

The Settlement Geography of Kuwait : Asocio - cultural and Historical Perspectives

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Aim of Study :

This study aims to trace and to analyse the settlement geography of Kuwait before oil discovery . The pre- oil era covers the period from early 1700s until the late 1940s . During that period number of factors played significant role in shaping the settlement and structure of Kuwait town . Those factors were :

- (a) Economic activities
- (b) Population size,
- (c) Islam teaching and Islamic culture,
- (d) Environmental Factors,
- (e) Building materials, and
- (e) Local planning and indigenous design .

The study believes strongly in the impact of the previous factors on the settlement geography of Kuwait before oil era in particular . During the pre- oil era Kuwait town witnessed four main types of settlements i.e .

- (a) Town settlements,
- (b) Coastal village settlements,
- (c) Oases- village settlements, and
- (d) Desert settlements .

Each of those types of settlements had its own characteristics and aspects under the impact of certain factors . We will also throw some lites on settlement and urban aspects of the Oil- era in relation to the main theme of the study in order to understand the deferences .

The study adopts analytical approaches in tracing and correlating aspects of settlement geography in Kuwait, mainly, the socio- economic, socio- cultural, and socio- urban approaches . It is difficult, however, to trace settlement's "form and pattern " i.e. agglomeration or nucleation basically because of types of human activities and land shape in Kuwait which prevent clear patterns of distribution . However the " Kuwaiti House " as a settlement phenomenon do exist in certain patterns during that period over the area of the town and other related parts .

Literature :

The study depends on four types of sources i.e .

- (a) Sources which deal with approaches of settlement geography in studying settlement origins, forms, and types, like the works of Demangeon (1927), Stone (1965), Jordan (1982) and other scholars . Although most if not all of their case studies related to European or American aspects of settlements, they produce a systematic and clear guidelines for further studies on other parts of the world .
- (b) Sources which cover that period in Kuwait based on studies undertaken by those who lived in Kuwait during that time and eyewitnessed all types of settlements and the related aspects, like the works of the Dickson family i.e Harold Dickson (1949, 1956), his wife violet, and their daughter Zahra. The study also makes use of the works of Kuwaiti scholars who explained the socio-economic and the socio- culture aspects in Kuwait which covered aspects of settlement geography . Non the less, the reports of the British political agencies, and other elaborated reports i.e. the work of Lorimer (1905) in the " Gazetteer of the Gulf " are highly considered here ,
- (c) Field work study based on tracing the remaining settlements in the old town and villages in Kuwait, which will produce a real picture of the settlement types of Kuwait in relation to that period . The study also look over some contemporary studies on town and settlements in Kuwait in general, and ;
- (d) For the oil- era, the study also makes use of Master Plans reports and technical papers which introduce clear and accurate analysis of settlements and aspects of urbanization for that period .

A house is more than mere shelter; it is a personal, social, and cultural reflection. The domestic settlements spring from the past which melt ingredients from various factors and effects old and new to present a uniform explanation of places which are inhabited permanently. That is why most of entire history of civilization is reflected in certain forms of human establishments over human landscape.

The geography of settlement is defined as "The description and analysis of the distribution of buildings by which people attached themselves to the land", the suggested core of settlement geography is buildings, simply because they are considered some sort of presentation at the process of living in an area (Stone, 1965: 347).

However, certain forms today are not the ancestral ones under the effect of continuous evolution, and new changes of needs and requirements. We should go back to trace their remote origins sometimes, in order to follow their evolution until present time. It is also necessary to refer to other effects in this context i.e. natural, social, and economic conditions (Demangeon, 1942: 506).

It is suggested that settlement geography concerned with rural settlement and urban settlement. By rural settlements we mean studying buildings to which people attached themselves to the land for primary production like for example, agriculture, forestry, mining, fishing hunting etc., while as for urban settlement we study buildings of people relating to secondary and tertiary production. Each group present different forms, sizes, and types of distribution of dwellings, i.e. single dwellings in small clusters hamlets or villages for rural settlements versus large groupings, sizes and styles for urban settlement (Stone, 1965: 347-348).

Settlement forms are affected by many factors, for example, physical conditions i.e. rock, soil types, climate, slope and so on which are actively shape the pattern and style of dwellings, land tenure, and even type of crops attached to the settlement. Physical conditions were strongly considered under the school of "Physical determinism". Today the concept of social factors are also important and in fact superseded physical factors in the form and location of settlements (Danial & Hopkinson 1979: 13). The social and behavioural approaches are prevailing strongly in the interpretation of settlement distribution, thus human decisions cannot be

explained in purely physical or rational terms without considering social, cultural and perception of people in relation to their surroundings.

Many efforts has been inforced in this context starting from the early twenties and the thirties in the "Classical Models" of urban Geography by Burgess in the "Concentric zones Model", Hoyt in the "Sector Model", and Harris & Ullman in the "Multiple Nuclei Model", which ended up with the notion that settlements and people under socio-economic factors were distributed in patterns over the urban landscape.

Moreover Shevky and Bill in the early fifties considered economic, family, and ethnic status in their "Social area analysis" of the cities, followed later by "Factor analysis" and "Factorial ecology" approaches in analysing urban aspects by utilizing number of social and economic variables. The study of lynch in the sixties on Boston by interpreting and analysing the "Mental Map" of the settlers in perceiving and understanding their urban realm, also threw strong light on this line of socio-behavioural approaches on the settlement question. Demangeon, on the other hand considered physical, social and economic factors as principal causes effecting settlement forms and their distribution. He stated, "The description and classification of settlement forms can be achieved only through study the influences that determine them. These influence fall into three main groups:

(1) The influence of natural conditions, (2) The influences of social conditions, and (3) The influence of the agricultural economy", (Demangeon, 1942 : 506). According to Demangeon and Arousseau rural settlement under previous influences will produce certain types of distribution i.e. agglomeration or nucleation and dissemination or dispersal.

Settlements on the other hand, are not limited to dwellings, nor are they restricted to permanent ones. There are degrees of permanency all of which represent some sort of attachment to the land. On our region, the Arabian Peninsula, and in Kuwait, there exist number of factors effecting settlement forms and patterns. Urban settlers, or town settlers for example are deferent from Bedouins who are continually oriented to nomadic cycle which force certain forms of settlement i.e. tents, easy to fix and easy to remove Likewise, in Europe, in terms of relation between activities and settlement types i.e the seasonally-occupied stone hut of native fisherman, a log cabin of woodcutter, or a year-round brick home of a farmer (stone, 1965 : 348).

Culture also puts forward strong pressure on settlement forms forcing certain design type or house type, even though some times, its design makes no environmental sense. Folk culture, for example force "Cultural landscape" that is when every folk society produces its own distinctive cultural aspects overland. The house or dwelling are the most basic structure of essence of each province or settlement location. One way to classify folk houses is by the type of building materials, or style of wood building vertical or horizontal or diagonal squared (Jordan & Rowntree, 1982 : 225 - 227).

In the Arabian Peninsula region, Islam and teachings attached to it affect form and styles of settlements in addition to other environmental and cultural adherences among the Arabs. That is why, to some scholars, "A traditional Arabian town, and Arabian house, is a unique phenomenon molded by physical, religion and social factors", (Costa & Noble, 1982 : 162 - 163).

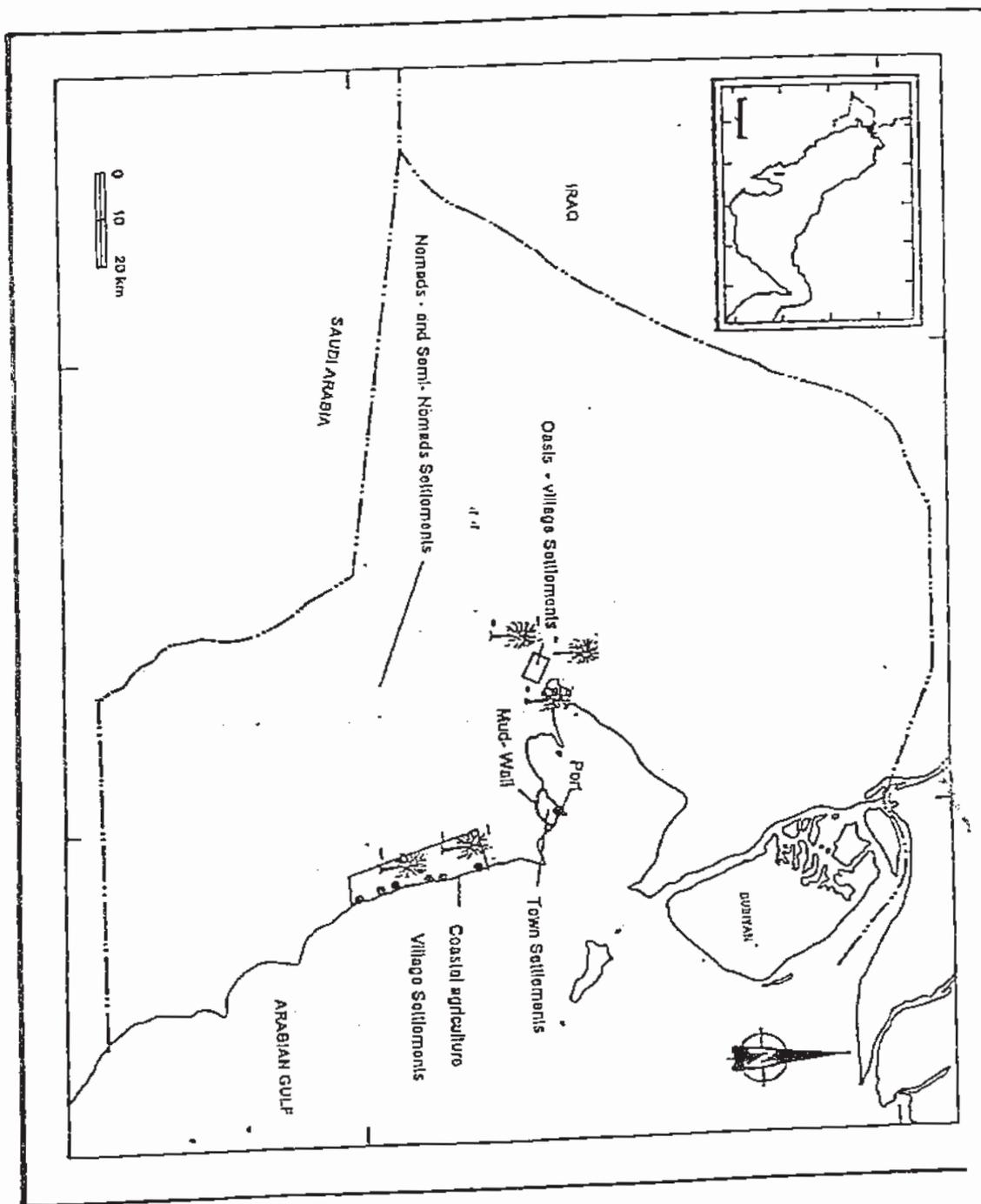
Settlement groups in Kuwait:

On the basis of previous remarks on settlements in relation to socio-economic-cultural and physical factors, we shall focus on the case of settlement groups in Kuwait and the main factors behind that before oil discovery.

