LIMITATION OF DIRECTION AND PATTERNS DISTRIBUTION OF RURAL SETTLEMENT IN AL-MUQDADIYAH COUNTRYSIDE

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Abstract: *rural settlements takes in its distribution a specific direction as a result of and human limits made by the distribution in this direction. The study reflects that direction of rural settlements in Al-Muqdadiyah countryside takes semi-circle shape attends from the (NE) to words (SW) because of clustering of major rural settlements in this direction thus these settlements a cope with along the streams and main roads, while the pattern distribution takes a dispersed pattern but accordance with the table (1) the distribution takes a random approximate a cope with limitations.*

Keywords: *rural settlements, Al-Muqdadiyah direction distribution 2018.*

Introduction

In spite of recent appearance of rural geography as one of geography branches that belong to the beginning of twentieth century but some researchers in human geography fields consider this field is a basic of human geography, because the evolution and shape any settlement reflects the extend of human ability and his interaction with environment where settlement as an organism grows and improves through a long periods of time from notice the site and patterns planning we can see the nature oh human and his investment of land in which he lives on , this feature seems to be in advance countries , so we can say the study of rural settlement started in nineteen century and extended in Germany and france , so there is a great role for human in evolution of these settlements because human considers the basic of innovation and interaction with environment so his disting connected by agriculture in which considers nerve of life so we can consider human and his organs are similar of rural settlements from points we depend on (Gis) because lt makes spatial layers and connected by atri butte tables in addition to statistical data.

1- Research problem

The study area considers one of many regions has a different natural and human factors reflects the picture of disparity of spatial distribution of rural settlements so the problem including did the natural and human factors limits the direction and patterns distribution of rural settlements in the study area?

2- Research Hypothesis

The research hypothesis:

There is areole for geographical factors in limitation of direction and patterns for rural settlements in the study area.

3- The aim of study

This study aims to uncover about direction and patterns distribution of rural settlements and the factors that responsible for this distribution by using (Gis).

4- The study area:

The study area represented by spatial boarders of AL- Muqdagiyah countryside within Diyala province in eastern part from Iraq in Mesopotamia composed from there counties district center, AL- wejaheen. Abi-saiyda. as showed in the map (1) the area extend between two latitudes (33^{5} , 45^{-} - 3400) north and longatitudes (44^{5} , 45^{-} - 45^{5} , 15^{-}) east from north boarders khanaqin and AL –khalis districts from east baladruz and AK – sadiya and from south AL-wieijahiyah county, the study area hove (25) farmlands . furthermore the study sheds light on rural settlements distribution during 2018.

