical section
- ◆ An agricultural economics officer
- ◆ A plant production officer
- ◆ A plant protection officer
- ◆ An animal production officer
- ◆ An animal health/veterinary officer
- ◆ An agricultural extension officer

The tasks of the technical section should include the following:

- (a) Guide, coordinate and monitor the activities of the Departments of Agriculture in Jericho and the Gaza Strip;

(b) Coordinate and monitor the activities of the agricultural NGOs operating in the Self-Rule Areas, including agricultural cooperatives, farmers' unions and the voluntary NGOs;

(c) Prepare for the Minister of Agriculture technical reports and studies on matters related to agriculture in the Self-Rule Areas;

(d) Monitor the implementation of the recommendations of the ad-hoc agricultural planning and coordination advisory committee (see proposal 3 of this section).

Initially, the following staff would be essential for the executive section of the Minister's office:

- ◆ Chief or head of the executive section
- ◆ A budget/finance officer
- ◆ A personnel officer
- ◆ An administrative officer
- ◆ A liaison/external relations officer
- ◆ A legal officer

The main tasks of the executive section should include the following:

(a) Prepare the annual budgets of the Ministry and of the Departments of Agriculture in Jericho and the Gaza Strip; monitor and supervise their expenditures; prepare reports on the financial situation of the Ministry, and procure the equipment and supplies needed by the Ministry;

(b) Organize all the personnel matters of the staff of the Ministry and of the two Departments, including recruitment, employment records, social security and the training needs of the staff;

(c) Organize the Ministry's documentation and filing systems and the secretarial and clerical work, and arrange for the maintenance of the Ministry offices, equipment and vehicles;

(d) Carry out liaison between the Ministry and the Department of Agriculture and Veterinary Services in the West Bank, the official agricultural institutions in neighbouring and foreign countries, as well as with the agricultural NGOs operating in the Self-Rule Areas and in the rest of the West Bank.

The Minister's office should be headed by a director, who should report directly to the Minister himself and be responsible for the management of the Minister's office and its staff.

## *2. Appointment of technical advisers to the Minister*

In order to provide the Minister of Agriculture with technical advice on agricultural development planning and policy issues and on specific technical agricultural matters, as well as on bilateral, regional and international cooperation and relations in the field of agriculture, it is proposed to appoint a number of technical advisers to the Minister of Agriculture.

Such technical advisers should be selected from among qualified Palestinian university professors or professionals, and their appointment should be made on a part-time basis, in the sense that they provide technical advice on specific issues when requested by the Minister of Agriculture.

Considering that priority should be given at this stage to policy and legal issues, it is proposed to appoint four technical advisers, as follows:

- (a) Agricultural economics adviser to advise on agricultural development planning and policy issues, and on production, marketing and pricing policies, as well as on external trade in agricultural produce;
- (b) Legal adviser to provide legal advice on all matters related to bilateral, regional and international cooperation and agreements dealing with agriculture;
- (c) Animal health adviser to advise on matters related to animal health, veterinary services and animal quarantine systems and regulations;
- (d) Plant protection adviser to advise on matters related to plant protection and integrated pest management of fruits and vegetables, and on plant quarantine systems and regulations.

Technical advice on other issues could also be sought from Palestinian consultants and specialists.

### 3. *Formation of an ad hoc agricultural planning and coordination advisory committee*

Until the final organizational structures of the Palestinian public agricultural institutions—including principally the Ministry of Agriculture and the Agricultural Council—are formally approved, until these institutions become operational, and in order to assist the Minister of Agriculture in formulating agricultural development plans and policies and in coordinating the activities of the existing Palestinian public and private agricultural institutions operating in the Self-Rule Areas, it is proposed to establish during this transitional period an ad hoc agricultural planning and coordination advisory committee.

The proposed composition of this committee is as follows:

- ◆ The Minister of Agriculture (Chairman)
- ◆ Director of the Minister's office (Secretary)
- ◆ The four technical advisers to the Minister
- ◆ The official responsible for agriculture in the Palestinian Economic Council for Development and Reconstruction (PECDAR)
- ◆ Senior representatives of the Palestinian Ministries or Authorities responsible for planning and international relations; economy and international trade; finance; water; environment; coordination with Israel; and regional cooperation
- ◆ Director of the Department of Agriculture in Jericho
- ◆ Director of the Department of Agriculture in the Gaza Strip
- ◆ Representatives of the agricultural NGOs operating in the Self-Rule Areas, including agricultural cooperatives, farmers' unions and local voluntary organizations
- ◆ Dean of the Faculty of Agriculture, Al-Azhar University in Gaza

The proposed terms of reference of this committee should include the following:

- (a) Propose the agricultural development objectives in the Self-Rule Areas and the strategies and plans for their achievement;
- (b) Suggest policies for production, marketing, trade and pricing of agricultural produce, evaluate the impact of these policies, and recommend necessary adjustments as needed;
- (c) Study and analyse specific agricultural problems and recommend appropriate policies and measures;
- (d) Coordinate the activities between the agricultural public and private organizations operating in the Self-Rule Areas.

#### B. AT THE OPERATIONAL LEVEL

##### 1. *Maintaining the existing public agricultural institutions, strengthening their capabilities and improving their efficiency*

In order to avoid any interruption in the provision of basic services to the farmers in the Self-Rule Areas, the following arrangements are suggested:

(a) Maintain the existing Department of Agriculture in Jericho and the Department of Agriculture in the Gaza Strip with their present administrative structures, and retain the staff actually working in the two Departments.

(b) Strengthening the capabilities and improving the efficiency of the two Departments. This would require the following action:

- (i) Filling essential vacant technical and managerial posts, in particular the posts of extension officers/agents, veterinary officers/assistants and plant protection officers;
- (ii) Identifying the urgent training/retraining needs of the technical and managerial staff working in the two Departments, as well as of the newly appointed staff. In this regard, priority should be given at this stage to short, practical training programmes. The training institutions, both local and foreign, should be identified and arrangements should be made to implement the training programmes;
- (iii) Equipping the two Departments with the necessary physical facilities, including office equipment, field equipment, laboratory equipment and vehicles;
- (iv) Reviewing and simplifying existing administrative regulations and procedures, with a view to improving the methods of intervention of the two Departments in order to quickly and efficiently provide the needed services to farmers.

2. *Establishment of veterinary and plant quarantine stations in Jericho and the Gaza Strip and providing them with the necessary technical staff, laboratories and physical facilities.* This action should be considered top priority in view of the agreement concluded between Israel and the Palestinian Authority concerning arrangements for the movement and trade of agricultural produce and animal products between Israel and the Palestinian Self-Rule Areas (the Gaza Strip and the Jericho Area).

3. *Assessment of the requirements for rehabilitating and reactivating the agricultural research station at Beit Hanoun (Gaza Strip)*, in terms of staff, equipment and physical facilities, including cost estimates.
4. *Assessment of the requirements for the development and upgrading of the Beit Hanoun Agricultural School in the Gaza Strip*, in terms of professional staff and physical facilities, including cost estimates.

The proposed organizational structure of the Palestinian public agricultural institutions in the Self-Rule Areas during Phase I is shown in figure I.

## **PHASE II: INTERMEDIATE ACTIONS AND ARRANGEMENTS FOR SELF-RULE AREAS AND FOR THE REST OF THE WEST BANK**

*(12 months: July 1995 to June 1996)*

During Phase II (July 1995 to June 1996), the following developments are expected to take place regarding the tasks and responsibilities of the Palestinian public agricultural institutions in the Self-Rule Areas (the Ministry of Agriculture and its two Departments in Jericho and the Gaza Strip), as well as those which are at present under the supervision of the Israeli Civil Administration in the West Bank (the Department of Agriculture and its regional offices in Nablus, Jenin, Tulkarm, Ramallah/Bethlehem and Hebron and the Department of Veterinary Services and its regional offices in Nablus, Qalqilyah, Jenin, Tulkarm, Salfet, Jericho, Ramallah, Bethlehem and Hebron):

- (a) Expansion of the technical and administrative functions of the Palestinian Ministry of Agriculture in the Self-Rule Areas;
- (b) More coordination, collaboration and gradual integration between the Palestinian Ministry of Agriculture and the Department of Agriculture and the Department of Veterinary Services in the West Bank;
- (c) More coordination and collaboration, at both the bilateral and regional levels, between the Palestinian Ministry of Agriculture and the official agricultural institutions in the neighbouring countries (Egypt, Israel, Jordan, Lebanon and the Syrian Arab Republic);
- (d) Expansion of the capital and technical assistance provided by the multilateral and bilateral donors to the agricultural sector in all the Palestinian territories.

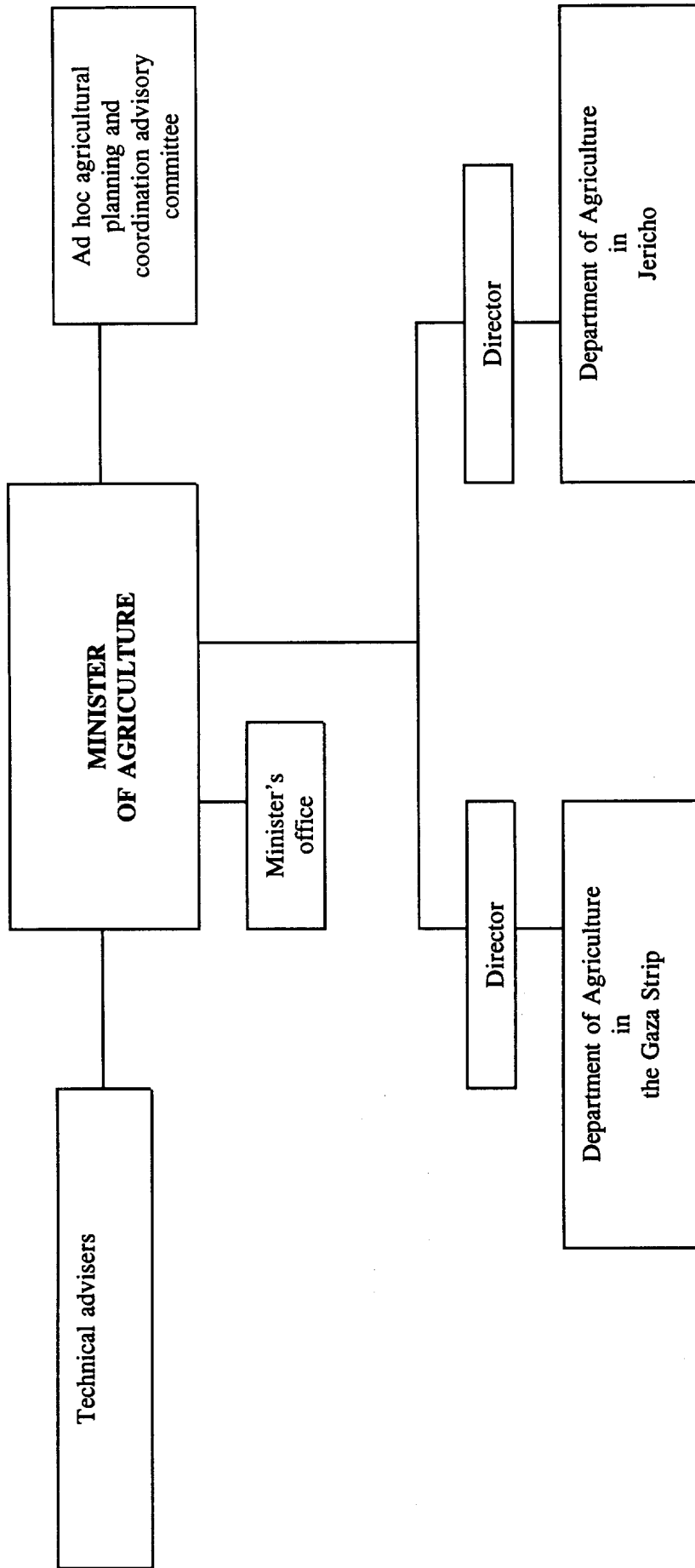
In view of the important developments which are expected to occur during Phase II, appropriate actions and arrangements are proposed for implementation during this Phase, at both the policy- and decision-making level and at the operational level, with regard to:

- (a) The Palestinian public agricultural institutions in the Self-Rule Areas;
- (b) The Department of Agriculture and the Department of Veterinary Services in the West Bank.

### **SELF-RULE AREAS**

The following actions and arrangements are proposed for implementation during Phase II (July 1995 to June 1996) with regard to the Palestinian public agricultural institutions in the Self-Rule Areas (Jericho and the Gaza Strip).

Figure I. Proposed organizational structure of the Palestinian public agricultural institutions in the Self-Rule Areas in Jericho and the Gaza Strip during Phase I



## A. AT THE POLICY- AND DECISION-MAKING LEVEL

The following actions and arrangements are proposed:

### 1. *Appointment of a senior assistant<sup>26</sup> to the Minister of Agriculture*

A senior assistant to the Minister should be appointed in order to assist the Minister of Agriculture in carrying out his tasks and responsibilities, which are anticipated to expand during Phase II.

This senior assistant should be selected from among the Palestinian civil servants working in the agricultural sector, and should have managerial capabilities and competence.

The duties of the senior assistant to the Minister of Agriculture should include the following:

- (a) Assisting the Minister in guiding, coordinating and supervising the various technical and operational activities of the Ministry of Agriculture and its directorates and departments;
- (b) Acting as secretary to the ad hoc agricultural planning and coordination advisory committee.

### 2. *Conversion of the technical and executive office of the Minister of Agriculture into two directorates*

In view of the technical and operational (financial and administrative) tasks and functions of the Palestinian Ministry of Agriculture, which are expected to increase and expand both in nature and volume during Phase II, it is proposed to convert the technical and executive office of the Minister of Agriculture into two directorates:

A directorate of agricultural affairs;  
A directorate of financial and administrative affairs

The proposed tasks and essential professional staff of the two directorates include:

#### (a) The directorate of agricultural affairs

The directorate of agricultural affairs will replace the technical section of the Minister's office which was proposed to be established during Phase I. The new directorate will assume the tasks and absorb the staff of the technical section, but with additional duties and additional technical staff in order to cope with the tasks and responsibilities of the Palestinian Ministry of Agriculture, which are expected to increase and expand in nature and in volume during Phase II, which is suggested to start in July 1995 and end in June 1996.

#### (i) Tasks of the directorate

Considering the nature and volume of the technical tasks and responsibilities which the Ministry of Agriculture should assume during the transitional Phase II, it is suggested that the tasks of the directorate of agricultural affairs include the following:

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<sup>26</sup> The title of this post should be consistent with the Palestinian Civil Service System and the formal administrative organization of the Palestinian Government. The title could be one of the following: Secretary-General, Under-Secretary or Director-General.

(a) In collaboration with the Directors of the Departments of Agriculture in Jericho and the Gaza Strip, prepare the annual work plans and programmes of these two Departments;

(b) Provide technical guidance and backstopping to the two Departments to improve their efficiency in providing technical services;

(c) Coordinate and monitor the activities of the two Departments, and strengthen the collaboration between them in common technical matters;

(d) Streamline the methods of operation of the two Departments. This task is very important in the light of the fact that while the Department of Agriculture in Jericho follows the Jordanian administrative system and regulations, the Department of Agriculture in the Gaza Strip still follows the Egyptian administrative system and regulations;

(e) Collect, compile and analyse all available statistical data on agriculture in the Self-Rule Areas, as well as in the rest of the West Bank;

(f) Collect information and data on the existing Palestinian agricultural marketing organizations—cooperatives, companies and associations—as well as on the foreign markets for Palestinian agricultural produce and the sources of supply for the various agricultural inputs;

(g) Collect information and data on the existing agricultural credit institutions: their sources of finance, lending operations and rate of repayment, as well as other relevant information that would be needed to organize agricultural credit services throughout the whole West Bank and Gaza Strip in Phase III;

(h) Analyse and assess the technical and economic feasibility of all agricultural development projects which multilateral and bilateral donors would be requested to fund;

(i) Collect data on the present situation of the existing public and private agricultural research institutions and stations throughout the Palestinian territories;

(j) Monitor the implementation of the recommendations of the proposed ad hoc agricultural planning and coordination advisory committee;

(k) Prepare for the Minister of Agriculture technical reports and studies on matters related to agriculture in the Palestinian territories.

