

Dedication

I would love to dedicate this research to:

My Dear Mother

&

My Sisters

&

My Family

Acknowledgments

Praise is to Allah, by which good deeds are done. And Peace and blessings be upon the best creation of Allah Muhammad peace be upon him.

Thank you, after God, to my family, especially my dear mother, who encouraged me to do this research, and to all my family members for supporting me, my colleagues with the master batch, and to my supervisor Prof. Dieter Fritsch, who did not spare any information helping me to complete this research.

ملخص البحث:

تناول هذا البحث قضية الإسكان ومدى أهميته كحاجة أساسية للإنسان حيث يجب الاهتمام بتوفير المسكن للأسر خصوصاً ذات الدخل المحدود من خلال عمل الخطط الإسكانية ، وهو الدور الذي تقوم به إدارة تنمية الريف وإعادة التخطيط بولاية الخرطوم حيث تقوم بتوفير أراضي سكنية وتمليكها للمواطنين عبر القرعة وذلك لاجل تحقيق الاستقرار للأسر ومن ثم تحقيق دخل مالي لخزينة الدولة. حيث أن المشكلة الأساسية تتمثل في ايجاد أراضي سكنية تتوفر فيها الخدمات الأساسية من شبكات مياه وكهرباء وصرف صحي حيث أن معظم الخطط الإسكانية الحالية لا تتوفر فيها هذه الخدمات نسبة لبعدها من المدن والأحياء المأهولة بالسكان. عمل هذا البحث على توفير أراضي سكنية حسب معيار القرب من المدن السكنية (700) متر بمقياس رسم (100)متر تمثل (1) كيلومتر حيث يمكن الحصول على خدمات الكهرباء والمياه بسهولة. تم في هذا البحث استخدام طبقات الأراضي السكنية بمختلف أنواع أغراض الاستخدام من تجاري وسكني واستثماري كذلك الفسحات الرياضية والمدارس في مربع 84 الجريف غرب وجزء من ال مربعات 79 و 90 الجريف غرب ومربع 1 الفردوس ، وكذلك طبقة الطرق العامة بحيث تمثل هذه الطبقات النطاق العمراني ، كما تم أيضاً استخدام طبقات الأراضي الزراعية التي سوف يتم اختبار مدي قربها من النطاق العمراني لكي يتم استبعاد الأراضي الزراعية البعيدة عن النطاق العمراني واختيار الأراضي الزراعية على مسافة اقصاها 7 كيلومتر من النطاق العمراني للمدن وبذلك يتم تحسينها وتغيير غرضها إلى سكنية .

تم استخدام برنامج (ARC GIS(10.2) لبناء نموذج يعمل على اختبار الأراضي الزراعية ومدى بعدها من النطاق العمراني للمدينة وذلك باستخدام م أدوات التحليل (buffer- erase) ومن ثم إنتاج طبقة جغرافية جديدة توضح الأراضي المستبعدة مع ظهور الأراضي التي يمكن تحسينها وتحويلها إلى سكنية .

Abstract

This study deals with the issue of housing and its importance as a basic need for human beings. It is important to provide housing for families, especially those with low income, through the implementation of housing plans. This is the role of the Rural Development and Re-Planning Department in the State of Khartoum, as it provides residential land and ownership to the citizens to achieve stability for the families and achieving financial family income, and lastly income for the state treasury.

The main problem is the provision of residential land with basic services of water, electricity and sanitation systems, where most of the housing plans now do not have these services, as far as the cities and neighborhoods are inhabited by the population. This study was carried out on the provision of residential land according to the criterion of proximity to the residential cities (700) meters on scale of every(100) meters represent(1)kilometer, where electricity and water services can be easily obtained.

In this research the use of residential land classes of various types of housing purposes from commercial, residential and investment as well as sports spaces and schools for square 84 West Geraif and part of the blocks of 79 and 90 and block 1 of elferdoos neighborhood, as well as the layer of public roads to represent the urban scale is under investigation. Agricultural land according to the standard required is also tested, which is land located within the urban range of cities and provinces and near the public streets. Furthermore, agricultural lands have been tested with regard to proximity to the urban scale, differentiated between agricultural lands eliminated from the urban scale and agricultural land at a distance of up to 1 kilometer distance. This has been carried out under the hypothesis, that the urban scale of cities has to be improved and changed to the purpose to be residential.

The ArcGIS (10.2) program was used to construct a model that works on the testing of agricultural land and its distance from the city's urban scale using buffer-erosion tools and then creating a new layer that refers to the excluded lands with the emergence of lands, that can be improved and transformed into housing areas.

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