



THE LAKHISH SETTLEMENT PROJECT

PLANNING AND REALITY

by

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Introduction

The concept of the Lakhish project was first announced at the beginning of 1955. At that time the idea referred to an inland area of Southern Israel (see Fig. 1) which was until then empty of Jewish settlement and in which it was decided to establish planned Jewish settlements.

The project was called 'The Lakhish settlement region' after the 'tel' of ancient Lakhish that is situated in the east. The original Lakhish region extended over approximately 750 sq. kms. or $\frac{3}{4}$ mln. dunam.¹

When the planned settlements were established it became clear that there was no point in maintaining the settlement framework of the region as a separate body and it should be combined with one of the other settlements regions of the Jewish Agency in Israel that border on it (the South or the Negev), or an intermediate region between the South and the Negev should be created and the settlements of the Lakhish region included in it.

The second alternative was chosen. The north-eastern part of the original Lakhish region was cut off and the whole region of Ashqelon, which had previously belonged to the southern region, was added to it. In this way the geographical shape of the region was improved. It was given a rectangular shape 40 kms. long and 17.5 kms. wide and its total area covered approximately 700 sq.kms. (see Fig. 1).

Later the concept of the Lakhish region underwent many changes. Today it is sometimes even used to refer to Jewish agricultural settlement throughout southern Palestine and the North-western Negev.²

The present article will refer to the Lakhish region in its second – geographical – form and will concentrate only on those villages that were established in the framework of the planned project.

The Physiographic Background

The Structure of the Land —. Geographically the Lakhish region includes the two geographical units to the west of the mountains of Western Palestine: the coastal plain and the Hills of the Shefelah. Each of these is divided into two subunits: the coastal plain into the coastal belt and the inner coastal plain, and the Shefelah into the upper and lower Shefelah (see Fig. 2). The planned Lakhish region extended over three of these four regions: the inner coastal plain, the Lower Shefelah and the Higher Shefelah.

The inner coastal plain is covered with alluvial soils which are the choice soils of Palestine. In the southern section the amount of loess increases. The soils are very good both for un-irrigated and irrigated crops. This region's problem is that of soil erosion. The average altitude varies from 100 to 200 ms. The land rises towards the South. The total area of the

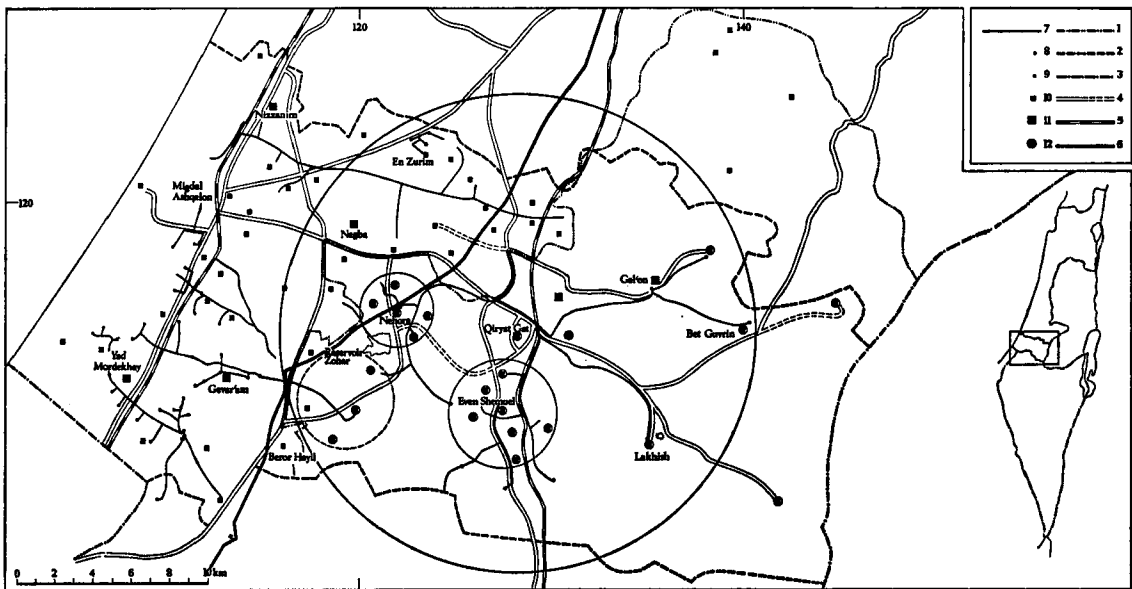
¹ 1 dunam = 0.1 ha.

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² WETZ, R. & A. ROKACH, Agricultural development, planning and implementation (Israel case study) Dordrecht Holland 1968.

WETZ, R., An introduction to regional-rural planning, Rehovot Israel 1968 (Hebrew).



- 1 - Border of the original Lakhish Region
- 2 - Border of the Geographical Lakhish Region
- 3 - Armistic demarcation line
- 4 - First class and Second class road
- 5 - Railway
- 6 - Main Water Pipeline, Yarkon-Negev Conduit
- 7 - Secondary water pipelines

- 8 - Well
- 9 - Water tank
- 10 - Jewish settlement
- 11 - Jewish settlement, established before 1948
- 12 - Jewish settlement, established or reorganized in the Lakhish Settlement Project

Fig. 1: General Map

inner coastal plain of the Lakhish region is roughly 250 sq.kms.

The Shefelah is hilly, forming the foothills of the Judaean Mountains. The rocks of which the region is composed are mainly chalk and marl of the Eocene period. They are covered by a 'Nari' crust that is 1-2 ms. or more in thickness.³

The absolute altitudes of the Low Shefelah are almost constant throughout its length at 200-300 ms. The southern section is slightly higher. The relative differences in height are small: in the south only 10-20 ms., because of the sand-loess infill, while in the north the differences are 20-30 ms. The soils of the region are grey rendzinas with a particular composition. In the south the percentage of loess is high. This is a region of gentle hills, at the head of which extend quite large plains, which give the area the form of a plateau. Approximately 50 % of the area - mainly hilltops and the wide valleys between them - are cultivable by modern methods. About a third of the area is suitable only for plantations, and the rest is suitable only for afforestation.