(ii) Staffing of the directorate

In view of the expanded tasks and duties, some additional technical officers should be added to the proposed staff of the technical section.

The proposed staffing of the directorate of agricultural affairs is as follows:

- ◆ Director<sup>27</sup>
- ◆ Agricultural economics officer

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<sup>27</sup> The chief of the technical section could be considered to fill this post, on the basis of educational qualifications and work experience.



- ◆ Project analysis officer (new post)
- ◆ Agricultural marketing officer (new post)
- ◆ Agricultural statistics officer (new post)
- ◆ Agricultural research officer (new post)
- ◆ Agricultural extension officer
- ◆ Plant production officer
- ◆ Plant protection officer
- ◆ Animal production officer
- ◆ Animal health officer
- ◆ Forestry/afforestation officer (new post)
- ◆ Irrigation officer (new post)
- ◆ Fisheries extension/training officer (new post)

The technical officers should be highly qualified with extensive practical experience as they may be considered to fill senior positions in the Palestinian Ministry of Agriculture, whose complete organizational structure will be established during Phase III.

(b) The directorate of financial and administrative affairs

The directorate of financial and administrative affairs will replace the executive section of the Minister's office which was proposed to be established during Phase I. The new directorate will assume most of the tasks and absorb most of the staff of the executive section, but with additional duties and additional staff in order to cope with the tasks and responsibilities of the Palestinian Ministry of Agriculture, which are expected to increase during Phase II (July 1995 to June 1996).

(i) Tasks of the directorate

In view of the nature and volume of the financial and administrative functions which the Ministry of Agriculture is expected to perform during the transitional Phase II, it is suggested that the tasks of the directorate of financial and administrative affairs include the following:

- (a) Prepare the annual budgets of the Ministry of Agriculture and the Departments of Agriculture in Jericho and the Gaza Strip; monitor and supervise their expenditures; and prepare reports on the financial situation of the Ministry;
- (b) Procure, within certain financial levels, the equipment and supplies needed for the Ministry of Agriculture;
- (c) Organize all the personnel matters of the Ministry and of the two Departments including recruitment, employment records and social security;
- (d) Identify the training needs of the staff of the Ministry and of the two Departments; participate in the preparation of training programmes and arrange for their implementation;
- (e) Organize the Ministry's documentation and filing systems and the secretarial and clerical work;
- (f) Arrange for the maintenance of the Ministry's premises and for the maintenance and repair of its equipment and vehicles;
- (g) Organize the Ministry's relations with the foreign countries;

(h) Carry out liaison between the Ministry and the Israeli authorities, including the Israeli Civil Administration in the West Bank, which supervises the Department of Agriculture and the Department of Veterinary Services in the West Bank;

(i) Coordinate and monitor the activities of the agricultural NGOs operating in the Self-Rule Areas.

(ii) Staffing of the Directorate

In view of the tasks of the directorate of financial and administrative affairs, it is proposed that its staff consist of the following officers:

- ◆ Director<sup>28</sup>
- ◆ Budget/finance officer
- ◆ Procurement/contracts officer (new post)
- ◆ Personnel officer
- ◆ Training officer (new post)
- ◆ Administrative officer
- ◆ External relations officer
- ◆ Liaison officer with Israel and the West Bank (new post)

The above-mentioned officers should be highly qualified with extensive practical experience as they may be considered to fill senior positions in the Palestinian Ministry of Agriculture whose complete organizational structure will be established during Phase III.

Since the technical and executive office of the Ministry of Agriculture will disappear as a result of the establishment of the two directorates, it is proposed to maintain a small private office for the Minister.

The Minister's private office will be responsible for:

- (a) Organizing the Minister's appointments and meetings;
- (b) Organizing the Minister's incoming and outgoing correspondence;
- (c) Arranging for the preparation of statements, reports and other information for the press and the mass media.

The staff of the Minister's private office should consist of:

- ◆ Private secretary
- ◆ Other secretaries
- ◆ A public relations clerk
- ◆ Clerical staff

## B. AT THE OPERATIONAL LEVEL

The following action is proposed for implementation during Phase II (July 1995 to June 1996):

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<sup>28</sup> The chief of the executive section could be considered to fill this post on the basis of educational qualifications and work experience.

1. *Further strengthening the capabilities and improving the efficiency of the Departments of Agriculture in Jericho and the Gaza Strip*

During Phase I a number of actions were suggested for strengthening the capabilities and improving the efficiency of the Departments of Agriculture in Jericho and in the Gaza Strip. This task should also continue during Phase II in view of the fact that the activities of the two Departments will increase and expand—both in nature and in volume—principally as a result of the establishment of veterinary and plant quarantine stations and the rehabilitation and reactivation of the agricultural research stations in the two areas.

In order to further strengthen the capabilities and improve the efficiency of the two Departments, the following actions are proposed during Phase II:

(a) Selection and recruitment of technical and administrative staff required for the two Departments. The number of the new staff members to be recruited should be determined by the actual needs for the proper functioning of the two Departments. Consideration in this regard should be given to filling established posts that may become vacant during Phase II and to establish new posts required for the operation of the agricultural research station at Beit Hanoun and the veterinary and plant quarantine stations;

(b) Training of all technical staff in the two Departments at appropriate training institutions. Priority at this stage should be given to practical and short-term training programmes. The training needs should be carefully identified, and training programmes should be designed specifically to meet these needs;

(c) Equipping the two Departments with the necessary physical facilities and equipment;

(d) Ensuring more effective coordination and collaboration between the two Departments, especially in technical matters. This should include exchange of information and expertise;

(e) Streamlining the methods of operation and intervention of the two Departments, in view of the fact that the two Departments still follow and apply different administrative systems and regulations inherited from the previous Jordanian administration of Jericho and the Egyptian administration of the Gaza Strip.

2. *Establishment of a regional veterinary laboratory for the Gaza Strip*<sup>29</sup>

In view of the fact that the Gaza Strip is geographically separated from the Jericho Area and the rest of the West Bank by the State of Israel, and in order to ensure effective prevention and control of livestock and poultry diseases in the Strip, it is proposed to establish a regional veterinary laboratory for the Gaza Strip to be located in the town of Gaza.

The regional veterinary laboratory for the Gaza Strip should carry out its activities in close collaboration with the animal disease investigation centre (ADIC), which is proposed to be established to serve the whole of the Palestinian territories, and which is suggested to be located in the town of Ramallah in the West Bank.

The regional veterinary laboratory will consist of 4 units as follows:

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<sup>29</sup> The establishment of a regional veterinary laboratory for the Gaza Strip was proposed by the ESCWA/FAO Animal Health Assessment/Project Identification and Formulation Mission to the Palestinian Territories (18 June to 1 July 1994). Details of the proposal are contained in "Rehabilitation of veterinary services in the Palestinian territories" (E/ESCWA/AGR/1994/9).

- (a) Gross pathology, for blood-smear and sample processing;
- (b) Avian diseases, including three subunits for autopsy and a laboratory for each of microbiology and parasitology;
- (c) Seriology of viral diseases;
- (d) Rabies diagnosis.

The essential technical staff of the laboratory should consist of :

- ◆ Two veterinarians (one of them a specialist in avian diseases)
- ◆ Four technicians

The regional laboratory should perform the following activities:

- (a) Diagnosis, surveillance and monitoring of notifiable contagious diseases in livestock and poultry;
- (b) Epidemiological surveys;
- (c) Evaluation of animal disease control measures;
- (d) Responding to individual requests for diagnosis, of animal and animal products for import/export purposes.

The regional laboratory should be equipped with all the necessary equipment to perform the above activities.

It is suggested to give priority to initiating the implementation of the following actions during this Phase:

- (a) Selection of the general area and the site;
- (b) Preparation of design of buildings;
- (c) Preparation of tender documents for the construction of the buildings;
- (d) Selection of the required technical staff (the two veterinarians and the four technicians);
- (e) Identification of the training institutions for the training of the technical staff;
- (f) Identification of alternative suppliers for the required equipment.

Should it be possible to implement all the above actions during Phase II, and should the required funds for the establishment of the regional veterinary laboratory be available, it would be necessary to proceed further, to begin implementing the following:

- (a) Select contractor and award contract. Start construction of the buildings;
- (b) Purchase the required equipment and vehicles;
- (c) Recruit the technical staff and send them for training.

3. *Rehabilitation and reactivation of the Agricultural Research Station at Beit Hanoun (Gaza Strip)*

It was proposed earlier, during Phase I, to undertake an overall assessment of the requirements of the rehabilitation and reactivation of the Agricultural Research Station at Beit Hanoun (Gaza Strip) in terms of staff, equipment and physical facilities, including cost estimates.

The assessment, which should be carried out by the Department of Agriculture in the Gaza Strip, should be completed before the end of Phase I in June 1995. The fact that this station is endowed with adequate physical infrastructure (buildings and farm land) should make the assessment task relatively easy and achievable during Phase I.

In view of the fact that agricultural research activities in the Palestinian territories collapsed completely after 1979, essentially owing to tighter budget restrictions, there is an urgent need to rehabilitate and reactivate the agricultural research station at Beit Hanoun (Gaza Strip). The task of rehabilitation and reactivation would require the following:

- (a) Recruiting technical agricultural research staff, as most of the staff who worked in this station were either transferred or dismissed;
- (b) Arranging for the technical research staff to be trained in appropriate institutions abroad, as most of the technical staff of the Department of Agriculture in the Gaza Strip have had very little access to advanced formal training during the past two decades, presumably because of Israeli budgetary restrictions;
- (c) Restoring and improving the physical facilities of the station, including buildings and farm lands;
- (d) Providing the station with the necessary equipment and supplies required for conducting agricultural research activities;
- (e) Allocating adequate funds to the station for carrying out adaptive research activities.

Since the agro-climatic conditions in the Palestinian territories vary a great deal and determine the types of horticultural crops that are most suitable for each area, each station should specialize in conducting adaptive agricultural research on specific crops. In this regard, it is suggested that the Agricultural Research Station at Beit Hanoun (Gaza Strip) be specialized in the following horticultural crops; citrus, strawberry, asparagus and similar non-traditional horticultural cash crops.

4. *Development and upgrading of the Beit Hanoun Agricultural School in the Gaza Strip*, by providing it with the necessary professional staff and equipment and improving its physical facilities.

### **THE REST OF THE WEST BANK**

During the next four years, significant political developments are expected to occur regarding sovereignty over the occupied Palestinian territories in the rest of the West Bank. It is anticipated that the Israeli Military Administration and Civil Administration will withdraw completely from almost all of the occupied Palestinian territories in the West Bank, and that the Palestinian National Authority will extend its sovereignty over the whole of the Palestinian territories.

Taking into consideration these anticipated political developments, and in view of the fact that there will be an increasing need for more coordination and more collaboration between the Palestinian National Authority and the Israel Government and Civil Administration in the West Bank (as well as with the

Governments of Jordan and Egypt) in many fields including, of course, agriculture, a number of institutional arrangements are proposed for the rest of the West Bank during Phase II.

The purpose of the proposed institutional arrangements is to:

- (a) Ensure smooth coordination between the Israeli and Palestinian Authorities in all matters related to agriculture and to the export and import and movement of agricultural produce, animal products and agricultural inputs;
- (b) Promote effective collaboration between the two parties, particularly in controlling and combating plant and animal disease and pests through the exchange of information and expertise;
- (c) Prepare the ground for a gradual integration of the Department of Agriculture and the Department of Veterinary services in the West Bank within the formal organizational structure of the Palestinian public agricultural institutions.

The institutional arrangements proposed for the rest of the West Bank during Phase II are the following:

A. AT THE POLICY- AND DECISION-MAKING LEVEL

1. *Enlargement of the membership and territorial coverage of the ad hoc agricultural planning and coordination advisory committee*

In order to coordinate and streamline agricultural development objectives, plans and policies in all the Palestinian territories, including the Self-Rule Areas of Jericho and the Gaza Strip and the occupied territories in the West Bank, and also to ensure coordination and collaboration between the existing public agricultural institutions in these two areas, it is proposed to enlarge the membership of the ad hoc agricultural planning and coordination advisory committee and to extend its territorial coverage.

The proposed enlarged membership of this committee is as follows:

- ◆ The Minister of Agriculture (chairman)
- ◆ The Secretary-General of the Ministry of Agriculture (Secretary)
- ◆ The technical advisers to the Minister
- ◆ The official responsible for agriculture in the Palestinian Economic Council for Development and Reconstruction (PECDAR)
- ◆ Senior representatives of the Palestinian Ministries or Authorities responsible for planning and international relations; economy and international trade; finance; water; environment; coordination with Israel; and regional cooperation
- ◆ Director of the Department of Agriculture in Jericho
- ◆ Director of the Department of Agriculture in the Gaza Strip
- ◆ Director of the Department of Agriculture in the West Bank

- ◆ Director of the Department of Veterinary Services in the West Bank
- ◆ Representatives of the agricultural organizations operating in the Jericho Area, the Gaza Strip and the West Bank, including the agricultural cooperatives, farmers' unions and associations and local voluntary organizations, such as the Palestinian Agricultural Relief Committee (PARC) and Union of Agricultural Work Committees (UAWC)
- ◆ Dean of the Faculty of Agriculture, Al Azhar University in Gaza
- ◆ Dean of the Faculty of Agriculture, Al-Najah University in Nablus
- ◆ Dean of the Faculty of Agriculture, Hebron University of Hebron

The terms of reference of this committee will remain the same as proposed earlier under Phase I, but the words "Self-Rule Areas" should be replaced with "Self-Rule Areas and the Palestinian territories in the West Bank":

#### B. AT THE OPERATIONAL LEVEL

In order to prepare the ground for a gradual integration of the Department of Agriculture and the Department of Veterinary Services in the West Bank within the formal organizational structure of the Palestinian public agricultural institutions, the following actions are proposed:

##### 1. *Assessment of the present situation of the Department of Agriculture and the Department of Veterinary Services in the West Bank*<sup>30</sup>

The purpose of the assessment would be to:

(a) Survey the number of the technical and administrative staff actually working in the two Departments and collect information on their educational qualifications, training and employment records with the aim of:

- (i) Determining the adequacy of the number of the existing staff and the need to appoint additional staff and establish new posts;
- (ii) Identifying the training/retraining needs of the technical staff.

(b) Assess the physical facilities of the two Departments, including premises/offices, equipment, laboratories, office equipment and furniture and vehicles in order to determine the needs for restoration/improvement and repair or replacement of these facilities.

The assessment should include an accurate estimation of the costs which would result from the establishment of new staff posts, the restoration/improvement of the premises and the repair or replacement of equipment, furniture and vehicles.

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<sup>30</sup> This assessment will cover the headquarters of the two Departments in Nablus as well as their regional offices in the different provinces/districts.

## 2. *Assessment of the agricultural research stations and the agricultural education institutes in the West Bank*

There are at present 11 agricultural experimental stations in the Palestinian territories: 1 in Jericho, 1 in the Gaza Strip, and 9 in the occupied West Bank, of which 3 were established after the occupation in June 1967.<sup>31</sup> These stations are the following:

- ◆ Jericho: Jericho<sup>32</sup>
- ◆ Gaza Strip: Beit Hanoun
- ◆ West Bank: Fari'ah, Askar, Tulkarm, Qabatiah, Nur Shams, Beiteen, al-Arub, El-Bireh and Beit Qad

These stations have buildings and experimental farms, and in the past, all were used for adaptive research. Until 1974, the stations were fairly active in conducting experiments. However, since 1976 there has been a drastic reduction in adaptive agricultural research owing to tighter budgetary restrictions. All research/experimental stations, with the exception of those at Jericho and al-Arub, were turned over to commercial production and most of the technical staff were either transferred or dismissed.

