Land strategies to address low-income housing in Suleimany city, Kurdistan Regional Government

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Foreword

This report has been written for the fifth survey which is part of the Housing graduation lab for the Real Estate & Housing master track of the faculty of Architecture at the Technical University of Delft. This report includes a number of research elements and conducted studies and can be seen as the completion of the research.

As I am interested in global questions, I saw it as an opportunity to get new experiences in my field and at the same time get to know new areas of the housing sector. Therefore, there is chosen for a research into the possibilities of land strategies to address the low-income housing in Suleimany city, Kurdistan Regional Government, after the huge need for housing by the target group. For this purpose, a literature study, expert consultations and practical study during an internship at the UN-Habitat in Suleimany city has been conducted. Due to the complex background that the Region carries, I was looking forward to my new experience.

This research can be seen as an analysis of land as an ingredient for housing in Suleimany city resulting in land strategies which can be deployed to provide low-income housing. The report describes the already existing and new land strategies, in which the most interesting and promising strategy will be selected and analyzed.

To conduct the research I spent six months in Suleimany city for an internship at the UN-Habitat. This is the only organization in the Region who is active in studying the housing. The gathered information and data during the period has formed the practical part for this study in which the research is based on. My supervisor at this organization was Mr. B. Mumtaz, an urban planner/development economist, specializing in urban management and housing finance and also a housing expert at the UN-Habitat. I would like to thank him for his guidance during the work in Suleimany city and for the consultations as a housing expert and correspondence through email. Also, I would like to thank Mr. D. Aubrey for his assistance as a land expert at the UN-Habitat and for the fact that he made my internship possible.

Finally, I want to use this occasion to thank my tutors, prof. dr. P. J. Boelhouwer and P. de Jong for their professional guidance, motivation and clear recommendations during this last year. I would also want to thank the board of examiners delegate drs. D. J. Dubbeling. Furthermore, I want to thank my fellow students Yassine Zaghdoud and Zakariya Chebli who collaborated with my research in one way or another.

Delft, 16 January 2014

Yad Faraj
Summary

Introduction
This research examines the land delivery system and development within the housing sector in Suleimany city to achieve the objective of providing affordable housing for the low-income households. The Kurdistan Region is a federated region in Iraq that has experienced very strong socio-economic growth in the last ten years coupled with a strong contrast between poverty and wealth. The populated city in this region, Suleimany city, has also undergone this phenomenon. The ever-widening gap between rich and poor is symbolized by the stark disparity in the quality of the living environment. The current young government does not have proper regional housing policy nor does it have an adequate land management system. According to figures (Mumtaz 2011), the city of Suleimany needs more housing for its target groups. Contrary to many developing countries, Suleimany’s challenge of reconstruction is not so much a matter of starting from scratch to achieve a new goal. Rather, recovery in Kurdistan region of Iraq is first about returning to levels of economic prosperity and political stability that the majority of the Iraqi population enjoyed in the late 1970s. While the loss of human life and socio-economic decay associated with two wars, sanctions and over-centralization is devastating, one should not underestimate the importance of an Iraqi/Kurdish population that, through its previous record and level of education, has demonstrated its capacity to sustain an advanced economic standard of living.

In order to achieve the maximum benefit, the report will be limited and emphasis will be put on the land issues. As for this research this significant housing aspect will be further elaborated to find a solution for the housing problem. According to UNESCAP and UN-Habitat (2008), for the urban poor there is probably no more fundamental problem than their inability to access decent, secure land for even the most minimum housing needs. Land is to be considered as a significant ingredient in housing the poor. It also acts as a safety net in times of hardship, and provides financial security, because it is an important transferable asset that may be sold, rented or loaned.

The growing demands on land are being dealt with in different ways and on several different levels within Suleimany city. There are five basic ways in which this has traditionally been done, namely Allocation of land designated for housing by the Municipality (1), Subdivision of land by its owner (2), Purchase of land (3), Compensation for land acquisition from farmers (4) and Inclusion of land as part of the housing project (5). Finally, forced out of the market, low-income households are left with only one option: to build, buy or rent dwellings of relatively small size, low quality of construction and minimal service provision in an informal settlement.

However, there is a lack of knowledge of land strategies in order to achieve low-income housing. Research shows that there is a need for a proper strategy to manage this valuable public asset to provide housing for the low-income group. This graduation project will consist of a study of the land delivery system and tries to identify solutions for this land issue to provide affordable housing to low-income target groups at the end. To analyze the theoretical framework for land delivery and the current situation in Suleimany city an attempt will be made to provide a proper strategy and on this basis to make recommendations for the future.

The land delivery system in the city does not react properly to the housing need for certain target groups, namely the low-income households. This target group, who has limited incomes, falls by the wayside. The land issues can be enumerated as follows:

1. The process for allocating land for housing transfers as a very valuable public asset at very low prices to selected households;
2. Access to cheap land lends itself to the practice of large plots and low density developments;
3. Allowing the subdivision and on-selling of plots without paying for the development gains resulting from public investments deprives the Municipality of funds for further development.
To solve the problem, there is a central question formulated with four sub questions. The main research question reads:

**What kind of strategy can be developed to get land for low-income people’s housing earning less than $600 USD in Suleimany city, taking into consideration the effectiveness and efficiency of the strategy and the support of the actors?**

This research aims to raise the housing problem of the low-income group in the KRG and in particular in Suleimany city and gain insight into the land issue and system as an ingredient to tackle the complex cross-cutting housing question for the mentioned target group. Ultimately, the aim of this thesis is to find adequate land solutions that can work within the context of Suleimany city, which allows the Government and private sector to continue to provide affordable housing in the future.

The solutions will eventually provide a strategy, that determine how land is to be used and provide appropriate land to their city’s low-income populations, that will be evaluated on the basis of three assessment aspects; effectiveness, efficiency and with support of the actors involved.

**Methodology**

The research questions, which are formulated to answer the main research question, are divided on the basis of four sub questions that also form the structure of the thesis. The sub questions are specified to make a distinction between answers on the basis of literature or field study (practice).

Before starting this research, I did an internship within UN-Habitat in Suleimany city on the preparation and development of a Low-income Household Strategy for the Kurdistan Regional Government. The internship was estimated for 2 months, however, it was running out for six months. As a national consultant I was designated to undertake specified tasks (see annex 3 for work specifications) and to keep the Senior Consultant informed of the progress and outcomes of all activities in Suleimany city, where I was located. The internship formed the practical study and during this appointment I identified the land problem in the city mentioned. With this information I came back to Delft to start my research proposal about Suleimany city.

The practical questions are answered with information from the internship, consultations with public and private institutions and interaction with target group households. For this purpose, these parties are approached for conducting interviews and exchanging data.

The study design consists of three phases:

1. **Descriptive study**
   Describing the land delivery for housing. This includes a literature study to gain more knowledge about land theory.

2. **Exploratory research**
   Checking several possible strategies according to criteria, based on a literature study.

3. **Elaboration and validation research**
   Elaborating and validating the strategy on the basis of the aspects effectiveness, efficiency and support will be done through consultation and discussion with the housing and land experts of UN-Habitat, who are active in the Kurdistan region. The validation aims to describe the possibility and effectiveness of the strategy in the city of Suleimany.

Overall, during this research project different methods will be used to achieve the final result. The study has a qualitative and quantitative character and the information is not always predictable. The contents of the documents are analyzed and criteria are used to categorize the strategies in a qualitative content analysis.
Research results

Inadequate supply of land is considered as one of the most significant constraints in housing the low-income households in many developing countries. Therefore, the provision of land for residential purposes is seen as the most important intervention of government in order to produce housing for the low-income group. Also, the land share of the total housing costs makes the provision of housing very costly for some houses of poor people. This land portion can increase to 50% (Mattingly 2010) for some houses of poor people. Compulsory purchase is one of the government ability to take land by legislative processes. Governments are able to offer market based methods of land delivery where a free and formally organized land market operates.

However, the land acquisition forms a complex cross-cutting issue that deals with land markets, administer land tenures and the implementation of land use planning. These processes are approached in each country in different ways. According to the literature, there are a several state interventions in the provision of land for social housing. These interventions can be summarized as; state financing on land and provision of social housing, interventions in property rights with regard to serviced land, interventions in social housing institutions through cross-subsidization, participation of developers in social housing projects through market strategies and participation of developers in some social housing projects with ‘non-market strategies’.

For several reasons, the struggle for shelter by low-income groups is often a challenge for land, as highlighted before. Most governments in developing countries assume that there is not enough urban land for housing. Actually, the problem is not the availability of urban land for housing, but how the management of urban land is failing to deliver housing to the low-income group in cities. In most Asian countries, urban land has more and more become a product for commercial purposes. Hence, there are several challenges in developing countries regarding to land for housing. These are the informal settlements due to the rapid urbanization. The city land market failure is another challenge concerning the failure of the supply of formal, legal land for housing. Finally, the poor policies concerning allocation and use of land that is publicly owned, making land for housing available through expanding infrastructure and services to new sites and affecting land price and availability through official rules and regulations. Regarding to the availability of land for housing, there are several tools which cities can use such as land use, land taxation, land administration systems, land tenure regulations, development plans and development standards.

In Suleimany city the delivery system for residential land is through the years also intervened by the government and especially the Municipality. The Ministry of Finance holds the title to state land and distributes state lands to the Ministry of Municipalities and Tourism for the municipalities. Subsequently, the Municipality controls and manages all the allocated land. With compulsory acquisition, the local government has also the capacity to acquire land for its purposes, with the approval of the court. The intervention points of the state to the residential land development process are related to the land-use planning and development control, land tenure, land taxation, infrastructure policy. Due to the lack of capacity and political stability, there is no policy basis for state land except that state land is to be protected by the MoF. In order to promote investment, state land may be used in the form of free or subsidized land. This “policy” has not been sufficient to provide the housing need for the low-income groups in Suleimany city. Additionally, land taxation is not used effectively for the control of the planned development in urban areas. The transformation of the land from rural to urban and increase in value of land have not been taken into consideration in land taxation in KRG.

In addition, the Ministry of Municipalities is responsible for urban planning in KRG municipalities. The responsibility on one hand and the authority and financial resources on the other create a mismatch in developing land for residential purposes in particular for the low-income target group in the city. Nevertheless, regarding to the land administration system for land titling, property registration, and land use change these are generally effective.

By the decision of the Ministry of Municipalities and its predecessors, local government could distribute land to selected target groups, without explicit policies about allocation of state land. After
allocation, the plots became tradable in the urban land markets, and were bought and sold among private parties. Though, there were many households that had no access to subsidized land and who also had no ability to pay for land purchased on the open market especially the lower income segment. The process also helped in the development of informal housing areas by households unable to access land for housing who then had to resort to using illegal processes.

Currently, there are four potential resources of vacant land concerning new residential development, namely infill plots within built-up areas, incomplete peripheral subdivisions, agricultural land at the urban periphery and rocky land. For the low-income housing the rocky land would offer a lot of potential because the high supply and due to the non-productivity of the soil. The resale prices for unserviced peripheral land plots in Suleimany are in the range of 200-400 US$ per m². Given plot sizes are on average 200 m² in peripheral areas in that city.

One of the recent trends in Suleimany housing market are inclusionary housing projects from larger commercial developments. Despite the development of these inclusion projects housing prices have become unaffordable for low-income households in the city. Besides the commercial projects, the local government also experimented with governmental low-income housing in the city in an attempt to develop housing for the low-income groups, on subsidized Municipal land. Nevertheless, these projects have to rely on budgetary allocations for land development and construction. The provision of service areas and infrastructure for the residential land development has been an important problem in Suleimany urban area. The provision of infrastructure is slow and lags behind demand in the rapidly growing city. One of the main constraints on housing for the Municipality is their lack of authority to raise revenues and carrying out infrastructure revenues. The responsibility for the provision of social and technical infrastructure lies with the Municipality of Ministries, and is provided for free. Except in the case of housing schemes built by private developers, the on-site infrastructure is the responsibility of the developer and the charge is included in the price of the house. Hence, if it was provided by the public sector the budget or payments of private developer’s schemes could be lower.

In the literature and in practice and also looking at the context of Suleimany city, there are various land strategies that could be addressed to increase the success rate of low-income housing. For this study it is important that strategies within the context of Suleimany municipality can be used, as a consequence there are (institutional and urban) criteria which should be taken into account. The main outcome of the analysis of the current land system and theoretical framework has resulted in the formulation of the following strategies that are interesting for Suleimani city. Based on interviews with the government (during the internship) and experts these strategies are assessed against the criteria specified for Suleimany city.
In the table above the strategies are compared on the basis of the criteria. A selection based on these criteria have resulted in the following strategies as the most interesting and promising, that could have a positive contribution to the improvement of the land provision and delivery system concerning the housing issue of the target group:

- **Cross-subsidy schemes**

In many countries and also in Asia several governments have developed a strategy to subsidise low-income housing through cross-subsidy. This new policy requires that private-sector developers retain a segment of their formal, market-rate housing for the mentioned target group. It could be seen as a progressive tax on high-end development. Although, there are different ways to approach this strategy, the ultimate goal of the policy is to reserve a certain percentage for low-income housing. This is designed through a certain percentage of the total land the new development is being built on.
Using public land for housing

Using public land is characterized as the best strategy to reduce land costs for low-income housing. For example governmental land agencies could designate land, which can be planned and built under a variety of partnerships. Land belongs actually to the residents of a city. Unfortunately nowadays these public lands will be sold or rented out to the highest bidder, for shopping malls and luxury hotels instead of using it for the public markets and low-income housing our cities so desperately need.

These (selected) strategies are both focused on the ‘Provision of affordable housing’ and ‘Compatible with other strategies’, which could enforce the private entrepreneurs to promote and or produce affordable/social housing as part of regular housing production. Both strategies have the potential to work more effective and efficient together and create synergy. Therefore, the choice has been to combine these two strategies into a broader strategy to serve the target group. Finally, the following strategy has emerged:

- Cross-subsidization scheme using public land for housing

Generally, the strategy is interesting and promising within the legal framework and could be deployed in Suleimany municipality to serve the low-income housing. Hereby, the detailed and practical suitability has not yet been directly taken into account in a specific scheme within the city and to what extent the strategy has a positive contribution to address the low-income housing and in particular the land development and allocation system.

Cross-subsidization is one of the objectives of mixed-use development and aims to improve the financial feasibility of social housing projects. The financial effectiveness for the mixed-income mechanism can be measured in a constructed model using a feasibility study concerning land development.

The financial information (Mumtaz, 2011) of the mixed-use cross-subsidization scheme for this research has been used to make a cash flow model, which in turn will be used to compare with the conventional land development model. This model is constructed in Excel spreadsheet, which makes it easy to adjust the different conditions of the parameters. However, the spreadsheet uses the parameters as fixed data with the purpose of calculating a realistic scheme. With this spreadsheet, it becomes very easy to make proposals and to assess their feasibility. In these calculations, the value of the land sale is income for the local authority and expenditure for the developer.

As a result, the proposed scheme will provide the occupied percentage low-income housing within the design. Since the mixed-income land development contains unsubsidized market-rate plots, it might also be possible for these plots to cross-subsidize the low-income housing units within the development, thereby reducing the need for government funding and creating a self-financing scheme. Hence, the revenues calculated for selling plots of land to developers or individuals (residual land value) could contribute to the construction of the low income units. The scheme does not require a profit margin for the developer, in this case the MoCH.

Accordingly, the land revenue of the mixed-income land development scheme with 100% subsidization for the low-income plots will provide enough income to also internally cross-subsidize the low-income housing within the scheme. The total costs for the land development will also be taken into account, which include acquisition and infrastructure provision. These figures will be used in a DCF-model in Excel to calculate the construction of the low-income houses.

The cash flow model constructed here is a net present value calculation. The rate of return used will be determined when the development costs and revenues equals to zero net result of the cash flow, by using the goal-seek function in Excel. The 40 plots for the low-income households in the mixed-income scheme make a gross floor area of 3600 m² resulting in 90 m² constructed area related to the housing unit. The construction costs are determined at 200 US dollar per m² GFA. The costs are escalating about 15% annually, although it is not accurate due to the unstable internal economic
situation and foreign factors. The development period will not exceed 1 year due to the small size of the project. The value of the projected cash-flows has a NPV of 0 USD at t=1, as required. This means that the Internal Rate of Return that would be accepted is 8.1%. As a result, the project proposal is feasible because the finance costs are covered for the low-income housing units and the project specify professional fees and risk are included in the cash flow scheme. Besides, the adequacy of the strategy is also depending on the support among the parties involved. The strategy will be differently evaluated by the “supplier” and the “customer”, which can be explained by the differences in interests. The Municipality and the MoCH shall take into account the social operation of serving the residents of the city without taking huge financial considerations. The residents only take into account the accessibility and affordability of the land and housing. The strategy offers considerable financial and social benefit for the MoCH, Municipality and the residents, because there are no huge direct costs involved. So, it is expected from the three actors to agree to the cross-subsidization using public land strategy.

It can be conclude that effective mixed-income housing contributes to the long-term sustainability of affordable housing. In addition, the communities tend to be more stable than, which are direct benefits to low-income residents. Using the figures (derived from the text of the report), enough profit can be made to cover the costs of the low-income plots and the housing. Because the development can be done in phases, only a small amount will be required to develop the first phase, the commercial and upper income segment, and use the income from its sale to finance the next phase, so that the low-income plots can be developed using the profits.

Conclusions
The elaboration and evaluation of the selected strategy by means of Effectiveness, Efficiency and Support has shown how the city of Suleimany could practice the proposed land strategy. The diagram on the following page, clarifies what affect the new strategy has on the target groups. We see the response of the current land acquisition to the problem and the future land acquisition by the intervention of the cross-subsidization scheme using public land strategy through a mixed-income-use mechanism. As a result the low-income households will be carried and paid by the high and middle income groups. Consequently, the land for the target group can be internally-cross-subsidized and thus the strategy will get land for low-income people’s housing earning less than $600 USD in Suleimany city.
On the other hand, the opportunities for the low-income groups to settle on unused public land are declining or poor located, as more and more leftover pieces of land get occupied. This strategy will provide the prospect to use public land for the target group by using the mixed-income mechanism. Also, the government has the ability to take land by legislative processes with adequate regulations.

Subsequently, the housing program will primarily be developed and managed by the MoCH. The actual construction of the houses may be done by the households, MoCH itself, or contracted out to private sector contractors. The financial and material resources for the construction comes from the land development value and the scheme could become a self-financing program using the income from the sale of housing to finance subsequent projects.

The elaboration and evaluation of the selected strategy by means of Effectiveness, Efficiency and Support has shown how the city of Suleimany could practice an active land strategy and how the development of the land value can contribute to development of housing and infrastructure in the municipality. The model illustrates that the mixed-income mechanism can provide affordable land and therefore increases security of tenure to those that are able to access it. Ultimately, the new strategy has some potential to improve the housing provision for the low-income households. Given the anticipated economic and social benefits, mixed-income development is a suitable strategy objective, and a viable mechanism for creating affordable housing.

Overall, it can be conclude that this new strategy has shown how the city of Suleimany could practice an active land strategy and how the development of the land value can contribute to development of housing and infrastructure in the municipality. The model illustrates that the mixed-income mechanism can provide affordable land and therefore increases security of tenure to those that are able to access it. Given the anticipated economic and social benefits, mixed-income development is a suitable strategy objective, and a viable mechanism for creating affordable housing.
Recommendations

- Involve developers for the participation in social housing projects with ‘non-market strategies’. The purpose of this kind of participation is either to improve relationships with local authorities. After the operation is completed, it is recommended to evaluate the project to assess if the goals that were stated are realized.

- To attract market-rate tenures and minimize vacancy losses, find a substantial proportion of the different income groups in each specific project.

- With the proposed mixed-income scheme model it could also be recommended to exclude the housing development phase, because it may that not all the low-income households want ready-built housing. Instead, it would be possible that many want to build privately. For that reason, through the introduced land price reduction variable to determine the potential discount on the market price concerning the revenues, the upper income, the better off and the middle income will receive reduction on the land price.

- The strategy can also be ideal if it can be combined with land readjustment (LR) to reinforce low-income housing provision. Though, the government has no experience of LR to date and this would require a major change in the law. Nevertheless, the land readjustment strategy reduces the need for relocations and land acquisition. The compatibility approach is to sell cost-equivalent land at a reasonably low price to the agencies producing low-cost housing.

- Set up a quasi-governmental housing management organization. It could be proposed that a Housing Management Organization (HMO) manages the housing program and provision, with the projects in the municipality.
Samenvatting

Introductie
Dit is het verslag van een onderzoek naar het grond allocatiemechanisme en de ontwikkeling binnen de huisvestingsector in de Koerdische regio te Irak. De doelstelling hiervan is het mogelijk maken van betaalbare woningen voor de lage inkomensgroep in Suleimany. De Koerdische Regio is een federatieve regio in Irak, die een zeer sterke sociaal-economische groei heeft doorgemaakt in de laatste tien jaar met een groot contrast tussen armoede en rijkdom. Suleimany stad, gelegen in deze regio, heeft dit fenomeen ook ondergaan. De groeiende kloof tussen rijk en arm in de stad wordt gesymboliseerd door het enorme verschil in de kwaliteit van de leefomgeving. De huidige jonge regering beschikt niet over het juiste regionale woonbeleid, noch een adequaat grond management systeem. Volgens de cijfers (mumtaz 2011) heeft Suleimany behoefte aan meer huisvesting voor de lage-inkomensdoelgroep. De wederopbouw van Suleimany hoeft in tegenstelling tot andere ontwikkelingslanden, niet vanuit het niets te beginnen. Het gaat vooral om het herstel van de economische voorspoed en de politieke stabiliteit zoals deze in de eindjaren 70 aanwezig waren.

Om maximale voordeel te bereiken zal het rapport zich beperken en richten op grondkwesties. Voor dit onderzoek zal deze belangrijke huisvestingsaspect verder worden uitgewerkt om een oplossing te vinden voor de huisvestingsproblematiek. Volgens UNESCAP en UN-Habitat (2008) is er voor de stedelijke armen waarschijnlijk geen groter fundamenteel probleem dan hun onvermogen om toegang te krijgen tot fatsoenlijke, veilige grond om de minimale woonwensen te kunnen bevredigen. Grond wordt beschouwd als een belangrijk ingrediënt in de huisvesting van de armen. Het fungeert ook als een vangnet in tijden van tegenspoed, en biedt financiële zekerheid, want het is een belangrijke overdraagbaar bezit dat mag worden verkocht, verhuurd of uitgeleend.

De toenemende vraag naar grond wordt op verschillende manieren en op verschillende niveaus binnen Suleimany stad behandeld. Er zijn vijf manieren waarop dit traditioneel wordt gedaan, namelijk door Toewijzing van grond die aangewezen wordt voor huisvesting door de gemeente (1), Subdivisie van grond door de eigenaar (2), Aankoop van grond (3), Compensatie voor grondverwerving van de boeren (4) en Insluiting van grond in het kader van het woonproject (5). Ten slotte blijven er voor de lage-inkomens nog slechts de volgende opties over: bouwen, kopen of huren van woningen van relatief kleine omvang, lage bouwkwaliteit en minimale dienstverlening in een Informele nederzetting.

Echter is er een gebrek aan kennis van grond strategieën om woningen voor lage-inkomensgroepen te realiseren. Onderzoek toont aan dat er behoefte is aan een geschikte strategie om grond te beheren en om woningen te realiseren voor lage-inkomensgroepen. Dit afstudeerproject zal bestaan uit een studie van het grond allocatie-systeem en probeert oplossingen te vinden voor de grond kwestie om betaalbare woningen te bieden aan de doelgroep. Door het theoretische kader voor het grond allocatie-systeem en de huidige situatie in Suleimany te analyseren, zal een poging worden gedaan om een geschikte strategie te bieden en op basis daarvan aanbevelingen te doen voor de toekomst.

Het grond allocatie-systeem in de stad reageert niet naar behoren op de woning behoefte voor bepaalde doelgroepen, namelijk de lage-inkomensgroep. Deze doelgroep, met een beperkt inkomen, valt uit de boot. De grond problemen kunnen als volgt opgesomd worden:

1. Het proces voor de toewijzing van grond voor woningbouw draagt een zeer waardevol publiek goed tegen zeer lage prijzen over aan geselecteerde huishoudens;
2. De toegang tot goedkope grond leent zich voor de praktijk van grote percelen en een lage dichtheid;
3. Het toestaan van subdivisie en verkoop van percelen, zonder te betalen voor de ontwikkelingsvoordelen die voortvloeien uit publieke investeringen, ontmeekt de gemeente fondsen voor verdere ontwikkeling.
Om het probleem op te lossen is er een centrale vraag geformuleerd met vier subvragen. De centrale onderzoeksvraag luidt:

**Welke strategie kan worden ontwikkeld om grond beschikbaar te krijgen voor woningen voor huishoudens die minder dan $600 USD verdienen in Suleimany stad, rekening houdend met de effectiviteit en efficiency van de strategie en het draagvlak van de actoren?**

Dit onderzoek heeft als doel om het huisvestingsprobleem van de lage-inkomensgroep op te lossen in de KRG en in het bijzonder in Suleimany stad en inzicht te krijgen in het grond vraag-stuk als een ingrediënt om de complexe woning vraag aan te pakken voor de genoemde doelgroep. Uiteindelijk is het doel van deze scriptie om adequate grond oplossingen te vinden die kunnen werken binnen de context van Suleimany stad, waardoor de overheid en de private sector in staat zijn om betaalbare huisvesting te bieden in de toekomst.

De oplossingen zullen uiteindelijk leiden tot een strategie die bepaalt hoe grond moet worden gebruikt en zal passende grond voor de doelgroep bieden. Hierbij zal de strategie worden beoordeeld op basis van drie beoordelingscriteria: Effectiviteit, Efficiency en Draagvlak van de actoren.

**Methodologie**

De onderzoeksvragen die zijn geformuleerd om de centrale onderzoeksvraag te beantwoorden, vormen de structuur van de scriptie. De deelvragen zijn gesteld om onderscheid te maken tussen de antwoorden aan de hand van de literatuur en de praktijk.

Voor het begin van dit onderzoek liep ik stage binnen de VN-Habitat in Suleimany stad en vervolgens heb ik gewerkt aan de voorbereiding en ontwikkeling van een “Laag-inkomen Huishouden Strategie voor de Regionale Regering van Koerdistan”. De stage werd oorspronkelijk gepland voor twee maanden, maar liep uit naar zes maanden. Als nationale consultant werd ik aangewezen om bepaalde taken uit te voeren (zie bijlage 3) en de Senior Consultant op de hoogte te houden van de voortgang en resultaten van alle activiteiten in Suleimany stad, waar ik was gevestigd. De stage vormde het praktische gedeeltje van deze scriptie. Op deze manier heb ik de grondproblemen geïdentificeerd in de stad. Met deze informatie ben ik terug gekomen naar Delft om mijn onderzoeksovertuiging over Suleimany stad te ontwikkelen.

De praktische vragen worden beantwoord met informatie uit de stage, overleg met publieke en private instellingen en interactie met de doelgroep huishoudens. Daartoe zijn deze partijen benaderd voor het voeren van interviews en uitwisselen van gegevens.

De opzet van het onderzoek bestaat uit drie fasen:

1. Beschrijvend onderzoek
   Het beschrijven van de grond allocatie voor woningbouw. Dit omvat een literatuurstudie om meer kennis te vergaren over de grond theorie.

2. Verkennend onderzoek
   Het controleren van verschillende op een literatuurstudie gebaseerde strategieën.

3. Uitwerking en validatie onderzoek
   Uitwerken en valideren van de strategie op basis van de aspecten effectiviteit, efficiency en draagvlak wordt gedaan door middel van overleg en discussies met de huisvesting en grond deskundigen van VN-Habitat, die actief zijn in de regio Koerdistan. De validatie heeft tot doel de mogelijkheid en de doelmatigheid van de strategie in Suleimany te beschrijven.

Kortom worden in dit onderzoek verschillende methoden gebruikt om het gewenste eindresultaat te bereiken. De studie heeft evenwel een kwalitatief als kwantitatief karakter en de informatie is niet altijd voorspelbaar. De inhoud van de documenten wordt geanalyseerd en met behulp van criteria worden de strategieën gecategoriseerd in een kwalitatieve inhoud analyse.
Onderzoek resultaten

Onvoldoende aanbod van grond wordt beschouwd als een van de meest significante beperkingen in de huisvesting van de lage-inkomensgroepen in veel ontwikkelingslanden. Daarom wordt de inbreng van grond voor woningbouw gezien als de meest belangrijke interventie van de overheid om woningen te produceren voor deze doelgroep. Ook het aandeel van grond met betrekking tot de totale woonlasten maakt de verstrekking van huisvesting zeer kostbaar voor sommige woningen van arme mensen. Dit aandeel kan oplopen tot 50 procent (Mattingly 2010) voor een aantal woningen van de lage-inkomensgroepen. Onteigening is een van de mogelijkheden van de overheid om grond te ontnemen door wetgevende processen. Zo zijn de overheden in staat om grond te leveren gebaseerd op markt methoden waar een vrije en formele georganiseerde grondmarkt opereert.

Echter vormt de grond acquisitie een complexe kwestie die zich bezig houdt met de grond-markt, het beheren van pachtgoed en de implementatie van de ruimtelijke ordening. Deze processen worden per land op verschillende manieren benaderd. Volgens de literatuur is er een aantal overheidsinterventies in de provisie van grond voor sociale woningen. Deze interventies kunnen worden samengevat als: overheidsfinanciering op de grond en het verstrekken van sociale huisvesting, interventies in de eigendomsrechten met betrekking tot bediend land, interventies in sociale huisvestingsinstellingen door middel van cross-subsidiseren, de deelname van ontwikkelaars in sociale huisvestingsprojecten door middel van markstrategieën en participatie van ontwikkelaars in bepaalde sociale woonprojecten met ‘non-marktstrategieën’.

Om verschillende redenen is de strijd voor onderdak door lage-inkomensgroepen vaak een uitdaging voor het grondbeleid. De meeste overheden in ontwikkelingslanden gaan ervan uit dat er niet genoeg stedelijke grond voor woningbouw beschikbaar is. Eigenlijk is het probleem niet de beschikbaarheid van stedelijke grond voor woningbouw, maar hoe het beheer van stedelijke grond er niet in slaagt om huisvesting te leveren aan de lage-inkomensgroepen in steden. In de meeste Aziatische landen is het stedelijk gebied meer en meer uitgegroeid tot een product voor commerciële doeleinden. Daarom zijn er verschillende uitdagingen met betrekking tot het beschikbaar stellen van grond voor woningbouw in ontwikkelingslanden. Dit zijn de informele nederzettingen als gevolg van de snelle verstedelijking. Het falen van de stedelijke grondmarkt is een andere uitdaging met betrekking tot het aanbod van formele, legale grond voor woningbouw. Tot slot leiden diverse omgangsvormen die de toegang tot grond voor huisvesting beïnvloeden, zoals het slechte beleid inzake de bestemming en het gebruik van grond dat in overheidschand is, het beschikbaar maken van grond door het uitbreiden van infrastructuur en diensten aan nieuwe locaties en beïnvloeden van de grond prijs en beschikbaarheid door middel van officiële regels en voorschriften, tot significante uitdagingen. Met betrekking tot de beschikbaarheid van grond voor woningbouw zijn er verschillende tools die steden kunnen gebruiken, zoals grond-behuizing, grond administraties, grondbezit regelgeving, ontwikkelingsplannen en ontwikkelnormen.

Het systeem voor het residentiele grondgebruik in Suleimany is door de jaren heen ook ingegeven door de overheid en in het bijzonder door de gemeente. Het Ministerie van Financiën heeft de titel voor staatsgrond en distribueert de grond aan het Ministerie van Gemeenten en Toerisme voor de gemeenten. Vervolgens heeft de gemeente de controle en beheert alle toegekweeken grond. Met de verplichte overname heeft de lokale overheid ook de capaciteit om grond te verwerven voor haar doeleinden, met goedkeuring van de rechtbank. De aangrijtingspunten van de staat met betrekking tot het residentiële grond ontwikkelingsproces zijn gerelateerd aan de ruimtelijke ordening en ontwikkelingscontrole, grondbeheer, grond belastingen en het infrastructuerbeleid. Wegens het gebrek aan vermogen en politieke stabielte is er geen beleid ontwikkeld voor staatsgrond in de regio, behalve dat staatsgrond dient te worden beschermd door het ministerie van Financiën. Om de investeringen te bevorderen, kan staatsgrond worden gebruikt in de vorm van kosteloze of gesubsidieerde grond. Dit “beleid” is niet voldoende gebleken om de woningbehoeften te voorzien voor de lage-inkomensgroep in Suleimany. Bovendien wordt grond belastingheffing niet effectief gebruikt voor de controle van de geplande ontwikkeling in het stedelijke gebied. De transformatie van de grond van landelijk naar stedelijk en de toename van de waarde van grond zijn niet in aanmerking gekomen in het land belastingheffing in Koerdistan regio.
Daarnaast is het Ministerie van Gemeenten verantwoordelijk voor stedenbouw in KRG gemeenten. De verantwoordelijkheid enerzijds en het gezag en de financiële middelen anderzijds maken een mismatch in de ontwikkeling van de grond voor huisvesting en in het bijzonder voor de lage-inkomens in de stad. Niettemin, zijn deze met betrekking tot het systeembeheer voor grond eigendomsrechten, de registratie van eigendom en de verandering in het grondgebruik over het algemeen effectief.

Door het besluit van het Ministerie van Gemeenten en zijn voorgangers, kan de locale overheid de grond toewijzen aan de geselecteerde doelgroepen, zonder expliciet beleid voor het toewijzen van de stasgrond. Na de toewijzing werden de plots verhandelbaar in de stedelijke grondmarkt en gekocht en verkocht onder private partijen. Hoewel, er waren ook veel huishoudens die geen toegang hadden tot gesubsidieerde grond en die ook geen mogelijkheid hadden om te betalen voor grond op de vrije markt. Dit geldt met name voor de lage-inkomensgroepen. Het proces heeft ook geholpen bij de ontwikkeling van informele woongebieden door huishoudens die geen toegang hadden tot grond voor woningbouw en die vervolgens hun toevlucht moesten nemen tot gebruik van illegale processen.

Momenteel zijn er vier mogelijke bronnen van onbebouwde grond voor nieuwe residentiele ontwikkeling, namelijk percelen binnen de bebouwde gebieden, onvolledige perifere onderverdelingen, landbouwgrond aan de stadsrand en rotsachtige grond. Voor de huisvesting van lage-inkomensgroepen zou de rotsachtige grond veel potentie bieden, vanwege de hoge aanbod en als gevolg van de non-productiviteit van de bodem. Met betrekking tot de marktprijs voor niet voorziene perifere kavels in Suleimany zijn deze tussen de 200-400 USD per m². De kavel maten zijn gemiddeld 200 m² in de perifere gebieden in de stad.

Een van de recente trends in de woningmarkt van Suleimany zijn insluitende woonprojecten van grotere commerciële ontwikkelingen. Ondanks de ontwikkeling van deze geïntegreerde projecten zijn de woningprijzen onbetaalbaar geworden voor de doelgroep. Naast de commerciële projecten heeft de lokale overheid ook geexperimenteerd met de overheids lage-inkomens huisvesting in de stad in een poging om woningen voor de lage-inkomens te ontwikkelen op gesubsidieerde gemeentelijke grond. Toch hebben deze projecten een beroep moeten doen op de begrotingsmiddelen voor grondontwikkeling en de bouw. De dienstverlening en infrastructuur voor de residentiele grond ontwikkeling zijn belangrijke problemen in het stedelijk gebied van Suleimany. Het voorzien van infrastructuur verloopt traag en blijft achter bij de vraag in de snel groeiende stad. Een van de belangrijkste beperkingen van de behuizing voor de gemeente is het gebrek aan gezag om inkomsten te verhogen en het uitvoeren van infrastructuur inkomsten. De verantwoordelijkheid voor het aanleggen van de sociale en technische infrastructuur ligt bij de gemeente en wordt gratis verstrekt. Behalve in het geval van de bouw van woningprojecten gebouwd door een particuliere ondernemer, is de on-site infrastructuur de verantwoordelijkheid van de ontwikkelaar en de financiële last is inbegrepen in de prijs van het huis. Vandaar dat, als het werd verstrekt door de publieke sector, de begroting of betalingen van particuliere woningprojecten door ondernemers lager zou zijn.

