Chapter I

GEOGRAPHICAL BACKGROUND OF IRAN

1.1 Introduction:

From 8th century B.C. (during Maads dynasty), until a century ago, the geographical size of Iran has gone under several changes. At present Iran is a country of 1,648,195 sq. km. (636, 000 sq.miles).

Among its neighbouring countries, it has the following scale: it is more than two times bigger than Turkey (Turkey is 780,576 sq.km.), nearly 2.5 times bigger than Afghanistan (Afghanistan is 648,000 sq.km.), 3.5 times bigger than Iraq (Iraq is 434,924 sq.km.), and finally 13.5 times smaller than Soviet Union (U.S.S.R. = 22,402,200 sq.km.). Iran is 1/27 of Asia and 1/90 of the land mass.

She is a bridge for communication by land between Far-eastern Asia and the land of Mediterranean Europe. It extends about 2250-2600 kms. from north-west to south-east and about 1400-2100 kms. from north-east to south-west. It is situated between latitude 37' and 25' north and between longitudes 44' and 61' east. Iran lies between the Caspian sea and the Persian Gulf and has common frontiers with Iraq, Turkey, Soviet
Union, Afganistan and Pakistan. Its common frontiers with neighbouring countries are as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Distance in kms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>830</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>850</td>
</tr>
<tr>
<td>U.S.S.R.</td>
<td>1740</td>
</tr>
<tr>
<td>Turkey</td>
<td>470</td>
</tr>
<tr>
<td>Iraq</td>
<td>1280</td>
</tr>
</tbody>
</table>

Source: Dr. Badiee, Rabiee, A Brief Geography of Iran.

Also its water frontier in south of Persian Gulf and Oman Sea is 1880 kms. which consists more than 1/3 of total Iranian frontiers.

1.2 Socio-Geography of Iran:

1. The People:

Iran has been always predominantly populated by group of people of distinct linguistic and cultural identities. The largest group, the Farsi speaking Iranian, known as the persians, comprise only 45 per cent of the total population of Iran. They are mainly concentrated on the central provinces. Second large groups, the Turks, which constitute another 26 per cent
and are sub-divided into sedentary Azaris, and the tribal Turkmans, Gashgais, Shahsavans and Afshars, who formed distinct entities in the north and southern province of Fars. There are also smaller linguistic and ethnic groups such as the Arabs, Kurds, Baluchis, Armenians and Assurians, Lurs and Bakhtiaries.

Kurds are settled in west and north west, Baluchis in the east, Turks in the north and north-west, Arabs in the south. Persians live in all other provinces. Armenians are mainly staying in Julfa (Ispahan).

2. Language:

The national language in the country is Persian. But there are other languages too. Among those Turky (Azari) after Persian is most common. Kurdi, Luri, Arabic, Baluchi, Dary (the language of old Iran mostly spokea by Zorashterians), Armenian, Assurian and some other local languages are also spoken by people in Iran.
3. Religions:

The vast majority of Iranians are Muslims of the Shie sect. According to the Middle-East year book of 1977, the percentages of different religions in Iran are as follows:

Table 1.2

Percentage Distribution of Population According to Religions in Iran.

<table>
<thead>
<tr>
<th>Religious group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muslims</td>
<td>98.00</td>
</tr>
<tr>
<td>Armenians/Assurians/Jews</td>
<td>0.80</td>
</tr>
<tr>
<td>Zorasshterians and other faiths</td>
<td>1.20</td>
</tr>
</tbody>
</table>


Note: The above table is before revolution of 1979. During and after it a huge number of minorities migrated from Iran. Today after more than a decade of Islamic Revolution the number of minorities is even lesser than what is mentioned at the table above.
4. Population:

