Key Facts and Research gap

- Residential deficit.
- Overcrowding.
- Unplanned housing.
- Residential re-   subdivision.
- Dwellings are unfit for habitation.
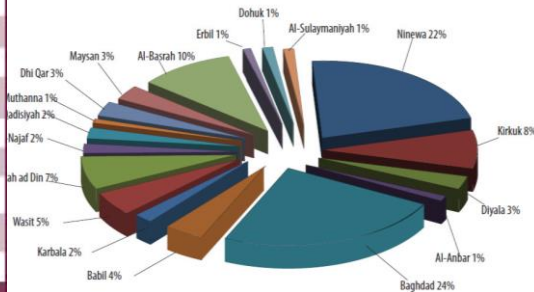
Overarching Research Questions

- Is the current housing design in Iraq subject to the sustainability indicators?
- To what extent the optimized residential model contributes to reduce the housing crisis?

Gover-norate	Current Defi-cit in Housing Units	Rate of Defi-cit in Housing Units %
Nineveh	168799	22
Kirkuk	64209	8
Diyala	24840	3
Anbar	11015	1
Baghdad	184645	24
Babylon	26633	4
Karbala	17267	2
Wasit	40131	5
Saladin	53667	7
Najaf	17644	2
Qadisiyyah	15300	2
Muthanna	7903	1
Dhi Qar	18609	3
Maysan	23744	3
Basra	75690	10
Arbil	2792	5,0
Duhok	2340	0,5
Sulaymaniya	3894	0,5
Total	759122	100%

Category of dwelling	Recommended plot area of one-family house (sq.m)			
	Detached house	Semi-detached house	Row house	Courtyard house
Small	400-450	300-340	200-260	150-210
Medium	420-500	320-360	220-290	170-240
Large	440-550	340-380	240-320	190-270
Extra large	460-600	360-400	260-350	210-300

Figures (3) plot area for typing of dwelling (Urban Housing Standard Manual, Republic of Iraq, Ministry of Construction& Housing, Baghdad. Oct., 2010)

Figures (1,2) Housing Unit shortage rate in Iraqi governorates (National Development Plan 2013-2017, Republic of Iraq, Ministry of Planning, Baghdad, Jan. 2013)

Research Approach

Residential Design → Sustainable residential → Characteristics → comparison → Indicators → Selections → Optimum design

the research outcome from the thesis!

- Work within the scientific and practical housing design framework.
- Viewing global models contributed to develop the appropriate local residential design characteristics of each region in the world.

Research outputs

Reduce the size of housing deficit in Iraq by contributing to the application of a residential model, that adaptive with social, economic and environmental situations in Iraq.

Thesis Title :- The optimization of urban housing design for more sustainability in Baghdad, Iraq.

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