In de literatuur en in de praktijk, waarbij ook gekeken is naar de context van Suleimany stad, komen er diverse grond strategieen aan de orde die ingezet kunnen worden voor de slachtoffers van de huidige land systeem. Voor dit onderzoek is het belangrijk dat de strategieen in het kader van Suleimany gemeente kunnen worden gebruikt. Als gevolg hiervan zijn er (institutionele en stedelijke) criteria waarmee rekening moet worden gehouden. Het belangrijkste resultaat van de analyse van het huidige land systeem en het theoretisch kader heeft geresulteerd in de formulering van de volgende strategieen die interessant zijn voor Suleimany stad. Gebaseerd op interviews met de overheid (tijdens de stage) en deskundigen zijn deze strategieen beoordeeld aan de hand van de criteria voor Suleimany.
In de bovenstaande tabel zijn de strategieën vergeleken op basis van de criteria. Een selectie op basis van deze criteria heeft geleid tot de volgende strategieën als de meest interessante en kansrijke, die een positieve bijdrage kunnen leveren aan de verbetering van de grond voorziening en allocatie met betrekking tot de huisvestingsproblematiek van de doelgroep:

- **Cross-subsidieregelingen**

In veel landen en ook in Azie hebben verschillende overheden een strategie ontwikkeld om woningen voor lage-inkomensgroepen te subsidiëren door middel van cross-subsidie. Dit nieuwe beleid vereist dat de particuliere ontwikkelaars een deel van hun formele, marktconforme woningen reserveren voor de genoemde doelgroep. Het kan worden gezien als een progressieve belasting op high-end ontwikkelingen. Hoewel, er zijn verschillende manieren om deze strategie te benaderen. Het uiteindelijke doel van het beleid is om een bepaald percentage woningen voor lage-inkomensgroepen te reserveren. Deze is vastgesteld op basis van een bepaald percentage van het totale grondgebied waar de nieuwe ontwikkeling opgebouwd is.
Het gebruik van openbare grond voor woningbouw
Het gebruik van openbare grond wordt gekarakteriseerd als de beste strategie om de kosten van de grond voor de huisvesting van lage-inkomensgroepen te verlagen. Bijvoorbeeld gouvernementele grond instanties kunnen grond aanwijzen, die kan worden gepland en gebouwd onder verschillende samenwerkingsverbanden. De grond behoort eigenlijk tot de inwoners van een stad. Helaas worden tegenwoordig deze openbare gronden verkocht of verhuurd aan de hoogste bieder, voor winkelcentra en luxe hotels in plaats van het gebruiken voor de openbare markten en lage-inkomenshuisvesting die onze steden zo hard nodig hebben.

Deze geselecteerde strategieën zijn zowel gericht op de ‘Verstrekking van betaalbare woningen’ en ‘Compatibel met andere strategieën’, die de particuliere ondernemers zou kunnen dwingen om betaalbare/sociale huisvesting te produceren als onderdeel van de reguliere woningproductie. Beide strategieën hebben de potentie om samen effectiever en efficiënter te werken en synergie te creëren. Daarom is gekozen om deze twee strategieën te combineren tot een bredere strategie om de doelgroep te bedienen. Ten slotte is de volgende strategie naar voren gekomen:

- Cross-subsidiering regeling met gebruik van openbare grond voor woningbouw

In het algemeen is de strategie interessant en veelbelovend binnen het wettelijk kader en kan worden ingezet in Suleimany gemeente om lage-inkomensgroepen te bedienen. Hierbij is er nog niet direct rekening gehouden met de gedetailleerde en praktische bruikbaarheid met een specifieke schema in de stad en in hoeverre de strategie een positieve bijdrage zal leveren om woningen voor de lage-inkomensgroepen aan te pakken en in het bijzonder de grond ontwikkeling en het allocatiesysteem.

De cross-subsidiering is een van de doelstellingen van de menging van inkomens (mixed-income) ontwikkeling en heeft als doel om de financiële haalbaarheid van sociale woningbouw projecten te verbeteren. De financiële slagvaardigheid van het mixed-income mechanisme kan worden gemeten in een geconstrueerde model met behulp van een haalbaarheidsstudie met betrekking tot de grondontwikkeling.

De financiële informatie (Mumtaz, 2011) van de inkomenfunctiemenging (mixed-income-use) cross-subsidiering voor dit onderzoek is gebruikt om een cash flow model te maken, dat op zijn beurt zal worden gebruikt om te vergelijken met het conventionele grondontwikkelingsmodel. Dit model wordt geconstrueerd in Excel, waardoor het gemakkelijk is om de verschillen in de diverse parameters aan te passen. Echter, het spreadsheet gebruikt de parameters als vaste gegevens met de intentie om een realistische schema te berekenen. Met dit spreadsheet wordt het heel gemakkelijk om voorstellen te doen en op hun haalbaarheid te beoordelen. In deze berekeningen is de waarde van de verkoop van grond inkomen voor de lokale overheid en de uitgaven voor de ontwikkelaar.

Als gevolg hiervan zal het voorgestelde schema het bezette percentage lage-inkomenshuisvesting voorzien binnen het ontwerp. Aangezien de mixed-income grond ontwikkeling ongesubsidieerde marktconforme percelen bevat, zou het ook mogelijk zijn voor deze percelen om de woningen voor de lage-inkomensgroepen te cross-subsidieren, waardoor de behoefte aan overheidsfinanciering verminderd en er een op zichzelf staand financierings-schema ontstaat. Daarom kunnen de inkomsten die berekend worden voor de verkoop van percelen aan ontwikkelaars of particulieren bijdragen aan de bouw van woningen van lage-inkomensgroepen. De regeling voor de woningbouw vereist geen winst marge voor de ontwikkelaar, in dit geval het Ministerie van Huisvesting.

Dienovereenkomstig, de grond inkomsten van de afstemming tussen de grondprijzen en het inkomen gebaseerd op het gepresenteerde schema met hierin 100 procent subsidiering voor de lage-inkomenskavels zal genoeg inkomsten genereren om ook de woningen van de lage-inkomensgroepen intern te subsidiëren binnen het schema. Bij de bepaling van de totale kosten voor de grondexploitatie worden eveneens de verwerving en de aanleg van de infrastructuur meegenomen. Deze cijfers worden gebruikt in een DCF-model in Excel om de haalbaarheid van de lage-inkomenshuisvesting te berekenen.
Het cash flow model hanteert een contante waarde berekening. Er is gebruik gemaakt van het IRR, die zal worden bepaald wanneer de ontwikkeling van de kosten en de opbrengsten in balans is. De 40 kavels voor de lage-inkomensgroepen het geconstrueerd schema maken gebruik van een bruto oppervlak van 3.600 m² resulterend in 90 m² bebouwde oppervlakte met betrekking tot de wooneenheid. De bouwkosten worden vastgesteld op 200 US dollar per m² BVO. De kosten escaleren ongeveer met 15% jaarlijks, hoewel deze uitkomst niet nauwkeurig is vanwege de instabiele interne economische situatie en de buitenlandse invloeden. De duur van de ontwikkeling zal niet meer dan een jaar duren vanwege de kleine omvang van het project. De waarde van de verwachte cash flow heeft een netto contante waarde van 0 USD at t=1, zoals vereist. Dit betekent dat de IRR die zou worden aanvaard gelijk is aan 8,1%. Als gevolg hiervan is het project voorstel haalbaar, omdat de financiële kosten gedekt worden voor de woningen van de lage inkomensgroepen en het project honoraria en de risico’s opgenomen zijn in het cash flow schema.

Er kan worden geconcludeerd dat een effectieve menging van de diverse inkomens bijdraagt aan de duurzaamheid van betaalbare woningen op de lange termijn. Bovendien ontstaan er stabiele gemeenschappen, die vooral voor de doelgroep positief genoemd kunnen worden. Met behulp van de cijfers uit het DCF-model, kan genoeg winst gemaakt worden om de kosten voor de lage-inkomensgroepen bestemde plots te dekken.

Conclusies
De uitwerking en evaluatie van de gekozen strategie op basis van effectiviteit, efficiëntie en draagvlak heeft laten zien hoe de stad Suleimany de voorgestelde grond strategie kan praktiseren. Het onderstaande diagram geeft aan welke effect de nieuwe strategie heeft op de doelgroepen. We zien de reactie van de huidige grondverwerving op het probleem en de toekomstige grondverwerving door de interventie van de cross-subsidiering met behulp van openbare grond strategie door middel van het mengen van inkomens. Het resultaat hiervan is dat de voor de lage-inkomensgroepen die minder dan 600 USD per maand verdienen bestemde woningen via kruis-subsidiëring worden betaald door de hoge- en midden-inkomensgroepen.
Aan de andere kant nemen de mogelijkheden voor de doelgroep om zich op niet gebruikte of slecht gelegen -publieke grond te vestigen naarmate er meer en meer overgebleven stukken gronden bezet worden. Deze strategie zal het vooruitzicht bieden om openbare grond te gebruiken voor de doelgroep met behulp van het voorgestelde schema. Ook heeft de overheid de mogelijkheid om land in gebruik te nemen op basis van nieuwe processen en adequate regelgeving.

Vervolgens zal het huisvestingsprogramma hoofdzakelijk worden ontwikkeld en beheerd door het Ministerie van Huisvesting & Bouw. De daadwerkelijke bouw van de woningen kan worden gerealiseerd door de huishoudens, het Ministerie zelf, of worden uitbesteed aan private aannemers. De financiële en materiële middelen voor de bouw zal afkomstig zijn uit de grondexploitatie waarde. Het ontwikkelde schema kan een zelf financierende programma worden door de opbrengsten van de verkoop van woningen in te zetten voor de financiering van de volgende projecten.

In het algemeen kan worden geconcludeerd dat deze nieuwe strategie heeft aangetoond hoe de stad Suleimany een actieve grond strategie kan praktiseren en hoe de ontwikkeling van de grondwaarde kan bijdragen aan de ontwikkeling van de huisvesting en infrastructuur in de gemeente. Het model illustreert dat de menging van inkomens betaalbare grond kan opleveren, waardoor de zekerheid van het eigendomsrecht toeneemt voor degenen die in staat zijn een toegang tot het ontwikkelingsproces te krijgen. Uiteindelijk heeft de nieuwe strategie potentie om de woonvoorziening voor de huishoudens met lage-inkomens te verbeteren. Gezien de verwachte economische en sociale voordelen, is de menging van inkomens een geschikte strategie en een haalbaar mechanisme voor het creëren van betaalbare woningen.

Aanbevelingen

- Betrek ontwikkelaars om deel te nemen in sociale woonprojecten met ‘non-market strategieen’. Het doel van deze vorm van participatie kan zijn om de relaties met de lokale autoriteiten te verbeteren.

- Om markt-conforme kopers en/of huurders aan te trekken en leegstand te minimaliseren, is het aan te bevelen om een substantiële verhouding te zoeken van de verschillende inkomensgroepen in elk specifiek project.

- Met de voorgestelde menging van inkomens is het ook aan te raden om de woningbouw fase uit te sluiten, omdat het zou kunnen dat niet alle huishoudens met lage-inkomens kant en klare woningen wensen. In plaats daarvan, zou het mogelijk zijn dat velen individueel willen bouwen. Hierdoor kunnen ook de hogere-inkomensgroepen reductie krijgen op de grondprijs.

- De strategie kan ook ideaal zijn als deze wordt gecombineerd met herverkaveling. Hierbij dient wel de kanttekening gemaakt te worden dat de overheid geen ervaring heeft met herverkavelingsstrategie. Toch vermindert door de herverkavelings-strategie de behoefte aan verplaatsing en grond verwerving.

- Het opzetten van een quasi-gouvernementele woningbeheer organisatie. Deze organisatie kan het huisvestingsprogramma ontwikkelen en de woningen deels beheren.
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## List of Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BoI</td>
<td>Board of Investment</td>
</tr>
<tr>
<td>DoA</td>
<td>Directorate of Agriculture</td>
</tr>
<tr>
<td>DoCH</td>
<td>Directorate of Construction and Housing</td>
</tr>
<tr>
<td>DoF</td>
<td>Directorate of Finance</td>
</tr>
<tr>
<td>FCF</td>
<td>Fixed capital formation</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GFSY</td>
<td>Agriculture, Forestry, Fishing and Hunting</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>HMO</td>
<td>Housing Management Organization</td>
</tr>
<tr>
<td>ID</td>
<td>Iraqi Dinar</td>
</tr>
<tr>
<td>IDP</td>
<td>Internal Displaced Persons</td>
</tr>
<tr>
<td>IFG</td>
<td>Iraqi Federal Government</td>
</tr>
<tr>
<td>IRR</td>
<td>Internal Rate of Return</td>
</tr>
<tr>
<td>KRG</td>
<td>Kurdistan Regional Government</td>
</tr>
<tr>
<td>KRP</td>
<td>Kurdistan Region Presidency</td>
</tr>
<tr>
<td>LIS</td>
<td>Land Information Systems</td>
</tr>
<tr>
<td>LR</td>
<td>Land Readjustment</td>
</tr>
<tr>
<td>MoA</td>
<td>Ministry of Agriculture</td>
</tr>
<tr>
<td>MoCH</td>
<td>Ministry of Construction and Housing</td>
</tr>
<tr>
<td>MoF</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>MoMT</td>
<td>Ministry of Municipality and Tourism</td>
</tr>
<tr>
<td>MoP</td>
<td>Ministry of Planning</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organizations</td>
</tr>
<tr>
<td>PPP</td>
<td>Public Private Partnership</td>
</tr>
<tr>
<td>RERD</td>
<td>Real Estate Registration Department</td>
</tr>
<tr>
<td>ROI</td>
<td>Return on Investment</td>
</tr>
<tr>
<td>SOMO</td>
<td>State Oil Marketing Organization</td>
</tr>
</tbody>
</table>
1 Personal vision

1.1 Motivation
After a visit to the Kurdish Region in Iraq I was touched by the contrast between poverty and wealth in the region. The ever-widening gap between rich and poor is symbolized by the stark disparity in the quality of the living environment. Substandard and insecure housing conditions are recognized as a crucial aspect of the urban poverty. The poor people have great difficulty obtaining affordable housing. The confrontation with this phenomenon motivated me to find a research subject that is focused on a social level. With my education, I would like to seize the opportunity to study the land for housing system in the Kurdish region of Iraq. With my fresh look at the challenges, I look forward to add something to the body of knowledge, however small it may be. The choice of my research subject is determined by experience, situations and the resulting interest in this area.

1.2 Vision
The pressures of rapid urbanization and economic growth in the city of Suleimany have resulted in increasing pressures on land. Without land, there can be no housing. And without looking at the issue of land, there can be no meaningful discussion about how to solve the problems of housing for the low-income groups. The inaccessibility of decent, secure, affordable land is the major reason, in the Region, why there are so many informal settlements in Suleimany city and a contributing factor to the urban poverty. At present there is little experience in Kurdistan with the realization of low-income housing. With this final report, I wish a proper land strategy is created for the government on achieving affordable housing for this target group. As other countries already have experience with land strategies to address low-income groups, this can be reflected to the Kurdish land system. With a literature research, case studies and interviews I want to create more clarity with regard to land for housing. In this way, I want to create support for the realization of this mission. So in the future government and other organizations could work harmoniously together for a final positive result. And that the current dissatisfaction about the housing can disappear.


The land strategies will focus on the main directions of the actions that should be taken in order to meet the housing needs and those who are vulnerable, disadvantaged or with limited incomes. My vision is ultimately focused on recommendations. Policymakers should note that providing land for low-income housing is ultimately a political issue.

1.3 Profile for the future role in the construction industry
As already mentioned before, my interest goes out to the land system to facilitate housing and housing policy. By focusing on the government, I expect that after completion of the report I have created the knowledge to profile myself in the labor market. With the accumulated knowledge I want to focus on advising governments in achieving affordable housing. This could be interesting for the government who adopt a specific strategy to achieve this objective. But knowledge can also be mirrored on the role of the community, in this way to use the knowledge for achieving affordable housing.

1.4 Study targets: general and personal
My learning objectives for this graduation period is to get in-depth knowledge on how to conduct a proper research scope and following specific goals for my graduation research:
- Gain more knowledge about the land system for housing of the Kurdistan region of Iraq and the challenges it faces today;
- to increase understanding of the institutions (formal state law and informal social rule) that support land transactions and disputes;
- to assess the strengths and weaknesses of strategies;
- to identify and explore implications for policy.


1.5 Relevance

1.5.1 Societal relevance

The struggle by low-income groups in urban areas to get housing and basic services is often a struggle either to get land on which to build or to get tenure of land they already occupy (Satterthwaite 2009). One of the problems of Suleimany city society is the fast urban growth and the income distribution. It may not be possible to stop the wheels of urbanization or market forces which are driving up the cost of urban land and making it inaccessible to most city dwellers and to the low-income especially. But there are things that governments, private developers and civil society organizations that support them can do to help make more land available for the low-income both now and in the future (UN-Habitat and UNESCAP 2008).

This study looks at how land is managed in the formal market and how this formal market is failing to make secure, appropriate land available to their city’s low-income populations and why a portion of the urban poor are being forced to obtain land for their housing through informal land markets. The aim of the thesis is therefore to improve the chance for the low-income groups in the society of Suleimany city.

The inaccessibility of decent, secure, affordable land causes so many informal settlements in the urban areas and is a contributing factor to urban poverty. The societal relevance of this study is vastly, because the problem directly concerns the lower income groups and their chances for an affordable dwelling.

1.5.2 Scientific relevance

Affordable housing for low-income groups is a problem that affects cities all around the globe and includes several aspects. This thesis examines land as the ingredient to affordable housing for the low-income groups. Land acquisition forms the working intersection of processes that deals with land markets, administer land tenures and implement land use planning. Although, this is seen from a narrow perspective, though land acquisition is a complex cross-cutting issue. Using literature study and a field study, this study tries to explore why there are problems in the land system in the case of Suleimany city in order to achieve housing for the target group and create more clarity with regard to land for housing.

The scientific relevance of the research is given by the identification of Suleimany city in the Kurdistan region of Iraq particular land system and the assessment of the different land strategies that are considered to address the problem. The results are expected to contribute to the international debate about land for housing and the elaboration and evaluation of a strategy to counteract it.
2 Kurdistan Regional Government

The Kurdistan Region is a federated region in Iraq. Its main institutions are the Kurdistan Regional Government, the Kurdistan Region Presidency, and the Kurdistan Parliament. As stipulated in Iraq’s federal constitution, Kurdistan’s institutions exercise legislative and executive authority in many areas, including allocating the Regional budget, policing and security, education and health policies, natural resources management and infrastructure development (KRG 2010).

Figure 1 - Autonomous Kurdistan region (forum.skyscraperpage.com)

<table>
<thead>
<tr>
<th>General indicators</th>
<th>Erbil, Suleimany and Duhok</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governorates</td>
<td>Erbil</td>
</tr>
<tr>
<td>Capital</td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>40,643 km²</td>
</tr>
<tr>
<td>Language</td>
<td>Kurdish, Arabic</td>
</tr>
<tr>
<td>Religions</td>
<td>Muslims, Christians, Yezidi, et al.</td>
</tr>
<tr>
<td>Ethnic groups</td>
<td>Majority: Kurds</td>
</tr>
<tr>
<td></td>
<td>Minority: Arabs, Assyrians, Chaldeans, Turkmen, Armenians, et al.</td>
</tr>
<tr>
<td>Currency</td>
<td>Iraqi Dinar (ID)</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>1 USD = 1,200 IQD (average)</td>
</tr>
</tbody>
</table>

Table 1 – General indicators of KRG (Ministry of Planning 2012)

2.1 Kurdistan Region Presidency

The Kurdistan Region Presidency (KRP) was promulgated as an institution by the Kurdistan Parliament in 2005. The President of the Kurdistan Region has the highest executive authority. He or she is elected by secret ballot in a popular vote every four years and can stand for election for a second term.

Mr. Masoud Barzani, the current president, was elected as the Kurdistan Region’s first president on 31 January 2005 by the Kurdistan Parliament, and re-elected for the third time by secret popular
ballot by the people of the Kurdistan Region in July 2013, with 38% of the vote. The President’s secretariat, called the Diwan, is headed by the Chief of Staff. 

The president represents the people of Kurdistan at national and international levels and oversees relations and coordination between the Region and the Iraqi federal authorities. He also represents the people of Kurdistan at Iraq’s Political Council for National Security, and in negotiations and consultations with other parties in Iraq. He is responsible for approving the KRG Prime Minister’s special appointments and promotions, and for ratifying all laws passed by the Kurdistan Parliament. He has the power to return once only for further debate and amendment any law passed by the Parliament.

2.2 Kurdistan Parliament

The Kurdistan Parliament is the Kurdistan Region’s democratically elected legislature. The parliament consists of one elected chamber. Its three main functions are:

- to examine proposals for new laws;
- to scrutinize government policy and administration;
- to debate the major issues of the day.

The founding principles of the parliament are liberty, pluralism, accountability, openness and the representation of all peoples in the Kurdistan Region.

2.2.1 Powers of the Kurdistan Parliament

As provided in the federal constitution of Iraq, parliament has considerable power to debate and legislate on policy in a wide range of areas: health services, education and training, policing and security, the environment, natural resources, agriculture, housing, trade, industry and investment, social services and social affairs, transport and roads, culture and tourism, sport and leisure, and ancient monuments and historic buildings.

The Kurdistan Parliament shares legislative power with the federal authorities in the following areas, but priority is given to the Kurdistan Parliament’s laws: customs, electric energy and its distribution, general planning, internal water resources.

In addition, under Article 121 of the Iraqi federal constitution the Kurdistan Parliament has the right to amend the application of Iraq-wide legislation that falls outside of the federal authorities’ exclusive powers.

2.3 The Kurdistan Region’s provincial authorities

The Kurdistan Region comprises the three northern-most governorates or provinces of Iraq: Erbil, Suleimany and Duhok. Each governorate has a democratically elected 41-seat Governing Council.

As well as receiving funds from the Kurdistan Region’s own budget, the governorates also receive directly from Baghdad funds for provincial capital investment and infrastructure projects.

2.4 Macro economy

The Kurdistan region has a fast growing economy built on natural resources, progressive economic policies and reconstruction. The investment opportunities rely on divers sector including oil and gas, electricity, agricultural, construction and the service industries. Since the liberation from the rule of Saddam Hussein and the international sanctions including UN-impose sanctions on Iraq until 2003 and Iraq sanctions on the Kurdistan region, the Region has undergone great economic growth.

Macroeconomics is an economic term referring to a group of theoretical solutions that deal with economy as a single package. The theory covers several subjects, including GDP, unemployment rates and price index, aimed to understand and develop local and global economies. The analysis tools used by economists in this field include national income indicators, GDP and pertinent contribution of the
various economic activities, local consumption, unemployment rates, savings, investment, and inflation.

This section focuses on the main subjects of national income, GDP and per capita GDP, GDP distribution by economic activities at current prices, FCF, investment, consumption expenditure and inflation.

2.4.1 National Income

The past years experienced a large growth in national income rates and average per capita share thereof. As a result, local production was more diversified in favor of the economic sectors. National income achieved a qualitative boom upwards from 4,373,887.262 million ID in 2003 to 17,017,138.822 million ID in 2007, at an increase rate of 289%. In 2008, it registered another rise reaching 30,224,000 million ID at current prices at an increase rate of 77.6% compared to 2007 figures, reflected in table 2:

<table>
<thead>
<tr>
<th>Year</th>
<th>National Income (in ID million)</th>
<th>Average per capita (in ID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>4,373,887.262</td>
<td>976,794</td>
</tr>
<tr>
<td>2004</td>
<td>7,976,963.669</td>
<td>1,728,935</td>
</tr>
<tr>
<td>2005</td>
<td>11,185,756.356</td>
<td>2,353,058</td>
</tr>
<tr>
<td>2006</td>
<td>14,523,316.596</td>
<td>2,926,339</td>
</tr>
<tr>
<td>2007</td>
<td>17,017,138.882</td>
<td>3,372,433</td>
</tr>
<tr>
<td>2008</td>
<td>30,224,000.000</td>
<td>6,837,000</td>
</tr>
<tr>
<td>2011</td>
<td>40,800,000.000</td>
<td>7,693,200</td>
</tr>
</tbody>
</table>

Table 2 – Growth of National Income and per Capita share at current prices 2003-2011 (Ministry of Planning 2011)

The increase of national income values during the past years reflected clearly on average per capita share thereof. It rose from 976,794 ID in 2003 to 1,728,935 ID in 2004, at an increase rate of 77%. This increase rate continued as a result of the rising state budget, reaching to about ID 3,372,433 in 2007, and ID 6,837,000 in 2008, at an increase rate of 102.7%, compared to 2007, and 602.2%, compared to 2003. It had a compound growth rate of 38.3 % for 2003-2008 at current prices.

2.4.2 GDP and per capita GDP

As shown in table 3 the economic development figures for 2004-2008 reveals that the Gross Domestic Product (GDP) at current prices increased from ID 2,419 billion in 2004 to ID 20,954 billion in 2008. This is a total increase rate of 110% annually and a compound growth rate of 68.9% for 2004-2008, which is reflecting remarkably on per capita GDP that increased from ID 524,426 in 2004 up to ID 4,740,000 in 2008. There is an increasing GDP by 10% annually with a total growth rate of 5.6%.
2.4.3 GDP at current prices by economic activity

Economic sectors’ contribution to GDP generation revealed different rates, coupled with sustained growth rates due to the stable local and foreign political and economic circumstances experienced by Kurdistan’s economy over the past years. The sectors’ contribution rates in 2008 were as follows: transportation, telecommunications, and storage 13.59%; social and personal development services 20.69%; wholesale, retail and Agriculture, Forestry, Fishing and Hunting (GFSY) 17.68%; building and construction 7.6%; finance and insurance 1.3%; Manufacturing Industry 9.4%. Other services 30.1%.

2.4.4 Fixed Capital Formation

Fixed capital formation (FCF) is a macroeconomic concept used in official national accounts. FCF refers to the material constituent arising from the investment process. It is mainly represented by the existing assets of machines, equipment, buildings, structures, transportation vehicles, in addition to other stationary elements, involved in the production process. FCF stages have a strategic importance not only at the level of long-run economic changes, but also at the short-lived changes and their impact on overall economic activity. During 2004-2008 period, FCF experienced substantial revival as GFC reached ID 4,780 billion at current prices for 2008. Its components are outlined in table 4. Based on estimates released by a number of specialized researches, FCF has increased by about 158% at current prices and by 114% at fixed prices, during 2004-2008. The boom experienced in 2004-2008 with respect to volume of FCF may be attributed to growing government and non-government investments with all their constituent elements.

<table>
<thead>
<tr>
<th>Sector</th>
<th>ID billion</th>
<th>Share (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>2,820</td>
<td>59</td>
</tr>
<tr>
<td>Public</td>
<td>1,960</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>4,780</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4 – Growth of GFCF at current prices from 2004-2008 (Ministry of Planning 2011)

2.4.5 Investment

After 2003, the Region succeeded to attract both foreign and local (private) investors due to the promising and diverse investment opportunities. Also the political and security stability contributed to this achievement, culminating in the enactment of Investment Law No. 4 of 2006. This law marks a substantial change towards enhancement and attraction of foreign and local investments, and creation of new investment opportunities.

The Board of Investment (BoI) statistics indicate that value of the capital invested in the Region in 2006 reached 438.308 Million US dollar. In 2007, this figure rose to 3,639,200 Million US dollar at an increase rate of 782.6%. It maintained its level in 2009 despite the financial and economic crisis that swept the world at the time, and the consequent decline of foreign investments, caused by the financial and economic conditions experienced by many countries and corporate companies.

The Region, however, could soon regain its power to attract new investments. Total investments in 2010 rose to 4,843.522 Million US dollar, at an increase rate of 14.72% from 2007 and 807.8% from 2006, as shown in table 5:
Land strategies 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Invested capital (in USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>438.308</td>
</tr>
<tr>
<td>2007</td>
<td>3,963.363</td>
</tr>
<tr>
<td>2008</td>
<td>1,922.173</td>
</tr>
<tr>
<td>2009</td>
<td>3,966.879</td>
</tr>
<tr>
<td>2010</td>
<td>4,843.522</td>
</tr>
<tr>
<td>2011</td>
<td>2,867.822</td>
</tr>
<tr>
<td>2012</td>
<td>213.851</td>
</tr>
<tr>
<td>Total</td>
<td>18,824</td>
</tr>
</tbody>
</table>

Table 5 – Invested capital 2006-2011 (Ministry of Planning 2011)

BoI latest statistics indicated that overall value of investment for the period from 1/8/2006 to 15/4/2010 reached US$ 18,072 million, spread over 12 economic sectors, as it is outlined in the table 6:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Capital (in USD million)</th>
<th>Share (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade</td>
<td>2,476</td>
<td>13.15</td>
</tr>
<tr>
<td>Banks</td>
<td>740</td>
<td>3.93</td>
</tr>
<tr>
<td>Health</td>
<td>320</td>
<td>1.69</td>
</tr>
<tr>
<td>Industry</td>
<td>3,191</td>
<td>15.95</td>
</tr>
<tr>
<td>Services</td>
<td>14</td>
<td>0.07</td>
</tr>
<tr>
<td>Tourism</td>
<td>1,656</td>
<td>8.79</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>659</td>
<td>3.5</td>
</tr>
<tr>
<td>Education</td>
<td>426</td>
<td>2.26</td>
</tr>
<tr>
<td>Agricultural</td>
<td>271</td>
<td>1.43</td>
</tr>
<tr>
<td>Housing</td>
<td>9,080</td>
<td>48.2</td>
</tr>
<tr>
<td>Technical</td>
<td>12</td>
<td>0.06</td>
</tr>
<tr>
<td>Sports</td>
<td>70</td>
<td>0.37</td>
</tr>
<tr>
<td>Total</td>
<td>18,824</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 6 – Total invested capital by sector 2006-2012

Foreign investment accounted for about 14.43% of the investments registered totaling 2716 million US dollar. Local investment, on the other hand, represented 79.43% of overall investments for the same period, amounting to 14952 million US dollar. Mixed investments represented 6.14% of total investments, at an amount of 1156 million US dollar. Foreign and local investment opportunities in Suleimany city is shown in table 7:

<table>
<thead>
<tr>
<th>Investment type</th>
<th>Joint investment Suleimany and Erbil</th>
<th>Erbil (in USD million)</th>
<th>Suleimany (in USD million)</th>
<th>Dohuk (in USD million)</th>
<th>Total (in USD million)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign</td>
<td>150</td>
<td>2027.23</td>
<td>n.a.</td>
<td>539</td>
<td>2,716</td>
<td>14.43</td>
</tr>
<tr>
<td>Local</td>
<td>n.a.</td>
<td>8640.259</td>
<td>5,110</td>
<td>1,202</td>
<td>14,952</td>
<td>79.43</td>
</tr>
<tr>
<td>Mixed</td>
<td>n.a.</td>
<td>586.466</td>
<td>343</td>
<td>227</td>
<td>1,156</td>
<td>6.14</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>11253.955</td>
<td>5,453</td>
<td>1,968</td>
<td>18,824</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 7 – Total invested money by governorate 2006-2012 (Ministry of Planning 2011)

The demands for investments expansion and increasing its contribution to the development processes require activation of BoI activities. These activities include particularly in the field of drawing the Region’s investment map, and promotion of available annual investment opportunities through media sources, Commission’s website, and the government’s official website.

2.4.6 Consumption Expenditure

Historical sources confirm that overall government and private consumption expenditure developed during the past years, reaching ID 19.721 trillion at current prices. Private consumption expenditure
(real estate ownership) came to ID 14.505 trillion of final consumption expenditure. Private consumption expenditure rate to GDP reached 82% and to imports 18%. On the other hand, government consumption expenditure reached ID 5.216 trillion, accounting for 36% of total final consumption expenditure. No complete data of consumption expenditure are available for periods before 2008 for making comparison and observing its progress.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Out of GDP (in ID billion)</th>
<th>Out of imports (in ID billion)</th>
<th>Total (in ID billion)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>11,898</td>
<td>2,607</td>
<td>14,505</td>
<td>64</td>
</tr>
<tr>
<td>Public</td>
<td>5,216</td>
<td>n.a.</td>
<td>5,216</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>17,114</td>
<td>2,607</td>
<td>19,721</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 8 – Total consumption expenditure at current prices in 2008 (Ministry of Planning 2011)

2.4.7 Inflation

According to the head of the Kurdistan Region’s Statistics Department, Sirwan Mohammed, the inflation in the Region rose to 5.6\(^1\) percent in 2012, nearly three times more than the year before. This data is based on conducted research by his office and an international bank.

A rise in salaries and property prices had contributed to increasing inflation. In order to assess the inflation, 700 items must be evaluated, according to S. Mohammed. The head of the Statistics Department stated that they have to start from zero since no research was conducted to assess inflation in Iraq before 2007.

The current inflation in the Kurdistan region, which seems to be much higher than 2%, can be explained by the following factors (Hatemi 2006):

Increase in money supply: The money supply is beyond the control of the Kurdistan Regional Government (KRG) and it is up to the Iraq Federal Government (IFG) to determine the optimal level of money supply. However, KRG can promote regional policies that can increase domestic production.

Structural factors and markup: If the price of production factors (like wages) increases, then producers will charge higher prices, which means higher inflation rate. Another cause of inflation is high markup or marginal profit (the difference between selling price and cost of producing each unit of a product).

Imported inflation. If the price of commodities in the source countries increases, then the price level in Kurdistan will also increase.

Currency depreciation: The exchange rate policy is beyond the control of KRG and it is up to the Iraqi central bank to formulate and implement optimal exchange rate policy.

Oil prices effect. The oil prices have almost tripled during the last years. The consequence of this is increased money supply in the market. If domestic production of goods and services does not increase, then the increase in money due to rising oil prices means a direct increase in price levels.

Low competition: If the number of suppliers of domestically produced or imported goods is limited, then the suppliers will have the possibility to charge higher prices, which will result in higher inflation rate.

Increasing demand: If the demand for a product increases, then the price of that product tends to increase. An example of that is the current cost of renting or buying houses in Erbil. Due to massive population flow from rural to urban areas, the demand for housing as an investment object or to rent has increased both housing prices and rents. A potential remedy could be to increase the stock of housing and control rent levels. The supply of housing could be increased through public investment.

\(^1\) http://www.mesop.de/2013/01/26/inflation-nearly-tripled-in-kurdistan-region-last-year/
(state or municipality) in housing. For example, rents or prices could be cost-based per m². Differences in prices because of location could be adjusted by imposing special tax rates on housing in attractive areas and subsidizing rent in less attractive areas and households with low income. This will also contribute to a more even income distribution in the region.

Low level of production: The regional economy is currently an almost consumption-based economy, which needs to become more productive. There is a negative relationship between production and inflation. If domestic production is low, it will not be able to meet the needs and demands of the consumers, thereby causing prices to rise.

War and Instability: There is also a positive relationship between war and inflation, because war destroys the productive capability of a country and increases the risk of investment. Despite the fact that the Kurdistan region is safe due to the well-organized security provided by the regional army, the region is still affected by insecurity and instability that prevails in other parts of Iraq.

In order to quantify the magnitude of each underlying factor mentioned above, empirical estimations are necessary. However, these estimations require data (statistics) on a regular basis. Such data is missing currently in the Kurdistan region, and it is important to start the processes of collecting, storing and processing data on a continuous basis as time series.

2.4.8 Kurdistan region oil and gas reserves

Federal Iraq and the Kurdistan region have a long dispute regarding to the state owned oil resource. The argument between Iraq’s federal government and the KRG over Kurdistan’s oil reserves is one of the major fault lines in the country’s politics. But while many observers see it as a political issue, there is also a legal debate that is often overlooked. These centers on the interpretation of the Iraqi Constitution approved by referendum in 2005 and implemented in 2006. Under a longstanding agreement, all petroleum exported from Iraq should be marketed through Iraq’s federal State Oil Marketing Organization (SOMO) with the KRG receiving 17% (Holland 2010) of the resulting revenues. However, there is disagreement over the extent of the KRG’s right to regulate the petroleum sector in Kurdistan and, in particular, its right to enter into contracts relating to the exploitation of oil and gas in the region.