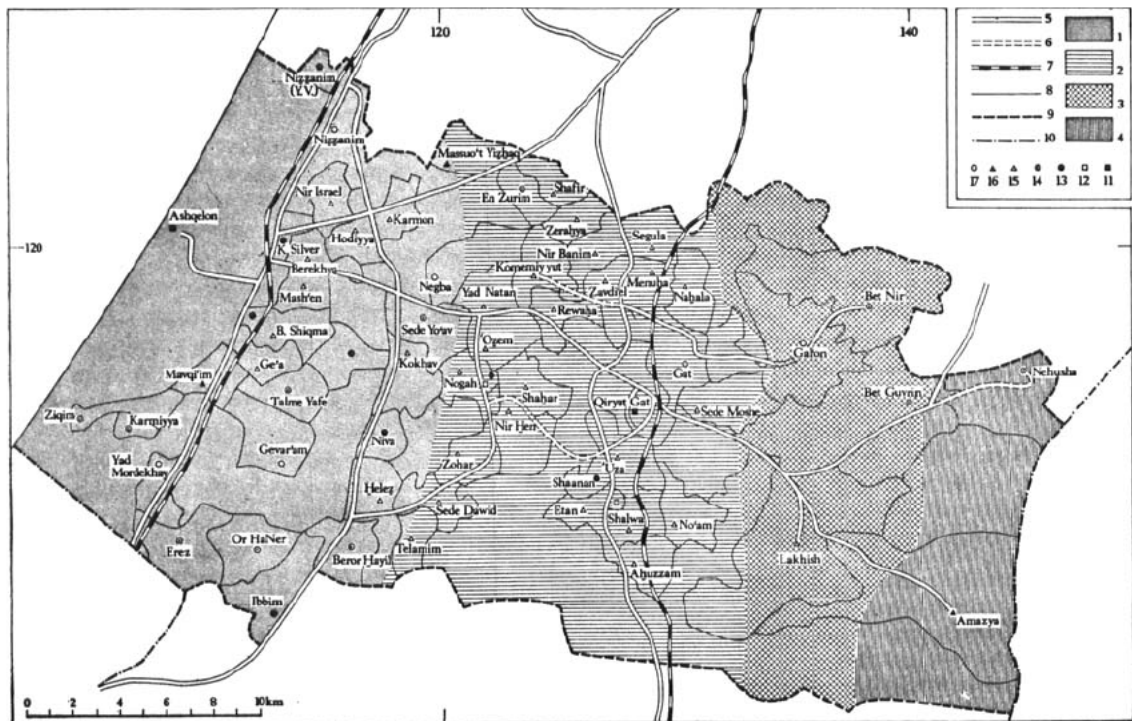
The absolute heights of the High Shefelah are

constant here too and vary from 400-500 ms. The southern section here is also slightly higher. The High Shefelah is entirely hilly in character. The area is stony and has many rocks in it. The slopes are steep and the differences in height between the valley and the mountain are great (70-80 ms. and over). Since the degree of incision of relief is strong the areas with soil are relatively small and occur mainly in the valleys and the few terraces occurring in the region. Only 12.5 % of this region is suitable for cultivation by modern methods, another 12.5 % are suitable for plantations, and the rest of the region only for pasture.⁴

Climate —. There are two varieties of climate in the Lakhish region according to its two sections: the coastal plain climate and that of the Shefelah hills. The temperatures in the coastal plain are very much similar to those of the other parts of the coastal plain of Israel. The annual daily fluctuations are quite small. It is correct to assume that there is a difference between the coastal belt and the inner coastal plain. But these differences are trifling. The rain

³ On the 'Nari' see BEN-ARIEH, Y., The geographical structure of the Lakhish region, *Twa Wearetz* 4 (1962) 1, p. 2-12 (Hebrew).

⁴ GIL, N. & Z. ROSENSAFT, Soils of Israel and their land use capabilities, Israel Ministry of Agriculture, Tel-Aviv 1955.



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|---|--|
| <p>1 - Outer Coastal Plain
 2 - Inner Coastal Plain
 3 - Lower Shefelah
 4 - Upper Shefelah
 5 - First class road
 6 - Second class road
 7 - Railway
 8 - Border of Settlement area
 9 - Border of the Geographical Lakhish Region</p> | <p>10 - Armistic demarcation line
 11 - Urban Centre
 12 - Rural Centre
 13 - Farm
 14 - Kibbutz (Lakhish Settlement Project)
 15 - Moshav (Lakhish Settlement Project)
 16 - Moshav Shitufi (Lakhish Settlement Project)
 17 - Kibbutz, established before 1948</p> |
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Fig. 2: Topographical background

in this region falls, as in other parts of the country, between October and April. The early rains are more frequent in the coastal plain than in the Shefelah. The total annual precipitation varies from 300-450 mms. The amount depends on the geographic latitude, distance from the sea and topographic altitude of the various parts of the region. From the map of isohyets it is possible to see the place of the Lakhish region on the general precipitation map of northern Israel and the differences between its various parts.⁵ The situation of the region on the border of the semi-arid section of western Palestine determined the nature of agricultural land-use of the region in the periods before the establishment of the State of Israel.⁶

⁵ Atlas of Israel 2/IV: compare topographic map with description of the structure of the land.

⁶ On the connection between precipitation and the southern boundary of the settlements in Palestine see AMIRAN, D. H. K., The pattern of settlement in Palestine, *Israel Exploration Journal* 3 (1953), p. 65-178, 192-209, 250-260.

Water Resources —. Within the region there are no permanent sources of surface water apart from a few small springs. All the streams are temporary, and all the water that flows in them during the rains percolates into the ground or flows to the sea. In addition up till now no rich sources of ground water have been discovered, although there is a difference between the coastal belt and the other three parts of the region. In the coastal strip, as in other parts of the coastal plain of Western Palestine, ground water at a depth of some tens of metres has been discovered, on layers of Neogene clay (saquieh). These ground waters result from rain-water that falls on the coastal belt. The average amount of ground water that any well can draw is roughly 50-100 cu.ms. per hour. In the other three sections of the region no sweet ground water whatsoever has been discovered. On the northern border of the region, however, in the valley of Nahal Ha'ela, in the deep layers of the Cenoman - Turon, sweet water has been

discovered in deep borings, but within the region itself no such sources have been found as yet. In a number of deep borings that were made in the region only saline water has been discovered.

In ancient times the water resources of the settlements of the region were cisterns and poor wells. The cisterns were dug out in the High and Low Shefelah, and the wells in the stream valleys, that occur both in the Shefelah and the inner coastal plain. These wells produce only small amounts of water (4-5 cu.ms. per hour approximately) from the underground supply that flows in the river valleys to the Mediterranean Sea.

The Planning of the Lakhish Project⁷

The Reasons for the Establishment of the Lakhish Project —. There were several reasons for the Lakhish region settlement project, the first and most important of them being the security factor. At the time this area was the most open in the State of Israel to infiltrations from across the border. The distance here between Mount Hebron and the Gaza Strip is the minimum so that the infiltrators took advantage of it. In addition the region was also of general security importance both because of the roads crossing it and because of its situation between Mount Hebron and the Gaza Strip, which gave rise to the fear that in case of renewed war between Israel and the Arab states there was the possibility of a breakthrough from Mount Hebron westwards or from the Gaza Strip eastwards. Such a breakthrough could lead to the cutting of the communications to the Negev, a situation that existed for a long period during the 1948 war, and there was naturally a similar fear that the event would recur.