According to statistical centre of Iran's publication in English language, population of Iran has been estimated as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban</th>
<th>Rural &amp; Nomadic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1921</td>
<td>2718</td>
<td>6939</td>
<td>9707</td>
</tr>
<tr>
<td>1931</td>
<td>3210</td>
<td>7975</td>
<td>11185</td>
</tr>
<tr>
<td>1941</td>
<td>3773</td>
<td>9060</td>
<td>12833</td>
</tr>
<tr>
<td>1951</td>
<td>4936</td>
<td>11301</td>
<td>16237</td>
</tr>
<tr>
<td>1961</td>
<td>7718</td>
<td>14654</td>
<td>22372</td>
</tr>
<tr>
<td>1971</td>
<td>12398</td>
<td>17622</td>
<td>30020</td>
</tr>
<tr>
<td>1976</td>
<td>15855</td>
<td>17854</td>
<td>33709</td>
</tr>
<tr>
<td>1977</td>
<td>16628</td>
<td>18029</td>
<td>34657</td>
</tr>
<tr>
<td>1978</td>
<td>17433</td>
<td>18293</td>
<td>35636</td>
</tr>
<tr>
<td>1979</td>
<td>18267</td>
<td>18382</td>
<td>36649</td>
</tr>
<tr>
<td>1980</td>
<td>19157</td>
<td>18541</td>
<td>37698</td>
</tr>
<tr>
<td>1981</td>
<td>20085</td>
<td>18699</td>
<td>38784</td>
</tr>
</tbody>
</table>

Source: Statistical Centre of Iran, September, 1985.
1.3 Available Land for Agricultural Activities:

The total land area under cultivation does not go beyond 10-15 per cent. About 15 per cent is grazing land, 10-15 per cent is covered by forest and 30-35 per cent is desert. Northern part of Iran is the most fertile area where there is also high population density. In other way 1/3 consists of mountains, 1/3 consists of deserts and 1/3 consists of forests and wasted land.

By providing irrigation facilities, there is possibility of bringing 20-30 per cent of land under cultivation. It would not require a large amount of capital to increase significantly the cultivable potential or to expand the yield per acre. About 32 million acres of wasted land are considered to be potentially cultivable.

In Iran we have variety of soils and climates and varying degree of rainfall in different parts of the country.

In the 'AVESTA', the sacred book of the ancient Iranians, irrigation was regarded as a good deed in the eyes of Ahuramazda (the God of good), and waste
of land and the resulting deserts were described as haunted by Ahriman (the God of devil), and his demons.\textsuperscript{6}

Generally speaking, the prosperity of Iranian villages is determined by the availability of water for farming. It is due to shortage of water that only $1/10$ of the total area of the country is cultivable (see the table below).

Table 1.4
Land Utilization in Iran, 1977.
(Figures in 000\textsuperscript{2} hectares)

<table>
<thead>
<tr>
<th>Description</th>
<th>Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area of the country</td>
<td>165,000</td>
</tr>
<tr>
<td>Total arable land</td>
<td>15,400</td>
</tr>
<tr>
<td>Rain-fed arable land under cultivation</td>
<td>5,600</td>
</tr>
<tr>
<td>Fallows</td>
<td>4,200</td>
</tr>
<tr>
<td>Irrigation arable land under cultivation</td>
<td>3,600</td>
</tr>
<tr>
<td>Fallows</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Source: Statistical Centre of Iran, 1984, p 335.
1.4 Natural Geography of Iran:

Deserts:

Nearly 1/3 of total land area in Iran is covered by desert. There are two main large deserts in Iran: 1) Kavir-Namak (salt desert) and 2) Kavir-Lut (dry sand desert). These two are the most arid land in the world.7

1. Kavir-Lut:

It is situated in south-east of Iran, between Sistan and Baluchestan. The maximum rainfall during a year is 100 mm. and it is even less in the south, its highest point is 600 mts. above the sea level and minimum 300 mts. in the area of 'Khabis'.8

2. Kavir-Namak:

Kavir-namak is from east to the west of the country and is about 600 kms in length. Its width is from north to south which is about 300 kms. and is about 400 mts. above the sea level. The major part of Kavir-Namak is covered by sand and gravel. The rainfall is 100 mm. and the temperature within 24 hours varies from 0 degree C to 70° C.
There is flow of very strong wind in these two deserts, sometimes it is good when it carries heavy clouds which helps to water the dry lands. It happens that the heavy wind does cover nearly roads and also nearly villages get in trouble as well.

Wind is a major obstacle for agriculture in these deserts because it carries sands and it blocks the qanats in its way and life becomes impossible or extremely difficult. In some areas there is water but it does get absorbed very quickly. The living population in this area is from 1.5 to 2.5 per sq.km. and transport is carried by camels.

Mountains:

Mountain areas are in central plateau of Iran. The 'Zagros' and the 'Alborz' ranges which came into being in geographical periods from the Paleozoic to the Pliocene, attain altitudes of over 11,000 feet. These two mountain ranges have the maximum height in Iran.