The management of oil and gas is dealt with in articles 111 and 112 of the constitution. Article 111 states that “oil and gas are owned by all the people of Iraq in all the regions and governorates” (Holland 2010).

Currently, the Iraqi Kurdistan Region Natural Resources Minister Ashti Hawrami estimated that oil reserves in the three Kurdish governorates are at more than 45 billion² barrels.

2.4 Kurdistan region elections 2013

The fourth Kurdistan legislative elections of 2013 took place on 21 September. A new government was elected. The new government has been formed on 20 November 2013 and the new Minister has the same vision and policy priorities regarding to housing compared to the previous government, (see annex 1).

3 Introduction

3.1 Problem analysis

In the Kurdistan regional Government of Iraq (KRG) the housing delivery system suffers from various shortfalls according to the Erbil Housing Strategy report (Mumtaz 2009). During a workshop on July 18th, 2011 with UN-Habitat and the KRG, the Ministry of Planning referred to the attempts of the Kurdistan Regional Government which is aimed at reducing the housing issue in the region. He also said that most of the efforts that so far have been made in the housing sector were non-systematic and lacking integrated mechanisms that are not able to meet the housing needs of different classes of the Kurdish communities. This is because on one hand people all of them are not government employees and on the other hand because most of them cannot afford the high prices they are deprived from the opportunity of having one of the houses that are given to the employees through the Housing Fund (see annex 2).

Poor housing production and current level of disruption have seriously deteriorated both the quantity and quality of housing throughout the countries in KRG. Housing delivery systems in KRG have underperformed for many years, due in large part to the sector's insufficient access to land, human, financial and material resources. The consistently low level of recorded housing production does not come close to matching the projected housing need.

Although, over the last few years, the main house-building activity has been the development of large housing estates, mostly with two storey villas or 3 and 4-storey structures, with two flats on each floor. The private developers sell these on the open market, with prices ranging from $85,000 to $150,000 US dollar paid on instalments reflecting construction progress (Mumtaz 2009). However, there are many low-income households that need housing but cannot afford such units. Most of these are either sharing accommodation or living in informal subdivisions or informal areas. UN-Habitat SCR-986 projects have, up to now, concentrated on providing housing for Internally Displaced Persons (IDP), but there are many urban poor living in equally bad circumstances without enough income to pay for decent housing. This marks the start of KRG efforts to also provide for the needs of this segment of the population using the so called 986 funds. At the same time, the disruption in administration and production has meant that costs of building materials and housing construction have increased and the capacity of government and municipality to provide land and housing has decreased. In practice, the State could not produce enough units on an efficient and effective way.

The very starting point for this research was to make a contribution to scaling down the enormous housing backlog in Kurdistan Region and addressing the low-income households in the region. One housing option that aims to address these issues is land for housing. However, there are places that are different in some way that profoundly affects a strategy: Size, Density, Jurisdiction, Geography, Materials, House Type, Land Tenure, etc. It is also the case that individual, location-specific housing programs or housing projects will be needed to indicate the detailed intervention in each locality and for different time periods. With regarding to the rural, these types of places have no housing need problem necessarily. The main source for housing need is in the urban. About 81% of the governorate population lives in the urban and about 19% lives in the rural. Also, in the rural the land is free this way the cost of housing unit is about 10% of the urban due to simple design, one story house and no expensive finishing and decoration (Suleimany Statistics Office 2007). However, the housing issues concern the urban in the three Governorates of KRG, namely Erbil, Suleimany and Duhok.

Before I started conducting this research, I contacted Mr. Dyfed Aubrey, who is a land and housing expert at the UN-Habitat in Iraq. Subsequently, he brought me into contact with Mr. Babar Mumtaz, an urban planner/development economist, specializing in urban management and housing finance and also a housing expert at the UN-Habitat. Thereafter, Mr. Mumtaz offered me an internship/work in Suleimany city, Kurdistan Region of Iraq. After this, an agreement was made between the Senior Consultant of UN-Habitat, Babar Mumtaz, and I as a National Consultant to work together on the preparation and development of a Low-income Household Strategy for the Kurdistan Regional
Government. The internship was estimated for 2 months, however, it was running out for six months. As a national consultant I was designated to undertake specified tasks (see annex 3 for work specifications) and to keep the Senior Consultant informed of the progress and outcomes of all activities in Suleimany city, where I was located. This way I identified the land problem in the city mentioned.

With this information I came back to Delft to start my research proposal about Suleimany city. Suleimany is the most populated city in the region. The city is comparable with the capital of Kurdistan region Erbil, due to their social and urban characteristics. As the two cities become a cultural and civic center for the surrounding region it also functioned as a magnet for in-migration, especially because of the work opportunities in these cities compared with the neighboring settlements. Large numbers of low-income job-seeking migrants had no chance to afford proper housing whether in terms of rent or ownership, and this led naturally to encouraging the formation of informal settlements.

As a result, there are a number of problems of housing in Suleimany city that need to be listed as a matter of priority. Amongst these are (Mumtaz 2009):

- Over the last few years, a number of informal housing areas have been constructed because the formal processes of developing and allocating serviced land for housing was not available for all those who needed housing. These informal areas have inadequate infrastructure/utilities, urban services and facilities, and the lack of security and support has also led to the construction of poor quality houses;
- On the other hand, many of those who had benefited from the allocation of housing plots have been subdividing their plots informally, and this has led to the roads, infrastructure and services having to serve a larger population and a general deterioration of services and space;
- At the same time, there are other housing plots that had been allocated, but which remain undeveloped, either for lack of funds, or for speculative reasons, leading to an inefficient use of installed services and facilities.

A survey conducted by the Kurdistan Institution for Political Issues (KIPI)⁴, released on 13th January 2010, showed that the cost of housing in Suleimany city is people’s number one cause for concern. Compared to the average salaries of residents in Kurdistan, housing is heavily overpriced. However, the main reason for these high costs is the high land cost portion of the total housing costs.

On the whole, therefore, the greater part of the need for housing remains unmet, particularly for those that do not have access to government-allocated land, and cannot afford the housing provided by the market. With a growing population, there is a growing need for housing, and with a more open market approach to the economy, the gap between rich and poor is widening, while the social safety nets that used to exist are gradually being done away with. There is also no clear and systematic social housing policy in Kurdistan region. A large proportion of the population (about 25%)⁵ used to rely on Government and Public Sector jobs, which also ensured access to housing and other benefits.

### 3.1.1 Unmet housing demand

It is clear from the above discussion, that housing is not easily or readily available for any but the better-off households – and for the very rich, there is probably an over-supply.

Table 9 attempts to group households by monthly income and indicates for each the form and process of housing provision, and suggests what their unmet demand for housing is. This does not mean that, for example, if housing finance or land were available the upper income group would not avail of it, but that these are either met or are not that pressing a demand for them.

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³ These problems are derived from Erbil housing strategy which was conducted for the city Erbil. Since the city Suleimany is comparable with Erbil, which are both in the Kurdistan region of Iraq, these assumptions could be accepted for Suleimany.


⁵ COSIT/IHES 2007. As well as the 25% currently employed, a further significant percentage was retired government servants.
<table>
<thead>
<tr>
<th>Group</th>
<th>Income (in USD)</th>
<th>Status</th>
<th>Housing provision</th>
<th>Unmet demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper income</td>
<td>Over $6000</td>
<td>Heads of business</td>
<td>Developer-built Luxury Villas</td>
<td>Non</td>
</tr>
<tr>
<td>Better off</td>
<td>Over $2000</td>
<td>Senior executives</td>
<td>Houses on privately bought land or allocated land</td>
<td>Housing finance</td>
</tr>
<tr>
<td>Middle-income</td>
<td>Under $2000</td>
<td>Government staff</td>
<td>Houses on allocated land</td>
<td>Land Housing finance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Middle level staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-income</td>
<td>Under $600</td>
<td>Small traders Workers</td>
<td>Informal Settlements Renting</td>
<td>Affordable⁶ or social housing Land</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laborers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very low-income</td>
<td>Under $400</td>
<td>Widows Pensioners</td>
<td>Sharing Sub-standard Housing</td>
<td>Social housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unemployed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 – Income group classification (Mumtaz 2011)

The data in table 9 have been derived through a series of informed group discussions with the Working Group in the Governorate. The WG included members from the various departments concerned with housing. The figures are estimates based on the available information, published and unpublished.

3.1.2 Housing need

On the face of it, estimating housing needs is a simple task: subtract the number of housing units from the number of households and the answer is the housing need, and to find the future housing need, do the same calculation but use future population. To these figures, we can add the numbers required to replace the substandard units, and, if we know the likely net production rate (new minus obsolescing units), we can estimate the number of additional units that would need to be provided. Thus (Mumtaz 2011):

\[ FU(y) = (CP-CU)+(FP-CP)-SU+NU \]

Where

- \( FU(y) \) = Future Units of housing in \( y \) years
- \( CP \) = Current Population in numbers of Households
- \( CU \) = Current Units of housing
- \( FP \) = Future Population in numbers of households
- \( SU \) = Substandard or unacceptable Units of housing
- \( NU \) = New Units produced during \( y \) years

While an attempt has been made to quantify housing needs for the next five years, table 10 uses the numbers more qualitatively and rounds them off to derive more easily handled targets. The benefits of using these simplified figures more than compensates for the “lack of accuracy” resulting from using rounded-off figures, because in practice no strategy can actually cope with the spurious precision of conventional housing needs.

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⁶ see annex 4 for a discussion on Affordable Housing
### Land strategies

### 3.1.3 The target group

It is virtually impossible to be able to assess the housing needs of the low income group, and those in need of social housing even more so. There are no accurate censuses or survey data on which these needs could be based, and therefore, estimates have to be made using what information is available. Socio-economic surveys such as the IHSES 2007 (Suleimany Statistics Office 2007), and the more limited surveys done by the KRG and the Governorate Statistical Organizations suggest that in total, there might be between 30 and 35% of the total population is likely to be in the low and very low income category.

Most of these households are likely to have some deficiencies in their current housing, either in terms of size, standard, construction, finishes and infrastructure. However, most of them do have housing. Overall, renters make up about 20% of the total housing. If we take that as an indicator of housing demand, it could be assumed that about half of the renting households are likely to be in the target group. Of those, half could be assumed to be on low incomes, and the other half in need of social housing. Under such assumptions, the target group, of households with limited incomes that do not own a house, may be 10% of the total. This figure will be used in the strategy.

The focus of the research is upon the low-income households earning less than 600 US Dollar per month, also referred to as limited incomes. The income of this target group is unfixed due to the irregularity of their jobs. Usually, the man is the only earner in the house. Typical housing provisions are in the squatter- and informal settlements. Such people are illiterate or literate but with no formal education. They have occupations of skilled and unskilled workers on daily wages like constructions workers, tilers and petty trading. The majority of the target group prefers single-family house and no preference for apartments due to privacy and the large amount of children.

<table>
<thead>
<tr>
<th>Suleimany</th>
<th>Households 2012</th>
<th>473,800</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban Households</td>
<td>189,500</td>
</tr>
<tr>
<td></td>
<td>Capital Households</td>
<td>203,700</td>
</tr>
<tr>
<td></td>
<td>Rural Households</td>
<td>80,500</td>
</tr>
<tr>
<td>Households 2017</td>
<td>536,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban Households</td>
<td>214,400</td>
</tr>
<tr>
<td></td>
<td>Capital Households</td>
<td>230,500</td>
</tr>
<tr>
<td></td>
<td>Rural Households</td>
<td>91,100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Housing Needs</th>
<th>12,440</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Areas Total</td>
<td>5,000</td>
</tr>
<tr>
<td>Capital City (Suleimany)</td>
<td>5,300</td>
</tr>
<tr>
<td>Rural Areas Total</td>
<td>2,100</td>
</tr>
</tbody>
</table>

Table 10 – Suleimany government Housing need 2012-2017 (Mumtaz 2011)

Table 11 – Housing need for the target group (Mumtaz 2011)
3.2 Research demarcation

This paragraph describes the framing of the research. The framework will be outlined in order to clarify the scope of the research. The housing issue takes several aspects into consideration such as finance, land, infrastructure, etc. To achieve the maximum benefit, the report will be limited and emphasis will not be put on issues such as the housing finance, housing strategy and investment strategy. As for this research a significant housing aspect will be further elaborated to find a solution for the housing problem. According to UNESCAP and UN-Habitat (2008), for the urban poor there is probably no more fundamental problem than their inability to access decent, secure land for even the most minimum housing needs. Land is to be considered as a significant ingredient in housing the poor. It also acts as a safety net in times of hardship, and provides financial security, because it is an important transferable asset that may be sold, rented or loaned.

Discussion of the Suleimany city planning and land policy and land provision for affordable housing is relevant for the following reasons. As the city Suleimany grows in size, population and prosperity, the demand for land will also grow. The degree of urbanization has risen to 80% in 2011 which almost 40% lives in Suleimany city. Due to this fast urbanization, the need for supply of land to meet the growing demand for urban housing increased enormously. Actually, every sector of the society is bringing pressures on urban land and increasing its commercial value. These days, the local Government of Suleimany invariably complains that there is not enough land supply in their city for housing the poor. But when poor people look around in Suleimany city and make their own surveys, they find pockets of empty land all over the place both public and private, much of it ideal for low-income housing.

Following to the above, one can conclude that the aspect land will be taken as an ingredient to tackle the housing issue in Suleimany city, the Kurdistan Region of Iraq. The figure below shows the research area of this thesis.

![Figure 3 - Conceptual scheme](image-url)
3.2.1 A framework for land for housing

The key to housing for most households has been to get access to land. Moreover, what financing is available is inevitably reliant on having ownership of land as collateral. The growing demands on land are being dealt with in different ways and on several different levels within KRG and also Suleimany city. There are five basic ways in which this has traditionally been done:

1. **Allocation** of land designated for housing by the Municipality. Usually this is land that has been in agricultural use until acquired and transferred to the Municipality. Traditionally, this land was allocated to Government or Public Sector Institutions for allocation to their employees at a nominal price. This land was also allocated to applicants that met certain (social) criteria.

2. **Subdivision** of land by its owner (legal or informal), usually by a simple division into two plots. The sale of one plot is used to finance house construction on the other. The price of such land may be between $200 and $400/m², or more, depending on its location and the level of development of the area. While some of the subdivisions are formally registered, many are not. Increasingly, speculators are occupying or purchasing land on the outskirts of, or even outside, the urban boundary, in what are termed “villages”, for as little as $100/m² in the expectation of being able to subdivide and sell it when demand for land increases.

3. **Purchase** of land, usually from a household that had been allocated it – see above. This is often the only option for households that are not government employees or eligible for land allocations from the Municipality. However, the high price commanded by planned, and especially developed, Municipal land is such that only well-off households can afford to buy it.

4. **Compensation** for land acquisition from farmers (or other landholders) by the Municipality, who conventionally compensate every donum (2500 sq.m) of land acquired with 300sq.m of land (or 12%) in the new development, usually in the form of 300sq.m plots in the new housing area being developed on their former land. While the compensation is based on current land values, the price invariably rises, even doubles, as soon as the infrastructure and services have been provided.

5. **Inclusion** of land as part of the housing project, especially in the case of apartments and flats in multi-story housing projects. The land is included as part of the house sale, and is held in collective ownership by the residents. Even though the land may have been provided virtually free of cost to the housing developer, the buyers pay a “market price” for the land.

An extraordinary way of land acquisition is **informal** settlement. This is not taken into account in the above basic ways to acquire land, because it is not legally and according to the land development regulations and procedures. These settlements are on land to which they are not entitled, and which is often not designated or suitable for housing. The informal settlements are mostly done by lower-income households who cannot access land by any of the means outlined above. They often include households that are effectively homeless. However, in many cases they will take over more than just a single plot of land for their own purposes, and will sell or rent the surplus – usually to other lower-income households. At various times, such households have been offered an amnesty and given the opportunity to formalize their land holding, but despite the fairly nominal charges, some households refuse or are unable to legalize their land. If their settlement is being formalized, they expect to be compensated for the land and any construction – especially if they have been able to obtain a tapu (title).

Overall, access to land is an inseparable ingredient in Suleimany city in order to start building a house. Aside from being a basis for shelter and access to services, secure land is also an important transferable asset and encourages people to invest in improved housing and the land itself.

Following there are several matters related to land supply for affordable housing in Suleimany city that will be discussed:

**Price**

As our cities grow the demand for land by every sector of society is bringing never before expected pressures on scarce urban land and increasing its commercial value. These days, you hear a lot less
about using public assets like land for social purposes. You hear a lot more about maximizing returns on assets. This is because land has become a commodity to be bought and sold to the highest bidder in the market (UN-Habitat and UNESCAP 2008). In Suleimany, the demand for land has grown rapidly, driven by commerce, foreign companies and upper income households’ demand for housing and land. In some locations land prices have increased by as much as 500% in five years. Land in good locations is being purchased by the private sector and developed or held speculatively as land prices continue to rise. However, land grabbers usually take hold of large tracts of vacant public land in the periphery of the city. Subsequently, they subdivide the land very quickly into a grid of plots and lanes. These plots, which they mark with stones and white paint, they sell directly to individual households. Although most of Suleimany’s squatter or informal settlements are on public land, private land is also sometimes subdivided and sold off using the same system. This private land is subdivided by the owners themselves or by land grabbers who have come to some arrangement with the owners. The availability of plots in the new such settlements usually spread quickly by word of mouth. The new residents then build their own houses, according to their means, many with help from relatives or the local self-employed construction workers. These land transactions are completely outside any formal or legal framework. They follow no official land subdivision or planning regulations, but are carried out with the tacit agreement of government officials from the Municipality. The system is so streamlined that land sales in the informal settlements are often “formalized” with signed, witnessed receipts.

Gradually, as the communities become established, most are able to negotiate with their local politicians and local officials to secure basic infrastructure services like piped water and electricity in the settlement. Most also build their own underground sewer systems, with technical assistance from local workers. Due to land registration and ownership and services provision (paving road, electricity, water etc.) the land speculation is increasing immensely, as mentioned before by as much as 500% in several years.

Quality
With the extension to the villages, the city of Suleimany has been expanded with 32 more quarters. These quarters were villages before. Currently, some of them are still seen as informal without residential land registration. Actually, these villages had agricultural registration in the former years, before becoming a quarter of the city. So, during this process the agricultural land owners divided the land in parcels (e.g. 3 hectares in 200 sq. meter parcels).

The informal settlements, in Suleimany, exist because the low-income group cannot afford or access even the most minimal housing provided by the formal land and housing markets. Many also face enormous barriers in accessing housing and land because of the time, corruption and difficulties involved. In Suleimany, the systems for distributing and acquiring land and housing are still governed by traditional land tenure systems that exist outside the market. More and more, urban land and housing markets are coming under enormous economic competition, and this is driving up the cost of all housing, so that even the most minimal standard of formal-sector housing is unaffordable to the poor. Forced out of the market, low-income households are left with only one option: to build, buy or rent dwellings of relatively small size, low quality of construction and minimal service provision in an informal settlement.

3.3 Main problem
Without land, there can be no housing. And without looking at the issues of land, there can be no meaningful discussion about how to solve the problems of housing for the poor in the city of Suleimany. The inaccessibility of secure and affordable land is a significant reason why there are so many informal settlements in Suleimany and a contributing factor to urban poverty.

For the low-income group in Suleimany one of the fundamental problems is their inability to access decent, secure land for even the most minimum housing needs. Households are unable to access land for housing who then had to resort to using illegal processes. The system of residential land allocation for citizens (at relatively subsidized prices) is inefficient and does only target high-income and middle-income categories and not the most deserving. The low-income groups are not covered by the land
acquisition opportunities and will continue to be disregarded. The diagram below, in figure 4, clarifies the reaction to the problem and also what effect it has on the target groups. We see the response to the problem and the current land acquisition as a result that the low-income groups fall by the wayside.

Land development issues
1. The process for allocating land for housing transfers a very valuable public asset at very low prices to selected households;
2. Access to cheap land lends itself to the practice of large plots and low density development;
3. Allowing the subdivision and on-selling of plots without paying for the development gains resulting from public investments deprives the Municipality of funds for further development.

To sum up, the government cannot keep up with the high demand for housing as they face several challenges concerning land development due to the current poor land acquisition and management system. The government acknowledges its responsibility to provide affordable housing and so they are looking out for new land mechanism on how to deal with the feasibility of this objective.

![Diagram of Land Strategies](image)

**Figure 4 – Problem diagram: Housing of low-income groups**

### 3.4 Main research question

To build more housing, target households has to have access to adequate and suitable land. In this research the availability of finance to build more housing is disregarded, as there are three sources of housing finance. And one of the finance resources is the Real Estate Bank (see annex 5- Housing Finance), which requires ownership of land and makes non-interest loans available. In the next chapters a more in-depth look will be taken at these three sources of finance. All in all, the focus of this research will be on the strategies for the land provision for housing. Due to time and data constraints, the focus of this research is only on the city of Suleimany Municipality. In Suleimany city, land has increasingly become a commodity to be bought and sold to the highest bidder, especially urban land. So if the old assumption that governments should provide land is not working very well, how can we get urban land to those who need it most? What kind of strategies can be developed to
3.5 Detailed research questions

To arrive at an answer to the main research question, first some sub questions need to be addressed. These questions will be answered in the research and also form the structure of the thesis. The research is broken down into 4 groups of sub-questions.

1. Sub questions for the formation of a theoretical framework for land for housing.
   1.1: What is the definition of land for housing?
   1.2: What is the contribution of land to affordable housing/land costs portion of total housing costs?
   1.3: Why is land acquisition difficult?
   1.4: What are the challenges of land acquisition for the low-income group in developing countries?

2. Sub question with the purpose to understand the land for housing delivery system in Suleimany city.
   2.1: What is the history background of Suleimany city?
   2.2: What is housing culture in Suleimany?
   2.3: How is the land delivery system organized?
   2.4: How does the land development process allocation proceeds?
   2.5: What are the characteristics of the housing market in Suleimany city?
   2.6: What are the current land policies?
   2.7: What are the regulations for infrastructure?
   2.8: What are the regulations for housing finance?

3. Sub questions to analyze the possible strategies.
   3.1: What are the similarities of the land system in Suleimany city and other countries?
   3.2: What are the strengths and weaknesses of the current land system in Suleimany city?
   3.3: What are the possible land strategies which are discussed in the literature?
   3.4: What is the most interesting and promising land strategy to be further explored for Suleimany city?

4. Sub questions with the purpose to elaborate and evaluate the selected strategy on the aspects effectiveness, efficiency and support.
   4.1: What does the chosen strategy contain and what are the characteristics about land demand and supply?
   4.2: What do the evaluation aspects contain?
   4.3: How can these aspects be measured and what are the results?

3.6 Research type

The research is basically both a qualitative and a quantitative study. The research consists of a literature review and field study conducted through an internship at the UN-HABITAT, the United Nations agency for human settlements, in Suleimany city, Kurdistan Region of Iraq. Hereby, information is gathered through various means in order to respond to the sub questions. Information obtained from interviews with housing professionals from the field and households is to be used to supplement the literature. Within this study information from the various interviews often has to do with observations.
The research can be divided into the following steps:

- Data and information collection
- Problem statement
- Research question and methods
- Analysis and results
- Conclusions and recommendations

3.7 The aim of this thesis

The aim of this thesis is to find adequate land solutions that can work within the context of Suleimany city, which allows the Government and private sector to continue to provide affordable housing in the future.

The solutions will eventually provide a strategy, that determine how land is to be used and provide appropriate land to their city’s low-income populations, that will be evaluated on the basis of three assessment aspects; effectiveness, efficiency and with support of the actors involved.

Overall, to make it clear for the government how the land system works and to help them understand the challenges better. This will provide the actors a basis for discussion how to deal responsibly with the current land to address the low-income’s housing. The result of this research will identify the most suitable solution concerning land to enable improved access to affordable housing, for low-income households, the target households.

3.8 Research methods

The research questions, which are formulated to answer the main research question, are divided on the basis of four sub questions that also form the structure of the thesis. The sub questions are specified to make a distinction between answers on the basis of literature or field study (practice).

The literature study is carried out through searched and handed literature. Thereby, there is particularly made use of governmental documents and reports of UN-Habitat. In the case of Suleimany city these are Municipal documents and Statistics office and other public bodies.

The practical questions are answered with information from the internship within UN-Habitat in Suleimany city, consultations with public and private institutions and interaction with target group households. For this purpose, these parties are approached for conducting interviews and exchanging data. Field study in this research is all the data and information obtained outside the literature study.

In the case of a number of sub questions there is a combination of literature research and practical research attempted to find an answer. The literature study often offers a first step to find answers to a question after which it can be supplemented with practical information.

Overall, during this research project different methods will be used to achieve the final result. The study has a qualitative and a quantitative character and the information is not always predictable. The contents of the documents are analyzed and then using criteria to categorize the strategies in a qualitative content analysis.
3.8.1 Research methods

The study design consists of three phases:

1. **Descriptive study**
Describing the land delivery for housing. This includes a literature study to gain more knowledge about land theory.

2. **Exploratory research**
Checking several possible strategies according to criteria, based on a literature study.

3. **Elaboration and validation research**
Elaborating and validating the strategy on the basis of the aspects effectiveness, efficiency and support will be done through consultation and discussion with the housing and land experts of UN-Habitat, who are active in the Kurdistan region. The validation aims to describe the possibility and succeed of the strategy in the city of Suleimany.

The first phase of my research will be focused on descriptive research for the formation of a theoretical framework and to understand the land for housing delivery system in Suleimany city. This phase details how the sub-questions will be answered using the various research methods.

<table>
<thead>
<tr>
<th>Sub question</th>
<th>Research method</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1: What is the definition of land for housing?</td>
<td>Literature study: UN-Habitat, J. Wallace, S. Erguden, W. K. Korthals Altes &amp; S. Sence Turk</td>
<td>4.1, 4.2 &amp; 4.3</td>
</tr>
<tr>
<td>1.2: What is the contribution of land to affordable housing/ Land costs portion of total housing costs?</td>
<td>Literature study: M. Mattingly &amp; UN-Habitat</td>
<td>4.4</td>
</tr>
<tr>
<td>1.4: What are the challenges of land acquisition for the low-income group in developing countries?</td>
<td>Literature study: UN-Habitat &amp; UNESCAP, W. K. Korthals Altes &amp; S. Sence Turk, D. Satterthwaite, B. Chitekwe-Biti</td>
<td>4.6</td>
</tr>
<tr>
<td>2.1: What is the history background of Suleimany city?</td>
<td>Literature study: Municipal documents</td>
<td>5.1</td>
</tr>
<tr>
<td>2.2: What is housing culture in Suleimany?</td>
<td>Literature study &amp; Practical study: - Case studies - Meetings &amp; Presentations - Interviews with residents</td>
<td>5.2</td>
</tr>
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</table>
The second phase of my research is to characterize as explorative. After analyzing the housing situation in Suleimany city, the solution will be provided through an in depth research into the possible strategies. The sub questions below are to give the solution:

<table>
<thead>
<tr>
<th>Sub question</th>
<th>Research method</th>
<th>Chapter</th>
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<tbody>
<tr>
<td>3.1: What are the similarities of the land system in Suleimany city and other countries?</td>
<td>Analysis chapter 4 and 5</td>
<td>6.1 &amp; 6.2</td>
</tr>
<tr>
<td>3.2: What the strengths and weaknesses of the current land system in Suleimany city?</td>
<td>Analysis chapter 4 and 5</td>
<td>6.3</td>
</tr>
<tr>
<td>3.3: What are the possible land strategies which are discussed in the literature?</td>
<td>Literature study: - UN-Habitat - Articles of W.K. Korthals Altes</td>
<td>6.4</td>
</tr>
<tr>
<td>3.4: What is the most interesting land strategy and promising to be further explored for Suleimany city?</td>
<td>Literature study &amp; Practical study: - UN-Habitat - Paper of C. Rakodi - Consultations (UN-Habitat experts &amp; Governmental staff) - Discussions</td>
<td>6.5</td>
</tr>
</tbody>
</table>

The third phase consists of an evaluation research based on three assessment aspects; effectiveness, efficiency and support of the actors involved. The sub questions below are to elaborate and validate the strategy:

<table>
<thead>
<tr>
<th>Sub question</th>
<th>Research method</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1: What does the chosen strategy contain and what are the characteristics about land demand and supply?</td>
<td>Literature study &amp; Practical study: - Schwartz and Tajbaksh</td>
<td>7.1</td>
</tr>
<tr>
<td>4.2: What do the evaluation aspects contain?</td>
<td>Literature study: - De Groot</td>
<td>7.2</td>
</tr>
<tr>
<td>4.3: How can these aspects be measured and what are the results?</td>
<td>Literature study &amp; Practical study: - Consultations (UN-Habitat staff &amp; Governmental staff) - Quantitative and qualitative assessments - Expert consultancy</td>
<td>7.2</td>
</tr>
</tbody>
</table>
3.8.2 Methods of collected data and information in Suleimany Governorate

During my internship in Suleimany city, I conducted a six months intensive housing study with the UN-Habitat, which included the whole housing issue in KRG. UN-Habitat was the executive actor in this project and the leading actor, the Ministry of Construction and Housing (MoCH), covered the role to coordinate the efforts of other Ministries, and Departments, and the holding of meetings such as the suggested Stakeholder Workshop. While signing the study project with the Ministry of Planning, the MoCH invited several stakeholders from the governorates and institutional partners in order to inform the actors about the whole process. Subsequently, all the stakeholders agreed with the housing study and of course the data and information collection. As a representative of Habitat, I was involved with the data and information collection for Suleimany city. First, the government of KRG established a task force, the so called High committee as the coordinating body. As for the governorate of Suleimany we established a Working Group consisting of eight government officials. Each Working Group member represented a directorate, which was involved in housing. The diagram below shows the official initiation process of the data and information process.
The Structure of data and information gathering

The framework consisted of eight directors and governmental consultants. The total data and information form is consisted of six aspects (see annex 6), namely common, affordability, land, finance, construction and infrastructure. Project executing participants:
After identifying the WG members, as shown in figure 7, we arranged a meeting at the governorate office. As a national consultant of UN-Habitat, I explained the assignment of the data and information collection through a power point presentation. Thereafter, we discussed about the methods how to conduct this collection process. Actually, it is very difficult to find data and information in the Region due to the lack of statistics and suspicion. Therefore, in order to achieve the objective of the project, UN-Habitat requested the governorate of Suleimany, through a formal letter (see annex 7), for their support in providing necessary data and information for this study. Consequently, a team of officers and related departments of Suleimany Governorate facilitated this process and provided all necessary assistance. However, given that there are not the resources to carry out surveys to generate the information, it has been suggested that the best way of doing this is through collective pooling and sharing of knowledge and information. The collected data and information include case studies, interviews and statistics, which are collected and processed in a template.

To gain a deeper understanding of the housing situation in Suleimany city, five surveys (see annex 5) are carried out of: 1) households; 2) builders and developers; 3) building materials producers and suppliers; 4) real estate brokers; and 5) housing projects. These field surveys were complemented by interviews with key individuals in the sector, including both public and private sector actors, as well as a desktop review of existing publications, legislation and data.

### 3.8.3 Actors and studies

To conduct this research there is often referred to different parties, which has a significant role within the housing sector. These parties in this research consist of Governorate of Suleimany, Municipality of Suleimany (Ministry of Municipality and Tourism), Directorate of Construction & Housing (Ministry of Construction and Housing), Directorate of Urban Planning (Ministry of Planning), Directorate of Finance (Ministry of Finance), Board of Investment and last but not least UN-Habitat. All these parties have a direct role as an executive or a controlling party. Moreover, some parties have an advisory or inquisitive role within this research. On the whole, all these parties have information on their own way, which have been used to conduct the field study. Despite the position of the different actors in the housing sector, the working perspective of these parties is also taken into account. Some actors have a more significant responsibility within this research than parties that are active on a greater distance with this subject. The table below will introduce the role and potential of the actors which have a significant role within this research.
### Activity | Actor | Role | Potential
---|---|---|---
**Regulation**
| Council of Ministers KRG | Proposal for laws, legislation ask from parliament for approval | Mid-level, indirect |
| Municipalities of Suleimany (Ministry of Municipalities & Tourism) | Setting instructions to facilitate legislations, implementation of regulation | Direct influence to implement projects (services) |
| Directorate of Construction & Housing (DoCH) | Project proposals, building supervision | Indirect – project supervision, contract control |

**Land**
| Municipality of Suleimany | - Land utilization and city expansion - Detailed land used - Land provision to employees, special groups | - Direct, totality in influence - Incomplete master plans - Shortage in data |
| Directorate of Agriculture (DoA) | Agricultural land that was authorized to farmers to use will be stopped; money will be given instead | Positive effect of land provision, unless highly fertile land is limiting the change of use |
| Directorate of Finance (DoF) | Land provision, changing land authority to municipality | Land provision directly to municipalities |
| Real Estate Registration Department (RERD) | Land documentation for owners, sold etc. | High capacity but old technical systems |

**Housing**
| DoCH | Joint design and supervision | - Medium incomes - Governmental or special groups are beneficiaries - Limited number - Built by contractor |
| Board of Investment (BoI) | - Oversees and promotes foreign and local investment - Licensing authority | - Price setting - Help carry out the law’s provisions and to facilitate strategically important investment projects - Entrepreneurial oriented |

Table 13 - Actor analysis (Mumtaz 2009)

As regard to the studies, the starting point was to collect data and information as mentioned before from July 2011 until November 2011. This process was carried out through a purely extensive field study in the governorate of Suleimany. Consequently, as a national consultant, I assisted the Working Group to carry out their tasks (collecting data) by advising on sources, options and presentation formats. In due course, a report has been submitted on the activities and outcomes which I had to carry out. The resources used were expert meetings, actors involved and group consultations. Furthermore, I was responsible to work together with the UN-Habitat senior consultant, Babar Mumtaz, on the preparation and development of a “low-income household strategy for the Kurdistan Regional Government”. The first study was a Housing Need report, which was carried out in the region. This report was the basis for the formulation of the different strategies according to figure 3.
In order to achieve an adequate housing strategy there have been several preliminary reports carried out. However, the initial stage was to look for agreement on:

1. The existing conditions
2. The constraints and options
3. The target group
4. The objectives for the strategy

This was very important, because from our perspective we could not start to develop the strategy unless we are all agreed why we want to do it, and what we think the problems are. For instance, are we targeting all the poor households or only some of them? If we say “only those without housing”, why are we punishing those that have managed to build houses despite being poor? Are we rewarding the lazy? If we say a household is “poor”, is it because they never bothered to educate themselves, find work, take risks, have too many children, etc.? Why are some families poor? Etc. However, all these inputs I have discussed, alongside the working group members, with the senior consultant. This way I delivered feedback on the acceptability of the strategies and suggested other aspects of measures and solutions. As a result, the “Affordable housing strategy in Kurdistan region” was the outcome of the practical study process mentioned above and the problem identification in the context of this research.

In response to the land issues highlighted according to the practical research in Suleimany governorate, the following strategies are proposed for land:

1. A land development program
2. A land provision and allocation strategy
3. Revised land standards
4. Land development incentives

Here are some guidelines i.e. strategies developed and briefly described as a kind of policy formation. The “Affordable housing strategies in Kurdistan region” report along with international studies will contribute to the land strategies in the context of this thesis, which will eventually result in the elaboration and evaluation of the most interesting and promising strategy to the aspects effectiveness, efficiency and support during this research.

Beside the practical study in Suleimany city, a literature study will also be conducted during this research to support the field study and form the land theory as a basis to justify the result of this thesis. For this part, literature and internet has been used as resources.

All of the methods described above will form this graduation research. The overall schematic design research is shown in the diagram below.
Conducted in Suleimany in 07-2011/01-2012

“Affordable Housing Strategies in Kurdistan region” report (2012)

Overall, schematic design research

UN-Habitat
UN-Habitat supervises the provision of technical assistance in the development of the Housing sector through funding from the Iraq Trust Fund under the bridging for phase III of Strengthening the Capacity of the Housing Sector project, facilitated through the United Nations Development Group. UN-HABITAT contracted Mr. Babar Mumtaz, the International Consultant who facilitated discussions within the working groups that were formed in Suleimany and Duhok, supported by governorates of both cities, to formulate strategic conclusions that were compiled into a strategy draft.
GOVERNMENT
IT DOESN’T MATTER HOW MANY RESOURCES YOU HAVE. IF YOU DON’T KNOW HOW TO USE THEM, THEY WILL NEVER BE ENOUGH.
4 Theoretical framework

In this chapter the theories for land will be described and the following questions will be answered; what is the definition of land for housing? What is the contribution of land to affordable housing? Why is land acquisition difficult? What are the challenges of land acquisition for the low-income group in developing countries?