Apart from the security considerations and the very fact of the existence of a large empty area here, there was also the hope, in those days, of a large wave of immigration to Israel. The settlement institutions sought a suitable area to settle the new immigrants. Consequently their eye was turned at once toward the region between the Jerusalem corridor in the north and the northern part of the Negev in the south. A study of the past history of the region shows that in many periods it was highly developed agriculturally and was densely settled, as proved in the archaeological remains and the many

⁷ On the planning of the Lakhish region see KAPLAN, B., *The Lakhish Settlement Project*, State of Israel, Study Group on Problems of Individual and Group Settlement, FAO Congress 1956.

'tels' found there. During the British mandate many villages existed in a considerable part of the region.⁸

All these factors led to the decision to settle the Lakhish region. When the decision was made, there was an attempt to plan the settlement of the whole region in advance, including all the economic, social and organisational details involved. For this purpose the administrative body of the Lakhish region was set up even before the establishment of the settlements, and its purpose was to deal with the planning and execution of the project. The administration of the Lakhish region that undertook the execution of the project placed five main principles at the basis of its planning:⁹

- a) Advance agricultural planning to determine the number, site, size and nature of the agricultural settlements that were to be established.
- b) The planning of the human elements that would inhabit those settlements.
- c) The basing of settlement from the start on the principle of the 'directed' farm.
- d) A new economic base for the settlements of the region, viz. emphasis on field crops.
- e) The establishment of the settlements according to the principle of regional settlement.

Advance Agricultural Planning —. The first problem that faced the planners was the water supply for the settlements that were to be established. The basic condition for the working of the whole project was the completion of the Yarkon-Negev pipeline, with the help of which it was intended to overcome the region's water problem. It should be pointed out that the few Jewish settlements that existed within the limits of the Lakhish region by that time were entirely based on cereals until the establishment of the planned project, because of the lack of ground water, and it was only the Yarkon-Negev pipeline that enabled the establishment of irrigated settlements in this area and with them the whole of the planned Lakhish project (see Fig. 1). A further point worth mentioning in relation to the water shortage in this part of the country, is that the ground water of the region of Ash-

⁸ See BEN-ARIEH, Y., *Land use in the Lakhish Area: a pioneer region of the semi-arid fringe of Israel*, *Yediot Bahakirat Eretz-Israel Weatikoteha* (Continuing the Bulletin of the Israel Exploration Society) 28, (1964) 1-2, p. 77-96, (Hebrew) and *Atlas of Israel Typical Landscape Regions*, Sheet VIII/3, Lakhish Region. Maps and Text.

⁹ ELIAV, A., *Planning of the Lakhish region*, Lecture Dept. of Geography, Hebrew University, Jerusalem 1956, and KAPLAN, *op. cit.*

qelon and the coastal belt in the west was directed, immediately after the establishment of the state, not to their natural hinterland in the east – Lakhish –, but to the south: the settlements on the border of the Gaza Strip, since it was of prime importance from the security point of view to settle the western Negev. This led to the delay in the settlement of the Lakhish region, since when it was decided to establish the project here, there was no water in the vicinity and water had to be brought from a distance from the Yarkon springs.

The second stage was advance agricultural planning of the settlements that were to be set up in the region. The largest part of this planning was the soil and agricultural survey that was carried out before the settlements were established. A further innovation in the agricultural planning was the form of settlements. In connection with this it should be mentioned that in the period immediately after the establishment of the State of Israel a large number of settlements were established which had a very elongated shape. These moshavim are known today as the 'Towel settlements'. The reason for this particular lay-out is to be found in the agricultural requirement that all the farmland of the moshav should be situated near the house of the occupant. With a farm-unit of 30-40 dunam and 80-110 families in houses along only one village road, such elongated settlements extended over several kilometres. This form of settlement proved unsuitable, especially for immigrant's moshavim. The long distance to the shop, kindergarten, school and other village institutions were disadvantages. In addition, security considerations dictated that no more such elongated settlements be built, since they could not easily be defended. Because of all this, in the planning of the settlements of the Lakhish region great emphasis was placed on the creation of a new form of settlement which on the one hand would fulfil the agricultural requirement of siting a large area of land near the settler's house, and on the other hand would not result in the extreme degree of dispersal of the houses of the village. The solution was found in the division of each settler's agricultural area into two parts: plot A of 2.5-8 dunam near the house, and plot B of the remaining area away from the house. This gave settlements a rather compact form, in accordance with the security condition that the diameter of any settlement was not to exceed one kilometre.¹⁰

¹⁰ On forms of agricultural settlements see Atlas of Israel 4/XI.

Planning of the Human Factor —. With the establishment of the new settlements it was essential to consider the suitability of the settlers and their absorption in the agricultural villages. To this end, first and foremost attention was given to the composition of the human factor and the steps necessary to facilitate absorption. The population was to be of two types: the vast majority would consist of new immigrants and a small proportion of Israeli youth. Consequently it was decided that the new immigrants should be settled in (co-operative) moshavim at locations that were both agriculturally convenient and safe from a military point of view, i.e. in the inner coastal plain, while the Israeli youth would be settled in (collective) kibbutzim, some moshavim and other new settlements in the more difficult territory, both agriculturally and from a security point of view, i.e. in the Shefelah area. Before the immigrants' arrival shacks were built as well as basic equipment for the village. For each village a team of supervisors was chosen to wait for the settlers and receive them. The idea was that during the early period the settlers would live in shacks, during which time they would be employed in building their houses, in soil reclamation and in various other agricultural projects. When the permanent buildings were completed they would move into the houses and the shacks would be used for agricultural purposes. The standards of building in these villages were higher than the average at the time: two-roomed houses, with a kitchen and conveniences, total area 40 sq.ms. In addition it was decided that the villages would be relatively small, between 60 and 80 agricultural units, and homogeneous from the point of view of type of inhabitants, who would be from the same country and community and sometimes even linked by family relationships. This was done to avoid internal conflict within the village, while the contacts between the various communities was to be carried out by means of the village centres which will be dealt with in more detail later.¹¹

The Principle of the Managed Farm —. In order to make the absorption of the immigrants easier until they were capable of undertaking the management of their own farms, and in order to prevent damage to the farm, the principle of the 'managed farm' was adopted, i.e. that in the initial years the farms would be managed by the administration of the region

¹¹ For details on the planning of the human factor and other principles of the Lakhish region, see KAPLAN, *op. cit.*