There were four main settlement groups in Kuwait at the pre-oil era i.e:

- (a) Town settlements,
- (b) Coastal-villages settlements,
- (c) Oases-village settlements, and
- (d) Desert settlements, see Figure (1)

Kuwait was always described as a mixture of activity groups at that time as follows, "The people who settled in what is now Kuwait were a mixture of desert-farers, seafarers, deep-sea divers and traders. This array of livelihoods at once both differentiated between individuals and integrated them within the same individual" (Al-Yawer, 1981 : 111). The town and its settlements was designed and styled under the impact of those groups of people in addition of other significant factors to be discussed later.



The Arabian and European sources gave number of dates for the exact time of town establishment, capital of the present state of Kuwait. The English East India Company suggested that the town was built about 1716 (Abu - Hakima, 1982 :1). The Kuwaiti sources, however, suggested that Kuwait was established in 1100 A.H. (1679), or 1125 A.H. (1704) (Al-Rashaid, 1978 : 33). Other Kuwaiti sources suggested early 1010 A.H. (1603) and was known under its old name "Gorain" (Al-Nabahani, 1923 : 126). It is worth mentioning that both names "Gorain" and "Kuwait" are diminutive forms of the Arabic word "Qarn" meaning high hill, while Kuwait is diminutive form of "Kut", meaning castle or fort surrounded by walls.

Kuwait town used to be a typical Arabian-Islamic town similar to those towns scattered over the eastern coast of the Arabian peninsula before the discovery of oil. There were number of factors which had shaped the morphology of the town, i.e.:

- (a) Economic activities
- (b) Population size, we shall discuss each factor in relation to the settlement question.

(a) The pre-oil economy of Kuwait:

Before the discovery of oil, Kuwait economy was based on pearl-diving, seafaring, boat building, trading, small size agriculture, fishing, herding and some small crafts (Al-Sabah, 1980 : 12). Beginning with the establishment of Kuwait, it grew rapidly in the first 50 years of existence. A further spur to rapid urban and economic growth was provided by the Persian occupation of Basra (Southern Iraq), and the diversion of much of Basra's trade to Kuwait. Carsten Niebuhr, a Danish traveller passed by Kuwait in 1764 and described the town as,

(1)
"Koueit or Graen as it is called by the Persians and Europeans is a sea port, three days journey from Zobejer or old Basara. The inhabitants live by the fishing of pearls and of fishes. They are said to employ in this species of naval industry more than eight hundred boats" (Freeth & Winston, 1972 : 62).

(1) The name "Gorane" was written in many ways as shown in the old maps of area i.e. it was written "Grane" by E. Weller in a map published in England in the 19th century, and also by Hall Burry on the map of Persia and Afgansitan published in Edinburgh in 1856, and also by the "Society for the Diffusion of useful Knowledge" in London on a map of the Peninsula; while in the map of Asia by Arrowsmith Published by Longman & co., in 1829 in London was written "Grayn"; on the other hand Niebuhr wrote it "Gran" and some wrote it "Graen" or "Gorain" etc., see, "Kuwait: a study in historical maps", 1994, by the Centre of research and Kuwaiti studies.

Pearl diving used to be the old occupation of the inhabitants of the coasts of the Arabian Gulf. It was full of high degree of risks and sufferings before reaching the satisfactory profitable catch of pearls. The pearl diving season was built on debt system between the owners of ships and the divers and other crew where they got further advances of payments to feed their families during the diving season. This industry provided income for the Shaikh of Kuwait, merchants and the whole town, according to Lorimer (1905) in the "Gazetter of the Gulf", this industry at its peak exports exceeded about £. 2 million in value and in 1904. Kuwait had more than 500 vessels, more than 460 boats were engaged in pearl diving employing more than 9000 men, and reached before the break of world war 700 boats employing 15000 men (Al-Sabah, 1982 : 16). By the start of the first world war the number of boats putting to sea was small, the severe depression after that war further decreased the number of boats and finally, the introduction of the cultured pearl by the Japanese almost destroyed the total structure of this industry.

Kuwait town on the baises of that economy was open to the sea and almost closed to the desert.⁽¹⁾ Sea trade on the other hand depend on transit trading to Gulf region, the peninsula, beside Europe carrying cargo, materials, dates, grains, among port of Southern Iraq, India, East Africa, beside Emerates of the Gulf and Yemen. On return, they brought foods, coffe, tea, rice, spices, some metals, clothes etc. According to the British political Agency, Kuwait foreign export from 1820 - 1905 reached number of Rs 142,000 to Rs 1, 154, 322 (Dickson, 1956 : 461), (Al-Sabah, 1982 : 20).

Agriculture, also had its impact on the activities of the town as it produced some essential needs to the people. It was a small scale activity scattered over some spots on the edge of the town and coastal villages and oases. There were some crops and trees grew in winter and summer over some villages like Jahra, Fintas, Failaka Island, Abu-Halifah and other locations. Palm trees used to be widly spread particularly in Jahra oasis-village, Fintas, and Abu-Halifah-winter crops were tomatoes, chard, coriander, cress, onions, while in summer, watermelon, and melon, cucumber. There were also wheat planted between October and April, barly in Jahra and Failaka Island, almost over the areas of wheat. Agriculture was faced with almost sand soil all over the area, and scarcity of ground water of high salt.

(1) In fact, although there was a wall surrounding Kuwait town, it was not closed totally to the desert. Trad in and out of Kuwait followed two old routes : The Gulf sea - route and the Caravan tracks . Desert caravans loaded at Kuwait and carried goods from it to Basrah, Bagdad, Aleppo, and other countries and ports of the Gulf . Estimation of camel's number in a caravan was ranging between 200 - 5000 camels with about 150 - 1000 men (see , Abu-Ha kimah , 1982, 93 - 94)

On the other hand, to the oboisit side the town, there existed another socio-economic cycle of human activities which had its settlement prints on the land. By that we mean, the activities of the people of the desert i.e. nomads (Al-Badia or Badawins), who camped beyond the town-wall. According to Dickson (1956), who spend almost all his life in Kuwait with his family at that time as British political agent the people of the town divided into three divisions i.e. "Al-Hadhar who are town people, or villagers, Al-Badia, who live nomad life in the desert, and Araibdar-Arabs of the homeland who live between Al-Badia and the Al-Hadar as "Semi-nomads", camping close to or living in town during the summer and back to the desert in winter (Dickson, 1956 : 82). In general, nomads and semi-nomads provided the town with their products i.e. wool, sheepskin, milk, camels, horses, weaved-wool peices, etc. The previous groups translated their existence in a number of settlements i.e. houses of mud or stones, shaks or wood houses, tents , as we shall see later.

Population size:

Population had their impact on the settlement geography of the town in terms of their distribution and ethnic roots, and other aspects. The population size was totally based on estimation, until the first official cencus in 1957 which was undertaken every five years from that time. the total numbers of population as shown in table (1) were represented by estimations of travellers or by political agents, or by locals.

Table (1) Population of Kuwait before oil discovery

| Year | Total population | Source of Estimation |
|------|------------------|-------------------------------------|
| 1756 | 10000 | Niebuhr, a Danish traveller |
| 1831 | 4000 | Stoequeier, a traveller |
| 1862 | 35000 | Palgrave, a traveller |
| 1904 | 48000 | Lorimer, in his "Gazetter" of Gulf |
| 1919 | 85000 | Food Supply Dept. in Kuwait |
| 1944 | 70000 | Miscellaneous |
| 1947 | 120000 | Miscellaneous |
| 1952 | 160000 | Dickson, British P. Agent |
| 1957 | 206413 | First Official census of population |

A gradual growth of population could be seen in table (1), except for the year 1831 i.e. the estimation of stoequeier. In his estimation of 1831 did not include the nomad and semi nomad tribes, in addition to that, he must

- (a) The sea-front division.
- (b) The markets division.
- (c) Residential area division.
- (d) Coastal villages beyond the wall of the town.
- (e) Desert division, beyond the wall of the town.

"The sea-front division", was directly located on the sea, it was the busiest part of the town, particularly in the trading and pearl-diving seasons. All dhows were spread over inside several tidal harbours, called "Niga'ahs" of considerable size formed by piers and break waters of loose coral blocks. Those dhows were loaded by goods or made repairs inside the low coral harbour walls. Attached to this small harbours on the opposite side, were houses of merchants who owned those ships. Between the sea-shore and the houses of merchants were the busiest street of the town during the favourite seasons, and in fact throughout the whole year. "The market division" was located between the sea front and the residential area of the town. This division was consisted of roofed markets attached to each other. To the sea-front it was considered a kind of "Hinterland" which received goods or loading other, while to the people it was the market place of clothes, foods, money exchange, meeting place for new labours for sea faring activities, new contracts for new seasons etc. This division was "A typical Arabian market", where, number of small special markets attached to each other in narrow paths with high covered roofs allowing in air current for moderating the heat of weather.

"The residential division" was divided into four large quarters which were subdivided into small wards. These four quarters were "Jiblah" (West), "Wasat" (centre), "Sharg" (east), "Mirgab" and "Salhiya" to the interior, (see figure 2). The small wards were divided according to family and tribe kinship system in addition to the origin of migration place of groups. For example those who came from the centre of the Arabia Peninsula i.e. Najd province were settled in the West (Jiblah quarter), while those who came from the east coast of the Arabian peninsula and southern parts of Iran were settled in the east of town (Sharg quarter) and so on. All the previous division i.e. sea front division, market division and residential division were surrounded by mud-wall with large five gates open to the desert.

The "Coastal Villages", on the other hand, were located beyond the mud-wall along the coast toward the south. Those villages used to provide the town with some small agriculture products as mentioned before. To the

desert side, is "The desert division", where the product of desert and its nomadic and semi-nomadic life cycle. All those divisions were located directed and to the of the town core, and all of the town was centralized around the "Palace of the Emeer" or the Shaikh of the town in "Al-Wasat division" (centre), which includes also the main Mosque, the main market place and the main port of the twon. On that basis, Kuwait town was a typical "Arabian Islamic town" particularly the type of the eastern coasts of the Arabian peninsula which consisted of the five main components.

