

A STUDY OF THE RURAL ECONOMIC PROBLEMS OF SISTĀN AND BALUCHESTĀN*

The area of the Ostān Sistān and Baluchestān is 17,783,200 hectares and the total area of cultivated land, excluding natural pastures, forests and common fallow lands, is 128,840 hectares, or 0.72 per cent of the total area of the Ostān. The surface area of lands planted with annual crops is 74,931 hectares (of which 1,335 hectares are destroyed before reaching the harvest stage). Of these lands 79.24 per cent are irrigated and 20.76 per cent dry farmed. Fallow lands in Sistān and Baluchestān consist of 48,142 hectares, of which 95.75 per cent are irrigated and 5.75 per cent are dry-farmed. Fallow lands not exploited consist of 2,780 hectares making a total of 50,922 hectares fallow in the province. In addition, some 482,500 hectares of land are capable of development without undergoing much change. If the fallow system were to be abandoned and all cultivable lands properly used, the area of cultivated land could be raised from 128,840 hectares to 662,262 hectares, i.e. increased by 414.018 per cent. Obviously, such an increase could not be accomplished without large investments and basic changes in the farmers' cultivation methods and it would need many years. But in any case, this is the only way in which agricultural production and farming income can be raised in this region.

The area of artificial pastures in Sistān and Baluchestān (all irrigated) is 314 hectares and the area of unexploited natural pastures is 877,000 hectares. If these were properly utilised they could be most effective in improving the livestock economy of this Ostān.

According to the 1335 (1956) census, the population of Sistān and Baluchestān is 428,363 of whom 91.3 per cent are rural and 8.7 per cent urban dwellers.

*All the figures presented in this section, whenever a specific source has not been mentioned, are taken from the 1339 (1960-1961) agricultural survey of Iran (*Amārgiri-ye keshavarzi-ye kol-e keshvar*, Tehran, Ministry of the Interior).

The 1960 agricultural survey of the country gave a figure of 374,700, made up of 89,850 households with an average of 4.17 persons per household for the rural population. Out of the 89,850 rural households, 47,700 held land, 22,500 held no lands (and were not agricultural operators) and 19,650 were operators with no lands. The two figures for operators with no land and for non-operators show the numbers of the *xoshmeshins* of Sistan and Baluchestan. That is to say, 42,150, or about 47 per cent of the total rural households of the Ostan. The stable population of Sistan as calculated by the 1345 (1966) census was 454,996 (232,488 males and 222,508 females) divided into 101,534 households.²

If we divide the 128,840 hectares of farm land of Sistan and Baluchestan by the number of operating households holding land, we find that each household holds an average of 2.7 hectares. And if we assume an average of 4.17 members per operating household, the area of land per capita is 0.64 hectares.

If we include non-operating households and operating households with no land in this calculation, the acute shortage of farming lands and congestion of the rural population of Sistan and Baluchestan becomes evident.

The 2.7 hectares calculated, on average, for each operating household, does not show the difference between the group who own only a small plot of land and those who own a great deal. This difference is shown in Table 1.

On the basis of Table 1 we conclude that 50.9 per cent of the operators, who own less than one hectare of land, cultivate 7 per cent of the total area of Sistan and Baluchestan, whereas 64 per cent of the operators owning more than 50 hectares, have at their disposal 31.7 per cent of the lands of this Ostan, and 41.41 per cent of the total operators who own 1 to 5 hectares cultivate 40 per cent of the lands.

But as Table 2 shows, a major problem is the existence of many different plots of land and their dispersion, both in small and large holdings, which will create difficulties in working with agricultural machinery in the future. Even under present conditions, the small, scattered units (4,007 pieces of land, with an average area of 0.67 hectares to

2. Plan Organization, Iranian Statistical Centre, *1966 Census*. Vol. 168, Esfand 1346. (February-March 1968).

each holding in Sistan and Baluchestan),³ constitute one of the difficulties of raising local farming income.

Table 1
Baluchestan and Sistan 1339(1960-1961), The distribution
of Agricultural Operators by Area of Holding

Category of holding	No. of operators	Per cent	Area of holding	Per cent
Less than 0.5 has.	16,500	50.9	3,421	7
0.5 to less than 1 ha.	7,425		5,600	
1 to less than 2 has.	70,500	41.5	10,096	40.1
2 to less than 3 has.	5,175		12,388	
3 to less than 4 has.	2,250		7,713	
4 to less than 5 has.	5,025		21,493	
5 to less than 10 has.	2,475	5.3	16,741	13
10 to less than 20 has.	788	1.7	10,586	8.2
20 to less than 50 has.	-	-	-	-
50 to less than 100 has.	150	0.32	13,264	10.3
100 to less than 500 has.	150	0.32	27,538	11.4
Total	46,988	100	128,840	100

Table 2
Sistan and Baluchestan 1339(1960-1961)
Number and Area of Plots in Operating Units (holdings)

Category of holding	No. of units	Area	No. of plots	Av.no. plots per unit	Av. area of plot (has.)
Total operating units with land.	46,988	128,840	191,250	4.07	0.67
Operating units less than 0.5 has. to less than 1 ha.	23,925	9,021	73,125	3.05	0.12
Operating units of 1 to less than 5 has.	19,500	51,690	91,725	4.7	0.56
Operating units of 5 to less than 10 has.	2,475	16,741	12,075	6.87	1.38
Operating units of 10 to less than 20 has.	788	10,586	2,075	3.9	3.44
Operating units of 20 to less than 100 has.	150	13,264	3,750	25	3.52
Operating units of 100 to less than 500 has.	150	27,538	7,500	50	3.67

The division of land on the basis of the present non-economical *na-saq*-holdings will not help to solve technical difficulties and the problem of the small area of most operating units.³

As shown in Table 2, the average area of plots, even in the case of the group of holdings of 100 to 500 hectares, does not exceed 3.67 hectares. With respect to the units of 5 hectares, this figure is 0.68 hectares.

There are no accurate data on the income level of the villagers of Sistan and Baluchestan, and no judgement can be expressed in this connection, except on the few villages visited by the Group. However, the small yield obtained by using primitive production methods, and the fact that most of Sistan and Baluchestan's lands are planted with low-value products like wheat and barley and that livestock-raising is not very common in the district, means that it is probable that the per capita income of the villagers of this district does not, on the whole, exceed the average income of the villages inspected by the Group.

Out of a total of 74,931 hectares planted with annual crops and fodder, 51.15 per cent is devoted to wheat, 17.84 per cent to barley, 4.13 per cent to rice, and 26.85 per cent to other crops such as millet, corn, cereals, cotton, oil seeds, vegetables, alfalfa and other plants. Thus the greatest part of the arable lands of Sistan and Baluchestan grow low-value products. In addition yields are low especially on dry-farmed lands. For example irrigated wheat lands yield 1,069 kilograms per hectare and dry wheat lands 93 kilograms per hectare. The yield of barley is in general 1,167 kilograms and that of rice (in paddy-fields) 3,312 kilograms per hectare. While the cultivation of rice has been confined to the operation of less than 5 hectares, cotton is grown only in holdings larger than this.

The most important perennial crop grown in Sistan and Baluchestan is dates, the palms of which cover some 85 per cent of the area planted with perennial crops. The largest part of this land is landlord owned and 24 per cent of the date-palms are dispersed around the fields and in other areas. In 1339 (1960-1961) 54,999 tons of dates were grown. The other

3. Agricultural holdings in Iran, consist, on the average four plots of land the average area of each plot being less than one hectare (0.99). *Tahqiqat-e Eqtesadi (No. 13 & 14 p. 157)*.

important perennial crop is citrus fruits of which oranges constitute only a small part. In 1339 (1960-1961) the citrus trees yielded a crop of 1,829 tons.

The primitive production methods employed in Sistān and Baluchestān are indicated by statistics relating to the power employed in farming work. In the year 1339 (1960-1961) about 60.74 per cent of operators made use only of animal power for their cultivation work; 2.23 per cent of machine power; 1.59 per cent of both machine and animal power and 5.42 per cent of only man-power.

Livestock-raising in Sistān and Baluchestān is not practised on a large scale. Thus, in the year 1960, 3.20 per cent of the cattle, 1 per cent of the buffalos, about 2.11 per cent of the sheep and 7.14 per cent of the goats of Irān were found in Sistān and Baluchestān. The buffalos are kept mainly by a group of 19,650 households which have no land and, out of 3,750 head of buffalo, 2,850 (76 per cent) belong to this class. The rest belong to agricultural operators holding plots of mostly over 5 hectares. The existence of a class of livestock raisers who have no lands is an indication that the keeping of buffalo is an almost independent profession which, by encouraging and extending the cultivation of fodder and preservation of the pastures of this Ostān, could be a new and substantial source of income for the villagers.

The hiring of plough animals is quite common: 46.3 per cent of the operators have borrowed ploughing animals from the *gāvbands* but the proportion of operators who have borrowed such animals differs in various holding classes; that is to say, operators who own between 0.5 and 1 hectares of land hire 53.53 per cent of the plough animals. The percentage of 1 to 2 hectare land holders who hire ploughing animals is 56.57 per cent while those of 2 to 3 hectares hire 76.81 per cent. Thus, those who have less land and are not well off, hire more than the others. For this reason, with the increase in the area of lands under operation and economic improvement, there is a gradual decrease in the percentage of those who borrow plough animals. Thus 61.52 per cent of the agricultural operators who own 10 to 20 hectares, hire 61.92 per cent of the plough animals while in the subsequent classes of 20 hectares and over, the number of such people falls to zero.

But, in addition to sustaining the expenses involved in hiring

plough animals, the farmers of Sīstān and Baluchestān also have debts on which they pay heavy interest. Out of 66,638 operators in Sīstān and Baluchestān, 9,900 or 14.85 per cent, have procured loans of which 2,550 households (25.5 per cent) have obtained loans from the government (Agricultural Bank or the the Rural Fund) and the rest from non-governmental sources as follows: 22.44 per cent from the landlords and 77.56 per cent from others such as shop-keepers, *pīlevārs* (hucksters) and *gāvbande*.

If we consider the very high rate of interest on non-governmental loans we can understand from these figures what a heavy burden lies on the shoulders of the rural population. The total amount of government loans extended to this region is about 75 thousand rials; and that of the non-government loans about 4,515,000 rials. Out of the non-government loans, 21,990,000 rials, or 48.70 per cent have been extended by *pīlevārs* and shopkeepers to the farmers. In general, both government and non-government loans are rather small in quantity, the reason being the lack of communication and roads required to connect this Ostān to other parts of the country.

In the 1339 (1960-1961) Agricultural Survey, the status of agricultural holdings, from the standpoint of types of ownership, were studied. According to this survey, 68.63 per cent of the agricultural operators holding land own their own land, and 24.66 per cent of them hold lands owned by landowners.

Evaluation of the Statistics on the Ostān's Rural Population

According to the 1960 survey, the population of Sīstān and Baluchestān is 374,700. Of this number, 255,600 (or 68 per cent) are over 10 years old, of whom only 13.96 per cent are literate. 57.27 per cent of the population over ten years are inactive and 67.6 per cent of the active population are engaged only in agriculture. Only 6.18 per cent of the active population are engaged in non-agricultural professions.

As shown in Table 3, about 44 per cent of the total population are below the age of 15, and are at present economically inactive but will gradually reach the stage of needing jobs. Therefore, it is most essential for them to obtain jobs in non-agricultural sectors.

As already pointed out, the pressure of population on the land under

present conditions, is very heavy and the active employment of new labour power, without an increase in the number of the potential unemployed, is unimaginable.

Table 3
Sistān and Baluchestān, 1339 (1960-1961)
Distribution of Rural Population

Age groups	No. of persons in each group	Per cent of total population
Below 10 years old	119,100	31.78
10-14	45,150	12.04
15-19	23,250	6.2
20-29	52,350	13.97
30-39	53,100	14.17
40-49	37,350	9.96
50-59	30,100	5.36
60 years and over	23,250	6.2
Total	374,700	100

In addition, 6.2 per cent of the total rural population are above the age of 60. Hence, by considering the total population of under 14, half of the population are economically inactive. This actually manifests the concealed unemployment and hence the heavy burden on the shoulders of the active group whose age is between 15 and 59 and who constitute 50 per cent of the rural population.

Ostān: Baluchestān

Region: Bampur

Village: Nukjub

Date of Survey: 12th Farvardin 1344

1st April 1965

Nukjub, located at the eighteenth kilometre of the unpaved motor road which runs between Irānshahr and Bampur, is a village which, despite its excellent natural situation, is economically backward. This makes it a good case study for a survey aimed at deciding what kind of plan is best for introducing the ignorant and poverty-stricken villagers to modern agricultural methods and to develop the resources of the village in the shortest possible time. The establishment of a regional development plan and the employment of Italconsult, an advisory organisation, was meant to help in the fulfilment of this aim in Sistān, Baluchestān and Kermān. So the group thought it essential to assess the effects of this policy by making a study of the Bampur Plain Development Centre—otherwise known as the Rigkabud Centre - one of the model development centres set up by Italconsult in various parts of Sistān, Baluchestān and the Jiroft area in 1336 (1957-58). This, together with other centres was meant primarily to demonstrate modern agricultural methods, introduce new crops, and improve already existing produce.

The Rigkabud Centre has 100 hectares of land of which 70 are cultivated. A list of the experimental crops is given in Table I. Three hectares of the remaining land has been ploughed and awaits an opportunity on the part of the Centre to develop new crops.

The Centre's extensive use of fertilizer means that no land is left to fallow and the management told us that if more fertilizer was available they would be able to introduce an annual system of double cropping. Its farm machinery consists of three 5-horse-power tractors, one bulldozer, one combined harvester and four ploughshares and seeders. At the time of our visit two of the ploughshares were out of service and one of the two dynamos which provide all the Centre's electric power had broken

down. One of the management's great fears was that the second dynamo would go out of order and paralyse the motor pumps which provide all the irrigation water for the farm, thus putting an end to all agricultural activities. Broken equipment was a sight we frequently witnessed in all ex-Italconsult development centres, the reason being that this Italian organisation bought Italian equipment for which no spare parts are available in the region's towns and are extremely hard to find even in Tehrān. The Centre has a repair shop of its own in which attempts are made to service equipment.