TABLE 1: THE SETTLEMENTS OF THE PLANNED LAKHISH REGION - BASIC DATE

Region	Name of settlement	Date of foundation	Type of settlement	Origin of settlers ⁴	Population	
					1957	1968
1. High Shefelah	Amazya	8. 6.55	Co-op. Moshav ²	Israel	64	60
2. " "	Nehusha	6. 9.55	Kibbutz	Israel	58	—
3. Low Shefelah	Bet Guvrin	23. 5.49 ¹	Kibbutz	Israel	85	137
4. " "	Bet Nir	20. 7.55	Kibbutz	Israel	49	170
5. " "	Lakhish	8. 6.55	Moshav ³	Israel	70	198
6. Inner coastal plain-east	Sede Moshe	2. 6.55	Moshav	Israel	226	294
7. " "	No'am	7. 8.55	Moshav	Morocco	448	471
8. " "	Etan	12. 6.55	Moshav	Tunis-Morocco	358	469
9. " "	Uza	6.11.50 ¹	Moshav	Tripoli	413	656
10. " "	Ahuzzam	30. 5.50 ¹	Moshav	Morocco	384	513
11. " "	Shalwa	25.12.52 ¹	Moshav	Tripoli-Tunisia	388	500
12. Inner coastal plain-west	Nogah	10. 7.55	Moshav	Iraq-Persia	363	543
13. " "	Ozem	24. 5.55	Moshav	Morocco	420	607
14. " "	Shahar	26. 6.55	Moshav	Morocco-Tunisia-India	320	362
15. " "	Nir Hen	26. 9.55	Moshav ³	Israel	56	45
16. " "	Zohar	2. 6.55	Moshav	Tunisia	362	246
17. " "	Sede David	1. 6.55	Moshav	Morocco	354	456
18. " "	Helez	5. 9.50 ¹	Moshav	Yemen	425	543
19. " "	Telamim	4. 8.51 ¹	Moshav	Tunisia	441	550

¹ The settlement has undergone reorganisation and was included in the planned framework of the Lakhish region.

² The settlement began as a Kibbutz and later became a co-operative Moshav.

³ The settlement began as a co-operative Moshav and later became a workers' Moshav.

⁴ In cases where the settlers came from other parts of the country and were not new immigrants, their country of origin is given as Israel.

and the settlers would work as labourers until they were capable of taking upon themselves the responsibility of managing their own farms. It was decided to set up an administrative production organisation in which the settlers would work as daily labourers. Accordingly, the land of each settlement would be cultivated as a whole and managed by a special team. This system was planned to be merely a transition stage. Consequently the economy was planned on the basis of individual farm units, and in accordance with this aim the irrigated land was parcelled out and the buildings erected. It was decided that the settlers should gradually be given livestock and increasingly larger parts of their land with a parallel decline in the managed farms until it was entirely handed over to them.

The Economic Base —. With the establishment of the Lakhish project, it appeared that the vegetable market in Israel had reached saturation point, and that a similar situation was imminent in the milk, egg and fruit markets. On the other hand there appeared to be the possibility of considerable expansion in the production of cotton fibre, seed grains as animal fodder and for human consumption, groundnuts, sugar beet, meat and wool. At the time of the establishment of the Lakhish

project these crops had passed the stage of agricultural experiments and it was assumed that they could be used for practical agricultural planning. It was finally decided, therefore, to base all new settlement in the Lakhish region on a type of 'field farm' the main agricultural products of which would not be directed to the final consumer, but would serve as the basis for a varied agricultural industry.

*The Principle of Regional Settlement*¹² —. The fifth and last principle was that of regional settlement. This principle both united and completed the others preceding it. With regard to the human element, it was thought that the rural centres would serve as a means of integration between the various communities in the homogeneous villages, whereas in relation with the economic base of industrial crops an urban centre would act as a collecting and processing focus for these industrial crops. The villages themselves were planned to include only a small centre containing the office, a small 'general store', a kindergarten, class I of the primary school, a small clinic, a club and a synagogue. The rural centre was to be common to 4-5 villages, and would contain an

¹² For principles of regional settlement see WEITZ & ROKACH, *op. cit.* WEITZ, *op. cit.*

TABLE 2: THE SETTLEMENTS OF THE PLANNED LAKHISH REGION – AREAS 1957
(areas in dunam)

Name of settlement	Gross area of settlement ¹	Planned agricultural units	Settled agricultural units	Size of unit	Unirrigated ²	Irrigated ²
1. Amazya	32,000	—	30	—	3,200	—
2. Nehusha	20,000	—	50	—	6,950	—
3. Bet Guvrin	10,000	120	60	71	6,970	115
4. Bet Nir	10,000	100	40	—	3,700	—
5. Lakhish	30,000	—	40	—	9,500	—
6. Sede Mosha	6,950	82	30	51	2,125	523
7. No'am	5,330	83	70	46	2,250	880
8. Etan	4,300	86	80	40	2,720	1,020
9. Uza	5,100	84	76	40	4,000	1,100
10. Ahuzzam	4,200	86	80	40	6,300	1,000
11. Shalwa	3,500	83	83	40	3,220	1,275
12. Noga	4,530	80	70	43	2,000	740
13. Ozem	5,370	89	89	43	1,880	2,300
14. Shahaar	5,010	87	74	43	2,670	1,100
15. Nir Hen	5,985	75	30	60	3,860	640
16. Zohar	4,000	80	70	41.5	2,850	600
17. Sede David	4,460	90	90	41.5	2,684	2,222
18. Helez	3,000	93	85	28	2,779	997
19. Telamim	3,700	84	79	28	4,564	528

¹ Denotes the area of agricultural land as allotted to the various settlements in those years.

² Cultivated land in 1957.

elementary school, other cultural and educational institutions for adults, social institutions and a regional clinic with suitable equipment in which a doctor and a nurse would work. Also included in such a rural centre would be a number of economic functions like a central store for clothing, shoes and general equipment; seed and fertiliser stores; collecting points for agricultural produce and a tractor centre to serve the villages. It seemed appropriate to limit the distance from any one of the villages to the village centre to no more than 2 kms., so that it would be within walking distance even for children.

Within the rural centre living accommodation were to be built for all the workers in public services in the various institutions such as: doctor, teachers, workers in the store, workers in the tractor centre, etc. By creating accommodations of a good level and quality it was hoped that good professional workers would be attracted to live there. Summing up: such a rural centre would increase the standard of services available to the settler, and at the same time result in considerable savings in maintaining these services.

The urban centre or 'country town' was to be in the centre of the region and its function was primarily to absorb the produce of the surrounding villages and to process it in various plants. In addition, it was planned to establish here services that could not be included in the

rural centres such as: garages, workshops, institutes of higher education and culture, branches of the settlement authorities etc.

