JMR P-ISSN:1815-6622 E-ISSN:2789-7354
Journal of Misan Researches
Volume 20, Issue 39, (2024), PP 359 - 381

Marshes of Southern Iraq and Some Economic Activities of its inhabitants.

https://doi.org/10.52834/jmr.v20i39.236

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Abstract:

This study aims to explain an important conception of the marshland region in southern Iraq from two important aspects. The first is to explain natural geographical characteristics of the marshland areas in terms of the way they are formed. It has also been shown that there are distinct climatic characteristics of marshes areas in terms of temperature, evaporation, relative humidity and rain that may be relatively different from that prevailing in other sedimentary plain areas in Iraq. The study also demonstrated the paramount importance of the marshland's water recharge sources, which included the sprawling streams of the Tigris and Euphrates rivers, as well as watercourses hailing from the Iranian highlands from the east. The second aspect of this study focused on two importance activity carried out by the inhabitants of the southern Iraqi lagoons: bird hunting and fishing, which clearly showed that the natural environment contributed to the requirements of these crafts in the region. The diversity of birds and fish caused the diversity of their fishing methods, which the population is keen to follow strictly

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أهوار جنوبي العراق وبعض الأنشطة الاقتصادية لسكانها

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الملخص :

تهدف الدراسة الى وضع تصور مهم عن اقليم الأهوار في جنوبي العراق من جانبين مهمين الاول رسم صورة الخصائص الجغرافية الطبيعية لمناطق الأهوار من حيث طريقة تكوينها اذ وضعت عدة فرضيات بهذا المجال اهمها ارتباطها الوثيق بفيضانات نهري دجلة والفرات التي تنتهي مياهما في تلك المناطق المنخفضة , كما تبين انه هناك خصائص مناخية مميزة لمناطق الأهوار من حيث درجات الحرارة والتبخر والرطوبة النسبية والامطار قد تختلف نسبياً عما هو سائد في مناطق السهل الرسوبي الأخرى في العراق , كما اوضحت الدراسة الاهمية القصوى لمصادر التغذية المائية للأهوار والتي اشتملت على الجداول المتفرعة من نهري دجلة والفرات فضلاً عن المجاري المائية المنحدرة من المرتفعات الايرانية من جهة الشرق. اما الجانب الثاني من هذا الدراسة فقد ركز على نشاطين مهمين يمارسهما سكان اهوار جنوبي العراق هما حرفتي صيد الطيور وصيد الاسماك اذ تبين بشكل واضح أن معطيات البيئة الطبيعية هناك هي التي اسهمت في توفير متطلبات هاتين حرفتي في المنطقة, كما أن تنوع الطيور والاسماك كان سبباً في تنوع طرائق صيدها التي يحرص السكان على اتباعها بشكل دقيق.

Introduction:

Inhabitants of the marshlands in southern of Iraq depend on the number of simple and varied economic crafts to secure their lives. The economic foundations of these crafts depend on the components of the marshland region and the process of trade between the marshes and their neighbouring cities is confined to narrow frameworks that do not exceed the reciprocal consumables. The inhabitants of the marshes generally depend on fishing, rice cultivation, buffalo breeding and hunting.

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According to the natural environment of the southern Iraqi marshes basically represented by water and natural plants, which facilitated the provision of a suitable environment for birds and fish, which was the base for the emergence of the fishing and hunting crafts of the men of the marshland population to form an important and absolutely irreplaceable living resource.

First: The general of geographical characteristics of the southern Iraq marshes

The marshes and swamps areas are natural territories that represent a distinctive environment in southern Iraq and represent Iraq's cultural and economic heritage. Historical sources indicate that the marshes and swamps areas of southern Iraq are areas where the first human civilizations, The first text in which the marshes were mentioned in the epic of Gilgamesh ,written five thousand years ago in the Sumerian language .Gilgamesh is the king of uruk of warka.In the epic confirmed by biblical text .We find Gilgamesh building a boat from papyrus reeds and coating in with tar. Many historical sources showed that the marsh areas of southern Iraq have existed since time immemorial in the Central and Southern Iraqi plains and have been renowned for their names, including Chaldean marshes, Suziana marshes and Babylonians.