- (a) The walls and gates of the town.
- (b) The main Mosque.
- (c) The palace of the Emeer.
- (d) The roofed markets and Bazaar, and
- (e) the closely compact residential areas of narrow wind streets. (see figure 2 , 3 , 4)

Settlement forms with reference to the "Kuwaiti House" :

Settlement geography and settlement forms in Kuwait were effected by number of factors before the discovery of oil with reference to the "Kuwaiti House", such as:

- (1) Physical geography with reference to climate and soil.
- (2) Islam teachings, and Arabian culture.
- (3) Indigenous planners and local contractors.

(1) Physical Geography with reference to climate and soil:

We have mentioned earlier that traditional "Arab town" and "Arabian house" were moulded by physical , religion, and social factors in addition to other side factors. Climate and soil and other environmental conditions effect very strongly the settlement geography of Kuwait. Kuwait lies between 28° and 30° north of the Equator between 46° and 48° east of the Greenwich meridian. The surface lacks bold relief. In the west the land rises to just over 300 m above sea-level, shelving gradually eastwards so that the eastern third of the state is less than 150 m above sea level and this part includes all the permanently inhabited divisions of the state including Kuwait town centre. In summer between May and September, Kuwait town is among the hottest spots in the world, mean monthly temperatures exceed 30°, and in July and August it reaches sometimes up

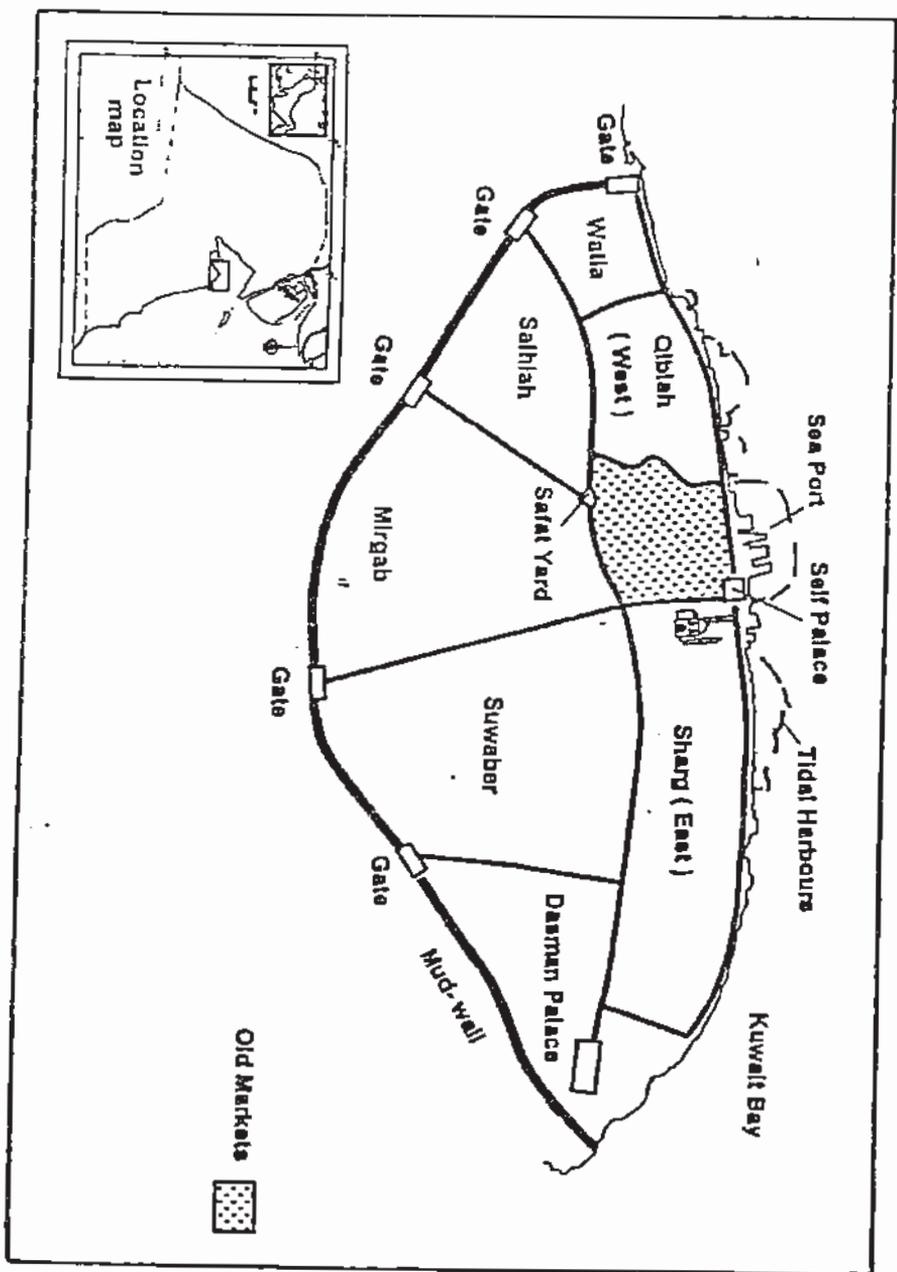


Figure (2) Old quarters of Kuwait Town

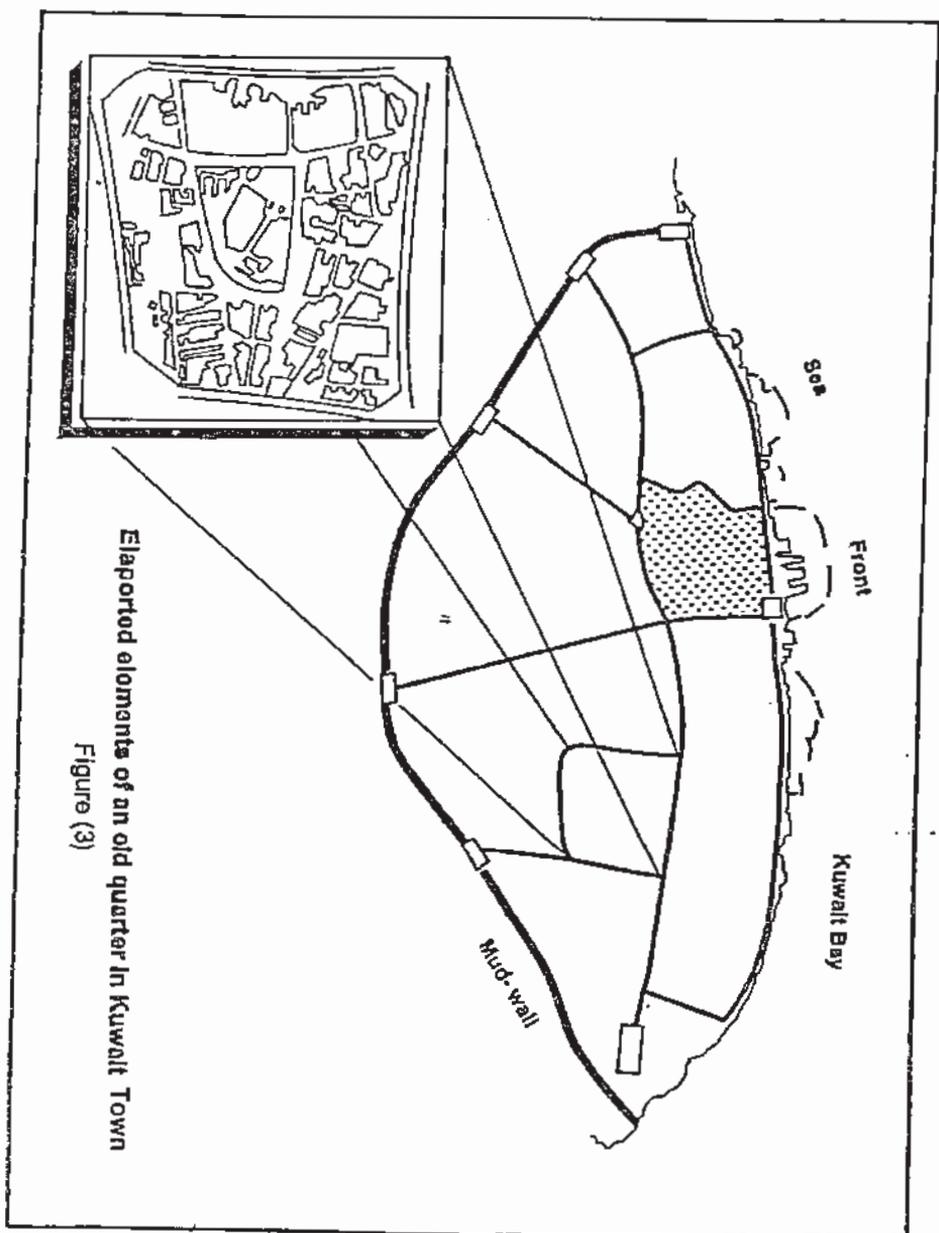
have visited the town during pearl-diving and trading seasons where the town left obsolete. It said also, that he must have visited the town during the epidemic which struck the town in that year causing high number of deaths and migration from the town. The years of the forties witnessed some decrease in population as a result of the world war. The structure of population in terms of its ethnic groups and socio-cultural roots belong to Arabian tribes either settled in central-middle and southern parts of the peninsula and its eastern coasts, or who were nomads for long time until seventies or late sixties of this century. It is also worth mentioning that there were group from the southern parts of Iran i.e. Persian and Arabs mixed with persians, besides, settled groups from other communities of Emarates of the Gulf at that time. Those groups have an outstanding influence on structure of settlements of the Kuwaitis i.e the Kuwait house and the wool-tent etc. The distribution of population could be seen through discussing the morphology of town which reflected characteristics of settlement geography of the town at that period.