The Zagros is extended nearly 1000 kms. from north-west to south-east. In certain parts its height rises over 4000 mts. Alborz range is located in the north of the country and has Iran's highest peak.
MAP 2

Deserts and Mountains in Iran
(Damavand). Its latitude is about 18600 feet (5672 mts.).

Water:

Water plays very crucial role in economy of Iran. Scarcity of water has led to numerous tracts of ample land as barren. At the beginning of 1950 there were less than 300 deep wells in all of Iran, open or under-ground channels (qanats) were the most popular form of irrigation, providing water to about 3/4th of the irrigated lands.¹⁰

Water is considered to be the most important factor leading to limiting agricultural activities in Iran.¹¹ Water has also been defined as a basic element of social and economical infrastructure. Water is an input for many activities. Historians do agree that civilization was somehow due to control of water for irrigation. In short, in today’s world, water is playing multipurpose role. Right from origin of civilization to the present, many of men’s major achievements have been involved in water source utilization. Due to scarce water sources, peasants have had to devise system for regulating the distribution and use of water in Iran.¹² Annual average of water in Iran
is estimated at about 400 billion cubic meters.\textsuperscript{13} 240 billion cubic meters are lost by direct or indirect evaporation, only 100 billion cubic meters are surface flow and out of which about 20 billion cubic meters are used for irrigation purposes. In other words, out of total rainfall about 24\% is flowing on the earth, 76 per cent is either getting evaporated or gets absorbed by the grounds as under ground-water. This is how out of 4.4 per cent of rainfall, only 1.4 is flowing which is a major difficulty in Iran. The cities and agricultural lands around the deserts are always facing difficulties due to poor rainfall. The highest rainfall (max.) is in the region where agricultural lands are of small size. Also the maximum rainfall is at the time when there is no cultivation season.

There are also abundant flood waters which could be converted into channels for the irrigation of non-cultivated lands.

The principal regions being cultivated are along the Caspian Sea in the north (provinces of Gilan and Mazandaran), Khorasan in the north-east (the area around Mashad), Azerbaijan in the north-west, the area around Kermanshah, Fars in the south and area near Tehran and around Isfahan, also certain parts of Persean Gulf littoral are under cultivation.
The total annual consumption of water in Iran is as under:

Table 1.5
Water consumption in Iran.

<table>
<thead>
<tr>
<th>Type of usages</th>
<th>Cubic meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total consumption of water in cities and industrial area</td>
<td>958,000,000</td>
</tr>
<tr>
<td>Total consumption of water for dry farming</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Others</td>
<td>32,000,000</td>
</tr>
<tr>
<td>Average</td>
<td>1,000,000,000</td>
</tr>
<tr>
<td>Consumption for irrigation purpose</td>
<td>39,000,000,000</td>
</tr>
<tr>
<td>Total annual consumption in the country</td>
<td>40,000,000,000</td>
</tr>
</tbody>
</table>


Rivers:

The 'Karun' is the widest and the only navigable river in Iran. It is about 850 km long. This river is the largest river flowing into the Persian Gulf. In Ahwaz the river is about 100 yards wide and is spaned by 4 to 5 bridges.
Other minor rivers which flow into the Persian Gulf are 'Hendijan', 'Jarahi', 'Karkheh', 'Dialeh', 'Alvand' and 'Zeb'.

Sefid Rud (White River), is the longest river in Iran, almost 1000 km long and it originates from Alborz mountain and drops swiftly into the Gilan Plain and finally through shallow rivers it reaches into Caspian Sea.

'Haraz' river too rises from the Damavand Peak and flows into the Caspian Sea at 'Babolsar'. It is about 150km, and has very important role in fishery of the region.

'Aras' or 'Araks', 'Atrak', 'Gorgan', 'Nika' & 'Talar' are some other rivers flowing into the Caspian Sea.

'Zarineh-rud' is another inland river which flows into 'Rezaiyeh' lake. 'Simineh-rud', 'Aji-chai', 'Mazlu-chai', 'Gum-rud' which flow into 'Howz-Sultan' Kashaf-rud which joins the Tojan and then flows towards Sand desert in Soviet-Turestar.