There are many opinions and theories that illustrated how the phenomenon of marshes and swamps arose in southern Iraq. Perhaps one of the most prominent theories is that the emergence of marshes in south of Iraq is linked to Iraq's exposure to torrential movements, which contributed to the lifting of areas north and north-east of Iraq.

on the other hands the owner of this theory is the scientist Pliny was supported thisl theory of French

De Morcan and he added that the Arabian Gulf reached the northern line between the city of Balad on the Tigris River and Het on the Euphrates River. Another

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theory is the irregularity of river deposition between the river's banks contributed to the arrival of river deposits in those low areas, especially Tigris and Euphrates rivers witnessed changes in their streams during the different ages (Mohammed, 1972,222). These ideas and opinions remained prevalent among researchers on the emergence of marshland and swampy areas in southern Iraq until the publication of both Les and Falcon in the Journal of the British Geographical Society in 1952, the said that , Delta Tigris and Euphrates did not advance towards the Arabian Gulf so quickly and there was no acceptable evidence that the Arabian Gulf head was far from its position this leads to the rise of some lands the decline the others. The descent of the Arabian Gulf floor with rising sea levels and its tyranny on the southern sedimentary plain has decreased and continues to decline, owing to accumulated deposits and to internal ground movements followed by convex bends. The question asked here is why the marsh and swampy areas have not been flooded yet, despite the many sediments carried by wind and water to the marshes area to answer this question that is only a continuous landing process which allows for continuous sedimentation, as well as significant dominant subsidence, there have been local depressions that have been caused by single, concave and light movements this is the simplest explanation for the phenomenon of marshes and swamps in southern Iraq (Al-Shamri, 2012,459).

The marshes are located between two latitudes (30° -29°) to (31° -54°) north and between two longitudes (46° -16°) to (47 ° -49°). Note the Fig. (1) and the marshes are wide flats of water running between the right bank of the Tigris River and the left bank of the Al-Gharaf river which is located south of the Euphrates River and Al-Hawiza marsh which extends over the left bank of the Tigris River. The range of the marshes is in the shape of a water triangle its head at the city of Amara and its base extends between Nasiriyah and Basra.

The Iraqi marshes represent the largest wetland ecosystem of its kind in the Middle East and Westen Asia. It consist of a group of connected lakes and swampy lands,

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in the lower part of the Euphrates and Tigris basin, which historically extended over an area of more than $20{,}000$ km 2 from Iraq and Iran.

One of the most prominent challenges, facing the marshes is due to water scarcity, drought and the absence of water-sharing agreements with neighbouring countries.

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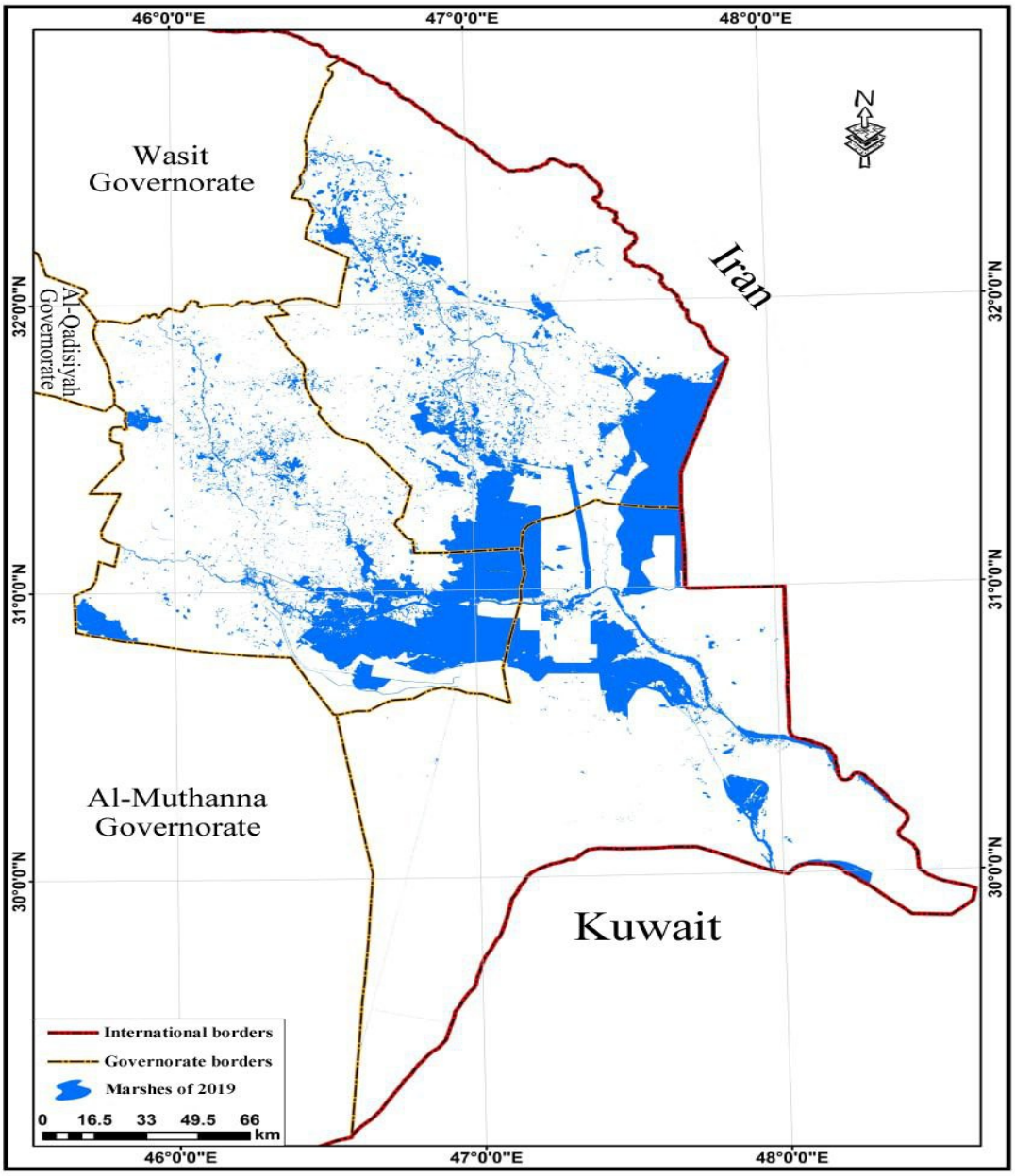

