

**THE REPUBLIC OF THE UNION OF MYANMAR
NATIONAL HOUSING POLICY WHITE PAPER**

**Prepared for
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Executive Summary

In each country, the state of the housing sector is essential for the societal and economic welfare of the nation. Myanmar's housing sector is divided between a formal sector and a vast and swiftly growing informal sector, reflecting sharp disparities in household wealth. This paper presents an analysis of the main features of Myanmar's housing sector and a set of proposals for policy measures.

Key findings are:

- The number of dwelling units and the number of buildings containing dwelling units is not known.
- Both current total formal and informal annual output of dwelling units appear to be significantly below housing needs. It is estimated that the total number of dwelling units may range between around 9.3 and 10.3 million units, far less than the number of households enumerated by the census of 2014.
- Long-term structural undersupply of dwelling units affordable for the majority of the population arguably led to suppression and delay of household formation.
- The housing stock consists of a rural segment and an urban segment. Major distinguishing differences are building materials with which dwelling units are erected as well as widely varying levels of infrastructural services for dwelling units, and while the share of units built with durable materials is growing, the absolute majority of all buildings is still constructed with non-durable materials.
- A great majority of households do not have access to dwelling units supplied through formal channels, including the housing program of MoC/DUHD. As a result of formal units' cost structure, it is estimated that about fourteen percent of all households in Yangon can afford dwelling units provided by formal housing delivery systems.
- Macro-economic indicators signal increasing stability for the broader economy, and Myanmar's banking sector is modernizing. Yet housing finance schemes for broader groups of the population - which are critical for expanding formal output - only exist in initial stages. CHDB is leading the way for improved housing finance schemes with innovative savings-and-loans schemes designed to circumnavigate unresolved collateral and title issues.
- The wide-spread absence of secure titles for land and apartments is a major impediment for further expansion of housing supply as well as for bank lending for maintenance and modernization of stock. Ambiguous tenure arrangements curb investment in maintenance and incremental improvement in informal units and drive up financing costs in the formal sector. In addition, with regard to the rental housing stock, maintenance and modernization are impeded by the effects of rent control legislation, which drive cash flows to landlords down to levels which preclude accruing reserves for maintenance.
- Against these backgrounds, policies accepting informal settlements and aiming at improving them through incremental measures need to be seriously considered. Large-scale sites-and-services schemes on government-owned land may need to be re-introduced, yet may face major obstacles due to an apparent shortage of government-owned land.

- The lack of basic urban services creates increasing public health risks. A major public investment program is required including all informal settlements regardless of tenure issues.
- The preparation of the National Housing Policy needs to be closely aligned with MoC's envisaged National Urban Policy.

To address these challenges, a wide-ranging and inclusive policy dialogue involving all relevant stakeholders is warranted.

A. Context and Background

A.I Introduction

1. In 2014 the Ministry of Construction of the Union of Myanmar initiated the process of preparing a **National Housing Policy**. The new government formed in March 2016 indicated its intentions to further pursue devising a National Housing Policy in collaboration with UN-Habitat. Hence, it is the purpose of this Preliminary White Paper to support the government's efforts.

2. White Papers are **policy documents** that outline the **government's proposals** for future governmental activities with regard to legal and regulatory frameworks governing a certain functional sector. A White Paper provides a basis for further **consultation and discussion** with interested or affected groups of stakeholders, thus serving as an important tool of democratic policy making. The purpose of a White Paper is to launch a debate with the public, stakeholders, and the members of the National Parliament with a view on facilitating a political consensus. Since at present the amount of knowledge on Myanmar's housing sector is limited, this White Paper is of a preliminary nature.

3. The development of the housing sector is indissolubly intertwined with the urbanization process, as the lion's share of additional buildings in urban agglomerations is constructed for residential purposes. Hence, it is imperative to closely align the Ministry of Construction's National Housing Policy with its **National Urban Policy** (NUP), reflecting their pronounced functional interrelations.

4. The White Paper consists of nine sections plus annex. Section B contains a situation analysis, which consolidates information available on the housing sector of Myanmar. Data gaps are identified. Section C addresses incomes and affordability issues. Section D investigates governance of land as central input for housing, while section E outlines the state of housing finance as another central factor shaping the housing sector. Section F delineates main elements of the legal framework affecting the housing sector, while section G addresses the interrelations between the construction industry, its residential component, and the labor market. Section H contains a diagnostic summary. Policy recommendations are outlined in concluding section I. The annex contains some detailed data on various factors affecting the housing sector.

A.II Components of a National Policy

5. Many terms used in the area of policy drafting and policy formulation are not conclusively defined. Even the term 'policy' merits clarification. A policy is typically described as a set of principles to guide subsequent decisions and achieve rational outcomes. A national policy may be considered to be a statement of political intent or a commitment to pursue a certain course of future action. A key function of a national policy therefore is to serve as an instrument for future decision-making, stating broad principles yet also laying the groundwork for more concrete directives and guidelines. In the form of clear and concise policy statements, a national policy should formulate near-term goals and long-term goals for the thematic sector it addresses. A policy should include initial actions to kick-start

the policy, a set of priorities, an overview on of both human and financial resources necessary, and the general distribution of responsibilities among public, private, and other civil society actors.

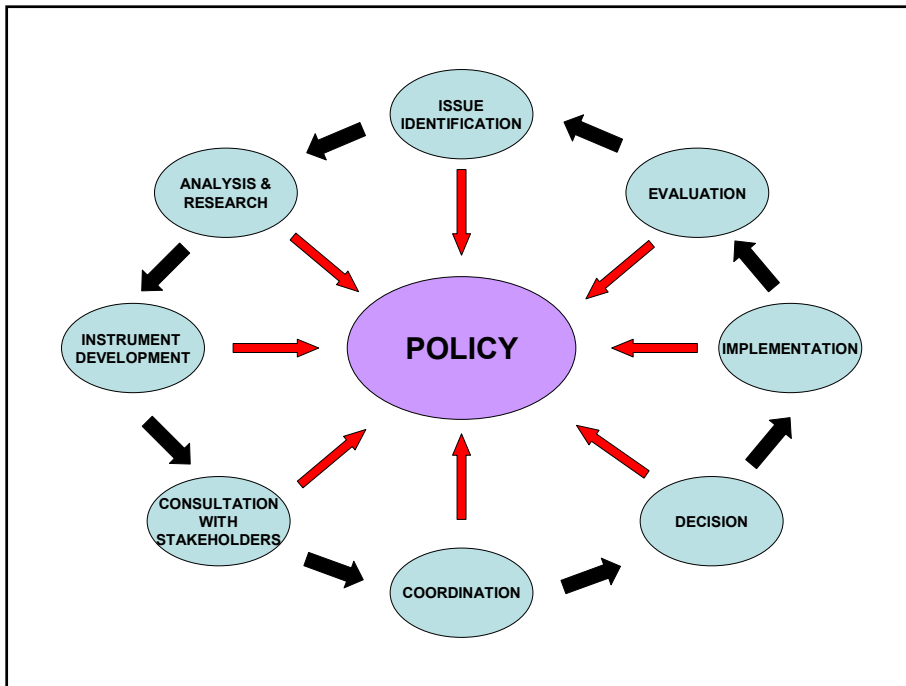
6. Finalized policy documents usually contain certain standard components including:

- A **purpose statement**, outlining why the Government is issuing the policy, and what the desired effect or outcome of the policy should be.
- A **background section**, indicating reasons, history, and motivating factors that led to the creation of the policy.
- An **applicability and scope statement**, describing whom the policy affects and which actions are impacted by the policy. The applicability and scope statement is used to focus the policy on its desired goals and objectives.
- Policy statements on **goals and objectives** of the policy, indicating the subsequent **specific strategies**¹ to implement the policy.
- A **responsibilities section**, indicating which **organizations and entities are responsible** for carrying out individual strategies. The responsibilities section often includes identification of relevant oversight and control structures.

7. Due to significance and quantity of interrelated components, in most countries - both developed and developing - the housing sector and the housing markets are subject to enduring governmental interventions in a multitude of ways. With regard to housing, the new Government of Myanmar finds itself at the **onset of a challenging long-term task spanning decades**. Against this backdrop, an outline of the generic policy cycle is presented.