The rivers which flow into Caspian Sea are from west to east. The Aras, Safid rud, Haraz, Lar,
Gorgan and Atrak carry no great volume of water except in the spring. Among the inland rivers, Zarineh-rud is the largest, it disappears into the 'Gavekhuni-Swap' and the famous Isfahan city is situated in its banks.

Inland rivers are mostly seasonal or are used for irrigation purposes. 'Hirman', which originates from Afganistan and pour into 'Hamoun lake'. Rud Koor (blind river) which pours into lake 'Bakhtegan' in Fars. 'Jajrud' & 'Karaj' are rivers near Tehran.

The rivers which flow into Iran from neighbouring countries are: Aras (Araxs), from Armenia and Turkey, Atrak, from USSR, Harid-rud and Hirmand-rud from Afganistan. These four rivers totally supply about 7.5 million Cubic Mts. Water into Iran.

Lakes:

Lake Rezaiyeh (Urmia) is the largest and the most important lake in Iran. It is situated in West-Azerbaijan and is about 130 km. in length and 50 km. in width. It has high salinity, therefore there is no fish in it. In this lake there are few islands, the largest one is called 'Shahi' which is 9 km. long and 3 km. wide. The depth of lake is not more than 20 mts.
Howz Sultan is situated between Tehran and Qom. This too is also salty, which in turn affects the drinking water of Qom city to be very salty. Its width is 20 kms.

Hamoun lake, situated in east Sistan and part of it come under the border of Iran and Afganistan. Bakhtegan lake, is the largest lake in Fars, having little depth and salinity.

**Seas:**

**Caspean Sea:**

It is situated in north and it lies between Iran and USSR. The sea is about 90 feet below the main sea level and is still reducing.

It is about 170,000 sq. miles (i.e. 730 miles in length and 130 to 265 in breadth). Due to climatical conditions the level of Caspean sea is always fluctuating.

**The Persian Gulf and Oman Sea:**

With about 1,800 kilometer of their northern shores lying within the Iranian territories, the Persian Gulf and Oman Sea constitute an endless source of meat and other sea products. According to Dr.Herald
Belgoved, the Danish ichthyologist, who carried out a careful study on natural resources of the two areas in 1936-37, it is possible to catch from 150 to 200 thousand tons of various fishes in this area each year, and thus satisfy the meat requirements of the entire country.

**Climate:**

Iran is far from big seas and several chain type mountains have surrounded the geographical territory of Iran. This is how it prevents wind carrying humidity towards central plateau of Iran. It is between 25° & 40° latitudes. High humidity and heavy rain in north makes the border of Caspean Sea very green. The mountainous parts of Iran have cold winter and mild-summer.

In Persian Gulf region humidity does not spread and pour much rain in the region, it is just because from Saudi Arabia side there is always blow of warm wind which prevent. Deserts have very hot summer and cold winter. In south of Iran summer is very hot but winter is pleasant. In north both summer and winter are agreeable seasons. The mountainous regions are very cold in winter with temperature as low as -13° F. The coastal plains to the south have long and hot summer and humidity is very high.
The Caspian sea littoral in the north is the rain belt of the Alborz mountain range, humidity is very high due to its favorable climatic conditions, has higher population density and better agricultural potentiality. In Iran the change from one season to the next is fairly abrupt.

By March 21 the 1st day of Iranian New Year (Nowruz), the fruit trees are in full blosom and fresh green wheat covers the fields and later while orchards are in bloom wild flowers carpet the stony hills.

Summer heat burn and kills the flowers. Temperature in summer is very high in south of Iran (Ahwaz, Abadan,..), cold winter sometimes is more dreaded for Iranian than the heat of summer. It happens that sometimes travellers and transport vehicles are forced to a halt. In villages among farmers, the conservation of their limited food supply for winter is very common.

Precipitation:

Iran is a country of low rainfall, therefore great regional variation in average annual precipitation. Average rainfall is about 300 mm per year. The amount of rainfall differs from place to
place, west and north (Caspian coastal region) are main areas of heavy rainfall with the average of 580 mm. where as rest of Iran has an average rainfall of about 150 mm.

Table 1.6

Percentage of Rainfall in East and West of the Country.

<table>
<thead>
<tr>
<th>Region</th>
<th>% of Iran's total size</th>
<th>Average rainfall per year in mm</th>
<th>% of total rainfall per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>East region</td>
<td>66</td>
<td>150</td>
<td>33</td>
</tr>
<tr>
<td>West region</td>
<td>34</td>
<td>580</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>730</td>
<td>100</td>
</tr>
</tbody>
</table>


In the above table inspite of the east region being twice bigger than the west, but it receives half of the rainfall of the west region.