Fig. (1) Marshes in southern of Iraq.

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Source: Ministry of Water Resources, Iraqi Marshlands and Wetlands Recovery Centre, Geographic Information Systems Unit, unpublished maps.

The marshlands in the south of Iraq extend over three areas : the first range is the marshes east of the Tigris River, the most important is the Al-Huwayzah marsh , inside Iraq is about. (2,900 km2) The water of the rivers Al-Tayyeb, Dwiraj and Karkhah is disposed of from Iranian territory as well as streams of Al- Mashrah, Al-Kahla and Al- Machrea inside Iraqi territory. In addition to the Hawr al-Hawizah, there are marshes that extend within this range. (Hor al-Sanaf, Umm al-Na'eej marsh , Abi Azeba marsh , Doob and Al-Jakah marsh) It is a secondary marshland whose waters interfere with water of Al-Hawiza's marsh, They are spans a distance About 80 km from north to south, with a width rate of about 30 km. The second range is the central marshes or so-called Qurna marshes. These marshes extend on the right bank of the Tigris River between the cities of Kut and Qurnah and feed the marshes of this range from a range of nutrients, the most important of which is the Al-Musandack gap as well as the Tigris River These are represented by the tables of Beitra, Al-Areedh and Al-Majer Al-Kabeer and extend within this range a wide range of secondary marshes, such as Ghamoukah, Duwa, Uam al-Awayna,and Abi Zirk marsh , as well as the marsh of Jabaish on the left bank of the Euphrates River and the marshes of Zajri, Sahaen, Shaql, Jedi, Odeh, etc. The third range is Al- Hammar marsh, which lies south of the Euphrates River, extending from Nasiriyah from the west to the Shatt al-Arab. (2500 km2) Al-Hammar marsh feeds from a group of branches which branching from the Euphrates River south of Nasiriyah, including Glwen, Al-Fathah, Akika and Beni Hassan, as well as excavator Al-Hafar , Um Nakhla , Karma Bani Saeed and others (Ministry of Water Resources, 2017).

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The marshland area in south of Iraq appears in the form of a basin to which land descends from three sides, from north to south, from east to west, and from west to east. This basin opens between two equal altitude lines, the equal altitude line of 25 m above sea level. This line surrounds most of the marshland areas in southern Iraq and between the 5m altitude line above sea level and generally the southern sections of the Alluvial plain towards north-west-south-east, but in general the lands where the marshes and swamps extend are largely streamlined, with the Earth ranging from 2.5 m above sea level at the city of Qurnah to 0 m, at sea level at the centre of Al-Hammar marsh it's the deepest point in different directions of Iraq. (Al-Khaiat, 1975.37-35).