At present, no adaptive agricultural research takes place in the Palestinian territories.

Since more intensive research should be targeted to solving production problems, some of the existing stations should be rehabilitated and reactivated, and this requires an in-depth assessment of the present situation of these stations with a view to identifying the requirements for their rehabilitation in terms of technical staff and physical facilities, including buildings, farm lands and equipment.

However, before any action is taken to rehabilitate the agricultural research stations, the Palestinian Authority should decide on the following:

- (a) The need for and feasibility of having 11 agricultural research stations in the Palestinian territories;
- (b) The need to have each station specialize in specific agricultural crops best suited to the area of the station.

Similarly, an in-depth assessment should also be made of agricultural education and training institutes, namely, the Khadoury Agricultural Institute in Tulkarm, and al-Arub Agricultural School in Hebron. Following occupation, the situation at Khadoury and al-Arub has deteriorated still further and there is an urgent need for their rehabilitation and reactivation.

The need for operating all the faculties of agriculture will also have to be assessed. It may be recommended to keep one single faculty of agriculture. Al-Najah University, which is located in the middle of the most important agricultural areas in Palestine and which is close to the three research stations of Beit Gad, Tulkarm and Fari'ah, may be the best choice in case such a decision is reached.

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<sup>31</sup> "Rehabilitation of the agricultural sector in the occupied Palestinian territories", p. 19.

<sup>32</sup> The Mission does not see the possibility of reactivating the experimental station in Jericho. This station is located in the town centre and is surrounded by buildings and it would therefore be difficult to continue using it as such. The Fari'ah station in the northern part of the Jordan Valley would be a better choice as a research station for the whole Jordan Valley area. The future of the Jericho station should be decided upon by the Palestinian authorities.



### 3. *Establishment of an animal disease investigation centre (ADIC) and two field veterinary units*<sup>33</sup>

In order to ensure effective prevention and control of livestock and poultry diseases in the Palestinian territories it is proposed to establish an animal disease investigation centre (ADIC) to be located in the central area of the West Bank near the town of Ramallah.

The ADIC will consist of five technical sections in addition to the administrative department. The five technical sections are:

- (a) Bacteriology, with three units to be functional from the beginning:  
General bacteriology and mycology  
Bacterial zoonotic diseases  
Serology of bacterial diseases
- (b) Virology, with three units:  
Serology of viral diseases  
Virus isolation and identification (cell cultures)  
Control of vaccines of viral origin
- (c) Parasitology, with two units:  
Helminthology  
Protozoology and entomology
- (d) Pathology, to consist of:  
Laboratory for histology  
Laboratory for toxicology  
Laboratory for rabies diagnosis, with a small space for housing animals  
Room for sample reception and dispatch  
A separate building for autopsy including a cold room and an incinerator room
- (e) Avian diseases, with three units:  
Autopsy room  
Laboratory for microbiology and parasitology  
Laboratory for serology

ADIC should be provided with the necessary technical staff and equipped with all the necessary equipment and supplies to perform the following activities:

- (a) Diagnosis, surveillance and monitoring of notifiable contagious diseases in livestock and poultry;
- (b) Epidemiological surveys;
- (c) Evaluation of animal diseases control measures;

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<sup>33</sup> The establishment of an animal disease investigation centre was proposed by the joint FAO/ESCWA mission on the rehabilitation of the agricultural sector in the occupied Palestinian territories (February/March 1993) (E/ESCWA/AGR/1993/9). The project proposal was reformulated by the ESCWA/FAO Animal Health Assessment/Project Identification and Formulation Mission to the Palestinian territories (June/July 1994). Details of the proposal are contained in "Rehabilitation of veterinary services in Palestinian territories".

- (d) Responding to individual requests for diagnosis of animals and animal products for import/export purposes;
- (e) Conducting applied field research.

In addition to ADIC, it is also proposed to establish two field laboratory units, one to be located in Nablus where there is a concentration of dairy animals, and the other to be located in Hebron, with a large population of sheep and goats.

The two field laboratory units will be attached to the district veterinary offices, and each of them will consist of two sections:

- ◆ Post-mortem examination and sample processing
- ◆ Serology

The requirements of ADIC and the two field laboratory units for space, technical staff and equipment will be outlined in detail in a separate project document being prepared by the ESCWA/FAO animal health mission to the Palestinian territories.

#### *4. Assessment of the agricultural credit system and institutions*

An in-depth analysis to investigate the present state of the agricultural credit system and institutions should be carried out in order to make recommendations for and plan for a rural and financial system/institution that would provide loans to producers to enable them to increase and improve their production. The Agricultural Division in ESCWA and the Division of the Near East and North Africa in the International Fund for Agriculture and development (IFAD) are considering planning to cooperate to carry out such a study in their 1994/1995 programme of work. The major issues that will be discussed include the assessment of the existing situation, the objectives and types of services that will be provided, the physical establishment, the resources and ownership, the organizational structure and staffing, the lending operations, and the phasing of implementation.

The proposed organizational structure of the Palestinian public agricultural institutions in the Self-Rule Areas (Jericho and the Gaza Strip) during Phase II is shown in figure II.

### **PHASE III: GENERAL ORGANIZATIONAL SCHEME FOR THE RESTRUCTURING OF THE PALESTINIAN PUBLIC AGRICULTURAL INSTITUTIONS** *(One year: July 1996 to June 1997)*

The proposed general organizational scheme for restructuring the Palestinian public agricultural institutions is formulated on the basis of the following assumptions.

- (a) That all the actions and arrangements proposed for implementation during Phases I and II will be completed by the end of June 1996;
- (b) That at the end of 1996 and the beginning of 1997, the Palestinian National Authority will have sovereignty over all the Palestinian territories, including in addition to the Self-Rule Areas the rest of the presently occupied territories in the West Bank.

The proposed general organizational scheme consists of the following public institutions concerned with agriculture:

#### **AT THE POLICY- AND DECISION-MAKING LEVEL**

##### **A. ESTABLISHMENT OF A PALESTINIAN AGRICULTURAL COUNCIL**

In order to assist the Palestinian Ministry of Agriculture in formulating agricultural development objectives, plans and policies and in coordinating the activities of all the Palestinian public and private agricultural institutions and organizations operating in all the Palestinian territories, it is proposed to establish a Palestinian agricultural council.

The Palestinian agricultural council will replace the ad hoc agricultural planning and coordination advisory committee.

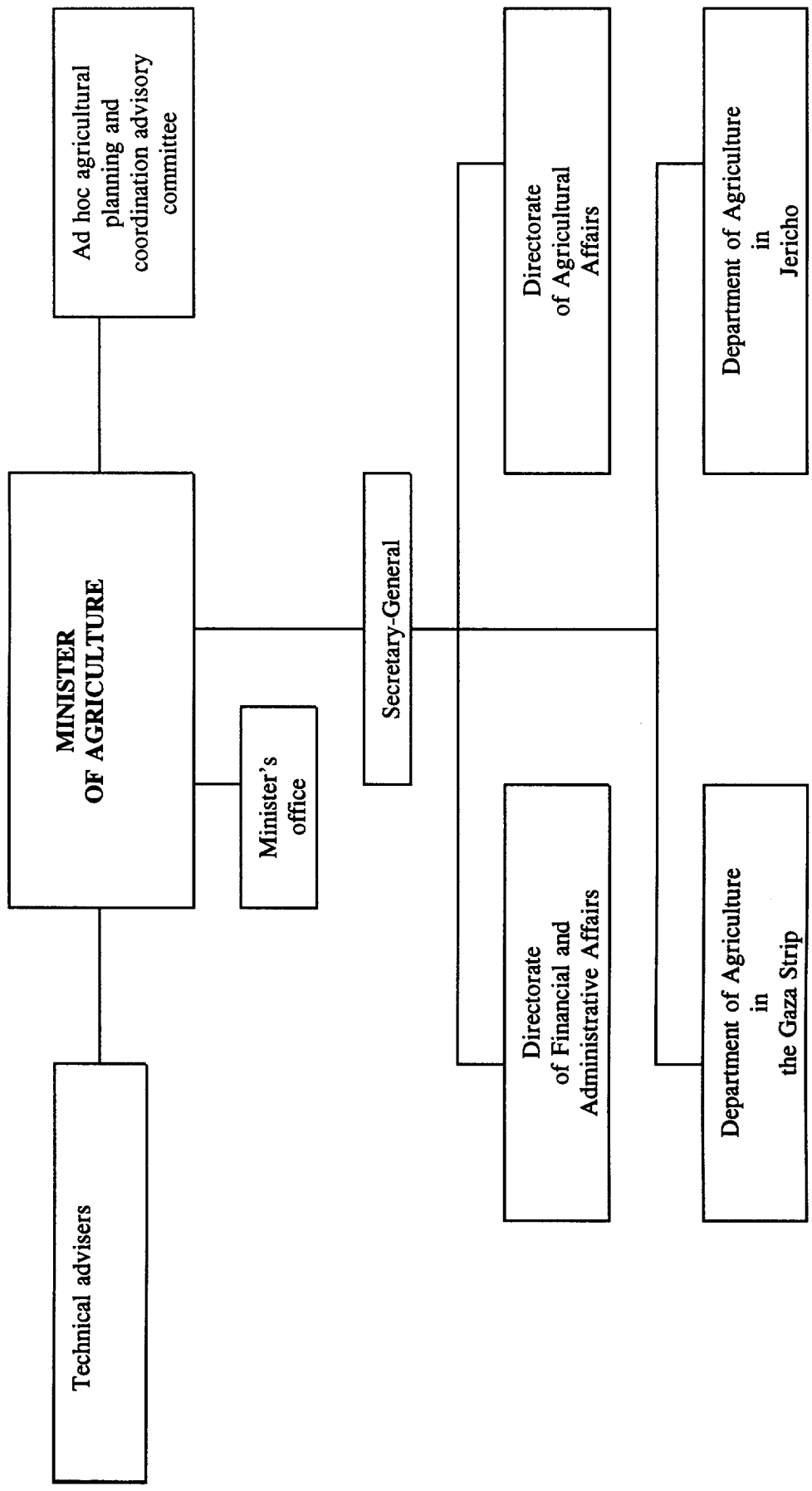
The proposed composition of this council (15 members) is as follows:

- ◆ The Minister of Agriculture (chairman)
- ◆ The Under-Secretary of the Ministry of Agriculture (deputy chairman)
- ◆ The Under-Secretaries of the Palestinian Ministries of: Planning and International Cooperation; Economy, Trade and Industry; and Finance.
- ◆ Senior representatives of Palestinian authorities concerned with environment and with water and irrigation
- ◆ The official responsible for Agriculture in the Palestinian Economic Council for Development and Reconstruction (PECDAR)
- ◆ The Director-General of the proposed Palestinian institute for agricultural research and transfer of technology (PIARTT)
- ◆ The Dean of one of the faculties of agriculture, to be nominated by the Minister of Agriculture
- ◆ Senior representatives of the Palestinian Agricultural Credit Institution and the agricultural cooperatives, to be nominated by the heads of these organizations
- ◆ Three members from the private sector selected from among recognized and active persons in the fields of fresh fruit and vegetables exports, food and agricultural industries, animal husbandry and floriculture and in the production of or trade in agricultural inputs (seeds, seedlings, fertilizers, etc.) to be nominated by the Minister of Agriculture and to serve for a period of three years.

The chairman will have the right to invite specialists to attend the meeting when their experience may enrich the debate on the issue it is considering, without his having the right to vote.

It is proposed that the Director-General of agricultural economics, coordination and external relations at the Ministry of Agriculture serve as secretary of the council.

**Figure II. Proposed organizational structure of the Palestinian public agricultural institutions in the Self-Rule Areas (Jericho and the Gaza Strip) during Phase II**



The terms of reference of the Palestinian agricultural council should include the following:

- (a) Propose the agricultural development objectives for the Palestinian territories in the West Bank and Gaza Strip and the overall strategies and plans for their implementation;
- (b) Study and recommend for the Cabinet of Ministers medium- and long-term plans for agricultural development;
- (c) Suggest policies necessary to achieve the goals and objectives of agricultural development plans, evaluate the impact of these policies and recommend necessary adjustments as needed;
- (d) Arrange for monitoring the implementation of agricultural development plans and for carrying out an annual evaluation of achievements;
- (e) Study and propose modalities of policy formulation and coordination among government agencies involved in the preparation and implementation of agricultural and rural development programmes and projects;
- (f) Study and analyse specific agricultural issues that need urgent action, and recommend appropriate measures and solutions;
- (g) Study proposed laws and by-laws that would have a direct or indirect impact on the agricultural sector and recommend necessary adjustments;
- (h) Review, analyse and propose necessary action on issues submitted to the council by the Cabinet of Ministers for comments or action.

It is proposed that the agricultural council meet at least every quarter, or whenever the need arises, at the invitation of the chairman or his deputy in his absence.

#### B. OVERALL STRUCTURING OF THE MINISTRY OF AGRICULTURE

When the Palestinian National Authority extends its sovereignty over all the Palestinian territories in the West Bank and the Gaza Strip, the Palestinian Ministry of Agriculture will become responsible for the agricultural sector in all the Palestinian territories and will be the official institution carrying out the Government's tasks and functions in this sector. At this stage, it will become necessary to formulate the overall restructure of the Ministry of Agriculture, including its tasks and functions as well as its internal organizational structure.

The proposed scheme for the overall restructuring of the Ministry of Agriculture has been formulated taking into due consideration the following factors:

- (a) The prospective role of agriculture in the Palestinian economy;
- (b) The role of the Palestinian Government in the agricultural sector;
- (c) The emphasis that should be given by the Ministry of Agriculture to:
  - (i) Planning and policy issues;
  - (ii) The provision of basic support services to farmers, including the transfer of modern agricultural production and irrigation technologies;

- (iii) The introduction of diversified cropping patterns in Palestinian agriculture;
- (d) The control and eradication of epidemic plant and animal diseases and pests;
- (e) Bilateral and regional cooperation in the trade of agricultural products;
- (f) The scientific principles of modern management and organization.

### *1. Tasks of the Ministry of Agriculture*

The Palestinian Ministry of Agriculture will have the following main tasks and duties:

- (a) Assist in increasing the volume of agricultural and food production and in improving the productivity and quality of agricultural products through:
  - (i) Increasing the cultivated area through land reclamation and improvement;
  - (ii) Promoting the application and use by farmers of modern agricultural production technologies, farming techniques and irrigation systems;
  - (iii) Promoting the use by farmers of high-yield varieties of seeds of field food and forage crops and of vegetables;
  - (iv) Introducing diversified cropping patterns aimed at import substitution and increasing the exports of non-traditional horticultural cash crops;
- (b) Provide basic support services to farmers and agricultural producers, and upgrade the technical skills of farmers through extension and training;
- (c) Collect, compile and analyse agricultural statistics and data;
- (d) Prepare and monitor the implementation of agricultural development plans and programmes;
- (e) Prepare, monitor the implementation and assess the impact of agricultural production, marketing and pricing policies;
- (f) Protect the agricultural and livestock resources by the control and eradication of plant diseases and epidemic animal diseases and pests;
- (g) Organize the economic activities of the agricultural sector, including the production, marketing, exportation, importation and trade of agricultural products and agricultural inputs;
- (h) Provide technical and economic advice and information to farmers, producers and exporters of agricultural products;
  - (i) Protect the natural environment through:
    - (i) Conserving and managing the forests and national parks;
    - (ii) Increasing the forest area by implementing afforestation programmes;
    - (iii) Combating desertification;

- (iv) Controlling the handling and use of fertilizers, pesticides, insecticides, herbicides and all other chemical products used in agriculture;
- (j) Guide, supervise, coordinate the activities of and provide support to private agricultural and rural development organizations, including agricultural cooperatives, farmers' unions and associations, town and village councils and voluntary organizations;
- (k) Organize relations with foreign countries on all matters related to agriculture;
- (l) Participate in the drawing up of agricultural research strategies and plans;
- (m) Participate in the drawing up of agricultural education and training policies;
- (n) Participate in the drawing up of an agricultural credit system and of policies and institutions concerned with agricultural credit;
- (o) Improve and modernize the laws and regulations which organize and govern the economic activities and services in the agricultural sector.