Rain-fed agriculture is generally practiced in those provinces which lie in the regions of Gilan, Mazandaran, Kurdestan, Kermanshah and parts of Khorasan.
According to Dr. Badi there are three main regions of rainfall in Iran:

1. Humid region: Which is small part but has heavy rainfall of 60-150 cm.

2. Dry region: Which covers major parts of the country and annual rainfall is between 3-25 cm.

3. Half-dried region: Area around desert of Iran, the highest rainfall in Iran is in Anzali and lowest at Yezd with the average of 41 mm.

1.5 Natural Resources:

The term natural resources refers to the gift of nature, thus we can include land, water resources, fisheries, mineral resources, forests, climate, rainfall, oil, metal, etc. Since we have explained about some of them in previous pages, here we shall explain and continue with the rest of them.

Natural resources do not guarantee production and progress by itself. But they can be useful when we convert them into economic asset. It is on behalf of
varieties of natural resources in Iran that different types of industries are operating. Availability of natural resources in fact gives us the idea of what pattern the economy of the country should follow.

If one wants to know about such resources, he has to know about the agricultural geography of the country where we come to know about location of a particular resource which helps us to plan for its exploitation and optimum production.

By looking into the map of Iran, we see a big dry land in the east of the country known as desert. At the same time there are mountains which surrender the country's forest which is mainly in the northern part of Iran, making the region very rich in some ways.

There are as well rivers, lakes, seas and several other resources which come under natural resources of the country. It is of great privilege to have abundant natural resources, in fact, it is of multipurpose benefit because such resources apart from being national wealth, it has great effect in the economy of the country as a whole. By exploitation of natural resources, there is employment, there is
production for domestic economy as well as export which in turn bring income to the country. Very simple example will show how resources can be important. To exploit resources, we need to employ some people to work for it, therefore employment brings income to employee, employee spends his income to buy goods, spending of money brings income to state (government), government spends the money for reproduction of goods. Hence, the cycle keeps on going on and resources (as an input) do have important role in this process.

**Marine Resources:**

The Caspian sea provide Iran with a variety of fish. Caviar is known in the world market and it has high demand in foreign countries specially in USSR and Europe. Half of the caviar is sold to USSR and the rest goes to the USA and Europe. Domestic consumption is not very high.

There are more fish in Persian Gulf but in quality it stand second to the fish found in Caspian Sea. The Caspian Fisheries Organization (SHILAT), is the government agency responsible for the fishing industry in the Caspian sea. The organization's main responsibility is production and export of Caviar. The 'Sturgeon' is the most valuable fish in the Caspian Sea.
Oil and Gas:

Oil and gas are considered the most abundant and valuable minerals in the country and Iran has come among the large producers of the oil in the middle-east. Oil has played very crucial role in the economy of Iran and it has very long history.

The province of Khuzistan in the south of the country is having the most prolific oil and gas in the country.

Oil and gas were discovered in Iran at the end of 19th century, few decades latter it was a major cause for socio-economic and political changes in the country.

Forests:

Forests in Iran have an approximate area of 18,000,000 hectares, i.e. about 1/9 of the total area of the country. Forests have very important role in changing climate and rainfall. The distribution and the main types of the forests of Iran are as follows:
1. Northern forests:

Covering the northern slopes of the Alborz ranges are the densest and the most valuable forests of Iran, running from Beldaghi Dehestan in Bojnurd to the city of Astara. Arasbaran forests, located on the south of Aras river, are also included in the northern forests. The forests on the Caspian litoral have an approximate area of 3,420,500 hectares, as determined on the basis of aerial photos. Out of 3,420,500 hectares, 1,330,000 hectares are considered commercial forests.