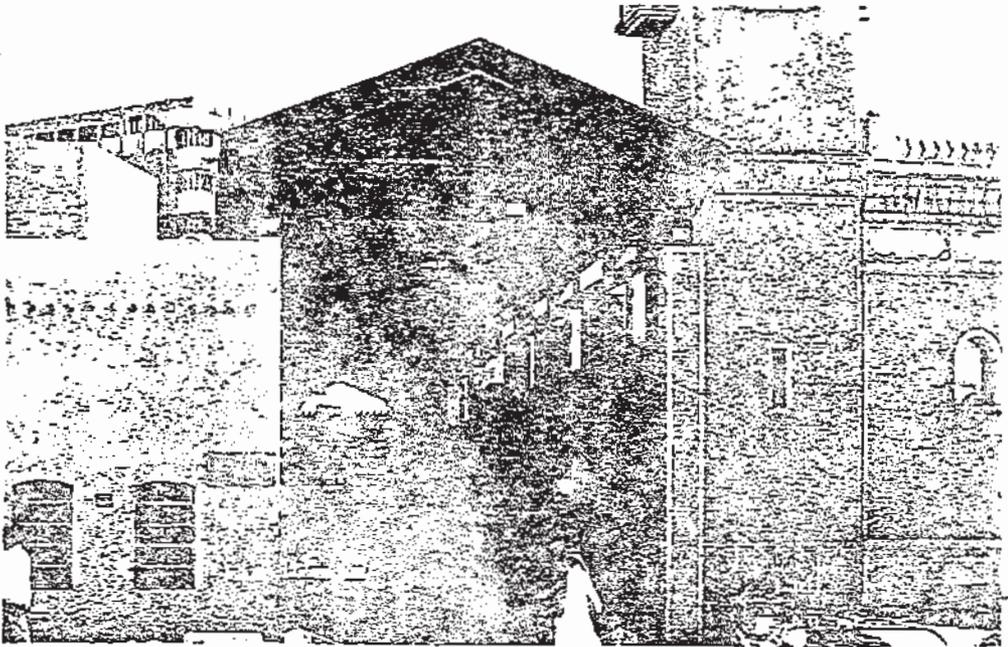
Morphology of town in relation to economic activities and population size etc.:

The structure of Kuwait town was influenced by many factors among which economic activities and population size were important beside other factors. In 1905, Lorimer in his "Gazetter of the Gulf", described the town as :

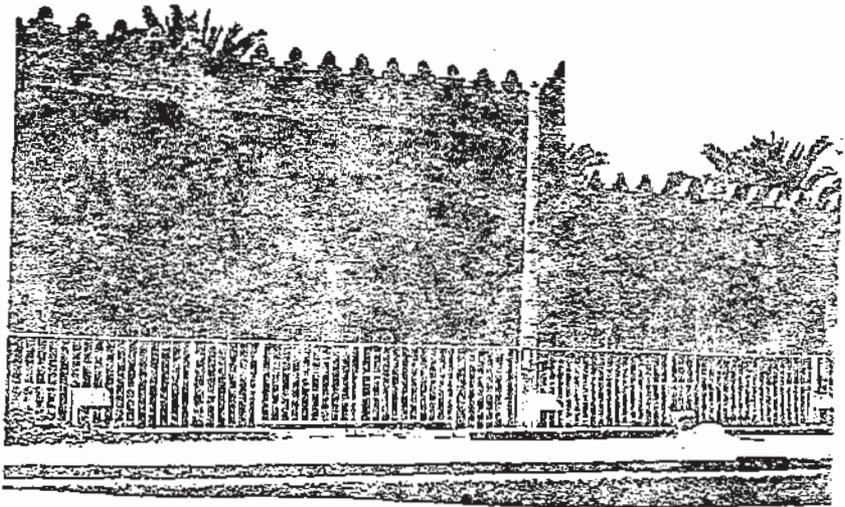
Small in size, about 3 KM along the shore, streets are irregular and winding, many of them blind alleys, and town is not laid out on any general plan, the only streets of apparent importance, besides the main bazaar which runs at right angles to the sea about the middle of the town, is one which leads from the suq or market square, situated at the back of the town near "Murgab" quarter, to the north-east and of the town, the sewage is deposited in large open public cesspools in various quarters. There are between 20 and 30 mosques of which 4 are Jami's or Friday congregational mosques, (Lorimer, 1905 : 1050).

The town was morphologically subdivided into five main quarters or division, including structure inside and beyond the wall of the town, (see figure No.(2), Those divisions were:





(a)



(b)

Figure (4) shows pictures of old market as in (a) , while on (b) a picture of an old Gate of the old town kept as monument. (Photos by the author)

to 50°. More specifically, average night minima exceed 24° during this period. Relative humidity drops below a maximum of 50 percent throughout the summer. Rain is never recorded but winds can be relatively strong during summer particularly in July and August coasing dust, and sand winds sometimes. The prevailing winds at all seasons are north-westerly, although in summer, strong south-easterly winds are occasionally recorded, and bring humidity, experienced in the coastal areas further down, but not comparing to Bahrain and Muscat for example, who suffer both high temperatures and high humidities in summer (French and Hill, 1971 : 67). At the end of September temperature drop sharply, cold north westerly and north easterly prevail most of the season. Water resources are scares, depending on importing water from southern Iraq, underground water on the coastal villages and Jahra village to the west are of good water. Soils are mostly sandy with high digree of salt, while agriculture soils over the villages are poor of essential menirals in general. Irrigation is very essential in some location, brackish water is always found near the surface while on some depth of about 20 feet good water appears.

Under the previous circumstances, "House forms" were designed to gain "Minimum heat" and "Maximum cool" in summer, while "Maximum heat" with "Minimum cool" in winter. All the micro climate scale requirements could be obtained through the "Location" and "Direction" of house in relation to sun light sun heat, and prevailing winds. The town was facing north-west which prevents direct sun heat. The narrow streets and high walls of houses and dwellings provide continuous shad for pedestrians. The small windows provide sufficient light and air current, the barren soils do not reflect heat or sun radiation. The mud-walls keep conduction and convection of heat very slow to the interior of houses by slowing down time-lage of heat radiation.

Islam teachings and Arabian Culture:

Islam provides the most significant factors in shaping and styling settlements and dwellings. The teachings of Islam in relation to settlements and neighborhood based on some aspects i.e

- (a) Complete privacy of family.
- (b) Group-feeling and close-connections.
- (c) Strong family and kinship relations.
- (d) High value of the close neighbour and neighborhood in general

- (e) Group worship i.e. five time daily prayer in addition to congregational Friday prayer, and Ramadan fasting month and the "Eid" (festival) of breaking fast after Ramadan and "Al-Hajj".
- (f) The high value of guest and hospitality in general.

These factors shape out the Arabian town and dwellings as in Kuwait town similar to these towns all over the region. "Complete privacy" for example, produces dwellings with few openings to the public, the existing screening is usually providing direct sunlight to prevent viewings from outside. The introvert character of dwellings stresses privacy of family sitting, through high walls, narrow inlets, while widely open inside to produce free privacy.

"The group-feeling and close-connection", strengthen face-to-face relations which was translated into certain design of close-end-wards for group gathering, and short and narrow paths which make door-to-door connections by dwelling a daily aspect. The compactness of town was a true meaning of group-feeling surrounded by wall from sea to sea.

"Strong family and kinship feeling" created inter connected organized town, divided according to family, tribe, and kinship system. Each ward was named after certain family or certain tribe which strengthen family inter-marriage, family meetings and family feelings.

The "close neighbour" has a great value in the ward as the prophet (peace be upon him) strongly stressed on the rights of the close neighbour and other neighbours in the ward, there must be no harm to him i.e. "Let no damage and no damaging", "No man would build his roof higher than his neighbour's" this will interfere his privacy etc.

"The daily worship and annual Islamic festivals" also surround all the previous factors by stronger unity as they pray five times daily seeing each other and meeting each other before and after worship, in addition of the Friday prayer, forcing building mosques in neighbourhoods in certain location i.e. centralized sites. "Hospitality" and special value of guest is very highly considered and still is existing until now. The design of house is effected by this factor, a "Reception room" for daily guests in addition to other room for special guests who might stay for some time (usually three days) must be considered in building any house.

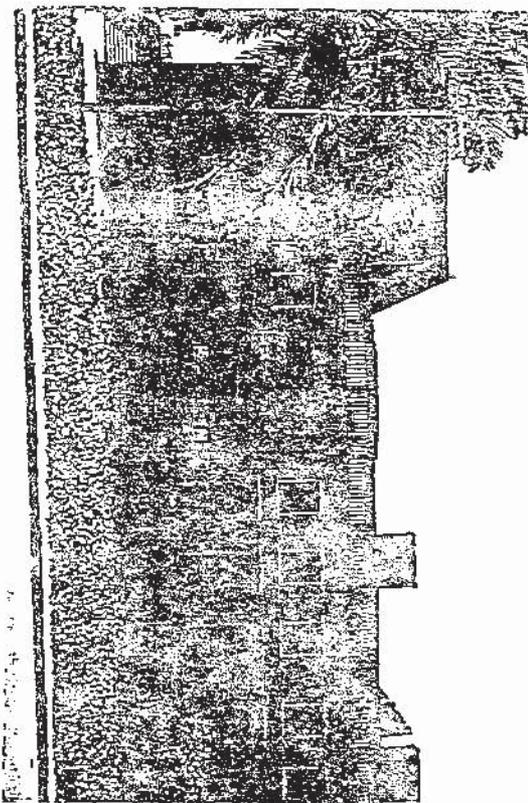
(3) Indigenous planners and local contractors:

This factor could be understood by comparing it with western planning methods. The western planning methods stress the division of urban life along isolated functional criteria. Special areas for housing, recreation, commerce, industrial activities and governmental use are singled out by corresponding zoning schemes. The result was loss of social contracts and isolation. True traditional Islamic city, on the other hand, under local planning, stresses the idea of close interaction between the various aspects of town life. The separation between ethnic groups allows individual groups to follow their own way of life. There is also a clear division between public and private realms, which reflect the Islamic concern for privacy in the residential quarter. The concept of "Local ward" do not contradict with the introvert aspect of residence allowing residential and public spaces to be "back to back" without the outside world interfering in the private sphere of the house. All this resulted in closely interwoves clear definition of spaces in correlation to their users, connections to the needs of pedestrian movement, allowing harmonical social interaction (Bianca, 1982 : 36). When western plans were adopted from the late fifties into the town, "Kuwait town" had changed dramatically as the idea of functional zones in a semi-concentric zone areas were forced on new town. The wall of the town was demolished in 1957, and the old town almost disappeared except for old mosques which remained by law providing the limits of each ward or quarter. Under the impact of first Master plan i.e. "Monoporio, spencly and Macfarlane" in the fifties followed by the Buchanan and shankland Master plans in the seventies and eighties, Kuwait town almost became a history.

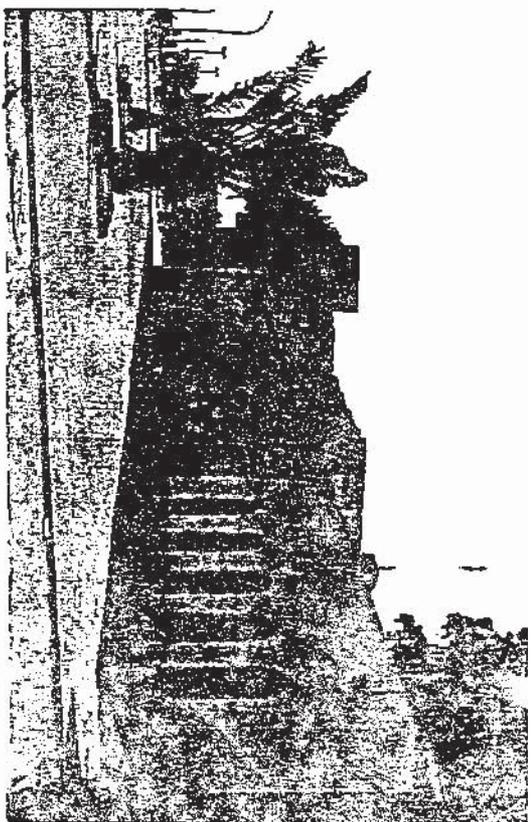
New houses, have lost their privacy and are exposed to the public through low walls, wide windows, while large streets replaced the intricate curvilinear irregular pattern of roads (see figure 5).