4.1 Major constraints in delivery of low-cost housing

Many developing countries have tried to achieve significant progress in the formulation and implementation of housing policies and to some extent strategies in the past decades. However, many constraints still effectively hinder movement in housing development in developing countries, particularly for low income and other vulnerable groups. One of the significant constraints is inadequate supply of affordable land. Selman Erguden (2001) has stated the following:

"Lack of adequate land for urban development particularly for low-income housing is perhaps the single most important impediment in achieving the goal of shelter for all. Proper records and registration of land is the first step in formulating and implementing a strategy on land. Scarcity of land leads to escalating land prices, overcrowding of existing neighborhoods, illegal invasion of vacant land and growth of squatter settlements. This trend can only be reversed by the provision of adequate and affordable land for low-income housing. In order to increase the supply of urban land, the financial and technical capabilities of the municipalities must be strengthened. It is also necessary to create conditions that would facilitate the growth of private land development agencies. Governments should formulate a regulatory framework ensuring that such private sector land developers will serve all income groups."

The most significant intervention of government is to produce social or low-cost housing (Le Grand et al. 1992). However, this could be difficult if the distribution of income is very unequal and housing is relatively expensive. According to Willem K. Korthals Altes & Sevkiya S. Turk (2010), one of the most important interventions is the provision of land for social housing, because landowners usually prefer more profitable land uses than social housing. High land prices make the provision of social housing costly.

4.2 Land delivery theory

By means of land administration systems the delivery of land and change of land uses will be managed for developments in all types.

There are countries with a poor theoretical basis to form their fundamental policy of land. Eminent domain (a term familiar in European countries) is the government ability to take land particularly in civil law countries (Wallace 2009). The capacity of governments in developing countries with civil law history can be an initial problem. Some Civil law countries give strong constitutional protection of land ownership. This way, the opportunities for compulsory acquisition will be restricted, which sometimes turned out in fatal results for public projects.

Countries which are sharing an English common law heritage use compulsory acquisition as a common and well-known method (Wallace 2009). The overall capability of government to obtain private land for public purposes is beyond doubt. This ability to take land is regulated by legislative processes. Besides, there are standards of acquisition, which apply to private land. The owners of the land are supported by market systems to compensate at an equivalent to commercial or market value estimated by a valuation of a professional. In contrast to informal markets, governments are able to offer market based methods of land delivery where a free and formal organized land market operates. These countries with formalized processes practice minimal human and social consequences for land delivery. Therefore, they use systems of compulsory taking manage the free
rider problems associated with opportunities to gouge developers otherwise available to “last owners to agree” to an acquisition.

The theoretical fundamentals in developing countries are typically not available. In these countries a clear constitutional framework and law is the actual starting point that establishes the basis for taking land in situations of unwilling sellers and occupiers, ideally integrating the human rights standards for resettlement.

**Common law**

Common law is a system of law- and legal formation based on customary law. This law system still exists in the United Kingdom and some of its former colonies.

In England, for example lawyers sought out the common law rules. Also, the judges traveled around and let themselves be assisted with information on the local customary law and statement of facts by a committee of local residents: the jury. The common law differs from other legal systems in that it arises from what is common and what the law turns into statements (legislative formation).

In many cases in a common law-system a jury trial takes place, the jury interprets the facts and the court applies the law. The judge is much more steerable than a civil law country: he must response to the requests (motions) of the lawyers and cannot act on his own initiative. The decisions of the common law-courts are often procedural, in which the judge will act as referee to conduct a fair process. Due to the fact that judges not own material statements but only assume motions of lawyers, in some countries (e.g. U.S.) they will be appointed on the basis of surname and not based on performance.

Common law does not mean that legislation is absent. Where legislation exists, however, that unlike a continental legal system, it is interpreted as respectively as possible. In areas where the principle of legality plays a major role, such as tax and criminal law, legislation, however, will play a dominant role.

The common law should not be confused with the “general law” (commune law), which it refers to the common Roman private law that most European legal systems are based. The Engels common law-system is taken by Engels colonists and is particularly in parts of Africa, in India, Australia and the United States to guide the national legal system.

The common law systems can be summarized as a system whose intellectual framework comes from judge-made decisional law which gives precedential authority to prior court decisions on the principle that it is unfair to treat similar facts differently on different occasions (Arnold-Baker 1996).

**Civil law**

Civil law is a legal system originating in Europe. Since the French Revolution in the most European countries the law- and legal formation is based on the late Roman legal system where the law is defined in legal codes (codification). The civil law is characterized by its core principles, which are codified into a referable system which serves as the primary source of law, which in contrast with the common law framework as previously described.

The history of civil law code goes back to the Code of Justinian, whereby the group of legal ideas and systems ultimately derived from. Conceptually, civil law proceeds from abstractions, formulates general principles, and distinguishes substantive rules from procedural rules (Fromont 2001). The substantive section establishes rules regarding the relationships between citizens and between citizens and goods. The law holds cases to be secondary and inferior to legal right. The court system of civil law system is usually inquisitorial and not linked to precedents. The court is composed of special trained judicial officers with limited authority to interpret law. Jury trials are not applied, but in some cases benchmarks may be sat by a mixed panel of lay magistrates and profession judges.

Colonial expansion spread the civil law which has been received in much of Latin America and Africa and parts of Asia which also includes Iraq.
4.2.1 Land delivery processes
Land acquisition forms the working junction of processes that deals with land markets, administer land tenures and implement land use planning. Although, this is seen from a narrow perspective, though land acquisition is a complex cross-cutting issue. In modern land administration theory, the purposes of land administration are land tenure, land use, land planning and land development which, if the land management paradigm (the method of understanding how the multiple processes work) is applied, are designed to deliver sustainable development (Enemark 2009). All the four purposes are involved in land delivery. Therefore, in such countries with formally organized processes, the development of land engages comprehensive consultation processes related to planning and zoning. In addition, the process involves highly professionalized services from government and private sector professionals at every stage. To ensure the public scrutiny the processes tend to be more transparent and liable.

Regarding to developing countries, they lack the capacity to build equivalent processes. Therefore, these countries often rely on Non Governmental Organizations (NGO) for consultation expertise. Technical areas are major incompetence, which creating land parcels, the so called parcellation, and forms a significant obstacle. These technical areas even apply for a very small project, which involves the formal identification of land for development purposes. Also, the subsequent conversion of raw land or rearrangement of formed parcels into the development parcels involves this area. So, the technical services and administrative capacity must always be developed, whether market based or social models of land delivery are used.

4.2.2 Land parcellation
A major stumbling block for developing countries regarding to land administration systems is the incapacity to reorganize land parcels (Wallace 2009). Converting raw land into parcels, parcellation, involves an exhaustive and extensive process. This process includes establishment of the boundaries of the development area, coherent arrangements with neighboring parcels and identification of the tenure of the developer. In addition, it consists of the provision of facilities, including roads, public transport, drainage, electricity, cable services, sewerage, water and so on, at the basic minimum. However, the process of subdivision and consolidation of land in developing countries are often inadequate. Even with the aid of commercial funds and professional project advice the land delivery process is not perfect.

Existing land uses and formal parcels deviate from each other, which is often profound and compounds reconstruction and compensation issues. The compensation between legal and illegal land development is not fair due to discrimination. This will lead to operational paralysis in those developing countries where “legalized” processes for land use planning, development and tenure regulation are not available or not putted into practice.

4.2.3 Building land delivery competencies
Within this range of multifaceted concerns, there are three tools that can contribute to the improvement of land delivery processes. These tools are usually within the capability of most governments. They assist governments comply good governance indicators and land governance indicators, since these tools are independent of a country’s ability to reach fulfillment with these indicators. Through research and experience, these tools are supported and have a long history. They can be described as a quick and effective land information system, a strong and systematically enforced anti-eviction law and guidelines for management of land grabbing:

Land information system – government level initiative
Nowadays most developing countries more and more rely on Land Information Systems (LIS) shifting into cadastral surveying as resources become available. This is in response to the vacuum of professional surveying capacity. One of the rising new tools regarding to LIS is the Geographic Information System (GIS) (Wallace 2009). This tool is available through new spatial technologies. GIS produces services like land use planning and property taxation on an effective and efficient way. However, the tool does not provide cadastral surveying that gives precise parcel mapping, scientific
coordination of legal boundaries with plan information, and land use identification. So it cannot replace cadastral surveying. All in all, it can be concluded that a GIS based LIS provides clear gains for managing people movement, consultation, and planning related to land delivery and in particular compulsory acquisition. UN-Habitat is supporting this tool by describing remote sensing and field surveying.

**Anti eviction strategies – grass roots empowerment**

Forced eviction is one of the methods used in countries with inadequate land administration systems and informal markets. They use almost inevitably this method in land delivery processes. According to the international and constitutional legislation (Wallace 2009) the right to housing and other human rights has to be guaranteed, but many evictions disregard this legislation.

There are also flexible legal anti-eviction laws in land acquisition processes, which empower local people to claim a role in negotiations related to a development. Certain laws provide an obvious underlying prospect for these people to complain to courts if they are ignored. This strategic impact concentrates on capacity building at basic level and not at government administrative levels. Therefore, there are authority indicators tested in the court system, where they are required as part of national ability to use a rule of law.

**Management of hard cases of land grabbing – an initiative for developers**

Within the land delivery processes land grabbing is a common aspect of land delivery. It is also a negative aspect that leads to long lasting tensions and undermines civil peace. It is useless to criticize governments of developing countries for their failures to meet international standards for management of land grabbing. These governments need assistance and support to create formal ability to manage their land delivery systems. The help and support initiative involves strategic partnership and commitment of foreign investors and their host countries in order to agree to a self imposed code of conduct for investment in agricultural land. Through this public private partnership (PPP), the adopted code subsequently helps target countries to reinforce their policy environment and implementation capacities by combining their efforts with those of investors. Ultimately, this code will deliver win-win solutions for all the actors due to the array of terms and conditions. The issues do not only include land administration, but also implementation of good governance standards through transparency. Next to this, the human rights based standards to protect local people while delivering essential development opportunities.

**4.3 Land provision for affordable housing**

The intention of social or affordable housing is to provide housing for those people who cannot afford to buy or rent housing under market conditions (Needham and de Kam 2000). By means of a number of ways the general prices of housing can be reduced and so address overall affordability. The first possibility is by modifying demand. That is for example by reducing net incomes or increasing the relative price of housing. Furthermore, the prices will decrease by reducing the real resource costs of producing housing, which means technological change or by making supply more elastic. The last method is by liberalizing the regulatory system to ensure more housing land is made available (Whitehead 2007). In this context, the second or third method is directly related to land provision for social residence.

However, there are significant restrictions that affect the land provision for social housing. The providers of social housing or affordable housing are in a weak place to supply land under market conditions due to the fact that returns are relatively low in social housing production compared to commercial housing production. Social housing goes with low rental incomes, and with low rental income, only low land prices can be covered (De Kam, Groetelaers et al. 2008). In addition, it has been accepted that social housing negatively affects the nearby residence prices (Needham and de Kam 2000).

These limitations resulted in an obstruction for state intervention to provide land for housing. De Kam et al. (2008) conducted a study in which different types of interventions haven been classified and
specifies. According to the study, state intervention in land provision for social housing can be divided into five intervention methods.

First intervention is state financing on land and provision of social housing. There are direct state subsidies on land and the construction of social housing, or subsidies to tenants who can receive housing benefits.

The second is related to interventions in property rights with regard to serviced land. This method can be classified into five different ways. First way, the state directly buys the land and provides freehold land for social housing. In the second, the state provides leasehold land for the same purpose as the latter. Third, the state directly carries out the social housing development. The fourth way, land provision for social housing will be provided via expropriation. The last method, the state enforces the private entrepreneurs to produce social housing as part of regular housing production programs by instruments such as inclusionary zoning (Whitehead 2007).

Third method includes interventions in social housing institutions. These institutions cover the housing costs (residence and land or construction) from their own budget. This could be achieved through cross-subsidization from the incomes of commercial housing sales. For this purpose social housing providers may follow market strategies like speculative land provision, or un-serviced land purchasing. Another approach is social residence providers which may develop non-marketing strategies.

Fourth is the participation of developers in social housing projects through market strategies. This means that land provision for social housing has direct economic advantage for them. For instance, a building that may achieve higher production rates by providing social housing in a time when the housing market is stagnating.

The final intervention method is the participation of developers in some social housing projects with ‘non-market strategies’ (De Kam, Groetelaers et al. 2008). The purpose of this kind of participation is either to improve relationships with local authorities, or motivated by corporate social responsibility and community engagement.

According to literature, the provision of land for social housing is a process which is often not fully coordinated with price. This means that land provision for social housing is not only a financial problem but also an institutional problem (Needham and de Kam 2004).

According to Kortals Altes and Sence Turk (2010), Land Readjustment (LR) can be used as a tool to provide social housing. This tool has been defined as land consolidation or land pooling by a government agency for the unified planning, servicing, and subdivision, with the sale of some of the new plots for cost recovery and the redistribution of other plots to the landowners (Turk and Kortals Altes 2010). There are some approaches to include costs related to social housing into LR projects (Turk, 2008). The first one is to sell cost-equivalent land at a reasonably low price to the agencies producing low-cost housing. This will finance the amount returned to the landowners by cross-subsidy. The second approach is, before LR, inclusion of agencies producing low-income housing into the project as a landowner by purchasing land from the project area (Turk and Altes 2010). Another approach is the use of financial surplus obtained from increasing land prices. This financial surplus will be allocated in order to produce low-cost housing during LR. The fourth approach is to use some landowners’ plots to construct multi-unit housing for rent or sale to low-income families. The last approach is to increase the land deduction rate at a certain level taken from landowners to finance public services. All these approaches to produce low-cost housing could be a possibility depending on the housing policies of the countries. These approaches has been used in several countries from different parts of the world, for example, while the first approach is used in South Korea (Turk and Kortals Altes 2010), both the fourth and fifth approaches are used in Spain (Gielen and Kortals Altes 2007).

However, the difficulty in developing countries is the low purchase powers of the low paid. This problem is much more an impediment to the provision of land through the formal private sector than
in developed economies (Keivani and Werna 2001). In addition, “...low income housing provision in
developing countries involves an intricate and complex network of relationships between various
agents and the state” (Keivani and Werna 2001, p. 111). It is therefore relevant to “...take into
consideration the entire structures of provision and the interactions of the relevant interest groups
and agents involved in the various submarkets and forms of housing provision.” (Keivani and Werna
2001, p. 111). The informal methods in which housing land is actually provided could be ignored by
strategies that are aiming to develop formal ways of provision of land for social housing (Keivani,
Mattingly et al. 2008).

4.4 Land costs portion of total housing costs
The cost of a housing unit depends on several components. As mentioned before one of the
significant components is land. Due to land the lower the cost of a dwelling unit, the higher the
proportion of total housing cost. This land portion can increase to 50% (Mattingly 2010) for some
houses of poor people.

Land can be used more efficiently through various approaches accordingly keep costs down. For
instance when a house is built on a small plot, the land cost for it is also relatively small. A building
which contains several dwelling units, they all can share the expense of the land plot on which the
building is realized.

For low-income housing it is often attractive to locate them in places where the land prices are low.
However, this can be a mistake, because these locations are difficult to use for housing which creates
a low price for such land plots. Subsequently, there will be additional costs to pay.

Obviously, public land can be used which it appears to cost nothing, but also this land does have a
price it would obtain if it were sold or rented on the market. This price indicates the cost of using for
housing an equivalent piece of land bought in the market (Mattingly 2010). Looking from another
perspective, if a quantity of public land were sold, the funds gained could finance services like water
provision, roads or other benefits to poor people. But this opportunity is lost if the land is used
instead for housing low-income people. Hence, there is a price tag for public land use. If that cost is
not assigned to the users of the dwelling units, the users are given a subsidy. The consequences of
subsidizing are also an issue to be aware of. It is necessary to know the size of the subsidy. This is not
just because of the opportunity lost to use this much of the resource or its market value for another
public purpose. If a subsidized scheme of providing land for housing low income people is to be
reproduced, the actual amount of the subsidy must be clear in order that it can be taken into account
in the financing plans for a similar project.

4.5 Challenges of land acquisition for the low-income group in
developing countries
The struggle for shelter by low-income groups is often a challenge for land – either getting land on
which to build or getting tenure of land already occupied. Most papers in this issue are about such a
struggle. The different challenges concerning land for low-income group housing in the developing
countries will be summarized below. These challenges were discussed in several articles and papers.

Most governments in developing countries believe that there is not enough urban land for housing. At
the same time, informal settlements are mushrooming and keep increasing in size and number. The
fact is that all these poor people continue to find pockets of land to squat. However, the land they
find is does not belong to them, which is not legal and it is not secure. This way, the problem is not
the availability of urban land for housing, but how the management of urban land is failing to deliver
this most basic ingredient of decent housing to the city’s low-income group.

In these developing countries in particular Asian cities, the strategies of building public housing on
public land, or of expropriating private land for social housing, had some success. But in most Asian
countries, urban land has more and more become a product for trading. This has dampened the
eagerness for most governments to set aside urban land for housing the poor. This resulted more or
less in a waiver of the strategy of government to provide land for social housing across Asia (Boonyabancha 2009).

4.5.1 Informal settlements

In many Asian cities in developing countries, which are dealing with rapid urbanization, the informal settlements are already much higher than the proportion of those living on formally-accessed land (UN-Habitat and UNESCAP 2008). On the other hand, the opportunities for the low-income groups to settle on unused public land are declining or poor located, as more and more leftover pieces of land get occupied. In addition, the poor people from large areas are often evicted in order to free up the land they occupy for commercial development or urban infrastructure projects. This eviction results almost in increased poverty, which is a serious problem for governments who are trying to achieve economic development and reduce poverty.

4.5.2 City land market failure

The motivation for these illegal settlements is the gap between the cost of the cheapest “legal” accommodation and what large sections of the population can afford (Satterthwaite 2009). In many countries, cities give attention to new investments as a result demand for labor. But the government regulations concerning land and legal urban land markets make no provision possible for the land needed for housing the low-income groups. Urban land markets are structured by the state (either explicitly or implicitly) because they determine the rules that govern land use. Therefore, they influence the supply of land and its cost. The failure of the supply of formal, legal land for housing for much of the population leads to the development of an informal land and housing market. But most of what this provides is of very poor quality and often in house structures that are illegal, on land sites that are occupied or built on illegally. As it could be assumed, this results in a high proportion of the urban population living in substandard housing and informal settlements, which a high proportion of these residents spending a large part of their income on renting accommodation.

4.5.3 Poor government land policies in the public good

As usual all governments influence access to land for housing in diverse ways, namely they allocate and use land that is publicly owned, they make land for housing available through expanding infrastructure and services to new sites and they influence land price and availability through official rules and regulations, including building permits and land use and plot specifications and how efficiently and transparently these are applied. The gaps between land for housing needs and availability within the legal formal system are matched by the gaps in official policy and what they deliver. The formulation of constitutions, laws and official declarations often makes much of social justice and of the social aspects of property rights and of government commitment to meeting needs, also in nations where sections of the urban population live in illegal settlements. They often use cut-off dates as a way of limiting this recognition. In Karachi, the Pakistan Railway Authorities have recognized that the informal settlements on their land have some legitimacy, but claim that only those formed before 1985 are legitimate. In the late 1970s, when the state government set up a special agency to regularize informal settlements on government land, initially this applied only to settlements formed by 1978; the cut-off date was later changed to 1985. Another device used by governments to limit entitlements to land is the waiting list – as explained in the paper on Zimbabwe by Beth Chitekwe-Biti (Chitekwe-Biti 2009). Local authorities are meant to manage land allocations for residential developments, and local residents are meant to register to get a plot. In theory, allocations are then meant to be influenced by those who have been longest on the list and those with secure employment. But it is difficult and time consuming to obtain the necessary documentation to get on the waiting list, and payment and annual re-registration are required to remain on it. It is also clear that there is corruption in the assignment of land allocations. In another case of housing queue management in Botswana, young people asked if they could inherit their parents’ place on the queue to improve their own housing opportunities – a reminder of the length of this process for many (Satterthwaite 2009).
What is land management?

When city governments have systems to make informed, equitable and effective policies and decisions about the allocation, use and development of the city’s land resources, that is good land management. An important part of land management is the land administration system, which identifies, records and disseminates information about the rights, value and use of land when implementing a city’s land management policies.

Source: (UN-Habitat and UNESCAP 2008)

Why can’t the poor access public land in cities?

**Centralized decision-making**
- Centralized decision-making keeps the authority over land and land management programs with national governments, while the local authorities who have to deal with the problems of landlessness in their cities have very little role in solving those problems locally.

**Inefficient use of urban space**
- Inefficient use of urban space means that too often, insufficient thought is given to how urban land is planned, developed, serviced and used, for example, where settlements are in relation to each other, to road and transport networks and where infrastructure like water and sewerage can be built cost effectively. This results in wasted land and wasted urban revenues.

**Government-driven approaches**
- Government-driven approaches rely on the state to make land available for people for housing and to set standards and procedures for developing that land. In many cases, a public monopoly on land ownership has worked against the poor’s ability to access urban land and created more barriers than options for them.

**Rigid and costly regulatory frameworks**
- Rigid and costly regulatory frameworks that dictate how land should be made available and developed often fail to meet the needs of the poor, who require much more flexible and affordable frameworks.

**Poor land recording systems**
- Poor land recording systems and highly centralized land information systems for registering land ownership and user rights can create large barriers for many poor households to access land.

Source: (UN-Habitat and UNESCAP 2008)

### 4.6 How cities can make land available for housing

Land provision to house the low-income people is an issue of political motivation for governments. If political interest exists, the literature describes a number of land management tools which governments can apply to make more urban land available for housing. These tools are outlined below (UN-Habitat and UNESCAP 2008):

- **Land use** plans which determine what specific pieces of land in a city can and can’t be used for.
- **Land taxation** which allows cities to charge landowners for holding land, receiving municipal services and using land in certain ways.

What is land management?

When city governments have systems to make informed, equitable and effective policies and decisions about the allocation, use and development of the city’s land resources, that is good land management. An important part of land management is the land administration system, which identifies, records and disseminates information about the rights, value and use of land when implementing a city’s land management policies.

Source: (UN-Habitat and UNESCAP 2008)
- **Land administration systems** which cities use to maintain updated information about land ownership, land use and who has the legal rights to what land.
- **Land tenure regulations** which determine what kind of tenure rights various owners, users and occupants may have to a piece of land.
- **Development plans** which cities can use to determine how specific pieces of land in the city can be used and developed in the future.
- **Development standards** which set rules and physical specifications for the kind of infrastructure and services that should be supplied to land and for different kinds of land uses.

If these land management tools are going to be effective in ensuring a sufficient supply of land for low-income housing, a city will need a good land management system to administer them, with an efficient organization, transparent procedures for decision making and appropriate information technology for collecting, processing, storing and disseminating information about land (UN-Habitat and UNESCAP 2008).

### 4.7 End of Chapter

This chapter formed the theoretical background for this thesis. As can be concluded from the literature studies the land issue is one of the most important components of housing, which can make a significant contribution to the housing problem. It is an extensive and international issue. The chapter also explained several challenges concerning land acquisition for housing in developing countries. The next chapter will specifically focus on the land for housing system in the city of Suleimany.
5 Land and Housing delivery systems in Suleimany

Kurdistan Region is a young government and is rapidly changing in all aspects of society. Also in the field of housing a number of housing programs have been made, which is also related to land supply and management. In this chapter, brief background information will be given of the city of Suleimany followed by the housing culture. The second section will give a description of the legal and regulatory environment for land and then an overview is presented of the housing market of Suleimany, followed by a clarification of the current land policy in the KRG. Finally an outline will be given of the infrastructure for housing and the housing finance in the region.

5.1 History background

Suleimany governorate is located in the east of autonomous Kurdistan Region of Iraq. The founding of the city started in the village Malkandi (today a quarter) and extended along the Marga in the south-west of the city because of favorable topographical conditions. The “Marga” formed the axis of the linear urban development. The main bazaar developed from the central point in the old city towards the south-west. This was one of the important reasons for the development of the whole city and its initial extension in north-east and south-west direction. Based on the master plan by Doxiades, a new axis was planned, later called Salem, which starts in the historic city extending in northwest direction. Possibly, within certain limits, a development towards the south-east and east may occur as a round off for the city. However, this is limited by the mountains and cemeteries. Additionally, there exists a canal to prevent flooding.

The city of Suleimany is 198 km off Kurdistan Regional capital Erbil and 385 km from the Federal Iraqi capital Baghdad. It is also the capital of Suleimany Governorate. Mountain ranges surround most of the urban settlements within the province Suleimany. This is also a fact for the city of Suleimany. Goizha and Azmar mountains, extensions of the Zagros mountains, prohibit a large scale urban extension towards the east and north-east, because these mountains are very near to the urban boundaries. There is a small forest area in the same direction which partially serves as wind protection for the city. In the north-west and south-west of the city we find the rivers Qlyasan and Tanjaro. The river bed is filled in the rainy periods; its width is between 50 m and 100 m. For this reason urban developments in these directions are impeded. The city is surrounded by agricultural areas with farms on them as well as leisure time facilities along the rivers. The agricultural areas provide the city with vegetables and grain. The Salem, the main street leading to the city centre and its extension connects Suleimany in the north-west with Kerkuk. The city is surrounded by a 60 m wide Ring Road. Under Saddam Hussein this ring road was the boundary of the developable area. Outside this area were only military installations partly with accommodation for military personnel.

According to the Suleimany Master Plan Final report (IGCO 2006), there is no actual record of the number of people living in Suleimany. The number of Suleimany province population as per a survey conducted by Suleimany Directorate of Statistics in December 2009 is 1,797,508 people out which 848,428 are males and 856,278 are females. A number of 365,605 families live in the province. This population is annually increasing by a rate of 3% and a number of new families are yearly formed with ordinary living standards.

The economy is primarily agro based. Main agricultural products are wheat, barley, rice, cotton, corn, lentils, various nuts and verity of seasonal fruits. Farming is a traditional industry in the Governorate. Farming products include chicken and meat, cheese, yoghurt, wool, leather etc. In addition there is considerable number of small and medium scale industries within the city areas. The main industrial products are construction materials such as tiles, concrete blocks, food items, carpentry work, ice plants etc. Two cement factories located in Tasluja and Sarchnar and the Tobacco and cloth factories located in city are the large industrial facilities in Suleimany. Suleimany’s economy today relies on tourism, agriculture and a number of small factories, most involved in the building trade.

Until 1921 Suleimany developed without any planning control. This resulted in irregular housing layout and narrow streets, what is still prevailing today in the historic town. Through the master plan
of 1957 and its modification in the 80-ies that was caused by the unexpected speed of growth, urban development occurred in structured pattern. After the fall of Saddam Hussein, the city grew rapidly like an amoeba, but there was no conclusive development planning. Moreover, the most dwellings in Suleimany are single-family owner occupied homes and attached housing. They include courtyard housing with and without front yards. The average plot sizes amount to 204.5 m² within the whole survey area. However, the variations are considerable, because the standard deviation is 88.5 m². The number of floors was recorded in the whole city as a mean value of 1.63 floors. Besides there are also mixed-use buildings including shops, residential apartments, doctor clinics, etc. in recent years there has been a huge increase in apartments. These buildings vary from low 3-4 stories buildings to high-rise buildings.

Figure 8: Urbanized areas of Suleimany city (Suleimany Municipality 2011)

5.1.1 Population size and urbanization

Kurdistan Region’s political economy is based on oil resources and it was only relatively recently that cities, urban land and urban poverty received much attention. Economic growth has not been equally distributed. In fact, inequitable distribution of economic activities, services and key infrastructures in KRG is putting pressure on emigration from less developed areas, especially in the districts, sub-districts and rural areas, to a handful of urban agglomerations. The growth of the populations and their increasing concentration in urban areas has put enormous pressure on the government to mobilize resources to meet the basic needs of their people. About 81%\(^7\) of Suleimany governorate population lives in the urban and about 19%\(^8\) lives in the rural. The urban population in Suleimany city was estimated at about 39.8 per cent, which were almost 720,718 people (Survey Data needs 2011) in 2009. In 1991 it was approximately 26 per cent. A key determinant but unquantified aspect of urban population growth in Suleimany, as elsewhere, is migration from rural areas due to infrastructure services and job opportunities (Survey Data needs 2011). Besides, the high growth rate plays a huge factor which is almost 3 per cent per annum (Survey Data needs 2011). While acknowledging the

\(^7\) COSIT/IHES 2007  
\(^8\) COSIT/IHES 2007
unpredictability of factors such as migration and growth rate, it concludes that there is no justification for interventions that attempt to prevent, restrain or induce urban growth.

Regarding to the jurisdiction, the district of Suleimany (city) has own municipality. The Governorate office is the main responsible actor in the governorate. The Municipalities are responsible for decision making but with contribution of Urban Planning Office, Directorate of Construction and Housing, and Board of Investment. Their obligations are setting instructions to facilitate legislations and implementation of regulation. Next to this, the obligation to compensate the land owner by providing 12% plots for each donums (2500 sqm) they own.

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<td>Suleimany city Annual growth rate</td>
<td>110.171</td>
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<td>3,89%</td>
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Table 14 – Overview annual grow rate in Suleimany city (Suleimany Statistics Office 2007)

5.2 The culture of housing

The region’s housing culture has a long tradition of self-housing, the initiative and the physically part of self-building with limited help from the government.

The initiative part of self-building consists of the construction planning, choosing a plot (location) and the design of the dwelling. The different styles, colors and use of materials reflect the outcome of this practice. Previously, self-building was also self-financed through own savings or incremental construction. Later, this changed when formal financial institutions started.

Followed by the initiative part the physical part of self-building was done with the help of family and friends. But nowadays the physically part has been replaced by building contractors. Only the initiative part of the tradition of self-building prevails.

5.3 Land delivery system

Suleimany delivery system for housing and residential land is through the years intervened by the government and especially the Municipality. This has been typified by a highly centralized bureaucracy. The institutions regulate everything from above and decisive, because housing is seen as a social activity rather than a productive activity. However, this approach is not adequate for the state to meet the demand and has to be rationed (UN-Habitat and IFC 2006).

In the years before, the government used the housing provision also as an instrument in controlling who lived where. This instrument was reflected in the allocation of housing, land and finance, which were used to benefit and reward sections of the population. However, the municipality of Suleimany could not produce enough units, nor could it meet the particular needs of individual without any assistance.

5.3.1 Land supply

Generally, the state owns virtually all vacant land. This land could be allocated to those the State wanted to reward or favor. In many cases, it is allocated to party members and state functionaries. Some of these land parcels were not used for housing. Therefore they were sold directly by the owners through brokers or auctions, has resulted in a private market.

Until 1921 Suleimany developed without any planning control. This resulted in irregular housing layout and narrow streets, what is still prevailing today in the historic town. Under centrally-controlled land use planning and zoning through the master plan of 1957 and its modification in the 80-ies that was caused by the unexpected speed of growth, urban development occurred in structured pattern. Serviced land with and without houses, as well as housing finance, were provided primarily to government employees. After 1980 the Government continued to allocate vacant land,
but poorly serviced at the periphery of cities. This resulted in the incomplete peripheral subdivisions. After the 2003, the city grew very rapidly without any compelling development planning. New settlements developed in the north, the north-east and in the south, they were planned but not coordinated.

As mentioned before, the allocated land plots became tradable in the private market. KRG has systems in place to facilitate the buy-sell process for land which are derived from the Iraqi systems. These systems are generally effective without serious constraint on residential development within master plan areas. The buying and selling process of land requires registration of title deeds with the Real Estate Registration Department (RERD). However, the system is not digitalized and not accurate and up-to-date. Therefore, it is not possible to define the real size of the demand on land in the private sector, due to the lack of complete date-base for these plots of land, and the none-use of the electronic system in registering the ownership.

Currently, there are four potential sources of vacant land concerning new residential development, which will be further discussed in this chapter: vacant plots within built-up areas, incomplete peripheral subdivisions, agricultural land at the urban periphery and rocky land. However, the municipality of Suleimany issued a freeze on the release of state land due to allocation disorder and mismanagement.

5.3.2 Urban land management

Ministry of Finance (MoF) holds the title to state land and is responsible for recording and protecting it (UN-Habitat and IFC 2006). The State Properties Directorate of MoF has the mandate to supervise the sale, lease or other assignment of government properties. In Suleimany city the surrounding land, in the outskirts is owned by the MoF and of Agriculture and the land was authorized for farming uses. MoF distributes state lands to Ministry of Municipalities and Tourism (MoMT) for municipalities. MoMT controls and manages the land allocated to them, but MoF remains the owner of title to land distributed to ministries. The process to change the land-use from agricultural to residential takes about 6 months (Mumtaz 2009). This is to allow for the land registration and laying-out of the plan and for the extensions to the access roads and services to be completed.

The Selling and Leasing State Property Law 32/1986 applies to all land allocations except those in free zones, industrial estates or under the investment laws. Under Law 32/1986 land may be sold or leased for residential, commercial or agricultural purposes. Public auctions are required to be held under prescribed procedures. Ministries that control land are bound by these procedures. Each has a sale and lease committee that manages the auction process. As part of the process, the land is valued by an assessment committee consisting of three directors or other high-level officials, plus a real estate agent and importantly, a representative from MoF (UN-Habitat 2011).

The most significant exception to the public auction requirement of Law 32/1986 is under the regime of Investment Law 13/2006, amended in 2009. The purpose of the law is to promote investment by the private sector. Under the Law, land can be part of the incentive for the investor, and no auction or bidding process is carried out (UN-Habitat 2011).

Land is leased for agricultural use by the General Commission of Agricultural Land of Ministry of Agriculture (MoA), under Law 35/1983. Rents are based on market value according to the assessment of a MoA committee.

The state can acquire land for its purposes, with compulsory acquisition governed by the 1981 Expropriation Law. Expropriation must be approved by the court.

5.3.3 Urban Planning

The Ministry of Municipalities is responsible for urban planning in KRG municipalities. One of the main constraints on the housing and real estate sectors for the Municipality is the shortage of developable land. The directorate has prepared master plans, which set out physical development proposals such as land use, infrastructure, special projects, etc. However, without specifying the process by which
they will be carried out. Hence, there is little or no detailed implementation planning, action planning, in which next steps, responsible parties and timeframes are defined.

Regarding to Suleimany, the Municipality is generally responsible for the implementation of urban development. Though, the Municipality as local government has limited capacity to carry out this order. Also, their lack of authority to raise revenues and carrying out infrastructure revenues plays a significant role. The responsibility of the Municipality on one hand and the authority and financial resources on the other create a mismatch, which explains the mixed results of public sector efforts to conduct urban growth in Suleimany.