8. The **policy cycle** is a **conceptual** tool for analyzing the development of a policy. It encompasses **eight distinct stages** as Exhibit I displays:

EXHIBIT I: THE EIGHT STAGES OF THE POLICY CYCLE



9. Three stages of the policy cycle are of a particular significance: (1) **instrument development**, (2) **implementation**, and (3) **evaluation**. In phase **instrument development**, the goals and objectives of the policy statement need to be outlined. In addition, envisaged future core strategies based on the policy document need to be identified. At this stage, it is fully sufficient to name the later strategies, which by necessity will be theme-based or sector-based.

10. The **implementation stage** needs to be split into two periods. Period No. 1 will include the preparation of the **strategies**. The subsequent Period No. 2 will be dedicated to carrying out the strategies through programs and projects, and it is this implementation which constitutes the majority of the policy cycle work. The **evaluation** stage merits special attention: The real outcomes and achievements of a specific policy need to be **examined and measured** as precise as possible. Only through the conduct of on-going systematic and sober reviews, errors and **unintended consequences** of a policy can be detected and subsequently corrected.

11. Once adopted by the political institutions in charge and endorsed by the National Assembly, an approved National Housing Policy should serve as the precondition for introducing and altering legislation and should provide the **general framework for successive implementation strategies concerning the housing sector**. Detailed implementation strategies then elaborate sequencing, content and resource demands for specific initiatives, programs (activities), and projects.

A.III Definition of Housing-Related Terms

Housing unit

12. Within the context of housing policy, the usage of the term 'housing unit' is strongly preferable to using other terms such as 'house', 'home' or 'flat'. A housing unit is a separate and independent place of abode intended for habitation by a single household. As a functional entity, it usually includes a cooking facility. In one housing unit with one cooking facility, more than one household can reside. As a synonym for housing units, the term dwelling unit is frequently used. Dwelling units can be located in various types of buildings, from free-standing single-family structures to multi-story high-rises. The physical qualities of buildings can be categorized through a ranking of levels of durability and levels of urban services provision.

Housing need

13. Housing need is the number of qualitatively adequate housing units that households ought to have, equipped with necessary amenities based on public health considerations and prevailing cultural preferences. The comparison of housing needs with the kind of housing people actually reside in enables identifying **unmet needs** or **supply gaps**. Mostly, this is relevant for households with low income levels.

Effective Demand

14. Effective demand is the amount of demand for housing units that becomes visible in both the formal and informal segments of the market place. Effective demand is a **subset** of quantitatively and qualitatively defined housing needs. Effective demand is usually smaller than housing needs, since due to budget constraints, a substantial portion of all households cannot successfully bid for **adequate housing units** – this is, for dwelling units equipped with the number of rooms needed for the family's size and located in or adjacent to areas where households gain their income to sustain livelihoods. Frequently, these households are a priori excluded from participating in both formal rental markets and formal property markets. Their housing needs are not covered by the formal housing market as the formal market segment is structurally unable to respond to these basic needs due to the **cost structure of permanent housing units**. Consequently, the formal market sector cannot be responsive to the wide-ranging needs for **affordable housing**, and households have to make do with the options offered through informal segments.

Housing Consumption

15. Housing consumption reflects the quality and quantity of housing which households are willing to pay for, given their income level. Housing consumption depends on a household's purchase power with which it can engage in market transactions in both formal and informal markets and on the cost of housing of a certain quantity and quality as established by the market place as well as on the price of other essential goods (such as e.g. food and healthcare) households need to purchase with their budget. For low income households, real housing consumption is usually much lower than actual housing need. The same may hold true even for households with higher incomes, if they lack access to finance or are subject to other constraints.

Housing Affordability

16. This is the amount of housing - both in quantitative and qualitative terms - a certain household can afford to buy, based on its income, savings, and the range of opportunities provided by housing finance institutions. Affordability can be low because of low incomes, because of lack of access to finance, or because of an undersupply of cheap yet acceptable housing units. Frequently, low affordability results from all variables concurring simultaneously.

B. Situation Analysis of Myanmar's Housing Sector

B.I The Specific Properties of Housing

17. The dwelling unit is the center of life. Access to adequate housing is one of the decisive basic human needs. Physically, dwelling units are the basic cells whose spatial arrangements in myriads of combinations shape the forms of human settlements in both urban and rural areas across the globe. The provision of adequate housing is essential for the entire well-being of families and individuals, and crucial for the protection of families' privacy. Since people cannot opt out of its consumption, housing is a basic necessity and adequate housing has been recognized as a basic human right. Housing performs fundamental social functions. Yet simultaneously, housing units are economic goods traded in markets, whose pricing is subject to economic laws of supply and demand. For its production, key economic inputs such as land, materials (cement, bricks, wood, and steel), labor, and capital (finance) need to be combined. Hence, multi-dimensionality is a core feature of housing.

18. On the macroeconomic level, housing forms a core component of most national economies. Investments in the housing sector contribute, directly and indirectly, through backward and forward linkages to national economic growth and from 10 to 30 percent of gross capital formation in developing countries.² Contributions to GDP are significant, ranging from two to eight percent of total GDP. When adding services affiliated with the housing sector, the share of GDP originating in the sector can reach between seven and 18 percent of GDP.³ As central asset for most private households, it comprises 20 to 50 percent of households' tangible assets in both developing and developed countries.⁴ Due to its outstanding importance for the broader national economy, the housing sector requires adequate policy attention.

19. Fundamental to the housing sector - both owned and rental - is the generation of a sufficient and steady flow of affordable supply. In particular, in developing countries, around 50 percent of all households, yet in some cases an even significantly larger portion of households do not command the financial means to obtain adequate housing through formal channels. Hence, as in other developing countries in Asia such as Bangladesh and Vietnam, in Myanmar the housing sector - like other components of its national economy such as the labor market - is characterized by a ubiquitous dichotomy of formality vs. informality. The box below presents an explanatory overview.

BOX: INFORMAL TRANSACTIONS/FORMAL TRANSACTIONS IN THE HOUSING SECTOR

When analyzing Myanmar's housing sector, the issue of **informality** and **informal transactions** is regularly encountered:

- In the context of production of housing units, all or most elements of the entire supply chain from the conversion of agricultural land to the final construction of affordable housing units can be provided through the informal sphere. Informal activities may encompass the conversion of agricultural land into land for residential purposes, the selling and buying of land, the selling and buying of housing units as well as rental contractual agreements.
- In contrast to the formal sector, laborers, businesses, and business activities making up the informal sector are not registered with or taxed by the government. Transactions are (mostly) neither formally monitored nor recorded by public-sector agencies.
- A major aspect of informality is that actors engaged in informal transactions mostly do not have access to any kind of neutral legal arbitration or court action, which tends to increase overall levels of transaction risk. A central outcome of informality in the interrelated housing and land sectors is that it creates chronic ambiguities with regard to tenure and, similarly important, impedes eventual creation of robust property rights.
- The absence of secure property rights durably registered on public records widely inhibits land and housing units to be used as collateral for long-term mortgages and other loans obtainable from the formalized financial sector.
- Informal areas lie outside Government planning and service delivery, and as a rule do not receive any services or infrastructure from local government.
- While in developed countries informal sectors exist as well, degrees of economic and regulatory informality in national economies are statistically significant associated with a country's overall level of economic development as expressed by GDP/capita. Once GDP per capita rises, levels of informality tend to decrease.

B.II Features of Myanmar's Housing Stock**B.II.1 Trends in Housing from 1983 to 2014**

20. The census of 1983 identified basic parameters of the housing sector. It enumerated and published the number of **structures**, the number of **dwelling units** in structures, as well as the **number of households**, and recorded the types of material which dwelling units were built with. However, it did not record the number of habitable rooms per dwelling unit and did not count the number of persons per room.

21. In contrast, the census of 2014 omitted enumerating following core parameters of the housing sector:

- Number of dwelling units;
- Number of structures;
- Numbers of habitable rooms per housing unit;
- Number of persons per room;
- Data on toilet sharing between households.

22. The limited extent of housing-related parameters covered by the census of 2014 points toward a significant regression. Physical characteristics of dwelling units are assigned to households. Since several households can share (and jointly own) the same dwelling unit, the utility of the census of 2014 for housing purposes is considerably impaired. This notwithstanding, it is possible to approximately compare some results from 1983 with data gathered in 2014, permitting some ballpark estimates on housing development trends in housing during the last 31 years. Table I comprises basic trends of population and households.