Table I

Product	Hectares	Remarks
Wheat	17	Local seeds known as "red seeds" sown.
Oil seeds	5	Improved seeds from the Institute for the Improvement of Seeds and Saplings. These include sun-flower seeds, sesame and castor-oil.
Alfalfa & Lucerne	8	
Barley	4	Local seeds.
Summer crops	4	Including <i>carbuzeh</i> (melon) water-melon, cucumbers, honeydew melon, squash, cabbage, onions, potatoes beans.
Citrus grove	5.5	Including limes, oranges, and sour oranges.
Nurseries	5	
Experimental grain fields	1	
Herb fields	2	
<u>Installations</u>		
Wind barrier	5	Eucalyptus and tamarisk trees.
Buildings	5	Including a store house, servicing centres for equipment, dwelling places etc.
Irrigation channels	5.5	Various types of irrigation channels.
Total	67	

The technical cadre includes a young agricultural engineer who

graduated from the Faculty of Agriculture at Shirāz two years before the date of the survey and who is now manager; and one veterinary surgeon who attends to the 15 cows, 45 sheep and 8 goats. The rest of the members are as follows: one mechanic, two drivers, one tractor driver, one motor operator, four irrigators, one milker, one cow-herd, one gardener, two guards and about ten seasonal workers.

When the contract between the Plan Organisation and Italconsult was completed, arrangements were made to continue the development activities of centres of this kind under the supervision of the Institute for the Improvement of Seeds and Saplings. At present such centres are financed by the Plan Organisation's budget for regional development projects. Last year the Bampur Plain Development Centre's budget was 3,500,000 rials allocated for crop farming, livestock raising, maintenance of farm machinery, and the salaries of workmen. No budget was allocated for development activities outside the Centre's farm itself. The management told us that this sum was inadequate and had to be supplemented by their own commercial activities the income of which contributes to their expenses, any surplus going to the government. The Centre is able to plough 150 hectares of land outside its own farm, thresh 50 tons of seeds for nearby farmers, and spray 30 hectares of land with insecticides. In addition it earns some income from the sale of farm produce.

Most of the time and energy of the small cadre of trained personnel is spent on office work. Even with respect to internal affairs they have no power to take any initiative and must request the orders of the Zāhedān and Tehrān offices over the most trivial problems. The paper-work involved not only accounts for many direct financial losses (produce may rot by the time permission has been obtained to sell it) but also deprives the staff of any feeling of responsibility. The result of this is a pessimistic outlook and a feeling of exile and idleness which prevents them from undertaking even those tasks which are within their abilities and inclinations. This outlook, combined with the staff's inexperience can be identified as the direct cause of the appearance of virtual anarchy in their relationship with the workers. Altogether these factors have resulted in a situation in which the Centre, instead of being an active factor in the education and guidance of the people of this backward region, has become four irrelevant walls, the graveyard of its cadre and the capital

invested in it and a direct reason for the local farmers' cynical view of this kind of project.

This attitude was evident in all of the three villages we studied in the Bampur region in the neighbourhood of the Rikgabud Centre and in other villages we visited near to similar centres. The poverty-stricken farmers of these villages told us that they were forced to turn over a large proportion of their annual produce to the *gāvbands* as the rental for their plough oxen and that the Rikgabud Development Centre could give them fundamental help by allowing them to use its tractor (the fee for tractor ploughing is 90 rials per hectare). However the Centre, instead of doing this, rents its tractors to the tribal chiefs and other local influentials. Thus the small-scale farmers, if they do want to use a tractor to plough their land, must pay a rental of 160 rials on the open market.

The Centre's management tried to explain away this situation by citing their own administrative limitations and told us that they were unable to resist the pressure of recommendations made to them on behalf of the influentials. In addition they said the fact that such people could pay the rent more easily carried great weight with the Centre's accountant. It is instructive to note that, despite the fact that the Centre is able to thresh 50 tons of seeds in addition to its own, the farmers make no use of this potential service because they fear that they will lose grain in the process.

In our opinion the greatest difficulty of development centres of this kind, and indeed of regional development plans in general, is the lack of any co-ordination between the various governmental agencies involved, and development plans at the Ostān level, and between these and other development programmes being carried out in other parts of the country. This lack of co-ordination means that each agency, imprisoned in its own sad little world, carries out random projects which are, from the macro point of view, completely unplanned. As they continue, more and more capital is wasted and the morale of the personnel becomes so broken that they can never hope to have any great effect on either the regional economy as a whole or the economies of individual villages.

The authorities responsible for agricultural affairs in the region told us that their facilities were so limited that they were helpless in the face of the villagers' requests for aid, particularly in the technical

field. Under such conditions it is no surprise that government agencies fail to participate in development activities. Indeed, even the agricultural extension organisation, the most effective development organisation at the village level and an organisation which has no technical equipment like that owned by the Rigkabud Development Centre at its disposal, is compelled to undertake only very small scale projects, very gradually within single villages. The remedy is, of course, better co-operation between all agricultural development activities as well as educational and public health programmes.

The Economic Condition of Nukjub

The village of Nukjub has a population of 665 divided into 133 households. Of these, 108 households are *nasaq*-holders while the other 25 are *xoshmeshins*. The area of cultivated land totals 304 hectares of which half lies at fallow each year. This means that each *nasaq*-holding family holds an average of 2.8 hectares of land, and, if we assume that the average size of a household is five, the per capita share of land will be 0.6 hectares. But, in addition to the land actually under cultivation, there is another 196 hectares within the legal limits of the village of which at least 70 hectares could be made fertile with the help of very simple developmental measures. The greatest factor preventing the villagers from taking action in this respect is their lack of capital and technical knowledge—a problem which could be solved if adequate help from the Bampur Plain Development Centre were forthcoming. Success in such a plan would increase the per capita share of land to 3.5 hectares and considerably improve the economic condition of the village.

The number of *gāvbāndīs* totals 22.5 *jofts* which, since 1338 (1959 - 1960) have, with the help of the Government Lands Office, been divided into twelve *boneh*. Of these *boneh* eight have one manager and eight members, and the other four have one manager and nine members. However, because of the constant possibility of conflict between the farmers, during the work periods some of these *bonehs* are divided into two and others into three. Each *boneh* reserves the equivalent of the amount of seeds it has sown during the year for the following season.

The division of the *jofts* between the farmers is uneven and the

nasaq-holders told us that only forty-five of them own oxen. Thus the majority have to rent their plough animals from the *gāvbands* against a payment of one-tenth of their product. If it were possible for them to use the tractors of the Bampur Plain Development Centre, or some other governmental organisation, the farmers would be relieved of the economic oppression meted out to them by the *gāvbands*.

Originally Nukjub was Public Domain property; but in the year 1342 (1963-1964) it was subject to the first stage of the Land Reform and sold to the villagers for 225,230 rials, although the document given to the villagers at the time still remains an unofficial one. At present the lands are divided into 111 shares and owned by 108 *nasaq*-holding families. Each family pays an annual installment of 1,970 rials. The average area of land recognised as a share is 3 hectares.

Although the soil of Nukjub is suitable for a variety of crops, the agricultural methods used in the village are primitive. Most of the ploughing is carried out by oxen, and it is only in the present year that a few of the villagers were able to make use of the Bampur Plain Development Centre's tractors to plough their gardens. The landowner of another rather far flung village in the district, has, however, ceded some of his rights to use the tractors to the headman of Nukjub. The land surface is divided into strips between which large bushes grow, and because the villagers do not have the strength to clear these, they guide the ploughshare between them.

The major products are wheat, corn, and other cereals such as beans, lentils and *sanganak*.¹ Wheat, the most important crop, is planted on the whole of the ploughed area, corn being sown only after the wheat harvest. The output of corn seeds is 1.20, but we were told by the experts of the Bampur Plain Development Centre that if the land were ploughed again after the wheat had been gathered, this ratio would be doubled. We asked the villagers why they did not do this and were told that the reason is the weakness of their oxen. Rice is sown along the river banks but since not more than 200 metres of land is devoted to this crop, a very small amount is produced. In addition to these crops another herb, *hachak*, whose flower is used as a substitute for tumeric, is grown around the broad bean beds.

Market gardening is developing well in Nukjub; at present 30 hectares

1. A small black grain used as cattle fodder.

of land are devoted to these products and the farmers are thinking of expanding it. There are 2,500 date-palms and in addition figs, atrons, apples and grapes are grown. The majority of trees are still young and have not, as yet, yielded any crops, but when they do, they will without any doubt contribute to a substantial rise in the standard of living of the villagers. However, their effect depends very much on the provision of adequate trading facilities. Greater use could be made of the village gardens if some of the grain crops were sown among the trees.

Part of the village water comes from the Bampur River, the rest being obtained from irrigation channels which were dug by the Bampur Plain Development Centre and which bring water from the Bampur dam. As a result, when it is compared with other villages in the region, Nukjub has an exceptional irrigation situation. This is also one of the main reasons for the somewhat better economic condition of its farmers.

The *nasaq*-holders work an average of 270 days per year, the busiest times being in the autumn when the land is weeded and the irrigation channels are dredged, towards the end of the spring at the harvest, and when the dates are picked in the summer. At harvest time the village is crowded with people who come from the neighbourhood to help with the harvest and receive a portion of wheat in return. At the end of the summer the farmers of Nukjub, in their turn, go to other villages which have a lot of date-palms to help with the date-picking. This gives them an opportunity to trade their own products and at the same time to produce their food for this short season in the form of dates. The wages of agricultural labourers vary with the season and the type of work, the highest being 45 rials per day paid towards the end of Xordad and the beginning of Tir (May-July).

We were told that chemical fertilizers are not used in the village and that the natural fertilizers are obtained from two sources: the leaves and branches of the tamarisk tree and ancient mud found in the Bampur area. The tamarisk tree is found in many of the forests in the region and these are, unfortunately, being denuded by local farmers who also use tamarisk wood to dam their fields for irrigation and for firewood.

In 1341 (1962-1963), Italconsult distributed improved seeds among the farmers and collected the equivalent from them the following year after the crops had been harvested. Thus an important step towards the

improvement of production was taken. Nukjub has also a mechanised flour mill which was built with the joint capital of the headman and a merchant from Bampur. The charge for milling 120 kilograms of wheat is 20 rials or its equivalent in produce.

Table 2
Gross Farming Income of the *Nasaq*-holders of Nukjub

1	2	3	4	5=2x3x2	6	7=6x5
Product ^A	Cultivated area (has.)	Seeds per hectare (kgs.)	Seed output	Annual product (kgs.)	Price per kg. (rls.)	Gross value of product (rls.)
Wheat	152	80	7	85,120	8	680,960
Corn	76	66	20	100,320	4	401,280
Broad Beans ^B			20	4,000	5	20,000
<i>Sanganak</i>			25	400	10	10,000
Rice ^C	2,000 ms.	App. 3			8	3,200
Total ^D	152					1,115,440

A. Besides the products mentioned, sesame, vetch, *varbuzeh* and water are grown, but these are insignificant economically.

B. Grown in the garden

C. Area of rice under cultivation not included in the total area under cultivation.

D. Corn cultivated on some land after the wheat harvest.

Table 3
Nasaq-holders' Annual Gross Income from Orchards

1	2	3	4	5=4x3	6	7=6x5
Product	No. of trees	Productivity	Annual product of each tree (kgs.)	Total product (kgs.)	Price per kg. (rls.)	Total value of annual product (rls.)
Dates ^A	2,500	250	30	7,500	4	30,000
Grapes	100	10	20	200	7	1,600
Pomegranates	326	100	5	500	4	2,000
Total						33,600

A. This shows the total number of trees for the whole village. The *nasaq*-holders share should be considerably less than that given because some of the *woshmeshins* have a share in the palm-groves. How many, however, we

The total gross annual income obtained from farming and market gardening is 1,149,040 rials from which the following expenses must be deducted.

	<u>Rials</u>
Seeds	118,764
Land reform installment	218,670
Installment for garden	18,650
Rent for plough oxen	65,073
Tractor rent	5,000
Labour	2,250
General services	<u>6,480</u>
Total	<u>513,457</u>

Therefore the net annual income of the *nasaq*-holders of Nukjub is 635,582 rials which, divided among the 108 *nasaq*-holding families leaves a share of 5,885 rials or a little more than 78 dollars per family. This gives a per capita income of approximately 15 dollars.

However, farming the land is not the only source of activity for the *nasaq*-holders. They also earn a considerable amount from their livestock herds. The cows belong mainly to this group, and the sheep to the *xoshne-shins*. There are 200 milch cows and if we assume that the total annual income from each of these is approximately 1,000 rials, the total will be 200,000 rials. This, added to the net annual farming income, gives 835,583 rials or 7,736 rials per family (approximately 103 dollars) or an annual per capita income of 20 dollars. Although this may seem to be an extremely low figure, Nukjub is, in fact, better off than other villages we studied in this area. The reasons for this are as follows:

1. It is near to the Bampur river and the Bampur dam and therefore has a virtually constant water supply.

2. It is the neighbour of the Rigkabud Development Centre with which it is in constant intercourse. In fact most of the Centre's workers are inhabitants of Nukjub which means that the farmers have acquired some knowledge of the use of modern agricultural techniques.

3. Some of the villagers have attended the Agricultural College in nearby Bampur.

4. The headman, despite his rather dictatorial attitude, and exceptional material circumstances, has encouraged the villagers to accept the were unable to discover. The figure showing the total income earned from the date palms does not include income from all the trees since some have not yet come to fruit.

use of modern methods and to develop a co-operative attitude towards their work.

5. The permission of the Public Domain's Office to create a garden has meant that the villagers have been encouraged in their attempts to introduce variety into their crops.

However, despite all these factors making for a measure of prosperity, the distribution of income in the village is very uneven. In what follows the studies we carried out on the income of a number of individual farmers are reported and it is hoped that these will illustrate the way in which income is distributed.

Table 4
Gross Farming Income of Ebrāhim Āchāk

1	2	3	4	5	6	7=6x5
Product	Cultivated area (has.)	Seeds sown in cultivated area (kgs.)	Seed output	Annual product (kgs.)	Price per kg. (rls.)	Gross value of product (rls.)
Wheat		450	7	3,150	8	25,200
Corn	1.5	100	20	2,000	4	8,000
Karbuzeh& Water melon	0.5	0.5		700	2	1,400
Sesame	0.15	6		70	12	840
Fodder	0.12	5		100	10	1,000
Broad beans		25		450	5	2,250
Dates	3	200trees 25productive	30kgs. per tree	750	4	3,000
Grapes				20	8	160
Pomegranates		70trees 20productive		100	4	400
Total						42,250

Table 4 shows the gross farming income of Ebrāhim Āchāk, the village headman. Āchāk owns land equal to one *joft-gāv*. From his gross farming income we should deduct the following expenses:

	<u>Rials</u>
Seeds	4,250
Permanent farm hand	5,500

2 per cent development tax	540
Cost of ploughing garden with tractor	2,300
Fodder and non-agricultural expenses	4,000
Public services	580
Land reform installment	<u>4,760</u>
Total	<u>21,930</u>

Therefore we arrive at a net farming income of 20,320 rials or a per capita income of 38 dollars for the family. But, in addition Mr. Āchāk also receives a salary of 30,000 rials for being headman and makes another 6,000 rials from his two milch cows and eight sheep. This brings his annual net income to 56,000 rials which, divided among his seven dependents gives an annual per capita income of 7,045 rials or 107 dollars. If Āchāk had an average family of five, the per capita figure would be 150 dollars. Mr. Āchāk's position is, of course, exceptional. Not only does he hold more than the average amount of land, but also his income is well supplemented by market-gardening, livestock raising, his headman's salary, and his share in the village flour mill.