2. Western Oak Forests:

The Oak being the most prominent tree of these forests, they are called the "Oak forests" covering semi-dry areas 1,500 to 2,200 meters above sea level. The area extends from south-west Rezaiyeh up to the Zagros and on the Bakhtiyari mountains and south-east of Fars, covering most parts of Kordestan, Kermanshahan, Lorestan, Bakhtiyari mountains, Chahararmahal, Kohgiluyeh and Kazerun mountains in Fars. The total area under Oak forests is estimated at about 10 million hectares of which about 1/10 is rather dense and the rest is thinly forested.
3. Turpentine Forests:

These forests cover mountainous and semi-dry areas 1,300 to 2,000 meters above the sea level on the southern skirts of the Alborz and Zagros, in Khorasan, south and east of Iran. Such forests can be found in the eastern parts of Fars as well, even on Siyah Koooh in the salt desert and around Yazd.

4. Mountain Forests:

The southern slopes of Alborz and the northeast mountains as well as the Zagros (ranging from 1,700 to 3,400 meters in height) are also covered with forests whose principal trees are Junipers (with needle-like leaves). The area of these forests are estimated as 1,200,000 hectares.

5. Tropical Forests:

These forests, about 500,000 hectares in area, are scattered in the south.

6. Desert Forests:

These forests having an estimated area of 500,000 hectares, are scattered over the central deserts of Iran, Kerman, Sistan Baluchestan and Khorasan.
Habibolah Sabethi in his book "Forests of Iran" has divided forests into three main regions:

Table 1.7
Regional Distribution of Forests in Iran.

<table>
<thead>
<tr>
<th>Area</th>
<th>Size in million hectares</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coast of Caspian Sea</td>
<td>184</td>
<td>14.44</td>
</tr>
<tr>
<td>West and Southwest</td>
<td>350</td>
<td>22.70</td>
</tr>
<tr>
<td>The border of deserts</td>
<td>740</td>
<td>58.00</td>
</tr>
</tbody>
</table>

Source: Sabeti H., Forests of Iran.

Percentage of different commercial trees available in the northern forest of Iran is shown in Map 4.

1.6 Main crops and their locations in Iran:

About 73 per cent of the land under cultivation in any year is planted in wheat and barley. The northern regions are the richest agricultural areas in the country.

Wheat, barley and rice are grown mainly in Gilan, Azerbaijan, Isfahan, Khorasan and Fars. A minimum of 12 inches rainfall is needed to ensure a good wheat crop. Until the world war II the country had surplus of wheat.
Barley, the total land area under the cultivation of barley in 1975 was 1,400,000 hectares. The main provinces of barley cultivation are: Khorasan East Azerbaijan and Khuzistan.15

Rice, is the third most important cereal grain. The total land under cultivation of rice was 400,000 hectares, cultivation chiefly along the Caspean litoral where 75 per cent of the crop is grown. The other main centres of rice cultivation are Gilan, Mazandaran, Khuzistan and Fars.16

Cotton is grown in Gorgan, Azerbaijan, Tehran, Kermanshah, Khuzistan and Khorasan. It is the most important of the non-food crops, which grows wherever irrigation facilities are available, about 60 per cent of total cotton crop is used by local textile mills and the rest is exported. Silk is produced in Mazandaran, Khorasan, Markazi and Fars.17

Tobacco and Opium are grown in a West-Azerbaijan, Gilan, Kurdestan and Fars. Tobacco as one of the leading cash crops, it has been produced for about 300 years mainly in the north. Inspite of the reduction of producing land in 1966, output rose from 20,000 tons
to 22,300 tons.\textsuperscript{19} The opium cultivation was common until it was banned in 1947. At present its cultivation is under government supervision.

Tea, the national drink, is grown in the district around 'Lahijan', near Rasht, in the western Caspean provinces, in Alborz hills. Production, purchasing, processing, distribution and development are strictly controlled by the Tea Organization under the Ministry of Agricultural Products and Consumers Goods. Also high quality of tea is imported from India.

Sugarbeet is grown in different parts of Iran. Khorasan, Isfahan, West-Azerbaijan, Fars and Kermanshah are the main regions for cultivation of sugar beet. Sugar beet production began on the large scale in about 1930, and in the years 1948-52 increased from the annual average of 454,000 tons to 3.3 million tons in 1968.\textsuperscript{19}

Corn is grown along the Caspean sea coast mainly, traditionally it was fed to donkeys and hence not regarded suitable for human consumption. Under foreign influence, corn became an important food product in the large towns.
Sugarcane is mainly cultivated in Khuzistan region since the beginning of 1960. The government has been engaged in an extensive project to grow sugarcane in Khuzistan province and in 1961, about 5,200 acres were planted to the crop and it increased gradually to about 35,000 acres in 1968. Output also increased from 150 tons in 1964 to 410,000 tons by 1968 and again increased by 67 per cent by the end of 1972.20

Fruits and Nuts are important agricultural products in most parts of the country. Dates are the staple food along the coast of Persian Gulf and the Oman Sea in the south-east estimated about 10 million dates palms on about 326,000 acres of land with the total output of 280,000 tons per year.