With regard to climate characteristics, the data of the General Authority for Aerospace and Seismic Monitoring of Iraq for the period 2007-2021 indicate that the annual average number of hours of actual solar radiation in the climate stations contained in the marsh areas is, Basra, Misan, Nasiriyah is about 8.7, 8.5,9.1 hours/day respectively. The annual temperature of the Basra climatic station is about (26, 19,33) ° m respectively ,and for the Mesan station are about (32, 18.25) ° C respectively while in Nasiriyah station is about (33, 18, 25) ° C respectively.

With regard to wind speed, the annual wind speed rate at Basra, Misan and Nasiriyah stations was about (3.8, 3.2, 2.3) m/s respectively as the annual relative humidity rate at Basra station was about (49%), Misan Station (45%) and Nasiriyah Station (51%). In terms of rain, the annual rainfall rate for Basra, Misan and Nasiriyah stations was about 79.88, 74 mm, respectively.

With regard to evaporation, the total evaporation rate in marshland areas was approximately. (2555) mm at Basra station and (2000) mm at Misan station and (1972) mm at Dhi Qar station. (Ministry of Transport and Communications, unpublished data).

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Finally, with regard to the sources of water nutrition for Iraq's southern marshes, it can be said that there are three sources of feeding the marshes, the first of which is the rains,which generally are few and wobbly from year to year and are therefore not a source of water.

The second source is the waterways, which in turn are divided into two parts: the interior and the exterior. The inland surface water sources are five sources of water nutrition that feed Al- Hammar marsh with water, with a total annual water discharge of about $52 m3/s$. For the central marshes, they are fed from nine water streams distributed between the governorates of Misan and Dhi Qar. The total annual rate of disposal of these sources is approximately $58 m3/s$. As for Al-Hawiza marsh, which lies between Misan and Basra governorates feed from two sources to talling about 26 $m3/s$ For external German sources of nutrition, the rivers descending from the Iranian highlands are the Tayyab, Dwayrig and Karkhah rivers. These rivers supply water to the Al-Sanaf marsh and Al-Hawizah marsh areas, with the Tayyab river discharge rate around (1000) $m3/s$ in some years while the annual rate of discharge of the Dwerig and Krakha rivers is about500 $m3/s$ It should be noted that the expenses of these rivers are highly fluctuating from one chapter to the next and from one year to the next, and in some years of significant rainfall, these waters bring huge amounts of sediment and water. (Ministry of Water Resources, unpublished data).

Second: Economic activities in the marshes of southern Iraq :

We stated in the foregoing that the economic activities of the population in Iraq's marshland area are closely linked to what the local environment provides to them. However, water that floods large areas of southern Mesopotamia can be considered

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the cornerstone of people's lives, providing the environment for breeding buffalo and the environment for birds and fish, as well as the availability of this environment from the growth of many species of natural plants that constitute major animal food there.

Accordingly, research will be limited to the study of bird hunting and fishing as important economic activities of the marshland population, with emphasis on methods used in fishing operations depending on the diversity of birds and fish in these areas.

1- Bird hunting: The marshes areas of Iraq are abundant in many species and in huge numbers of birds. Some estimate that they are more than 134 species. Birds in the marshland areas are classified into two categories in terms of their habitat. Migrant birds comprising duck and geese factions begin to migrate in the Autumn from the Black Sea, northern Turkey and the Caspian Sea areas of northern Iraq. and provide suitable places for the construction of nests and the laying of eggs. These birds remain throughout the winter and early spring as they begin their reverse migration to their places of origin around April and estimate the number of migratory birds reaching the marshland areas Annually about 1890,000 birds. The other species are poultry birds that feed on fish such as red stork, Heron bird and others that get their food by diving underwater or standing on the edge of the swamps and depending on the nutritional value of the birds, they are classified into two categories: birds that have little nutritional value and are not exposed to many fishermen These in turn are divided into two parts: free birds whose skin is often red, such as Khoderi, Dalaf, Jochma, Kosher, Musk, Chinese duck, Basil, Sodomy, Smuggling, Salt and Barbache etc. There are also non-free birds whose skin is black, including archaeological birds, Burhan, water chicken, heliji , rekuy, Umm Jibiya, etc. The craft of bird hunting is one that has economic significance in the lives of marshland inhabitants, although it is a seasonal craft limited to the duration of migratory birds in those areas from the beginning of Autumn Until the beginning