TABLE I: GROWTH OF POPULATION AND HOUSEHOLDS, 1983 – 2014

	1983	2014	Change 1983-2014, %	Growth rate 1983-2014 p. a. (CAGR*), %
Population	35,307,913	51,486,253	45.82	1.22
Households	6,495,621	10,877,832	67.46	1.68
Housing units	6,750,884	n. a.**	n. a.	n. a.
Persons per household	5.44	4.73	-12.92	-0.45
Persons per housing unit	5.23	n. a.	n. a.	n. a.

Sources: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Nay Pyi Taw, May 2015; The Socialist Republic of the Union of Burma, Ministry of Home and Religious Affairs, Burma – 1983 Population Census, Yangon (Rangoon) 1986 (English version).

* CAGR: Compound Annual Average Growth Rate.

** not available.

23. Table I shows that from 1983 until 2014 the average annual growth rate of households considerably exceeded the average annual growth rate of the population.⁵ As a result, the average number of persons living in one household quite significantly fell between 1983 and 2014. The average annual growth rate of households is about 37 percent higher than the growth rate of the overall population. This is significant because it is households - regardless of their composition – and not individuals that participate in housing markets as **demand generating actors**. **This implies that housing needs grew significantly stronger than the population.**

24. Provided enumerations in 1983 were accurate, the census of 1983 shows that the numbers of households and numbers of dwelling units were roughly in balance, with the number of housing units slightly exceeding the number of households by about 250,000; a surplus of about 4%. Data on the number of housing units tallied in 1983 open up the opportunity to estimate the number of housing units that would exist in 2014 **if** the numbers of **dwelling units** had grown at the same average annual rate from 1983 to 2014 as the number of **households** actually has. Table II below combines this estimate with measured data from Table I. This provides an estimation of the housing needs of Myanmar, if the ration of households to dwelling units has remained constant.

**TABLE II: GROWTH OF HOUSEHOLDS, 1983 – 2014;
HYPOTHETICAL GROWTH OF HOUSING UNITS, 1983 – 2014**

	1983	2014	Change 1983-2014, %	Growth Rate 1983- 2014 p. a. (CAGR), %
Population	35,307,913	51,486,253	45.82	1.22
Households	6,495,621	10,877,832	67.46	1.68
Housing units	6,750,884	11,305,306*	67.46*	1.68*
Persons per household	5.44	4.73	-12.92	-0.45
Persons per housing unit	5.23	4.55*	-12.92*	-0.45*

*Figures **bolded** and in *italics* indicate assumptions.

25. Table II indicates that if the same growth rate as measured for households were applied, the number of housing units should stand at around 11.3 million in 2014. This would have implied an annual net addition of 147,000 units per year:

**TABLE III: ABSOLUTE CHANGE OF NUMBER OF
HOUSEHOLDS, 1983 – 2014;
ASSUMED CHANGE OF NUMBER OF
HOUSING UNITS**

	Households	Housing Units
Absolute change 1983-2014	4,382,211	4,554,422*
Average quantity added p. a., 1983- 2014	141,362	146,917*

*Figures **bolded** and in *italics* indicate assumptions.

26. Replacement needs for obsolete or destroyed units need to be accounted for as well.⁶ Thus, the **average annual gross construction output** needs to be substantially larger than the posited annual average increase solely required by the growth of the number of households. As substantial portions of Myanmar's housing stock consist of semi-permanent and temporary units, which deteriorate faster than units constructed with bricks, steel and concrete, the extent of desired annual gross output of dwelling units needs to be augmented by a substantial degree, as is discussed further below.

B.II.2 Estimation of Housing Deficit in 2014

27. Pieces of information indicate that the current size of Myanmar's housing stock significantly falls short of the hypothetically derived quantity of 11.3 million units. For the purpose of devising a National Housing Policy, it is imperative to get an understanding of the current shortfall's magnitude. Various approaches can be used to estimate the shortfall.

28. The census of 2014 found that 47 million people are living in private (conventional) households, whose total quantity stood at approx. 10.9 million. A closer look at data indicates that this figure may include a substantial number of **potential additional** (hence "hidden") households, that is, potential households would prefer to become **households living in their own housing unit** (no matter whether owned or rented) and leave existing households, if their budget situation were to permit such a step.

29. In this context, the most interesting group is constituted by the 1.64 mill. sons-in-law and daughters-in-law living in households which they do not head.⁷ The figure implies that in 2014 approx. 820,000 married couples were not living in their **own dwelling unit**. If they prefer to do so, they need to leave the current household and form an **additional** new household, which implies the need to find their own dwelling unit. Yet in the developing countries of South-East Asia it is much more a cultural norm than in developed countries that married adult children plus spouses and children co-reside with their parents in the same household. Hence, a share of multi-generational/multi-family households can represent outcomes of genuine choices of individuals concerned⁸ and may not result from doubling-up caused by problems of finding adequate and affordable housing for (mostly) younger families. To account for cultural preferences, it is assumed that just 50 percent of married couples prefer to leave, yet cannot due to budget constraints. **At the 50 percent rate (which is probably too low) additional housing needs to the tune of 410,000 dwelling units emerge from married couples who are unable to reside separately from their parents but would prefer to.**

30. In addition, 1.76 mill. individuals are categorized as "other relatives" and 0.92 mill. as non-relatives, forming another relatively large group consisting of 2.68 million adult persons, which might prefer to live in their own housing unit, if they could afford it. Assuming that 50 percent of these 2.68 million persons might prefer to form new additional households of their own consisting of two persons each, augments housing needs by another 670,000 dwelling units. In sum, additional housing needs of 1.1 million dwelling units emerge.

31. Applying a related angle, "hidden" or "invisible" housing needs can also be assessed by taking a closer look at the substantial numbers of persons living in households with six or more persons, as shown in Table IV.

TABLE IV: PERSONS LIVING IN CONVENTIONAL HOUSEHOLDS WITH SIX OR MORE PERSONS

Conventional households by size of persons living in household	Number of conventional households	Percent of all conventional households	Number of persons	Percent of all persons living in conventional households
6 Persons	1,183,110	10.88	7,098,660	14.81
7 Persons	706,209	6.49	4,943,463	10.31
8 Persons	449,959	4.14	3,599,672	7.51
9+ Persons	406,021	3.73	3,654,189	7.62
Sum:	2,745,299	25.24	19,295,984	40.26

Source: The 2014 Population and Housing Census, The Union Report - Census Report, Volume 2, Table A-9, p. 112.

32. Table IV indicates that approx. 25.5 percent of all persons living in conventional households are lodging in households with seven or more persons – approx. 12.2 million individuals. If one assumes that 50 percent of those would prefer to live in their own household (6.1 million persons) and each new household would comprise four persons, this would generate an additional amount of housing needs of about 1.5 million units.

B.III Composition of Housing Stock by Durability

33. Results from the census of 1983 permit a ballpark estimate concerning developments in (relative) durability of dwelling units between 1983 and 2014. Table VI below compares usage of construction materials. The census of 2014 did not enumerate the number of housing units. Thus, as a rough proxy the **proportional distribution** of construction material (for the walls) among households is used.

TABLE VI: CONSTRUCTION MATERIALS, 1983/2014

1983			2014		
Structures			Households		
Construction Material	Total	Percent	Construction Material (Walls)	Total	Percent
Pucca*	116,979	1.8	Permanent***	1,732,291	15.9
Semi-pucca**	89,612	1.4	Corrugated Sheet	54,329	0.5
Wood	944,402	14.8	Wood	2,352,212	21.6
Wood & Bamboo	3,442,159	54.1	Bamboo	5,571,105	51.2
Bamboo & Thatch	1,663,427	26.1	Dhani/Theke/In leaf	1,025,549	9.4
Other	108,942	1.7	Other (incl. Earth)	142,346	1.3
Sum	6,365,521	100	Sum	10,877,832	100

Sources: The Socialist Republic of the Union of Burma, Ministry of Home and Religious Affairs, Burma – 1983 Population Census, Yangon (Rangoon) 1986 (English version), Table 3, p. II-13f; The 2014 Population and Housing Census, The Union Report - Census Report, Volume 2, Table I-4b (Construction Material for External Walls), p. 235 f.