## *2. Internal organizational structure of the Ministry*

The internal organizational structure of the Palestinian Ministry of Agriculture will be formulated on the basis of the following:

- (a) The tasks, duties and functions which will be performed and carried out by the Ministry;
- (b) The overall organizational structure of the Palestinian Government;
- (c) The scientific principles of modern management and organization.

The Palestinian Ministry of Agriculture would comprise, under the authority of the Minister of Agriculture, the following: (a) the office of the Minister; (b) the Secretary-General of the Ministry; (c) the Deputy Secretary-General for the Gaza Strip; (d) five central directorates general of: agriculture; animal resources; forestry, afforestation and range; agricultural economics, coordination and external relations; administration, finance and personnel; and (e) seven regional departments, in the governorates/provinces of Gaza Strip, Jericho, Nablus, Jenin, Tulkarm, Hebron and Ramallah/Bethlehem.

### (a) Office of the Minister

The Office of the Minister would consist of a private secretary, technical advisers and a press/public relations officer and of an internal inspection and audit unit for the Ministry.

The Office of the Minister will perform the following duties:

- (a) Organize the Minister's appointments and meetings;
- (b) Organize the Minister's incoming and outgoing correspondence;
- (c) Prepare summary reports, based on the work of the central technical directorates general and the regional departments, to enable the Minister to follow developments in the agricultural sector;
- (d) Provide the Minister with advice on specific technical and legal issues;

(e) Arrange for the preparation of statements, reports and other information for the press and mass media concerning the activities of the Ministry and the agricultural sector.

(b) Secretary-General of the Ministry

The Secretary-General of the Ministry will:

(a) Be responsible for directing, coordinating and monitoring the activities of the central directorates general and the regional departments with the exception of the Department of Agriculture in the Gaza Strip;

(b) Perform any other tasks as requested by the Minister.

(c) Deputy Secretary-General for the Gaza Strip

In view of the geographical separation between the West Bank and the Gaza Strip by the State of Israel and of the particular conditions of the Strip, it is proposed to appoint a Deputy Secretary-General for the Gaza Strip. The office of this official would be in the town of Gaza; this official would represent the Minister in the Gaza Strip and be responsible for directing and monitoring the activities of the Department of Agriculture in the Strip.

(d) The central directorates general

The Ministry of Agriculture would comprise five central directorates general, as follows: the Directorate general of agriculture, the Directorate general of animal resources, the Directorate general of forestry, afforestation and range, the Directorate general of agricultural economics, coordination and external relations and the Directorate general of administration, finance and personnel.

The proposed tasks and internal organizational set-up of each directorate general are described in the following pages.

(i) Directorate general of agriculture

a. Tasks

The main task of the directorate general of agriculture will be to increase the quantity and improve the quality of agricultural plant production, including field food crops, vegetables and fruits, through:

(a) Promoting the application by farmers of modern agricultural production technologies, farming systems techniques and irrigation systems;

(b) Promoting the production and use by farmers of high-yield varieties of seeds of field food crops and vegetables and of high-quality and virus-free fruit-tree seedlings;

(c) The control and eradication of plant disease and pests;

(d) Improving the technical skills of farmers through extension and training;

(e) The reclamation and improvement of agricultural land;

(f) Promoting the efficient use of water for irrigation.



b. Internal organizational structure

It is proposed that the directorate general of agriculture consist of the following four departments: the department of plant production, the department of plant protection, the department of soil and irrigation and the department of extension and farmers' training.

The internal organizational structure of the directorate general of agriculture and of each of its four departments is shown in figure III.

i. Department of plant production

Tasks

The department of plant production will have the following tasks:

(a) Prepare technical studies for improving the productivity and quality of field food crops, vegetables, fruits and ornamental flowers;

(b) Prepare the annual plans for the production of foundation seeds of field food crops, vegetable seeds and fruit-tree seedlings. Monitor the implementation of these plans;

(c) Cooperate with the proposed Palestinian institute for Agricultural Research and transfer of technology for the production of high-yield varieties of seeds and of high-quality and virus-free fruit-tree seedlings;

(d) Organize and control the production, import and export of seeds, seedlings, rootstocks and fertilizers;

(e) Organize and control the operations of the olive presses and fruit-canning and pickling industries;

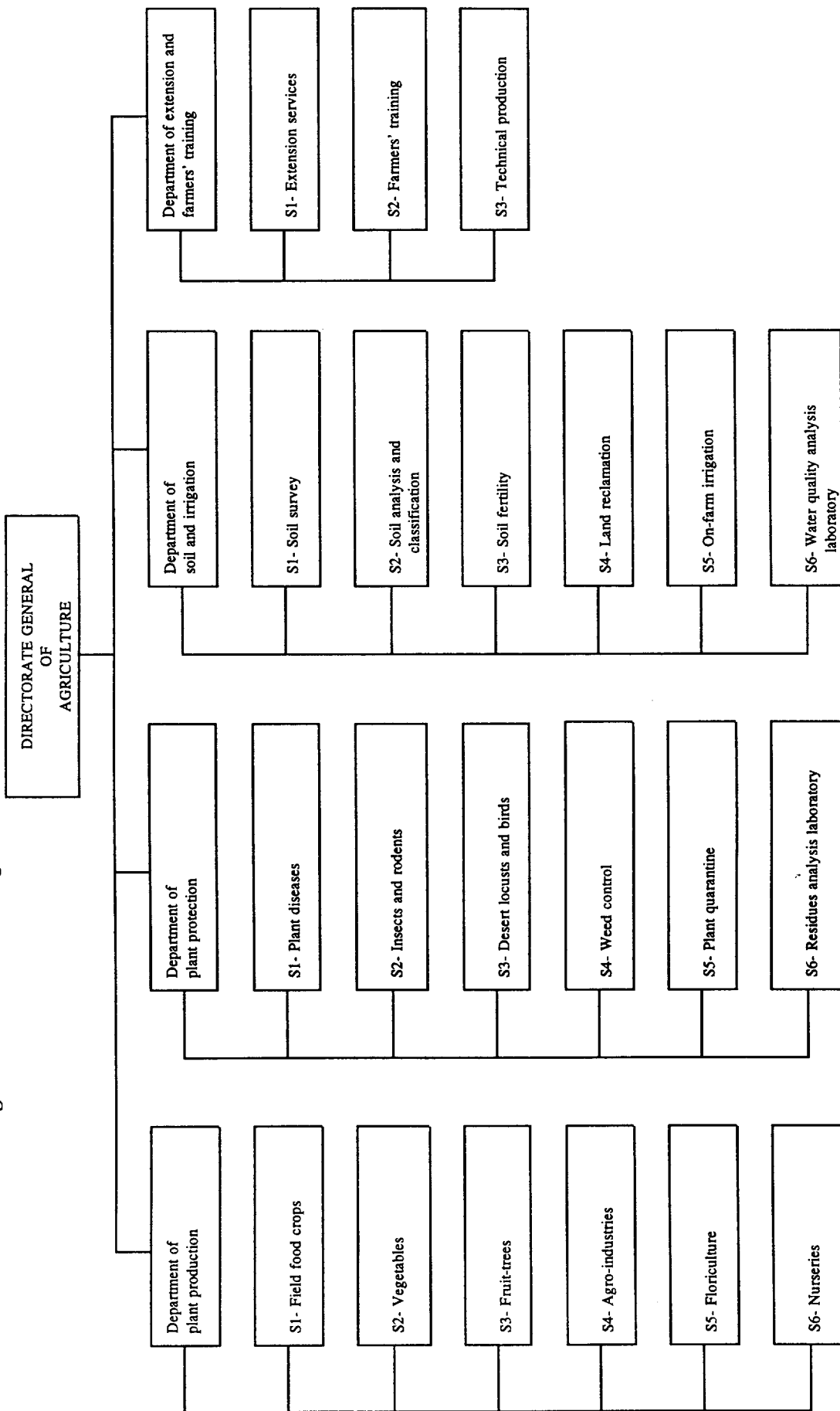
(f) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

Internal organizational structure

It is proposed that the department of plant production consist of the following six sections:

- ◆ Field food crops section
- ◆ Vegetables section
- ◆ Fruit-trees section
- ◆ Agro-industries section
- ◆ Floriculture
- ◆ Nurseries

Figure III. The internal organizational structure of the Directorate General of Agriculture



### Staffing

The technical staff of the department of plant production should consist of an adequate number of specialists having university degrees and work experience in the following agricultural disciplines:

- ◆ Cereals production
- ◆ Legume production
- ◆ Vegetable production
- ◆ Protected cultivation of vegetables
- ◆ Vegetable seed production
- ◆ Fruit production and propagation
- ◆ Agro-industries (olive oil and fruit and vegetable canning)
- ◆ Bulbs and cut flowers
- ◆ Nursery management

The number of the technical staff that should be employed in this department should depend on the importance of crops and the volume of work.

#### ii. Department of plant protection

##### Tasks

The department of plant protection will have the following tasks:

- (a) Survey and classify the known plant diseases, insects, rodents, birds and weeds;
- (b) Prepare plans and programmes for the control and eradication of plant diseases;
- (c) Organize and implement campaigns for the control and eradication of epidemic plant diseases;
- (d) Cooperate with regional and international organizations in controlling and combating the desert locust;
- (e) Organize and supervise plant quarantine stations in ports, airports and frontier areas;
- (f) Monitor the implementation of the regulations concerning the production, trade and use of pesticides, herbicides and insecticides, and analyse their residues in crops;
- (g) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

##### Internal organizational structure

It is proposed that the department of plant protection consist of the following six sections:

- ◆ Plant diseases section
- ◆ Insects and rodents section
- ◆ Desert locusts and birds section
- ◆ Weed control section

- ◆ Plant quarantine section
- ◆ Residues analysis laboratory

### Staffing

The technical staff of the department of plant protection should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Plant disease diagnosis and control
- ◆ Plant insects and rodents
- ◆ Desert locusts and migratory birds control
- ◆ Weed control
- ◆ Integrated pest management (IPM)
- ◆ Chemical analysis of pesticides, herbicides, insecticides and all other chemical products used for plant protection purposes

The number of technical staff that should be employed in this department should depend on the relative importance of plant diseases, the volume of work and the number of plant quarantine stations which would be established.

### iii. Department of soil and irrigation

#### Tasks

The department of soil and irrigation will have the following tasks:

- (a) Conduct soil survey and land classification activities, and determine the suitability of agricultural lands for crop production, range and afforestation purposes (land use planning);
- (b) Undertake technical activities for the analysis of soil chemistry and quality of water used for irrigation purposes;
- (c) Analyse the chemical composition of fertilizers and soil nutrients, and control the implementation of the regulations which govern their production, trade and use;
- (d) Advise farmers on the use of fertilizers through extension and training;
- (e) Conduct studies and experimental work to determine the water requirements of the different crops;
- (f) Evaluate the efficiency of the different systems of irrigation and advise farmers on their benefits and uses;
- (g) Collaborate with other competent government authorities in regulating and controlling the use of treated sewage water and brackish water for irrigation;
- (h) Plan, implement and supervise the implementation of land reclamation and improvement projects;

(i) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

#### Internal organizational structure

It is proposed that the department of soil and irrigation consist of the following six sections:

- ◆ Soil survey section
- ◆ Soil analysis and classification section
- ◆ Soil fertility section
- ◆ Land reclamation section
- ◆ On-farm irrigation section
- ◆ Water quality analysis laboratory

#### Staffing

The technical staff of the department of soil and irrigation should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Soil survey
- ◆ Soil analysis and classification
- ◆ Soil fertility
- ◆ Use of fertilizers and nutrients
- ◆ Land reclamation and improvement
- ◆ On-farm water management and irrigation systems
- ◆ Water quality analysis

The number of the technical staff that should be employed in this department should depend on the volume of work of each section.

#### iv. Department of extension and farmers' training

##### Tasks

The department of extension and farmers' training will have the following tasks:

- (a) Prepare and implement the Ministry's general policy and programmes for agricultural extension and farmers' training;
- (b) Transfer technical and economic information to farmers through the design and implementation of general and specialized extension programmes and campaigns;
- (c) Improve the technical skills of farmers through extension and training programmes;
- (d) Collaborate with PIARTT in solving technical problems facing agricultural production and in introducing modern agricultural production technologies and farming systems and techniques;
- (e) Collaborate and coordinate with other public and private institutions providing extension services and training to farmers;

(f) Design and produce extension messages in all forms: written, audio and audiovisual;

(g) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

#### Internal organizational structure

It is proposed that the department of extension and farmers' training consist of the following three sections:

- ◆ Extension services section
- ◆ Farmers' training section
- ◆ Technical production section

#### Staffing

The technical staff of the department of extension and farmers' training should consist of an adequate number of specialists having university degrees and work experience in the field of agricultural extension and training. The exact number should depend on the volume of work.

#### (ii) Directorate general of animal resources

##### a. Tasks

The main task of the directorate general of animal resources will be to increase the quantity and improve the quality of animal production from all sources: livestock, poultry and fish, through:

(a) Protecting animal resources from diseases and pests by planning and implementing vaccination programmes;

(b) Providing adequate veterinary services through specialized clinics and centres;

(c) Making appropriate arrangements for implementing the veterinary quarantine laws and regulations, and operate the quarantine stations in ports, airports and frontier areas;

(d) Organizing the registration of and trade in veterinary medicines and drugs;

(e) Organizing the technical aspects related to animal production and establish specifications for animal breeding and fattening farms and poultry farms;

(f) Promoting meat and milk production through the improvement of local and imported breeds of sheep, goats and cows;

(g) Organizing, in collaboration with other competent authorities, the import, export and transport of live animals, poultry and animal feed;

(h) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

b. Internal organizational structure

It is proposed that the directorate general of animal resources consist of the department of veterinary services and the department of animal production.