Characteristics of the "Kuwaiti House":

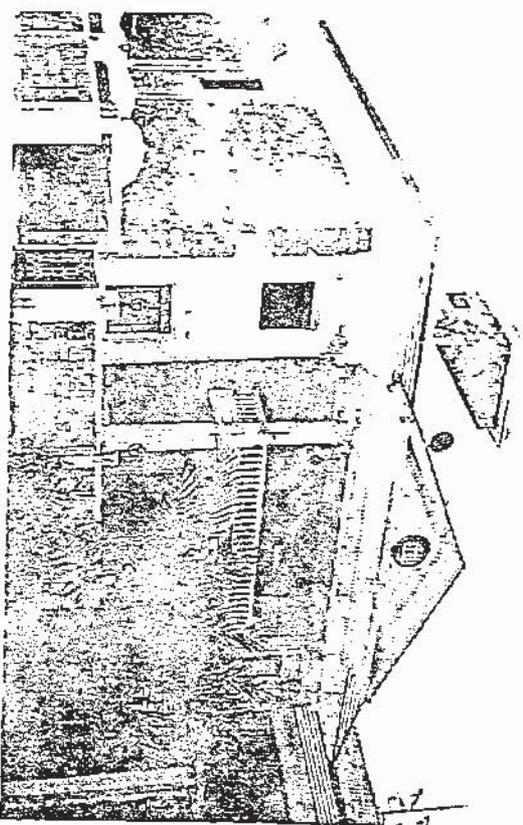
The bulk of Kuwaiti house structure was formed largely of indigenous materials which answer the requirements the environment. The walls were constructed of sun-dried mud, paliets; or lemps of coral rocks taken from the seashore. Mud mortar was used to bind these units together, and mud plaster to face them. The roof was supported on "Chandals" (round wooden poles about 10 cms in diameter and always cut to a standard 3



(a)



(b)



(c)

Figure (5) shows number of pictures of old and new houses in Kuwait picture (a) and (b) shows well - to - do kuwain Houses of the pre-oil era while picture (c) shows modern house which has no connection with the past Photos by the author.

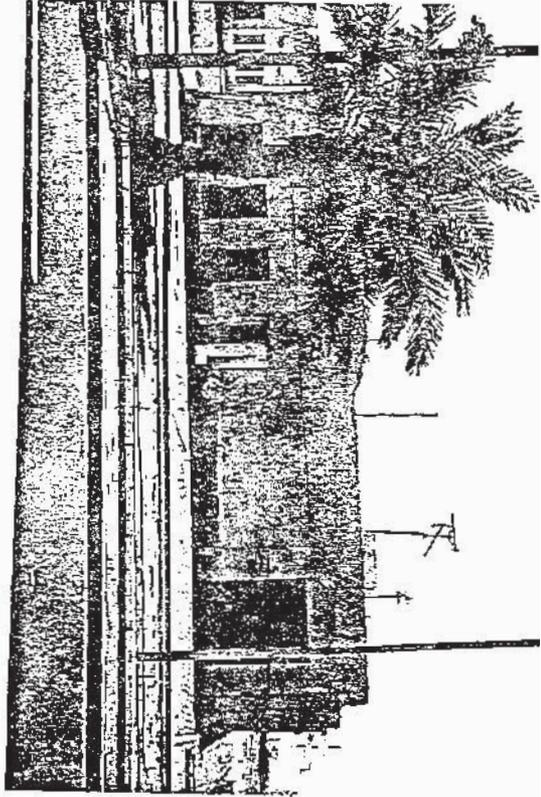
meters length), imported from the Rufiji River in East Africa. By the standard length of those mangrove poles the width of rooms was limited. On top of those poles were placed reed mats which supported about 30 cms of mud mixed with straw. Teak wood is used for windows and doors. Large windows always for men reception facing outside, while small windows are high allowing light and air to the interior. Occasionally, there was no second story, instead there was a single room attached to open roof with walls "Sateh" for sleeping in summer. The internal courtyard was usually "Screened" near the entrance, so that visitors could enter without encountering the family inside. The "Diwaniyah" (men reception room), for friends and close members of the family is located to the right or left side of the main entrance. Water is obtained throughout digging wells in the courtyard of the house or by purchasing water from people who usually bring it from southern Iraq.

The well-to-do houses are larger in size and higher, with many rooms and double courtyards with two stories. Burned bricks were used instead of mud bricks. On the roof of houses, there exist "Bagdir" or "Badgir" (high octagonal division of shaft provides inlet and outlet for ventilation 2-3 meters high and 2 meters cross (see figure No.6)

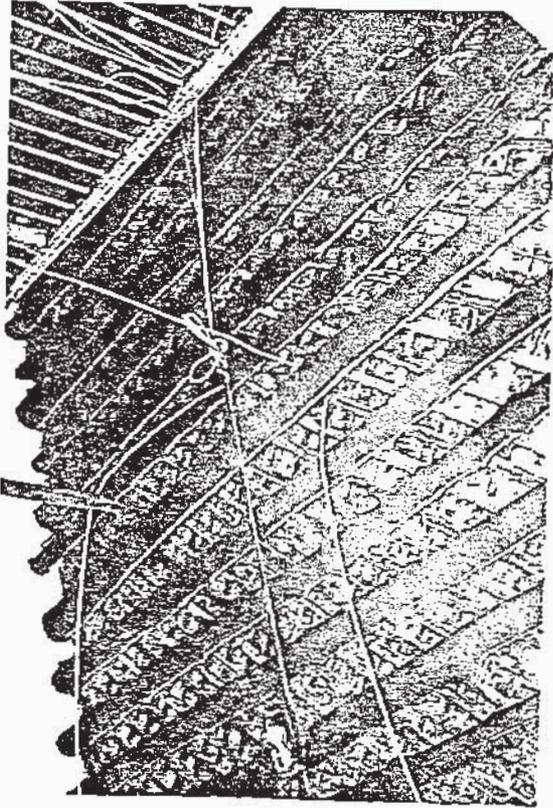
In general the total size of the house was about 10 by 15 meters, or 10 by 12 meters, some times more or less than that size depending on the condition of the family i.e. 40 by 30 meters for rich families or more.

Rural Settlement of Kuwait:

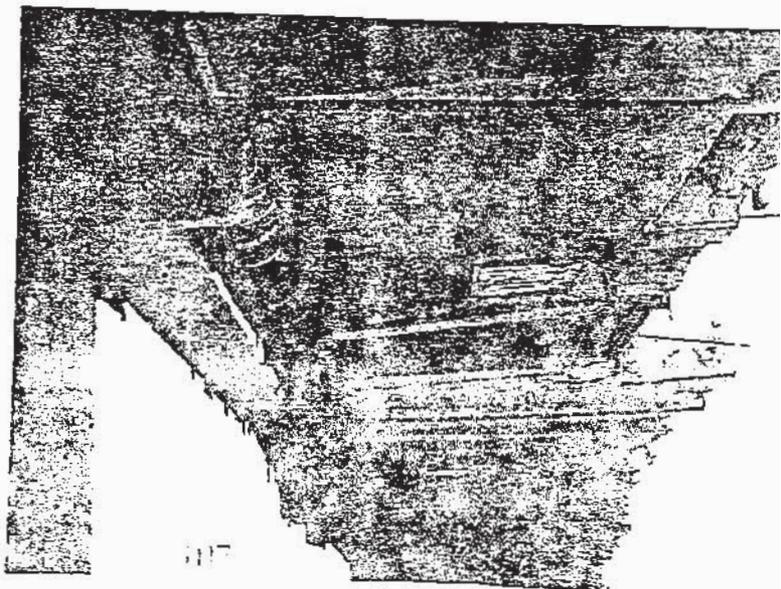
Not far from the town were number of villages over which some small scale agriculture took place as mentioned earlier. There were some sort of rural settlements attached to these parts differ from what was seen inside the mud wall of the town. According to Lorimer (1905), "Fantas" a coast village in "Adan" district of Kuwait principality 16 miles south-south-east of Kuwait town. It contains about 100 houses, the inhabitants belong to various mixed Arab tribes which are found in Kuwait town. There were about 30 wells, some are brackish, but other contain good water at depth of 20 feet. Cultivation consist of barley, lucerne, melons, radishes and onions, the village has 300 date palms and many ber trees. It is accounting resort for town's 5 men of Kuwait" (Lorimer, 1905 : 535)



(b)



(c)



(a)

Figure (b) shows number of pictures of Diwaniyah (men reception room). In picture (a) our door summer 'reception' place on the main entrance while picture (b) shows complete house where both reception room of large windows in addition of out - door men reception place picture (c) shows the old roof of a Kuwaiti house with " chandals" round wooden poles (Photos by the author)

Likewise, his report on Fahaihil" represented similar accounts i.e. "Acoast village in "Adan" district of Kuwait principality 21 miles south-south-east of Kuwait town. It consists of 50 houses and has 20 wells of good water about 18 feet deep. There were 200 well-grown date palms, and some cultivation of wheat, barley, and melons, irrigated from the wells. The inhabitants who belong to various Arab tribes, own some flocks of sheep and goats. Fahaihil, is a resort in the coast for twons men of Kuwait (Lorimer, 1905 : 511).

These coastal villages as mentioned before practiced rural activities which produce settlement of particulars forms i.e. small houses attached to cultivated land, water wells, palme trees etc, with small numbers of population between 300 - 100 houses. Until recent times, even after oil discovery and oil production those areas practice small-scale cultivation as well as resort places in certain seasons.

On the other had, some places regarded as a combination of, cultivation and animal hearing only like the village-oasis of "Jahra", Dicskon (1956), considered "Jahra" "A considerable village and oasis", situated near the foot of Kuwait Bay, about two miles in land, forty feet above see level, and distant twenty miles from Kuwait town. The permanent inhabitants of Jahra are mostly cultivators of Najdi extaction, and in summer there were large Badawin encampments a short distance from the oasis, for its excellent drinking-water.

Nomads Settlement.