* Pucca means "permanent" ;

** Semi-pucca means «semi-permanent».

*** "Permanent" in 2014 refers to construction materials such as tile/brick/concrete.

34. Since categorizing of construction materials in 1983 does not fully match categories applied in 2014, groupings from Table VI were condensed into two: “permanent/semi-permanent” and “temporary” (Table VII). In the category “permanent/semi-permanent” in 1983, pucca, semi-pucca, and wood were included, whereas in 2014 this class comprises “permanent” (i.e., tile/bricks/concrete), corrugated sheet, and wood.

TABLE VII: RELATIVE DURABILITY OF STRUCTURES 1983 / RELATIVE DURABILITY OF DWELLINGS HOUSEHOLDS LIVED IN, 2014 (URBAN/RURAL)

1983			2014						
Structures	Total	%	Households	Urban households	Urban h'holds, % of total	Rural households	Rural households, % of total	Total number of households 2014 by durability	Total number of households 2014 by durability, % of all households
				Durability		Durability			
Permanent/Semi-permanent	1,150,993	18.1	Permanent/Semi-permanent	1,752,860	57	2,385,972	30	4,138,832	38
Temporary	5,214,528	81.9	Temporary	1,296,573	43	5,442,427	70	6,739,000	62
Sum	6,365,521	100	Sum	3,049,433	100	7,828,399	100	10,877,832	100

35. In 2014, even in urban areas just 57 percent of all households lived in dwelling units made of permanent/semi-permanent materials, whereas in rural areas only 30 percent of all households lived in units made of permanent/semi-permanent materials. The rate of 43% of urban households still living in temporary units appears to be quite high, indicating a substantial need for modernization even in urban areas. In sum, a significant gap between building quality in urban and rural areas clearly manifests itself.

36. Data indicate that between 1983 and 2014 the overall share of permanent/semi-permanent dwelling units more than doubled, rising from 18% to about 38%. This indicates that during the last 30 years some degree of economic development took place, which fostered a partial modernization of housing stock. This notwithstanding, the number of temporary units such as huts made from dried plant material still increased by around one million or 1.5 million, affecting nearly 62 percent of all households in 2014 and pointing towards large-scale requirements for further improvement.

B.IV Types of Tenure

37. Both nationwide and in rural areas ownership by far outnumbers renting. Yet it is noteworthy, that in the urban areas already 20 percent of households identify themselves as renting, as Table VIII below shows. Growing portions of renting households are associated with urbanization as well as with high costs for purchasing units. As urbanization progresses, a growing significance of the rental sector - both formal and informal - can be expected. Proportions between the two core types of housing tenure “owning” and “renting” may further shift towards renting.

TABLE VIII: DISTRIBUTION OF TYPES OF TENURE 2014; URBAN/RURAL

	Owner	% of total	Renter	% of total	Provided free (individually)	% of total	Government Quarters	% of total	Private Company Quarters	% of total	Other	% of total	Total
UNION	9,302,840	85.52	805,491	7.40	272,557	2.51	354,155	3.26	77,234	0.71	65,555	0.60	10,877,832
- Urban	2,013,052	66.01	619,064	20.30	133,025	4.36	213,875	7.01	30,890	1.01	39,527	1.30	3,049,433
- Rural	7,289,788	93.12	186,427	2.38	139,532	1.78	140,280	1.79	46,344	0.59	26,028	0.33	7,828,399

Source: The 2014 Population and Housing Census, The Union Report - Census Report, Volume 2, Table I-2, p. 230.

38. The share of households living in government houses is lower than could be expected, comprising just about 3.3 percent of all households. Yet in urban areas this rate is twice as high. It is noteworthy that in urban wards the share of households which are provided with “free” housing is standing at approx. 4.4 percent. This figure may mostly encompass households which moved to urban areas and were accommodated by relatives. In contrast, the recorded share of accommodation provided by private companies at just one percent in urban areas is lower than expected. With industrialization progressing, increasing provision of accommodation through private companies would be desirable.

39. The distribution of construction materials among types of tenure as shown by Table IX below provides another interesting aspect of Myanmar’s housing stock. About 28 percent of all households who are renters are living in units built with permanent materials. This portion is more than twice as high as the share of all households residing in dwelling units built with durable materials, which only stands at about thirteen percent. This can be explained by the location of renters which is mostly in urban areas, where the share of dwelling units built with durable materials is much higher than in the rural areas. The highest share of households at approx. 68 percent who are residing in buildings constructed with durable materials is to be found in the tenure category “provided by government”. Conversely, this category encompasses the lowest shares of temporary materials made from bamboo or other dried plant material, standing at around eleven percent for bamboo and at just 1.5 percent for other materials such as predominantly dried leaves and earth.

TABLE IX: SHARES OF TYPES OF CONSTRUCTION MATERIAL BY TYPES OF TENURE, 2014

Construction Material \ Type of Tenure	Total	Bamboo	% of total	Wood	% of total	Tiles / Bricks / Concrete ("Permanent")	% of total	Other Materials (Dhani / Theke/ In Leaf; Corrug. Sheet; Earth; Other)	% of total
	Owner	9,302,840	5,005,745	53.8	2,023,257	21.7	1,190,795	12.8	1,083,043
Renter	805,491	335,813	41.7	172,420	21.4	226,505	28.1	70,753	8.8
Free Provision	272,557	126,894	46.6	68,069	25.0	47,087	17.3	30,507	11.2
Provision by Government	354,155	40,364	11.4	68,054	19.2	240,250	67.8	5,487	1.5
Provision Private Company	77,234	30,747	39.8	15,553	20.1	20,295	26.3	10,639	13.8
Other	65,555	31,542	48.1	4,859	7.4	7,359	11.2	21,795	33.2

Source: UNFPA Myanmar, 2014 Myanmar Population and Housing Census – Thematic Report on Housing Conditions, Household Amenities, and Assets, p. 29 f. (unpublished mimeo, Nay Pyi Taw, March 2016).

40. In addition, the census of 2014 found that the vast majority of owning households - 85.6 percent⁹ - live in dwelling units constructed with plant-based materials, which are temporary by nature. This reflects the fact that the majority of owning households resides in rural areas. Yet it also indicates the relatively low level of financial investment made per dwelling unit, which in turn is the result of aggregate low income levels as detailed below.

B.V Infrastructural Services for Households

B.V.1 Supply of Drinking Water

41. Table X shows sources of drinking water for households as established by the census of 2014. Classifications are based on WHO recommendations.¹⁰ Data suggest that about 62 percent of all households in Myanmar have access to improved sources of drinking water. Yet data also show that only nine percent of all households have access to the most advanced source, piped tap water. In the urban areas, the share of this source is nearly twice as high, standing at 16 percent. Yet even in Yangon CDC area and in Mandalay CDC area, spatial extent of networks is limited. It is important to note that piped water in Myanmar is generally not safe for drinking. Moreover, piped water networks also suffer from supply interruptions. Drinking water pumped from boreholes and tube wells is increasingly exposed to significant risks from contamination through leakage seeping into the soil from septic tanks suffering from poor building quality. In sum, data indicate a significant need to upgrade the quality of drinking water supply nationwide, requiring substantial fiscal outlays.

TABLE X: SOURCES OF DRINKING WATER FOR HOUSEHOLDS (URBAN/RURAL), 2014

Improved Drinking Water Sources															
	All House-Holds	Tap water/Piped	% of all HH	Tube well, borehole	% of all HH	Protected well/Spring	% of all HH	Waterfall/Rain water	% of all HH	Sum of HH, Improved Drinking Water Sources	Im-proved Drinking Water Sour-ces, % of all HH				
Uni-on	10,877,832	974,598	9.0	3,419,490	31.4	2,054,528	18.9	339,978	3.1	6,788,594	62.4				
Urb.	3,049,433	488,159	16.0	851,419	27.9	350,997	11.5	25,309	0.8	1,715,884	56.3				
Rur.	7,828,399	486,439	6.2	2,568,071	32.8	1,703,531	21.8	314,669	4.0	5,072,710	64.8				
Not Improved Drinking Water Sources															
	All House-holds	Unprotected well/Spring	% of all HH	Pool/Pond/ Lake	% of all HH	River/stream/canal	% of all HH	Bottled water/ Water purifier	% of all HH	Tanker/ Truck	% of all HH	Other	% of all HH	Sum of HH, Not Improved Drinking Water Sources	Not Im-proved Drinking Water Sour-ces, % of all HH
Uni-on	10,877,832	580,552	5.3	1,335,360	12.3	814,911	7.5	1,109,006	10.2	50,763	0.5	198,646	1.8	4,089,238	37.6
Urb.	3,049,433	55,642	1.8	182,222	6.0	55,773	1.8	954,803	31.3	36,260	1.2	48,849	1.6	1,333,549	43.7
Rur.	7,828,399	524,910	6.7	1,153,138	14.7	759,138	9.7	154,203	2.0	14,503	0.2	149,797	1.9	2,755,689	35.2

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), Table J-2, Conventional Households by Source of Water for Drinking and Urban/Rural, pp. 243-244.