The internal organizational structure of this directorate general and of each of its two departments is shown in figure IV.

i. Department of veterinary services<sup>34</sup>

Tasks

The department of veterinary services will have the following tasks:

- (a) Survey and classify all common and epidemic animal diseases and pests;
- (b) Prepare and implement plans and programmes for vaccination against animal diseases and pests, including rabies;
- (c) Provide adequate veterinary services to livestock owners and poultry farms through specialized clinics and centres;
- (d) Make appropriate arrangements for implementing the veterinary quarantine laws and regulations and operate the quarantine stations in ports, airports and border areas;
- (e) Organize the registration of and trade in veterinary medicines and drugs;
- (f) Collaborate with the relevant regional and international organizations in the investigation, control and eradication of epidemic animal diseases and pests;
- (g) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

Internal organizational structure

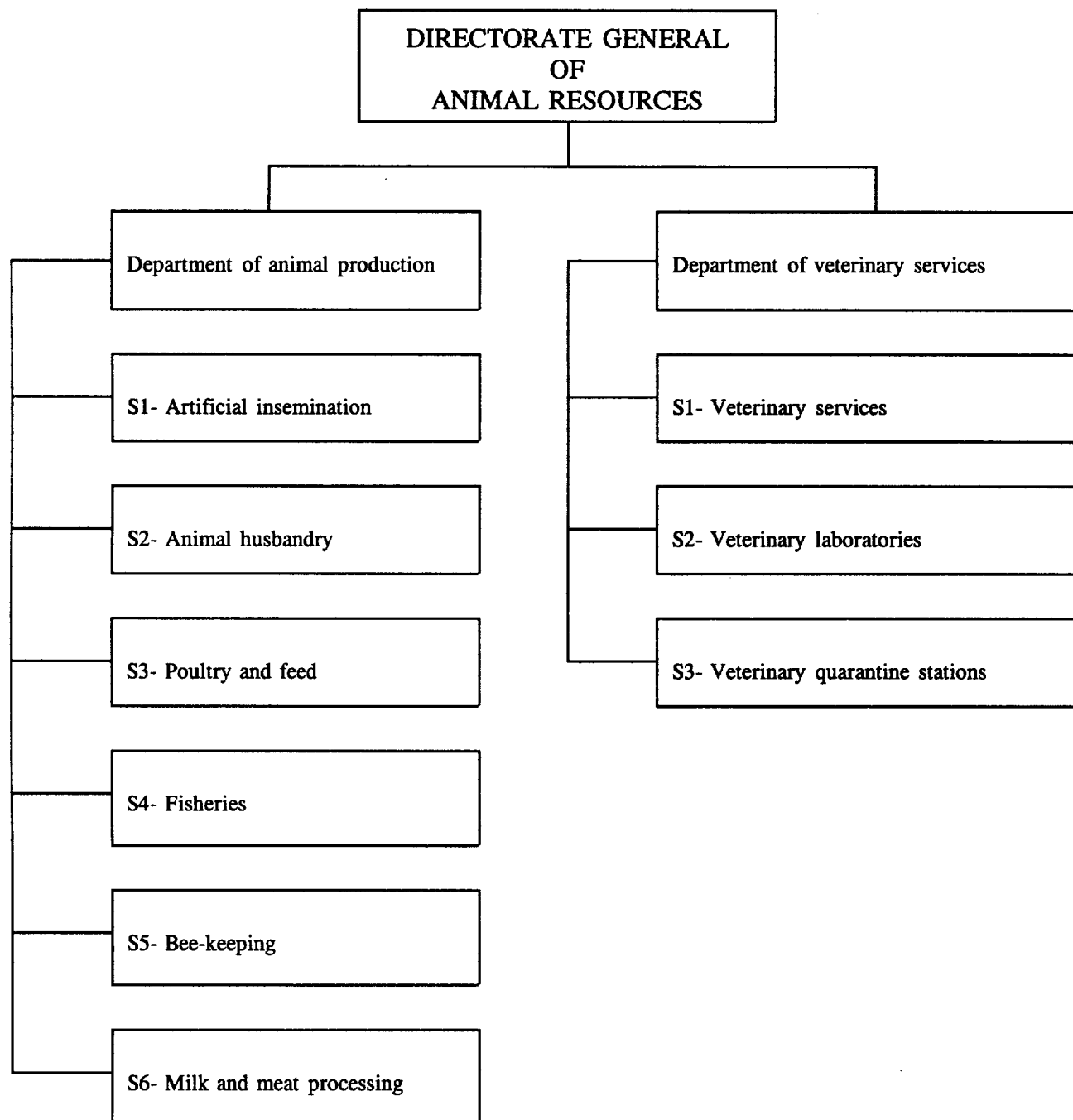
It is proposed that the department of veterinary services consist of the following three sections:

- ◆ Veterinary services section
- ◆ Veterinary laboratories section
- ◆ Veterinary quarantine stations

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<sup>34</sup> A proposed overall organizational structure of the veterinary services in the Palestinian territories will be included in the report of the ESCWA/FAO Animal Health Assessment/Project Identification and Formulation Mission, "Rehabilitation of veterinary services in the Palestinian territories" (E/ESCWA/AGR/1994/9).

**Figure IV. The internal organizational structure of the Directorate General of Animal Resources**





### Staffing

The technical staff of the department of veterinary services will consist of an adequate number of specialists having university degrees and work experience in all technical disciplines related to animal disease investigation, diagnosis, vaccination and control.

A special project proposal for strengthening veterinary services in the Palestinian territories was prepared by the ESCWA/FAO Animal Health Assessment/Project Identification and Formulation Mission which visited the Palestinian territories in June/July 1994.

#### ii. Department of animal production

##### Tasks

The department of animal production will have the following tasks:

- (a) Prepare technical studies for developing and improving the animal resources in the Palestinian territories: livestock, poultry and fisheries;
- (b) Organize the domestic animal production activities, and issue technical specifications for the establishment of animal breeding and fattening farms and poultry farms;
- (c) Promote meat and milk production through the improvement of local and imported breeds of sheep, goat and cows;
- (d) Promote the establishment of projects for bee-keeping, rabbit raising and fish farms through the provision of technical advice and information;
- (e) Organize and control the operations of milk-processing, meat canning and animal and poultry feed manufacturing enterprises;
- (f) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

#### ii. Internal organizational structure

It is proposed that the department of animal production consist of the following six sections:

- ◆ Artificial insemination section
- ◆ Animal husbandry section
- ◆ Poultry and feed section
- ◆ Fisheries section
- ◆ Bee-keeping section
- ◆ Milk and meat processing section

##### Staffing

The technical staff of the department of animal production will consist of an adequate number of specialists having university degrees and work experience in the following technical disciplines:

- ◆ Artificial insemination
- ◆ Sheep-breeding
- ◆ Goat-breeding
- ◆ Animal nutrition
- ◆ Animal feed
- ◆ Poultry production
- ◆ Bee-keeping
- ◆ Fishing technology
- ◆ Milk and meat processing

The number of the technical staff of the department of animal production should be determined on the basis of the volume of work and technical expertise required.

(iii) Directorate general of forestry, afforestation and range

a. Tasks

The main task of the directorate general of forestry, afforestation and range will be to improve the natural environment of the Palestinian territories through:

- (a) Protecting the existing forests and woodlands from all the dangers caused by man, animals and natural reasons;
- (b) Increasing the land area covered by forests through afforestation;
- (c) Improving the management of forests;
- (d) Developing the rangelands and improving their management.

b. Internal organizational structure

It is proposed that the directorate general of forestry, afforestation and range consist of the department of forestry, the department of afforestation and the department of range.

The internal organizational structure of the directorate and of each of its three departments is shown in figure V.

i. Department of forestry

Tasks

The department of forestry will have the following tasks:

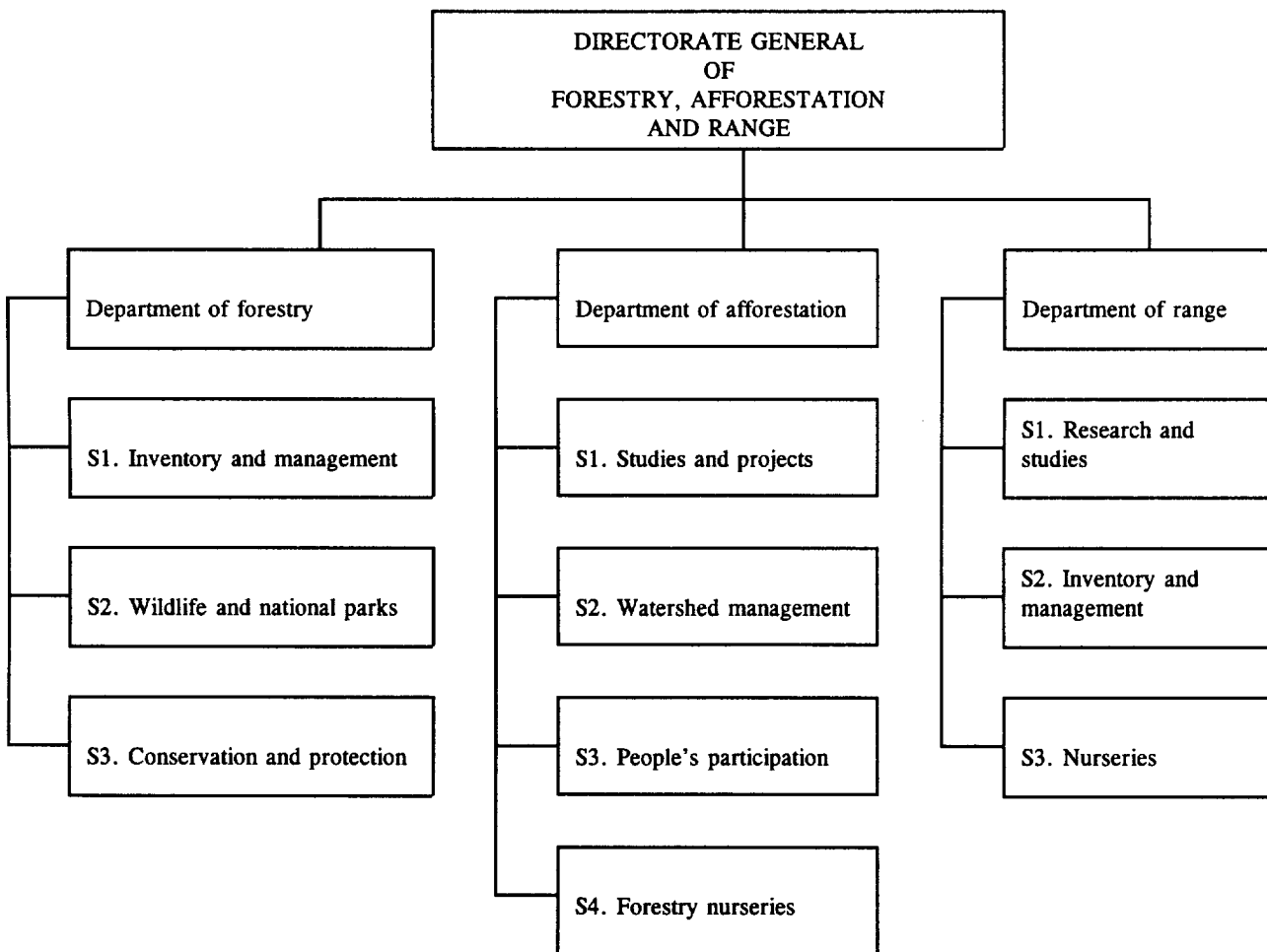
- (a) Make an inventory of all the existing natural and man-made forests, and classify the tree species;
- (b) Improve the management of forests through the preparation and implementation of proper management plans;
- (c) Prepare and implement plans and programmes for the protection of forests from all dangers caused by man, animals and natural reasons;

(d) Conserve the wildlife of the Palestinian territories and make an inventory of the existing species of wild animals;

(e) Conserve and improve the existing national parks and prepare and implement plans for the establishment of new parks;

(f) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

**Figure V. The internal organizational structure of the Directorate General of Forestry, Afforestation and Range**



Internal organizational structure

It is proposed that the department of forestry consist of the following three sections:

- ◆ Inventory and management section
- ◆ Wildlife and national parks section
- ◆ Conservation and protection section

### Staffing

The technical staff of the department of forestry should consist of an adequate number of specialists having university degrees and work experience in the technical disciplines related to forestry development and management, including:

- ◆ Forestry inventory and classification
- ◆ Silviculture production technologies
- ◆ Forestry utilization
- ◆ Forestry protection and conservation
- ◆ Forestry management
- ◆ Wildlife conservation
- ◆ National parks management and engineering

The number of the technical staff which should be employed in this department should be determined on the basis of the size and location of the existing forests and the volume of work.

#### ii. Department of afforestation

##### Tasks

The department of afforestation will have the following tasks:

- (a) Prepare studies to determine the species of forest trees which are suitable for plantation in the different agro-ecological zones of the Palestinian territories;
- (b) Prepare and implement plans and programmes for afforestation;
- (c) Prepare and monitor the implementation of plans for the production of forest tree seedlings;
- (d) Prepare and implement programmes to avoid soil erosion through afforestation;
- (e) Prepare and implement programmes to combat desert encroachment and desertification through sand-dune fixation;
- (f) Improve the harvesting and conservation of water through the implementation of adequate watershed management;
- (g) Operate and manage forestry nurseries;
- (h) Promote people's participation in the implementation of afforestation programmes;
- (i) Provide guidance and technical backstopping to the Departments of Agriculture in the provinces/districts.

##### Internal organizational structure

It is proposed that the department of afforestation consist of the following four sections:

- ◆ Studies and projects section
- ◆ Watershed management section
- ◆ People's participation section
- ◆ Forestry nurseries section

#### Staffing

The technical staff of the department of afforestation should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Silvicultural research
- ◆ Silviculture propagation
- ◆ Watershed management
- ◆ Sand-dune fixation
- ◆ Nurseries management

The number of the technical staff to be employed in this department should be determined on the basis of the volume of work.

#### iii. Department of range

##### Tasks

The department of range will have the following tasks:

- (a) Make an inventory of the existing rangeland resources in the Palestinian territories;
- (b) Prepare technical studies for improving the rangelands in the Palestinian territories;
- (c) Collect technical and socio-economic data on livestock management and feeding systems and the seasonal movement patterns of herds;
- (d) Collect data on traditional grazing rights and systems of pastoral groups;
- (e) Prepare and implement management plans for the utilization of common rangelands;
- (f) Operate and manage nurseries and herbariums for the production of seeds and shrubs.

##### Internal organizational structure

It is proposed that the department of range consist of the following three sections:

- ◆ Research and studies section
- ◆ Inventory and management section
- ◆ Nurseries section

#### Staffing

The technical staff of the department of range should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Rangeland improvement
- ◆ Rangeland management
- ◆ Range extension
- ◆ Range vegetation mapping
- ◆ Social sciences/economies
- ◆ Agricultural research
- ◆ Nurseries management

The number of technical staff which should be employed in this department should be determined on the basis of the technical activities and volume of work of the department.

(iv) Directorate general of agricultural economics, coordination and external relations

a. Tasks

The main tasks of the directorate general of agricultural economics, coordination and external relations will be to develop the agricultural sector in the Palestinian territories within the framework of the national development objectives and food security targets, through:

- (a) Proposing plans and programmes for the development of Palestinian agriculture;
- (b) Proposing policies for the production, importation, exportation and pricing of agricultural products;
- (c) Preparing and assessing the technical and economic feasibility of agricultural development projects;
- (d) Organizing relations with foreign countries for trade in agricultural products;
- (e) Monitoring the implementation of agreements related to trade in agricultural products;
- (f) Guiding, coordinating and supervising the activities of all the Palestinian NGOs working in the agricultural sector, such as the agricultural cooperatives, farmers' unions, local community councils and voluntary organizations.

b. Internal organizational structure

The directorate general of agricultural economics, coordination and external relations will consist of the department of agricultural economics, the department of coordination and supervision and the department of external relations.

The internal organizational structure of the directorate and of each of its three departments is shown in figure VI.

i. Department of agricultural economics

Tasks

The department of agricultural economics will have the following tasks:

- (a) Collect, compile, classify and analyse all statistical data related to Palestinian agriculture, including land resources, water resources, human resources, crops, animal resources, fisheries resources and forestry and rangeland resources;
- (b) Prepare studies and plans for the organization of agricultural production;
- (c) Propose plans and programmes for the development of Palestinian agriculture, and propose the necessary means for their implementation;
- (d) Propose general and specific policies for the production, importation, exportation and pricing of agricultural products, and propose the necessary means for their implementation;
- (e) Monitor the implementation of the agricultural development plans and programmes;
- (f) Monitor the implementation and analyse the effects of the agricultural policies, and propose necessary adjustments as required;
- (g) Prepare and assess the technical and economic feasibility of agricultural development projects;
- (h) Provide marketing advice and market information to the producers and traders of agricultural products.