In the early 1900 s, the estimated numbers of the nomads were between 13-15000 people. They were scatered over the desert and some were surrounding the wall of Kuwait. Some were close to the town who are called "Arab-dar" or "Badawins of the houses" as mentioned before as they spent summer near the town. The magority were nomads, who spent most of there life in a nomadic cycle of movement according to seasons of the year, i.e. in summer they look for water wells located near some villages i.e. Jahra village of Kuwait, while in winter and spring they roam over the desert of the peninsula over there usual places "Diras".

The settlement which nomad Badawins used was the tent which made up of strips of black or brown coarse cloth. They are woven for goats hair or

from sheep's wool, never from camel hair, so that the name "Camel hair tents" is a misnomer according to (Dickson, 1949 : 66).

Tents differ according to the social position of the person in the tribe i.e. in size, number of poles, number of broad strips. Each tent has number of portions, i.e. men's portion, women's portions, kitchen etc. (see figure No. 7).

The town usually deals with the Badawins who bring their product to the town, i.e. woven rugs, ugurt, leather built, camels, sheep, goats etc. According to Lorimer (1905) there were about 135 dealers for Badawin requisites (Lorimer, 1905 : 1054).

They have there "Land port" in the town "Safat" yard where they sell their products and buy new ones.

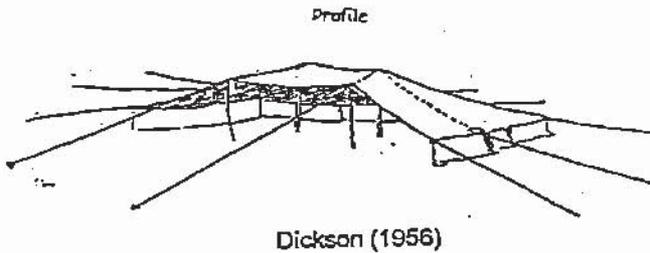


Figure (7) showing two types of tents in front of modern settlements, black and white tents. The black tent is the usual Badawin tent, while the white is new style. These tents nowadays especially the black one are used for traditional parties i.e. feasts, weddings and group meetings under the call of Arabian roots but no more residence. (Photo by the author)

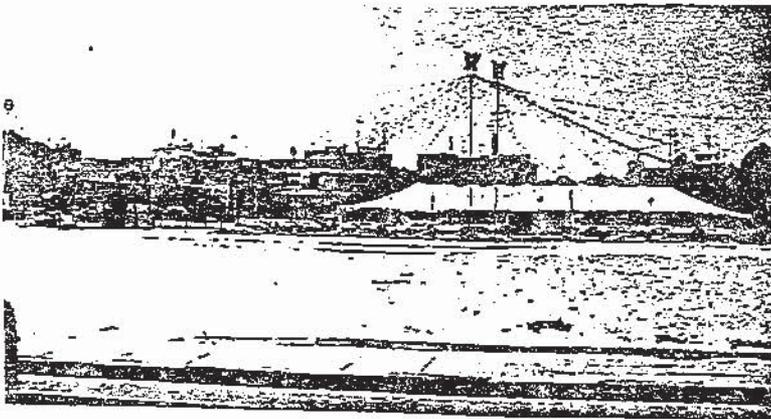


Figure (7)

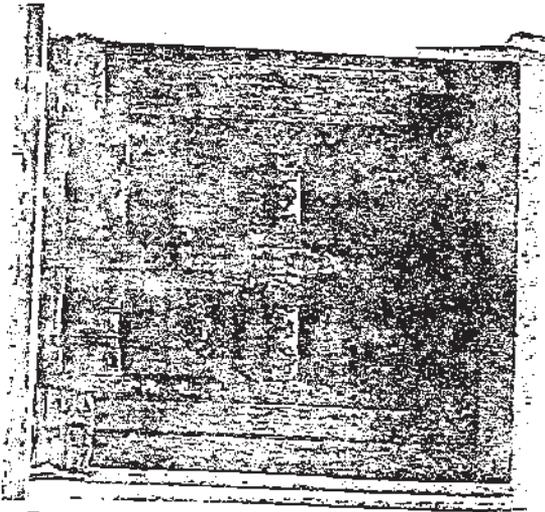
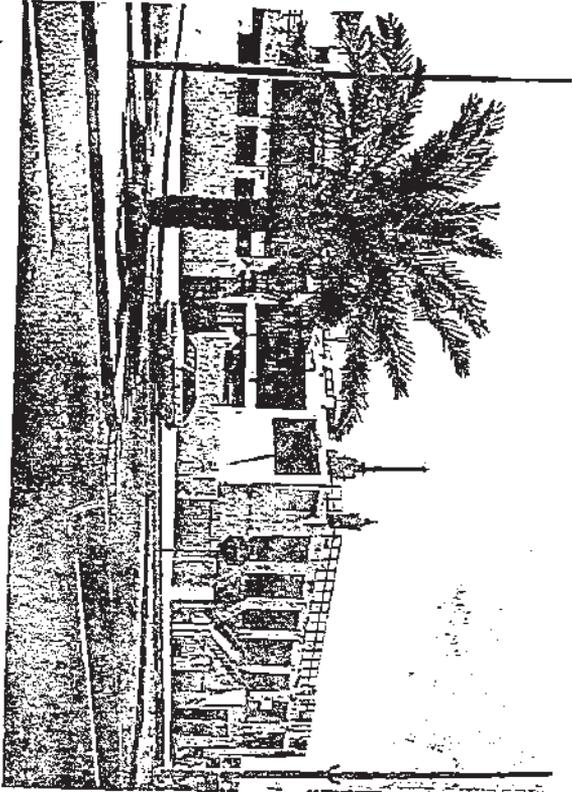
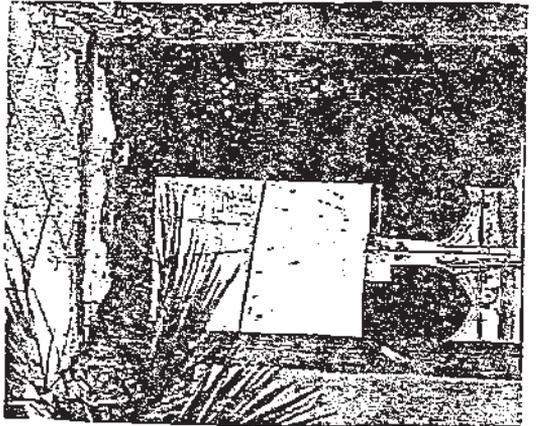
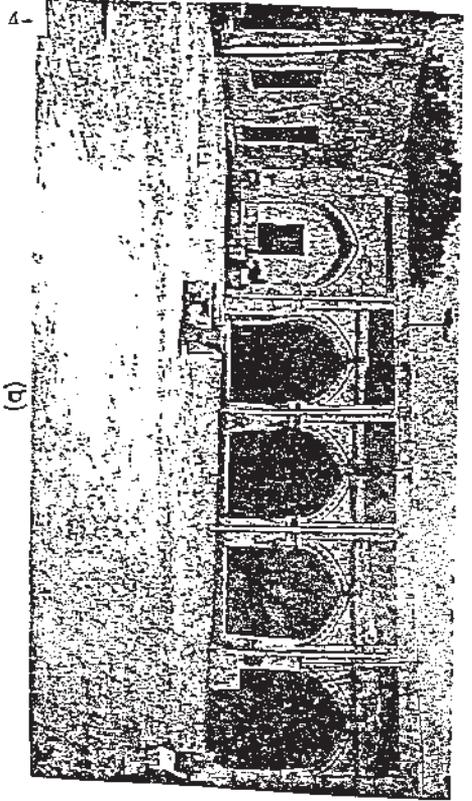


Figure (b) shows number of pictures in the old town i.e. (a) shows an old door leading to courtyard in Kuwaiti- House, (b) shows the courtyard with its water wall in the centre , (c) shows the old British political Residency where the Dickson's spent most of thier life in Kuwait, and (d) another old door. (Photos by the author)

Urban Aspects of Kuwait City after the Discovery of Oil :

With the spiralling oil revenues and the influx of foreign-born immigrant population to Kuwait, the city expanded rapidly both vertically and horizontally . This urban expansion was under financial, legislative and planning policy powers which transformed the city .. rapidly both physically and socially by time incidentally .

There were two main factors which shaped out new urban expansion, i.e .

- (1) The property acquisition scheme in 1951 .
- (2) The application of comprehensive urban planning .

The property acquisition scheme began in 1951 with twin aims : (a) infusing sums of oil-revenue indirectly into the economy's private sector and (b) facilitating the whole sale reconstruction of the old city . (1)

Owners of land and property within the old city and its surroundings were offered high prices to encourage them to move into the new suburbs in addition of providing them with certain amount of working capital for the new oil economy . Almost in less than 15 years about K.D. 600 million was transformed to the Kuwaitis of the old town (2) .

Land acquisition scheme continued its policy and have reached its peak both money and land wise in 1986 were about K.D. 620 Million were disbursed to Kuwaitis but in the area beyond the old city, covering about 5, 144, 537 m² , and generally about K.D. 4,250,00000 covering about 156,000 Km² from 1951 - 1994 .(3)

The application of comprehensive Urban planning started along with the acquisition scheme . That was when the government through

(1) French, G & Hill, A. 1971, " Kuwait Urban and Medical Ecology " .
Springer - Verlag Berlin - New York, p. 35

(2) Op Cit

(3) Direct information from deputy in chief of the " Expropriation for public welfare Dept " , in 3/4/1995. at Kuwait Municipality. K. D. 1=3 3 3

Kuwait Municipality invited number of consultants to put forward a comprehensive urban - structure covering every single element of future urban expansion which extended beyond the year 2000 . Those plans were undertaken by number of western consultants in cooperation with the municipality, i.e. (see figure no . 9) , :

- (1) Master Plan of 1952 by a British consultant firm, Minopario, Spencely & Macfarlane .
- (2) Urban plan of 1967 by Kuwait Municipality .
- (3) Master plan of 1970 - 1995 by a British consultant firm, Colin Buchanan & Partners .
- (4) Master plan of 1977 - 2000 by a British consultant firm, Shankland Cox & Partners .
- (5) Master plan of 1983 - 2005 by Colin Buchanan & Partners .

By those comprehensive urban - structure plans Kuwait city in particular and Kuwait in general had dramatically changed . The most important one of those was the 1952 plan, because it was the first plan which forced outstanding changes in urban land - use , and later on settlement's socio- aspects on the basis of western urban planning, and secondly because most if not all the other plans had followed almost all its general strategies . These strategies were : (a) the old city was planned for wholesale redevelopment as a modern City Centre serving all of " Greater Kuwait " , (see figure no . 10), (b) a road system was to comprise a series of radial dual- carriage ways with semi- circular cross connections together with system of minor roads in a broadly rectangular layout within the new neighbourhoods . Overall, traffic system was to be highly centralized on the old city, and (c) new neighbourhoods were to have a selection of centrally located services like schools, mosques, shops, for district's residents . (d) Construction of public buildings and some Ministries in the centre of old town , (see figure 11) .