B.V.2 Domestic Sanitation

42. A similar exercise was carried out with regard to census data concerning domestic sanitation (Table XI). The census identified flush toilets as well as water-sealed (improved) pit latrines as “safe sanitation” or “improved sanitation” (category I).¹¹ Hence, traditional pit latrines (pits), surface latrines (buckets), and the classification “other” were grouped together, constituting category II ‘less safe’. As with potable water, the level of (relatively) safe domestic sanitation is much higher in urban areas than in rural areas. The category “none” comprises a significant share of 14.4% of all households nationwide, pointing towards high levels of poverty, or, probably homelessness, especially in rural areas.

TABLE XI: TYPES OF DOMESTIC SANITATION IN HOUSEHOLDS (URBAN/RURAL), 2014

	Total Number of Households	I Safe Sanitation (%)	II Less Safe Sanitation (%)	None (%)
UNION	10,877,832	74.3	11.3	14.4
Urban	3,049,433	92.3	5.1	2.6
Rural	7,828,399	67.3	13.7	19.0

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), p 232 f.

43. Households’ wastewater is in most cases discharged into septic tanks located directly adjacent to the dwelling unit. The overwhelming majority of both household and industrial wastewater remains untreated when eventually discharged into the rivers or into the sea. The high share of households with less safe domestic sanitation and of households without any toilets points to grave needs for improving the status of sanitation, in particular in the rural areas. The recorded relatively high level of “safe sanitation” may be misleading, since only the CBD area of Yangon has a sewerage network, whose origins date back to the colonial period. A new wastewater treatment plant was opened in 2005. Before that, Yangon’s wastewater was discharged untreated into Yangon River. Mandalay does not have any centralized wastewater system, and only a limited number of households have septic tanks of varying quality. Planning for a modern wastewater system in Mandalay has started, yet is still in its incipient stages. Consequently, a significant quantity of wastewater ends up in the open drainage canals paralleling roads, from where the wastewater is further discharged into lakes and into the Ayeyawady River. The wastewater of all other settlements eventually runs untreated into rivers, lakes, and other open water bodies, creating major risks to public health.

B.V.3 Electricity Supply

44. Reliable and steady electricity supply is an indispensable precondition for strong and sustained economic development. Many infrastructural assets currently planned to improve both the quality of life inside dwelling units and the public quality of life such as treatment plants for drinking water, wastewater treatment plants and concomitant pumping and distribution centers require uninterrupted power supply for proper functioning. In particular, the further development of a manufacturing economy requires a steady and reliable flow of electrical energy. Thus, the rapid expansion of a

steady electricity output is an overarching macro-theme for Myanmar's development, in particular with a view on the urgently required rural electrification. Any substantial augmentation of power output strongly contributes to the quality of life in both cities and villages. Once a suburban area is connected to the power grid, land values rise, building activities for residential purposes intensify, and population densities tend to increase, in turn expanding demand for other urban services.

TABLE XII: SOURCES OF ELECTRICITY FOR LIGHTING IN HOUSEHOLDS, (URBAN/RURAL), 2014

	Total Number of Households	Electricity (%)	Candle (%)	Battery (%)	Other Sources (%)
UNION	10,877,832	32.4	20.7	16.9	29.9
Urban	3,049,433	77.5	7.2	6.3	9.1
Rural	7,828,399	14.9	26.0	21.1	38.0

Source: Ministry of Immigration and Population, The 2014 Population and Housing Census, The Union Report (Census Report Vol. II), p 241.

45. Myanmar is suffering from a severe shortage of power supply. While Vietnam has achieved an electrification rate of virtually 99 percent, census data reveal that in Myanmar just 32 percent of all households have access to the power grid in such a way that electricity from the grid is the main source for lighting in dwelling units; a figure that certainly can be used as a proxy for measuring nationwide level of grid connectivity. Almost 21 percent of all households have to rely on candles, while approx. seventeen percent make use of batteries. Additional sources are private generators (mostly running on diesel fuel), kerosene (lamp oil), solar energy, private water mills, and some sources not further specified. All those together provide the main energy for lighting in about 30 percent of all households. Private generators, kerosene, and solar energy each roughly make up slightly less than one third of other sources combined. With regard to power grid access, gaps between urban areas and rural areas are exceptionally wide. Nationwide, 77.5 percent of all households located in urban wards have access to the power grid, while this is the case for only about fifteen percent of all rural households. Yet a swift electrification of rural areas constitutes an important factor for local economic development and hence job creation; a necessary precondition for decelerating the pace of rural-to-urban migration.

B.VI Assessment of Housing Needs in 2014

46. Due to the paucity of data, quantitative assessments of housing needs are difficult and fraught with risks. This notwithstanding, an attempt needs to be made to get an **impression of the size of the supply gap likely to exist**. The first step in this exercise is **to set a benchmark**. In a second step, the estimated status quo is compared with this benchmark.

47. Due to the lack of data available on dwelling units in 2014, a benchmark has been estimated based on the number of dwelling units is used which would have existed by 2014 if the ratio of the number of households and the number of dwelling units were the same in 2014 as 1983. In 1983, the

ratio of dwelling units (du) to households (hh) – du/hh – stood at 1.04. The number of households roughly matched the number of dwelling units. To maintain the du/hh ratio of 1983, an assumed quantity of **11.3 million dwelling units** should have existed by 2014, as indicated in Table II above.

48. In 1983, there even was a small surplus of units. While the internal composition of the overhang measured in 1983 is not known, it needs to be noted that there should always exist a surplus of five to seven percent in housing markets to reduce pressures with regard to unit price appreciation and to serve as a general buffer. Of course, a surplus of units only exerts beneficial impacts if certain conditions are met. Surplus units must be provided in the affordable mass-segment. An excess supply of vacant luxury condominiums hardly contributes to dampening prices in mass markets.

49. In section B.II.2 the number of likely additional households requiring additional dwelling units was estimated as follows:

- | | |
|--|-----------------------------|
| ▪ Married couples living in parents' households: | 0.82 million (couples) |
| ▪ 50 percent ¹² of whom would prefer to live in their own dwelling unit, if affordable: | 0,41 million (units) |
| ▪ Other adults living in households which they do not head: | 2.68 million (persons) |
| ▪ 50 percent ¹³ of whom would prefer to form a household of their own in their own dwelling unit consisting of two persons: | 0.67 million (units) |
| ▪ Resulting additional housing needs: | 1.08 million (units) |

50. An alternative approach can be based on the number households which are living in units of very low quality as identified by the census of 2014. 10.9% of all households - about 1.2 million - assigned one of the two lowest possible quality ratings to their housing unit (out of a total of five). Hence, just providing households exposed to low quality units with housing units of adequate quality would require the provision of at least 1.2 million newly built units.¹⁴ In addition, the census identified 1.6 million households **without toilets**, approx. 14.4% of all households. This figure permits the assumption that unmet housing needs may total at least 1.6 million dwelling units, which is significant. It also needs to be acknowledged that the number of households without toilets may include a substantial portion of the approx. one million homeless individuals enumerated by the census.¹⁵

51. The **minimum number of dwelling units** can be estimated to stand at 9.3 million units. This figure can be derived from the census of 2014 which states that 9.3 million households own the unit they live in. Thus, it can be inferred that **the shortfall of housing units** stood somewhere between one to two million units in 2014, compared to the (assumed) benchmark of 11.3 million units. **It is reasonable to assume that the current stock of housing units is reaching around 9.3 million to 10.3 million.** Evidently, this estimate can only be considered to be a “ballpark estimate”, as it is exposed to risks of major deviations due to the limitations of data provided by the census of 2014. Table XIII a) summarizes core features of estimates.