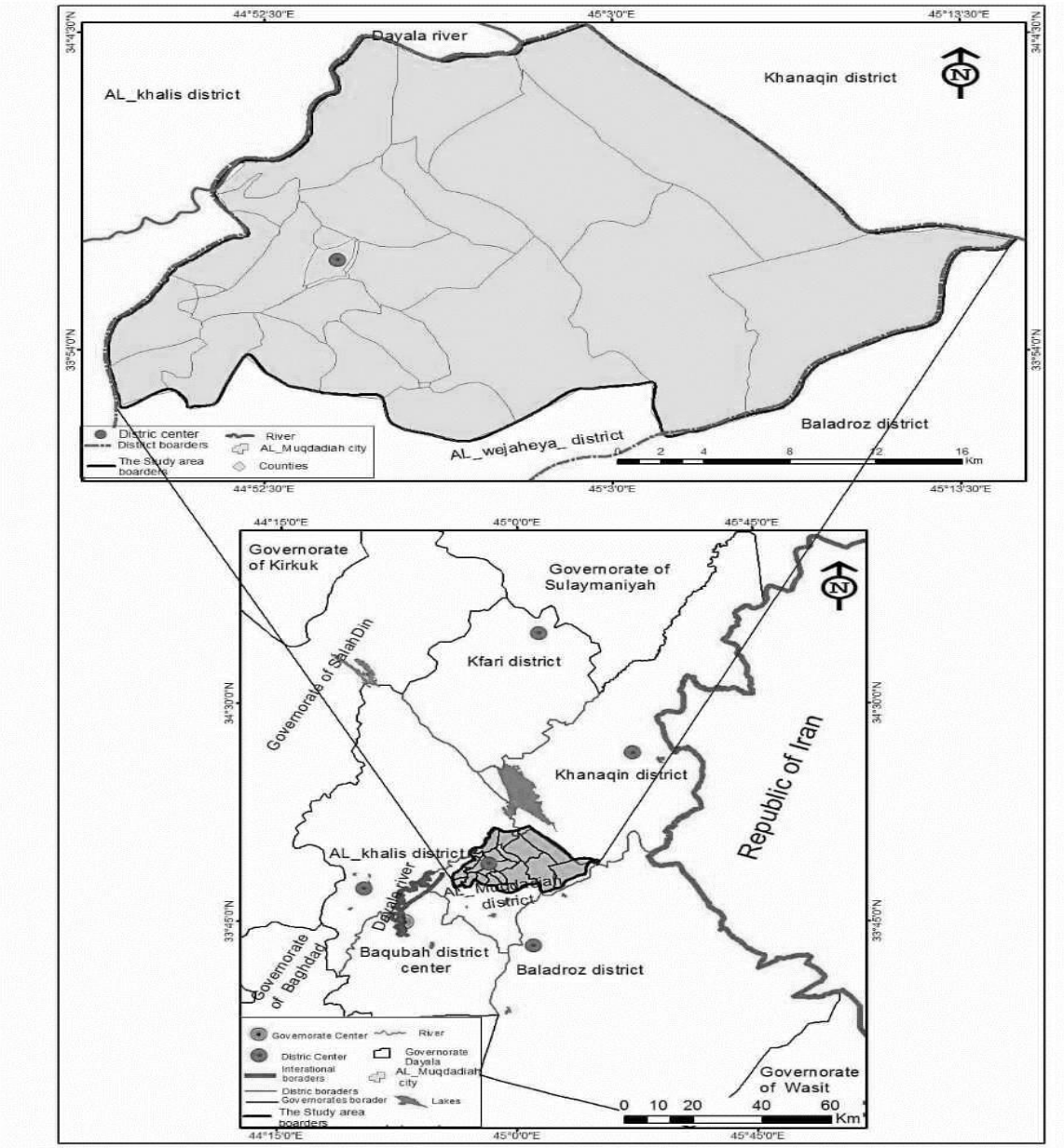

Fig. 1. Map (1)

1-Directional distribution

Rural settlements takes in its distribution a specific direction as a result of natural and human limits made the distribution in this direction. To determining the direction of rural settlements in the study area it would be used the application of (Arc Gis) programme through, Arc Tool Box → spatial statistics Tools → Measuring Geographic Distribution → Directional Distribution.

The direction of rural settlements in Al –Muqdadiyah countryside takes semi-circle extends from NE to SW map (2) because the majority of rural settlements focus in this direction according to river streams and main roads in this case rural settlements appear dispersed along with two factors above.

2-Spatial distribution pattern by using Nearest Neighbor.

Nearest Neighbor is one techniques used to analysis of spatial patterns it is a wide spread and using by a number of Geographers. The spatial distribution forms a limits pattern if there are many factors responsible for this case, but if the distribution is random it belongs to coincidence factors that is so difficult to analysis it[(1)]. The most prominent ways to know the spatial distribution is nearest neighbor in which aims to measuring and analysis of real distance between settlements centers that average of expected distance between these points in which represents the centers in random of pattern distribution.[(2)]

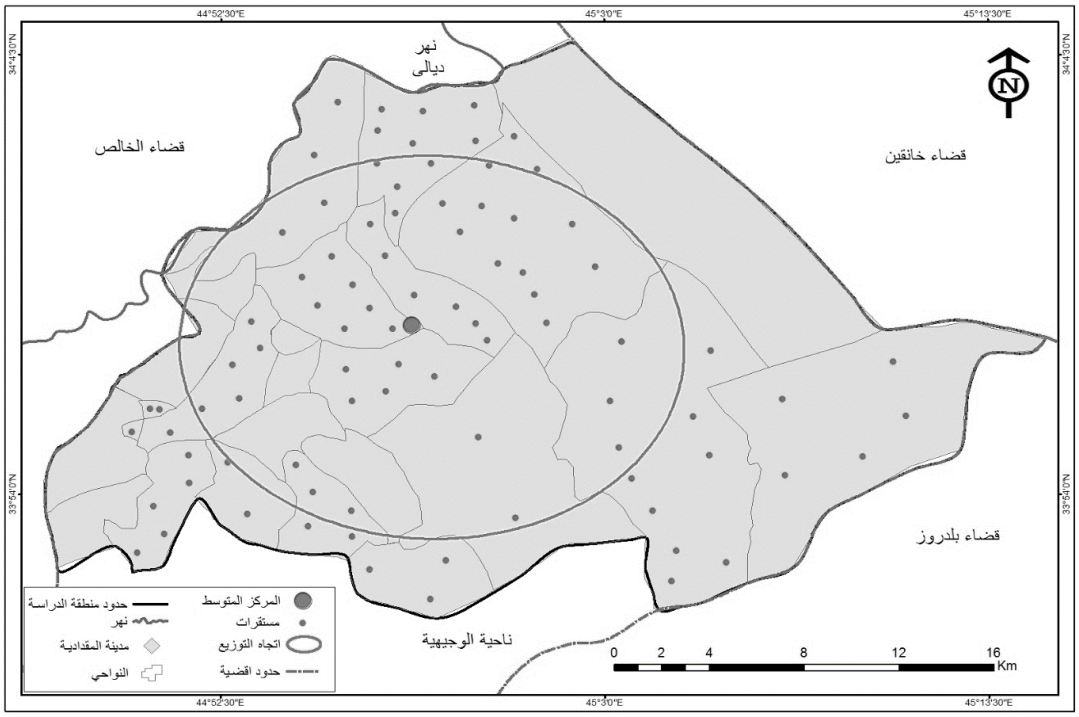

Fig. 2. Map (2)

To analysis of nearest neighbor and uncover about the pattern of rural settlements distribution in the study area lt used the applications of (Arc Gis) through: Arc tool box → spatial statistics tools → nearest neighbor analyzing patterns average.