The subsequent urban expansion was occurred later categorically when the aims of the previous Master plan had been realized and witnessed , for example, in 1960, the approximating targets of the first Master plan of 1952 was completed, thus , another consultants were asked to continue

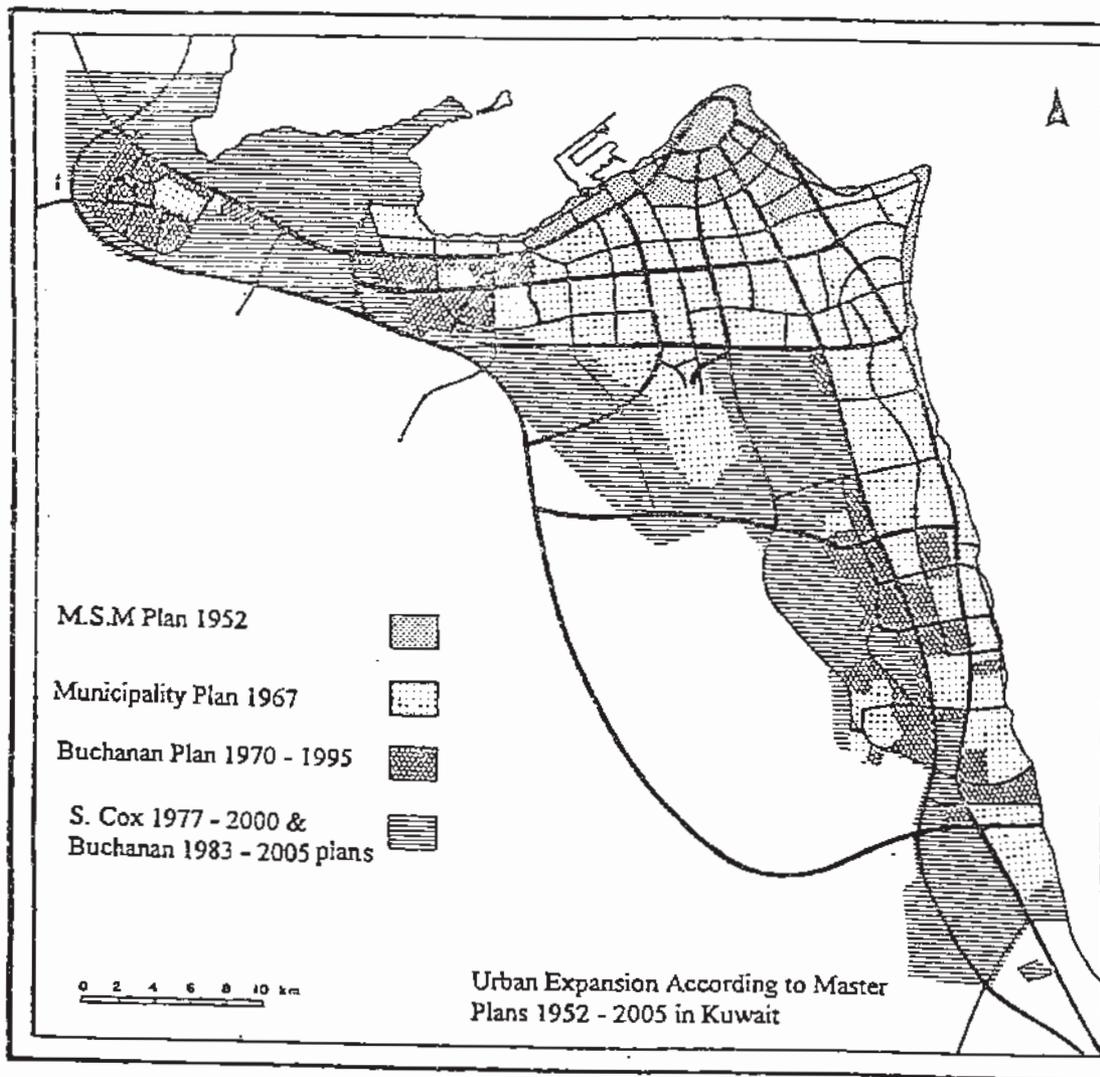


Figure No. 9

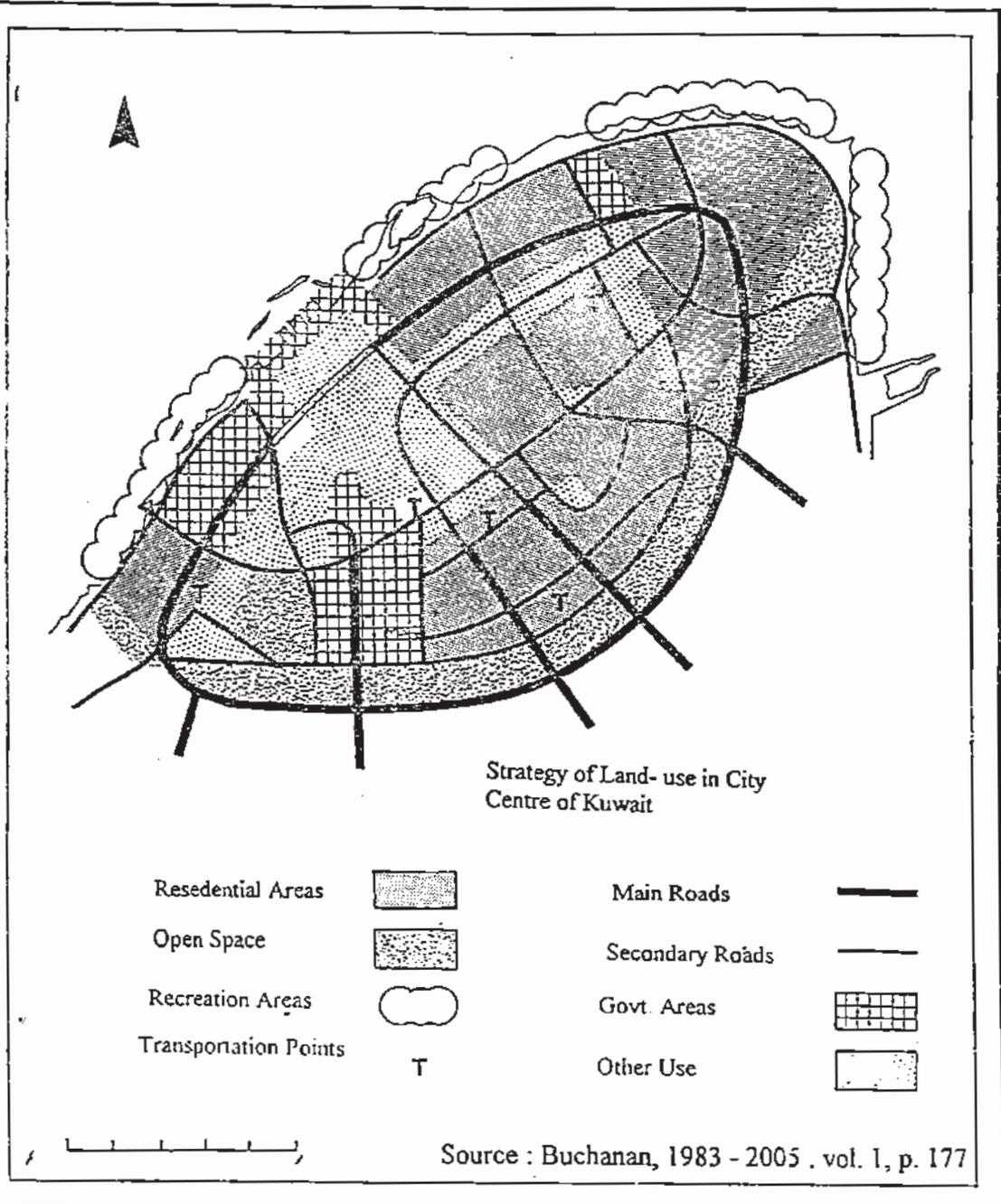


Figure No. 10

new expansion beyond the old city . The 1960 - 1967 was the Municipality plan, followed by Colin Buchanan 1970, Shankland in 1977, then Buchanan 1983 . The later ones i.e. Buchanan 1970 lasted up to 1995 in terms of its projections of labor, migration, housing, transportation, electaacity etc . Shankland also expanded from 1977 to . 2000 Utilizing the year 1975 as abais for futur projections . Buchanan of 1983 also extended to 2005 which means along - term comprehensive urban planning i.e . 25 years for each of thes Master plans .

The new Master plans starting from 1970 put forward number of new urban strategies which brought modern urban aspects of planning by subdividing Kuwait into three main urban function areas i.e.,

- (a) Metropolitan area
- (b) City centre, and
- (c) National physical area .

Each of those areas witnessed special concern which made them larg urban units attached together by atransportation and communication system providing active urban mobility .

(a) The Metropolition structure plan (1) (MSP):

From the point of view of the consultants the metropolitan Area includes the capacity and residential denesities or the ultimate population capacity of the Metropolitan structure plan through the years of the plan . The plan covers three main areas : (i) between shuwaikh and Jahra to the west, (ii) From sabah Al- Salem (formerly Messila) southwards to Shuaiba and Mína Abdullah and (iii) the central zone north of the sixth Ring Road to the City centre . These areas continue the general direction of the largest proportion of urban development which has been colsely related to the coastline because of constraints to development further inland i.e. oil fields , oil reserves and major water gathering grounds . Additionally, the desert offers lettle environmentally for the siting of major new settlements or the extention of existing areas .

(1) Shankland cox partnership, "Master plan for Kuwait", vol. I. final report, " Planning and Strtegy ", (1977 - 2000), p. 25 see also colin Buchanan, Master plan for Kuwait ", final report , vol 2, " Economics, Demography, Utilities, 1983 - 2005, p. 17

The MSP covers many urban aspects i.e. Kuwaiti and non- Kuwaiti areas, Industrail area distribution, shopping centres and services, social facilities, health services, land scape and recreation, transport system and road network, public utilities etc ..

(b) City centre structure plan (CCSP) : (1)

It comprises the area formally known as Kuwait Town and is defined by the green built and first ring road . The city centre is characterised by the main Souk (old market) and the commercial area adjoining the Sief palace . It covers many land uses i.e. residential, industry, government offices, public building, open space, cemeteries, retail offices and vacant land .