Table XIII a): Summary of Estimates 1983-2014 – Number of Dwelling Units, Ratio du/hh, Estimates of Outputs and Growth of Output

	Number of households (hh)	Number of dwelling units (du)	Ratio dwelling units / households (du/hh)	Estimated total net output 1983 - 2014	Estimated annual net output 1983-2014	Estimated average annual net growth rate 1983-2014, % (CAGR)
1983	6,495,621	6,750,884	1.04	n.a.	n.a.	n.a.
2014 (a)	10,877,832	11,300,000*	1.04	4,550,000	146,774	1.68
2014 (b)	10,877,832	10,300,000*	0.95	3,550,000	114,516	1.37
2014 (c)	10,877,832	9,300,000*	0.85	2,550,000	82,258	1.04

* Estimates.

Note: 2014 (a), (b), and (c) refer to different scenarios, assuming different ratios of households to dwelling units

52. Estimates indicate that to maintain a rough balance between the number of households and the number of dwelling units, an **average annual net output of about 147,000 units** would have been required. If the housing stock stood at 10.3 million in 2014, from 1983 until 2014 an annual net output of about 115,000 units would have been required. If total housing stock stood at 9.3 million in 2014, from 1983 until 2014, still an annual net output of about 82,200 units would have been required. The numbers reflect net annual output. This means they do not account for replacement needs for units which became defunct over the year. **Thus, gross annual unit production needs to be significantly higher than annual net production** – that is, annual net output needs to be the gross out **plus** replacement needs.

53. International housing research suggests that the annual replacement rate approx. equals one to two percent of existing stock. This implies that over the years a growing housing stock on average leads to a growing absolute number of units ripe for substitution. Examples in Table XIII b) below illustrate this.

Table XIII b): Scenarios of Total Output Including Replacement Needs 1984 and 2013 by Annual Replacement Rates of 1% / 2% and by Varying Sizes of Estimated Stock in 2014

	SCENARIO A 1983 – stock of dwelling units: 6.751 million 2014 - stock of dwelling units: 9.3 million; average annual growth rate 1983-2014 of net output: 1.04% (CAGR)		SCENARIO B 1983 – stock of dwelling units: 6.751 million 2014 - stock of dwelling units: 11.3 million; average annual growth rate of net output 1983-2014: 1.68% (CAGR)	
	1984	2013	1984	2013
Stock	6,821,006	9,204,393	6,864,001	11,113,779
Annual output necessitated by growth of numbers of households:	70,122	95,607	113,117	186,221
Replacement of 1% of stock of dwelling units:	67,509	92,044	67,509	111,138
Replacement of 2% of stock of dwelling units:	135,018	184,088	135,018	222,276
Required total annual output @ 1 % replacement rate:	137,631	187,651	180,626	297,359
Required total annual output @ 2 % replacement rate:	205,140	279,695	248,135	408,497

Note: The seeming exactitude of figures in Table XIII b) is just an outcome of arithmetic operations. **It is not intended to pretend a level of accuracy that actually does not exist at all.** On the contrary: It is imperative to be clear about the fact that the figures just express very approximate magnitudes.

54. From table XIII b), following main findings can be derived:

- The total annual gross output for units consists of two components:
 - Unit output for newly formed households in a given year; and
 - Units to be built in a given year to replace units that became obsolete and dilapidated during that year.
 - If the annual desired replacement rate is larger than the growth rate of households, as a consequence the share of units required for replacements is larger than the share of units needed to satisfy needs generated by growth of households' numbers. E.g., this is the case in Scenario A (replacement rate at two percent) which is based on an estimated housing stock of 9.3 million units in 2014.
- As the entirety of the housing stock grows, the absolute number of new units just needed for replacement can grow as well.
- Even in low-growth Scenario A, at a replacement rate of 1% per year, (desired) aggregate output would need to reach about 138,000 units per year at the beginning of the period 1983 to 2014 and 188,000 units per year at the end of the period 1983 to 2014.

- Due to the prevalence of temporary (plant-based) building, the annual replacement rate in Myanmar is more likely to be found at or around two percent than at one percent.
- If one assumes that 11.3 million units existed in 2014 and replacement rate stood at one percent per year, significant quantities of desired unit output emerge, reaching about 181,000 units per year at the beginning of the period 1983 to 2014 and approximate 297,000 units per year at the end of the period 1983 to 2014.
- At a replacement rate of two percent, massive output quantities of more than 400,000 units per year towards the end of the period 1983 to 2014 may emerge.
- Magnitudes of housing needs come into view which are challenging.

B.VII Projection of Housing Needs until 2024

55. Dependable data depicting the implementation and completion of total (public and private sector) housing construction, which would enable some estimates of annual increase and the pace of construction, are not available. With regard to the issue of supplying steady data streams on population trends (“demand side”), Myanmar’s civil registration and vitality statistics system (CVRS) is not sufficiently well developed¹⁶, leading to a lack of **comprehensive time series** of marriage rates, births, and deaths.

56. With consistent data on annual output of residential construction and annual population trends being largely absent, any assessment of future trends needs to be based on census results available. Census data only provide static snapshots of demographic and physical conditions as measured during the census week(s). Consequently, developments between censuses need to be captured through extrapolation. Since the period between the two last censuses extends over more than 30 years, a substantial amount of uncertainty has to be reckoned with.

57. This notwithstanding, an approximate projection of the number of households to be expected by 2024 and of the number of dwelling units needed is undertaken. It is based on the measured average annual household growth rate from 1983 until 2014 of 1.68 percent. For want of plausible alternatives, its further application is reasonable. The same growth rate is used to estimate a “synthetic” number of housing units which would be required to exist by 2024 **to keep the ratio between dwelling units and households in rough balance as measured in 1983.**

58. Table XIV below shows required annual unit outputs based on three different starting points with regard to size of existing stock: 9.3 million, 10.3 million, and 11.3 million units. In addition, replacement rates of stock of one percent per year and two percent per year are considered.¹⁷

TABLE XIV: PROJECTION OF HOUSING NEEDS / DWELLING UNITS, 2014-2024

	Scenario A: Assumed stock 2014 - 11.3 million units; ratio du/hh: 1.04		Scenario B: Assumed stock 2014 - 10.3 million units; ratio du/hh: 0.95		Scenario C: Assumed stock 2014 - 9.3 million units; ratio du/hh: 0.85	
	Change 2014 – 2024	Change 2014 - 2024 per year (rounded)	Change 2014 - 2024	Change 2014 - 2024 per year (rounded)	Change 2014 – 2024	Change 2014 - 2024 per year (rounded)
Desired amount of dwelling units to be added until 2024 to match growth of number of hh, based on constant du/hh ratio in 1983 - 13,351,041 [1]	2,045,735	205,000	3,051,041	305,000	4,051,041	405,000
Replacement rate: 1% of estimated stock in 2014 [2]	1,130,000	113,000	1,030,000	103,000	930,000	93,000
Total gross output @ 1% annual replacement rate: [1] plus [2]	3,175,735	318,000	4,081,041	408,000	4,981,041	498,000
Replacement rate: 2% percent of estimated stock in 2014 [3]	2,260,000	226,000	2,060,000	206,000	1,860,000	186,000
Total gross output @ 2% annual replacement rate: [1] plus [3]	4,305,735	431,000	5,111,041	511,000	5,911,041	591,000

59. The ballpark estimate indicates that **an annual addition of about 205,000 units** would be required to parallel household growth if the average rate of annual household growth of 1.68 percent p. a. as measured between 1983 and 2014 remains unchanged. As a rule of thumb, international housing research commonly suggests annual replacement rates of one to two percent of stock. Given the high share of dwelling units constructed with plant-based materials, which are temporary by nature, a replacement rate of two percent per year appears to be more appropriate for Myanmar. An annual unit replacement rate of 2% leads to an extra annual amount of about 226,000 dwelling units, provided housing stock size amounted to 11.3 million in 2014.

60. This quantity of 431,000 units needs to be substantially augmented, if the unit supply gap estimated above is to be reduced and to be eventually closed within a reasonable amount of years. In case current shortfall amounts to approx. one million units, output driven by net household formation needs to reach about 305,000 units per year plus 206,000 units for replacement, adding up to an annual desired output of about 511,000 units. If current stock stands at 9.3 million units, total required

annual (gross) output reaches 591,000 units. Yet it is highly doubtful whether any catch-up is possible under current socioeconomic macro-conditions, unless annual affordable unit output makes sizeable and lasting progress.