Table 5
Gross Farming Income of Lāl Mohammad Sahāri

1	2	3	4	5	6	7=6x5
Product	Cultivated area (has.)	Seeds sown in cultivated area (kgs.)	Seed output	Annual product (kgs.)	Price per kg. (rls.)	Gross value of product (rls.)
Wheat	1.5	135	7	940	8	7,560
Corn		36	20	720	4	2,880
Lentils	250	5	5	25	10	250
Broad beans						
Dates		20trees		500	4	2,000
Grapes				75	8	600
Total	1.7					14,190

The next person interviewed was Lāl Mohammad Sabāri who owns one *fard-gāv*. His gross annual farming income is shown in Table 5. From this the following expenses should be deducted:

	<u>Rials</u>
Seeds	1,100
Labour	2,750
Public services	1,600
2 per cent development tax	250
Land reform installment	2,500
Tractor rent	<u>180</u>
Total	<u>8,360</u>

Therefore Sabāri's net annual income from farming is 5,830 rials to which we should add 3,000 rials earned from 1 cow and 4 sheep to obtain a total net income of 8,830 rials. This, divided among Sabāri's household, gives an annual per capita income of 1,260 rials or 17 dollars. If it were not for the income from livestock-raising, the per capita income of this farmer's family would fall to 533 rials or 7 dollars, less than the village average. It should be noted that Mr. Sabāri's income is nearer to the mean for the village than is that of the headman.

The Social, Economic and Health Condition of Nukjub

The inhabitants of Nukjub are Sunni Baluchs of the Hanafi sect who speak Farsi with a Baluchi accent.

As in most villages in this region, malaria is endemic and most of the villagers suffer from it. We were told that each year about 10 per cent of the children died in this way. In addition trachoma, dysentery and scalp disease affect many of the villagers. There is no clinic or doctor in the village the nearest medical facilities being in Bampur. The only public health measures taken so far are the spraying of the village against malaria twice and the vaccination of everyone against smallpox. Drinking water at first came only from the Bampur main channel but recently, with the sinking of two deep wells, one by the headman and other by the village council, new sources of drinking water have been provided. The village also lacks a bath-house and the people wash themselves in the Bampur channel. There is no toilet in the houses which are either built from sun-baked bricks or are tents made from reeds and felt.

The village council was formed in 1334 (1965-66) and at present it has five members. However, in reality all village affairs are conducted by the literate headman who is the only person with any capital and the

only tradesman. Last year the council collected the 2 per cent development tax from the farmers in the form of 2,400 kilograms of wheat and 1,800 kilograms of corn. So far it has built a four-grade school and four bridges and has made loans to farmers who have no resources of their own to build houses. Last year the council also approved a plan to join with Mach Qāsem, a neighbouring village, to build a six-grade school. The local Development Office has approved this plan and it has been agreed that the government should provide 50 per cent of the cost. When this school is built the existing four-grade school will be used for the village girls. At present forty children from Nukjub and twenty from Mach Qāsem and Che-kārābād go to the school. From the year 1341 (1962-1963) adult literacy classes, which are attended by about thirty of the villagers, have been held. About twenty of the men are literate. The school has a head teacher and an assistant and, at present, twenty of the village boys are continuing their education in Bampur.

There are five radios in Nukjub, but reading matter is limited to religious books and pamphlets published by the Agricultural Office at Bampur. There is one village shop which provides for most of the needs of the peasants; however, goods are mainly bought on credit and the people pay about twice the retail price in the end. At one time the owner of the village shop brought kerosene to Nukjub to sell to the few who use it for lighting purposes or for primus stoves. However, since the shop sells this at twice the normal price, ever since a branch of the National Iranian Oil Company has opened in Bampur, those who need it buy their kerosene there. Loans extended in the village usually carry 100 per cent interest, and for the most part are made by the headman.

Most of the produce is consumed inside the village itself and what is left is bartered for sheep fat or sold to members of the Baluchi tribe who make visits from time to time. Handicrafts are few although some of the women do weave collars and sleeves for their own dresses.

There are twenty-five resident *roshneshin* families, most of whom are related to the *nasaq*-holders. They are mainly engaged in livestock-raising and they possess some of the palm-groves. Only a few of the farmers make use of labourers: those who have more than the average amount of land employ one for the first ten days of Tir (June-July) and pay them 40 rials per day in addition to one-twentieth of the crop they harvest.

Although new agricultural methods are used to some extent, they have

not really taken root in Nukjub. Only recently, in 1341 (1962-1963) did Italconsult distribute improved seeds. Moreover, the level of technical information is somewhat low: the elders told us that no-one knows how to drive or to use chemical fertilizers. This seems rather strange in view of the fact that twenty of the farmers have attended the Agricultural College at Bampur and some of the villagers are workers at the Bampur Plain Development Centre. In 1338 (1959-1960) Nukjub, together with the neighbouring villages of Alehābād, Mach Qāsem, Bāq and Xeirābād founded a co-operative society with a capital of 800,000 rials. However, in 1342 (1963-1964), when Nukjub's lands were divided under the terms of the Land Reform Law, the Land Reform Organisation decided to dissolve this co-operative and form a separate one for Nukjub. However, the Agricultural Bank opposed this so the plan did not succeed. In the opinion of those we interviewed, a joint society yields little benefit and, despite the fact that all the *nasaq*-holders are share-holders, not one of them is a member of its four-man management board. The villagers told us that they had no information on the condition of the company, but they added that so far it had shown no real results, for the farmers of Nukjub at any rate. The price of shares is 50 rials, and the majority of the *nasaq*-holders have twenty shares or more.

پښتونستان د علومو انساني و مطالعاتو فرانسې
پرتال جامع علومو انساني

Ostān: Baluchestān and Sistān

Shahrestān: Irānshahr

Village: Mohammadābād

Date of Survey: 14th Farvardin 1344

3rd April 1965

Mohammadābād is situated 12 kilometres from Irānshahr on the road running from Irānshahr to Bampur. It has a population of 840 divided into 168 households of which 108 are *nasaq*-holders and 60 *xoshmeshins*.

Up to the year 1307 (1928-1929) when the village became part of the Public Domain (*xāleseh*), it was owned by Dust Mohammad Xān Baluch. In 1335 (1956-1957) the heirs of Dust Mohammad were successful in placing their own candidate in the national parliament and, through his influence, they were able to regain Mohammadābād and the two nearby villages of Shahrzād and Nukābād. From that time onwards they collected a landlord's share of 30 per cent of the total annual product from these villages, which are rich ones and yield an equivalent of the interest to be gained from eighteen other villages situated in the Bampur area. The peasants are very upset by this situation and constantly go to complain about it to the authorities, but so far their pleas have achieved no response. But when rumours of a land reform began to spread, and an entirely new outlook grew up among these farmers, the wave of their discontent spread beyond the boundaries of the village and, in their turn Dust Mohammad Xān's fifteen heirs began to dispute among themselves and take action against the villagers. At present the latter want the landlords to be thrown out and the land to be divided among themselves, and whenever they meet an outsider they immediately begin to speak of the oppression that has been meted out to them on the threshold of land reform. The landlords, on the other hand, have begun to ruin the village - they seize the farmers' produce and even claim a share in their gardens. This conflict has caused a great deal of confusion in the life of the villagers since they are forced to constantly protest to the Department of Agriculture at Irānshahr over the oppression of these men who, besides Mohammadābād, also own many other

villages in the area stretching to the Pakistan border. Their frequent protests are evident from the fact that when the group, on arriving in Irānshahr, visited the Department, it met a number of the inhabitants of Mohammadābād who claimed that the landlords had trespassed on their gardens and stolen their broad beans.

If the land reform, within its own terms, is able to solve such conflicts and replace the present village society with one which upholds basic economic and legal rights, it can be looked upon as a successful programme. In a community which, throughout its long history, has been deprived of any knowledge of individual human rights, the news of a land reform, besides appearing desirable from the economic point of view, excites the eagerness of the people as regards their social and economic rights. Indeed, in the minds of the farmers, the image of land reform is, above all, the removal of the landlord-peasant system and the return of their legal persons. Because of this they are unable to tolerate the existence of the landlord in any part of the village. Even the slightest remnants of his influence are liable to disappoint their enthusiasm.

But besides the humanitarian and legal aspects, the farmers also understand their interest in the economic aspect of land reform very well. The system of dividing crops in direct proportion to the five input-factors in the traditional agrarian system of production is a crucial element in the landlord-peasant bond, and one which works against the peasant in that, if he has only few of the factors of production, his share in the produce is very small. The events now taking place in Mohammadābād which revolve around the search of the peasants for their legal rights, and their stand against the much more powerful landlords, must be counted as an example of the awakening of this class and its move towards social maturity.

The Economic Condition of Mohammadābād

In Mohammadābād, three of the five factors of production which form the basis of the relations of production between landlord and peasant that is water, land, and seeds, are provided by the landlord. Moreover, only thirty of the fifty-three *gāvbāndis* of the village own their own oxen, so the rest are forced to rent theirs from the *gāvbānds* in return for which they must hand over another fifth of their product. As a result,

a sizeable proportion of the of the *nasaq*-holders retain only one-fifth of the crops they grow; and, as we shall see, their extremely low income is the consequence of this economic substructure.

The area of land upon which crops are cultivated totals 330 hectares of which half is left to fallow each year. But, in addition, there are sixty-five garden plots sixty-three of which, covering 14 hectares, are owned by the *nasaq*-holders. The 108 *nasaq*-holding families who work this land are divided into 53 *gāvbandis* and the average holding of each family is 3 hectares of which 1.5 hectares are farmed each year. If the 40 *xosh-neshin* families were included in this calculation of the average amount of land per family, the figure would fall to 1.3 hectares, and the per capita share of land would be 0.4 instead of 0.6 hectares.

Table I shows the gross annual income from farming of the *nasaq*-holders of Mohammadābād.

Table I

Gross Annual Farming Income of the *Nasaq*-holders of Mohammadābād

1	2	3	4	5=4x3x2	6	7=6x5
Product	Cultivated area(has.)	Seeds per ha.(kgs.)	Seed output	Annual product	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	165	100	7	115,500	8	924,000
Corn	20	60	20	24,000	4	96,000
Dates						
Sesame		60kgs.		480	12	5,760
Broad beans		1,500kgs.	10	15,000	5	75,000
<i>Sanganak</i> ^A		60	20	1,200	10	12,000
Lentils		60	5	300	10	3,000
Fallow	165					
Total	330					1,115,760

A. A small black grain used for fodder.

From the gross income of 1,115,760 rials the following costs should be deducted:

	Rials
Seeds	146,220
Landlord's share	446,304

Labour	20,000
Public services and non-agricultural necessities	64,800

Therefore, the net farming income is 438,436 rials which gives an average income of 4,060 rials or 54 dollars for each *nasaq*-holding family. Assuming the size of the average family is five, the per capita income of this class is 816 rials or 10.8 dollars.

But in addition the *nasaq*-holders receive an income of 200,000 rials from 100 cows (1,000 rials per annum per cow) and 200 sheep (500 rials net per annum per head). This brings their total annual income to 638,436 rials or 5,910 dollars, and gives a per capita income of 1,186 rials or 15.5 dollars.

The distribution of income between the farming families is fairly even, and this is illustrated by the two interviews reported below.

Mr. Orang Zera'i farms one *farā gāv* and has six dependents. His gross annual farming income is shown in Table 2.

Table 2
Annual Gross Farming Income of Orang Zera'i

1	2	3	4	5=3x4	6	7=5x6
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Annual product (kgs.)	Price of 1 kg. (rls.)	Total value of product (rls.)
Wheat		160	7	1,120	8	8,960
Corn		25	40 ^A	1,000	4	4,000
Sesame		4		20	12	240
Grain		3	7	21	10	210
Total						13,410

A. Mr. Zera'i fertilizes his corn field and so gets a better yield than other farmers.

From 13,410 rials gross income the following costs should be deducted:

Landlord's share	5,356
Labour	2,000
Seeds	1,490
2 per cent development tax	50

Public services and non-agricultural necessities	<u>610</u>
Total	9,956

This farmer's net income from agriculture is, therefore, 3,454 rials or 50 dollars and the per capita income of his family is about 7.5 dollars.

Mr. Shabaz Bāmeri farms one share of land, has a pair of plough oxen and eight dependents. His gross annual farming income is shown in Table 3.

Table 3
Annual Gross Farming Income of Shabāz Bāmeri

1	2	3	4	5=3x4	6	7=5x6
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Annual product (kgs.)	Price of 1 kg. (rls.)	Total value of product (rls.)
Wheat		150	10	1,500	8	12,000
Corn		36	20	720	4	2,880
Dates		10palms each yield 30 kgs.		300	3	900
Beans		12	10	120	5	600
Lentils		10	50	50	10	500
Total						16,880

From 16,880 rials, the following costs should be deducted:

Two-fifths landlord's share	Rials 6,725
One worker for tending the oxen	2,000
Seeds	1,184
Public services and non-agricultural necessities	648
2 per cent development tax	<u>70</u>
Total	1,654

Therefore Bāmeri's net income from agriculture is 6,226 rials or 83 dollars and the per capita income of his family is approximately 10.3 dollars. However, this *nasaq*-holder also earns 2,500 rials from 5 sheep which brings his total income to 8,726 rials and his family's per capita income to 14.5 dollars.

In order to give an example of the situation of a village *mollā* in this region, in what follows the income of Yahyā Malekzādeh, the *mollā* of Mohammadābād is analysed. Malekzādeh was educated at Zāhedān where he

completed the second year of his secondary school. He then went to Lahore to study theology. At the time the group visited the village he had been there for three years, and in the second year of his residence he had bought a 1,000 metre garden plot for 3,400 rials. He has seven dependents, none of whom work and earns the following income from his garden:

	Rials
70 kgs. wheat at 7 rials per kg.	560
70 kgs. corn at 4 rials per kg.	280
30 kgs. lentils at 10 rials per kg.	300
35 kgs. <i>sanganak</i> at 10 rials per kg.	350
40 kgs. broad beans at 5 rials per kg.	200
7 kgs. cumin seeds at 40 rials per kg.	280
60 kgs. barley at 3 rials per kg.	180
4 kgs. of sesame at 12 rials per kg.	<u>48</u>
Total	2,198

In addition he is given the following as his *mollā's* salary:

	Rials
500 kgs. wheat	4,000
450 kgs. corn	1,800
10 kgs. lentils	100
20 kgs. <i>sanganak</i>	200
20 kgs. broad beans	100
Onions, cumin seeds, sesame and barley	<u>300</u>
Total	6,500

Therefore Malekzādeh has a total gross annual income of 8,698 rials from which 200 rials for the cost of seeds must be deducted to obtain a net income of 8,498 rials. The per capita income of his family is 1,214 rials or approximately 16 dollars. However, he owes approximately 3,000 kilograms of wheat to the *nasaq*-holders in return for a loan he obtained to help his younger brother complete his education in Pakistan. This loan carries a high interest: Malekzādeh must repay about 2 kilograms of wheat for every ten rials he has borrowed which in money terms means a lay-out of 60 per cent.