It is also connected to an urban design strategy which includes conservation areas, defining the CBD , the environmental areas . The structure plan of the CCSP has an employment targets of 120,000 - 140,000 jobs together with residential population of 117,000 persons has been approved in principle by the Municipal council in order to provide practical level of movement , parking, and access to the centre .

Table (2)
Population Growth and Distribution 1975 - 1995 (millions)
according to S . Cox Master plan

| | 1975 | 1980 | 1985 | 1990 | 1995 |
|------------------------------|-------|-------|-------|-------|-------|
| National Population | 1.000 | 1.333 | 1.665 | 2.002 | 2.207 |
| Metropolitan Structure plan | 0.960 | 1.288 | 1.545 | 1.697 | 1.777 |
| Rural Areas | 0.40 | 0.45 | 0.050 | 0.055 | 0.060 |
| Residue for new growth areas | ----- | ----- | 0.270 | 0.270 | 0.570 |

Source : Shankland cox partnership, Master plan for Kuwait, First review 1977
- 2000, vol. 1, table 51 , 106 .

The invasion of Kuwait in 1990 had its catastrophic impacts on

(1) Ibid., p 69

the projections of the Master plan . Population census now expect about amillion and half for total population or little more with non- Kuwaiti labor of 800,000 . The projections of 2000 of shankiand cox Master plan expected about 2,760 million which is no more exist after liberation .

(c) **The National Physical Plan (1) (NPP) :**

The third division of plan phases in the Master plan of Kuwait (i.e. NPP) , put forward by consultants includes many overall aspects . Those are, for example national constraints and opportunities, sites for major growth areas, alternative strategies i.e. dormitory sattlite strategy , self-contained new town strategy, and conurbation strategy, which reflect clearly the impact of modern planning on Kuwait urban structure .

Impact of Modern Planning on Settlements :

By modern planning we mean the application of those Master plans which had been adopted in Kuwait after oil discovery since the 1950s , as mentioned earlear . The first major decision of development was to develop and expand the old town and its surroundings . This lead directly to the drawing up of the original town plan with its ring roads concentric with the old town (now expanded to the seventh Ring Road) . The subdivision of the sectors of land so formed into building plots and the allocation of these plots to families whose land in the old city had been acquired by the government or the those who had not benefited from the land acquisition scheme .

The decision to abandon the courtyard princible was unanimous . On private plots owners were free to build whatever they liked within reason .

Not all house holders opted for detached Mediterranean style villa situated in the centre of the plot but in general new styles posted the whole lot . The government had considered this issue by allowing and building both eastern (cortyard style) and western (semi - detached) houses for the lower income groups .

(1) Ibid, p. 105

The rejection of the courtyard was principally because it was considered old fashioned to some people, while to the others new facilities in the modern designs made old units of courtyard houses no more essential i.e. the availability of air conditioning, the large roofs, and heat proof etc ...

New building materials have come to be seen replacing old materials i.e. cement, iron, aluminum, bricks of limestone, marble, gravel, new man-made materials instead of chandal (wood bars), basjeel (bamboo sections), buwari (grass matt) mud and straw etc., which caused continuous changes in expenses of buildings i.e. labour, materials of constructions, and costs of land. The result was not all people were able to build their own houses at their own expenses which caused to results (a) establishing the Bank of loans and (b) building popular low and middle-class housing and other electives.

Settlements Types after Oil Discovery :

Nowadays, government is responsible of building and or dealing with types of dwellings :

- 1- private villas for those who can still afford to build them, by allowing them a loan of K.D 70,000 (about 245,000 U.S, Dollars) . This loan had been developed every ten years i.e. (used to be K.D 24,000 then K.D 54,000, then later K.D 70,000 after liberation) .
- 2- Middle - income houses for Kuwaiti graduates, (this title has been canceled avoiding class- division problems) .
- 3- Low- income housing for low- income groups, (this title has been canceled avoiding class- division problems)
- 4- Popular housing mainly for badawins through the plan of re-settlement of Badawins .
- 5- Apartments in the city- centre in large complexes (i.e. Suwaber) for graduates who like to live in the city centre .
- 6- Land- loan grants from the government, for those who would like to apply their own designs over a 400 sq. mt of land .
- 7- A loan of K.D 70,000 for those who prefer already built houses or villas and afford to add some of their own income .

In general , the urban context in Kuwait had become amosaic of multi urban , cultural , social of local and outside effects . Methods of construction have changed in many ways, i.e. new wall construction , floors, roofs, foundations and framework . The consideration of climate during the long hot summer which extends from mid- April till the end of October, Keeping cool is a major environmental problems . In the old courtyard dwellings this was achieved by opening the shutters at dawn to capture the cool of morning air . Everything was then sealed up and the house remained Comfortable for much of the day . As the heat begin to penetrate the walls, it was possible to move into a shaded part of the courtyard and to sleep on the roof at night . The new houses which replaced the old , were less thermally efficient . Concrete lets in almost twice as much heat as the equivalent thickness of mud, and with concrete block it was possible to build thinner walls . The 30 cm . thick was replaced by a 15 cm concrete one which was only 35% as efficient in impeding the passage of heat, thus the use of air- conditioning , once considered something luxury has become Universal so that 66% of summer peak load is utilised for this purpose (1) . In another study, by Al-Khaiat (1988), the cost of air- conditioning is about 18% of the total cost of building , this percentag is approxincalley the same for other havsing units with central air- conditioning, plus about K.D. 200 (U.S. 670) per year for maintenance, for a 400 sq/mt. middle - income governmental housing (2) . This means , it is perhaps twice as much for the case of private villas of 750 or 1000 sq/mt . The per capita consumption of electricity on the other hand has in creased from 1000 Kwh/yr in 1957 to 9100 Kw/yr in 1985 (3) . Table (3) shows the breakdown of house building cost in Kuwait .

(1) Council of planning , " The Ideal Home " , 1972, p. 21 .

(2) Al - Khaiat , H. " Long - term Housing costs in the Hot and Arid Environment of Kuwait " . in Energy Buildings , 12 (1988) 129, 134, p 131

(3) OP cit

Table (3)
Breakdown of house costs

| Item | % of total cost |
|---|-----------------|
| Foundation | 6 |
| Substructures | 3 |
| Superstructure | 16 |
| Exterior Closure | 11 |
| Roofing | 2 |
| Interior Construction | 26 |
| Air conditioning | 18 |
| Electrical Works | 9 |
| Site Works | 9 |
| Total cost = K.D 130/m ² (U.S. \$ 430/ m ²) | |

Source : Al- Khaiat , Long- term Housing costs in the Hot and Arid Environment of Kuwait ; Energy Building , 12 (1988) table (1), p. 132 .

The new settlements in Kuwait are not efficiently suitable to the environment requirements nor to the consumption standards . According to Al- Khaiat (1988) , the high electricity consumption in buildings is due to a number of factors i.e. : (a) large surfaces are exposed to the sun (b) building materials which are inefficient in conserving energy (c) designs that disregard the environment requirements (d) badly fitting of many works like windows , doors, etc.. which encourage high solar gains .

While it may be possible to standardise new layouts it should be possible to standardise some elements of the houses without seriously affecting individual tastes . These should include room size , ceiling heights , door , and window openings . Consideration the thermal properties of the new houses at the design stage could drastically reduce plant costs and energy requirements . Economics in materials can be effected by reducing foundation sizes, eliminating much of the frame in favour of wall bearing designs, reviewing floor and roof construction and cutting out

external rendering . The settlements of pre- oil era although simple in construction but were characterized of high quality control and durability of environment requirements . New settlements should match between old and new designs by considering possible standard elements along with socio- culture elements .

General comments and conclusion:

In conclusion we can argue that Kuwait before oil discovery witnessed number of settlements i.e.

- (a) Urban settlements in the town.
- (b) Rural settlements which include coastal-villages and oasis-villages to the south and west of the town beyond the mud-wall and
- (c) Nomad settlements, or temporary settlements which include Badawins and semi-Badawins settlements.

Most of these settlements had almost disappeared in the oil era under the impact of main factors:

- (a) The western Master plans which forced new style of settlements and house types with new urban planning,
- (b) The housing plans, which prepared new built-houses for those who want to change their old houses.
- (c) The municipality acts which adopted demolishing of almost all of the structure of old town except mosques.
- (d) The change in economic activities which transferred people from primary production like fishing, pearl diving, into social welfare activities.
- (e) New plans of developing fishing herding and agriculture activities under modern basis, and transferring those activities into new locations.
- (f) The change in income had change the old needs into modern needs.

There are also other factors which played significant role in this context; like the change in population size under the influx of immigration which forced descion-makers to move into new areas beyond the old city.

Nowadays, Kuwait is mostly an urbanized society were about more the 90% of population are urban settlers.

On the other hand, according to Akbar (1981), most foreign settlement planners did not understand and appreciate the suitability of the courtyard house as in the Kuwaiti house. Even Kuwaiti planners in modern times also failed to understand it. The new type of house plan has not answered religious- social demands, nor has it met satisfactorily climatic conditions. The once private open - air courtyard has disappeared, only to be replaced by garden surrounding the house and enclosed by an eye-level wall which is overlooked by neighbours who might sit on their first floor in afternoon, The intense heat on the other hand prohibits the garden from being used before late afternoon. Climatically, modern houses are inferior to the traditional courtyard houses. Since they are detach houses they have the maximum area exposed to direct solar radiation they have large climatically unprotected windows which invite overlooking and present social problems. Those windows cannot be open during the day because the hot dry air, forcing inhabitants to rely on fans or air conditions.

Islamic urban cultural organization is physical manifestation of the equilibrium between social homogeneity and heterogeneity in a social system which requires both segregation of domestic life and participation in the economic and religious life of the community. The old town, comprises a system of public, semi-public, semi-private and private spaces varying in degrees of accessibility and enclosure. The traditional houses were always served by pedestrian systems, which consist of walk ways on different levels of privacy and visual access.

Today the movement is mainly for vehicle and is therefore unsafe for small children. It prevent social activities and group gathering and damaging quarter system of the social structure of the town. The domain of men in public areas of town like shopping area, market, gatherings etc., was separated from the domain of women who have their own social gatherings and meetings, the women may observe public life under certain conditions (Akbar, 1981:162-163).

Nowadays, one could see some efforts to re-built the Kuwaiti house, and the concept of quarter in some areas, but still, it needs some coordination and incorporation of these efforts or their equivalents into the new house.

On the other hand, village settlements and Oases settlements are almost disappeared under the urban expansion. Large farms for agriculture products are now pushed by law to the southern and northern parts of Kuwait, i.e. in "Wafra" and Abdely.

In terms of nomads settlements, they have almost disappeared from Kuwait nowadays as they are considered Unauthorized settlements. People of Kuwait use tents lately for camping in spring or sometimes for traditional parties under the call of Arabian Culture.

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