The Establishment of the Settlements — The settlement of the Lakhish region was initiated in May 1955. Most of the settlers arrived during the following year. Four settlements that were established in the north east of the region (Tirosch, Gefen, Sedot Micah and Luzit) were later removed from the project. Consequently they do not appear in Tables 1 and 2, which offers details of all Lakhish settlements by sub-region. Also excluded are the settlements of the coastal plain as well as those of the inner coastal plain that were established beforehand and therefore show the 'traditional' economic structure. On the other hand, those settlements that existed beforehand as cereal growers and now have been replanned as irrigated settlements, are included in Tables 1 and 2.¹³ Kibbutz Sede-Yoav is also excluded because it is not an integral part of the Lakhish project.

In addition to the agricultural settlements two rural centres were founded in the region: Nehora on the inner coastal plain – west, and Even Shmuel on the inner coastal plain – east. A new town was founded – Kiryat Gat. Thus the

¹³ The data of all the tables come from the Statistical Office of the Settlement Department of the Jewish Agency. Thanks are due to Mr. Felix, Director of the Office, who helped the author collecting the data.

TABLE 3: THE SETTLEMENTS OF THE LAKHISH REGION – AGRICULTURAL AREAS 1968 (areas in dunam)

Name	Physical area, cultivated	Units-lots	Units-settled	Physical area Unirrigated	Physical area Irrigated	Natural pasture
1. Amazyia	7881	—	—	7191	690 ¹	23500
2. Nehusha	—	—	—	—	—	—
3. Bet Guvrin	9028	—	—	7962	1066 ¹	12000
4. Bet Nir	11069	—	—	9343	1726	22850
5. Lakhish	11309	60	52	10000	1309	30000
6. Sede Moshe	—	82	61	—	—	—
7. No'am	5079	83	75	2394	2685	4700
8. Etan	4443	70	66	2187	2256	—
9. Uza	6987	84	84	3183	3174	—
10. Ahuzzam	8476	87	76	5578	2898	4000
11. Shalwa	5156	83	70	2471	2685	—
12. Nogah	5202	83	82	1596	3606	—
13. Ozem	5714	89	88	2960	2754	—
14. Shahar	4443	78	63	1878	2565	1845
15. Nir Hen	5933	75	13	4112	2121	—
16. Zohar	3810	80	45	2284	1526	—
17. Sede David	5079	90	74	2727	2352	—
18. Helez	5714	93	84	3246	2468	5050
19. Telamim	5079	84	79	1876	3201	—

¹ Most of the irrigated areas are not near the settlement but consist of land in the plain region that were made available to these settlements.

TABLE 4: THE SETTLEMENTS OF THE LAKHISH REGION, CULTIVATED AREAS 1968 (areas in dunam)

Name	Cultivated area. Total Unirrigated	Unirrigated industrial crops only	Irrigated area	Irrigated industrial crops	Plantations	Flowers
1. Amazyia	5885	—	655	330	530	—
2. Nehusha	—	—	—	—	—	—
3. Bet Guvrin	4950	550	1630	1500	414	—
4. Bet Nir	9230	—	1060	830	606	—
5. Lakhish	9620	800	379	—	723	39
6. Sede Moshe	—	—	—	—	—	—
7. No'am	2158	—	1288	460	411	—
8. Etan	2104	—	649	127	354	—
9. Uza	2802	—	1072	206	408	—
10. Ahuzzam	3329	341	1321	341	428	—
11. Shalwa	2156	—	572	112	419	—
12. Nogah	981	—	1737	772	403	22
13. Ozem	1630	—	1788	925	462	7
14. Shahar	1071	286	1286	339	378	711
15. Nir Hen	3142	—	348	155	397	—
16. Zohar	1408	85	993	40	333	—
17. Sede David	2420	—	1130	289	372	9
18. Helez	1959	—	1167	489	864	—
19. Telamim	1504	—	659	235	1048	—

planned Lakhish region included 22 settlements: 4 kibbutzim, 15 moshavim, 2 rural centres and a town. The remainder of our discussion will deal with the development of these settlements since their foundation, and with the degree of realization of the basic principles.

The Position of the Settlements of the Original Lakhish Region Today
The Economic Situation of the Settlements and

the Influence of Physical-geographical Conditions —. Thirteen years have passed since the initiation of the planned Lakhish project. It is reasonable, therefore, to examine the position of the settlements that were established or re-organised in the frame work of this planned project.

Tables 3 and 4 show the land use position of the settlements of the Lakhish region today. The tables only reveal a number of details, but

nevertheless enable to draw several conclusions. A survey and interviews carried out by the author in the various settlements complete and extend these conclusions.

Physical-geographical conditions appear to have had some influence on the degree of success of the settlements of the Lakhish region. This is expressed first and foremost in the *High Shefelah*, where two settlements were founded within the framework of the Lakhish project: Nehusha and Amazyia. The first is uninhabited today and its lands are cultivated by another settlement from outside the region. The position of the second is also problematic. Its population is very small and it is far from having reached a stable economic base. It appears that a lack of sufficient land in the region and the non-profitability of bringing water from the north to these high regions are the main factors that have led to the failure of these settlements. In order to overcome these problems it was decided, over the years, to allocate to them land in the inner coastal plain. But this allocation came too late, and it was unable to replace the land and water that were lacking near the settlements. It also appears that the long distance of these settlements from the centres of population and from other agricultural settlements was a disadvantage to development. Similar factors were influential in the neighbouring settlement project in this area, i.e. the Adullam region. Most settlement here was also concentrated in the High Shefelah. The difficult soil conditions, the water shortage and isolation of the region, were in the case of the Adullam region the most outstanding difficulties facing the colonisation project. It should also be mentioned that Jewish colonisation in Israel usually succeeded on the basis of intensive irrigated cultivation. In the settlements of the Lakhish region in the High Shefelah and likewise in the settlements of Adullam the settlers were not given the opportunity to take up this type of settlement. It should not be forgotten, however, that together with all these factors the human element played a significant role. Most of the settlers who were sent to the Adullam region were new immigrants without agricultural experience, and the challenge that faced them was beyond their capacity. In the Lakhish project it was mainly Israeli youth that were sent to the settlements of the High Shefelah, but they were in the main sent within the framework of their military service and did not consider the colonisation of this region as their main aim in life. There was a high rate of population movement and no large groups

could be found to remain in the region in order to stabilise its economic base.

The influence of physical geography is also felt in the *Low Shefelah*, but here the results were different. Two settlements were established here within the Lakhish project (Lakhish and Bet Nir). In addition a third settlement (Bet Guvrin) which had been founded several years before, underwent reorganisation. The position of the first two settlements is satisfactory, while the third is still facing integration problems, although it has improved a great deal. The decision to site here a small number of settlements with large allocation of land was justified, as the land was sufficient for the needs of the settlers. In addition small quantities of water were brought up here from the Yarkon-Negev pipeline in order to help with irrigation (see Fig. 1). The advantage of the Low over the High Shefelah lies in the existence of much larger areas that are suitable for cultivation and also in the lower topography of this region. Beside these two physical factors contributing to the success of the settlements of the Low Shefelah, the human element played a decisive role. The two new settlements were occupied by Israeli youth who regarded settlement here as their primary aim. In moshav Lakhish they were the sons of veteran moshavim or members of kibbutzim who had left them as they wanted a different way of life in a workers' moshav. Kibbutz Bet-Nir was settled by a group of youth of a kibbutz organisation. On the other hand, the veteran settlement of Bet Guvrin has been hampered by its high rate of population mobility and the inability to find a suitable group of settlers who see the development of the settlement as their primary aim.

