

**Towards a Sustainable System to Achieve Urban
Intensification Policies as an Approach to Solve the
Housing Problem of the Existing Urban Communities
in Egypt**

By

Eng. Rehab Abdalla Abelzaher Abdalla

Assistant Lecturer in Architectural Engineering Department, Faculty of
Engineering, Fayoum University

A Thesis Submitted in Partial Fulfillment

Of

The Requirements for the Degree of

Doctor of Philosophy in Engineering Sciences

Architectural Engineering

(Urban Development and Communities Design)

Department of Architecture

Faculty of Engineering, Fayoum

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Under the Supervision of:

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ABSTRACT

Inadequate housing units for the population at the urban, environmental, economic and social levels have greatly exacerbated the housing problem. The research aims to develop a sustainable system to activate the policies of urban intensification in Egypt as an entrance to solve the housing problem in the existing urban communities in Egypt.

This thesis shows the beginning of the manifestations of the housing problem in Egypt, whether formal or informal housing. The study then deals with the study of urban intensification as one of the most appropriate solutions to solve the housing problem in the existing urban communities in Egypt, where the beginning of all theoretical studies that confirmed the thought of urban intensification and the most important intellectual principles and definitions and objectives, up to the fact that urban intensification is the best solution to solve the housing problem at the theoretical level.

Then the vision of sustainable development is linked with urban intensification, and to benefit from the study of successful global experiences in how to apply policies of sustainable urbanization and to extract the most important tools, parties and mechanisms used to achieve the requirements of residential development and then measure the policies of urban intensification with measurement indicators.

The research presents the formulation of the sustainable system and its formulation in its initial form based on the theoretical and analytical part and its testing through field work. In two phases the stage of meetings of experts and consultants and the questionnaire design phase to come up with a set of additional mechanisms and studies to achieve sustainable urbanization and the actual needs of the population and then formulate the sustainable system in its final form.

The thesis then applies the proposed sustainable system to the current situation in Egypt through the strategic plans of the Egyptian cities starting from the presentation of the introduction to the strategic plans definition and objectives and stages of preparation and extraction methodology of

current housing studies followed in the strategic plans, then reach the disadvantages and constraints of the implementation of the policy of urban intensification in the operational reality and then apply the proposed sustainable system on the city of Tammy Al Amdid, after the development of current housing studies according to the proposed system. The current status of all dimensions of economic, urban, environmental and social .

Finally, the research suggest the stages of urban intensification and the extent of impact of the potential of urban intensification in the strategic plan and then study the future need and project. Consequently, the proposed high and medium intensification potentials were proposed for the city of Tammy Al Amdid.