Sixty of the village families or 35 per cent of the population, are *xoshneshins*, or, in local dialect, *gusheneshins*. This class can be divided into two distinct groups. The first group or about 33 per cent of the *xoshneshins* has an exceptionally low income and is mainly engaged in jobs

known as *kes̄hālehkārī* (bringing irrigation water to the fields in buckets) and *dulābkārī* (planting crops on the banks of the village streams). With respect to the latter activity, each *xoshneshin* plants an average of 5 to 10 kilograms of seeds. The food of this group consists mainly of grass and a kind of purslanes and their poverty is such that they often resort to begging. The second group own a small number of sheep and cows and are, to a certain extent, able to eke out their existence by this means. About forty families are members of this group.

Bahādor Darzādeh, who is a *xoshneshin*, works six months of the year for one of the *nasaq*-holders for which he receives a wage of 180 kilograms of wheat valued at 8 rials per kilogram. Altogether this makes 2,160 rials or about 28 dollars. But Darzādeh has a family of ten and since this income is insufficient to procure their livelihood, together with his family he spends three months in the neighbourhood of Irānshahr picking dates and obtaining his food by collecting dates which have fallen to the ground. Food for the remaining three months is a kind of grass.

The Social, Educational and Health Condition of Mohammadābād

The religion of the 740 Baluchs resident in this village is Islām of the Hanafi sect. A four-grade school was founded in 1327 (1948-1949) with the aid of the villagers in a house provided by the headman. The school has one teacher and thirty-eight boy pupils. The girls, and ten of the eligible boys, do not go to school. There are no adult literacy classes but ten of the men are able to read and write. Eight of the graduates of the village school are at present continuing their education in Irānshahr and Bampur and two of them attend high-school. The *mollā* helps with teaching besides giving religious instruction.

There are ten radios in Mohammadābād, most of which were bought after the land reform. In general, the literate people do not read books and newspapers, although three of them borrow from the teacher from time to time. Five people own bicycles and many have watches. The farmers have no technical knowledge of any kind: they do not even know how to drive, use chemical fertilizers, or take simple measures for pest control.

Since the village is situated on the Irānshahr road, the inhabitants are able to go to the town every day. At present each month 120 people make the journey by car and 150 go on foot. Kerosene sold in the village

shop is very expensive (three times the normal price), so most of the people use the tamarisk tree for firewood and buy oil necessary for lighting in Irānshahr and Bampur.

The village has no doctor or clinic and the inhabitants are forced to take their sick to Irānshahr. The lack of any knowledge of public health means that many diseases, including, malaria, trachoma, dysentery and measles are prevalent in the village. Animal diseases are also a great problem. The only public washing place available is the stream which also provides drinking water. There is no educated midwife and ten old women attend births. Precautions against malaria are taken each year and the people are vaccinated against smallpox.

A village council was founded 1343 (1964-1965) and this now has five members. Last year the council collected 900 kilograms of wheat valued at 6,000 rials (the 2 per cent development tax) from the landlord, this being the only money they have had from him so far. This year they collected 906 kilograms of corn from the villagers and on the basis of this credit they have obtained a loan for the construction of a water storage tank. The village co-operative was founded in 1340 (1961-1962) and at present it has more than 300,000 rials capital. It is run by a management board of four and the majority of the farmers of the village are members. It is purely a credit organisation.

Since there is no flour mill in Mohammadābād, the villagers take their wheat and corn to Nukjub, Irānshahr or Bampur to be ground. The lack of a money economy means that barter transactions are common and the inhabitants generally pay for the goods they have bought at the village shop at harvest time. In general the final price is about two to three times the retail value.

Water for irrigation purposes is obtained from the Bampur river but since the village lands are on high ground tamarisk wood dams have to be constructed and this is done without any financial help from the landlord. At the time when Mohammadābād was Public Domain property the Public Domains Administration made financial advances to the peasants, thus securing their ability to build the dams.

Factionalism is rife, one of the major conflicts between the farmers being over the number of *gāvbandis* that should be formed to cultivate the land. One faction favour the division which existed in the days of the *sūlṣeh* while another wants to increase the units. Another problem of this

kind is irrigation. Some disputes are settled, or at least eased, by the intervention of village elders. But what strikes one more than anything else in Mohammadābād is the pessimistic and discouraged outlook of the farmers. They insisted on trying to make us understand that conditions in the village had declined and that life in the past was, from every point of view, better than it is at present. When the group asked them what their usual subject of conversation is they replied "our misfortune". In our opinion the first step towards a basic change in the village is the dethronement of the absolute power of the landlord in such a way as to create a completely different outlook and a readiness for all kinds of activity among the farmers.

Change in Mohammadābād over the Past Ten Years

1. The Ford Foundation report recorded 148 families in Mohammadābād in 1956 and said that all these held a share of the land. However, whether or not these were all *nasaq*-holders is unclear. At present 108 families hold a share in the village lands. Moreover, when we asked the farmers if anyone had left the land during the past ten years, they replied in the negative. We must therefore assume that ten years ago either all the villagers held shares, or that the *woshmeshins* were not included.

2. Ten years ago thirty-eight *gāvbandis* were reported, each *gāvbanāi* consisting of three to four members, while at present there are fifty-four *gāvbandis* each having two members.

3. Although no details on the ownership of the village were recorded in the earlier report, a basic change has taken place in the sense that the village has been turned from Public Domain property into private property.

4. There have been changes in the seed output of some of the crops. For example, ten years ago the output of wheat seeds was 1:9 while at present it is 1:7. The output of corn-seeds has not changed, and barley, which was recorded in the earlier report, is no longer cultivated.

5. The price of wheat has increased from 5 to 8 rials per kilogram and the price of corn from 3 to 4 rials per kilogram.

6. The earlier report mentions only three products: wheat, barley and corn. A larger variety of crops are recorded in our tables on farming income, and we are certain that for the most part these are not innovations.

7. The area of cultivated land is not recorded in the earlier report so it is not possible to make any definite conclusions on changes in the ratio of population to land. However, by taking the population recorded in the earlier report into account, and the figure quoted in the 1335 (1956) census, it is possible to say that the average area of land per capita is less than it was ten years ago, and that the pressure of the population on the village economy has increased. One of the interesting reasons for this may be the increase in the number of *gāvbandis*.

8. Increases in the level of per capita income are related, in the first place, to increases in the price of village produce, and, in the second place, to the inclusion of crops not recorded in the earlier survey. By taking these factors into account, we can conclude that the rise in per capita income is very small. For example, Mr. Orang, the farmer whose income was recorded at 2,179 rials, or about 30 dollars in the earlier report, now makes 3,454 rials or 50 dollars.

پژوهشگاه علوم انسانی و مطالعات فرهنگی
 پرتال جامع علوم انسانی

Ostān: Baluchestān

Region: Bampur

Village: Shamsābād

Date of Survey: 16th Farvardin 1344
5th April 1965

Shamsābād lies 3 kilometres off the rough road which runs from Bampur to Chahār Bahār. It can be reached by a dusty track built in 1331 (1952-1953) with the help of the Development Office. Without any doubt it is among the poorest and sorriest villages the group has ever seen in any part of Irān. The buildings consists of a number of smoky huts and a few mud houses whose roofs are made of the branches of date-palms. The necessities of life we saw were so poor that they reminded us of primitive man. The children, naked and with burnt complexions and bloated stomachs, stood aside as if ashamed whenever they met members of the Group. The men and women sat beside their huts and regarded us in an astonished manner, and nowhere in the village could we see the usual complexion found in the Irānian countryside.

This village, which was originally part of the Public Domains (*xāleseh*) was divided among the villagers under the law governing the first stage of Land Reform. At this time the farmers were completely lacking in economic strength and were living at the extremities of poverty and the Group was forced to conclude that, apart from making the farmers their own masters, the division of land had been virtually without effect. Indeed, with their extremely low standard of living, the land appeared to them as an extra burden on their shoulders and many were little by little turning their backs on it and emigrating.

We sat by the side of the huts to interview the villagers who surrounded us, and asked whether they were not pleased that they had become the owners of their land. They replied that they were pleased, but that they had had no other aid, and added that many had gone. We asked whether those who had left also had land, and they replied in the local dialect, "What use is the land? They had nothing to eat so they went. For two years there has been a drought and nothing has come our way. Perhaps this year

God will come to our aid".

Of course the goal of land reform was not simply the division of the land among the poor peasants who have neither capital nor any other kind of power and Shamsābād demonstrates very well what can happen if the division of land is not supplemented by education and guidance and no facilities are provided for marketing.

We asked the people who surrounded us about farming conditions, food, the population and the number of dependents. The standard of living they described was extremely low - if their farming efforts were not spoiled by drought or the gnawing teeth of desert rats and wild boars, then they could produce a certain amount of crops for their own consumption; but if the crops were spoiled then they were forced to depend on the locusts. When, as was our custom, we brought up the question of the prices of various products, the villagers expressed ignorance. The main reason for this is that the economy of Shamsābād is a subsistence one and there are few monetary relations either inside the village itself, or with the outside world.

Another factor which has served to produce a pessimistic outlook among the villagers with respect to the land reform is the activities of several government organisations at the Ostān level. These are scattered, unco-ordinated, and much more in the interests of the *sardārs* (tribal leaders) and other local influentials than the villagers. The Group was interested to know about other activities besides the foundation of a co-operative society which in any case gives only a limited number of very small loans and the conversation turned to the problem of the Agricultural Bank. One of the elders said: "The Agricultural Bank gives us no loans instead they all go to the Baluchs and their leaders." With surprise we asked whether they too were not Baluchs, and they replied, "of course we are, but we have neither guns nor a leader." Thus the group became conscious of a point which government organisations concerned with the impletementation of the Land Reform Act should realise.

The Economic Condition of Shamsābād

In 1342 (1963-1964), the lands of Shamsābād were divided among ninety *nasaq*-holding families. These lands, which total 172 hectares, are divided into 101 shares. Ten households each own two shares, and eighty-one

households each hold one share. The *nasaq*-holders are divided into nine *bonehs*, each *boneh* consisting of eight to twelve farmers. There are fifteen ploughing oxen in the village, of which the headman owns two, the ten two-share holders own one, and the rest share the other two.

All the land is irrigated and half is left to fallow each year. On the other half wheat is grown, and after the wheat harvest 40 hectares are planted with corn. Therefore one-quarter of the village land is double cropped. Apart from the grain fields, about 15.5 hectares of date-orchard and market garden are attached to Shamsābād and the *nasaq*-holders own 13.32 hectares of this. The rest is held by twenty *xoshneshin* families. The farmers also grow lentils, broad-beans and *sanganak*.¹

By dividing the 172 hectares of the village land among the *nasaq*-holding families we arrive at an average share of 2 hectares per household and, assuming that the average size of a household is five, an average per capita holding of land is 2,000 metres.

The basic problem of this village, and indeed this region, is lack of water for irrigation purposes. In the nearby village of Chakerābād, which has 13,500 hectares of land attached to it, only nine households are able to make a living for this reason. The irrigation water of Shamsābād itself comes from the Bampur river by means of dykes the villagers have built with tamarisk wood. In addition there are two deep wells sunk some years ago by Italconsult but, so the villagers told us, the mouths of these have been shut down and they are unable to make use of them.

Table I shows the gross annual farming income of the *nasaq*-holders of the village, and Table 2 shows the income earned from the palm-grove and market garden.

From the total income the following expenses must be deducted:

	Rials
Seeds	80,190
Land reform installment	110,100
Labour	12,000
Other costs and public services	<u>30,000</u>
Total	232,290

Therefore, the net annual farming income is 501,210 rials or approximately 682 dollars which, divided among the *nasaq*-holding households

1. A kind of small, black grain used in cattle fodder.

gives an income of 73 dollars per household or a per capita income of 14.5 dollars. However, a cautionary note must be introduced here. The relatively good income of the village headman exerts a boosting influence

Table I
Gross Annual Farming Income of the *Nasaq*-holders of Shamsābād

1	2	3	4	5=4x3x2	6	7=6x5
Product	Cultivated area (has.)	Seed per ha. (kgs.)	Seed output	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	86	100	7	60,200	8	481,600
Corn	40 ^A	65	20	52,000	4	208,000
Fallow	86					
Total	172					689,600

A. Sown on the same land as wheat.

Table 2
Annual Income from Orchards and Market Garden

Product	Number	Output	Product of 1 tree (kgs.)	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Date-palms	2,300	300	30	9,000	4	36,000
Broad beans				1,000	5	5,000
Barley				300	3	900
Lentils				100	10	1,000
<i>Sanganak</i> ^A				100	10	1,000
Total						733,500

A. A type of small,, black grain use as fodder.

on the level of income per capita. If, for example, we subtract the income from 300 date palms, all belonging to the headman, the per capita income declines to 13 dollars. But in addition to the income from grain farming, market gardening and palm groves, there is a further income from livestock raising which must be included in our calculation. There are 120 sheep, 40 cows and 15 camels in Shamsābād which yield a total income of 106,000 rials. This brings the total net income to 607,210 rials, the

average income of each household to 6,672 rials or 88 dollars and the per capita income to 17.5 dollars.

In order to gain a better understanding of the distribution of income in the village, a number of the *nasaq*-holders were interviewed. The first was Jān Mohammad Amiri, who owns one *fard-gāv* and has a family of five. His gross annual farming income is shown in Table 3.

Table 3
Gross Annual Farming Income of Jān Mohammad Amiri

1	2	3	4	5=3x4	6	7=6x5
Product	Cultivated area (has.)	Seeds in cultivated area (kgs.)	Seed output	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	3	300	7	2,100	8	16,800
Corn	0.5	30	20	600	4	2,400
Broad beans		3		30	5	150
Tomatoes		2		50	4	200
Onions				150	2	300
Total						19,850

From this the following costs should be deducted:

Labour	Rials
Seeds	2,400
Fertilizer	2,850
Public services	1,000
Land reform installment	2,000
2 per cent development tax	4,700
Total	300
	13,250

This makes an annual net income of 6,600 rials and a per capital income of 1,320 rials or 17 dollars. But, in addition, Jān Mohammad earns 1,500 rials from two sheep and one camel and this raises the per capita income of his household to 21.5 dollars.