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of the spring, fishermen other than Burhan, Raven, Rekhiwi, Heli, Prizji and Um Jebeh do not find in the summer, and some sources suggest that bird craft is not a major craft for the inhabitants of the Al-Hawizeh marshlands, for example during the 1950s and 1960s in the areas marsh People who sell birds are contemptuous and therefore the population satisfies their need for birds during the winter by purchasing them from fishermen in these areas. Only 1% of the population is employed in this profession. There are 5% of them who take up bird hunting as a secondary occupation in addition to the profession of cultivation of grain crops or the manufacture of bronchial mats. (Joybrawi, 2011, 142).

Fishermen in the form of groups go to the ponies' areas, especially fishing trips that last for a long time (two days or more) due to the dangers that the fisherman may encounter are unable to confront alone. The bird-hunting craft is of economic importance in the life of the populations of the pontiff despite being seasonal, consuming a portion of the birds locally as food and collecting others and selling in markets where the value of hunted birds varies according to their size and types There are some kinds of birds to eat but take their feathers as well as other birds' feathers and stuff to make pillows in them.

Some pontiff residents inspect the nests of some birds to take advantage of their eggs to get chicks or selling them in high quantities and prices in nearby local markets (Al-Qaisi, 1994, 248).

The multiplicity of bird species has resulted in the multiplicity of methods used to catch them, perhaps the most important of which are:

A.Al- dosha :It is a handmade grid between 10-8 m long and wide (3-2 m). The grid is erected under shallow water near the edges of the marshland by installing a few sticks in the bottom of the water in the shape of the boat's structure and linking its limbs to each other with ropes connected to one rope of length between (70-50cm) and its height (50cm) it has a narrow hole from which it looks to the net and

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when the fisherman intends to hunt the birds, the fisherman scatters the grain inside the net. This lasts a few days until the birds secure it in abundance. This is known from the effects that birds leave as feathers at an appropriate distance from the net and leaves in the wall a small hole through which he looks and holds the thread and flies when it feels there and even puts its cuvia on its nose and mouth so that the birds don't hear its cough or sneeze and when as many birds as possible gather inside the network, the hunter pulls the cord with all the power that comes from, then to the net gathers together and the birds stay insideThen the fisherman comes out of hiding and proceeds to slaughter the birds and returns to his home with his fishing holder, when his family cleans the birds of feathers. Each pair is tied by its legs to be sold in the morning in nearby markets or on the area houses and the current habit is that the fisherman connects a fat bird with the other vulnerable and the buyer has to buy a strapped pair, and from the birds being made Catching it in this way is the water chicken, which is the cheapest type of bird, with the husband's price not exceeding 1−1.5dinaras at that time, as well as the Khaderi birds, the most expensive of which is between 3−4dinaras through period between 70's−80's .

B. Guns:This method is used to catch birds. There are old guns called shotgun which are made locally. They are a perforated tube from the top at the back and put under the hole Al- Jada or sulfur inside thin silver paper. They are placed in this tube next to the gunpowder hole and then a cloth and then a second cloth. At the top of the hole is a trigger that presses him, and he falls on the hole inside that yellowhead or sulfur, and there is a spark towards the gunpowder, which releases.

Some marshland residents may use more sophisticated rifles than The Al-Jada named Kasrea , and some of them may be called inclination. This gun provides the hunter with the effort of making gunpowder and his hardship. Hunting is more assured. Of the most important birds caught in guns is called kasrea . This bird is known to fly at night and disappear by day in his dens. He does not replace his