#### Internal organizational structure

It is proposed that the department of agricultural economics consist of the following five sections:

- ◆ Statistics section
- ◆ Planning and policies section
- ◆ Project analysis section
- ◆ Marketing services section
- ◆ Monitoring and evaluation section

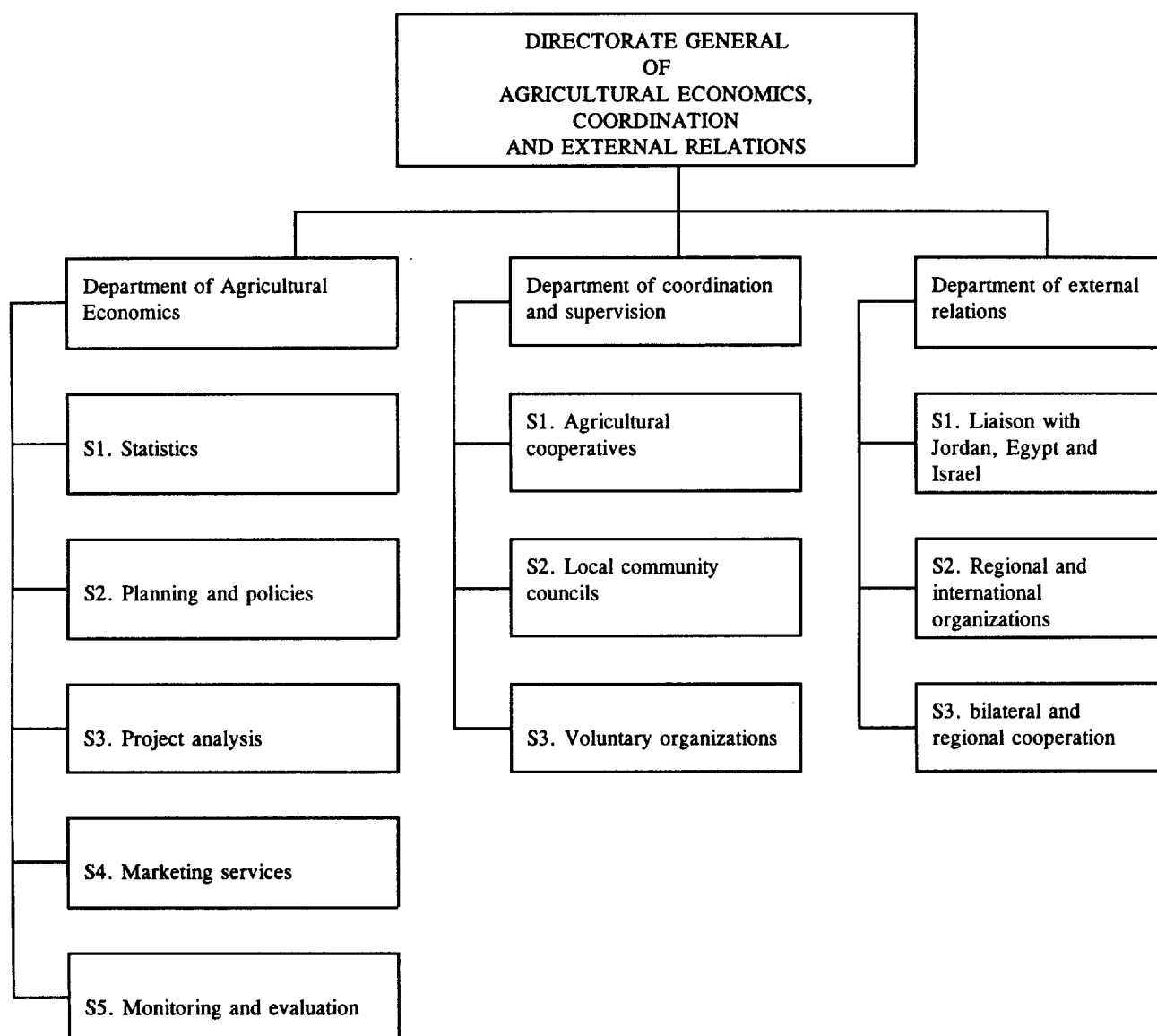
#### Staffing

The technical staff of the department of agricultural economics should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Agricultural economics
- ◆ Agricultural planning
- ◆ Agricultural policy analysis
- ◆ Agricultural statistics
- ◆ Project analysis
- ◆ Agricultural marketing
- ◆ Business administration

The number of technical staff to be employed in this department should be determined on the basis of the volume of work.

**Figure VI. The internal organizational structure of the Directorate General of Agricultural Economics, Coordination and External Relations**



ii. Department of coordination and supervision

Tasks

The department of coordination and supervision will have the following tasks:

- (a) Collect information on all NGOs working in the Palestinian agricultural sector, including agricultural cooperatives, farmers' unions, local community councils and local and foreign voluntary organizations;
- (b) Participate with other competent authorities in the preparation and enactment of laws and regulations for organizing the activities of the agricultural NGOs;



(c) Coordinate the activities of the Palestinian agricultural public institutions and the agricultural NGOs at the national level;

(d) Provide guidance and technical support to the agricultural NGOs aimed at improving the efficiency of their activities and operations;

(e) Supervise the activities and operations of the agricultural NGOs and propose policy and administrative measures as appropriate.

#### Internal organizational structure

It is proposed that the department of coordination and supervision consist of the following three sections:

- ◆ Agricultural cooperatives and farmers' unions section
- ◆ Local community councils section
- ◆ Voluntary organizations section

#### Staffing

The technical staff of the department of coordination and supervision should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Agricultural cooperation
- ◆ Accounting and financial analysis
- ◆ Business administration
- ◆ Agricultural economics
- ◆ Law

#### iii. Department of external relations

##### Tasks

The department of external relations will have the following tasks:

(a) Act as liaison between the Palestinian Ministry of Agriculture and the official agricultural authorities in Jordan, Egypt and Israel on all matters related to agriculture;

(b) Monitor the implementation of the agreements between the Palestinian and Israeli Authorities concerning the importation, exportation and movement of agricultural products;

(c) Monitor the implementation of the agreements concluded between the Palestinian Authority and foreign States on agricultural matters;

(d) Make preparations for the participation of the Palestinian Ministry of Agriculture in regional and international meetings;

(e) Act as liaison between the Ministry of Agriculture and regional and international organizations dealing with agriculture.

### Internal organizational structure

It is proposed that the department of external relations consist of the following three sections:

- ◆ Liaison with Jordan, Egypt and Israel section
- ◆ Regional and international organizations section
- ◆ Bilateral and regional cooperation section

### Staffing

The technical staff of the department of external relations should consist of an adequate number of specialists having university degrees and work experience in the following disciplines:

- ◆ Agricultural economics
- ◆ International trade
- ◆ International law
- ◆ Agricultural legislation

The number of the technical staff which should be employed in this department should be determined on the basis of the volume of work.

(v) Directorate general of administration, finance and personnel

a. Tasks

The directorate general of administration, finance and personnel will be responsible for administering the staff of the Ministry of Agriculture and all of its financial and administrative affairs. It will also monitor staffing needs and determine training needs and draw up training programmes and evaluate their results. It will improve and simplify the administrative regulations, procedures and forms.

b. Internal organizational structure

It is proposed that this directorate general consist of the following three departments: the department of administration, the department of finance and the department of personnel.

The internal organizational structure of the directorate general of administration, finance and personnel and each of its three departments is shown in figure VII.

i. Department of administration

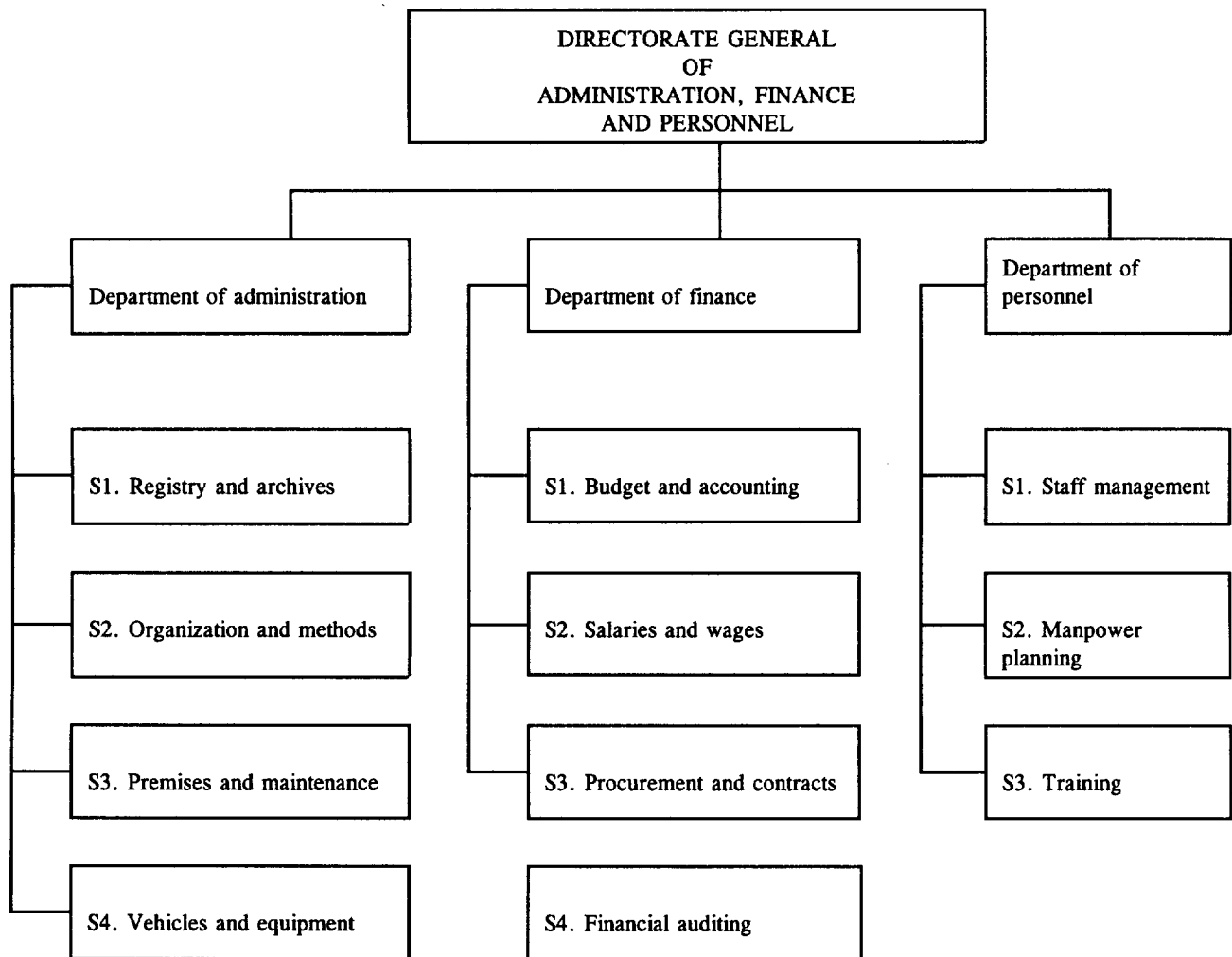
Tasks

The department of administration will have the following tasks:

- (a) Organize the Ministry's documentation and filing systems and correspondence;
- (b) Organize the secretarial and clerical work of the Ministry;
- (c) Arrange for the maintenance of the Ministry's premises and for the maintenance and repair of its equipment and vehicles;

- (d) Secure the transportation needs of the Ministry and organize and supervise the use of official vehicles;
- (e) Review the existing administrative regulations, procedures and forms, and make proposals for their improvement and simplification.

**Figure VII. The internal organizational structure of the Directorate General of Administration, Finance and Personnel**



(ii) Internal organizational structure

It is proposed that the department of administration consist of the following four sections:

- ◆ Registry and archives section
- ◆ Organization and methods section
- ◆ Premises and maintenance section
- ◆ Vehicles and equipment section

### Staffing

The administrative staff of the department of administration should consist of an adequate number of professionals having university degrees and adequate educational qualification and work experience in the following disciplines:

- ◆ Business administration
- ◆ Documentation and filing
- ◆ Civil engineering
- ◆ Mechanical engineering

Their number should be determined on the basis of the requirements and volume of work.

### iii. Department of finance

#### Tasks

The department of finance will have the following tasks:

- (a) Prepare the annual budget of the Ministry and monitor expenditures;
- (b) Organize the accounts of the Ministry;
- (c) Procure, within certain financial levels, the Ministry's needs for equipment and supplies;
- (d) Arrange and monitor contractual services for the Ministry;
- (e) Organize the payment of salaries and wages for employees and labourers;
- (f) Carry out the financial auditing on the Ministry's revenues and expenditures.

#### Internal organizational structure

It is proposed that the department of finance consist of the following four sections:

- ◆ Budget and accounting section
- ◆ Salaries and wages section
- ◆ Procurement and contracts section
- ◆ Financial auditing section

#### Staffing

The administrative staff of the department of finance should consist of an adequate number of professionals having university degrees and work experience in the following disciplines:

- ◆ Financial planning and management
- ◆ Accounting
- ◆ Purchasing management
- ◆ Warehouse management
- ◆ Financial auditing
- ◆ Civil law

Their number should be determined on the basis of the volume work.

iii. Department of personnel

Tasks

The department of personnel will have the following tasks:

- (a) Look after the administrative management of the staff of the Ministry, pursuant to the regulations in force;
- (b) Identify the needs of the Ministry for technical, administrative and general service staff (manpower planning);
- (c) Identify the training needs of the staff of the Ministry at all levels;
- (d) Draw up the required training programmes, monitor their implementation and evaluate their results;
- (e) Act as liaison with the relevant local and foreign training institutions.

Internal organizational structure

It is proposed that the department of personnel consist of the following three sections:

- ◆ Staff management section
- ◆ Manpower planning section
- ◆ Training section

Staffing

The administrative staff of the department of personnel should consist of an adequate number of professionals having university degrees and work experience in the following disciplines:

- ◆ Personnel management
- ◆ Industrial relations
- ◆ Business administration
- ◆ Labour law

Their number should be determined on the basis of the total number of staff employed by the Ministry.

(iv) Regional departments of agriculture in the governorates/provinces

At present, the regional departments of agriculture in the various governorates and provinces of the Gaza Strip and the West Bank consist of the following:

- (a) Department of Agriculture in the Gaza Strip;
- (b) Department of Agriculture in Jericho;
- (c) Department of Agriculture in the West Bank which has its headquarters in the town of Nablus and has five sub-offices in the following governorates/provinces:

- ◆ Nablus
- ◆ Jenin
- ◆ Tulkarm
- ◆ Ramallah/Bethlehem
- ◆ Hebron

Under the new organizational structure of the Palestinian Ministry of Agriculture, the regional departments of Agriculture in the governorates/provinces of the West Bank would be under the overall supervision of the Secretary-General of the Ministry, while the Regional Department of Agriculture in the Gaza Strip would be under the direct supervision of the Deputy Secretary-General for the Gaza Strip.

This administrative arrangement would require the cancellation of the present Department of Agriculture in the West Bank and the redeployment of all its staff either to the central directorates general of the Ministry of Agriculture or to the regional Departments of Agriculture.

However, two important issues can be raised with regard to the final number, geographical coverage and composition of the technical staff of the regional departments. These two issues are that:

(a) The number and geographical coverage of the regional departments of agriculture should be consistent with:

- (i) The official system of local government in the Palestinian territories which will be adopted by the Palestinian Government;
- (ii) The cultivated area which will be served by each of the regional departments, the type and intensity of production, the number of farmers to be served and the overall economic importance of agricultural production;
- (iii) The geographical areas which will be covered by each Regional Department. In this regard, it is noted that Bethlehem is closer to Hebron than to Ramallah;

(b) The composition of the technical staff in each regional department, in terms of number and technical specializations, should be determined on the basis of:

- (i) The number of farmers and farming units in each governorate/province;
- (ii) The types of crops grown;
- (iii) The types of livestock (cattle, sheep, goats), poultry or fisheries resources which exist in each governorate/province;
- (iv) The existence of forests and rangelands in the different governorates/provinces.