### 5.3.4 Urban development

To understand the actual situation of a city it is important to look at the development in the past – if possible since the foundation. Suleimany was founded in 1784. As no former maps of the city have been available the oldest map is showing the nucleus of Suleimany in the year 1925. This small settlement in today’s centre of the city is a kind of seed of Suleimany. In 1925 the city corpus of Suleimany was situated in the south-east of today’s city. The corpus was of longitudinal shape pointing towards the north from a south-west to a north-east direction, located on a fairly plain plateau. The urban form looks compact and dense. The size of the developed city was 145.9 ha. Up to 1973, nearly 50 years later, the city has grown in a moderate way by 1.5% per annum and has doubled its size. In-between steps from 1925 and 1973 therefore are not giving more findings. The city corpus developed more or less in ring form to the west, north and east. The extensions to the south are less in size and we see in the north, west and south enclaves of development that are not connected to the “urban extension ring”. The borders of the developed areas don’t show a homogeneous form, they start looking irregular in shape. In 50 years the city corpus has increased to 315.8 ha. In the year 1973 Sarchnar existed as an industrial area out of the official Suleimany demarcation. The corpus of Bakrajo was agricultural land. Ten years later, in 1990 we can identify a considerable increase in size of urban area. The urban extension occurs predominantly in north-western direction, but not in a consistent form, but rather in “islands”. Some of them in the south and west, more or less disconnected to the actual city corpus. For the first time, urban development occurs in western direction, outside the official demarcation of the city of Suleimany. In 1990 the ring road exists but is not shown as only the settlement areas are illustrated in the map. The overall area occupied by urban development amounts to 2,173.9 ha; out of this, 57.80 ha are located outside the city demarcation. This shape of the city corpus is about 2.5 times bigger than the area in 1980. The growth pattern in 2003 is in character and form very different from the development in previous decades. The urban development spreads predominantly in western direction, whereby the wadi in north-south direction gets also filled with development, mostly commercial. The road to Kirkuk seems to attract development, which occurs in scattered form, like islands. The ring road around Suleimany has lost its function as a boundary altogether. The overall developed urban area amounts to 3,891.2 ha, out of that 458.2 ha are located outside the official demarcation of the city. The last record, the map of 2007 reinforces the development trend that had occurred in the 2003 map. We can record a large amount of scattered development islands in the western direction along the Kirkuk road but also in the north, the south-west and south-east. The extensions in the north and in the south-east start reaching into the feet of the mountains, creating considerable ecological problems. The overall developed urban area amounts to 5,858 ha. 1,320.40 ha are located outside the official demarcation of the city. Obviously, the city growth will continue due to the population trends and the economic developments in the future.

The Master Plan identifies large expansion areas particularly in the south and west for future development of Suleimany. These areas shall be developed step by step. Main objective is to fill in the already sub-divided areas in the south and north of the town, i.e. consolidation. Necessary technical infrastructure (roads, water, sewage and waste disposal) as well as social infrastructure (schools, facilities for health treatment and culture, shops and services, police, administration and above all sport and leisure facilities) are to be facilitated. Once this has happened the other development areas will commence. Unlike the areas described above one has to make sure that in the new areas the technical infrastructure is in place before housing is erected. Building shall be according to the subordinate system stipulated in the Master Plan.
5.3.5 Land Administration

Although KRG is now autonomous in most aspects of land governance, much of legislative and institutional framework for land governance in Iraq will still be applicable to Kurdistan. As predetermined in the Land Registration Law No. 43 of 1971, land titling and registration functions are undertaken by the General Directorate of Real Estate (Land Administration Department, Ministry of Justice). These registrations are processed in local offices, known as Real Estate Registration Directorates (RERD). They operate land cadastres, maintaining original title deeds for properties within their jurisdiction. Actually, the local governments have no role in land titling and registration in their jurisdictions. These records are documented in hard copy form, which are entered by hand into paper registers. Therefore, there are no accurate up-to-date aggregated data on types of property ownership or number and type of transactions.

Nevertheless, this land administration system for land titling, property registration, and land use change are generally effective. This way, legal owners are able to protect their property rights by securing legal title. Despite the complexity, land registration and ownership transfer can generally be carried out in less than one month.

The problems of the current land administration system are mainly multiple ownership claims, decreasing coverage due to informal settlement and long cumbersome procedures for converting agricultural land to urban uses. In general, the registration system is not acting as a constraint on land and housing market performance.

5.4 Land development process and allocation

Prior to 2003, the public sector was ultimately the source of all urban land. Following decision by the Ministry of Municipalities and its predecessors, local governments would auction land or distribute them to selected target groups (UN-Habitat and IFC 2006). However, once they had been allocated, land plots became tradable in the urban land markets, and were bought and sold among private parties.

According to Household Survey data (UN-Habitat and IFC 2006) the share of owner occupiers that purchased their plot from private parties is 80.9% in Suleimany city. Another 18.4% of households purchased their plots from government, as shown in the following table. We can conclude that the most share of acquiring land in Suleimany city is through the private sector and the remainder is allocated by the government.
Land development is the process of acquiring land, planning and laying it out with various land uses and providing infrastructure. The process of providing infrastructure, especially roads, also involves and includes the costs of leveling and clearing land (though not necessarily the clearing and leveling of the actual plots of building land, which is usually done by the builder/user).

In Suleimany, the process and procedure for land development can be summarized as follows:

1. **Acquiring land**: Most of the land that is likely to be used for housing is either unusable, hilly land (sakhari), or is being used for agriculture. In the case of the former, the process of acquiring the land is straightforward case of the Ministry of Finance agreeing to the change of land use and transferring it to the Municipality. In the case of the latter, there is an additional step of paying compensation to the current holder of the land. This varies according to the tenure and the actual type of use and development, but the most common process involves a “compensation in kind”, whereby the holder is “paid” in the form of developed land. Currently this is at the rate of 300m2 for every donum of land – or 12% of the land being acquired.

2. **Planning and laying out**: this is a relatively small % of the total land cost, and generally absorbed by the developer.

3. **Providing on-site Infrastructure**: the cost of providing the infrastructure is borne by the developer and, in the case of a private developer or investor, recovered as part of the developed land price. In the case of publicly developed land, the cost is rarely recovered directly from those to whom the land is allocated (though they in turn usually sell the land at a price that includes the enhanced value added by the infrastructure) – and as a result financing constraints mean that there is often a delay between land allocation and infrastructure provision.

The conventional practice in the KRG and Iraq generally, has been to allocate housing areas to one or more Government or semi-Government Ministry, Department or Professional or Trade Union to on-distribute to their members, usually in accordance with rank and seniority. Alternatively, land has been offered to applicants that meet specific eligibility criteria – usually for vulnerable or other targeted households.

After that, the Municipality is the authorized unit to subdivide the plots that are then registered with the land registration directorate as residential plots instead of farmland, and are allocated or sold to individual users.

Urban land created by such subdivision was allocated or sold at heavily subsidized prices to the following groups:

- Governmental employees,
- Work unions members,
- Martyrs families, and
- People of special needs

Since 2000 until 2010, some plots have allocated through acquisition, subdivision and transferred to various beneficiaries as shown in table 16. The table shows the decline of allocated land plots in Suleimany city, because the government issued a moratorium on the release of state land in 2010/2011. Obviously, the government has realized that the system of residential land allocation for

<table>
<thead>
<tr>
<th>Source of plot</th>
<th>Suleimany</th>
<th>Baghdad</th>
<th>Basrah</th>
<th>Hilla</th>
<th>Mosul</th>
<th>Najaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>18.4%</td>
<td>12.2%</td>
<td>40.8%</td>
<td>12.8%</td>
<td>12.8%</td>
<td>23.7%</td>
</tr>
<tr>
<td>Cooperative</td>
<td>0.0%</td>
<td>2.6%</td>
<td>4.5%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Private owner</td>
<td>80.9%</td>
<td>63.3%</td>
<td>50.8%</td>
<td>69.5%</td>
<td>71.6%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Gift or inheritance</td>
<td>0.7%</td>
<td>21.8%</td>
<td>3.4%</td>
<td>16.3%</td>
<td>12.8%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Other</td>
<td>0.0%</td>
<td>0.05</td>
<td>0.6%</td>
<td>1.4%</td>
<td>2.8%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 15 - How did you acquire this plot? (% of owner-occupiers)
(Household Survey, PADCO/UN-HABITAT 2006)
citizens (at relatively subsidized prices) is inefficient and does not target low-income categories and the most deserving. At present there has been little or no vacant land left in Suleimany city and thus new extensions of the city have been made in the area beyond.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3478</td>
</tr>
<tr>
<td>2001</td>
<td>990</td>
</tr>
<tr>
<td>2002</td>
<td>1913</td>
</tr>
<tr>
<td>2003</td>
<td>5539</td>
</tr>
<tr>
<td>2004</td>
<td>1324</td>
</tr>
<tr>
<td>2005</td>
<td>3323</td>
</tr>
<tr>
<td>2006</td>
<td>1545</td>
</tr>
<tr>
<td>2007</td>
<td>263</td>
</tr>
<tr>
<td>2008</td>
<td>58</td>
</tr>
<tr>
<td>2009</td>
<td>533</td>
</tr>
<tr>
<td>2010</td>
<td>24</td>
</tr>
</tbody>
</table>

Table 16 – Land plot allocation for housing (Municipality of Suleimany 2011)

On the other hand, there were many households that had no access to subsidized land and who also had no ability to pay for land purchased on the open market. These included:

- Non-governmental employees
- Families renting accommodation
- Retired persons (whether governmental or non-governmental)
- IDPs and Returnees
- Employees who had been in service for only a short time or were at a or low salary grade

There are advantages and disadvantages of the allocation process and system. Table 17 shows the two perspectives of this process.

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing access to housing</td>
<td>The process meant that some vulnerable groups could have no access to subsidized plots</td>
</tr>
<tr>
<td>Instituting a feeling of belonging</td>
<td>The allocation was based on status rather than the needs of the households</td>
</tr>
<tr>
<td>Supporting and offsetting an otherwise low salary structure</td>
<td>Vast areas of serviced and un-serviced land remained un-built due to a lack of finance</td>
</tr>
<tr>
<td>Identifying areas planned to be supplied with services</td>
<td>Land ownership was shifted in many cases to high income families due to the inability of beneficiaries to build a house</td>
</tr>
<tr>
<td>Providing beneficiaries with a source of funds for construction through the sale of the other half of the plot to non-beneficiaries</td>
<td></td>
</tr>
</tbody>
</table>

Table 17 – The advantages and disadvantages of the land allocation process (Mumtaz 2009)

The process also helped in the development of informal housing areas by households unable to access land for housing who then had to resort to using illegal processes. While the regulatory and other machinery of the government was in place, it was able to restrict the development of such areas. But when this was not the case, the tendency for illegal settlements, squatting and informal development could not be restrained, especially when coupled with an increased need for housing by IDPs, Returnees and other migrants.

As the city become a cultural and civic centre for the surrounding region it also functioned as a magnet for in-migration, especially because of the work opportunities in Suleimany compared with the neighboring settlements. Large numbers of low-income job-seeking migrants had no chance to afford proper housing whether in terms of rent or ownership, and this led naturally to encouraging the formation of informal settlements.
In Suleimany, these informal settlements were formed through
- the control or illegal use of municipal or public properties
- the use of agricultural land around the city since their right-of-use was given to farmers who could profitably sell this right
- the illegal use of public buildings

5.4.1 Land supply and availability
The sources for vacant land can be categorized into three main sources. These sources will be discussed below:

- **Infill plots throughout build-up fabric**: This source is economically efficient for housing investment, which are given high priority for development. The development process is simple, whereby the household or developer buys the plot from the current owner. Next, the future owner builds housing and occupies, rents or sells the unit(s). There are no significant constraints or problems. However the quantity of land in infill plots in the consolidated, built-out area of the city is not large.

- **Incomplete Peripheral Subdivisions**: This source is characterized by site demarcation by means of infrastructure (water and roads). Also this resource is economically efficient and should be priority development areas. In contrast to infill plots, the quantity of vacant land in peripheral subdivisions is quite large. Many recipients have secured title but did not build on their plots, because little infrastructure was provided in these areas. According to the MoMT in 2001, the residential land shortage would not be solved by more subdivisions, and that government should service existing residential areas to incentivize construction of housing on existing plots.

According to public officials and private experts interviewed in the study IHMS:
1. Land owners are generally private;
2. Some owners of vacant plots reside locally, others are absent.
3. Some owners prefer to build a house for themselves of their family, but lack financing.
   Other owners of plots are more interested in building housing, including rental housing, for investment.
4. Some owners get a construction permit, but never build. Some people use their permits to get access to subsidized building materials.

- **Agricultural land at the urban periphery**: Agricultural land requires conversion to urban uses, transfer of ownership or use rights to developers, or partnership between current owners and developers/contractors. The costs of off-site infrastructure can be important. In so far as the first two sources mentioned above cannot gratify residential land requirements, development will be necessary. However, since agricultural land lies mostly beyond master plan boundaries of Suleimany, it has less potential value for housing development. It is difficult to extend infrastructure services to these areas due to lack of municipal authority.

The agricultural land owners acknowledge the development potential of their lands. Many owners are willing to develop if land was rezoned. However, some owners do not comprehend the land development regulations and procedures. This way, they may decide to collaborate with land grabbers or developers/contractors. As it is known, rezoning agricultural land to residential land (urban uses) would seem to be a powerful development stimulation tool in Suleimany city.

- **Rocky land (sakhary areas)**: Suleimany is a hilly city, which is surrounded by hills and mountains. As for agricultural land, rocky lands such as hilly areas also require conversion to urban uses. Though, this resource is less suitable land for building due to its rough structure and some are protected areas, but because of the non-productivity of the land it has more
potential for urban development. Considerations of environmental sustainability require that valuable agricultural and productive land should be avoided or minimized.

5.4.2 Land Prices

The value of privately owned land is set by the market price for the land in Suleimany city. The land price varies considerably. Median land price ranges from 900 US$ per m² to 1100 US$ per m². The average land price is 1100 US$ per m². The prices are based on the following:

- Prices in (historic) centers are highest on average, reflecting central location and in some cases commercial development potential.
- After (historic) center, highest price per m² is in public housing estates and then peripheral subdivision settlements.

Resale prices for un-serviced peripheral land plots in Suleimany is in the range of 200- 400 US$ per m². Given plot sizes are average 200 m² in peripheral areas in that city. Depending on its location, ownership, service provision and level of development of the area the land speculation is increasing immensely. Figure 10 shows the land price indication for the city, conducted through a survey and interviews with real estate brokers. Some of the grey areas (200-400 USD/m²) shown in the figure are not registered and considered as informal. This is the reason these lands are underpriced in comparison with the other land plots.

Figure 10: Land price (Working group survey)
5.5 The Housing market

In Iraqi Kurdistan, the city of Suleimany is enjoying a property boom. As more and more commercial residential projects are developing and demand exceeds supply, buying off-the-plan is becoming more popular. The semi-independent region is generally more secure and more open to international investors than many other parts of Iraq, there are more and more people climbing onto the property ownership ladder. One of the recent trends in this housing market is buying off-the-plan properties from larger commercial developments. These projects are high in demand and often popular projects sell out almost immediately. A combination of increasing oil revenues and the money poured into reconstruction efforts along with lax regulation have been the main drivers of this boom (Zulal 2011).

The oil money comes in and is distributed through payment of inflated wages by the state. Yet banks are not fully trusted and the local stock market has a long way to go – the local population has very little knowledge of how it works.

Accordingly, housing is by far the most attractive form of investment (Zulal 2012). However, there is little data maintained concerning property prices in Suleimany city. The exiting numbers by surveys and looking through any real estate agent’s brochure indicating that house prices have quadrupled, and in some cases, even risen tenfold, since 2003 in the city (Zulal 2012).

Before the 2003 US-led invasion of Iraq, property prices here were seriously undervalued for obvious reasons. After the fall of Saddam housing and land prices have risen dramatically and public demand appears to be driving the residential market. Due to these circumstances the off-plan market is the new investment craze.

Despite the development of these inclusion projects housing prices have risen and private properties are fast becoming unaffordable for the residents and first time buyers in the city. According to the figures (Salih 2012) from the Kurdistan Region’s Ministry of Finance, the monthly income of a newly-employed college graduate is between 300,000 to 400,000 Iraqi dinars (approximately $240 to $320). Moreover, a day laborer with a limited and unreliable income makes around 500,000 Iraqi dinars (approximately US$400) a month.

The government has been trying to tackle this issue by introducing financial schemes to enable certain residents to get on the housing ladder. This includes, for instance, offering government employees the option of an interest free loan. The state provides 30 percent of the financing for an off-the-plan project, depending on the age of the recipient. The recipients need to reside in Iraqi Kurdistan and they usually will not pay any interest for around 20 years. The policy has proved popular although it is not completely fair as it is only aimed at public sector employees. However, there will come a point where property prices are so high that newcomers to the market will not be able to buy directly and will require mortgages. Apart from various government schemes though, the mortgage market is almost non-existent.

5.5.1 Household type, income and housing opportunities

The number of households in Suleimany reaches the smallest point at the level of Iraq and Kurdistan (Suleimany Statistics Office 2007), that is because of raising people’s awareness in this city by using modern method to organize family. A special report about the health of infancy and maternity indicate that using method to prevent delivery has a great rate in this city in which leads to shrink the family and community, ultimately we will get an aging community as it clarified in table 18. The age classification is categorized according to the working population, which is determined from 15 years to 60 years.
The average housing costs (including electricity, water and petrol) in Suleimany is about 25% of the total income of the household (Suleimany Statistics Office 2007). The figure shows that food takes priority before housing. See figure 11.

Available figures and statistics based on ration book (rations distribution) in 2007, and IHSES results, indicate that population distribution by environment (urban/rural area) was, at the level of the governorates, the 78.8% urban population against 21.2% rural population in Suleimany.

Average Kurdistan salaries can vary greatly due to company, location, industry, experience and benefits. In table 20, the average household’s income is given in Iraqi Dinar and US Dollar for an average household type of 5.0 persons based on a survey among selected families in Suleimany which counted 1080 families. The average income for households according to IHSES is 825 USD. The Ministry of Planning in Kurdistan Region announced that the average per capita income in KRG...
reached 4000 dollars. Gross National Product has registered a rise of 46.6% at current prices during the past six years. Also, Gross Domestic Product has risen by 68.9% for the same period, hence increasing the average per capita income by 42.7% at current prices (UNDP PUBLIC SECTOR DEVELOPMENT PROGRAMME 2011).

<table>
<thead>
<tr>
<th>Monthly income/household (in ID x 1000)</th>
<th>Monthly income/household (in USD)</th>
<th>Percentage income distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 or less/household</td>
<td>432 or less/household</td>
<td>27%</td>
</tr>
<tr>
<td>500-1000/household</td>
<td>432-865/household</td>
<td>35%</td>
</tr>
<tr>
<td>1000-2000/household</td>
<td>865-1730/household</td>
<td>30%</td>
</tr>
<tr>
<td>2000 or more</td>
<td>1730 or more</td>
<td>9%</td>
</tr>
<tr>
<td>Average per household (5.0 persons)</td>
<td>825 USD</td>
<td></td>
</tr>
</tbody>
</table>

Table 20 – Monthly income distribution (results of IHSES 2007 and Mumtaz 2011)

### 5.5.2 Land rights

There are three different land tenures in Iraq and the Region: (1) private ownership, in which the landowner has the right to buy and sell land and to raise capital against the value of the land; (2) land leased from the government on a long-term basis; and (3) inherited land, which has been passed from generation to generation but frequently results in an unmanageable number of owners (RTI-International 2008).

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Legal recognition and characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full private ownership</td>
<td>Legal recognition: Civil Code Registration/recording: Real Estate Registry Transferability: full, except to foreigners</td>
</tr>
<tr>
<td>Tassaruf (right of disposal): only underlying title held by the state</td>
<td>Legal recognition: Civil Code Registration/recording: Real Estate Registry Transferability: full, except to foreigners</td>
</tr>
<tr>
<td>Waqf (endowed for religious or charitable purposes)</td>
<td>Legal recognition: Islamic law Registration/recording: Real Estate Registry Transferability: not transferable</td>
</tr>
<tr>
<td>Customary tribal tenure</td>
<td>Legal recognition: none Registration/recording: none for the collective right Transferability: none</td>
</tr>
</tbody>
</table>

[other, if any]

Table 21 – Land titles in Suleimany city (RTI-International 2008)

### 5.5.3 Housing

The housing in Suleimany city is done by individuals, developers or the government. The projects by the private sector are usually intended for the higher income groups and the public sector endeavors to build for the lower-income groups. These projects are usually inclusionary schemes with similar income group within the scheme. There are three basic ways of constructing a house, and one of accessing one:

**Self building**

To arrange for a builder/contractor to construct it or with the help of family and friends, whereby the latter becoming less common, the tradition of physically self-building has been replaced by building contractors – this “self-building” is characterized with varying levels of inputs of materials and labor.
by the householder. The construction may be done in one or more stages. In the latter case, neither the timing nor the design of the subsequent stages is pre-determined, being dependent upon availability of funds and housing needs. The household must already own or hold the land before or at the time construction starts.

Developers
The last years commercial project developments have become very popular in Kurdistan Region and thus also in Suleimany city. When developing these residential compounds there are no minimum requirements concerning affordable dwellings. And often project developers focus on the upper middle income group and the high income group. They make these projects expensive and not accessible to the low-income group. To reduce risk they do not build until they have sold the units.

To buy the house from a developer, either off-plan or once it is built. In the former, the payments follow stages of construction, usually booked with a small upfront payment and the rest paid in arrears. Generally the householder selects a particular house (type) within a scheme of his choice – so long as it can afford to meet its terms and price. The householder need not have any land. See figure 12 and 13 for an example.

Figure 12: German village, example of residential (inclusion) project
(Source: http://iftss.net/icerik/proje_resim/german%20village%201.jpg)

Figure 13: Kurd city
(Source: http://www.naliagroup.com/wenekan/kurdcity%20one.JPG)

Governmental sector
For the house to be constructed by the Government (usually Ministry of Construction and Housing) and sold at a highly subsidized price (over 50%) to be paid in installments without any interest payments, over a 20-year period. Generally, the household applies for a particular scheme but has no choice of actual site or house or its design and construction. The householder does not need to have any land. Indeed, in most cases, owning land would probably be a disqualification, and having a house certainly would. The schemes are intended for the low-income group.

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9 See Annex 5
Private rental sector
The fourth option is to rent a house from a private (formal or informal) or public sector landlord, and some 10% of households resort to this option, either because they cannot afford to build, or more likely because they are waiting to build or be allotted a house – or (in the case of upper-income households) because they have not yet decided, or will not be living permanently in the KRG. Rental housing is an option across the income range, but is more likely to be resorted to by the very low-income or the better-off households.

5.6 Current land policies
There is no policy basis for state land except what can be derived from the legislative and regulatory regime. State land is to be protected and MoF is the responsible authority. It must be allocated under an open market basis. On the other hand, state land may be used in order to promote investment, and in these cases incentives are available in the form of free or subsidized land (UN-Habitat 2011).

MoF is the custodian of the nation’s assets, with an over-riding duty to protect them and to ensure maximum return on their allocation, unless there is explicit legislative or regulatory direction to the contrary for state purposes. Where government policy is to provide incentives to investors, MoF has the responsibility to ensure that the incentive is only as much as is needed to make the project feasible, and that the investor complies with the agreement. There is no institutional framework for implementing these mandates. Council of Ministers Order 7/2010 under the Investment Law conflicts with MoF’s mandate to some extent (UN-Habitat 2011).

There are no explicit policies about allocation of state land to ministries, what to do about surplus state land, or addressing issues concerning land occupied by squatters.

5.6.1 Land Tax
As a semi-autonomous region in Northern Iraq, the Kurdistan Region has introduced certain laws and practices which divert from the position in Federal Iraq. The government rates 0% - 6% on transfer of land, depending upon value of transfer, when land is bought (Deloitte 2012).

5.7 Infrastructure
Except in particular circumstances, the responsibility for the provision of social and technical infrastructure lies with the Municipality of Ministries, and is provided without any charge the households only pay user charges. Ideally, the installation of infrastructure should precede or at least accompany the sale of housing plots. Inevitably the provision of infrastructure is not always in line with demand, and very often the delay in infrastructure provision is cited as the reason for households not developing their plots.

In the case of housing schemes built by private developers, the internal, on-site infrastructure is the responsibility of the developer – and the charge is included in the price of the house.

5.8 Housing Finance
Very little housing finance is available in general and none for the purchase of land for housing. All loans require either a Government job or someone with a government job to act as a guarantor whose income must be sufficient to take on the loan repayment in case of default.

There are three sources of housing finance:
1. The Real Estate Bank – This requires a regular government job, ownership of land and makes low-interest loans available, usually for 12 years for non-Government employees and 15-20

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10 The IHMS surveys reported only 7% of Iraqi households having relied primarily on formal housing finance for their housing.
years for Government employees, depending on salary. The maximum size of the loan is determined by the household’s income (see annex 5).

2. **The Housing Fund** – This is meant to provide interest-free loans of 5-10 years, to very low-income households with regular government jobs – or an acceptable guarantor. The maximum loan size cannot exceed 30-40% of the house cost (see annex 2).

3. **Private Banks** – are relatively new and limited both in the range and the size of their operations, and do not really lend for housing, except for bridging finance in the case of a very few, selected individual individuals well known personally to the Bank.

### 5.9 End of chapter

In this chapter the focus was on Suleimany city and the land for housing delivery system in particular. The chapter explained how the land for housing delivery system have been established and managed. Also the current situation has been analyzed with the current policies and housing market. In Suleimany city the unexpected speed of growth in the 80-ties lead to urban development occurred in structured pattern. Therefore, the Municipality is responsible for the urban planning and development who has prepared a master plan with the proposed land use in the city. The directorate also controls and manages all the land within the municipality, which can be seen as a very valuable public asset.

The conventional practice of land development is authorized by the Municipality. Land development is the process of acquiring land, planning and laying it out with various land uses and providing infrastructure. Prior to 2003, the public sector was ultimately the source of all urban land. The land for residential purposes is developed by the local government and allocated or sold to individuals. These allocated lands are developed by individuals through self-building. However, to cope with the vast housing need the Municipality allocated undeveloped (subsidized) land to developers in order to build housing for the residents in the city. Eventually, the land is included as part of the house sale. Though, the responsibility of the Municipality on one hand and the authority and financial resources on the other create a mismatch, which explains the mixed results of public sector efforts to conduct urban growth in Suleimany. These projects in which was built in coordination of the Housing Fund and private companies and sold in a suitable price to the citizens with installment payment of 10 years (see annex 5 - Housing project descriptions). Though, the first payment has not served some low income groups and the costs of one square meter building were high as land was almost free. In addition, technical services are provided by the company, if it was provided by the public sector the budget or payments could be lower. Unsuccessfully, the allocation of municipal land to the private sector does not target the low-income categories.

The local government also experimented with governmental low-income housing in the city in an attempt to develop housing for the low-income groups in 2011 (see annex 5 - Housing project descriptions). The pilot project was carried out by the governorate as financial facilitator, the MoCH as project supervisor and private contractor as executor. Nevertheless, these projects have to rely on budgetary allocations. In addition, one of the main constraints on the housing for the Municipality is their lack of authority to raise revenues and carrying out infrastructure.

We can conclude that the problem is not the availability of urban land for housing, but how the management of urban land is failing to deliver housing to the low-income group in the Suleimany city. The land in the city is not handled and developed in a sustainable way by the authorized unit, the Municipality. In general, it can be stated that the objective to serve the low-income group through land at municipal level is not achieved. In this case, the lack of a land strategy or mechanism for the conventional land development is at the expense of the low-income households.

The next chapter will employ chapter one and two in order to identify possible strategies to cope with the current problems.
6 Possible strategies and solutions

This chapter deals with the possible land solutions and strategies that can be used to reduce and or partially solve the housing problem of the low-income group in Suleimany. The Directorate of Construction and Housing along with the Municipality want to serve this target group if possible. For this purpose, both existing and not existing strategies will be discussed to consider what they could mean for the mentioned group, with reference to the previous chapters. Also, to what extent the problem will be solved. Initially, all the possible land strategies and solutions will be appointed, which could contribute to addressing the housing problem. For drawing up this list of strategies literature study has been carried out along with practical study involving several interviews and field studies during the six months internship in Suleimany city, which is discussed before. The literature studies include significant UN-Habitat studies and also studies from another authors including W. K. Korthals Altes who has been examined the Turkish planning system and land for provision.

This chapter will give the similarities between Suleimany city and other developing countries, followed by a critical assessment of the current land system, concerning housing in Suleimany city. Subsequently, the possible land strategies will be discussed, that could make a contribution to the provision of affordable or social housing for low-income target households. At the end the most interesting and potential land strategy will be selected through criteria.

6.1 Similar land challenges as other developing countries in housing the low income group

The city of Suleimany has to deal with some of the same challenges for land that other cities also encounter, as discussed in chapter 4. The different challenges concerning land for low-income group housing in Suleimany city is similar to other developing countries on the following aspects; informal settlements, city land market failure, poor government land policies in the public good.

6.1.1 Informal settlements

The opportunities for the low-income households to settle on unused public land are declining or poor located in Suleimany city. Many households face obstacles in accessing land because of the time, price, corruption and difficulties involved. The distribution and acquisition of land and housing are still managed by traditional land tenure systems that exist outside the market. Consequently, the informal settlements exist because the low-income groups cannot afford or access the minimal housing provided by the formal land market. Thus, even the minimal standard of formal-sector housing is unaffordable to the poor. The option for the low income households is to build, buy or rent dwellings of relatively small size, low quality of construction and minimal service provision in an informal settlement.

Figure 14 – Informal area (left) and informal housing layout (right) in Suleimany city
6.1.2 City land market failure
The state structures urban land markets in order to govern land use which they affect the supply of land and its cost. Currently, there is a failure of adequate supply of formal, legal land for housing for the low-income households of the city. The high land prices ensure a significant challenge for the low-income group to acquire land in order to build their housing. The land cost portion provides huge total housing costs, which makes housing considerably less affordable.

6.1.3 Poor government land policies in the public good
Currently there is no clear and systematic land and social housing policy in Kurdistan region. Although, the government influence access to land for housing in diverse ways, namely they allocate and use land that is publicly owned and they make land for housing available through expanding infrastructure and services to new sites. However, the gaps between land for housing needs and availability within the legal formal system are not matched by the gaps in official policy and what they deliver.

6.2 Similar approaches for land for housing as other countries
There are three approaches which are relevant in Suleimany city according to chapter 4 and 5. These are the self-build housing, public land and the Greenfield (turnkey) projects.

6.2.1 Self-building
Self-build housing on allocated, subdivided or purchased land is part of a long tradition in Suleimany city. Initially it was full self-build and later this developed into co-operation self-help. This co-operation was not considered as formal through an organization, but it was rather the friend and family who helped each other out with the labor. Currently, small contractors carry out the work which it is still an approach for housing.

6.2.2 Public land
In Suleimany city most of the housing has been done through the conversion of public land. This approach has been practiced through acquisition, subdivision and transferred to various beneficiaries. The Municipality is the authorized unit to subdivide the plots that are then registered with the land registration directorate as residential plots instead of farmland, and are allocated or sold to individual users. The process has evolved during the time to meet the housing needs. Consequently, public land has been allocated to companies for private sector housing development.

6.2.3 Developers (inclusions)
The last years, commercial turnkey project developments have become very popular in Suleimany city. These project developers have most of the time access to subsidized land. However, they focus on the upper middle income group and the high income group. The government has no formal ability to manage their land delivery systems. There is also no initiative to involve strategic partnership to reinforce their policy environment and implementation capacities by combining their efforts with those of investors. This will create a win-win solution.

6.3 Critical assessment of the current land system for housing
Following the chapters 4 and 5 a critical assessment will be outlined in this part. In this part the strengths and the weaknesses of the current method that allows individuals and companies access to land for private sector development will be described:

Strengths
All lands within the cities basic designs will be either owned by the Municipality or at its disposal, according to laws in force. Also citizens who own land purely or by disposal rights would be eventually, by virtue of the laws, returned to Municipality, after compensation of owners. Thus, there will be technical and legal control for the Municipality on land use that does not allow any use not in accordance with the basic design. The implementation of the Plan and land use will be through
scientific methods studied by the Planning Authority in the city. In addition, current legislations allow municipal corporations to seize agricultural land located within the boundaries of the basic designs or their expansion and conversion to a real-estate use for citizens, according to guidelines, meaning the existing legislation to facilitate the task of obtaining new-real estate lands dedicated to the public good or for sale to the private sector.

Weaknesses
The allocation of municipal land to the private sector through a large allocation of land integrated (compounds) for implementation by the private sector does not target low-income categories and the most deserving. Also, the system of residential land allocation for citizens (at relatively subsidized prices) is inefficient and does not target low-income categories. Finally, the high increase of real estate value due to speculation creates an impediment to get access to land. Reflecting to chapter 4 and 5 we can conclude that the problem is not the availability of urban land for housing, but how the management of urban land is a weakness to deliver housing to the low-income group in the city.

Institutions concerned with allocation of land for the private sector development:
- Municipal institutions within cities and urban communities.
- Ministry of Finance and Ministry of Agriculture, which specializes in land outside urban areas.
- Different Ministries and institutions concerned with public lands for projects of such parties.
- Directorates of indispensable properties.
- Real Estate Registration Directorates concerned with registration of ownership of all land.

Legal frame which governs sale and allocation of land for the private sector:
- Municipal Management Law which can only be implemented within Municipality boundaries.
- Selling of State Properties Law through public bidding.
- Investment Law.

6.4 Possible strategies to make land more accessible to the low-income

The city of Suleimany over the past years had to deal with the weak land system in order to provide housing for the low-income group. During the six month internship in Suleimany there have been several meetings to discuss possible solutions including land solutions with regard to the low-income housing problem. An analysis of the problem observed during the housing study within the city of Suleimany shows that there are many options for limiting the problem with which this study focuses on in theory. These different land possibilities to provide housing for this target group can be found in both new land to provide housing as adjusting the existing supply in order to provide housing.

Below the available and possible strategies and solutions are listed that have been addressed during this study. They also theoretically fit within the city of Suleimany. These strategies are established on the basis of literature study, interviews with experts and discussions held during the internship at UN-Habitat Iraq department.

Initially, certain conditions are not taken into consideration. For instance the costs and time period considered necessary in the implementation of the strategy are not taken into account. However, a number of strategies will be selected from which are interesting for the DoCH and the Municipality of Suleimany to be further investigated and discussed in the following chapter. The most interesting and potential strategies will later be elaborated and evaluated in the next chapter for their effectiveness, efficiency and support among different actors.

The opportunities of land need to be seen as part of a broader approach for ensuring housing for the urban poor. Issues around land need to be looked at in the context of urban governance, urban planning and infrastructure provision as well as economic and social empowerment of the poor.

Hence, some believe that there is a single solution to the problems of land. Unfortunately, there is not a single solution and that is a myth for two reasons:
1. *Political contexts, legal frameworks, land ownership, urban histories, employment sources and community organizations all vary dramatically from place to place, and no policy or program can ever cover them all.* A solution that may work well in one place may completely fail in another. Likewise a solution may work well for 20% of the city’s poor, but not for the other 80% (UN-Habitat and UNESCAP 2008).

2. *Single-solutions seekers miss many good chances when they look only one way.* A rich field of experimentation and innovation on many fronts, in many styles, and with many groups trying out different strategies are those which are most likely to produce the solutions that work. The solutions that do not work can be forgotten, but those which show promise can be supported, refined, expanded and then replicated or adapted in other places (UN-Habitat and UNESCAP 2008).

The strategies which are presented here are ideas that can help affordable housing projects in the future become more feasible to address the low-income group:

**Strategy 1 Planning more efficiently or revised land standards**

Standards of land provision, in terms of plot sizes and layout, largely determine land use and densities and therefore the total amounts of land required for housing and settlements. In all situations, environmental sustainability suggests the reduction of land used, especially in terms of its usurping and encroaching on agricultural or environmentally sensitive land.

However, land use and layout also determines the visual appearance of settlements and affects social behavior and cultural aspirations. For example a low-density development may force residents to resort and rely upon private cars, reducing a sense of community and increasing isolation. The same may be the case with high-rise residential blocks.

Thus, settlement planning and layout should be concerned with both conserving land, but also promoting livability through smaller, narrow-fronted plots, medium-rise development, pedestrian-based neighborhoods with mixed income mixed-use development in a relatively self-sufficient district connected with rapid and affordable public transport. This strategy is actually difficult to implement in some informal settlements. Due to the defined structure the land layout could not be changed easily. With radical modifications the structure of such settlements could be improved. When laying out a redevelopment project, good planning can help reduce per-unit land costs, allow for more efficient and more affordable basic services, and create better living environments which allow the residents to enjoy a better quality of life. There are several ways to do this:

- Planning for higher density
- Planning with people
- Planning efficiently
- Planning roads for pedestrian, not cars

**Strategy 2 Improved land information**

A well-functioning land information system is important precondition to provide land for housing the poor. An unclear land record in a city will provide manipulation for land-use in different ways by potent interests. In these manipulations, the poor are almost always the brunt. Besides, you cannot legally give or lease land to the poor (either individually or collectively) if the rights are uncertain, so the threat of eviction remains. A good land information system is an essential tool for planning how land is managed. This way, a city’s land resources can be used efficiently and equitably for the benefit of all its inhabitants, its economy and its environment. Without clear land information, planning for a city’s roads, infrastructure networks, social amenities, public facilities and housing becomes extremely difficult. The lack of reliable, updated public records of land rights and land transactions can also be a barrier to developing an effective, transparent land market. Poor land records stimulate the growth of informal land markets, with large numbers of land transactions and allocations going unrecorded. So cities lose out on revenues from property taxes. A land information system prevents forged land titles and false land sales and make it hard to ensure appropriate compensation in cases
of resettlement or land readjustment concerning informal settlements. These problems can in turn lead to greater tenure insecurity and increased instances of land conflict.