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dwellings for the duration of his stay that season. This bird usually lives in a water space surrounded by cane and cold plants so dense it's hard to find, and when a fisherman can find out where one of these birds is presenting it at night and hiding with its canoe between reeds and papyrus, the birds of Khudairi have left their places away as usual, and when the magic begins, their groups begin to return to their places and they return groups from each to the other for a few minutes, and then the fisherman starts throwing it back successively as soon as the first group arrives and fisherman leaves the killed birds in place until they all come at dawn, after which he returns to his house and boat Abundant with birds and other types of birds caught with guns are birds (Burhan, Zarqi, Baiji, Ewidi, Lahoui) and others. When the fisherman sees these birds, he draws his mind the way he will reach or approach them. Either he walks curved or sheltered in the marketplace, crawls on his stomach or works a barrier of papyrus seeking (shulter) that is sharp angle the length of each rib (1.5m) and 30 cm high) and is fixed on the shulter Vertically, some of the plants around the area have their hand carefully pushed to a nearby location that is suitable for payment, or they use a very small boat that has no capacity for more than one passenger, with nothing appearing while walking in the water, but a few centimetres from the edges, and when the fisherman sees these birds stretching in this small boat on the stomach, to hide something from the eyes of the birds, to shoot the barrel of the rifle Towards fishing, slaughter, throw it into the boat and then pursue fishing for one bird after another or return to its home.

C: Poisons: The poison (blossom) is used to catch birds. The fisherman buys a amount of hazelnut-like blossom, breaks it with his teeth or stones to extract its pulp and then crushes it with heavy tool after adding to it a amount of soap powder and bird poo (chicken), kneads it with a little water, then comes with soft papyrus and puts For use, this type of hunting requires a group of fishermen to come out and cooperate. Fishermen take their boats out to the birds' location. When they see them, they are reversing the wind passing on the birds by long distances, fearing

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that they will escape them and put poisoned roots over the water waves towards birds that eat them as a food of their choice and in a short period of 10-15minutes the poison affects the body of the bird, disturbs its balance, flips on its back and circles the water around itself, speeding hunters to slaughter it before it dies and continues to watch the rest of the birds and then return to their homes to sell them in markets or to eat their meat and collect their feathers to benefit from them in making or selling pillows.

2- Fishing: The fishing craft is one of the most important in Iraq's marshland areas and the vast majority of the population is good at the craft, including those who fish as daily food, and those who catch it for sale and trade. The population who occupy the fishing craft is called (Berberas) Because this craft was despised among people for a long period of time, but this view changed after the economic and social conditions of society evolved, the price of fish in the city centres on the one hand and the transfers of non-fish cars became easy on the other.

Marshlands are a suitable environment for fish wealth. They are home to some (52) species of fish belonging to seven families and there are (23) species constituting a ratio (44%) settler in the marshland areas and there are also (12) carp family, two of which are settler in the marshland, and there are (17) A fish family lives in saltwater but takes a place from the marshland to lay its eggs, as shallow water is found. All the marshes are wealthy fishing fields for a number of reasons .The most important are the availability of vegetation and the availability of crustaceans, algae and other .These substances constitute food for fish. The marshland areas are suitable places for fish to spend winter because of the warmth of the water and free of water currents. The marshland water is also characterized by renewable water due to the return of the Tigris and Euphrates rivers and their schedules we do not forget to provide oxygen in the marshland water needed to sustain fish life. Finally, the low salinity marshland water suits the breeding of some marine fish that migrate from the saltwater Arabian Gulf towards the marshland areas, especially the fish

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known as shad . And with the abundance of this wealth in the marshland environment In all seasons however, it is abundant in some seasons and scattered in others, since fish migrate from one region to another and multiply in certain seasons . Fish migration begins from February and lasts for about six weeks to reach their breeding places and fish traffic is Against the river stream, the population calls this migration the "Zara" group migration, as fish leave marshland areas through waterways, mostly in areas between Samarra and Tikrit on the Tigris River and between Aana and Het on the Euphrates River Therefore, any change in water levels for one reason or another will affect this reproduction process and contribute to the loss of fish eggs, which are represented by Grey mullet , green carp , cat fish ,anchovy , fizz, carp, etc. (Dahm, 1988, 94).

In April, the fish begin to return to the marshland areas after being thrown its eggs into the upper rivers and then move with the current of water pushing them towards the estuaries, as they return with weakness and emaciation, during which time they also migrate to the marshland areas Marine patio fish, when their eggs are due, move against the stream to wards the marshland areas. The population calls the return of fish to the marshland areas "Kharat", where first the turtles are returned, then the cat fish , the snow, and then the large fish like Grey mullet, carp, and Anchovy

Daily per capita share of marsh fish in the 1970s was about (3.3kg) but decreased to about 1.5 kg) during the period (1984-1986) due to the conditions of the Iraqi-Iranian war in Al-Hawiza marsh , which led to the migration of the population to the central and western cities and marshes, relatively far from the location of military operations. According to FAO data, Iraq's fish production in 1989 was about (13200) tons, but in 1994 it decrease to about (12600) tons, while in the 1970s it was only about (17000) tons only in marshland (Al- Rubi, 2003,129).