The second farmer we interviewed was Yaqut Sangari, who owns two shares of land and has a household of eight.

Table 4
Gross Annual Farming Income of Yāqut Sangari

1	2	3	4	5=3x4	6	7=6x5
Product	Cultivated area (has.)	Seeds in cultivated area(kgs.)	Seed output	Total product	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	2	200	7	1,400	8	112,000
Barley	400sq.m.	3	10	30	3	90
Corn	0.5	30	20	600	4	2,400
Lentils	50 "	1		5	10	50
<i>Sanganak</i>	50 "	1.5		6	10	60
Broad beans	100 "	2		25	5	125
Total						13,925

From the gross annual farming income shown in Table 4, the following costs should be deducted:

	<u>Rials</u>
Seeds	1,764
Oxen	5,440
Public services	<u>1,000</u>
Total	9,968

Therefore the annual net income of this household is 3,957 rials and its per capita income is 474 rials or 6.5 dollars. Yāqut Sangari has no other sources of income.

The twenty *xoshmeshin* families, in addition to having jobs as building labourers, thorn pickers and date pickers, own a few date palms. Nasrullāh Dorzādeh is a *xoshmeshin* who has a family of eight. For six months of the year he works as a building labourer in Bampur for which he receives an average of 40 rials per day (7,200 rials). In the harvesting season he works as a reaper for thirty days for which he receives 3 kilograms of wheat per day valued at 24 rials (720 rials). Also, for one month, together with his only beast, an old exhausted donkey, he gathers animal droppings for fertilizer and sells it to the farmers for 10 rials per day. In this way he earns another 300 rials. Thus his total annual income from ten months of work is 8,740 rials or 116.5 dollars, and the per capita income of his family is 1,092.5 rials or 14.5 dollars.

The Social, Educational and Health Condition of Shamsābād

The inhabitants of Shamsābād are Sunni Baluchs of the Senfi sect. They live in mean reed huts made from the branches of date-palms by the side of which are situated their stables. Their fuel is obtained from the tamarisk tree because their poverty is such that they cannot afford kerosene even though the National Iranian Oil Company's distribution centre is nearby in Bampur. The only industry in the village is reed weaving.

There are no radios or watches, and only four people own a bicycle. In addition there is no shop and no flour mill and the villagers are forced both because of lack of transport and lack of money, to go to Bampur on foot to obtain their provisions.

Shamsābād does, however, have a village council which has so far built a school and a rather stony road with the money collected from the 2 per cent development tax. But no government agency has so far given any help on the village level and there is no village agent. The people told us that although they themselves had paid their development tax the landlord had never paid his own share. Shamsābād also shares a co-operative society with Qasemābād, a neighbouring village. This society has a total of 691 share holders and at the time of its foundation it had a capital of 500,000 rials. Up till now it has given loans to all its members for which it receives a 6 per cent interest. In addition it has received 4,000 tomans in aid. It is mainly a credit organisation and its supervisor pays it a visit once a month. The inhabitants of Shamsābād were of the opinion that the greatest help which could be given to them by the government through the society was a steel plough-share, something they are unable to acquire with their own capital. Of course well equipped service centres and spare parts should go along with such aid.

Shamsābād has a four-grade school which is attended by the village boys; but we were told that at least thirty of the eligible boys still do not go. There is one teacher for all the four classes. Among the adults only four of the men are able to read and write a little. Two of these attend the adult literacy classes at the agricultural college at Bampur. No one can drive and no one knows the techniques of chemical fertilizing or pest control. Up till now only once, when the village was part of the *xi-lesek* lands, has any film on agricultural problems been shown in Shamsābād. The extension agent visits the village from time to time and gives

instruction on irrigation, but up to now no principles of modern agriculture have been put to practise. There are two *mollās* and the only books ever read are religious works.

Health conditions are, because of the extreme poverty of the villagers, primitive. There is no bath-house and the only W.C. is in the house of the headman's brother. The source of drinking water is the stream which runs into the Bampur river. The nearest clinic is in Bampur and the villagers told us that the town doctors were not ready to come to Shamsābād to visit the sick. An excursion to the town for medical treatment costs 300 to 500 rials a time. Despite the effort that has been made to stamp out malaria, it is still one of the major diseases of the area. Parasites, particularly round worm, are common as are scalp disease, trachoma, tuberculosis and smallpox. In the month prior to our visit twenty children died of malaria, scarlet fever, and measles. The livestock of the village are also nearly all suffering from some type of disease. The death rate among them is very high.

Locusts, a pest to farming and property all over the region are thought of as a divine blessing because they are one of the major foods of the villagers. At one point they asked us what the aim of our study was, but were dubious of our explanation and insisted that our work was part of the plan to eliminate locusts. They therefore pleaded with us to intercede with the government and ask them not to take any control measures. Apart from locusts, the desert grass, a kind of lucerne, is the main food, together with dates and other village produce.

Change in Shamsābād over the Past Ten Years

1. In the Ford Foundation report the population of the village was put at 70 households whereas at present there are 121 households.
2. Of the 70 households, 63 were *nasaq*-holders and 7 were *xoshneshins*. At present there are 90 *nasaq*-holding families and 31 *xoshneshins*.
3. The increase of the number of *xoshneshins*, as well as of the population in general, has led to an acute social crisis. The farmers tend to think of the *xoshneshins* as a troublesome element, and said that, "they are harmful to us, the water is ours, the land is ours, what are they
4. Perhaps one of the reasons for this is that some of the shares in the 15.5 hectares palm-grove were given to ten of the *xoshneshins* at the

time of land reform.

5. Ten years ago twenty-one *gāvbandīs* were reported. We did not record any since the organisation of production has now changed into a *boneh* system, and the number of members of a *boneh* is unstable. The reason for this change is probably the inability of the *gāvbandī* system to absorb the extra population.

6. The price of some agricultural products has changed; the price of wheat has risen from 5 to 8 rials per kilogram. The price of barley, however, remains stable at 3 rials per kilogram.

7. Ten years ago only three products—wheat, barley and corn, were recorded. At present a greater variety of products are included in Table I (which shows the gross annual income from farming). It is difficult to tell whether the total value of the village produce recorded ten years ago includes these latter or not.

8. It is interesting to note that, despite the rise in the price of wheat in the past ten years, incomes have not increased. The most important reason for this is the decline in the average holding of land per family. The highest household income recorded ten years ago was about 70 dollars or 5,176 rials and this was for a farmer who owned his own oxen. At present the income of such a farmer, for example Jān Mohammad Amiri, is about 6,600 rials or 89 dollars. If we were to subtract the income from products not mentioned in the earlier report, the present income of this and other farmers would be consistently less than it was ten years ago.

9. Although the area of cultivable land was not mentioned in the earlier report, if we assume that the present 172 hectares are stable, then, with the increase of the farming population from sixty-three to ninety-one households, we can see very well how the limited possibilities for production have compelled the farmers to create *bonehs* and accept the conditions of co-operative work.

10. The village was, at the time of the earlier survey, part of the *xāleseh* lands. In 1342 (1963-1964) it was valued at 1,898,598 rials and subject to the Land Reform Law.

11. In the earlier report the only livestock recorded were 35 plough oxen. At present there are 120 sheep and goats, 40 cows, 15 camels, and 7 donkeys which yield an income greater than that from agriculture.

Ostān: Sistān and Baluchestān

Shahrestān: Zābul

Village: Hassanxun

Date of Survey: 18th Farvardin 1344

7th April 1965

Hassanxun is situated 16 kilometres to the east of Zābul, on the dirt road which connects Zābul with the Zahak dam district. In the reports of the survey carried out by the Ford Foundation ten years ago, the name of this village was not mentioned although the income of the *jofts* and the *nasaq*-holders of two villages identified simply as "two villages below the Zahak dam" were calculated. When we arrived in the district we therefore experienced some difficulty in finding out which village we should study. But after consultation with officials of the Zābul Department of Agriculture, and a study of various surveys, it became clear that the village which could be identified with the Ford Foundation villages was Hassanxun, which is situated below the Zahak dam and which itself consists of four agricultural units known as 'Alijān, Darvish, Shirmohammad, and Hassanxun. Since Hassanxun could, for a number of reasons, also serve as an example of some of the reasons for the failure of plans to distribute the land in Sistān, we made it a final choice for our survey.¹ However, it was almost impossible to choose two of the four economic units and study them separately, so we thought it more correct to take the four together.²

The types of land holding which can be found in Sistān are as follows:

1. Villages which the influentials and tribal leaders of Sistān originally rented from the *xāleseh* (Public Domain) and which, as a result of

1. This refers to the plan for the distribution of *xāleseh* (Public Domain) lands in Sistan in the year 1311 (1932-33).

2. The explanation the villagers gave for the division of the village into four separate units is as follows: "With the distribution of the land, and the division of shares between the farmers, a number of farmers having obtained their share, began to build houses, and little by little others took the same course until Hassanxun was divided into four separate residential units. Eventually these units came to be known as separate villages.

the distribution of the land, ~~became~~ their private property.

2. Villages whose land has been divided into shares and distributed among the farmers.

3. A limited number of villages whose land is still owned by Public Domain Administration, but the *nasaq* of which is in the hands of private individuals.

For the research team, the villages of the second group, especially since they generally have a large population and limited land, are of greater interest. In the villages of the first group, the old landlord-peasant system still survives, and the tribal leaders and influentials, having now become the full owners of their land, have not only gained a stronger hold over their economy and society but also, through the use of a variety of irregular methods and a show of force, have been able to secure their position vis a vis the central government. Moreover, even when they simply rented the land, these people made no attempt to develop the villages and avoided their taxes, and now, having gained a wider power of decision making within their limited domain, they are able to exercise their power to exploit the villagers even more. The weakness shown by government agencies in the face of these people must, indeed, be taken as the first reason for the failure this particular programme of land distribution.

But a second, and equally important reason, is the division of land among the villagers on the basis of inadequate and non-economic shares: no study on the best size of a farming unit was undertaken, nor was any survey of the land carried out. Moreover, after the cession of the land, the poverty-stricken villagers were freed from their feudal bonds without being given any credit or any of the technical help and protection from government agencies which might have contributed to the building up of the villages and the expansion of farming activities. Conditions were even worse in the lands which remained in the hands of the Public Domain because a much larger population was forced to cultivate a smaller area of land within the framework of the traditional landlord and peasant relationship, and, besides paying costs, and the *gāvbandi*'s share for the renting of his plough oxen, was also bound to pay two-fifths of the product as the Public Domain's share.

According to the villagers, the land-holdings of Hassanxun total 127 shares of which 23 are still Public Domain property and the rest belong,

as a result of the land distribution, to the *nasaq*-holders. The land is divided between the four sections of the village as follows:

	No. of shares	No. of families
Hassanxun	57	120
Darvish	27	30
Shirmohammad	18	20
'Alijān	<u>25</u>	<u>30</u>
Total	127	200

The elders estimated that the village population is 1,000 made up of 200 families, which makes an average of five members per family.³

Of the total number of families, 150 are *nasaq*-holders, and the rest are *xoahneshina*. Of the *nasaq*-holding families, 104 own their own land, and 23 cultivate Public Domain land. The inhabitants said that a share consisted of an average of 60 *man*. 25 *man* constitute one hectare, so that an average share is equal to 2.4 hectares. This makes a total of 304.8 hectares of land, an estimate confirmed by the amount of seeds sown. If this area of land is divided by the number of *nasaq*-holding families, and it is assumed that the average size of a *nasaq*-holding family is five, the area of land *per capita* will come to 0.3 hectares.

But the law governing the distribution of land in Sistan stipulates that the size of each share should be 3.9 hectares. If we multiply this figure by the 127 shares of the village, on paper the total area of land attached to this village should be 495.3 hectares or 3.3 hectares per family and 0.5 hectares per capita—still a very inadequate area. In the file on Hassanxun in the Department of Agriculture at Zābul, counting 16 hectares of barren lands within the village limits, the village lands are recorded as consisting of 528 hectares. This gives an average area of 3.5 hectares which is again, a little more than about 0.5 hectares per capita.

Whichever of these three figures we take to be true, all show the frighteningly inadequate nature of the farming economy of the village. But the situation is even worse than these figures show, for 32 of the shares which total 79 hectares, are unsuitable for cultivation due to water-logging and the resulting alkalinity of the soil. If we subtract this figure from the first estimate, the *per capita* share in the land comes to 0.2 hectares.

3. In the 1335 (1956) census, the village is recorded as Hassanxoi, and its population is put at 585. The figure given by the Department of Agriculture at Zābul is 905.

The total number of *gāvbands* (oxen used for ploughing) in Hassanxun is 27 *jofts* of which 16 *jofts* are rented and 11 *jofts* owned by the *nasaq*-holders. The following statistics show the division of the rented and owned *jofts* between the four units of the village:

	No. of <i>jofts</i>	No. of rented <i>jofts</i>
Hassanxun	13	10
Darvish	5	3
Shirmohammad	3	1
'Alijān	<u>6</u>	<u>2</u>
Total	27	16

Farmers who rent their plough oxen pay one-third of their product to the owner. But in addition to ploughing by oxen, some 14 hectares of the village land are ploughed by tractor. The tractor rent is 850 rials per hectare.

The distribution of land among the villagers is not even. We asked the elders about this point and they told us that eight families each have 1 to $1\frac{1}{2}$ shares of land, eighty-nine families each have 1 share of land, and thirty families each have $\frac{1}{2}$ a share of land. If we add to the 23 shares of *ṣāleseh* land, the total number of shares comes to 139, one more than that quoted by the Department of Agriculture in Zābul and twelve more than the figure originally given by the villagers. However, since the land was not surveyed at the time of the division, the real number and area of the shares is unclear. Moreover, the official area of land known as a share is 3.9 hectares, but it is common to find shares much larger or smaller than this. As we shall see in the next section of the report, the income from half a share may be equal too, or, in some cases, even more than the income from one share.

The major products of the village are wheat and barley with the addition of a little alfalfa, lucerne and clover. The elders told us that the productivity of wheat seeds was one to three, a ratio which was difficult for us to believe. But it was confirmed by the Department of Agriculture at Zābul, and by the explanation of the villagers who cited the salinity of the soil and primitive methods of cultivation as the main reasons. Therefore, after the inadequate area of land, the waterlogged and saline soil is the major problem of the village. The water collects on the different levels of the village field—a common problem in Sīstān. But apart from this, Hassanxun has a special difficulty in that it is situated

between the two town water channels and the Mehrān channel which come from the Zahak dam.

These difficult conditions, which together serve to endanger the livelihood of the villagers, have forced a situation in which the land is not laid to fallow, although the file on the village in the Agricultural Department states that half the lands are fallow each year.