When poor communities have access to good information about what land in their city is available, who owns it, how much it has sold for and how much similar land is worth, it can help them to find possible land for housing and strengthen their negotiations for a lower price. The use of aerial photographs, land records and GIS systems is no longer the exclusive privilege of the educated elite in our cities.

**Strategy 3 Better land taxation systems**

Taxing land is one of the main ways that cities around the world generate public revenue for various public purposes. But charging taxes on land – especially on land left vacant – is also an important fiscal tool city governments can use to discourage land speculation and ensure a steady supply of land for various purposes. A steady supply of land in a city has the effect of keeping overall land prices down, which in turn makes it easier for the poor to access land for housing.

Taxes on land are charged in different ways, according to a variety of tax systems. Three main categories of tax are:

- Capital gains taxes
- Vacant land taxes
- Land use taxes

In many countries, however, these land taxation policies have not won much support from political elites, many of whom are themselves land buyers and land speculators, and implementation of the policies is almost always hampered by under-assessing of property values, bribery and tax evasion. Often, high taxes on land drive land transactions underground and result in informal subdivision of lands and false sale records. Within an informal settlement the taxation system will not contribute financial support.

**Strategy 4 Land sharing**

Land sharing is an approach developed in Asian countries to resolve urban land conflicts between poor communities (who need the land they occupy for their housing) and private or government landowners (who want the land back to develop it).

After a period of planning and negotiation, an agreement is reached to “share” the land. The community is given, sold or leased one part of the land for reconstructing their housing (usually the least commercially viable part of the land), and the rest of the land is returned to the landowner to develop. How much land the people get and how much land goes back to the owner is decided during the negotiations. And finally, everybody benefits.

Land sharing is usually a long and complicated process and doesn’t work in all situations. But as more and more land sharing projects are being implemented in different countries, the strategy is becoming much better known and understood by communities, governments, housing professionals and landowning agencies, and the negotiation and development times are getting shorter.

Land sharing divides the benefits of urban prosperity a little more equitably:

- Landowners can clear some land for immediate development and save time and the costs of long eviction litigation.
- Informal settlement residents stay where they have been living and working, get secure land tenure.
- Governments get much needed land and housing delivered to the city’s poor communities, without having to pay for it.
**Strategy 5 Land readjustment**
This strategy provides a new, planned redevelopment project by joining several pieces of land, which are adjacent and therefore creates a large site. Land readjustment projects are often realized in low-density slums in inner cities. These neighborhoods will be transformed into new, high-density subdivisions with more housing and smaller size house plots. The layout of the houses will also be improved on an efficient way with better public facilities and infrastructure. In a large project there may be parks, playgrounds, schools and shops integrated in the plan. The landowner will be promised one or two plots in the new subdivision in exchange for agreeing to join the scheme. These new plots are expected to fetch a high market price. The process of land readjustment requires several steps to come up with an adequate plan. To begin, the value of the land has to be determined with a set of preliminary readjustment plans. Subsequently, this first step will be considered and discussed with the involved landowners and occupants. They decide together which form the final redevelopment plan takes. Finally, according to the value of the former land the new plots are allocated to landowners in the new housing scheme.

This readjustment strategy can be used as a solution to provide land and housing for the urban poor, but it may not produce huge numbers of housing units per year.

**Strategy 6 Cross-subsidy schemes**
In many countries and also in Asia several governments have developed a strategy to subsidies low-income housing through cross-subsidy. This new policy requires that private-sector developers retain a segment of their formal, market-rate housing for the mentioned target group. It could be seen as a progressive tax on high-end development. Although, there are different ways to approach this strategy, but the ultimate goal of the policy is to reserve a certain percentage for low-income housing. This can be designed through the total number of units a developer builds or a certain percentage of the total land the new development is being built on. The unit size and price whether rent or sale, are determined in the policy to ensure the affordability to the poor. In practice, the private-sector developers are not enthusiastic about this idea, which results in negligible number of affordable housing units for the poor.

**Strategy 7 Regularizing existing slums**
The tenure uncertainty of informal residents makes for the slum dwellers more complicated to have access to land and housing. The recognition of this fact is a way to highlight the problem and solve this by granting legal tenure land to ensure the poor’s sustained access to land and housing. The process of regularizing informal settlements on private land requires negotiation with landowners. The land could be sold or leased to community members, community cooperatives or some intermediary government organization, which then manages the repayment of individual households for their land plots. Regarding to governmental land, the plots are usually regularized by granting long-term lease contracts or user-rights to individual households or community cooperatives. There are three granting scenarios, namely for free, for a nominal fee or sometimes for full cost-recovery.
Strategy 8 Using public land for housing

Using public land is characterized as the best strategy to reduce land costs for low-income housing. For example governmental land agencies could designate land, which can be planned and built under a variety of partnerships. A land belongs actually to the residents of a city. Unfortunately nowadays these public lands will be sold or rented it out to the highest bidder, for shopping malls and luxury hotels instead of using it for the public markets and low-income housing our cities so desperately need. For poor communities it is living on public land to negotiate affordable lease rates and secure tenure terms than it would be on private land.

Strategy 9 Learning from informal land developers

Informal land market is a fast, simple and easy system of delivering land to the poor. That is also one of the reasons why this target group approaches this informal system with the risk in their mind. Due to the lack of formal sector efficiency organized by governments, the poor have no choice but to resort to these informal markets. The formal systems are based on bureaucracies. Moreover, it takes too many steps to plan and implement these projects coupled with too many fees and procedures, which takes too much time. A more important aspect is the corruption, when these systems do not reach their target group, but they end up supplying subsidized land and housing to groups who are not so poor at all. Although, there are also examples of governments who are providing public land for housing in a transparent, simple, fast and effective way in reaching the poor through partnership. The reference of Hyderabad, Pakistan shows this way of partnership.

Strategy 10 Supporting community initiatives

Due to the high costs of land it is hard to realize affordable housing for the poor. This group is left to provide their own housing in informal settlements. In order to increase and improve the supply of
affordable land and housing in Asian cities the poor themselves has to be supported. The most effective way of delivering land is still informal systems, which they have developed. So, poor communities can be more inventive than centralized formal systems or developers concerning land for housing. When well-organized communities have access to cheap, flexible loans they can search for and negotiate to buy suitable land on their own. Instead of undermining the efforts of the poor, there are many ways whereby governments, NGO’s and institutions can support what poor communities and their networks and federations are already doing from the bottom-up. Through partnership with the poor communities some strategies are developed which communities have produced some of Asia’s most exciting new breakthroughs in land and housing for the poor.

One of the examples of a community based organization is the Vincentian Missionaries Social Development Foundation, Inc. (VMSDFI). This is a church based organization which has been working in the urban slum community of Payatas, Quezon City, since 1991, in search of community development goals for the lowest 20 per cent of the urban poor population. As a support intermediary organization, it works with urban poor communities in Metro Manila and three other cities in the Philippines.

6.5 Selection of strategies

6.5.1 Objective
The selection of the most interesting strategies, which described in the previous section, has been developed through interviews, group discussions with the before mentioned working group in Suleimany and consultations. Thus, during these meetings several strategies and solutions have been discussed. The starting point of the discussions was to get feedback on acceptability, and also whether there are other aspects which are missing with regard to the strategies under the current circumstances for Suleimany city. In addition, to reach a joint assessment that which of the strategies could be interesting for further investigation to have treated in this study. Thereafter, with the feedback and information in mind, the strategies are assessed against the criteria through discussions with UN-Habitat experts. These experts represent the overall picture of the acceptance rate of the strategies, due to their extensive working field within the Kurdistan Regional Government for the formulation of the KRG housing strategy in 2011.

The issues and preconditions, with regard to the selection emerged from the interviews and discussions, are summarized in the next paragraph.

6.5.2 Assessment criteria
The strategies described in this study have theoretically all potential to bring any improvement in the land provision for housing the low-income. However, Suleimany city has to deal with different aspects and (legal) preconditions that should be considered in the deployment of new or adapted strategies and policies. Therefore, the criteria with regard to the selection have been determined through literature study (Rakodi 2007), consultations with UN-Habitat experts, Babar Mumtaz and Dyfed Aubrey and also through the collected data and information in the city during the internship. Through informal interviews and consultation, these experts have given their evaluation about the possibilities of each strategy against each criterion. Table 22 will briefly elaborate on the aspects that are used as criteria and the evaluation of the criteria by the experts.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Understanding</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior experience/past experience</td>
<td>Has something like this been done before – what happened</td>
<td>Very useful Good basis on which to judge whether proposals will be acceptable and to evaluate chances of success.</td>
</tr>
<tr>
<td>Financial investment</td>
<td>What are the cost implications</td>
<td>Very useful Costs of implementing and impact of costs on people and institutions likely to determine acceptance willingness to try</td>
</tr>
<tr>
<td>Juridical/ regulations</td>
<td>What are the legal implications</td>
<td>Useful Ordinarily not very useful except perhaps for the additional time required – but in present Iraqi context, having existing legal basis is essential (changing laws is difficult)</td>
</tr>
<tr>
<td>Security of tenure</td>
<td>What impact will it have on security of tenure</td>
<td>Very useful This is of course one of the main reasons for intervening in land – and lack of land is big obstacle for housing</td>
</tr>
<tr>
<td>Possible to combine with other strategies</td>
<td>Compatibility with other measures</td>
<td>Very useful Having an internally consistent policy is helpful because each becomes supportive of the other, lessens costs/efforts</td>
</tr>
<tr>
<td>Service provision</td>
<td>Infrastructure</td>
<td>Very Useful After tenure and access to land, the ability to provide infrastructure cheaply/easily is the most important</td>
</tr>
<tr>
<td>Access to disadvantaged groups</td>
<td>Impact on disadvantaged groups</td>
<td>Very useful That is assuming that you are concerned about such groups – and public policy SHOULD always be very concerned</td>
</tr>
<tr>
<td>Scale</td>
<td>Implications for scale</td>
<td>Useful Again, depends on what scale the overall policy is concerned with...this might become key, but otherwise less important</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>Is it easy to implement the strategy?</td>
<td>Very Useful The less institutional change required the better</td>
</tr>
<tr>
<td>Felt need</td>
<td>Is there a felt need?</td>
<td>Very Useful The great/more obvious the need the more support</td>
</tr>
</tbody>
</table>

Table 22 – List of criteria

6.5.3 Score and selection

Regarding to the selection of the best strategy there are some remarks to be discussed concerning the criteria and the scores. As mentioned before the criteria are established using literature of Rakodi (2007), group discussions in Suleimany city and consultation and interviews with experts both from Kurdistan government and UN-Habitat. Subsequently, the eventual criteria are evaluated by the UN-Habitat expert, Babar Mumtaz and Dyfed Aubrey. In addition, Babar Mumtaz has added two other conditions namely “ease of implementation” and “Is there a felt need”. What is very important is not to do a lot of work on a strategy only to find that it is not acceptable or not easy to be implemented or has already been tried or not to have included something that is felt to be needed. Furthermore, each criterion will be categorically weighted within the context of Suleimany city. Below tables outline the evaluation of the land strategies against the criteria. Arguments that emerged for assessing the strategies are include in the tables. The arguments are based on the following sources:

- Babar Mumtaz, Housing expert at UN-Habitat and Urban planner/development economist (14-08-2013)
- Dyfed Aubrey, Land and Housing expert (Iraq) at UN-Habitat (09-08-2013)
- KRG housing needs assessment report, Mumtaz B.
### Planning more efficiently or revised land standards

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>No. Standards have not changed since 1976</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Positive&lt;br&gt;This could considerably reduce costs of infrastructure, and of housing and also the overall expenditure on housing</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Many/Complicated&lt;br&gt;Any change in land standards would require a major change in the land use and planning standards and legislation</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Positive&lt;br&gt;By reducing the amount of land required, the price per plot should reduce. More importantly, many informal housing areas are threatened with eviction because they do not meet standards – they will greatly benefit</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Positive&lt;br&gt;Depending on what standards are changed, etc, this could be compatible</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Positive&lt;br&gt;This should reduce costs of infrastructure by reducing service runs</td>
</tr>
<tr>
<td>Impact on disadvantaged</td>
<td>Positive&lt;br&gt;Assuming land standards are modified to suit the needs of lower income, this would be advantageous for the disadvantaged groups</td>
</tr>
<tr>
<td>Implications for scale</td>
<td>Reductions in plot sizes and increases in densities should make it possible to use less land and therefore land could be developed more efficiently and more areas could be used</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>Negative&lt;br&gt;This is likely to face considerable opposition from professionals and bureaucrats who are mainly against change</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>No –&lt;br&gt;Most professionals and bureaucrats and politicians feel threatened by any “lowering” of standards</td>
</tr>
</tbody>
</table>

### Improved land information

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>No.&lt;br&gt;There is a strong tendency to not make public any information, especially relating to land</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Major&lt;br&gt;Since the whole state and status of information collection and dissemination hardly exists, this will require a major effort to set up and manage</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Many/Complicated&lt;br&gt;Even if there are no actual laws preventing the release of information, the bureaucracy acts as if ALL information is covered by “State Secrecy” confidentiality and major legislation will have to be introduced to make information freely available</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Neutral or Negative&lt;br&gt;Any beneficial impact is likely to be indirect at best – but it is likely that existing tenants and owners (especially in informal areas) will be asked to prove their right to be there and in the absence of legal tenure, might be evicted</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Positive</td>
</tr>
</tbody>
</table>
Better and more accessible information should make urban planning and housing projects easier to design and implement

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>However, the information could be used to better identify land that has been serviced and to collect user charges and therefore improve cost-recoveries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on disadvantaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
</tr>
<tr>
<td>See security of tenure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implications for scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
</tr>
<tr>
<td>Initially, the need to have information might well delay and even derail housing projects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ease of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
</tr>
<tr>
<td>Freedom of information goes against current traditions and is likely to be met with considerable opposition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Is there a felt need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes and No –</td>
</tr>
<tr>
<td>Those on the demand side are keen to more open and accessible information, while those on the supply side who are responsible for the information are against it</td>
</tr>
</tbody>
</table>

### Better land taxation systems

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>No. Systems have not changed - since 1976?</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>This could improve Municipal revenues thereby making service delivery and housing subsidies easier</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Many/Complicated</td>
</tr>
<tr>
<td></td>
<td>Any change in land taxation would require a major (constitutional) change in revenue allocation and sharing. Currently all collections go to the centre, there is no incentive for Suleimany to increase revenues</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Marginal</td>
</tr>
<tr>
<td></td>
<td>But, if the poor were not protected by some form of progressive taxation, they could be adversely affected</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>If done well, it could increase revenues which could be used to support other housing measures</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>This should improve the municipality’s ability to provide infrastructure, but under the present set-up may not be able to</td>
</tr>
<tr>
<td>Impact on disadvantaged</td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Assuming the taxation is progressive – it may even be positive if it is used to support the disadvantaged</td>
</tr>
<tr>
<td>Implications for scale</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Though the larger the number of people that have to be taxed, the more complicated it might become unless well-designed</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>This is likely to face considerable opposition from the better off as well as professionals and bureaucrats who are mainly against change</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>No –</td>
</tr>
<tr>
<td></td>
<td>Most better off and professionals and bureaucrats and politicians do not feel any need for more taxes</td>
</tr>
</tbody>
</table>
## Land sharing

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>No.</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Marginal Any costs would likely be offset by gains in reduced expenditures on relocations</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Many/Complicated This would require a major change in the law</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Positive Most informal settlements could be accommodated in-situ thereby reducing the need for evictions</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Positive Would reduce costs and increase affordable housing</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Positive Most land-sharing would be in areas already serviced or contiguous to serviced areas, therefore reducing the need for major extensions of infrastructure networks. However, increased densities may put excessive pressure on some systems in some locations</td>
</tr>
<tr>
<td>Impact on disadvantaged</td>
<td>Positive See security of tenure</td>
</tr>
<tr>
<td>Implications for scale</td>
<td>Positive Land-sharing reduces the need for relocations and land acquisition</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>Negative Professionals and bureaucrats see such measures as “favoring/rewarding criminal/illegal behavior”</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>No. The formal position is that there is no problem and that informal settlements should be demolished. Most informal households probably want relocation and compensation (provided it can be near where they are now)</td>
</tr>
</tbody>
</table>

## Land readjustment

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>No. There is no experience of this to date</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Marginal Any costs would likely be offset by gains in reduced expenditures on relocations</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Many/Complicated This would require a major change in the law</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Positive Most informal settlements could be accommodated in-situ thereby reducing the need for evictions</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Positive Would reduce costs and increase affordable housing</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Positive Most land readjustment would be in areas already serviced or contiguous to serviced areas, therefore reducing the need for major extensions of infrastructure networks. However, increased densities may put excessive pressure on some systems in some locations</td>
</tr>
<tr>
<td>Impact on disadvantaged</td>
<td>Positive</td>
</tr>
</tbody>
</table>
### Land strategies

<table>
<thead>
<tr>
<th>Implications for scale</th>
<th>Positive</th>
<th>Land readjustment reduces the need for relocations and land acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of implementation</td>
<td>Negative</td>
<td>Professionals and bureaucrats see such measures as “favoring/rewarding criminal/illegal behavior”. Moreover, most potential land is in the control of large, powerful Ministries who are likely to resist land sharing</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>No</td>
<td>The formal position is that there is no problem and that informal settlements should be demolished. Most informal households probably want relocation and compensation (provided it can be near where they are now)</td>
</tr>
</tbody>
</table>

### Cross-subsidy schemes

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>No</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Positive</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Neutral</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Marginal</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Very Positive</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Positive</td>
</tr>
<tr>
<td>Impact on disadvantaged</td>
<td>Positive</td>
</tr>
<tr>
<td>Implications for scale</td>
<td>Positive</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>Neutral</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>Positive</td>
</tr>
</tbody>
</table>

### Regularizing existing slums

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>Yes - No</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Positive</td>
</tr>
</tbody>
</table>
### Using public land for housing

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done before – what happened</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Most of the housing has been done through the conversion of public land</td>
</tr>
<tr>
<td>What are the cost implications</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>The actual costs of land are nominal</td>
</tr>
<tr>
<td>What are the legal implications</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>This is the standard procedure so covered by current legislation</td>
</tr>
<tr>
<td>What impact will it have on security of tenure</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Provided it is used to provide affordable housing for those that do not have housing and upgrade informal settlements</td>
</tr>
<tr>
<td>Compatibility with other measures</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>This is fully compatible with most other measures</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>The provision and upgrading of infrastructure can be planned and implemented easily</td>
</tr>
<tr>
<td>Impact on disadvantaged</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>But only if their needs are accommodated</td>
</tr>
<tr>
<td>Implications for scale</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>There is sufficient public land available to meet needs</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>This is standard operating procedure, but some of the details would have to be varied to meet the needs of low-income and disadvantaged households</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Learning from informal land developers

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has something like this been done</td>
<td>No</td>
</tr>
<tr>
<td><strong>before – what happened</strong></td>
<td>There are relatively few instances of informal land development</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **What are the cost implications** | Positive  
Informal land is developed much cheaper, largely because it lacks infrastructure and public space |
| **What are the legal implications** | Negative  
There are likely to be major complications in changing the law to accommodate “lower” standards |
| **What impact will it have on security of tenure** | Positive  
More households are likely to be housed affordably |
| **Compatibility with other measures** | Positive  
More efficient standards should support other measures |
| **Infrastructure** | Negative  
Infrastructure provision and standards might be lower as a result |
| **Impact on disadvantaged** | Positive  
Households are more likely to get housing |
| **Implications for scale** | Positive  
More housing could be accommodated and projects implemented more rapidly, especially if sequential upgrading is incorporated |
| **Ease of implementation** | Negative  
Bureaucrats and professionals are not sympathetic to such measures and might resist change |
| **Is there a felt need** | Yes  
In so far as the need to do something about affordable housing is a priority |

### Supporting community initiatives

<table>
<thead>
<tr>
<th><strong>Criteria</strong></th>
<th><strong>Evaluation/Assessment</strong></th>
</tr>
</thead>
</table>
| Has something like this been done before – what happened | No  
There has been little community initiative apart from resisting evictions |
| **What are the cost implications** | Positive  
Any additional costs are likely to be offset by a reduction in the extent of work and effort that the State will have to put in |
| **What are the legal implications** | Positive  
This should be possible under present setup and legislation |
| **What impact will it have on security of tenure** | Positive  
Community-titles could be provided immediately, which could be later converted into individual titles if required |
| **Compatibility with other measures** | Positive  
Should be supportive of most measures |
| **Infrastructure** | Positive  
Could help with land readjustment and infrastructure provision |
| **Impact on disadvantaged** | Positive  
Community-based organizations are better placed to recognize and respond to the needs of individual households |
| **Implications for scale** | Positive  
Community participation would enhance and speed up implementation |
| **Ease of implementation** | Positive  
See above |
| **Is there a felt need** | No |
All the criteria are plotted in the table below against the measures after the above evaluation:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Planning more efficiently/revised land standards</th>
<th>Improved land information</th>
<th>Better land taxation systems</th>
<th>Land sharing</th>
<th>Land readjustment</th>
<th>Cross-subsidy schemes</th>
<th>Regularizing existing slums</th>
<th>Using public land for housing</th>
<th>Learning from informal land developers</th>
<th>Supporting community initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior experience/past experience</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>++</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Financial investment</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>0/+</td>
<td>0/+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Juridical/regulations</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Security of tenure</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>-</td>
<td>0</td>
<td>++</td>
<td>0/+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Possible to combine with other strategies</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Service provision</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Access to disadvantaged groups</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Scale</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Is there a felt need</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Interesting and promising</td>
<td>-</td>
<td>-</td>
<td>--</td>
<td>-</td>
<td>0</td>
<td>++</td>
<td>0</td>
<td>++</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The final assessment indicates very interesting outcomes regarding to the land strategies within the possibilities of Suleimany municipality to address the low-income group. Though, the strategies with a neutral assessment will not be considered as interesting because it requires general change in the regulations. These strategies involve the existing supply in order to provide housing. For the existing settlements (informal) or upgrading projects, the size, location and other characteristics and determinants of the projects depend on the actual informal settlement selected. Hence, these settlements have too many complications and a long history of conflict and confrontation that makes it more difficult than would otherwise be the case. This requires an in-depth and extensive research. After all, this selection is to choose the strategies that have the potential for implementation and are worth for further investigation. Whether these are actually suitable will be further explored in this study.
The final selection is the following strategies:

- Cross-subsidy schemes
- Using public land for housing

It can be noticed that the (selected) strategies which are focused on the ‘Provision of affordable housing’ and ‘Compatible with other strategies’ are seen as the most interesting strategies.

As mentioned before in the previous chapter, regarding to the governmental interventions in property rights related to serviced land, these strategies could enforce the private entrepreneurs to produce social housing as part of regular housing production. Also the participation of developers in social housing projects through market strategies with regard to cross-subsidization could make a contribution to this purpose.

For the city of Suleimany the selected strategies are interesting and have potential for further investigation concerning the suitability of these to house the low-income households. Some strategies work more effective and efficient along with other strategies and they have substantive similarities or same principles. Therefore, the choice has been to combine these tow strategies into a broader strategy to serve the target group. Finally, the following strategy has emerged:

- Cross-subsidization scheme using public land for housing

**6.6 End of chapter**

The opportunities of land for ensuring housing for the low-income households are cited through different strategies and solutions in the literature and also in practice. Most of these strategies are not used Suleimany city, while other existing strategies through merging could make a positive contribution. The strategies which are providing affordable housing and are compatible seem to be interesting for Suleimany municipality to ensure housing for the target group. As the state owns virtually all vacant land, using public land for housing is a strategy which potentially could make a contribution. In addition, this strategy can be combined with cross-subsidy schemes to provide affordable housing for the low-income households. Eventually, there has been found a mix of strategies that are interesting within the current circumstances for Suleimany city. It concerns the strategy; Cross-subsidization scheme using public land for housing.

This strategy is set within the context of Suleimany municipality to ensure housing for the low-income group. The strategy will be further elaborated and evaluated in the next chapter. Cross subsidization is one of the objectives of mixed-income-use development and aims to improve the financial feasibility in order to provide low-income housing projects. Thus, the basic condition for an effective and efficient application of the cross-subsidization scheme in Suleimany city within this framework is defined by mixed-income population. In chapter 7, a calculation of the effectiveness of the strategy is measured with a constructed model in Excel.
7 Elaboration and evaluation

In this chapter the selected land strategy will be further elaborated. Therefore, it will be analyzed and validated in order to draw an adequate choice for Suleimany city to enlarge the housing opportunities of the low-income households. This chapter will answer on the following sub questions; what does the chosen strategy contain and what are the characteristics with regard to demand and supply? What do the assessment aspects contain? How can these aspects be measured and what are the results?

To answer these questions the selected strategy will be described briefly. Consequently, there will be discusses about the possible expected results. Furthermore, the major concerns of the strategy will also be addressed related to the demand and supply. After this analysis, the actual evaluation takes place. For this purpose, the strategy will be evaluated according to: Effectiveness, Efficiency and Support.

7.1 Elaboration

The selected strategies will be described and analyzed in this section. This will mainly focus on the target group and the associated demand and supply. Furthermore, the costs and its social benefits will be discussed.

7.1.1 Cross-subsidization scheme using public land for housing

One of the suitable approaches that are often discussed is to combine low-income and higher income households in the same development. This mixed-income housing attempts to attract higher income households to cross-subsidize developments that are also occupied by the low-income groups. Accordingly, this approach deals with several key questions about mixed-income housing: the financial feasibility and its social effects.

The term mixed-income schemes can refer to many different kinds of housing. Mixed income developments vary in the number of income groups included, the amount of income mixing that occurs and the quality of housing occupied by various income groups. One of the challenges in developing mixed-income housing is determining a mix of incomes that can be sustained over time. In practice, there is no single formula, or standard definition, of mixed-income housing (Doerr 2003). Therefore, low-income households may occupy from 20 percent to more than 60 percent of the units (Schwartz and Tajbaksh 1997). In these mixed-income schemes sometimes each building includes households from every income group. In other instances the income groups occupy different sections of the development, with lower income households positioned apart from higher income residents. Also, some developments provide the same quality of units in terms of size and services for residents from all income groups, while others offer smaller, less-lavish units for lower income households. Mixed-income schemes have been sponsored by public, nonprofit, and for-profit organizations and can include homeowners as well as renters.

According to Schwartz and Tajbaksh (1997) any assessment of mixed-income housing must consider the variety of forms it can assume. There are four broad categories which most mixed-income housing falls into. First, some State and local governments promote mixed-income housing through density bonuses, inclusionary zoning ordinances, and other land-use regulations that encourage developers to reserve a portion of the total amount of new housing (usually 20 percent) for low- and moderate-income households. Second, public housing authorities have recently experimented with mixed-income housing. Third, some State and local housing programs require mixed-income occupancy as a condition for funding proposed developments. Finally, not all mixed-income housing originates with government programs designed to encourage this type of housing; some results from the independent efforts of individuals and agencies.

If a mixed-income housing development contains unsubsidized market-rate units, it might be possible for these units to cross-subsidize low income units within the development, thereby reducing the need for government funding. Besides the financial advantage of cross-subsidizing mixed-income housing, it advocates seem to believe that if concentrating poverty in public housing engenders
chronic welfare dependency and other social pathologies, then mixing differing income groups will produce more desirable social outcomes (Schwartz and Tajbaksh 1997).

The approach of cross-subsidization could also be used as a strategy for the land development and allocation process, so that by the use of differential pricing, plots for the lower income households can be internally-cross-subsidized. Developed land, with appropriate technical and social infrastructure could be made possible in various settlements through an open market process so that households can acquire the land they need for housing at an affordable price. As discussed before in chapter 5, land development is the process of acquiring land, planning and laying it out with various land uses and providing infrastructure. The KRG and Iraq generally practice the conventional process of land development and allocation. The process of providing infrastructure, especially roads, also involves and includes the costs of leveling and clearing land. The allocation results in each housing area being restricted to a specific category of household. Since the infrastructure costs are not recovered the provision has to wait until budgetary considerations allow.

Due to lax taxation in the Kurdistan Region, the high income groups have benefited the opportunity to the progression of the society. Also, the provided social and technical infrastructure is provided by the Municipality without any charge – the households only pay user charges. Though, the government acknowledges its responsibility to provide affordable housing. Therefore, the higher income groups have also the responsibility to contribute to the feasibility of this objective, since they have obtained appropriate work and chances in the city without repaying any effort whatsoever to the government.

One way of looking at strategies or policies is to regard them as attempt by governments to bring about changes in the behavior of all or some actors, for instance private individuals or organizations such as developers (Doling 1997). The identification of the strategy content can be presented according to the mixed-income population mechanism whereby behavior is to be modified, and thus their provisions are mandatory and force change. The Municipality of Suleimany may seek to exhort individuals as well as developers to behave in ways consistent with the strategy aim. Subsequently, the local government may decide through regulation that certain percentage ought to be reserved for the low income group (20%-80%) for each mixed-income project in Suleimany city designed for the low-income group. The regulation can take form of specifying minimum or maximum percentages of income groups within a scheme.

Using an alternative whereby having a mixed income, mixed-use scheme allows for developed land to be sold, including infrastructure, at market prices using internal cross-subsidies and not having to rely on budgetary grants. Therefore, an attempt is made to evaluate the effectiveness of this strategy that would be suitable and can be deployed regarding to land development and allocation including housing in the city of Suleimany. Thus, the selected strategy is directly legally implementable without any major change in the legislation and without neglecting the interests of for example the Municipality and the MoCH.

The government is virtually the only source of cheap land. As discussed before, MoMT controls and manages the public land allocated to them, but MoF remains the owner of title to land distributed to ministries. After all, all lands within the cities basic designs which are owned by citizens would be eventually, by virtue of the laws, returned to Municipality, after compensation of owners. Actually the compensation is categorized in three types; 20% for the land owner, 12% for whom has right for use contract; and 3% for agricultural contract. If an ex-farmer have contract with the government he will be compensated about 12% just like others. However, according to the head of the Land section, the compensation is finally going to be 12% in all cases. This is because the first type (20%) is very rare cases and more than 90% is the case of 12%. Also the 3% agricultural contract will eventually be compensated by 12%, due to the compensation of the cultivated plants and trees.

All in all, the cross-subsidization scheme using public land strategy is concerned to manage the public land asset through a mechanism to introduce mixed-income schemes to provide subsidized and secure land for the low-income households using internal cross-subsidization. Eventually, it will result in affordable housing and everyone would be better off than under the current system.
Supply
The supply in which this group could make use of will be considered by the variety of forms the mixed-income scheme can assume. Depending on the portion of the total amount of new housing for low-income households and the land availability in the city of Suleimany the scheme will provide a certain percentage to these households. According to the literature, this portion can provide low-income households from 20 percent to more than 60 percent of the plot units within a mixed-income developed housing area. The acquired land will be allocated amongst different uses and sold to households and to commercial, institutional and other investors at prices lower than its current undeveloped market price.

Low-income households
The low-income groups are a very suitable target group for this strategy in relation to the certain percentage allocated for the provision of low-income housing, which it is minimal 20%. All the households in Suleimany city with an income of less than 600 USD will be eligible for the low-income sections within the mixed-income scheme. According to interviews, the low-income households are able to pay 120-150 USD monthly for their housing (see annex 5- Target households). In many cases it is about secure land with appropriate services allowing them to live in adequate and formal housing. Also, research has shown that most of the target group households prefer a housing area of 100 m². In many cases these households could extend their houses with an additional floor which will provide enough flexibility to expend and sufficient space. This strategy offers a mechanism and increases the supply of secure and affordable land to provide affordable housing for the target group. Also, it delivers an adequate mechanism to manage the available land within the city of Suleimany. The strategy also helps in the countering of the development of informal housing areas by households unable to access land for housing who subsequently have the possibility to acquire subsidized formal land through a mixed-income scheme instead of using illegal processes.

Land price
Determination of the current price of privately owned land in Suleimany city is set by the market price. There are no adequate theories received of the land market in Suleimany city, since they ignore the supply of land.

Initially, the local government would auction land or distribute them to selected target groups. Once allocated, these land plots became tradable in Suleimany land market, which were bought and sold among private parties, as described in chapter 5. However, due the fast grow of land demand, in some locations land prices have increased by as much as 500% in five years. Therefore, the land price is far from regulated and very unstable, detriment of the low-income households.

Since the Municipality is the authorized unit to subdivide the plots and allocate or sell to individual users, the strategy has the effect to regulate the land price. Instead of an increasing price by 500% in several years, the mixed-income scheme development could sell the land at market rates using internal cross-subsidies. The actual market prices for privately owned land are between 200 and 400 US dollar in the periphery of the city, where land grabbers usually take hold of large tracts of vacant public land. Due to land registration and ownership and services provision (paving road, electricity, water etc.) the land speculation is increasing immensely.

7.2 Evaluation
In this section the strategy “Cross-subsidization scheme using public land for housing” will be evaluated according to the three aspects; Effectiveness, Efficiency and Support.

7.2.1 Effectiveness
According to De Groot (2007) evaluation research is, in the most common sense, ultimately aimed at determining the success or failure of an intervention. The use of cross-subsidization can be considered in this context as an intervention.

There are various terms used for examining policy/strategy effectiveness, such as research situation, effects research, effectiveness research, target realization research and performance evaluation (De
Groot 2007). They are all familiar with their own characteristics. In case of the effectiveness of the discussed strategy, is this type of research not difficult to apply because the objectives are to describe in quantitative terms. The objectives are dealing with greatest possible change compared to the current situation and the contribution of the strategy to the change. It concerns the supply of a certain portion subsidized secure land to provide affordable housing for the low-income households with a reduction of the need for government funding. This will determine the effect of the strategy to the realization of the objectives.

For this research it can be determined that it concerns a research situation and an effects research. Here, a measurement of the baseline situation (situation before the strategy intervention) will be compared with the situation after the strategy intervention. Thereafter, the effect of the use of the strategy intervention is evaluated to see the impact of the deployment of the mixed-income mechanism, ultimately to realize subsidized low-income housing.

The financial effectiveness for the cross-subsidization scheme using public land strategy can be measured in a constructed model using a feasibility study concerning land development, as shown by figure 15. The figure clarifies the overall urban area development feasibility study consisting of land development, real estate development and real estate operation.

![Feasibility Study Diagram](image_url)

**Figure 15 – Feasibility study urban area development (Koppels and Binnekamp 2013)**

Though, the focus of this research outlined in red (in the previous figure) is zoomed in figure 16, which gives details about the land development period consisting of land acquisition costs, soil cleaning/leveling costs, site preparation costs and the land revenues for the real estate department.
The financial information (Mumtaz, 2011) of the mixed-use cross-subsidization scheme for this research has been used to make a cash flow model, which in turn will be used to compare with the conventional land development model. This model is constructed in Excel spreadsheet, which makes it easy to adjust the different conditions of the parameters. However, the spreadsheet uses the parameters as fixed data with the purpose of calculating a rational scheme. With this spreadsheet, it becomes very easy to make proposals and to assess their feasibility. In these calculations, the value of the land sale is income for the local authority and expenditure for the developer.