#### AT THE OPERATIONAL LEVEL

The following institutional arrangements at the operational level are proposed for implementation during Phase III.

A. IMPLEMENTATION OF THE GENERAL ORGANIZATIONAL SCHEME FOR THE RESTRUCTURING  
OF THE PALESTINIAN PUBLIC AGRICULTURAL INSTITUTIONS

Once the general organizational scheme has been adopted by the Palestinian National Authority, the implementation phase of the scheme should start at the earliest possible date in order to ensure proper functioning of the public institutions concerned with agriculture.

The implementation phase should include the following:

- (a) The preparation of detailed terms of reference—tasks, duties and functions—for all the administrative units of the Ministry of Agriculture at all levels: directorates general, departments, sections and the regional departments of agriculture in the governorates/provinces;
- (b) The determination of the numbers of technical, administrative and general services staff which should be employed in the Ministry of Agriculture for ensuring that all its administrative units function properly and efficiently carry out their tasks, duties and functions;
- (c) The preparation of detailed job descriptions for each managerial, technical and administrative post in the Ministry of Agriculture and its central directorates general and regional departments. This process should also include the required educational qualifications and work experience and other qualifications for each job;
- (d) The definition of the working relations among:
  - (i) The Ministry of Agriculture and the other ministries and institutions/organizations within the Palestinian Government;
  - (ii) The various central directorates general, departments and sections within the Ministry of Agriculture;
  - (iii) The Ministry of Agriculture and its central directorates general and the regional departments in the governorates/provinces;
  - (iv) The Ministry, its central directorates general and regional departments and the farmers and agricultural NGOs;
- (e) The preparation of a plan for the redeployment and training/retraining for the staff who are to be kept on and who will be given posts in the new structure of the Ministry of Agriculture;
- (f) The preparation of a plan for the selection, recruitment and training of the new staff who will be employed in the Ministry of Agriculture;
- (g) The preparation of a reconversion plan for the staff to be shed as unsuitable for the new structure of the Ministry;
- (h) The determination of all the physical facilities which are required for the proper functioning of the Ministry of Agriculture, including premises, office equipment and furniture, vehicles and laboratories;
- (i) The definition of the basic rules and regulations for staff and human resources management;

- (j) The determination of the financial costs of completely restructuring the Ministry of Agriculture.

For the implementation of the general organizational scheme for the restructuring of the Palestinian public agricultural institutions, principally the Ministry of Agriculture, a special ad hoc committee should be established comprising representatives of the relevant ministries, such as: agriculture, finance and labour, as well as staff representatives of the existing institutions subject to restructuring. This committee could seek advice and assistance from specialized management consultants and consulting firms.

However, it is felt that the implementation of the proposed general organizational scheme for the restructuring of the Palestinian public agricultural institutions would require major external technical assistance and financial support in order to help:

- (a) Establish and reinforce the new structures until they are fully functioning;
- (b) Ensure the satisfactory reconversion of surplus staff in order to avoid potential social problems for the staff who are subject to leave as a result of restructuring.

For this purpose, the Palestinian National Authority could seek technical assistance from the Food and Agriculture Organization of the United Nations (FAO) and financial support from the international donor community, mainly the World Bank, for the implementation of the general organizational scheme for restructuring the Palestinian public agricultural institutions.

#### B. REHABILITATION AND REACTIVATION OF THE AGRICULTURAL RESEARCH STATIONS AND AGRICULTURAL EDUCATION INSTITUTES IN THE WEST BANK

It was proposed earlier to undertake, during Phase II, an overall assessment of the present situation of the agricultural research stations and agricultural education institutes in the West Bank with a view to identifying the requirements for their rehabilitation and reactivation in terms of technical staff and physical facilities. The assessment should be completed before the end of Phase II in June 1996.

The task of the rehabilitation and reactivation of the agricultural research stations and education institutes in the West Bank would require the following:

- (a) Selection and recruitment of technical staff—research or education—as most of the staff who previously worked in the research stations were either transferred or dismissed;
- (b) Arranging for the training/retraining of the old and new technical research and education staff in appropriate institutions abroad;
- (c) Restoring and improving the physical facilities of the research stations and education institutes and providing them with the necessary equipment;
- (d) Allocating adequate funds to the research stations for carrying out adaptive research activities.



C. FUNCTIONING OF AN ANIMAL DISEASE INVESTIGATION CENTRE AND OF THE REGIONAL AND FIELD VETERINARY LABORATORY UNITS

During Phase II of the restructuring scheme, it was proposed to establish an animal disease investigation centre in the town of Ramallah (West Bank), a regional veterinary laboratory for the Gaza Strip in the town of Gaza<sup>35</sup> and two field laboratory units, one in Nablus and the other in Hebron.

Even before completion of the construction of the premises which will host these laboratories, the Palestinian Authority should initiate action on the following:

- (a) Selection and recruitment of the needed technical and administrative staff, including staff presently working in the departments of veterinary services;
- (b) Preparation and implementation of training programmes for the technical staff, preferably in advanced specialized institutions abroad;
- (c) Ordering and installing of the required equipment.

In view of the substantial funds and of the highly specialized technical expertise which will be required for the establishment and proper functioning of these veterinary laboratories, major external financial support and technical assistance will be needed. While the international donor community should be approached by the Palestinian Authority to provide the necessary capital assistance and financial support, FAO could be requested to provide the required technical assistance which falls within its mandate and fields of competence. For this purpose, a detailed project document on strengthening the veterinary services in the Palestinian territories, including the establishment of veterinary laboratories and veterinary quarantine stations, is being prepared by FAO, and will shortly be forwarded to the Palestinian authorities for consideration and submission to potential interested donors.

D. ESTABLISHMENT OF A PALESTINIAN INSTITUTE FOR AGRICULTURAL RESEARCH AND TRANSFER OF TECHNOLOGY

To stimulate greater and sustainable agricultural production that meets local and international demand, it is proposed to establish a Palestinian institute for agricultural research and transfer of technology (PIARTT), which would have overall responsibility for identifying and testing potential technologies for the various agricultural systems in the Palestinian territories of the West Bank and Gaza Strip and for the dissemination of these technologies to farmers through the different technology transfer agents (the Ministry of Agriculture, innovative farmers, cooperatives, faculties of agriculture and agricultural schools and agricultural inputs supply firms).

It is proposed that the PIARTT enjoy full administrative and financial autonomy so as to allow it to recruit high-quality employees and to establish good working conditions for its staff.

The PIARTT is to perform the following functions:

- (a) Establish an agricultural research and technology transfer strategy to set the direction for its programmes and define research priorities in line with that strategy;

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<sup>35</sup> See "Rehabilitation of veterinary services in the Palestinian territories".

(b) Prepare research programmes focusing on the highest priority crops and main agricultural problems facing farmers, paying special attention to the economic importance of crops, the number of farmers that may benefit from the outcome of research and the potential of achieving tangible improvements in a reasonable amount of time;

(c) Carry out research on developing/adapting packages of high-level technologies appropriate for local conditions and disseminate these technologies through the appropriate channels to farmers;

(d) Cooperate with the private sector in identifying and prioritizing agricultural research needs and in establishing a research grant fund to be used for carrying out research activities of high priority requested by the private sector;

(e) Establish scientific links and cooperation with the regional and international agricultural research institutions for the identification and implementation of joint research programmes and activities.

PIARTT would be managed by a council composed of the following:

- ◆ The Minister of Agriculture (chairman)
- ◆ The director of the institute (deputy chairman)
- ◆ Under-Secretary of the Ministry of Agriculture
- ◆ A representative of the Water and Irrigation Authority named by the Director-General of the Authority
- ◆ A member of the teaching faculty, of professor status, from each of the faculties of agriculture at the official universities, named by the university presidents
- ◆ An individual with experience and specialization in the field of scientific research appointed by the Minister for a period of two years extendable for one additional term
- ◆ Three members from the private sector selected among recognized and respected leaders in irrigated agriculture, fresh fruit and vegetable exports, rain-fed agriculture, processing of agricultural products, or livestock production.

The council shall assume the following duties:

(a) Approve agricultural research strategies and plans and prioritize them according to the general agricultural policy;

(b) Approve the basis for cooperation with public agencies, universities, private-sector and scientific organizations;

(c) Recommend approval of agreements and contracts with foreign parties;

(d) Approve policies governing the work of PIARTT and its annual plans and programmes;

(e) Approve the annual budget of PIARTT and submit it to the Cabinet of Ministries for incorporation into the general budget of the Government;

(f) Any other matters which are part of the duties of the PIARTT that the chairman or the Director-General sees fit to include on the council's agenda.

It is proposed that the council meets at least once monthly or whenever the need arises at the invitation of the chairman or his deputy in his absence. Any meeting held by the council shall be legal if attended by two thirds of the members including the chairman or his deputy in his absence.

The Director-General of the PIARTT shall be appointed, his salary and other financial rights fixed and services terminated or relieved from by decision of the Cabinet of Ministers upon the recommendation of the council of the PIARTT.

Whoever is appointed Director-General for the PIARTT should hold a Ph.D or M.Sc. degree in agricultural science or in one scientific specialization related to the activities of the PIARTT in addition to practical experience in the field of scientific research of a minimum of 10 years in the case of the Ph.D holder and 15 years in the case of the M.Sc. holder.

The financial resources of the PIARTT shall consist of the following:

- (a) The allocations made for the PIARTT in the general Government budget;
- (b) Revenues from services, consultancies and research rendered by the PIARTT;
- (c) Assistance, donations and contributions offered to the PIARTT subject to the approval of the Cabinet of Ministers if these were from foreign countries or institutions;
- (d) Funds which are allocated to agricultural research from bilateral or multilateral assistance.

It is suggested that the following agricultural experimental stations be attached to and administered by the PIARTT for carrying out its research programmes, taking into consideration the agro-ecological regions in Palestine:

- ◆ The Fari'ah Station in the Jordan Valley
- ◆ The Khadouri Station
- ◆ The Beit Gad Station
- ◆ The Arroub Station
- ◆ The Beit Hanoun Station in Gaza

It is proposed that the PIARTT be organized according to a multidisciplinary systems approach including irrigated agriculture, rain-fed agriculture, low-rainfall agriculture (below 200 mm) and integrated livestock/agriculture systems, which has been found to lead to a more efficient and more effective research agenda and programme of technology transfer to farmers than the old organization along traditional commodity-based lines such as horticultural crops and field crops.

#### E. CONDUCTING A GENERAL AGRICULTURAL CENSUS

Statistical data on the agricultural sector in the Palestinian territories are scarce and not reconcilable, and there are doubts about the reliability of what is being published. Some key agricultural data are kept sacrosanct, for example: (a) the exact amount of land over which Palestinians have lost control; (b) the number of dunums in the West Bank and the Gaza Strip farmed by settlers; (c) the quantity of water in the Palestinian territories used by the Palestinians and the settlers, respectively; and (d) the exact number of

settlers in the Palestinian territories. Agricultural data and information generated by the Israeli Civil Administration of the Military Authority in the occupied territories and the large number of NGOs active in the territories are not reconcilable.<sup>36</sup>

In view of this situation and in order to enable the Palestinian National Authority to formulate proper agricultural development strategy, plans and policies on the basis of complete, up-to-date and reliable agricultural statistical data and information, the highest priority should be given to the conducting of a general and comprehensive agricultural census in the Palestinian territories, including the Jericho Area, the Gaza Strip and the occupied Palestinian territories in the West Bank.

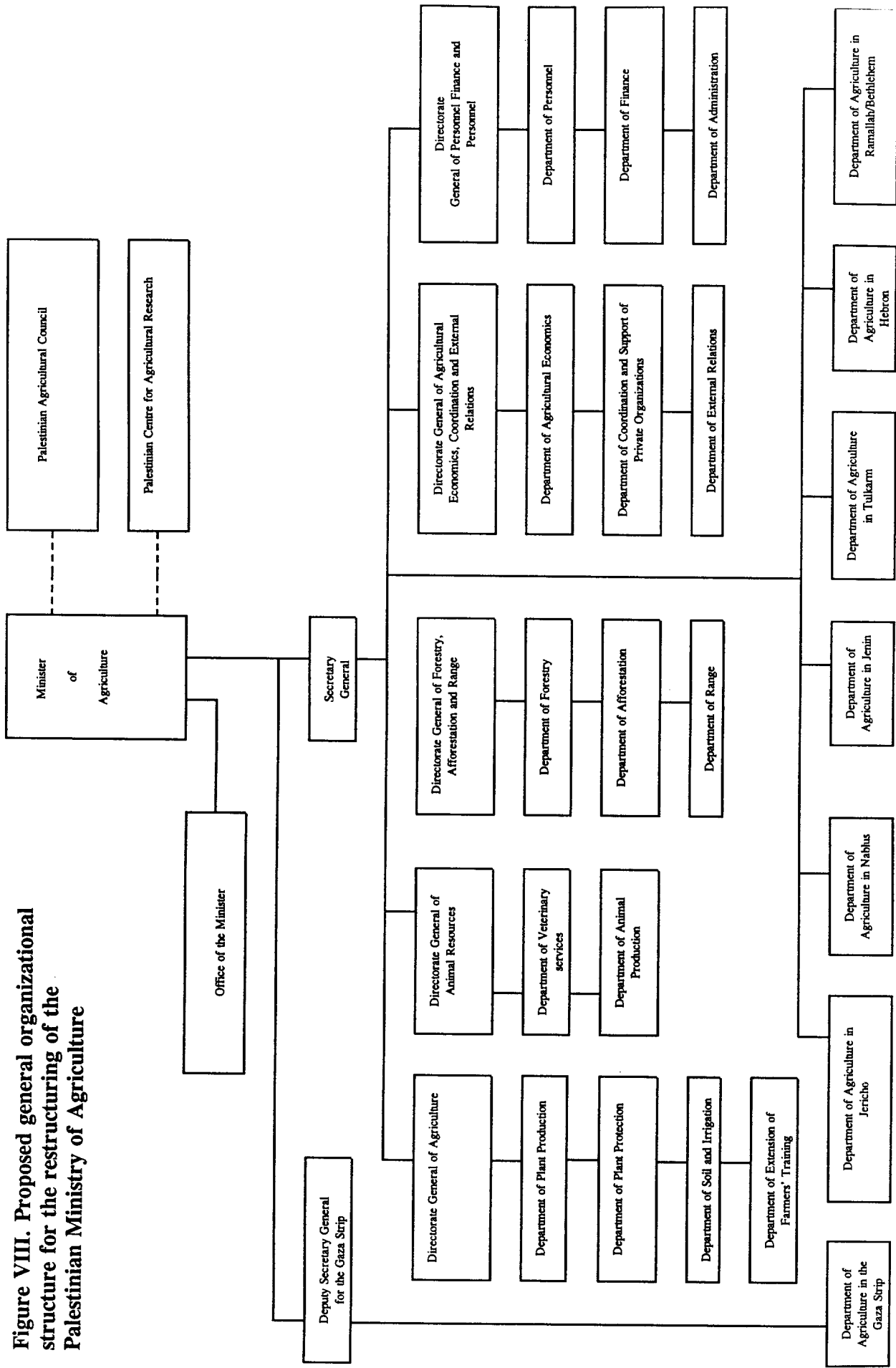
The Palestinian National Authority could seek technical assistance from FAO in organizing and conducting the general agricultural census.

A detailed chart of the proposed general organizational structure for the restructuring of the Palestinian Ministry of Agriculture is given in figure VIII.