Total agricultural land in the country during 1975 was estimated to 15,700,000 hectares, out of which 6 million hectares was provided for irrigated land and 9,700,000 was for dry farming cultivation. With compare to 1974, in 1975, the land under cultivation was reduced by 3.8 per cent.21 Irrigation experts believe that if improved irrigation methods were used, at least 1/3 more land could be put under the cultivation.22
1.7 Methods of Irrigation:

Surface system rivers, dams, springs, wells, and Qanats (Kariz) are the main sources of irrigation. Irrigation water is provided by above methods in Iran. Until recently qanats were the most important source of irrigation in Iran. By 1960, more than 75 per cent of all water used for irrigation came from these underground channels. Qanats lie in the central, eastern and south-eastern regions (low rainfall region). The depth and length of qanats differ from place to place. Depth may be between 20-90 meters, while the length goes up to 70 km (Ghonabad). A qanat may irrigate a few hectares or more than one village. The numbers given for qanats vary greatly; it is estimated that, they are between 30,000 to 50,000 of course these numbers are given for 1954 Census.

According to 1st statistics in 1954, 8570 qanats were out of use and dried. After 1970, there was more investigation by Statistical Centre and other ministries regarding the number of qanats. In 1976, the number of total ghanats (dried and working), was about 20800, which is shown in the following table.
Table 1.8

Number of Working and Dried Qanats in Iran.

<table>
<thead>
<tr>
<th>Year</th>
<th>Working Qanats</th>
<th>Dried Qanats</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>21060</td>
<td>8570</td>
<td>29630</td>
</tr>
<tr>
<td>1961</td>
<td>22000</td>
<td>8000</td>
<td>30000</td>
</tr>
<tr>
<td>1963</td>
<td>20000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1972</td>
<td>14986</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1973</td>
<td>15500</td>
<td>5300</td>
<td>20800</td>
</tr>
<tr>
<td>1974</td>
<td>14778</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1975</td>
<td>15770</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>


1.8 Summary:

Iran is a country of 1,648,195 sq.km. It is important because of its geographical location as a link between east and west. There are different people living in different parts of the country with their own socio-cultural identities and religious beliefs. Among all the Farsi speaking Iranians are in majority. Iran has been an agricultural country from centuries ago but even today its total agricultural lands under
cultivation does not go beyond 10-15 per cent. If facilities can be provided the area under cultivation can be extended to about 30 per cent. Iran has variety of climates and the most suitable one for agricultural propose is in the northern part of the country which comes under Alborz range and has high population density.

Iran has variety of soils and varying degree of rainfall as well as temperature. The shortage of water has been one of the major causes of limiting agricultural activities. Although during centuries Iranians have learned to use underground channels (ghanats) for irrigation purpose but the cost of maintaining it has been always a burden on the shoulders of Iranian farmers (peasants particularly). Another irrigation methods are dam construction which has been increased during last 3 decades. Surface water, wells springs and rivers are other possibilities available to agriculture in the country. There are two big deserts in Iran namely Dasht-e-lut and Kavir-e-Namak which seem to be the most arid ones in the world. The rainfall in these two regions is close to zero and living is almost impossible due to high temperature in summer and dry cold in winter time.
Iran does have plenty of natural resources which play important role in the country's economy. The country is rich in the production of oil, which provides the major part of government revenue. In fact, it has been through the oil revenue that the government has been able to implement several development plans until now. Needless to say that oil has played very important role in country's industrialization. The major part of agricultural land is cultivated in wheat and barley. These two together cover almost 70-75 percent of land under cultivation, the richest region for these two crops is the northern part of the country. The rice is the 3rd most important cereal grain which is chiefly cultivated in caspian litoral. Cotton, silk and tobacco come under 4th category and their cultivation is possible in different regions of the country. Tea is considered as a national drink which mainly grown in Lahijan.
References:


2. Ibid.


17. Statistical Center of Iran, *Statistical Information of Rural Iran*, p 17.