7.2.2.1 Proposed mixed-income land development and allocation scheme

The scheme consists of a number of plots that could be changed according to location and project development characteristics (see annex 5- Proposed vacant land for housing). In this way the model will let the user change this amount of plots to the specific project. Though, for the proposed scheme the number of plots is fixed in order to get a realistic and practical calculation. This amount is consisting out of 100 plots as a principle, which determines the details about the net residential area and the total development area. The scheme will be in accordance with inclusionary zoning requirements that can deviate from existing norms and standards without requiring a general change in the legislation. No houses are developed by the scheme, except for the low-income housing, which will be developed by MoCH. The scheme consists of acquiring land, developing it with leveling and infrastructure and then selling it to different groups at different prices, at a profit. The land development process of acquiring the land, planning and laying it out with various land uses and providing infrastructure is described in chapter 5. The process and procedure for the land development can be summarized as follows:

1. Acquiring land
2. Planning and laying out
3. Providing on-site Infrastructure

The scheme assumes that land will be acquired from existing owners who will be given 12% of the developed land as compensation, as described before. The costs for the land development are calculated for acquisition of land, soil cleanup/leveling, roads, sewage system, etc. Concerning the social infrastructure it is incorporated in Departmental annual budgets. The plots will be distributed according to certain percentages. The land development will be recovered from sale of plots at differential rates. The revenues are eventually calculated for selling plots of land to developers or individuals (residual land value).

The purpose of the model is to allow the user to use the inputs, which can be used as variables according to specific location and project (percentage distributions, as well as plot sizes, etc.) and instantly see the results of that change on profits and losses and the funding required. The spreadsheet calculates the resulting land areas, costs, prices etc. for variable number of plots,
accordingly for this scheme it is fixed at 100 plots, as mentioned before. Before addressing the Excel spreadsheet an elaboration will be given on the given information of the parameters as an input, which is location and project development characteristics dependent. As a consequence, these numbers can be varied in other mixed-income schemes to see the implications of the variables. Following parameters are used as input for the scheme:

**Land development costs**
The actual costs of infrastructure provision vary, partly depending on the planning and standards of provision and partly on the physical characteristics of the site, including its size, topography and geography. In a survey (2012) of housing area development\(^{11}\), it was found that the costs ranged from $20 to $90 for every square meter of the overall site area. Therefore, an average figure of $50/m² may be used as an initial rule-of-thumb guide cost.

**Land use**
The scheme assumes that land will be acquired from existing owners who will be given 12% of the developed land as compensation. Residential uses will take up 40% of the total land and the remaining land will be designated as follows as a guideline; 12% for compensation, 40% for social infrastructure and 8% for non-residential uses such as shops. The actual non-residential functions will be determined by potential need, demand and opportunity of the particular site. The percentage of land designed to be allocated to the various uses will be given as fixed data, though it can be changed according to location and project development characteristics.

**Population**
In order to ensure a mix of income groups, the scheme will indicate the residential land population allocations for the land development program. Referring to the literature description discussed in the previous section it is required to reserve at least 20% of units for low-income households. The units in the proposed scheme will be distributed according to ascending percentages as follows: Upper Income 10%, Better Off 20%, Middle Income 30%, and Low Income 40%. These portions are taken as principles and fixed for this mixed-income development scheme in order to have realistic calculations; however it can be changed depending on elements from the location and project development characteristics.

**Plot size**
The plot sizes are determined according to current plot areas in the formal and informal settlements. With reference to interviews (see annex 5- Target households) with households and minimal design studies (see annex 4) theses figures are the results. The plot sizes are as follows:

- Upper income: 250 m²
- Better off: 200 m²
- Middle income: 150 m²
- Low income: 100 m²

Also, these figures are subject to modification in another scheme calculation, which will be determined by potential need, demand and opportunity of the particular site. Though, in order to make sensible and rational calculations these figures will be fixed. The unit size should be determined as a policy to ensure the affordability to the poor.

**Land price**
The value of land in Suleimany city, as mentioned before, is set by the market price through the selling and purchasing privately owned land either formally or informally. As mentioned in chapter 5, the price varies considerably. In a survey (2011) conducted in Suleimany municipality the land price ranges from 900 US$ per m² to 1100 US$ per m². However, the resale prices for un-serviced peripheral land plots in Suleimany is in the range of 200- 400 US$ per m², with plot sizes of average

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\(^{11}\) The review of recent housing schemes and their relative costs was carried out by the Working groups in the Governors (see annex 8)
200 m². Since there are few options for further development within the city boundary, new development are required to be realized in peripheral areas. Consequently, the scheme could assume a (maximum) land price of 200 USD per m².

What the land price is based on (also taking into account the long-term developments), however, is not considered. It is clear, that the land price is determined by the value of what can be placed on it, which are fundamental to the land value and land value development. A good land value calculation is a combination of elements from the location and project development phases.

**Phasing**

The proposed mixed-income land exploitation requires phased development to finance each phase. The subsequent phase will be financed by the sale of the completed phase. The first phase consists of the development of upper income and non-residential plots. The income from sales of these plots will be used for middle-income, better off and compensation development, which is to be considered in the second phase. Income from sales of these plots will be used in the third phase for the low-income plots and repay initial investment.

**Inflation**

As described in the previous chapter the inflation in the Kurdistan region seems to be much higher than 2%, however there is not an exact rate. Actually, they have to start from zero since no research was conducted to assess inflation in Iraq including KRG before 2007. Therefore, the discounted cash flow model will calculate with a dynamic inflation rate equals to 5%. Since the macro economy of the Region is growing according to chapter 2, it can be assumed that inflation over years will decline.

**Return on Investment**

The mixed-income scheme project will be completed and paid off in 3 years at the most, so a simple Return on Investment (ROI), in this case 100% is enough which is the actual return of the project. Therefore, there is a given percentage ROI taken in the calculations equals to the inflation rate, instead of an Internal Rate of Return (IRR). Though, the selling prices, costs, etc. can be adjusted to get whatever rate of profit is desired. Of course if the prices are too high, you may not get any buyers.

As described in the literature the Internal Rate of Return is the rate of return by which cash inflows and outflows when discounted will return zero. Here we assume all the cash inflows reinvested into the project at rate equal to IRR. While ROI is much broader concept, it all depends on what you include as returns and costs. The term in the broadest sense just attempts to measure the profitability of an investment and, as such, there is no one “right” calculation. We can conclude that the IRR is a strictly mathematical formula (theoretical) and ROI is more practical, which closer to reality.

**Cash flow**

The cash flow calculated in the model is the movement of the money into or out of the project. It is measured during a specified period of time. The cash flow is calculated for the costs and revenues of the land development area per land use and indexed for inflation (5%), which discloses cash flows over period. The time of cash flows into and out of the project are used as inputs in the end-value and present value, to determine the project’s return on investment value.

**Interest**

The government is virtually the only source of housing finance, without significant private sector interest or involvement. Government has the funds but not enough under its current standards and costs of housing and very high subsidies.

In the Region there is no mechanism for those with limited incomes to finance housing. In addition, loans which charge interest are not socially acceptable. The long term, interest-free loans and high subsidies by Government means that the private sector is not able to participate or be interested in housing finance.

Moreover, there are major constraints to the deployment of conventional mortgage-based housing finance systems in the KRG, especially as a way of assisting lower-income households. The mortgage-
based systems rely fundamentally on the interest rate as a mechanism to attract funds from individuals and institutions and to charge for the costs of providing loans. While the idea of charging for the costs of the loan is acceptable in principle, in practice its application has been negated. This is by assuming that all the costs of servicing a loan are payable at the beginning of the loan and is the same regardless of the length of the loan. Moreover, the charge has been reduced and fixed at 2% (Mumtaz 2011) of the loan, which is inadequate for all but large and medium-sized loans since costs are relatively fixed as an amount, making them larger for small loans. Any other amount, and especially an annualized charge, is considered exorbitant and presumed to be “interest” by another name.

According to Eng (2010), “the Islamic real estate investment trusts is limited to the prohibition to engage in certain activities that are deemed as non-permissible. These activities include: financial services based on interest, gambling/gaming, manufacture or sale of non-halal products and tobacco products, conventional insurance, certain entertainment activities, stock broking and share trading in non-shariah compliant securities and hotels and resorts (Eng 2010)(Eng 2010).” Interest is thus not acceptable to many households on religious grounds, and increasingly being rejected by most as a matter of course.

This state of affairs has developed and been in existence for many decades and therefore are not going to be easy to change, though the rejection of “interest” as a principle needs to be accommodated in practice. At the same time, government institutions dealing with such “loans” have no incentive to take a financial view of such loans, and operate largely as social welfare institutions.

<table>
<thead>
<tr>
<th>Current land price</th>
<th>200</th>
<th>USD/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td>12</td>
<td>%</td>
</tr>
<tr>
<td>Development cost</td>
<td>50</td>
<td>USD/m²</td>
</tr>
<tr>
<td>Net residential %</td>
<td>40</td>
<td>%</td>
</tr>
<tr>
<td>Social infrastructure %</td>
<td>40</td>
<td>%</td>
</tr>
<tr>
<td>Return on Investment</td>
<td>10</td>
<td>%</td>
</tr>
<tr>
<td>Inflation</td>
<td>5</td>
<td>%</td>
</tr>
<tr>
<td>Plots (given)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Development period</td>
<td>3</td>
<td>Year</td>
</tr>
<tr>
<td>Land price</td>
<td>200</td>
<td>USD/ m²</td>
</tr>
</tbody>
</table>

**Table 23 – Overview of the financial information of the proposed mixed-income land development scheme**

**Objectives**

The proposed scheme has the following objectives:

- Demonstrate and test the feasibility of providing affordable housing through the implementation of a limited scale intervention.
- Identify constraints and shortcomings in the proposed mechanisms and develop improvements and modifications to overcome these when going to scale.
• Provide guidance to the Regional Ministries and Directorates to undertake affordable housing projects.
• Provide the basis for a better understanding of the principles of affordable housing amongst the general public and amongst the private sector investors and developers in particular.

Assumptions

• Not all households want ready-built housing – many want to build privately
• Low-income households assumed to be 40% of total households
• The unit size and price (sale), are determined in the policy to ensure the affordability to the poor.

7.2.2.2 The Excel model

The cash flow model constructed here is completely different compared with the way the land section, MoMT, calculates its cash flows. Here are the main differences:

• This Excel model is an End value calculation. The return on investment used here is 5%, which equals to inflation.
• The method used here is to determine the total land revenues derived from the land price for the different income groups.

First the conventional land development practice in the KRG and Iraq generally will be outlined in order to compare this with the proposed mixed-development scheme. The conventional allocation results in each housing area being limited to a specific category of household in contrast to mixed-income land use scheme. Besides, since infrastructure costs are not recovered, the provision has to wait until budgetary considerations allow. Even, if land is subsidized and given for free to developers in order to build housing in coordination of Housing Fund (see annex 2), the on-site infrastructure is provided by the developer, and the charge is included in the price of the house. As surveys (see annex 5- Housing projects) have been carried out with regard to these housing projects, it became clear that if the land development was conducted by the public sector the budget or payments could be lower. In addition, these “public private partnership” schemes require certain conditions. A significant condition is to disburse an upfront payment, initiating from 6.500 USD. Therefore, these schemes have not served low-income households, but supported civil servants and middle class people with limited income.

The table below is a “screenshot” from the Excel spreadsheet of the conventional land development scheme.

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>Land use %</th>
<th>Population %</th>
<th>Plot size</th>
<th>Price $/m²</th>
<th>Total land size</th>
<th>Number of plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social infrastructure</td>
<td>100%</td>
<td>-</td>
<td>3,000</td>
<td>-</td>
<td>30,000</td>
<td>100</td>
</tr>
<tr>
<td>Low income</td>
<td>60%</td>
<td>50%</td>
<td>1,500</td>
<td>-</td>
<td>15,000</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>4,500</td>
<td>-</td>
<td>45,000</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COSTS</th>
<th>Total area</th>
<th>Cash flow</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td>2,500</td>
<td>515,400</td>
<td>515,400</td>
<td>616,100</td>
</tr>
<tr>
<td>Social Infrastructure</td>
<td>8,115</td>
<td>438,007</td>
<td>438,007</td>
<td>522,384</td>
</tr>
<tr>
<td>Low income</td>
<td>50,000</td>
<td>500,000</td>
<td>500,000</td>
<td>578,000</td>
</tr>
<tr>
<td>Total</td>
<td>66,615</td>
<td>1,061,407</td>
<td>1,061,407</td>
<td>1,268,486</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REVENUES</th>
<th>Last price $/m²</th>
<th>Cash flow</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>50</td>
<td>500,000</td>
<td>500,000</td>
<td>578,000</td>
</tr>
<tr>
<td>Total</td>
<td>500,000</td>
<td>500,000</td>
<td>500,000</td>
<td>578,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>Cash flow</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>500,000</td>
<td>500,000</td>
<td>578,000</td>
</tr>
</tbody>
</table>

Table 24 – Screenshot of the cash flow model in Excel for the conventional land development and allocation (own construction)

In table 24, only housing has been designed for, with associated infrastructure provision and a 12% allowance for land acquisition compensation. The plots are limited to that for low-income (100%). If
these plots are sold for $50/m² which equals the development cost and thus a reduction of 75%, then the cost of every 100 houses will require a total subsidy of 52% from the public funds. Hence, housing units has not been constructed yet.

An alternative is proposed whereby having a mixed income, mixed-use scheme allows for developed land to be sold, including infrastructure, at market prices using internal cross-subsidies and not having to rely on budgetary grants.

If, instead, a mixed income scheme with mixed land uses is designed, the investment amount requires changes. By using prices in accordance to market rates, internal cross-subsidies can be achieved which allow for land to be developed for low-income housing and made available free. Instead of a 52% subsidy, there could be a -49% subsidy, as is shown by table 25. The land revenues from the higher income groups can be used to develop the low-income housing in the real estate development phase, as shown in figure 15.

<table>
<thead>
<tr>
<th>MIXED-INCOME SCHEME</th>
<th>Residential area</th>
<th>Pot area</th>
<th>Price $/m²</th>
<th>Total land costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensatory</td>
<td>2%</td>
<td>100%</td>
<td>4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Social infrastructure</td>
<td>3%</td>
<td>100%</td>
<td>3.80</td>
<td>3.80</td>
</tr>
<tr>
<td>Non-residential</td>
<td>2%</td>
<td>100%</td>
<td>3.80</td>
<td>3.80</td>
</tr>
<tr>
<td>Upper income</td>
<td>1%</td>
<td>100%</td>
<td>3.80</td>
<td>3.80</td>
</tr>
<tr>
<td>Middle income</td>
<td>1%</td>
<td>100%</td>
<td>3.80</td>
<td>3.80</td>
</tr>
<tr>
<td>Low income</td>
<td>1%</td>
<td>100%</td>
<td>3.80</td>
<td>3.80</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>4.50</td>
<td>4.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COSTS</th>
<th>Total area</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td>4,000</td>
<td>255,526</td>
<td>351,086</td>
</tr>
<tr>
<td>Social infrastructure</td>
<td>3,000</td>
<td>154,000</td>
<td>175,239</td>
</tr>
<tr>
<td>Non-residential</td>
<td>2,000</td>
<td>101,689</td>
<td>117,044</td>
</tr>
<tr>
<td>Upper income</td>
<td>1,000</td>
<td>50,840</td>
<td>58,934</td>
</tr>
<tr>
<td>Better off</td>
<td>6,000</td>
<td>300,000</td>
<td>302,525</td>
</tr>
<tr>
<td>Middle income</td>
<td>6,000</td>
<td>300,000</td>
<td>302,525</td>
</tr>
<tr>
<td>Low income</td>
<td>6,000</td>
<td>300,000</td>
<td>302,525</td>
</tr>
<tr>
<td>Total</td>
<td>29,000</td>
<td>1,291,285</td>
<td>1,291,285</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REVENUES</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land price XVP</td>
<td>1,079,250</td>
<td>1,079,250</td>
</tr>
<tr>
<td>Compensation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social infrastructure</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non-residential</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Upper income</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Better off</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Middle income</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Low income</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,079,250</td>
<td>1,079,250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUES</td>
<td>1,079,250</td>
<td>1,079,250</td>
</tr>
<tr>
<td>COSTS</td>
<td>1,291,285</td>
<td>1,291,285</td>
</tr>
<tr>
<td>Public Funds</td>
<td>-49.8%</td>
<td>0</td>
</tr>
<tr>
<td>Up-front Investment</td>
<td>1,070,183</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 25 - Screenshot of the cash flow model in Excel for the mixed land development and allocation (own construction)

7.2.2.3 Effect of the proposed mixed-income scheme with the Excel model

In the mixed-income scheme there is a price tag for public land use. The higher income groups can actually bear the land costs of the low-income households. If that cost is not assigned to some users of the dwelling units, the users are given a subsidy. Thus, through the created cross-subsidization land will be made available for the low-income target group.

Therefore, the mixed-income cash flow model uses a market price to gain revenues. Hence, the model introduces the land price reduction variable to determine a potential discount on the market price concerning the revenues. As a result, the low-income households will receive a discount of 100% on the land price, which will be fully subsidized. As shown in table 25 the upper income, the better off and the middle income could also receive reduction on the land price respectively. Though, it will not be applied in this scheme in order to gain the maximum revenue. As shown in table 26, the developers or users of the upper income, the better off and the middle income plots will pay a price for the land they intend to develop. This way an End-value of 1,070,183 USD can be achieved while reducing for 100% the land price for the low-income target group. As has been highlighted in chapter 3 the cost of a housing unit depends on the land portion costs. According to Mattingly (2010) this land portion can increase to 50% for some houses of the lower income groups. Due to the free land, the lower the proportion of total housing cost for the low-income households in Suleimany.
The total investment in the project consists of land development (acquisition, layout and infrastructure provision) and low-income housing. If the housing construction is left to developers or users (except for low-income/social housing), the project would cost \(2,171,167\) US dollar. The developed land can be sold for a total of \(3,241,350\) US dollar. Therefore, the planned development is feasible and acceptable with a return of 49%.

The development is phased, as a result an investment of only \(500,536\) US dollar is required to finance each phase and the subsequent phase is being financed by the sale of the completed phase. Given the huge demand, it should be possible to “pre-sell” most of the development.

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Land price $/m²</th>
<th>Reduction (subsidy)</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-residential</td>
<td>200</td>
<td>0%</td>
<td>694,575</td>
</tr>
<tr>
<td>Upper income</td>
<td>150</td>
<td>0%</td>
<td>578,813</td>
</tr>
<tr>
<td>Better off</td>
<td>140</td>
<td>0%</td>
<td>926,100</td>
</tr>
<tr>
<td>Middle income</td>
<td>95</td>
<td>0%</td>
<td>1,041,863</td>
</tr>
<tr>
<td>Low income</td>
<td>0</td>
<td>100%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,241,350</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 26 – The effect of the land market price put to test to measure the effect (own construction)

7.2.2.4 Result

As a result, the proposed scheme will provide the (occupied percentage) low-income housing within the design. Since the mixed-income land development contains unsubsidized market-rate plots, it might also be possible for these plots to cross-subsidize the low income housing units within the development, thereby reducing the need for government funding and creating a self-financing scheme. Hence, the revenues calculated for selling plots of land to developers or individuals, the residual land value, could contribute to the construction of the low income units. This would include the production of 40 low-income housing units within this scheme, consisting of core houses, which would be provided to eligible households.

The scheme does not require a profit margin for the developer, in this case the MoCH.

Accordingly, the land revenue of the mixed-income land development scheme with 100% subsidization for the low-income plots will provide 3,459,225 US dollar considered as Land Development Value. As a reminder, the total costs for the land development will amount 2,171,167 US dollar, which include acquisition and infrastructure provision. These figures will be used in a DCF-model in Excel to calculate the construction of the low-income houses.

The following financial data are used with the constructed model in Excel:

<table>
<thead>
<tr>
<th>Gross Floor Area (GFA)</th>
<th>3600</th>
<th>Low-income housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land costs (in USD)</td>
<td>2,171,167</td>
<td>price level t=0</td>
</tr>
<tr>
<td>Construction costs ($ / GFA m²)</td>
<td>200</td>
<td>price level t=0</td>
</tr>
<tr>
<td>Annual construction cost increase</td>
<td>15,0%</td>
<td>nominal price development (see annex 5- costs table)</td>
</tr>
<tr>
<td>Professional fees as % of construction costs</td>
<td>5,0%</td>
<td></td>
</tr>
<tr>
<td>Contingency sum as % of construction costs</td>
<td>3,0%</td>
<td>buffer for unforeseen events</td>
</tr>
<tr>
<td>Development period in years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Internal Rate of Return (MoCH)</td>
<td>8,1%</td>
<td>IRR equals inflation</td>
</tr>
<tr>
<td>Land development value (in USD)</td>
<td><strong>3,241,350</strong></td>
<td>Residual land value</td>
</tr>
</tbody>
</table>
The cash flow model constructed here is a net present value calculation. Instead of a Return on Investment, there have been used of the rate of return, which will be determined when the development costs and revenues equals to zero net result of the cash flow, by using the goal-seek function in Excel.

The 40 plots for the low-income households in the mixed-income scheme make a gross floor area of 3600 m² resulting in 90 m² constructed area related to the housing unit. The construction costs are determined at 200 US dollar per m² GFA, derived from a survey in Suleimany city (see annex 5 - costs table). The costs are escalating about 15% annually, although it is not accurate due to the unstable internal economic situation and foreign factors. The development period will not exceed 1 year due to the small size of the project.

The value of the projected cash flows has a NPV of 0 USD at t=1, as required. This means that the Internal Rate of Return that would be accepted is 8.1%.

As a result, the project proposal is feasible because the finance costs are covered for the low-income housing units and the project specify professional fees and risk are included in the cash flow scheme (contingency sum). To consult the cash flow calculation see annex 10.

### 7.2.2 Efficiency

In this section an in-depth look will be taken at the strategy, Cross-subsidization scheme using public land for housing, to see how efficient the strategy is. The efficiency is measured through interviews taken with the different actors. Looking at the assessment of the solution each party will have a different approach, but in certain cases there could be discussed about the expectations. This way the suitability of the strategy will be determined by the financial means, the scale of investment is crucial. Money is a highly decisive factor for the government and especially the private sector to realize certain strategy or policy decisions. In addition to the financial returns to be gained there are also aspects which have to be considered for the implementation of the strategy. These are the actions that have to be taken, the actors involved and the needed time for the implementation and the execution. The aspects (Mumtaz 2011) those are relevant to evaluate the efficiency of the strategy are reflected in the following questions:

- What is the potential benefit?
- What actions have to be taken to implement the strategy?
- Who needs to be involved? Actors
- How long will it take? Time
- What resources are needed for the implementation and execution of the strategy?

#### 1. Potential benefit

The potential benefit for a mixed-income scheme if land price reduction becomes an official form of subsidy, as measured in the previous section, is shown again in table 27.

<table>
<thead>
<tr>
<th>Cash flow</th>
<th>Present value</th>
<th>End value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>3.029.250</td>
<td>2.800.000</td>
</tr>
<tr>
<td>Costs</td>
<td>1.928.281</td>
<td>1.875.536</td>
</tr>
<tr>
<td>Public Funds</td>
<td>-49%</td>
<td>924.464</td>
</tr>
</tbody>
</table>

Table 27 – Potential benefit of the proposed mixed-income scheme

Besides the economical advantage the mixed-income scheme will also generate social benefit. Socially mixed-income housing is believed to create a stable environment for low-income residents. It turned to mixed-income housing to remedy the intense social problems found in
neighborhoods with concentrations of poor households living in assisted dwellings (Doerr 2003). Mixing residents with differing incomes in a neighborhood or development, the number of opportunities for interaction between low-income and middle- or upper-income residents is considerably increased. In theory, this interaction provides low-income residents with exposure to employment opportunities and social role models.

2. What actions

1. The former process and practice of allocation of land to households through Ministries, employers and other institutions should remain suspended for the time being.
2. Instead, the process of a more market-oriented approach should be introduced so that land development can be done without reliance on external funds or grants.
3. The land development strategy proposed is for the development of mixed-use, mixed income housing so that by the use of differential pricing, plots for the lower income households can be internally-cross-subsidized.
4. Land should continue to be acquired un-developed, as currently, by compensating existing landholders with planned, developed land of equivalent value. Under current practice, for land being cultivated, this means returning 300 m² of developed land for every donum (2500 m²) of undeveloped land, equivalent to 12% of their expropriated holding. However, the process should be made more formal and therefore quicker to implement.
5. The acquired land will be planned and laid out, allocated amongst different uses, developed with access roads and other technical and social infrastructure and sold to households and to commercial, institutional and other investors at prices lower than its current undeveloped market price.

3. Actors

A. The Directorate of Urban Planning, MoMT will take the lead in supporting local authorities to acquire and develop the land identified by them under their Land Development Program.

B. Given the limited capacity of MoMT, the land use planning and layout should be contracted out to professional firms under a competitive bidding process, but the Urban Planning Directorate, MoMT, will provide the over-all standards, objectives and outcome of the plans.

C. Different parcels of the site will be sold for development to designated users as follows:
   1. Areas for lower income Housing and associated infrastructure to MoCH
   2. Areas for upper income Housing and associated infrastructure to BoI
   3. Areas for commercial and industrial development and associate infrastructure to BoI

D. The Directorate of Housing, MoCH will undertake the development of social housing, for the lower income households on land it has acquired from the Municipality. The design, layout and actual construction of the housing may be contracted out, but to the standards and specification of the MoCH and the Municipality. The land will be provided free.

E. The BoI will undertake the development of upper income households on land it has acquired from the Municipality. The design, layout and actual construction of the housing may be contracted out, but to the standards and specification of the BoI and the Municipality.

F. The BoI will undertake the development of Commercial and Industrial development and associate Infrastructure on land it has acquired from the Municipality. The design, layout and actual construction of the Commercial and Industrial development and associated Infrastructure may be contracted out, but to the standards and specification of the BoI and the Municipality. The land for commercial and industrial use will be sold at market prices.

G. As an alternative, the following steps may be proposed for one or more of pilot projects, based on Private Sector/Developer involvement. This solution in theory requires no capital investment from KRG other than social housing if desired.
• A development brief is prepared for the site by a consultancy company, in such a way that could maximize internal cross subsidy, under guidance/regulation of MoMT.
• Development brief is endorsed by Municipality.
• Developers invited by competition to submit detailed design proposals and accompanying financial bids for the site in line with the development brief.
• Financial bids are converted to provision of services in kind for 12% of the site, provided as compensation to existing owners, for social housing/subsidized serviced plots for low income households that will be transferred to MoCH respectively and as contribution towards trunk infrastructure and social infrastructure in kind, so that land value is captured within the project.
• Developers can then develop and on-sell the rest of the sites as commercial, middle income housing, serviced plots etc. in accordance with their design proposal.

H. Although the above suggests that the MoMT, MoCH and BoI are acting in parallel, on three or four different though inter-related projects, the process could be made more effective and efficient if they were engaged together, in different parts of the same project.

4. Time

The willingness of the government here determines the time this will take to enforce this strategy. If the government is willing, the projects can be initiated straight away, especially in terms of working out the standards, objectives, conditions etc. The production of land use plans will probably take 4 to 6 months. The detailed design and development of the land will probably take 6 months to a year, depending upon available capacity.

5. Resources

The current levels of allocations can probably meet the financial requirements of MoCH for lower income housing and the BoI for upper income housing. Since the households and the non-residential enterprises will repay most of the funds, they could be used to underwrite housing development on a self-financing basis. The technical resources and capacity, both within the Government and in the Private sector, is much more difficult to have in place at the start. Therefore a Pilot project will also have to act as and provide a basis for training and skill development. With some incentives, the required skills should be forthcoming, perhaps initially from outside the region and then locally.

Land acquisition using mixed-income cross-subsidization scheme:

![Figure 17 – Land acquisition using mixed-income land development scheme](image-url)
7.2.3 Support
Besides the effectiveness and efficiency the achievement of the objective also depends on the support that is needed. The strategies can only be implemented and conducted if the actors and other stakeholders are in favor. For this research, to assess and evaluate the selected strategy there has been looked at the MoCH as the leading actor concerning the housing issue, the Municipality of Suleimany regarding to the land development program and of course the residents. To this end, the parties are approached through interviews and meetings during the internship (see annex 5). Within the housing sector several parties are involved, but for this research the latter actors are selected for the direct benefit. An important aspect is that the strategy is directly implementable and does not require any major change in the legislation.

MoCH
For housing purpose the MoCH has to rely on governmental budgetary each year. While the Government’s intentions are good, the high costs and limited capacity make it difficult to meet targets. Thus, both the public and the private sector have neglected the low-income housing mainly because of costs and no profits.

Introducing the mixed-income cross-subsidization scheme could really help them realize more affordable dwellings for the low-income households if they could have access to the amount of fund recovered from internal cross-subsidies. This way, they support this and think that this could really help them realize more affordable and social dwellings if they could have access to this fund.

It is expected that the MoCH will agree to this, because there are no huge direct costs for the government.

Municipality
Due to the lack of a proper land development and management system the Municipality acknowledges its responsibility to looking out for new land mechanism on how to deal with the feasibility of the objective to provide affordable housing. The cross-subsidization scheme using public land strategy will introduce a new land mechanism to develop and allocate land through a mixed-income land development scheme which create internal cross-subsidization and thus improve the conventional practice. It is expected that the Municipality would not oppose to this idea, because there are no direct costs for the government regarding to the land development. Eventually, it is feasible to gain revenues for selling plots of land to developers or individuals (residual land value).

Residents
Currently the residents have the most benefit from this strategy. Public land will be used after compensation to existing owners, for subsidized serviced plots for low income households, which will be transferred to MoCH to achieve the objective of providing affordable housing.

7.3 End of chapter
The results of the elaboration and evaluation of the strategy has made it possible to draw conclusions about the adequacy and validation of the strategy. The strategy, the cross-subsidization scheme using the public land is a good strategy to subsidize and acquire land for the low-income households and to regulate and lower the land price in the city of Suleimany through a mixed-income-use land development scheme. However, the allocated land does not only include the low-income households, as the development also shares the land with the other income groups. This results in a certain percentage for the target group. Nevertheless, as the project becomes larger (number of plots), the greater the supply for the low-income will be. The strategy has the potential to serve the target group, despite the fact that it is also used for a larger group. The difference is in the income group population, plot size and the land price per square meters. The low-income group has the most share in the scheme, thus we see the larger supply side of this group corresponding to 40% in the proposed scheme. Besides, in order to attract and retain occupants willing to pay market-rates or higher prices than others for the plots and/or housing, the sizes of the plots have to vary to provide certain quality differential. Hence, the size of the plot will restrict acquisition by higher income households. These houses should reflect the range of incomes and therefore affordability of the households.
Consequently, the low-income group has the lowest plot size within the scheme, referring to the minimum size for an average household size of 5.0 persons as well as being affordable. The population and the plot size are taken as principles in the scheme in order to have a sensible and rational calculation, though it can be modified depending on location and project development characteristics as highlighted in the previous section.

According to the land prices, these are also reflected to the different income groups within the scheme. This is a particular input, in which the cross-subsidization scheme is based on. As shown in the Excel spreadsheet these prices are in accordance with the market rate. The land price in the mixed-income scheme is determined at 200 USD per m² for the upper income, the better off and the middle income in order to achieve the internal cross-subsidization.

Therefore, the former process and practice of allocation of land to households through Ministries and employers should make way for the process of a more market-oriented approach, so that land development and low-income housing can be done using a very valuable public asset without reliance on external funds or grants. To achieve this objective, the strategy could be implemented if the public institutions act in parallel and together in different parts of a project. This will make the process of the mixed-income land development scheme more efficient. Therefore a pilot project will probably take the best part of a year if not more, excluding the development process. Subsequent projects will take considerably less time.

Besides, the adequacy of the strategy is also depending on the support among the parties involved. The strategy will be differently evaluated by the “supplier” and the “customer”, which can be explained by the differences in interests. The Municipality and the MoCH shall take into account the social operation of serving the residents of the city without taking huge financial considerations. The residents only take into account the accessibility and affordability of the land and housing. The strategy offers considerable financial and social benefit for the involved parties, because there are no huge direct costs involved. So, it is expected from the three actors to agree to the cross-subsidization using public land strategy.

We can conclude that effective mixed-income housing contributes to the long-term sustainability of affordable housing. In addition, the communities tend to be more stable than, which are direct benefits to low-income residents. Using the figures (derived from the text of the report), enough profit can be made to cover the costs of the low-income plots and housing. Because the development can be done in phases, only a small amount will be required to develop the first phase, the commercial and upper income segment, and use the income from its sale to finance the next phase, so that the low-income plots can be developed and constructed using the profits.
8 Conclusions

In this chapter the research question will be answered based on all the previous chapters and the results, followed by an implementation strategy. After that the possible pitfalls will be discussed.

8.1 Strategy to get land for low-income people’s housing

This research aims to raise the housing problem of the low-income group in the KRG and in particular in Suleimany city and gain insight into the land issue as an ingredient to tackle the complex cross-cutting housing question for the mentioned target group. Consequently, to look at the possibilities those exist in order to prevent or reduce the problem. The main research question answered by this study is the following:

What kind of strategy can be developed to get land for low-income people’s housing earning less than $600 USD in Suleimany city, taking into consideration the effectiveness and efficiency of the strategy and the support of the actors?

In response to this main question there are several sub questions drawn in the beginning of the research. The research is broken down into 5 sub questions and will be answered in this section after which followed by the answer on the main question and sub question 5 is related to this section.

1. Sub questions for the formation of a theoretical framework for land for housing.
2. Sub question with the purpose to understand the land and housing delivery system in Suleimany city.
3. Sub questions to analyze the possible strategies.
4. Sub questions with the purpose to assess the best strategy on the aspects effectiveness, efficiency and support.

1. Theoretical framework for land for housing

One of the most significant constraints in housing the low-income is the inadequate supply of land in many developing countries. Land provision for housing is seen as the most important intervention of government to produce social or low-income housing. The high land prices make the provision of housing very costly. Due to land the lower the cost of a dwelling unit, the higher the proportion of total housing cost. This land portion can increase to 50% (Mattingly 2010) for some houses of poor people.

Compulsory purchase is one of the government ability to take land by legislative processes. Governments are able to offer market based methods of land delivery where a free and formally organized land market operates. However, the land acquisition forms a complex cross-cutting issue, which forms the working junction of processes that deals with land markets, administer land tenures and implement land use planning.

There are also state interventions in land provision for social housing. These interventions can be summarized as; state financing on land and provision of social housing, interventions in property rights with regard to serviced land, interventions in social housing institutions through cross-subsidization, participation of developers in social housing projects through market strategies and participation of developers in some social housing projects with ‘non-market strategies’. Besides these, Land Readjustment (LR) can be used as a tool to provide low-income/social housing. There are some approaches to include costs related to social housing into LR projects (Turk, 2008). One approach is to sell cost-equivalent land at a reasonably low price to the agencies producing low-cost housing. This will finance the amount returned to the landowners by cross-subsidy.

The struggle for shelter by low-income groups is often a challenge for land, as highlighted before. Most governments in developing countries assume that there is not enough urban land for housing. The problem is not the availability of urban land for housing, but how the management of urban land is failing to deliver housing to the city’s low-income group. In most Asian countries, urban land has
more and more become a product for commercial purposes. The challenges in the developing countries regarding to land for housing are the informal settlements due to the rapid urbanization. The city land market failure is another challenge concerning the failure of the supply of formal, legal land for housing. Finally, the poor policies concerning allocation and use of land that is publicly owned, making land for housing available through expanding infrastructure and services to new sites and affecting land price and availability through official rules and regulations. All in all, cities could make land available for housing through several tools such as land use, land taxation, land administration systems, land tenure regulations, development plans and development standards.

2. Land and housing delivery system in Suleimany city

Suleimany city developed until 1921 without any planning control. Though, through the master plan of 1957 in the 80-ies caused by the unexpected speed of growth, urban development occurred in structured pattern. The most dwellings in Suleimany are single-family owner occupied homes and attached housing with average plot sizes amount to 204.5 m². The housing culture has a long tradition of self-housing in the municipality, but nowadays the physically part has been replaced by building contractors. Suleimany delivery system for residential land is through the years intervened by the government and especially the Municipality. The MoF holds the title to state land and distributes state lands to MoMT for municipalities. Subsequently, the Municipality controls and manages all the allocated land. The local government has also the capacity to acquire land for its purposes, with compulsory acquisition, but it must be approved by the court. Actually, there is no policy basis for state land except that state land is to be protected by the MoF. In order to promote investment, state land may be used in the form of free or subsidized land.

In addition, the Ministry of Municipalities is responsible for urban planning in KRG municipalities. The responsibility on one hand and the authority and financial resources on the other create a mismatch in developing land for residential purposes in particular for the low-income target group in the city. Nevertheless, regarding to the land administration system for land titling, property registration, and land use change these are generally effective.