The influence of physical geography in the third region — that of the *inner coastal plain*, is generally advantageous: the soils are fertile and water was available from the Yarkon-Negev pipeline. These conditions helped considerably towards the development of a number of settlements whose members had come without previous agricultural experience. Despite this, the differences in the agricultural position of the various moshavim of the region cannot be explained solely by the facts of physical geography, and it is the human element that is decisive in determining the degree of success of the settlement. The subject of man's influence will be discussed in the next paragraph.

The Influence of the Human Element and the Application of the Principle of the Directed Farm —. The influence of the human factor in

the degree of success of the agricultural settlements of the Lakhish region is particularly outstanding in the settlements of the inner coastal plain. Here the settlers were given ideal conditions for agriculture, fertile soils and adequate water supply. The problem was to train people who had no former agricultural experience, and who in many cases were not very enthusiastic about the idea of being turned into farmers.

In connection with the discussion of the human element, first mention should be made of the great importance of the principle of the 'managed farm'. The new settlers did not receive ownership rights over the farms immediately upon their arrival, but worked initially as hired labourers on their farms while receiving payment from the Jewish Agency. Only when they had become adjusted to the place and had shown that they had learnt to cultivate the land and were capable of managing the farms themselves, did the land pass gradually into their hands. In some cases the settlers even requested that the land be given to them more quickly, so that the aim of the settlement authorities was attained – that the settlers should appreciate the property that they were receiving. It would appear that this method was one of the main reasons for the lack of outmigration from the moshavim of the Lakhish region, in contrast to the situation that was prevalent in many moshavim that were established during the period before the establishment of the Lakhish project.

Another point worth emphasising is that the administration of the Lakhish region, the agricultural supervisors and other workers devoted themselves wholeheartedly to the care of the new settlers in the agricultural villages. It is hard for anyone to integrate in a new place, so how much more for new immigrants in a new country, in a strange place and in work in which they had no experience. The devoted care of the workers in the absorption of the immigrants in the new region was of long-term importance in their integration in the agricultural villages. Nevertheless the devoted care of the supervisors of the Settlement Department of the Jewish Agency and the gradual process of handing over the farm to the new settlers were not always successful. There are several settlements in the Lakhish region where most of the inhabitants do not cultivate their land. For example: Zohar and Etan, where the settlers work outside the moshav as labourers in citrus-groves managed by the Jewish Agency or as agricultural labourers in other places, or even work in Kiryat Gat and Ashqelon. Their land

is cultivated en bloc by development companies from Kiryat Gat, with the support of the Jewish Agency, and cotton and other crops are grown. The settlers receive rent paid to them by the company, a development running totally counter to the ideology of the moshav movement.

In contrast to the unsuccessful settlements there are others such as Shahar, Nogah, Nómam and others that appear to have reached agricultural stability and demand extensions of their agricultural land, more water and help in the development of additional branches of agriculture. The degree of consolidation and success of the various settlements often finds its expression in the outer and inner view of the villages and their houses: extensions to the dwellings; care of the gardens and streets; the addition of modern equipment such as gas stoves, refrigerators, television and modern furniture in the houses; sun-heaters for hot water on the roofs of the houses; agricultural equipment and tractors etc., and finally private cars for the convenience of the settlers. But it is dangerous to determine the socio-economic position of the settlement merely on the basis of its outer appearance. The cultural level of the inhabitants of the various settlements is normally the determining factor in this outward appearance. For example, in moshavim whose population consists of Jews from Eastern communities, the yards and houses are often neglected, but there are many television sets. On the whole, however, one may learn a considerable amount about the state of the settlement from its outward appearance.

The influence of the human element is particularly outstanding in the case of Sede-Moshe. This moshav was founded together with the other settlements of the Lakhish region, but as its population consisted of people from other parts of the country, in many cases outmigrants from kibbutzim, with agricultural experience, who saw their future in the settlement, they led to the success of the moshav. Today the settlement is no longer under the direction of the Jewish Agency, and it has public buildings, and a swimming pool. Most of the settlers own private cars. The houses have been radically altered from their original form and well tended gardens surround them. It is interesting to note that the population is not homogeneous. Some of the settlers are from Eastern and Central Europe, others from eastern countries and a few from South America. But all of them have been in Israel for a relatively long period and had agricultural experience before arriving in this settlement.

In many settlements of the Lakhish project emphasis was laid on the homogeneity of the population. Great efforts were made to ensure that the inhabitants in each village were of the same community and country of origin and in some cases even linked by family relationships. To this end the size of the agricultural settlements was limited and the number of farm units did not exceed 80. It appears that this factor was exaggerated. It is true that this approach considerably lessened, particularly in the initial stages of the establishment of the settlement, the causes of conflict amongst the inhabitants of each village. This was particularly evident in contrast to former settlements that included immigrants from many and distant countries. On the other hand this factor had no influence on the success of the settlements from the agricultural point of view. In fact, the limitation of size of the agricultural settlement together with its land allocation, was quite a disadvantage. This will be discussed in the next paragraph.

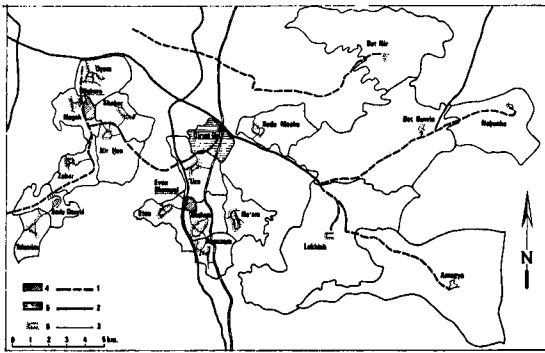
Agricultural Planning and Economic Consolidation —. Two further principles guided the planning of the Lakhish region. These were agricultural planning and the attempt to provide a special economic base. It appears that from the technical point of view the physical planning was successful and satisfied the requirements. From the point of view of actual agricultural planning it is clear that the basic assumption not to establish agricultural settlements in this area without bringing water from the north was correct. The partial success of the settlements of the region in the inner coastal plain is due in the first place to the possibility that was given to the settlers to use quantities of water that were brought from the north. The soil survey that was carried out was also important, although it did not cover the whole region. The siting of the agricultural settlements also proved successful. But it appears that their distribution is not so successful. This distribution was determined on the basis of the principal of regional settlement, but the original plan was not completed and not all the settlements were in fact established. As a result part of the region is very densely settled but another part too sparsely.