Agricultural methods are traditional and primitive. Ploughing, which is usually done with an iron plough-share, is a mere scratching of the surface of the land. No fertilizer is used and sowing is by hand, the traditional method. The seed used is a native strain and no improved seeds are available to the farmers. Harvesting is done with a scycle, and threshing is carried out by the traditional method used in Irānian villages in the desert.

To these factors we must also add that of moving sands and wind. The villagers told us that because sands frequently covers their fields, they are compelled to carry out their farming operations a number of times.

Irrigation water comes from the canal which runs from the Zahak dam. The water right of the village is 16 hours per day, or, in the local terminology, one *man*. Usually this amount flows from sunrise to sunset. Only the lands of Shirmohammad, which are situated at a higher level, are irrigated by means of a water pump. Each share of the village land must pay 150 rials per annum to the Irrigation Centre for the water from the channel. For the 18 shares which use the water pump, not only must the 150 rials be paid, but also, two-fifths of the produce of the share must be given over to the owner of the pump, a resident of Zābul. The file on the village at the Agricultural Department states that 20 shares are irrigated by the pump, and the rental is recorded as half the total product. This is, of course, an extortionate fee and we might mention in passing that in Sistān, many people who have a little capital invest it in this way, creating a new and extremely onerous kind of exploitation for the villagers.

Livestock raising is not prospering very much in Hassanxun, the reason being the general conditions found in Sistān with respect to this activity. Years ago, when the river Hirmand had more water and flowed into the Hāmūn lake, the pastures around the lake were rich, and large herds of Sistān cattle, particularly beef cattle, grazed there growing fat on

the plentiful food available to them. However, in recent years the river waters have dried up, the pastures have withered, and the flocks have been depleted a process which has been further exacerbated by disease. In addition, because the villagers make frequent journeys to the Gorgān plain and Gonbad to find work, and stay there for long periods of time before returning to farm their land, livestock raising, an activity which requires permanent residence, is impossible. At present there are 150 sheep, 80 cows, and 50 donkeys in Hassanxun. The sheep are grazed in an area which stretches to the township of Birjand, and the donkeys are mainly kept for trading purposes. There are no horses or camels in the area and the village fowls have all died of a disease known as Newcastle.

There is no handicraft industry, although, in view of low standard of living, one might have thought that this was a useful supplement. The villagers told us that the raw materials for handicrafts, which come from the sheep flocks, can only be sold after a rather long delay; whereas it is possible to find a market for raw wool very quickly. However, in the group's opinion the major reason for the lack of an industry is the periodic migrations and the fact that in Gorgān it is possible to earn wages exceeding the income that can be gained from this source.

From the gross annual farming income in Table 1, the following costs must be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	189,602
Rent for oxen used in ploughing	37,500
Cost of 127 shares of water paid to the irrigation office	19,050
Two-thirds paid to the owner of the motor-pump in Shir-mohammad for 18 shares	34,646
Landlord's interest on the 23 shares of Public Domain land	36,892
Public services (barber, <i>mollā</i> , etc.)	38,100
Tractor rental	<u>11,200</u>
Total	<u>366,990</u>

Therefore, the net farming income of the *nasaq*-holders is about 315,375 rials. This, divided among the 150 *nasaq*-holding families, gives an income of 2,102.5 rials or 28 dollars per family. There are 750 members of *nasaq*-holding families so the per capita income of this group from farming is about 5.6 dollars. But to this we must add the earnings from livestock

raising: 155,000 rials from 80 cows and 150 sheep.⁴ As a result the income of each family is raised to 3,136 rials, or about 42 dollars and the per capita income to about 8.4 dollars.

Table I
Gross Annual Farming Income of the *Nasaq*-holders of Hassanxun

1	2	3	4	5=3x4	6	7=5x6
Product	Cultivated area (has.)	Seed in cultivated area(kgs.)	Seed output ^A	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	166.3	23,945	3	74,835	6.5	486,427.5
Barley	47.5	7,125	5	35,625	3.5	124,687.5
Alfalfa & lucerne	9.5	B	900kgs. per ha.	8,550	6.0	51,300
Clover	9.5	B	300kgs. per ha.	2,850	7.0	19,950
Total	232.8					682,365

A. In the General Agricultural Census of 1339 (1960-1961) the output coefficient of seeds for this region.

B. The amount of seeds per hectare cannot be calculated because these fields are not seeded every year.

The average income of each of the 127 shares cultivated is about 2,483 rials or approximately 33 dollars. But there are not enough shares to enable the 150 *nasaq*-holding families to hold a complete share each so their average income is less. Besides this, differences in the area and quality of land included in a share mean an uneven distribution of income. Inequality is also exacerbated by the fact that those who work land irrigated by the motor pump pay a great deal more for their water than those who use the irrigation canal, and that those who work Public Domain land must pay two-fifths of their product as landlord's share. In order to see the way in which income is distributed among different groups of *nasaq*-holders more clearly, we calculated the income of each group separately.

The first group are farmers who hold 86 shares of the land of Hassanxun but are unable to cultivate 24 of these because they are waterlogged. Their gross annual farming income is shown in Table 2.

4. Net income from each cow is 1,000 rials, and from each sheep 500 rials.

Table 2
Gross Farming Income from 86 shares of the Land of Hassanxun

1	2	3	4	5=4x3	6	7=6x5
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	106.3	15,945	3	47,835	6.5	310,927.5
Barley	30.4	4,560	5	22,800	3.5	79,800
Clover	6 ^A		300kgs. per ha.	1,800	7	12,600
Alfalfa & lucerne	6 ^A		900kgs. per ha.	5,400	6.0	32,400
Total	148.8					435,727.5

A. The amount of seeds per hectare cannot be calculated since these fields are not seeded every year.

From this the following costs must be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	129,214.5
Rental for plough oxen	25,800
Cost of water paid to irrigation office	12,900
Public services (barber, <i>molla</i> , etc.)	25,800
Tractor rental	7,583
Total	193,798.5

Therefore, the net annual farming income of this group comes to 242,429 rials or a little more than 3,232 dollars. The average income from each share is 827 rials or 37.5 dollars.

The second group are *nasaq*-holders who work 23 shares of Public Domain land, of which 6 shares are uncultivable due to waterlogging. This group consists of 23 families.

From the gross farming income shown in Table 3 the following costs must be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	33,172
Rental for plough oxen	6,800
Cost of water paid to the irrigation office	34,500
Public Domain share	39,885

Public services (barber, <i>mollā</i> , etc.)	6,900
Tractor rental	<u>2,028</u>
Total	<u>92,235</u>

Table 3

Gross Annual Income from Public Domain Lands

1	2	3	4	5=4x3	6	7=6x5
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Total product	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	29.1	4,365	3	13,095	6.5	85,117.5
Barley	8.3	1,245	5	6,225	3.5	21,787.5
Clover	1.7		300kgs. per ha.	510	7	3,570
Alfalfa & lucerne	1.7		900kgs. per ha.	1,530	6	9,180
Total	40.8					119,655

Therefore the net annual farming income of this group comes to 27,420 rials or about 365.6 dollars and the average income of one share is 1,192 rials or about 16 dollars. The per capita income (assuming that each family has an average of five members) is, therefore, 238.4 rials or a little more than 3 dollars.

The third group are *nasaq*-holders who cultivate 18 shares in Shir-mohammad and irrigate their land by means of the motor pump.

From the gross annual farming income shown in Table 4, the following costs must be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	35,118
Rental for plough oxen	5,400
Cost of water bought from the irrigation office	2,700
Share of motor-pump owner	50,676
Public services (barber, <i>mollā</i> , etc.)	5,400
Tractor rental	<u>1,588</u>
Total	<u>100,882</u>

The net annual income of this group, is, therefore, 25,808 rials or 344 dollars and the net average income of each share is 1,434 rials or 19 dollars.

Table 4
Gross Annual Farming Income of Shirmohammad

1	2	3	4	5=4x3	6	7=6x5
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Total product kgs.	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	30.8	4,620	3	13,860	6.5	90,090
Barley	8.8	1,320	5	6,600	3.5	23,100
Clover	1.8	A		540	7	3,780
Alfalfa & lucerne	1.8	A		1,620	6	9,720
Total	43.2					126,690

A. The amount of seeds per hectare cannot be calculated since these fields are not seeded every year.

It can be seen that although members of the first group earn about half a dollar more than the average income for the village, the income of the second and third groups is much less. Indeed the figure we quote is among the lowest incomes to be found in the world. It is interesting to note that in the file on Hassanaxun held by the Agricultural Office at Zābul, the net annual farming income of a *nasaq*-holder owing one share is recorded at 5,000 rials or 66.6 dollars. This gives an annual per capita income from farming of 13.3 dollars. The difference between this figure and our own arises from the fact that the Agricultural Office has put the amount of land attached to the village at 572 hectares, of which 256, or half, are cultivated each year - more than the amount we calculated.

But the crucial factor in the calculation is the area of land included in a share, or, more exactly, the area of land held by each farmer for, as we have already mentioned, not all the farmers hold a complete share. Our data on the kind of crops grown and the output ratio of seeds are the same as those held by Department of Agriculture, the only difference being in the area of land taken into account.

To gain closer knowledge of the condition of individual farmers and the distribution of income between them, the group conducted personal interviews. The first *nasaq*-holder to be interviewed was Rezā Kixāh, the headman of the village. He owns one share consisting of 2.2 hectares and cultivates this without leaving any fallow. His gross annual income from

farming is shown in Table 5.

Table 5
Gross Annual Farming Income of Reza Kixāh

1	2	3	4	5=4x3	6	7=6x5
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	1.6	240	3	720	6.5	4,680
Barley	0.4	60	5	300	3.5	1,050
Clover	0.2	18		80	7	560
Alfalfa & lucerne		12		72	6	432
Total	2.2					2,766

From this following costs of production should be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	1,968
Public services (barber, <i>mollā</i> , etc.)	300
2 per cent development tax	60
Payment for water	150
Rental for plough oxen	780
Total	3,258 ⁵

Therefore, the net annual farming income of Reza Kixāh is 3,464 rials or 46 dollars, and the per capita income of his family of eight is 433 rials or 5.7 dollars. But in addition to this Kixāh receives 6 kilograms of wheat and 6 kilograms of barley from each share as his headman's salary (value 7,620 rials), and earns about 3,500 rials from his cow and from his five sheep. This makes an extra 3,500 rials to be added to his farming income and brings the per capita income of his family to a total of 1,823 rials or 24 dollars. However Kixāh claimed that this was insufficient for the basic necessities of life and that he was compelled to go to the Gorgan plain every few years to take a job as a labourer to supplement his income.

The next person to be interviewed was Rustam Purfāzeli who owns one

5. Since this farmer has eight dependents most of his labour needs are provided by his family.

share and has a family of twelve. His share consists of 3.2 hectares of land. Table 6 shows his gross annual farming income.

Table 6

Gross Annual Farming Income of Rustam Purfāzeli

1	2	3	4	5=3x4	6	7=6x5
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Total product (kgs.)	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	3	430	4	1,800	6.5	11,700
Summer crops (water melon & <i>varbuseh</i>)	0.2			150		500 ^A
Total	3.2					12,200

A. Net income.

From this the following costs should be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	2,925
Rent for ploughing oxen	585
Public services (barber, <i>mollā</i> etc.)	500
Water fee	150
2 per cent development tax	60
Total	<u>4,220</u> ⁶

Therefore, Rustam's net annual income from farming is 7,980 rials or 106 dollars and the per capita income of his family is 605 rials or about 9 dollars. However, to this sum 3,500 rials earnings from one cow and five sheep must be added. Thus his total net income is 11,490 rials which gives a per capita income of 557.5 rials or 12.7 dollars.

In comparing the income of these two farmers, the following observations can be made:

i) Although both Kixāh and Purfāzeli own one share, Kixāh's land is 2.2 hectares and Purfāzeli's 3.2 hectares.

ii) Both grow the same crops and use the same methods of farming, but the income of Kixāh's family is 46 dollars and that of Purfāzeli's 106 dollars. Although Purfāzeli has four extra dependents, the per capita income of his family is about 3 dollars more.

6. Rustam has twelve dependents who supply his labour requirements.

The third person to be interviewed was Mohammad Hassan Kadxodā'i who owns half a share and has five dependents. His share totals 2.1 hectares. Kadxodā'i's gross annual farming income is shown in Table 7.

Table 7
Gross Annual Farming Income of Mohammad Hassan Kadxodā'i

1	2	3	4	5=3x4	6	7=6x5
Product	Cultivated area(has.)	Seeds in cultivated area(kgs.)	Seed output	Total product	Price of 1 kg. (rls.)	Gross value of product (rls.)
Wheat	2	300	3 ^A	900	6.5	5,850
Barley	0.1	15	5	75	3.5	262.5
Total	2.1					6,112.5

A. The *nasaq*-holder in question has calculated the yield of wheat to be 1:2 rather than 1:3

From this the following costs must be deducted:

<u>Items</u>	<u>Rials</u>
Seeds	2,002.5
Rental for ploughing oxen	220
Public services (barber, <i>mollā</i> , etc.)	250
2 per cent development tax	50
Water fee	75
Total	<u>2,597.5</u>

Therefore, Kadxodā'i's net annual farming income is 3,515 rials or 47 dollars and the per capita income of his family is 703 rials or 9.37 dollars. To this we should add 1,000 rials earned from one cow and 320 rials wages gained from eight days labour in the town to arrive at a total net income of 4,835 rials or 64.5 dollars. This makes a per capita income of 967 rials or about 13 dollars for his family.

We should note that, despite the fact that Kadxodā'i holds only half a share, the amount of land he farms is only 0.1 hectare less than that of Kixāh. Moreover, his income from farming is one dollar more than Kixāh's although the latter, in addition to wheat and barley, cultivates alfalfa and lucerne, and clover. Probably one of the reasons for this is that Kadxodā'i has better quality land.

The Social, Educational and Health Condition of Hassanxun

The following are the major social groups to be found in the village:

1. *Nasaq*-holders who own their own land. Despite the relative advantages derived from ownership, the members of this group are unable to secure their family's livelihood in the village and all, without exception, go once every few years to the Gorgān plain and Gonbad Kuch in order to supplement their incomes by working as labourers.

2. *Nasaq*-holders who work the Public Domain lands. The economic and social condition of this group is worse than that of the previous one. Their relations of production are those of landlord and peasant, and they are compelled to turn over two-fifths of their product to the Public Domain Administration. Although, like members of the first group, they used to migrate to find work, because of the possibility that their land will soon be ceded to them, they are unable to make the journey and must remain in the village waiting. This inability to make an extra income means that the economic condition of this group is more depressed than that of the previous one.