Throughout the shape (1) the observed of standard deviation is (2-59) it means that z-score is (2-59) this degree is high of critical degree so the hypothesis is nearest to dispersed pattern so the pattern distribution is random approximate a cope with table (1).

Table 1. The values of nearest neighbor index

Pattern distribution	**Coefficient of Nearest Neighbor**
Clustered	0,009 – 0,00
Inde terminate approximate	0,49 – 0,1
Random approximate	0,99 – 0,50
random	1,19 – 1,00
Far	2,15 – 1,20

Source: mohammed Azhre AL- samac, Ali Abed Abas, geographical research between method specialist, statistical ways, tecniques and modern information Gis, Dar ibn AL- Atheer for printing and publishing, Al – Mosul university, 2008, p18.

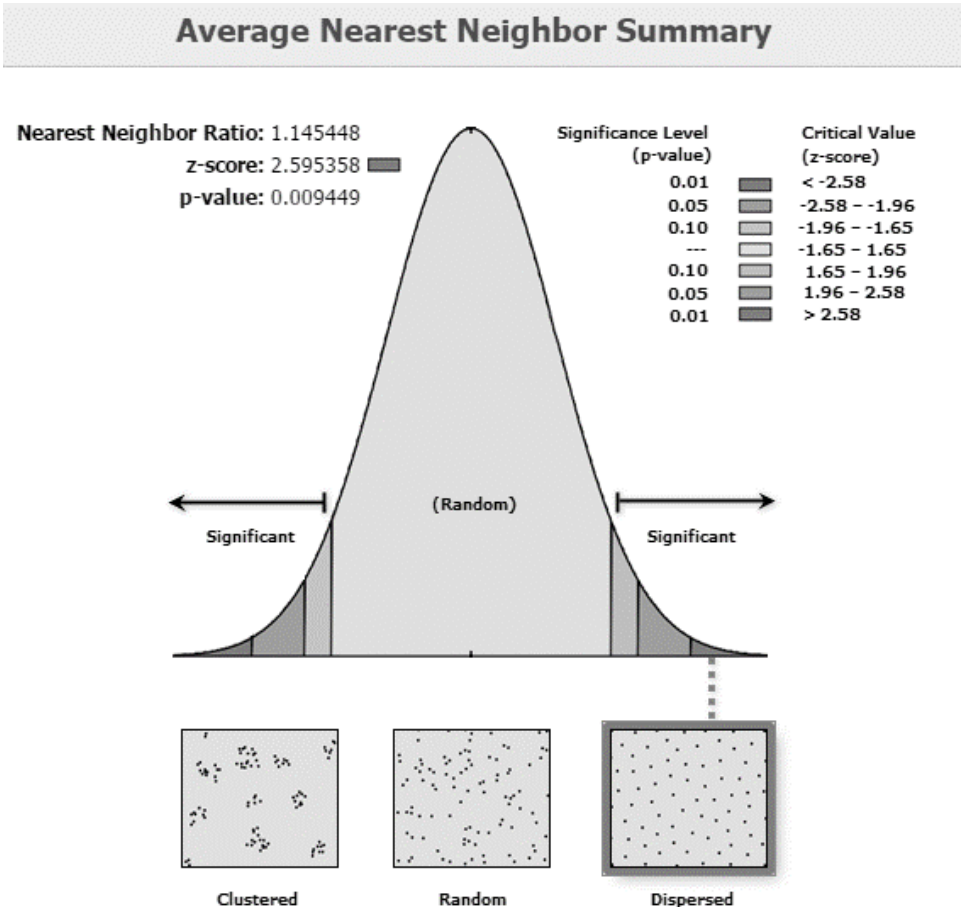

Fig. 3. Shape (1)

Conclusion

1-The study showed clear spatial disparity in spreading of rural settlements patterns , the most prominent pattern is a linear and clustering shape along the main roads and streams so the direction extends from (NE) to (SW) with semi-circle.

2-The study indicates that natural factors have a great role in disparity of pattern that rural settlements takes, so the clustering pattern appears in plain areas with fertility lands and water resources.

Recommendations

1- -select the suitable place to establish rural settlements by using future planning throughout the foundation of natural factors to gain settlement process represents by water resources and soil .

2- It takes into consideration paving roads in Rural to elevate the rural suffering specially during the rain season.

3- It nessesary to use (Gis) in studies that related to settlement with all its kind.

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