It is doubtful whether the size of farm unit that was fixed at 40 dunam for the settlements of the inner coastal plain, is large enough, particularly if we take into account the size of the family in the immigrant settlements. The relatively small number of farm units per village is not

justified. This was decided, as mentioned before, in accordance with the intention to maintain homogeneity of the population of the settlement, and with the aim of transferring all service and supply institutions as well as the subject of intermingling of the communities, from the village level to that of the rural centre. It will be pointed out later that also these centres did not realize all the hopes that were attributed to them. It is possible that if larger villages had been built this would have constituted an advantage to the rural centres.

With regard to the economic base, it appears today that the aim to have the settlements of the Lakhish region specialise on industrial crops has not been realised. There are two main reasons for this. Firstly the structure of small units of the moshavim proved basically unsuited to the extensive cultivation of industrial crops, especially because these crops, such as cotton and groundnuts, require a high level of mechanisation. Secondly the settlers quickly began to prefer growing crops that would bring in high returns directly. In the early years the settlers in a number of moshavim grew their crops according to the instructions and directions they received. After a short time they fell into debt. From then on payments for the crops were deducted to repay the debts that were mounting up in the moshav account. In order to prevent these deductions, the settlers began, at least on part of their land, to grow crops, mainly vegetables, without control, and sold them directly in Kiryat Gat on the Monday- and Thursday-market. In this way they received direct payments that were not deducted from their debts.

Table 4 shows the proportion of industrial crops in the various settlements of the Lakhish region in 1967 as being insignificant. The other irrigated field crops are generally potatoes and vegetables. Some settlements, particularly where the settlers are industrious, have recently started the cultivation of flowers for export. Some moshavim have begun to develop other specialised branches: in Lakhish turkeys and fattened fowls and also flowers; in Sede-Moshe poultry, plantations, vegetables; in Amazyia poultry; in Bet Guvrin dairying. The common citrus grove has also begun to take up a more important place in most of the moshavim. In conclusion it may be said that some common agricultural feature does exist today among the settlements of the planned Lakhish region: they are not based on dairying, while poultry and field crops serve as the main branch of activity. The planning objective that industrial and export



- 1 - First class and Second class road
- 2 - Railway
- 3 - Border of Settlement area
- 4 - Rural Centre
- 5 - Urban Centre
- 6 - Pattern of villages

Fig. 3: Pattern of villages

crops should form the main sector of the field crops has not been fully realised.

Regional Settlement – the Rural Centres —
 The Lakhish settlement project received its publicity particularly as a result of its identification with the idea of regional colonisation. In its framework a hierarchy of three levels of settlement was considered: the agricultural village, the rural centre and the country town. As the former would be small for reasons indicated earlier, services would be concentrated in rural centres, each of which would serve 4-5 surrounding settlements, all of them within walking distance.

According to these plans the village centres of Even-Shmuel and Nehora were set up. The first was in the centre of five moshavim (Uza, Ahuzam, Shalwa, Noam and Etan) and the second to serve four moshavim (Ozem, Nogah, Shahar, and Nir-Hen). Let us examine these two centres today (see Fig. 1 and 3).

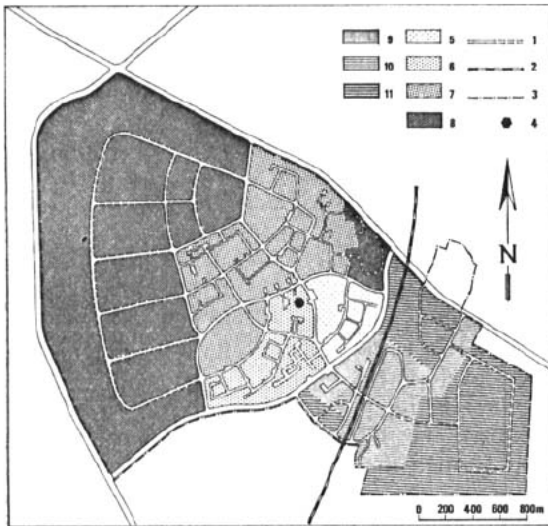
Even-Shmuel serves primarily as an educational centre, not only for the moshavim in its immediate vicinity, but also for other more distant settlements. The point to emphasise is that it is a religious educational centre. In fact it forms a branch of a larger centre just to the north of the original Lakhish region, Shafir, which is the educational centre of religious settlements over there. It should be mentioned that religious settlements will send their children to a religious educational centre even if it is a long way from home and will not use a local school if it is non-religious. For the same reason the small centre of Telamim developed in the western Lakhish region, because the larger centre of Nehora

did not satisfy the requirements of the religious settlers. Similar phenomena inclinations (although more political than religious) are prevalent among the kibbutzim. Consequently the children of Bet-Guvrin and Bet Nir go to kibbutz schools and not to the regional schools. In the workers' moshavim there is no particular ideology regarding schools; children of moshavim will even go to school in the town, if it is the nearest for them. In the Lakhish region the children of the moshavim Lakhish and Sede-Moshe go to school in Kiryat Gat.

Another fact that had considerable influence on the development of the village centre Even-Shmuel is its proximity to Kiryat Gat (only 4 kms.), which upset the hierarchical system that formed the basis of planning, and is apparently responsible for the fact that Even-Shmuel did not develop as a service and supply centre at the intermediate level between the village level and that of the country town, as was intended.

The second centre – Nehora – lies at a considerable distance from the towns of Ashqelon and Kiryat Gat, an important explanation for the fact that it developed into a bigger centre than planned, serving not only the four surrounding moshavim, but six others as well. Besides different general (non-religious) schools, it contains a large store, a bank, a cinema, clinic, restaurant, etc. Another explanation for this development is due to a personal factor – the initiative of the Guber family. This family lost two sons in the War of Independence in 1948. The parents decided to move to a new settlement and to devote their energy and time to help integrate new immigrants. They chose Nehora. Their initiative, devotion and their connections with many groups made a valuable contribution to the development of the centre, with the result that the settlers of S.W. Lakhish (Zohar, Sede-David, Telamim, and Helez) who were originally not intended to use this centre, also began to visit Nehora. Subsequently the plan to develop another village centre in their vicinity was abandoned. In addition other settlements to the north outside the planned Lakhish project became included in the hinterland of Nehora (such as Yad Nathan and others). Nehora also contains the residences of those working in the services there, like teachers, doctors, clerks, tractorists, etc., which led to a greater degree of consolidation of the region.