3. The *xoshneshins* are a group who show great variations in their social and economic conditions. Some own oxen which they rent to the *nasaq*-holders for purposes of ploughing. These are in a much better situation than the other section of the *xoshneshins* who earn their livelihood by working as labourers. The oxen-owning *xoshneshins* go less than the labourers to Gorgān because they are compelled to stay in the village to supervise their animals which graze in the reed beds at the side of the lake. Besides these two groups, there are three shop-keeping families who, from the economic, if not the social point of view, are quite different from the rest. They are well able to earn their living from their enterprises and so constitute a stable part of the population of the village.

Most of the villagers are members of the major tribal groups of Sīstān (*tā'efe*) such as the Sharkī, Nāru'i, Molāshāhi and the Kohxāh. Their major religion is Shi'ism and their language is Zābuli Farsi.

On entering Hassanxun, the numerous ponds surrounding the houses and the fields first meet the eye, and then the houses, which are made from mud and sun-dried bricks and have roofs like soldiers' helmets: excellent ventilators. The houses are low and mean and the narrow streets are

covered with soft smooth mud.

Despite its large population, Hassanxun is completely devoid of any medical facilities, the nearest clinics and doctors being found in Zābūi 16 kilometres away. There is no bath, and it is interesting to note that, while we were in Hassanxun, the people took us to a vast area surrounded by a brick wall in the middle of which was a cemented canal. With a wry smile they introduced us to their cow's bath which had been built in 1960 by Italconsult's engineers for washing the village herds, and which was now in ruins. The farmer's satirical remarks only confirmed the view that, if the community does not participate in development plans, and if these plans are not related to basic social needs, most of the effort and capital which have been invested in them is not on a firm basis and will be wasted.

The most prevalent diseases of the village are malaria, trachoma, and tuberculosis. Malaria is made worse by the ponds which although they were sprayed some time ago are still an ideal breeding ground for flies. Trachoma is caused by contaminated water, lack of observance of health rules, contaminated dust and the variety of flies found in the environment. The basic cause of tuberculosis, here as in other parts of the region, is lack of food. Starvation in the real sense of poor nutrition and inadequate calories is widespread. The local food is mainly bread made from wheat harvested in the village, dates, a kind of broth made without meat and, very rarely, meat itself.

Drinking water comes from the town channel which branches from the Hirmand river and which, because it is not filtered and becomes very contaminated along its course, is a big factor in causing disease. Childbirth is attended by three local, untrained midwives. When we asked about the death rate among the children we were told that in the space of the previous month three had died, two of measles and one of dysentery.

We enquired about the activities of the village council which was formed in 1332 (1953-1954) for this institution can initiate many development activities. The elders felt that their main problem was poverty and in the year 1342 (1963-1964) they were only able to collect 350 kilograms of wheat for the development tax because many of the farmers were incapable of paying their share. In 1343 (1964-1965) as well, only 300 kilograms of wheat were collected. This meagre sum is all that is available to meet the needs of Hassanxun which include a girls school, a number of

wooden bridges and a mortuary. Up to now all the council has been able to do is to build a school and four bridges over the canal.

There are two primary schools, one for boys built in 1327(1948-1949) which has six classes, and the other for girls built in 1329(1949-1950) which has five classes. Altogether five men and one woman teach 180 boys and 40 girls. But this number does not include all the eligible children of the village since all families are not able to send their children to school. Adult classes were only begun in the present year (using a mobile school), but were soon closed.

The level of technical knowledge is low. Only one person knows how to drive, and there is no repair shop in the village. In case of need a visit to Zābul is necessary. The extension worker visits the village once each week to teach the inhabitants about modern agricultural methods and arboriculture but as yet modern techniques have not taken root. Three films on these problems have so far been shown and the villagers told us that they await their repetition enthusiastically. There are two radios in the village and each time one of the literates goes to the town he buys a newspaper and returns to the village to read it aloud.

We would have thought that in a village whose lands had for some years, been for the most part owned by the farmers, and in which the state is still the landlord of a few shares, a co-operative society to extend credit to the villagers, give technical aid, buy seeds, and sell produce at a fair price would have been created. When we asked the villagers about this rather strange lack they told us that no move on the part of the government had ever been made in this respect. Towards the end of 1343, with the encouragement of propaganda, the villagers did apply to form a society but no more than 2,000 shares were sold and the Agricultural Bank was unwilling to help unless 50,000 shares were sold.

The majority of the farmers are in debt—a number to the *pilevars* of the city and a number to the Agricultural Bank. In the latter case, the deeds of the land are handed over as a guarantee in return for a loan. The other source of credit in the village is a number of people who sell their oxen to each other and lend the money obtained in this way. The three village shops belong to three *zoshneshin* families. One is a butchers shop, which is open for three months of the year, and the other two are general stores. Fuel is generally thorns collected from the desert or the remnants of trees or animal droppings. Kerosene is only used for lighting

and is brought from Zābul by the shopkeepers and sold to the villagers at more than the normal market price.

The twenty-three shares of Public Domain land, like all the remaining public domain land in Sistān has still not been ceded to the peasants although recently that is in Ordibehesht 1344 (April-May 1965) the Cabinet decreed that these lands should be ceded to those who rent them at present unless there is some opposition. The largest amount of land that can be given to any one person is four shares. However, we must remember that most of the land concerned is at present rented by the *sardārs* and influentials and that the peasants do not have the power on the local level to oppose their claim. So the probable result of this programme is that only a small part of the Public Domain will go to the farmers and that in small, uneconomic units.

While the group was leaving the village a discussion arose as to what possibilities were available to this large impoverished population who were unable to obtain any other kind of work in the village or the surrounding area. Zābul, because of the economic decline of Sistān has absolutely no possibilities of work, and even the Gorgān Plain and Gonbad, which makes use of much immigrant labour is now saturated from this point of view, and for the young people who are now reaching the age at which they should pay an active part in production, this kind of work does not offer a very good future.

Change in Hassanxun over the Past Ten Years

As we mentioned in the introduction to this report, the villages surveyed by the Ford Foundation ten years ago were not named. We are therefore unsure that they can be identified with the four economic units included in Hassanxun. For this reason a number of problems arise when it comes to making comparisons. However, we thought it worthwhile to make a few points, and in what follows we have tried to confine ourselves to a discussion of matters on which some concrete information is available.

1. The closeness of the Zahak and Kuhak reservoirs, and the fact that they are not entirely safe puts the whole region in the danger of flooding. Indeed the problem has obviously existed for some time for all parts of the region we visited were bare of the tamarisk trees which were, in

the past, used for building wooden dykes. At present the only means available to avoid flooding is the abandonment of the farming land and the area. Over the past ten years numerous inundations and constant waterlogging have served to increase the alkaline nature of the soil and have caused a decrease in the output of crops.

In the Ford Foundation report the productivity of seeds was recorded at between 1:3 and 1:5. According to the farmers we interviewed in the present survey, the output is now 1:3; a ratio which is confirmed by local agricultural authorities.

2. Because of the uncertainty as to the identity of the village studied by the Ford Foundation it is impossible to make an exact comparison of population statistics, or even to put forward good reasons for increase or decline in the population. In the 1335 (1956) census the population of Hassanxun was recorded as 585. The file on the village in the Zābul Agricultural Office records it as 905, and at the time we made our survey 1,000 persons were recorded. The following points can be made about these figures:

(i) There is no stable population in the village because of periodical migration to the Gorgān Plain and Gonbad, which means that the actual population is more than that recorded at any one time.

(ii) It is possible that the increase shown by our own figure is due to the fact that little by little the Gorgān Plain and Gonbad are unable to absorb agricultural workers from outside the region and that, despite their desire to find other work, an increasing proportion of the village population are forced to stay at home. This, incidentally, may also have been an active factor in the increase which has taken place in the price of the land of Hassanxun, despite the low income it yields. The farmers we interviewed told us that: "In the past, the price of each share of land was about 2,000 rials whereas it is now 4,000 rials."

(iii) However, these points should not lead us to think that the village population is becoming more stable. One of the elders told us that: "We were in the lands of the Turkamān and returned to farm our own land. Our situation got worse and this year we will go back."

3. The reasons put forward for the economic decline of Sīstān in the earlier report still hold. The distribution of land and registration of holdings which might have been of great help in solving the problem of the

oppression of the tribal leaders, and in limiting their sphere of influence has not, because of the power of this same group, as yet succeeded.

4. Although the legal area of a share of land in Sistān was put at 3.6 hectares, the lack of any survey, the shortage of land available for small-scale farmers, and the corruption which crept into the administration of land distribution has resulted in a confused situation. The farmers do not, as recorded in the earlier report, all own shares of 3.6 hectares. Our study of seeding carried out by the farmers we interviewed showed that while one held a share equal to 2.4 hectares, another had 3 hectares, and another 4 hectares. The disproportionate economic units which came into being in the reform in Sistān, and which through sale and inheritance became even more inadequate, are a serious danger to the economic future of the land-holding farmers of the region.

5. In the report written ten years ago, the net income of each farmer holding one share (with the assumption that a share was 3.6 hectares) was put at 2,910 rials or approximately 39 dollars. The present group found that the income of each share was dependent on the area of land making the land area, not the share, the major criteria for measuring income. The calculations of income we made show that a farmer who owns 4 hectares of land has an income of approximately 39 dollars. However, the average income of each share in the village is 33 dollars. In the file on Hassanxun at the Zābul Department of Agriculture, the average income of each share is recorded as 5,000 rials or 67 dollars. In this calculation it is assumed that the area of land included in each share is 3.9 hectares.

THE FORD FOUNDATION REPORTS

Ostān: Baluchestān

Shahrestān: Bampur

Village: Nukjub

In the village of Nukjub, located about 4 kilometres from Bampur, there are 28 *gāvbandis* with a *gāvbandi* head and three other workers each. Ordinarily there are two oxen per *gāvbandi* but in this village, due to losses from malnutrition and actual starvation, there were, at the time of the survey, only forty-three instead of the normal number of fifty-six.

Each *gāvbandi* crops 3 hectares of winter crop (almost all wheat) and 2 hectares of summer crop (grain sorghum). The village has as much arable land in fallow as in crop with the land cropped every second year. The amount of winter crop seeded is 450 kilograms per *gāvbandi* from which a yield of eight to one or 3,600 kilograms of wheat is normally obtained. In addition 60 kilograms of sorghum seed are planted in a special seed-bed, and the seedlings transplanted to the field getting a yield of 20:1 or 1,200 kilograms per *gāvbandi*. At harvest the wheat has a value of 5 rials per kilogram and the sorghum a value of 3 rials per kilogram.

There are 112 family heads in the village, all of them cultivators, and a total population estimated at 560. Eight children, all boys, go to school in Bampur. There is no school in the village and the reason advanced for the limited attendance is that "it is too far for the girls to walk". The headman is only 24 years old, was born in the village, attended elementary school for six years and vocational agricultural school one year. His father was headman before him and although he has two older brothers he was selected as headman by virtue of his ability to read and write. The closest doctor is located 18 kilometres away at Irānshahr where the ill must go on the back of an ox. The village is owned by the Public Domain.

Two-fifths of the crop is paid to the landlord (the Public Domain) which provides the land and the water, although the water is obtained directly from the Bampur River and little or no expense in the construction or maintenance of the irrigation structure is borne by the landlord.

Three-fifths of the crop goes to the operators who furnish seed, labour and oxen. Within the *gāvbandi* the operator's share is divided as follows:

1. One-fifth of total crop is "laid aside" for the next year's seed.
2. The remaining two-fifths is divided into five parts as follows: two parts go to the *gāvbandi* head, one part goes to the owner of two oxen who furnishes the plough and pays for any plough repairs, two parts are divided among the three workers.

Since each *gāvbandi* normally produces 3,600 kilograms of wheat at 5 rials and 1,200 kilograms of sorghum at 3 rials this results in incomes to the various parties as follows:

To the landlord two-fifths or:

1,440 kgs. of wheat at 5 rials per kg.	7,200 rials
480 kgs. of sorghum at 3 rials per kg.	<u>1,440</u> "
Total per <i>gāvbandi</i>	8,640 "
Total for 28 <i>gāvbandi's</i>	241,920 "

Laid aside for following year's seed, one-fifth or:

720 kgs. of wheat
240 kgs. of sorghum

Balance divided into five parts, each consisting of:

288 kgs. of wheat
96 kgs. of sorghum

Two parts to the *gāvbandi* head or:

576 kgs. of wheat at rials per kg.	2,880 rials
192 kgs. of sorghum at 3 rials per kg.	<u>576</u> "
Total	3,456 "

One part to owner of two oxen, or:

288 kgs. of wheat at 5 rials per kg.	1,440 rials
96 kgs. of sorghum at 3 rials per kg.	<u>288</u> "
Total	1,728 "

Two parts divided among 3 *gāvbandi* members, or for each worker:

192 kgs. of wheat at 5 rials per kg.	960 rials
64 kgs. of sorghum at 3 rials per kg.	<u>192</u> "
Total	1,152 "

The actual distribution of income in the village is as follows:

1 <i>gāvbandi</i> head owns 3 oxen, so receives	6,048 rials
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10 <i>gāvbandi</i> heads own 2 oxen each, so receive	5,184 rials
17 <i>gāvbandi</i> heads own 1 oxen each, so receive	4,320 "
3 <i>gāvbandi</i> members own 1 oxen each, so receive	2,016 "
79 <i>gāvbandi</i> members own no oxen, so receive	1,152 "

Thus 79 out of 112 family heads, or 70 per cent receive a total income for their year's work of 1,152 rials or 14.4 dollars from which they must feed and cloth a family averaging five members. They buy small quantities of sugar and tea from local merchants for which they must pay at the time of purchase. Shoes and clothing are purchased in very limited amounts to be paid for at harvest. Members of this group pay twice as much wheat or sorghum at harvest as would have been required had they been able to pay at the time of purchase. It was reported by villagers that "sometimes a man's share is not enough to pay for the clothes he has bought" so he ends his year's work in debt, unable to purchase the most meager of necessities.

The village council had on hand 29,362 rials from the 1952 crop and essentially the same amount from the 1953 crop. This checks with remarkable precision against the calculated return to the landlord of 241,920 rials since the landlord contribution of 10 per cent to the village council would be 24,192 rials.

The limiting factor in production for this village, like all others in the area, is availability of water for irrigation. Land is available to triple their present acreage if water could be provided to irrigate it.

The basic problem here is again too many people on too little land with resultant underemployment and low productivity spelling miserably inadequate incomes.