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There are Several methods of fishing in marshland areas follow some rudimentary methods and others are more modern. All methods are used to use boats or riffs to move between fish places. These methods are:

A- Nets: The length of one net is about 100 m. and 1 m. width and it is made locally and usually connects to the bottom of the net balls of lead to dip, and the upper edge of the net placed a peace of cork to float on the surface of the water and at the start of the fishing determines where the fish are available and the appropriate depth is required and usually goes in the canoe several people and upon reaching the desired place the canoe travels quickly towards the accidental or longitudinal direction for the hourly and straightforward, and in the meantime they start throwing the nets with water gradually until they all dip and after finishing the net, everyone waiting quiet for about 15 minutes One of them may go down in the water carrying. With his hand Mardi (a pole of reeds), he goes towards the nets for 30 meters and then reverses his direction towards the nets, striking the water in the irradiated louder, with the purpose of intimidating and escaping the fish in front of the nets and continuing to beat and scream with walking toward the nets after that the fishermen start to pull the net and gathering fish in their canoe . Fig (2)

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Fig (2). Fishing with nets

The method of netting is used in another method known by fishermen in marshland areas where the net is fixed, and the water stream is cut off so that each party is installed on a wooden pole planted in the land leaves enough room for movement in the water and the net stays for one or two days to gather as many fish as possible. Fishing is often carried out during the night or the net is held by fishermen. Other people hit the water by sewage or on empty plates. The fish move towards that net or the area where the fish are likely to be often encircled by a circular net.

B. Karof: The Karof resembles the mesh in terms of manufacture, but it is less tall when used in the water in the form of a semicircle and the fishermen quickly drag it towards the edge of the coast, trying to collect as many fish as possible between the mesh and the beach, and upon reaching the beach all fish in the water enter the surrounding network (Karof).

C. Al Silieh: a network made of yarn in the form of a strapped funnel in the head of a thread held by the fisherman and at the end of the circle, a weight of bullets helps to bring the basket down into the water. It is open in the form of a landing

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canopy. Fishermen collect fish stuck there after being pulled into the canoe and This method is commonly used in shallow places of marshland.

D. Alfalah: It is an iron tool manufactured locally or may be purchased by fishermen from the outskirts, districts or alloys and made from iron in the shape of a palm that is one foot long and is either with five pointed heads, it is called (quintuple) or it may be three-headed, so-called (triple), and each head looks like an arrow, and at the end, this tool connects to a stick of wood or bamboo about 3 meters in length. And it follows several methods of hunting, including the hunter standing in the back of the boat while another man manages the boat or directs it to a side where he can hit it to the fish without preventing it from turning it between him and the presenter of the boat, in which case he hit fish in the water, in papyrus or in reed roots is likely to be a fish, and then the fisherman shoots it towards the water movement that may result from a fish, and if he gets it wrong, he gets it out of the water and keeps it moving, and if he gets it or loses it, When the fishermen are caught, the fisherman works to tie the fisherman to a rope so that he can retrieve it whenever he hits a fish and the fishermen often prove a stick of reeds close to each other near the edge of the water and put behind it a series of blockades to repel the stream of water so that if a fish settles there some reed sticks move, it draws the fishermen's attention and then the fisherman throws. And the other method of fishing with fala, where the fisherman uses a petroleum light that helps his light to attract fish and floats it with the effect of that light, the fisherman initiates it with his own, All in the front of the light which who helps him to fish. The marshland population has become experienced in this way so that one of them can catch a large number of fish, and one of them rarely fails to injure the fish, whatever the circumstances around them. The valle may also be used to fish in a way (Noam) For hunting large fish that tend to sleep on plant grasses underwater and the dry way of fishing that jumps near the boat and the way (DG: Stabbing Fish

JMR P-ISSN:1815-6622 E-ISSN:2789-7354
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) When fish strikes with Fala several times in places where papyrus grows frequently, fishermen believe that these places have abundant .Fig (3).