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<sup>36</sup> "Rehabilitation of the agricultural sector in the occupied Palestinian territories", p. 1.

**Figure VIII. Proposed general organizational structure for the restructuring of the Palestinian Ministry of Agriculture**



## **ANNEX TABLES**

**Annex table 1. GDP AND THE AGRICULTURAL PRODUCTION OF THE OCCUPIED TERRITORIES,  
AT 1986 PRICES  
(Millions of NIS\* at factor cost)**

Year	West Bank			Gaza Strip		
	GDP	Agricultural GDP	%	GDP	Agricultural GDP	%
1968	436.9	163.1	37	217.2	67.3	31
1969	501.7	205.7	40	232.4	76.7	33
1970	533.3	185.4	35	280.6	88.5	31.5
1971	612.6	211.7	34.5	315.7	100.6	32
1972	757.5	298.7	39	329.7	110.3	33.5
1973	693.7	214.7	31	350.5	113.4	32
1974	910.5	364.9	40	365.8	126.1	35
1975	896.8	220.5	25	393.6	131.8	33.5
1976	1061.7	293.7	28	426.5	141.8	33
1977	1024.1	258.3	25	448.3	135.1	30
1978	1195.7	353.3	29.5	466.7	136.1	29
1979	1117.6	241.9	22	517.3	129.1	25
1980	1386.1	442.4	32	489.8	117.4	24
1981	1267.4	359.2	28	494.9	122.2	25
1982	1439.9	415.6	29	476.1	114.0	24
1983	1388.5	371.5	27	454.1	103.2	23
1984	1467.1	373.6	25	469.6	98.6	21
1985	1441.6	330.3	23	481.9	108.3	22.5
1986	1784.1	575.0	33	513.4	102.5	20
1987	1658.7	379.5	23	578.7	123.4	21
1988	1644-1748	758	44	504-512	122	24
1989	1944-1699	534	31	573-583	141	24
1990	2068-2131	865	41	597-617	152	25
1991	1917-1988	630	32	631-652	170	27
1992	2437-2526	1087	44	751-777	198	26

Source: Excerpted and calculated from: the World Bank, *Developing the Occupied Territories—An Investment in Peace*, vol. 4, *Agriculture* (Washington, D.C.: 1993), p. 62.

\* New shekels, the Israeli unit of currency.

**Annex table 2. RELATIVE SIGNIFICANCE OF AGRICULTURAL EXPORTS, SELECTED YEARS**  
(In millions of US dollars)

Year	West Bank			Gaza Strip		
	Total Exports	Agricultural exports	Agriculture as a percentage of total	Total exports	Agricultural exports	Agriculture as a percentage of total
1973	35.9	7.9	14.6	40.3	6.6	16.4
1974	77.9	10.4	13.4	51.7	5.1	9.9
1981	205.2	82.0	40.0	197.8	55.3	28.0
1982	200.6	72.7	36.2	190.0	50.1	26.4
1983	201.0	62.5	31.1	180.6	46.7	25.8
1984	184.5	77.4	42.0	104.5	27.5	26.3
1985	166.4	48.1	28.9	106.0	30.9	29.2
1986	240.1	65.1	27.1	139.7	34.8	24.9
1987	228.2	41.5	18.1	157.1	32.4	20.6

Sources: Israel, Central Bureau of Statistics, *Administered Territories Statistics Quarterly* (Jerusalem, various years); and Israel, Central Bureau of Statistics, *Statistical Abstract of Israel* (Jerusalem, various years).

**Annex table 3. USE OF CULTIVATED LAND FOR SELECTED YEARS**  
(Thousands of dunums)

	1968	1975	1980	1985	1989	1990
<u>West Bank</u>						
Total area (excluding fallow)	1683 <sup>a</sup>	1626	1616	1700	1755 <sup>b</sup>	1793 <sup>b</sup>
Irrigated area	57	83	92	104	97.8	94.9
Vegetables	31	56	46	50	59.5	58.1
Citrus	24	24	-25	25	24	23.7
Rain-fed area	1626 <sup>a</sup>	1543	1524	1595	1657.2	1697.7
Field crops	833	538	521	494	552.3	584.8
Vegetable crops	70	101	34	50	84.1	-85.6
Fruit-trees (also olives)	680	901	957	1005	1018.3	1024.5
<u>Gaza Strip</u>						
Total area	204	210	210 <sup>c</sup>	220	192	N.A
Irrigated area	90	95	95	118	114 <sup>d</sup>	N.A
Rain-fed area	114	115	115	102	68 <sup>c</sup>	N.A

Sources: Data for 1968, 1975, 1980 and 1985 from Kahan David, *Agricultural and Water Resources in the West Bank and Gaza (1967-1987)*, tables 4.1 and 4.3 (pp. 129-130). The 1989 and 1990 data for the West Bank are based on the figures shown in the *Agricultural Statistics Quarterly*, No. 1, 1991 of the Central Bureau of Statistics, Israel; and footnotes d and e are taken from *Palestine Development for Peace*, table 4 (page 149), Proceedings of the ECCP-NENGOOT Conference, Brussels, September 28 to October 1, 1992.

<sup>a</sup> Estimate.

<sup>b</sup> Excludes Jewish localities.

<sup>c</sup> Refers to 1987/1979.

<sup>d</sup> Citrus 58,200 dunums; vegetables 49,350 dunums; fruits 7,000 dunums.

<sup>e</sup> Field crops 25,200 dunums; vegetables 9,150 dunums; fruits 33,900 dunums.



**Annex table 4. AGRICULTURAL OUTPUT, INPUT AND INCOME**

	Value (Thousands of NIS)*			Quantity (In thousands of tons, unless otherwise stated)		
	1990	1991	1992	1989/1990	1990/1991	1991/1992
<b>WEST BANK</b>						
<u>Output: grand total</u>	937,619	790,982	1,200,941			
Crops: total	550,255	343,415	698,613			
Field crops	36,562	20,294	35,248	53.5	19.7	33.6
Vegetables and potatoes	154,153	157,040	197,463	216.0	186.0	205.9
Melons and pumpkins	5,408	3,030	7,499	9.5	5.6	13.6
Olives	204,081	10,911	291,665	143.6	5.4	170.6
Citrus	38,556	35,339	43,378	73.2	72.3	65.1
Other fruit	103,509	107,786	111,076	99.2	97.3	87.8
Miscellaneous	7,985	9,016	12,284			
Livestock and livestock products - Total	387,365	447,567	502,329			
Meat	238,312	286,320	320,277	51.7	61.6	61.6
Milk (million litres)	119,241	124,100	125,062	63.5	65.8	67.0
Eggs (millions)	27,820	34,300	53,518	123.7	172.4	239.8
Miscellaneous	1,992	2,847	3,472			
<u>Inputs</u>	265,937	311,762	363,245			
<u>Income originating in agriculture</u>	671,682	479,220	837,696			

Annex table 4. (continued)

	Value (Thousands of NIS)*			Quantity (In thousands of tons, unless otherwise stated)		
	1990	1991	1992	1989/1990	1990/1991	1991/1992
<b>GAZA STRIP</b>						
<u>Output: grand total</u>	278,964	323,887	381,414			
Crops: total	186,163	203,919	244,722			
Field crops	4,816	3,691	6,019			
Vegetables and potatoes	91,860	135,695	160,077	138.3	173.1	201.6
Melons and pumpkins	3,431	5,491	4,067	6.4	10.4	9.9
Citrus	64,172	34,505	42,350	196.8	134.7	119.3
Other fruit (including olives)	20,019	22,370	28,542	19.1	19.9	19.8
Miscellaneous	1,865	2,167	3,667			
Livestock and livestock products	92,801	119,968	136,692			
Meat	47,059	59,893	73,992	13.5	16.6	18.2
Milk (million litres)	15,225	18,535	17,280	8.4	9.5	9.3
Fish	1,947	7,008	4,685	0.4	1.8	1.0
Eggs (millions)	25,802	32,880	38,642	90.0	112.0	145.0
Miscellaneous	2,768	1,652	2,093			
<u>Inputs</u>	109,723	120,649	137,820			
<u>Income originating in agriculture</u>	169,241	203,238	243,594			

Source: Israel, Central Bureau of Statistics, *Statistical Abstract of Israel*, No. 44 (1993), table 27.30.

\* Prices were adjusted to the average prices of each year, quantities—by agricultural year and prices—by calendar year.

Annex table 5. NON-GOVERNMENTAL AGRICULTURAL DEVELOPMENT INSTITUTIONS IN THE OCCUPIED PALESTINIAN TERRITORIES

West Bank									
Institution	Main areas of work	Location	Date of Foundation	Target beneficiaries	Funding	Staffing			
						Full-time <sup>1</sup>	Part-time	Volunteer	
Agricultural Company Ltd.	Financing	Al-Bireh	1988	small farmers	EEC	6	3	-	
Al-Ojah Agricultural Cooperative Society	Input supplier	Jericho	1974	Cooperative member (212)	NGOs	3	-	7 (1)	
Arab Development Society (partly involved in agriculture)	Consultancy and training	Jericho	1946	not specified	Arab, NGOs, EEC	60	-	12 (4)	
Agricultural Marketing Cooperative Society	Input supplier, marketing	Jenin	1979	Cooperative member (520)	Arab, NGOs, own resources	8	-	8 (4)	
Agricultural Counselling Centre	Cosultancy in livestock	Hebron	1990	Farmers	Palestine sources	6	3	3 (6)	
Arab Company for Money and Investment (partly involved in agriculture)	Financing consultancy, training	Nablus	1991	not specified	not specified	12	5	5	
Soit Nuba Cooperative for Animal Husbandry	Animal production	Ramallah	1965	Cooperative member (65)	ANERA EEC, member fees	11	-	- (1)	
Bader Agricultural Establishment	Consultancy, training	Hebron	1987	not specified	Own resources	2	-	5 (1)	
Cooperative Poultry Breeder Society	Poultry production	Ramallah, Al-Bireh	1974	Cooperative member (180)	Not specified	10	-	10	
Economic Development Group (partly agricultural)	Database, consultancy services, financing	Jerusalem	1986	Any client	EEC, European Governments, Arab sources, Palestinian sources	12	1	-	
Hebron Cooperative Community	Financing, marketing consultancy services, training	Hebron	1986	Cooperative member (90)	Not specified	Not specified	Not specified	Not specified	
Institute of Applied Research		Bethlehem	1990	Any client	NGOs, Canada	6	-	3 (4)	

Annex table 5. (continued)

West Bank									
Institution	Main areas of work	Location	Date of Foundation	Target beneficiaries	Funding	Staffing			
						Full-time <sup>a</sup>	Part-time	Volunteer	
National Association for Development and Investment (partly agricultural)	Training, financing, agro-industry	Jerusalem	1991	Any client	Palestinian sources, Arab sources, NGOs	3	-	-	
Palestinian Agricultural Relief committee (PARC)	Consultancy services, training, pioneer projects, relief	Jerusalem and Gaza	Not specified	Farmers, rural population refugees	EEC, European Governments, NGOs	30	25	100 (20)	
Technical Development Community (multi-sector)	Economic and social studies, financing	Jerusalem	1989	Clients from all sectors	EEC, European Governments, Palestinian sources	8	-	5	
Union of Agricultural Work Committees	Provision of inputs, services, pioneer projects (sheep deve. and land reclamation)	Jerusalem	1986	Variety of clients	EEC, NGOs, profits of the Union	49	-	27 (37)	
Land and Water Establishment for studies and legal affairs (Palestinian Hydrology Group)	Consultancy services, training, pioneer projects	Jerusalem	1987	Any client	European Governments, NGOs	8	1	3 (12)	
Cooperative Society for Pressing Manufacturing and Marketing Olive Products	Olive production, processing and marketing	Hebron	not specified	Cooperative member	EEC, Palestinian sources	7	-	- (2)	
Centre of Development Work	Database, consultancy, training	Jerusalem	1990	All inclusive	Not specified	5	1	-	
Cooperative Society for Agricultural Marketing	Input supplier, marketing	Tulkarm	1980	Cooperative members (560)	Not specified	7	-	- (1)	

Annex table 5. (continued)

West Bank									
Institution	Main areas of work	Location	Date of Foundation	Target beneficiaries	Funding	Staffing			
						Full-time <sup>a</sup>	Part-time	Volunteer	
Cooperative Society for Manufacturing and Marketing of Grape and Plum Juice	Processing, marketing, export	Hebron	1984	Cooperative members (720)	Arab, NGOs	8	-	- (3)	
Cooperative Society for Poultry Breeders	Poultry production, veterinary services, export marketing	Tulkarm	1982	Cooperative members (42)	NGOs, member fees	1	1	-	
Cooperative Society for Animal Husbandry	Provision of inputs and services	Ertah-Tulkarm	1984	Cooperative members (45)	Member fees, NGOs, Coops Bank/Jordan	3	2	- (2)	
Cooperative Society for Agricultural Marketing	Financing, marketing services	Qalqiliyah	1963	Cooperative members (400)	NGOs, Society profits	7	-	- (2)	
Cooperative Development Project (partly agricultural)	Consultancy services, marketing, financing	Jerusalem	1985	Not specified	US, NGOs	20	7	- (4)	
Cooperative Society for Agricultural Marketing	Input supplier, marketing	Salfet, Nablus	1981	Cooperative members (170)	NGOs, members contributions	19	-	- (1)	
Cooperation for Development	Agricultural financing	Jerusalem	1986	Farmers	EEC, NGOs	12	5	4 (5)	
Cooperative Society for Holy Land Industries	Olive-wood handicraft	Beit Sahour	1981	Cooperative members (53)	Not specified	2	-	-	
Development Organization for Marketing Agricultural Products in Ramallah District	Database, marketing, provision of services	Ramallah	1984	Cooperative members (1200)	NGOs, membership fees	10	7	- (3)	
Jericho Cooperative Society for Marketing Agricultural Products	Marketing, financing, provision of inputs and services	Jericho	1959	Any client	ANERA	7	-	10 (4)	

Annex table 5. (continued)

Gaza Strip							
Institution	Main areas of work	Location	Date of Foundation	Target beneficiaries	Funding	Staffing	
						Full-time <sup>2/</sup>	Part-time Volunteer
Agricultural Cooperative Society for Animal Husbandry	Consultancy services, financing, marketing	Gaza	Not specified	Cooperative members (154)	Not specified	6	- (3)
Cooperative Society of Strawberry and Vegetable Farmers	Input supplier, marketing, financing	Beit Lahia	1977	Cooperative members(448)	Society's fees and profits	6	- 6 (6)
Khan Yunis Agricultural Cooperative Society	Extension, training, marketing	Khan Yunis	1985	Cooperative members (427)	ANERA	7	- -
Union of Arab Agricultural Workers (multisectoral)	Plant protection	Gaza	1964	Not specified	Not specified	-	- 9 (5)

Source: Compiled from Agricultural Relief Committee/Arab Thought Forum, *Directory of Agricultural Development Institutes in the West Bank and Gaza Strip*, vol. 1, No. 4, 1992.

<sup>2/</sup> Numbers in parentheses refer to specialists in agriculture.

Annex table 6. DISTRIBUTION OF ADCC LOANS BY PROJECT TYPE

Project type	Number of projects	Amount (dollars)
Agricultural marketing	8	339500
Animal sheds	37	162139
Bee-keeping	11	31830
Broilers	15	38968
Calves	5	20000
Cold storage	1	34000
Dairy herds	69	253428
Draught animals	3	3700
Farm equipment	23	190653
Grape trellising	31	73311
Greenhouses	194	889063
Green-forage	16	31273
Land reclamation	80	215606
Layers	177	840603
Machines: wheat, olive	5	383000
Manufacturing	19	620000
Nursery	15	64395
Others	6	70052
Reservoir and drip irrigation	51	313544
Sheep and goat-raising	98	307004
Wells	28	372230
Total	892	5254299