61. Devising an effective housing policy vitally depends on an in-depth investigation of the quantitative situation of the housing sector and its current internal dynamics in particular with a view on net (additional) household formation. **An international core tenet of policy formulation is that it needs to be evidence-based.** Thus, it is imperative to execute a statistically robust survey as soon as possible to put further policy work on a sound footing. This survey needs to be based on a statistical sample of about 20,000 to 23,000 households.

B.VIII Migration and Housing Needs in Yangon Region

62. To get a grasp of the **dynamics of the spatial distribution of current and future additional housing needs**, it is necessary to examine migration flows. The overall intensity of migration within Myanmar markedly picked up between 2007 and 2014, as comparisons between the results of the census of 2014 and the Fertility and Reproductive Health Survey (FRHS) of 2007 show. Both in 2014 and 2007 the highest levels of net migration gains were measured in Yangon Region, whereas the largest net loss of population was found in neighboring Ayeyawady Region.¹⁸

63. The census of 2014 registered about 3.36 million persons who had migrated in the five years before the census and were living in conventional households at the time of census, referring to seven percent of the entire population living in conventional households. This group is called recent migrants to distinguish them from life-time migrants, i.e. persons who left their place of birth and moved (at least once) to another township, district or state/region at some point in time more than five years before census. From census data (collated in Annex, Tables A and B¹⁹), three major migration patterns were derived for this group of recent migrants: (i) Individuals who moved between townships within the same district (short-distance migration), (ii) individuals who moved between districts in the same state, and (iii) individuals who moved from a state/region to another state/region (long-distance migration). Short-distance migrants make-up about 38 percent of all recent migrants, whereas district-to-district migrants assume the smallest portion at about 16 percent. At 46 percent, long-distance migrants represent the largest group. All three groups of migrants contribute to the generation of additional housing needs at their area of destination, yet arguably at varying degrees. Due to its significance, a particular focus is put on long-distance migrants.

64. There is no information available on the average household size which the migrating individuals form. This notwithstanding, it is possible to develop estimations **to get an impression of the size of the migrant housing-related issues** in Yangon Region. The total number of recent long-distance migrants in Myanmar amounts to about 1.54 million persons, the bulk of which - 650,000 persons (approx. 42 percent) - moved to Yangon Region (Annex, Table A).

65. It is plausible to assume that migrating households are much smaller than average the household size of 4.4 individuals measured nationwide. Assuming that the average household size of long-distance migrants is 1.5 persons, this would amount to about 433,000 households which moved to Yangon in the five years before 2014, about 90,000 per year. Simultaneously, there was strong district-to-district migration recorded in Yangon Region as well as strong township-to-township migration, affecting another 210,000, resp. 590,000 persons (Annex, Table A). For township-to-township migration resp. district-to-district migration household sizes are plausibly larger, probably three persons. On a gross level, combined intra-region migration would require the provision of 270,000 units, 54,000 per year. In sum, migration to Yangon Region and within Yangon Region may require the provision of 150,000 affordable dwelling units per year (this quantity being a subset of quantities identified in Table XIV). The net level of additional output of dwelling units needed, however, may be somewhat lower, since the dwelling units which households migrating within the Region move out of continue to exist in many cases and hence may accommodate another household. As a result of one household moving into a newly built dwelling unit and thus moving out of a dwelling unit which then is added (again) to the supply of units available in the housing market, frequently chains of subsequent and related moves of households are brought about.

66. Tiered housing markets in metropolitan agglomerations such as Yangon Region feature **fluid interrelated dynamics**, which are very hard to capture without sufficient data based on a major survey.²⁰ Furthermore, there is an overlap of unknown dimension between the newly formed households - which represent housing needs generated through demographic trends - and housing needs generated by internal migration. This is because both factors are **frequently inextricably joined** and hence become effective simultaneously, cancelling each other out. This notwithstanding, it can be presumed that **long-distance migration requires at least about 100,000 additional affordable dwelling units per year on a net level in Yangon Region** - in addition to housing needs generated by the “natural” local increase of the number of households. If due to a further rise of foreign direct investment (FDI) in manufacturing industries job opportunities in Yangon Region continue to proliferate, the migration driven number can be safely expected to increase. Effects of the current demand for dwelling units in Yangon Region are illustrated in section D.II below.

C. Housing Affordability

C.I Expenditure Patterns of Households, Debt Levels, and Land Ownership

67. **Affordability of housing** as a share of households' annual expenditure is commonly considered to be given, when households are able to allocate 30 to 40 percent of their income to spending on housing (both owned and rental).²¹ Sufficient residuals are required to cover food, education, healthcare, and other indispensable goods. To get a clearer picture of current purchase power of Myanmar households, data available on the income situation of Myanmar households was examined.

68. Since 2010, data on households' expenditure and income situation have become available through the **Integrated Household and Living Conditions Survey** in Myanmar (IHLCS 2010)²² as well as through two surveys carried out by ILO in close cooperation with Myanmar authorities.^{23,24} In addition, JICA's Strategic Urban Development Plan of the Greater Yangon Area²⁵ provides data on incomes of households residing in the Greater Yangon Area. Since methods of surveys differ, scope for comparisons of results is limited. This notwithstanding, a broad picture emerges, which provides a level of utility sufficient for policy formulation.

69. IHLCS 2010 is based on a sample of about 19,000 households. Table XV below shows the share which expenditures for food and health care took of annual expenditures. Households are grouped in ten deciles ranked according to total amount of annual expenditures.

TABLE XV: HOUSEHOLDS' SHARES OF FOOD, HEALTHCARE EXPENDITURES, AND OTHER ITEMS BY EXPENDITURE DECILE, CHANGES 2005-2010

Household deciles	2005		2010		Changes 2005-2010	
	Food & health care	Other items	Food & health care	Other items	Change of share for food & health care 2005-2010, %	Change of share for other items 2005-2010, %
1st decile (lowest 10%)	72.4	27.6	74.1	25.9	2.3	-6.2
2nd decile	72.0	28.0	73.4	26.6	1.9	-5.0
3rd decile	71.6	28.4	73.3	26.7	2.4	-6.0
4th decile	72.2	27.8	71.7	28.3	-0.7	1.8
5th decile	71.4	28.6	71.6	28.4	0.3	-0.7
6th decile	71.2	28.8	70.5	29.5	-1.0	2.4
7th decile	70.4	29.6	70.4	29.6	0.0	0.0
8th decile	70.8	29.2	69.3	30.7	-2.1	5.1
9th decile	68.5	31.5	66.6	33.4	-2.8	6.0
10th decile (highest 10%)	63.6	36.4	56.8	43.2	-10.7	18.7
UNION	69.4	30.6	68.0	32.0	-2.0	4.6

Source: Ministry of National Planning and Economic Development / UNDP Myanmar / UNICEF Myanmar / SIDA, IHLCS 2010, p. 18.

70. Between 2005 and 2010 the allotment of expenditures for food (& health care) actually grew among the lower 30 percent households. Conversely, the share of expenditures for other items such

as e.g. housing fell. This implies a more or less stagnant situation regarding those households' options for apportioning spending to other purposes than food and health care.²⁶ The potential for allocating spending to housing did not increase and, apparently, little leeway is left for any expansion of spending for housing purposes.

71. In contrast, a significant decrease of the food share was recorded for the top 30 percent of households only, with the top decile of households taking the lion's share of reduction. Inversely, the share of expenditure obtainable for other items – which includes housing - grew significantly by 5.1 percent in the eighth decile, six percent in the ninth decile and by nearly 19 percent in the tenth decile, which is substantial. Data suggest an increase of relative wealth, which evidently concentrates among the top three deciles, with the top ten percent of households enjoying a significant edge over the eighth and ninth decile. In sum, economic development from 2005 until 2010 evidently advanced the upper third of households, as the internal relative composition of their consumption basket shifted towards items other than food and healthcare.