Following decision by the Ministry of Municipalities and its predecessors, local governments would auction land or distribute them to selected target groups (UN-Habitat and IFC 2006). There are no explicit policies about allocation of state land to ministries. Though, once land plots have been allocated they became tradable in the urban land markets, and were bought and sold among private parties. However, there were many households that had no access to subsidized land and who also had no ability to pay for land purchased on the open market especially the lower income segment. The process also helped in the development of informal housing areas by households unable to access land for housing who then had to resort to using illegal processes.

Currently, there are four potential resources of vacant land concerning new residential development, namely infill plots within built-up areas, incomplete peripheral subdivisions, agricultural land at the urban periphery and rocky land. For the low-income housing the rocky land would offer a lot of potential because the high supply and due to the non-productivity of the soil. Regarding to the resale prices for un-serviced peripheral land plots in Suleimany is in the range of 200-400 US$ per m². Given plot sizes are average 200 m² in peripheral areas in that city.

One of the recent trends in Suleimany housing market is buying off-the-plan housing from larger commercial developments. Hence, housing is seen as the most attractive form of investment for individuals and private organizations. Despite the development of these inclusion projects housing prices have risen and becoming unaffordable for low-income households in the city. Such developer projects, either off-plan or once it are built, the payments follow stages of construction, usually booked with a upfront payment and the rest paid in installments. Though, the first payment has not served some low income groups. Due to lax regulations, these projects are exclusively designed for the middle and high income groups. Apart from various government schemes though, the mortgage market is almost non-existent. There is very little housing finance available in general and none for the purchase of land for housing. There are three sources of housing finance: The Real Estate Bank, The Housing Fund and Private Banks. Besides the commercial projects, the local government also experimented with governmental low-
income housing in the city in an attempt to develop housing for the low-income groups. These projects will be carried out on subsidized Municipal land. Nevertheless, these projects have to rely on budgetary allocations for land development and construction. In addition, one of the main constraints on the housing for the Municipality is their lack of authority to raise revenues and carrying out infrastructure revenues. The responsibility for the provision of social and technical infrastructure lies with the Municipality of Ministries, and is provided for free. Except in the case of housing schemes built by private developers, the on-site infrastructure is the responsibility of the developer and the charge is included in the price of the house. Hence, if it was provided by the public sector the budget or payments of private developer’s schemes could be lower.

3. The possible land strategies
In the literature and in practice, also looking at the context of Suleimany city, there are various land strategies that could be addressed to increase the success rate of low-income housing. For this study it is important that strategies within the context of Suleimany municipality can be used, as a consequence there are (institutional and urban) criteria which should be taken into account. A selection based on these conditions have resulted in the following strategies as the most potential and interesting, that could have a positive contribution to the improvement of the land provision and delivery system concerning the housing issue of the target group:

- Cross-subsidy schemes
- Using public land for housing

These (selected) strategies are both focused on the ‘Provision of affordable housing’ and ‘Compatible with other strategies’, which could enforce the private entrepreneurs to promote and or produce affordable/social housing as part of regular housing production. Both strategies have the potential to work more effective and efficient together and create synergy, Therefore, the choice has been to combine these two strategies into a broader strategy to serve the target group. Finally, the following strategy has emerged:

- Cross-subsidization scheme using public land for housing

Generally, the strategy is interesting and promising within the legal framework and could be deployed in Suleimany municipality to serve the low-income housing. Hereby, the detailed and practical suitability has not yet been directly taken into account in a specific scheme within the city and to what extent the strategy has a positive contribution to address the low-income housing and in particular the land development and allocation system.

4. The elaboration and evaluation of the selected strategy
Therefore, in order to determine suitability of this strategy within Suleimany municipality the selected strategy is first elaborated, subsequently evaluated on the effectiveness, efficiency and support.

The selected strategy has its own specific characteristics which can contribute to the improvement of the housing situation of the target group. Through a mixed-income-use mechanism, the cross-subsidization scheme using public land strategy attempts to attract higher income households to cross-subsidize developments that are also occupied by the low-income group. As described in the literature according to chapter 7, a mixed income development can be defined as a development that is comprised of units with differing levels of affordability, typically with some market-rate units and some units that is available to low-income occupants below market-rate. The “mix” of affordable and market-rate units that comprise mixed-income developments differ from community to community and can depend, in part, on the location and development characteristics. In practice, there is no single formula, or standard definition, of mixed-income housing. Therefore, the local government and the developers should evaluate location, local market condition, and develop locally supported concepts and characteristics of the mixed-income development.

Accordingly, this strategy in this research deals with the financial feasibility (using the figures in the report). A calculation of the effectiveness of the strategy is, therefore, measured with the
constructed model in Excel; taking into account the mixed-income population as a principle related to location and scheme characteristics in order to have a rational calculation and the land price as a variable (the potential discount on the market price).

By using market rate pricing, internal cross-subsidies can be achieved which allow for land to be developed for low-income housing and made available free, while still keeping the remaining prices well below market rates, as shown in table 28.

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Land price $/m²</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-residential</td>
<td>200</td>
<td>0%</td>
</tr>
<tr>
<td>Upper income</td>
<td>200</td>
<td>0%</td>
</tr>
<tr>
<td>Better off</td>
<td>200</td>
<td>0%</td>
</tr>
<tr>
<td>Middle income</td>
<td>200</td>
<td>0%</td>
</tr>
<tr>
<td>Low income</td>
<td>0</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 28 – Price reduction variable put to test to measure its effect in order determined the reduced land price and thus the share of cross-subsidization

When this strategy is calculated in the model used in chapter 4 and the variables used in table 28, this result in the following: if the housing construction is left to developers or users (except for low-income/social housing), the project would cost 2.171.167 US dollar. The developed land can be sold for a total of 3.241.350 US dollar, resulting in an end value of the cash flow of 1.070.183. Therefore, the planned development is feasible and acceptable. Since the households and the non-residential enterprises will repay most of the funds, they could be used to underwrite land development on a self-financing basis.

When comparing these results with the conventional land development practice, instead of a 52% subsidy, there could be a -49% subsidy, as shown by the table below.

<table>
<thead>
<tr>
<th>Conventional land development (100 plots)</th>
<th>Proposed land mixed-income land development (100 plots)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income 75% subsidized</td>
<td>Low-income 100% subsidized</td>
</tr>
<tr>
<td>Public funds needed 52%</td>
<td>Public funds needed -49%</td>
</tr>
</tbody>
</table>

Table 30 – Financial effectiveness of the cross-subsidization scheme using public land strategy
The support for the strategy will be great under the current political situation. This strategy can offer a significant difference in the financial cash flow making land development feasible for the low-income households in Suleimany municipality.

The diagram below, in figure 18, clarifies what affect the new strategy has on the target groups. We see the response of the current land acquisition to the problem and the future land acquisition by the intervention of the cross-subsidization scheme using public land strategy through a mixed-income-use mechanism, as a result that the low-income households will be carried and paid by the high and middle income groups. Consequently, the land for the target group can be internally-cross-subsidized and thus the strategy will get land for low-income people’s housing earning less than $600 USD in Suleimany city. Accordingly, the overall conventional land acquisition can be integrated in the new strategy. Hence, this land portion can decrease to 50% (Mattingly 2010) for some houses of the low-income households. According to table 29, the land development costs for the target group amounts about 6000 US dollar per plot, which can be subsidized by the higher income groups. For the subsidized scheme of providing land for housing the low income people, the actual amount of the subsidy will be clear with the constructed Excel model in order that it can be taken into account in the financing plans for a similar project.

![Figure 18 – Land solution diagram: Housing of low-income groups](image)

On the other hand, the opportunities for the low-income groups to settle on unused public land are declining or poor located, as more and more leftover pieces of land get occupied. This strategy will provide the prospect to use public land for the target group by using the mixed-income mechanism. Also, the government has the ability to take land by legislative processes with adequate regulations, which has been discussed in the previous chapters.

Subsequently, the housing program will primarily be developed and managed by the MoCH. The actual construction of the houses may be done by the households, MoCH itself, or contracted out to private sector contractors. The low-income housing will be paid for over a 20/25-year period, as the current governmental projects (see annex 5- Housing projects description). The financial and material
resources for the construction comes from the land development value and the scheme could become a self-financing program using the income from the sale of housing to finance subsequent projects. In accordance with the housing costs, the house should be minimally finished and fitted, and should cost about $200/m² (see annex 4 & 5 - Building materials & Costs table). This would include the production of 40 low-income housing units, consisting of core houses, which would be provided to eligible households.

Therefore, the strategy assists and supports the local government to create formal ability to manage its land delivery system and able to provide secure and decent land and housing for the target group. Hence, this will also discourage land grabbers in the city to decrease the informal land acquisition. As user of the strategy it is important for the local government to realize that they have to practice a public private partnership (PPP), in so doing the adopted strategy subsequently helps target Suleimany to reinforce its implementation capacities by combining its efforts with those of investors in order to provide affordable housing. Moreover, it could enhance the government land policies in the public good encouraging the development of mixed-income neighborhoods (see annex 1). Currently, there is no scheme such as the proposed mixed-income land development scheme, elaborated and evaluated in this research, which could contribute to the mentioned policy priority of the KRG.

We can conclude that this new strategy has shown how the city of Suleimany could practice an active land strategy and how the development of the land value can contribute to development of housing and infrastructure in the municipality. The model illustrates that the mixed-income mechanism can get land for the target group and therefore increases security of tenure to those that are able to access it. Given the anticipated economic and social benefits, mixed-income development is a suitable strategy objective, and a viable mechanism for creating affordable housing.

### 8.2 Implementation plan

The implementation plan needed consist out of several phases. Here an overview.

- **Consensus with all the parties.** The government plays a significant role, in particular the Municipality of Suleimany and the MoCH, during this phase. If the Municipality can reach a consensus with the MoCH than the other parties will not be a problem to deal with. For each party it must be clear what he wishes to realize with the new strategy.
- **Each project will be mixed-income and mixed-use, with the overall guiding principles and criteria determined by the MoCH.**
- **The Governorate will detail its project to take into account its particular needs and circumstances, and in particular the location and circumstances of its site, and funding.**
- **The project site may be one that has already been acquired by and is available for housing, or it may be acquired for the project through compensation to the existing landowners.**
- **The project funding may come either through a budgetary allocation made specifically for the project or through the allocation of part of the funds provided for social housing under KRG Law No 7, 2011 (see annex 9).**
### 8.3 Work plan

<table>
<thead>
<tr>
<th>Activity</th>
<th>Output</th>
<th>Responsibility (organization)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review project document and update, propose guidelines and standards</td>
<td>Agreed guidelines and parameters for pilot project</td>
<td>MoCH</td>
</tr>
<tr>
<td>Establish project budgets and sources</td>
<td>Project budgets</td>
<td>MoCH, Governorates</td>
</tr>
<tr>
<td>Establish housing finance options: Real estate bank (sundooq) or Law 7</td>
<td>Housing Finance Options</td>
<td>MoCH, MoF</td>
</tr>
<tr>
<td>Identify project site and confirm availability and suitability</td>
<td>Project site</td>
<td>DoCH</td>
</tr>
<tr>
<td>Prepare detailed site layout, housing and infrastructure designs as required, approved by MoCH</td>
<td>Detailed site plans</td>
<td>DoCH, Governorate and Municipality</td>
</tr>
<tr>
<td>Call for phased tenders, Award contracts</td>
<td>Contracts for site development</td>
<td>Municipality</td>
</tr>
<tr>
<td>Define eligible households, numbers, and invite applications</td>
<td>Applications for housing, plots</td>
<td>Municipality</td>
</tr>
<tr>
<td>Initiate phased development of site</td>
<td>Developed site, plots</td>
<td>Municipality</td>
</tr>
<tr>
<td>initiate sales of plots, occupancy</td>
<td>Settled housing site</td>
<td>Municipality</td>
</tr>
<tr>
<td>Call for phased tenders, Award contracts</td>
<td>Contracts for housing construction</td>
<td>DoCH</td>
</tr>
<tr>
<td>Initiate phased housing construction</td>
<td>Construct plots, Houses</td>
<td>DoCH</td>
</tr>
<tr>
<td>initiate allocation of housing, occupancy</td>
<td>Settled housing units</td>
<td>DoCH</td>
</tr>
</tbody>
</table>

### 8.3 Possible pitfalls

There is little to actually prevent implementing such strategy except for the built-in reluctance of professionals. Hence, the biggest risks remain the unwillingness of government to cooperate to implement the strategy, because most professionals and bureaucrats are mainly against change. The willingness of the government could be defined in terms of working out the standards, objectives, conditions etc.

Also, the strategy could face opposition from the better off in response to their unsolicited contribution to the lower incomes while sharing their site with them. Though, this could be worked out by the layout design for instance by offering high-quality amenities, architectural details etc.

Municipal staff will need to be trained to handle variable standards and designs, but this is not a major obstacle.
9 Recommendations
Based on the research a number of recommendations will be done. On the one hand, these are recommendations for promoting affordable housing and on the other hand recommendations for further research. Both of which are described below.

9.1 Land strategy to address low-income housing
The conclusion shows that the government should initiate and put its resources to encourage affordable housing. This research shows what possible strategies can be deployed by the government and also the private parties. The selected strategy emerges as the most interesting and potentially, which is elaborated and evaluated according to the effectiveness, efficiency and support. It is recommended to make proposals for housing finance options. After preparing detailed site layout, housing and infrastructure designs as required, approved by MoCH it is very important to involve developers for the participation in social housing projects with ‘non-market strategies’. The purpose of this kind of participation is either to improve relationships with local authorities. After the operation is completed, it is recommended to evaluate the project to assess if the goals that were stated are realized.

To attract market-rate tenures and minimize vacancy losses, the Municipality is recommended to find a substantial proportion of the different income groups in each specific project. As with all real estate, the location of mixed-income housing is a critical determinant of market appeal. Where a new and untested investment is being tried, they should identify areas that are relatively risk-free and likely to generate profitable returns.

With the proposed mixed-income scheme model it could also be recommended to exclude the housing development phase, because it may that not all the low-income households want ready-built housing. Instead, it would be possible that many want to build privately. For that reason, through the introduced land price reduction variable, to determine the potential discount on the market price concerning the revenues, the upper income, the better off and the middle income will receive reduction on the land price respectively; 25%, 30% and 53%. At the same time the reductions should encourage the private developers to invest in mixed-income schemes in which they get potential discount on the market price regarding to the residential plots respectively. This way an End-value of zero can be achieved while reducing for 100% the land price for the low-income plots with a 0% of public funds. To consult the cash flow calculation see annex 11.

By using market rate pricing, internal cross-subsidies can be achieved which allow for land to be developed for low-income housing and made available free, while still keeping the remaining prices well below market rates, as shown in table 28.

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Reduced price $/m²</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-residential</td>
<td>200</td>
<td>0%</td>
</tr>
<tr>
<td>Upper income</td>
<td>150</td>
<td>25%</td>
</tr>
<tr>
<td>Better off</td>
<td>140</td>
<td>30%</td>
</tr>
<tr>
<td>Middle income</td>
<td>95</td>
<td>53%</td>
</tr>
</tbody>
</table>

Table 31 – Price reduction variable put to test to measure its effect in order determined the reduced land price and thus the share of cross-subsidization

As a result the strategy will provide the reserved percentage land for housing for the target group, in this case the low-income households assumed to be 40% of total households. Subsequently, the plots will be allocated according to the current criteria stated by the Housing Fund (see annex 2). Otherwise, a ranking system should be clearly defined, for example based on weights and points, in order to select from amongst eligible applicants in case the needs of all of them cannot be met at this point. Consequently, the housing units should be developed by the users and could be financed through the provision of financial loans by the Region Bank (see annex 5-Housing finance). To be eligible, therefore, the beneficiaries should own land.

Though, it is not obvious to mention the most suitable land strategy to address the overall low-income housing, because there is no one single solution to the problems of land. Therefore, the
strategy can also be ideal if it can be combined with land readjustment (LR) to reinforce low-income housing provision. Though, the government has no experience of LR to date and this would require a major change in the law. Nevertheless, the land readjustment strategy reduces the need for relocations and land acquisition. The compatibility approach is to sell cost-equivalent land at a reasonably low price to the agencies producing low-cost housing. This will finance the amount returned to the landowners by cross-subsidy. As per the Reconstruction Law dated 1993 in current use, the KRG established a fund for the reconstruction of the Kurdistan Region. This way, LR could be adopted as a land strategy and thus an implementation means in order to achieve the reconstruction and the affordable housing objective. The implementation means of local physical plans is recommended to be carried out by the Municipality within the municipal and adjacent areas to achieve the desired objective. Land readjustment is a technique used for both the development of new areas and the reorganization of the structured areas in urban regions (Larsson 1997). There are different models of LR according to countries, whether private initiative in the application of LR models or the public initiative (municipality, governorship, etc.). Though, in whatever country the method is applied, the principle is that after the allocation for public usage (roads, parks, car parks) the total of all plots that fall into the LR area, the residual areas are distributed to the landowners in proportion to either the area size or value criteria. The LR method is also applied in neighboring Turkey with a long background of models and a vast accumulation of experience, but possibly somewhat not quite efficiently (Turk 2007). For a successful and efficient application of the LR method there are basic conditions within the framework of international literature. Conditions (Turk 2007) for the efficient application of the LR method can be recommended under seven headings:

- **Cost recovery**
  Cost recovery is one of the basic conditions for the efficient application of the LR method, in other words, the self-financing capacity of the method. The sufficiency of the model to meet the costs is an important reason for the method to be preferred by the public agencies. The service areas and technical infrastructure in LR areas can be recovered with various methods without being a burden on the budget of public institutions. For instance, in Japan and Korea the construction of infrastructure and services in LR models are included within the scope of the LR project. Therefore, there are different approaches introduced in various countries for the ability of this model to recover the costs. These approaches can be defined as cost recovery by taking deductions from the land of landowners or by taking fees from landowners for the increase in land values as a result of LR. Though, the most common method used in financing the costs in these projects is land deduction, which is prescribed in the law of some countries. For instance, in Germany the contribution percentage will be up to 30% in areas where the public infrastructure has not been constructed, and up to 10% in other areas. The remaining area might be also serviced. Eventually, the provisions for the infrastructure and services are financed by the sale of some plots within the remaining or reserved area, often for commercial activities (UNESCAP 2004). In Turkey the contribution percentage is found by dividing the total area allocated for public use into the total areas of plots falling into readjustment. This contribution percentage is applied to each plot (Turk 2007).

There are also some approaches to include costs related to social housing into LR projects (Turk, 2008). The first one is to sell cost-equivalent land at a reasonably low price to the agencies producing low-cost housing. This will finance the amount returned to the landowners by cross-subsidy.

- **Sharing of the project benefits and costs**
  Sharing of the project benefits and costs in LR projects are based on transparent and fair principles. The most critical part of LR is the distribution stage among the landowners, public agencies and the community for LR. This stage is based on area size or value of the landowner’s land prior to readjustment. In the former, the landowners are provided at the
end of LR with the amount of area remaining after the deduction of land from the original plot area. It is important to provide the plot in its original location, and then adjacent to or close to its original location, or in case it is impossible, within the LR area. The distribution in LR in Turkey is performed based on the land area. Countries with distribution models based on value are performed based on the values of real properties within the LR project areas prior to and after the readjustment are determined. Therefore, the market value can be used in the determination of values.

- Including of infrastructure constructions and costs to LR process
  As mentioned before in some countries’ model the infrastructure costs and construction are included within the scope of LR, in which the financing and construction is an obligation of local governments.

- Conditions arising in terms of planning
  Regarding to the planning of an efficient LR there are certain conditions applicable. These are the ideal seize, which means that small and medium-size areas are applied more successfully, a connection between the master plan and the LR projects and finally the realization of construction.

- Public participation
  The public sector is an important actor and their participation is one of the important conditions in the efficient application of LR. LRs are decided directly by public authorities regardless of the landowners’ consent. Through the initiatives, the landowners are generally informed of the project after the public announcement and are administrative procedures.

- Number of technical personnel and management
  The number of technical personnel and management is also an important component in the efficiency of the LR method characterized by the availability of skilled and competent personnel.

- Quality of cadastral maps
  Finally, data is an important input in determining LR projects. The incoming data from the land registration system should, therefore, be precise in order to prevent technical difficulties. Adequate cadastral maps should show proper values to facilitate an efficient process.

Finally, it is recommended as MoCH or MoMT to set up a quasi-governmental housing management organization. It could be proposed that a Housing Management Organization (HMO) manages the housing program and provision, with the projects in the municipality. The HMO will determine the details of its own projects within the overall framework established by the HMO. The governorate of Suleimany has stated that they already have land that could be provided for residential projects, with funding coming from Law 7 or budgetary allocations. In the initial period, the design and construction could be managed by MoCH and the houses built by contractors. Completed houses should be transferred to the HMO. The HMO may take the lead in the design and construction of the low-income housing units on land acquired from the MoMT. The HMO will be the primary implementing body – and could be set up as an independent organization, or as part of the Housing Fund or the MoCH or the MoMT. Also very important to recommend is that the HMO and the MoF should facilitate micro-finance operators but they should organize their own finances.

9.2 Future research

In this research the most interesting and potentially land strategy is discussed and evaluated to enabling parties to address the low-income housing. Though, various aspects could still be further investigated, which are not taken into consideration or not in-depth in this research. Therefore, researchers may consider the following suggestions or recommendations for further research:
• A more in depth housing market research, evaluate local market conditions, homeownership sector and rental sector, public and private. Type of dwelling, size of dwelling, year of construction of the dwelling, technical state of the dwelling, the current market price of the dwelling, wish to move to another dwellings, etc. and develop locally supported concepts and characteristics of the mixed-income development.

• An in-depth research regarding satellite cities and suburbs.

• Elaborate housing finance mechanisms, for instance mortgage-based system, for the households in order to finance their housing.

• Look at new building techniques in order to build dwellings that are cheaper, while maintaining a high quality level.

• A in-depth research on how to design the layout in order to attract and retain occupants willing to pay market-rates for housing, while sharing their site with poorer households.
10 Reflection

This research into the possible strategies to get land in order to address low-incomes housing in Suleimany city resulted in the most interesting and promising strategy to provide housing for the target group. The selected strategy is based on theory and practical researches. Additionally, it is mostly based on the opinions of the consulted experts. Moreover, the final evaluation is based on cash flow calculations and relevant questions with regard to the efficiency and support derived from interviews. In retrospect on the whole process of setting up this thesis, a final reflection is given on the graduation process, the research method and the results.

From the start of the Master program, I was concerned about the topic of my graduation. Partly due to my interest in global questions and at the same time get to know new areas of the housing sector, the choice of the graduation topic was quickly made. When I chose the graduation topic, ambitiously I began to look for a total solution concerning the whole housing problem throughout Kurdistan region. Soon it proved to be very ambitious and I had to limit the subject and the context. Due to the complex background that the Region carries it was found that there is little to no scientific studies have been regarding to the housing problem. The fact that there is a huge housing need for the target group, why there are not adequate solutions yet? This question intrigued me to look at the housing problem in the surveyed city. On recommendations I conducted a study in the Region in order to gain more knowledge and information about the subject. After doing an in-depth research into the housing issues, the problem has been identified. Therefore, I was looking at the land component as an ingredient to tackle the problem, using possible land strategies. Looking at the literature I found a lot of UN-Habitat studies. However, the acquired studies during the internship made me decide to put the focus on this.

In the master stage of Architecture Faculty attention is paid to the theory of conducting a scientific research. Choosing a research method is a step in building up the research. The practical research started in Suleimany city for six months. This includes all the aspects concerning housing. This research was very successful and all the necessary data and information have been collected and analyzed. This emerged in a report in 2012, highlighting all the issues and guidelines covers all the aspects of housing. A frequently recurring question from the mentors was; what do I add to this report? First of all, my graduation research has added new insights and multiple land strategies. The research is also supported by reference to scientific literature, which also examined the land element thoroughly and in more detail. In addition, this is a qualitative study involving interviews and discussions with experts including all the land strategies, as well as a quantitative study by elaborating and evaluating the selected strategy according to the effectiveness, efficiency and support.

After the second survey, the actual research is initiated which deals with the possible land strategies and a lot of information is exchanged mainly through the email. Also, thanks to my research organization at the UN-Habitat, contacts have been made with the experts on the fields of housing and land. From these interviews and consultations, as well as many meetings with various officials during my internship, this information emerged regarding to the strategies and the assessment of the strategies. Reflecting on the discussions in Suleimany city, these had to be more structured with more emphasize on the land strategies. There is also often spoken with authorities and parties who are active in the field of housing in Suleimany city. Perhaps it would have been better for the validity to have more in-depth interviews with the relevant parties.

During the research in Suleimany city an interesting fact was the moment in which a question was asked to the deputy minister of MoCH regarding to their wish and requirements concerning the housing problem. On this, the deputy minister stated, “...we want affordable housing”. I then assumed that there is more freedom for finding solutions due to the absence of requirements and desire. Consequently, ten criteria are drawn and then evaluated on the basis of experts. Subsequently, ten possible land strategies are compared with these criteria and assessed on the basis of the same experts, based on in depth interviews. In addition, the obtained information during the information and data collection in Suleimany city has also contributed to the assessments. These assessments are plotted in a table and the strategies are categorized based on the reviews. Actually, the results are not shocking. Unfortunately, there is no ready-made solution to the land issues and
housing problem, but rather a combination of strategies. Land as a significant ingredient and a valuable public asset in the city of Suleimany requires responsibility. This public asset can be used effectively and efficiently to achieve housing for the target group. Currently, this asset is not used effectively and responsibly due to the lack of strategies and mechanisms in order to develop the land supply. The land is dealt with on a conventional way which is allocated, subsidized or for free, to individuals and developers for commercial purposes. The current land system is not used effectively for the control of the planned development in urban areas and the provision of housing. Therefore, the intervention of the state to the land development process is inevitable. The impact of state intervention upon residential land development process at local government levels are rarely considered systematically. There is not any document available related to descriptive evaluation of land administration and policy. The proposed strategy provides a great potential to achieve, but this requires a great collaboration of the public and the private sectors. Also, to actually test the strategy with all the tools a pilot project will be required. The Municipality needs to be more open and transparent and the governorate should set an example and coordinating role to assume.

In short, the new land strategy provides a robust solution. But obviously the whole housing problem cannot be solved with one housing aspect and to keep pace with the demands of rapid urban growth in Suleimany city. It is important that the actors take action and initiate this new strategy. The risks of failure are small, in the worst case the plots will not be sold against the market price in which the government has to bear the remaining development costs. However, the risk is very small since there is a great need for land for housing in both the low and high-income groups. Furthermore, the results of this research contribute to the recognition of mixed-income development as an instrument to decrease the dependency on grant funding to achieve financial feasible low-income housing projects.

Though, developments at the national level will continue, nourished by political pressures. The local government has to become familiar with new financial incentives, planning instruments and organizational structures. Again, this demands training and the provision and spreading of information at the municipal level. Take for instance the process of integrating development planning. Since the year 2009 the Municipality has prepared a master plan and still there are difficulties with the development and implementation of such a plan. It cannot be expected that a modest change in public policy is all that is required to achieve the actual delivery of low-income housing projects; the sector needs to generate sustainable institutions over time, in order to serve as the implementing bodies to tackle physical, social and economic dysfunctions.

I hope that my research stimulates to further explore the mixed-income mechanism. This research has given me skills in how to conduct a scientific research and the implementation of a new strategy in the city of Suleimany.
10 Reference


Deloitte (2012). ME Tax handbook ’12, Getting to grips with the essentials.


Mumtaz, B. (2011). Strategies to address Low-Income Housing in KRG, KRG HOUSING NEEDS ASSESSMENT.


11 Annex

Annex I Housing vision KRG & Policy priorities

Vision
A vibrant private housing sector in which all residents of the Kurdistan Region have decent shelter.

Policy priorities
Our policy priorities through 2017 to improve the availability and accessibility of housing include:

- **Improving land-use regulations.** We will review and reform our land-use regulations to encourage the supply of units of various sizes and types of housing at a wide range of prices. As part of improving land-use regulations, we will consider formalizing informal housing developments where possible, including establishing proper zoning and granting formal title to people who live in these developments.

- **Reforming land titles and ownership.** We will strive to make more transparent the owner records of each parcel of land so that the private market in residential land can function more effectively. This will enable homebuyers, people who want to buy land for their own new home, or home developers to make easily find available land or homes.

- **Encouraging development of mixed-income neighborhoods.** We will encourage neighborhoods that contain housing for people of all income levels. When necessary, we will explore public-private partnerships to do so, including concessions to those real estate developers who agree to provide newly built housing to low-income families below market price when that housing is in mixed-income neighborhoods.

- **Establishing a housing-finance system.** We will review and improve the laws and regulations related to our financial system to make possible the widespread provision of long-term housing finance, such as mortgage, by NGOs or private financial institutions.

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12 Ministry of Planning, Kurdistan Regional Government, 2013
Annex II Housing Fund

Can be obtained from the author
Annex III Internship agreement

Can be obtained from the author
Annex IV Affordable housing definition

Affordable housing

Affordable Housing is that housing which a household can access using its own available and accumulated resources plus those that it can access through formal and informal arrangements from relatives, friends and other individuals and institutions, such that no undue stress or strain is put on the household’s ability to access and to consume the other necessities and expectations of life.

Thus, it is assumed that a household must first and foremost be able to access a quantity of food, clothing and shelter, sufficient for its needs. Secondly, the household is able to access education, health, transport and entertainment appropriate to its standing and status. For the average household, it is presumed that its expenditure on housing will be in the range of 30 to 50% of its total expenditure, at least in the long run. The actual percentage will be dependent on the household’s income, the general costs of living and, to some extent life-style choices.

If it is assumed that the rent charged for a house should enable the capital value of the house to be recovered in about 20 years, then the monthly rent should be about equal to \( \frac{1}{12} \) of its capital value. If the monthly rent is about a third of the household’s monthly income, then the capital value should be 6,000% the monthly rent, making the capital value equal to 5 times the annual income.

From another point of view, if a household devotes 30% of its income to repayment, then the capital it can borrow over 20 years at 5% interest is about 4 times its annual income. This is also the ratio that Bank managers use in the UK and other countries to assess a household’s ability to borrow. However, few lenders will allow a household to borrow the full price of a house, and most will not want to lend more than 80% of its value. Thus, the affordable house is 4 times annual income + 20% = 5 times annual income.

Therefore, we can say that an affordable house is one that costs about 5 times a household’s annual income. Using this criterion, we get the following range:

<table>
<thead>
<tr>
<th>Group</th>
<th>Monthly Income</th>
<th>Annual Income</th>
<th>Affordable House</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income</td>
<td>$400</td>
<td>$4,800</td>
<td>$24,000</td>
</tr>
<tr>
<td>Middle Income</td>
<td>$600</td>
<td>$7,200</td>
<td>$36,000</td>
</tr>
<tr>
<td>Upper Income</td>
<td>$1,000</td>
<td>$12,000</td>
<td>$60,000</td>
</tr>
</tbody>
</table>

However, what is affordable may not be acceptable if it cannot provide the size and quality of accommodation that a household wants. Indeed, it may not be possible to provide decent affordable housing.

In the KRG, housing costs are quoted as being a minimum of $400 per square meter. Therefore $24,000 would purchase a 60 sq.m house. According to some, the minimum size of a house should be at least 100 square meters. In that case, acceptable housing would not be affordable unless it was possible to bring the costs down to almost $240 a square meter. This of course assumes that the land and infrastructure are available for free.

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13 Source: Mumtaz, B. (2011). Strategies to address Low-Income Housing in KRG, KRG HOUSING NEEDS ASSESSMENT. And collected data and information see annex 3 Working group on Affordability
Affordable Housing - Incremental Development steps

14 Mumtaz, B. (2011). Strategies to Low-Income Housing in KRG, KRG HOUSING NEEDS ASSESSMENT.
Annex V Templates/guidelines for National Consultant

Can be obtained from the author
Annex VI Data and Information template

Can be obtained from the author
Annex VII Data and Information collection support letter

Can be obtained from the author
Annex VIII Land development cost estimation

Can be obtained from the author
Annex VIII Law 7

Can be obtained from the author
Annex X DCF-model for the low-income housing unit construction

A screenshot of the cash flow model in Excel for the development of the low-income housing in the mixed-income scheme

<table>
<thead>
<tr>
<th>Low-Income housing development</th>
<th>3600</th>
<th>Low-income housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land costs (in USD)</td>
<td>2,171.167</td>
<td>price level t-0 (see sheet 1)</td>
</tr>
<tr>
<td>Construction costs ($ / GFA m²)</td>
<td>200</td>
<td>price level t-0</td>
</tr>
<tr>
<td>Annual construction cost increase</td>
<td>15.00%</td>
<td>nominal price development (see annex 3-cost table)</td>
</tr>
<tr>
<td>Professional fees as % of construction costs</td>
<td>5.0%</td>
<td></td>
</tr>
<tr>
<td>Contingency sum as % of construction costs</td>
<td>3.0%</td>
<td>buffer for unforeseen events</td>
</tr>
<tr>
<td>Development period in years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Internal Rate of Return (MoCoR)</td>
<td>8.1%</td>
<td>IRR equals inflation</td>
</tr>
<tr>
<td>Land development value (in USD)</td>
<td>3,241,350</td>
<td>Residual land value (see sheet 1)</td>
</tr>
</tbody>
</table>

| Phasing construction costs t= | 0 | 1 |
| Percentage of costs | 0% | 100% |

<table>
<thead>
<tr>
<th>Development costs</th>
<th>t=</th>
<th>0</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land development</td>
<td>-2,171.167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction costs</td>
<td>0</td>
<td>-828,000</td>
<td></td>
</tr>
<tr>
<td>Professional fees</td>
<td>0</td>
<td>-41,400</td>
<td></td>
</tr>
<tr>
<td>Contingency sum</td>
<td>0</td>
<td>-24,840</td>
<td></td>
</tr>
</tbody>
</table>

| Land Development Value | 3,241,350 |  |

| Net Cash Flow | -2,171.167 | 2,347,110 |
| Present value | -2,171.167 | 2,171,167 |
| Net Present value | 0 |  |
Annex X DCF-model for the land development feasibility

A screenshot of the cash flow model in Excel for the mixed land development and allocation

| MIXED INCOME SCHEME | BASE scenarios | ASR | Compensation | 1% | 5% (8% | 10% | 15% | % | 1 | 5% | 10% | 15% |
|---------------------|----------------|-----|--------------|----|-------|-----|-----|---|---|----|-----|-----|-----|
| RESIDENTIAL | Residential area | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| NON-RESIDENTIAL | Non-genera | 100 | 100 | 100 | 100 | 100 | 100 |
| SOCIAL INFRA | Social infra. | 40% | 40% | 40% | 40% | 40% | 40% |
| TOTAL | Total land area | 15,100 | 15,100 | 15,100 | 15,100 | 15,100 | 15,100 |

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>Land use</th>
<th>%</th>
<th>Population</th>
<th>%</th>
<th>Net area</th>
<th>$/m²</th>
<th>Total land area</th>
<th>Number of plots</th>
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<tbody>
<tr>
<td>Compensation</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4,900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social infrastructure</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-residential</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Upper income</td>
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<td>10%</td>
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<td>200</td>
<td>4,500</td>
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<tr>
<td>Lower off</td>
<td>12%</td>
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<td>200</td>
<td>200</td>
<td>4,000</td>
<td>20</td>
<td></td>
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</tr>
<tr>
<td>Middle income</td>
<td>12%</td>
<td>20%</td>
<td>200</td>
<td>200</td>
<td>4,500</td>
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</tr>
<tr>
<td>Law income</td>
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<td>20%</td>
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<td>200</td>
<td>4,000</td>
<td>20</td>
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<tr>
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<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>37,000</td>
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<th>$/m²</th>
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<th>End value</th>
<th>2012</th>
<th>2014</th>
<th>2015</th>
<th>2018</th>
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<tr>
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<td>1,164</td>
<td>256,000</td>
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<td>50%</td>
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<tr>
<td>Lower off</td>
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<td>100%</td>
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<th>End value</th>
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<tr>
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<tr>
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<th>Revenues</th>
<th>Costs</th>
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<th>End value</th>
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