Fig(3). Fishing by Fala

E-Floating: This method is used on quiet nights, where poles of reeds are fixed in the bottom of the water in different dimensions and then attached to each of the two columns of a grid. After setting up all the nets that are sometimes close to ten , the fisherman travels with his boat or his mantle between them, observing their movement and listening to each sound

JMR P-ISSN:1815-6622 E-ISSN:2789-7354
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Occurs. If a fish pass and clash in one of these nets , it makes a sound and movement in the water , trying to extricate itself. The fisherman hurries to lift the net and catches the fish. If it is large , it is difficult to move it from the net to the boat , he hit the fish on the head with a small stick that he always carries it so that his strength becomes weak his resistance ceases , so it becomes easy to catch her. Thus he continues to move between the nets until the beginning of dawn, where he collects his nets and returns to his house as he seizes.

F- Poison: One of the methods known in marshes for fishing. These toxic substances take many forms, the most important of which is the flower method, which uses toxic flower pulp by placing it in a food material consisting of a paste of wheat flour or rice after climbing into boiling water or putting it in freshwater shrimp (taste). The fishing process is preceded by fishermen throwing grains of barley, dunan , cooked rice or food waste where fish collect around them. When the (Zaher: type of poison known in these areas) the fish are eaten by the poison, they are then raped with dizziness and floated on the surface of the water. This method is a primitive method that leads to the annihilation of large numbers of fish and their different sizes, and also a toxic substance used for fishing is a substance The deadly T.B.B, smuggled out of Iran, is one of the most dangerous for both fisheries and human beings and, at the same time, the most lucrative for fishermen because of the abundance of fish caught .The authorities have imposed a ban on the use of these toxic materials and the government chased the people who were using it .

G-Small dams: One of the main fishing methods used in Chabaish marsh ,people benefit from large migratory fish, and for this purpose reside in the width of the riverbed two dams and two beds of papyrus that meet in the shape of an exploding angle facing the water stream and leave at the meeting point a narrow hole with a small grid attached to a bell fixed above the hole so that the net moves, The current attracts some migratory fish and enters between the two dams, and when he tries to

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find a way out, he ends up searching for the hole. If he tries to get out of it, he hits the net and the bell pawns. The fisherman then rushes to the caged fish and hits it on the head with a small stick called "Miflaka", and it becomes easier for him to hold it (Saleem , 1970,388).

H. Hook: It is a simple method where a long thread that connects the stool to a small siren, tightens to a cane and connects to the thread near the siren is used as an iron piece that helps to lower the scrape and places in the siren a piece of cooked dough or dates. Sometimes worms or shrimps are used and a piece of cork or papyrus is attached in the middle of the thread. When diving, the fisherman pulls the thread hard, attaching the siren to the mouth of the fish through its pointed head and hook two types (Tooh) and throws over a long distance from the width of the marsh (Shemel), which connects to a cane and is commonly used near the banks (Al-Qaissy , 1994,255).

E. Al-Tahoel: Al-Tihla is a floating island in the waters of the marsh and fishermen engage in fishing in various ways, including that in the summer the water decreases and its platforms meet with the bottom of the marsh and its movement stops and the other free part that has not connected to the bottom becomes a fish depot for the cold of the water underneath which constitutes an attractive environment for fishing in such a hot summer. Fishing in this ways is starting by surrounding(Al-Tihla) the floating island with the net and a number of fishermen remain on the roof to make some kind of noise and movement, causing the fish to dizzy and enter the mud in their gills, forcing them to go out where the nets hold them, or fishermen tackle them with (Falah) called this method (Chos hunting), and another way of catching Al-Tihl (collecting a Tihla) is that the fisherman dives under sight and ties one foot to a rope grabbed from the other end by a fisherman standing on its surface, seeking to search for fish there to catch it, if he fails to do so, the hunter

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seeks another method: to puncture the surface of the sagging from the middle and then to get down from that hole. When he grabs the fish, he shakes the rope with a notification that his mission is over to pull him over it, and this method is called locally by catching the drill. (Diving) and hunting this way is very dangerous, and many of the hunters who followed it have died. So this method is not common nowadays, and only adventurers do it, Another method of slanderous hunting is to puncture the **Al-Tahoel** and prove near the hole four reeds on which a red button is placed and the fisherman stands next to the hole and his waffle with his hand. Once the fish sees the red light in the water, it attacks towards the hole and the fisherman immediately shoots it by (Falah). (Mohammed, 1967,110-107).

K-Al- Makraf : This method is used for small (Fish like : Abu mullet) fishing during September usually consisting of a net tied to a circular tree branch and has a long handle held by the fisherman and descended into the water in ponds and shallow areas.

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