Ostān: Baluchestān

Shahrestan: Bampur

Villages: Mohammadābād and Shamsābād

The Bampur agricultural district of central Baluchestān lies 225 miles by rough road north of Chāhbahār, Irān's Gulf of Omān port. The Bampur River, which provides intermittent irrigation water for a narrow strip of cultivable land, is flanked on both sides by desert. The river runs above ground for only part of its course; it does not reach the Gulf, but empties into a salt flat to the west during flood season. The east-west aligned tiers of folded limestone ridges (the south-eastern most extension of the Zagros system), drained in part by the Bampur River, make travel and communications from the north difficult for much of the year. In general, most of this district is barren and unproductive, for beside the communication difficulties provided by irregular topography, there are climatic drawbacks - intense heat - great aridity, violent and intense sand storms. Historically the province was more productive and, in fact, the route from Chāhbahār to Kermān was once an alternative caravan route to that of Bandar Abbās - Kermān, the Makrān coastal region being noted for sugar production. But constant social turmoil, wars, the raiding of sedentary agriculturalists by the Baluch nomads leading to reprisals by the government forces, plus indifferent and incompetent public administration, have caused a decline in agriculture, in trade, and in the total existence of the present reduced population. Because of a magnificent growing season, however, some irrigation water, and a fairly productive soil, this oasis-like ribbon of irrigable land from the village of Irānshahr at the upper end of the Bampur basin to below Bampur, the ancient capital of Baluchestān, is considered to be the richest agricultural region of the province today.

The cultivators of this land are the dependents of the once proud and warlike nomadic Baluch tribesmen. Gone now, from these remnant peasant farmers, are most of the flocks, the camels, and the traditional handicraft skills of yesterday. An overcrowded strip of agricultural land,

plus an outworn system of social and economic control, has ground these people down to the level of sub-agriculture. Their dwellings are rude huts of palm fronds, their food between grain harvests the omnipresent locust, sickness and disease is rife. Remote from the central government at Tehrān, even far distant by third-class road from the provincial capital at Zāhedān, only recently has some effort been made to construct a diversion dam on the Bampur and a plan for rehabilitation has been drawn up under the Ministry of Agriculture supervision. It is interesting to note in the development plan that sixty families are to be brought from Yazd, Kāshmar, and Torbat Heydarieh to settle on the land. If more land than now available is developed for agriculture, this feature of the plan would be feasible and desirable, but the following statistics should be considered with reference to the present economic relationship between the land and the people.

In the public domain village of Shamsābād near Bampur there are seventy families. Sixty three of these families till the land with twenty-one *gāvbandis*, each *gāvbandi* having three family heads. The yield of each *gāvbandi* on three hectares of irrigated land for the winter crop of wheat and barley is 2,870 kilograms of which 120 kilograms of wheat is deducted for general expenses, i.e., the *mollā*, repairs, the farm equipment, and the salary of the water supervisor, etc.

In actual practice the grain crop is purely a subsistence crop and is eaten until it is gone, and then the peasants eat locusts. But for theoretical purposes the division of the crop will be shown in rial value:

2,750 kgs. of wheat at 5 rials per kg.	=	13,750 rials.
210 kgs. of barley at 3 rials " "	=	630 "
600 kgs. of sorghum at 3 rials" "	=	<u>1,800</u> "

Per *gāvband* 16,180 Rials

The crop is first divided into five parts with two parts, or 6,472 rials, going to the Public Domain Administration. Grain to the value of 3,236 rials is put aside for seed. This leaves grain to the value of 6,472 rials for each *gāvbandi*. This amount is divided into five equal parts. The head of the *gāvbandi* gets two parts or 2,588 rials value. There are a total of 35 oxen in the village for the sixty-three *gāvbandi*'s which means that half of the *gāvbandis* must rent oxen at one-fifth of the *gāvbandis* share of the crop, or 1,294 rials. In the *gāvbandis* which have

oxen, the oxen owner in the *gāvbandi*, normally its head, gets the 1,294 rials. This leaves 1,294 rials apiece for the year's work for the other two members of the *gāvbandi*. Thus there is considerable variation of return within the *gāvbandi* itself, a range from 5,176 rials for the *gāvbandi* head with one oxen which he rents to another *gāvbandi* down to 1,294 rials. But it is readily apparent that even the most affluent of the cultivators achieves a bare subsistence level by grinding down the income of the other *gāvbandi* members.

In another village in the Bampur area, Mohammadābād, which has 148 families, each family head has some land to cultivate by the simple expedient of increasing the 37 *gāvbandis* from three to four members, which in time reduces the amount of land that each man cultivates. But because of a fairer division of the crop within the *gāvbandi* each of the four members of the *gāvbandi* receives 2,179 rials for the year's crop as compared to the range of from 5,176 to 1,294 in the preceding village. The data for Mohammadābād may be summarised for each *gāvbandi* as follows:

420 kgs. of wheat seed x 1:9 return = 3,780 kgs. minus two-fifths for the government and one-fifth for seed = 1,412 kgs. divided equally between four members of the *gāvbandi* = 353 kgs. per member x 5 rials per kg. = 1,765 rials for wheat.

30 kgs. of barley seed x 1:6 return = 180 kgs. minus three-fifths for the government and seed $\div 4$ = 18 kgs. x 3 rials per kg. = 54 rials for barley.

60 kgs. of seed seed sorghum x 1:20 return = 1,200 kgs. minus three-fifths for the government and seed = 480 $\div 4$ = 120 kgs. x 3 = 360 rials for sorghum.

1,765 rials for wheat

54 rials for barley

360 rials for sorghum

2,179 rials net yield per *gāvbandi* member.

Ostān: Kermān

Shahrestān: Sistān

Villages: Two samples

The Zābul Plains agricultural area in the province of Sistān is irrigated by water from the Hirmand River which rises in the mountains of eastern Afghānistān, thence flowing some 700 miles to the central eastern border of Irān. The Hirmand divides near the Irāno-Afghān border into two branches - one branch, the Pariān, forms the border between the two countries for about 40 miles, and the other branch, the Sistān, waters some 100,000 hectares of land in the Zābul plains. On the Irānian side of the border two diversion dams, the Kahak and the Zahak, have been constructed on the Sistān, and below the latter a network of channels and canals (still partially under construction) fan out to provide water to the adjacent land. It is estimated that an additional 100,000 hectares of land may be irrigated when the distribution system of canals is completed. But the Zābul plains area is flat country and, as the government-built dams are diversionary, not storage, the agricultural lands are in yearly danger from spring floods. To help prevent flooding and to lift the river water to field level, it has been necessary for the farmers of this area from time immemorial to build small dams or dikes of earth and tamarisk logs along the river bed. It is reported now that the shortage of tamarisk logs and the lack of any better means of flood control is gradually forcing the abandonment of some previously cultivated land. Moreover, frequent flooding and constant irrigation over a period of several hundred years have resulted in a highly alkaline soil in the lower areas, which affects the agricultural yield. Without irrigation, farming here would be entirely out of the question since the normal rainfall is less than four inches per year.

Because of the increasing alkalinity of the soil, because of floods, and because of land tenure difficulties to be mentioned later, the population of this area seems to be decreasing, with only about 30,000

families now estimated to be present and the majority of these existing on some of the lowest incomes to be found anywhere in Irān.

In the recent historical effort of the Irānian Government to extend its political hegemony over all the tribes and tribal areas of Irān, the province of Sistān was occupied under the direction of Mir'Alam Xān in 1866-7. The lands subsequently became part of the Public Domain. Until 1923 these lands were rented to the local chieftans, or *sardārs*. In this year (1923) the *sardārs* were accused by the central government of failing to maintain the land, of extorting their peasants, and of not paying their taxes. Thus it was decided to distribute the land to the cultivators under the aegis of the local Ministry of Agriculture officials. This land distribution has been cited by those opposed to land reform as the "horrible example" of tragic failure resulting from land distribution. And so it may be, not because the principle of land distribution *per se* is wrong, but because the land distribution pattern adopted was ill conceived and the distribution poorly executed. As one authority has said:

"The fundamental reason for the decay of Sistān must be sought in the oppression of the *sardārs*, the mal-practices of government officials, inadequate control of irrigation, absence of health services, and the fact that the peasant, having no security of tenure or title to the land, is not prepared to undertake any improvement of it."

It is the considered opinion of the reconnaissance team that, in addition to malfeasance, the decline of this once prosperous agricultural area is also due to fundamental economic factors: (i) the inadequate size of land holdings for the individual cultivator; (ii) the lack of supervised credit facilities; and (iii) the failure of agricultural leadership in providing farm management and technical assistance to small farmers.

Concerning the mechanics of the land distribution here, the government land of this area formerly rented by the *sardārs* was divided into some 36,000 shares of 3.6 hectares per share in 1932 and distributed as follows:

20,000 persons received one share.

2,000 persons received two shares.

12 *sardārs* received 2,500 shares in blocks of from 100 to 500 shares.

200 persons received 1,500 shares in 5 to 10 share blocks.

10,000 shares were not distributed and at the present time 3,000 shares of this undistributed land is rented to farmers by the Public

Domain Administration, while the remaining 7,000 shares are at present pasture or dry lands.

No survey work was carried out and title to the land was, and still is unclear. Since 1932 there has followed a long history of complaints from the cultivators in this region of governmental and private machinations with regard to the buying and selling of the land shares; and series of reports by governmental commissions appointed to review the complaints whose recommendations, some constructive and some untenable, have been disregarded by the central government. In effect, nothing constructive has been done either by the central or local governmental authorities and the fiddling continues while Sistan declines.

Two villages below the Zahak dam, in which individual freeholding cultivators owned one share (3.6 hectares) of land apiece, were surveyed to determine the relationship of the population to the economic land base. The following data with reference to the per capita income per land share was assembled:

The two villages have a population of 105 families, or approximately 525 people. Seventy-eight family heads in the two villages own one share (3.6 hectares) of land apiece. Twenty-seven family heads in the two villages have no land and either work as labourers for landlord-held lands or provide services in the villages, such as hand weaving of cotton cloth, barbering, etc. These villagers have no draught animals so they are obliged to rent oxen from professional oxen owners in nearby villages.

The gross wheat and barley yield in this area from one hectare of irrigated land is 1,500 kilograms of grain from 420 kilograms of seed, a ratio of 3.5:1. It should be noted that due to the high alkalinity of the soil here as compared to that of, say, the Jiroft area, the yield is only one-third as great as the average Jiroft return.

The operating expenses on one share of land for these villagers are as follows:

- 90 kgs. of grain to oxen owner for ploughing
- 96 kgs. of grain to oxen owner for harvest
- 104 kgs. of grain to oxen owner for threshing
- 24 kgs. of grain to barber
- 24 kgs. of grain to the village headman
- 420 kgs. of grain for next year's seed
- 160 kgs. of grain to *mollā*, gendarmerie, dependent relatives, and

minor tributes to government officials.

918 Total

1,500 kgs.gross yield per share

918 kgs. average operating expenses

582 kgs. net income in kgs. of grain per share

At an average price of 5 rials per kilogram, 582 kilograms of grain gives the cultivator of one share of land a net cash income of 2,910 rials for his year's labour. Summer crops, due to lack of summer water at this time, are negligible. Unfortunately, even this is not the true state of affairs for, with the possible exception of the headman, every farmer must borrow money during the year which is repaid at harvest time in wheat at an exorbitant rate of interest. But here is the important point: despite the contention that the Sistan land distribution is a failure, the individual farmer on the Zābul plains cultivating land only one-third as productive as that in Jiroft, is making a net cash return three times that of the Jiroft farmer in a *gabbandi* without oxen. Despite their abject poverty, when the freeholders of these villages were asked if they were better off under their former landlords than now, they defended to a man their present independence on their own tracts of land.

Yet Sistan has declined in agricultural production, deteriorated with reference to land and water use, and in almost every other respect. We have said that this decline is due, in our opinion, not only to faulty public administration, but also in great part to: (i) the inadequate size of land shares, (ii) the lack of supervised credit facilities, and (iii) the lack of agricultural leadership in providing farm management advice and technical assistance. Let us assume for the moment that with the water distribution system completed and permanent dikes installed (which will take some years at the present rate of progress), a credit system is introduced either by co-operatives or by the re-orientation of policy of the Agricultural Bank to allow small cultivators credit to buy their own oxen. Let us assume also that the agricultural officials are stimulated to introduce better seeds and perhaps simple agricultural machinery, together with row irrigation and other innovations to prevent the increase of soil salts. With these improvements we might reasonably assume that the farmer with 3.6 hectares of land would be able to double his income to 5,820 rials. But even by doubling this farmer's income, the amount

would be less than the annual income of a rural family in India with its great press of population on the land.

It is apparent, then, that the first factor, an economic sized unit of land, must be given priority over rural credit and technical assistance if the economy of this area is to expand to the point of an increased standard of living. It is our estimate (considering the poor soil of this area) that from 10 to 15 hectares of irrigated land with sufficient water for summer crops is the minimum land base to support one cultivator and his family with the provision that he has access to reasonable credit and technical assistance to improve this amount of land.

It should also be stated that the peasants in this area who till the large landholders' estates - the so-called sharecroppers - are as poor, if not poorer, than the freeholders with one share of land. And these sharecroppers are poor for the very same reason the landholding peasants are poor: the size of the tract of land each tenant farmer cultivates is not sufficient to make an adequate living. It follows that with an inadequate land base, no farmer can become credit worthy; he cannot borrow money to provide seed, oxen, or materials for water development, fertilizer for soil improvement, or any medium of increased food production from a credit institution which desires to remain solvent because of the credit risk involved in loaning money on an unsound investment. These are the economic facts of life as far as Sistan is concerned, as we see them, and we submit that Sistan will remain a depressed area, socially and economically, until these practical land population factors are squarely faced.

GLOSSARY

- boneh* A *boneh* consists of a group of farmers, frequently but not necessarily related to one another, who cultivate their land on a co-operative basis.
- dāng* A *dāng* is one-sixth of any piece of real estate. Thus we speak of six-*dāng* village meaning a complete village.
- fard-gāv* Equal to half a *juft gāv*.
- gāvband-gāvbandi* The most common meaning of *gāvband* is one who contributes the oxen in the crop-sharing agreement which was, before the Land Reform, the norm in Iranian villages. The role of the *gāvband* has still not disappeared. In the area included in this survey *gāvbandi* has the same meaning as *juft gāv*; that is a unit of plough land.
- juft-gāv* A *juft* or *juft gāv* is a unit of plough land, generally calculated on the basis of the amount of land a pair of oxen can plough in one day.
- man* A *man* is a measure of land. 25 *mans* equal one hectare.
- nasaq-holder* One who, although he does not own land, has a traditional and inheritable right to cultivate a specified portion of the village lands for which right he pays one - fifth of his product to the landlord.
- qanāt* *Qanāts* are underground water channels used for

irrigation purposes, and constitute the most common traditional method in most parts of Irān.

xāleseh

Crown or, later, Public Domain land.

xoshneshin

Literally this means "happy sitter" and is a term applied to the large rural class who have no rights in land.



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