The Urban Centre Kiryat Gat — With the setting up of the Lakhish project it was intended to build a central city. The idea was that a small



- 1 - Road existed and planned
- 2 - Railway
- 3 - Border of Kiryat Gat area
- 4 - Centre of Kiryat Gat
- 5 - Residence area - First stage
- 6 - Residence area - Second stage
- 7 - Residence area - Third Stage
- 8 - Planned Residence area
- 9 - Industrial area - First stage
- 10 - Industrial area - Second stage
- 11 - Planned industrial area

Fig. 4: Kiryat Gat

country town would be built for a few thousand inhabitants in order to serve the new settlements of the Lakhish region, and that industrial crops of the agricultural villages would be processed in the town which would serve as a shopping and service centre for all the settlements of the region at a higher level than that of the village centre. But events took a different turn. The town developed and grew much more than had been imagined. The large wave of immigration of Jews from Poland and other countries who reached Israel immediately after the beginning of the Lakhish project in 1956 made it essential to find a place to absorb them. It was decided to bring them to Kiryat Gat. The town began to grow rapidly. Additional industrial plants were built there to employ the town's growing population. Thus the town lost its character as a country town in the Lakhish region and turned into a development town like many others in Israel. Today its population has reached 20,000 and considerable growth is expected in the near future. On the other hand all other settlements of the original Lakhish region have a population total today of only 7,000.

Another difference between the original intentions for Kiryat Gat and its present development is the type of building in the various

neighbourhoods. Initially dwelling units were built on one storey with land for agricultural activities round the houses, and the extent of the built-up area was relatively limited. Afterwards there was a change to the method of building of two-family or two-storeyed houses. Later still whole neighbourhoods were built on the principle of 'Neighbourhood units'. Today tall multistoreyed blocks at high densities are being built as in other development towns. There is even talk of demolishing the one-storeyed houses with the agricultural plots and replacing them by denser residential building. This has all taken place within the span of ten years.

A third change concerns the site of the town. The planners intended to build it in the centre of the region, but specifically not on the Tel-Aviv-Beersheva road to prevent it from becoming a wayside town of inns and restaurants. Consequently it was placed a few kilometres eastwards. Today the trend of events is precisely what the planners did not want: the town is becoming a junction on the Tel Aviv-Beersheva axis, and its neighbourhoods and buildings are approaching the road (see Fig. 4).

In addition it should be pointed out that the eastern hilly section both of the Lakhish region and to the south of it, was not populated by so large a number of agricultural settlements as expected. On the other hand the coastal plain of the region and of the areas to the north and south of it were densely settled by agricultural villages, which drew and continue to draw the development of the town to the west.

Another factor that brought the planners to remove the site of Kiryat Gat to the east, some kilometres away from the Tel Aviv-Beersheva road, was the wish to remove it as far as possible from the sphere of influence of Ashqelon. The result of this removal is that all the settlements of the Lakhish region established in the western sector (the Nehora group and south of it) are linked today to Ashqelon and not to Kiryat Gat. For the town of today this makes very little difference as it is now a normal development town similar to the others in the south of the country that are based on industrial plants, but from the planning point of view it would appear that here too the status of Kiryat Gat as the central town of the Lakhish region has not been attained.

The real development of Kiryat Gat as a large town in southern Israel arouses further questioning on the justification of the siting of the town. The planners did not want to locate the town as far east as the hills of the Shefelah, since

they thought of it as a small country town whose inhabitants would be involved in part-time agriculture on plots around their houses. Accordingly the most easterly section of the inner costal plain was better than the Shefelah. As Kiryat Gat grew and turned into a large development town, the built-up area of the town extended and invaded considerable agricultural areas. Had the planners of Kiryat Gat known what we know about it today, that it would not lie in the centre of the Lakhish region and would not serve merely as a country town for the Lakhish region, they might have sited it elsewhere. If they had moved the town still further eastwards and sited it on the hills of the Low Shefelah or still further east on the hills of the High Shefelah in the region where agricultural settlements were not integrated, they would on the one hand have saved agricultural land, and presumably have enhanced a greater development in the eastern sector of the Lakhish region. The establishment of Kiryat Gat as a development town in the east of the Lakhish region would also have strengthened the eastern sector of southern Israel in the line of towns: Jerusalem-Bet Shemesh-Beersheva, and would have removed it still further from the competitive neighbourhood of Ashqelon. It is perhaps true that from the point of view of Kiryat Gat itself its present site near Plugot Junction and the Beersheva-Tel Aviv road is much more convenient. The much closer proximity to the settlements of southern Israel and the Negev which provide a considerable proportion of the raw materials for agricultural industry gives it considerable economic advantages. But from the point of view of planning of the country it seems that it would have been preferable if Kiryat Gat had developed to its present size at a more easterly site.

Summary and Conclusions

A summary of our discussion on the original Lakhish project and its present situation leads to the following conclusions:

a) Even today, agricultural planning should not ignore the influence resulting from the conditions of the physical geography of each region.
b) Various theories are good and often important. But they should always be adapted to reality, and there should be no hesitation about altering them in changing conditions. In the case of the Lakhish region it appears that the village centres were planned for too small a number of settlements and the regional centre for too small a region from the agricultural point of view.

c) In planning any region with whatever purpose it is important to think not only of the region itself but also of the general surrounding. A region does not exist in a vacuum. Its dimensions should not be forgotten and its value should neither be under- nor overestimated. In the case of Lakhish it appears that the extent of the original Lakhish region was exaggerated. The planners did not think enough about the links that were likely to be created between the newly settled region and the neighbouring areas that had been settled before. In geographical terms it may be stated that the 'site' of the region was carefully planned whereas the 'situation' was almost ignored.

d) Regional co-operation is a tool and like other tools it can increase man's success. But it is not an objective tool like the soil, water or other similar ones, but as a subjective tool it must be adapted to man. In this respect it is worth pointing out that organised regional co-operation merited particular and interesting development in Israel even before the establishment of the Lakhish project. Regional education centres, as well as service and industrial centres, are found in many parts of the country today. This co-operation began to develop in Israel first and foremost as a result of the activity of the human element, that is the Israeli agricultural settler, and not because of the application of various planning theories.

e) The social element is in fact the determining factor in the success of agricultural settlement today. Man has his own desires and wishes. If planning is to be successful, man's outlook must be appreciated and planning must be adapted to it.

People do not act solely according to laws and planning models. They possess their own ideological beliefs and desires. In the case of the Lakhish region it was first thought that the plan would co-ordinate all the different forms of settlement within a single framework. It was hoped, for instance, that both religious and non-religious moshavim, kibbutzim, training farms, etc. would all be merged into one planned framework of regional settlement, but it became clear that sometimes social factors are stronger than regional ones. Thus the religious moshavim set up their own education centre, and the kibbutzim did not merge into the regional framework in any way. Consequently if successful planning is to be achieved, the ideology and belief of man and society to be settled must be considered. Planning must suit, or at least not clash with the ideological realities existing in the area under discussion.