Household Debt

72. Identified debt levels further constrain consumption options of the poor. In addition to deciles, IHLCS grouped households into two major categories – (i) poor and (ii) non-poor. Outstanding debt levels among poor households stood at 14 percent of total consumption expenditure, whereas the debt/consumption ratio among non-poor households reached 22 percent. Yet identifying levels of **debt stock** does not tell much about the **flow of interest payments** – e.g. as a share of fixed monthly expenditures. In addition, IHLCS 2010 neither provides information on duration of credit maturities nor on modes of repayment. Aggregate debt levels appear to be quite high, leaving only limited space for further expansion, e.g. for housing purposes. Furthermore, debt affects a relatively large fraction of all households. Table XVI presents an overview:

TABLE XVI: HOUSEHOLD DEBT, 2004-2009; 2015

	(a) Poor		(b) Non-poor		All households		
	2004	2009	2004	2009	2004	2009	2015 ²⁷
Percent of households in debt	53.0	33.0	46.6	29.4	48.4	30.2	35.1
Total debt as % of indebted household consumption (including health expenditure)	15.0	14.1	24.0	22.2	21.9	20.8	n. a. ²⁸

Sources: Integrated Household and Living Conditions Survey in Myanmar (2009-2010), p. 49; Ministry of Labor, Employment and Social Security(MoLES)/Central Statistical Organization/ILO Myanmar, Myanmar Labor Force, Child Labor and School to Work Transition Survey 2015.

Changes in the share of indebted household point towards an interesting development. According to the survey which MoLES/CSO/ILO Myanmar carried out in 2015 (MoLES/ILO 2015), the share of indebted households seems to increase again after a dramatic decline from 2004 to 2009. Plausible explanations for those fluctuations are not at hand.

Land Ownership

73. In a predominantly agricultural economy, land ownership represents a critical component of households' overall asset position. In particular, this holds true in Myanmar against the backdrop of the country's relatively weak and underdeveloped monetary regime. Besides being an income-generating asset when farmed or rented out, land serves as a central storage of wealth and provides the fundamental source of collateral for mortgage creation and for access to other types of credit. IHCLS 2010 identified high levels of landlessness in particular among the poorest 30 percent of households. Table XVII comprises data and trends from 2005 to 2010.

TABLE XVII: LANDLESS RATE IN AGRICULTURE/ OWNERSHIP OF AGRICULTURAL LAND BY CONSUMPTION DECILE

Consumption decile	Landless rate			Ownership rate of agricultural land			Average land area owned (acres)			
	2005	2010	Change 2005-2010, %	2005	2010	Change 2005-2010, %	2005	2010	Change of owned land area (acres, abs.)	Change 2005-2010, %
1st decile (lowest 10%)	33.77	37.96	12.41	66.23	62.04	-6.33	3.17	3.88	0.71	22
2nd decile	31.81	29.82	-6.26	68.19	70.18	2.92	4.14	4.60	0.46	11
3rd decile	29.19	30.60	4.83	70.81	69.40	-1.99	4.91	5.37	0.46	9
4th decile	25.74	23.33	-9.36	74.26	76.67	3.25	4.94	5.76	0.82	17
5th decile	24.38	21.83	-10.46	75.62	78.17	3.37	5.10	6.22	1.12	22
6th decile	20.90	20.71	-0.91	79.10	79.29	0.24	6.14	7.04	0.90	15
7th decile	21.38	15.38	-28.06	78.62	84.62	7.63	6.12	7.27	1.15	19
8th decile	17.51	14.45	-17.48	82.49	85.55	3.71	9.28	7.90	-1.38	-15
9th decile	19.12	10.60	-44.56	80.88	89.40	10.53	8.07	9.53	1.46	18
10th decile (highest 10%)	14.80	6.95	-53.04	85.20	93.05	9.21	12.13	10.12	-2.01	-17
UNION	25.72	23.61	-8.20	74.28	76.39	2.84	6.11	6.69	0.58	10

Source: IHCLS 2010, p. 42 f. Data refer to households whose main activity is in agriculture.

74. From 2005 to 2010 in the poorest decile the share of landless households grew by 12.5% while in the 2nd and 3rd decile the share remained more or less unchanged. In contrast, the share of households **without land** strongly fell among the top 40 percent of households, with the 9th and the 10th decile recording significant rates of decline at minus 44 percent and minus 53 percent. Conversely, the rate of households with ownership of agricultural land increased by about nine respectively eleven percent among the top 20 percent. It is evident that the top 40 percent of households substantially increased their share of land ownership, while nationwide the ownership rate just slightly increased.

75. Across most deciles, the households that own land were able to expand the absolute size of the land they hold at a rate of about 20 percent from 2005 until 2010, yet with the notable exception of the 8th and the 10th decile. The households in the poorest decile were able to augment the average size of owned land by 22 percent, whereas the average size of landholdings in the 8th and the 10th decile

shrank by 15 percent respectively 17 percent. Plausible explanations for these seemingly counterintuitive developments are not at hand. A remarkable outcome, however, is that most probably the aggregate area of agricultural land in Myanmar expanded by ten percent, possibly indicating a substantial expansion of agricultural output from 2005 to 2010.^{29,30}

C.II Income Levels

Nationwide Levels of Income

76. Due to differing methodologies, available findings on incomes are comparable only in a rather approximate manner. IHLCS 2010 identified annual **expenditures** in 2005 and 2010 in inflation-adjusted 2009 MMK, whereas the Myanmar Labor Force Survey (MoLES/ILO 2016), ILO's Survey on Internal Migration (ILO/Mya 2015) as well as JICA's Strategic Urban Development Plan of the Greater Yangon Areas (2013) measured **incomes**. Household expenditures cannot directly be compared with data on household incomes. Hence, expenditure data of IHLCS 2010 were not considered for delineating the income situation of households.³¹ IHLCS 2010 data, however, are highly useful for depicting the structural distribution of wealth in Myanmar's society at the beginning of the reform period.

77. Comparability of surveys carried out in collaboration with ILO is limited as well. ILO/Mya 2015 used a sample size of about 7,300 **migrating individuals**, whereas results from the MoLES/ILO 2016 are based on a sample of about 23,400 **households**, which, however, were questioned about wages of **individual employees**. Table XVII presents an overview.

TABLE XVII: AVERAGE MONTHLY WAGES/SALARIES, 2015

Earnings Types of Workers	Monthly Earnings, MMK	Monthly Earnings in USD (@ 1 USD = 1,250 MMK)	Number of Months Per Year Earnings Received	Annual Earnings in MMK	Annual Earnings in USD (@ 1 USD ≈ 1,250 MMK)
Salary Earners*	134,490	108	12***	1,613,880	1,291
Wage Earners*	124,100	99	12***	1,489,200	1,191
Own Account Workers (self-employed)*	129,410	104	10.6	1,371,746	1,097
Recent Migrants Workers**	108,180	87	12***	1,298,160	1,039

* MoLES/ILO Survey 2015.

** ILO Migration Survey 2015.

*** Numbers of months worked are estimated.

78. It becomes apparent that migrant workers earn 16 to 20 percent less than non-migrant workers. A significantly higher share of public sector/education/defense employees in the non-migrant labor force may cause this, since public sector/education/defense employees tend to earn more than migrant workers. Both ILO surveys do not state unambiguously **how many months per year** respondents actually worked. Numbers of months actually worked are only available for own-account workers.

Thus, annual incomes in Table XVII are an assumption based on the notion that monthly salaries are paid twelve times per year, which arguably creates an impression which is too optimistic.

79. A further issue arises from the non-comparability of wage brackets selected. This notwithstanding, Table XVIII presents an overview of data for 2015, **as the distribution of incomes among the population is fundamental for designing future housing policy.**

TABLE XVIII: PERCENTAGE SHARE OF MEMBERS OF LABOR FORCE BY WAGE BRACKETS 2015

Wage/salary earners, bracket (MMK/USD)*	< 80,000 / 64	80,000 - 109,000 / 64 – 87	110,000 - 126,000 / 88 – 101	127,000 - 159,000 / 102 - 127	> 159,000 / 127	
Wage/salary earners, % per bracket*	18.9	20.3	20.1	19.0	21.7	100
Own account workers (self-employed) - bracket (MMK/USD)*	< 51,500 / 41	51,500 - 83,320 / 41 – 67	83,330 - 124,990 / 67 – 100	125,000 - 177,990 / 100 - 142	> 177,990 / 142	
Own account workers (self-employed), % per bracket*	20.0	20.0	19.2	20.5	20.4	100
Migrant members of labor force, bracket (MMK/USD)**	< 50,000 / 40	50,000 - 99,000 / 40 – 79	100,000 - 149,000 / 80 – 119	150,000 - 199,000 / 120 - 159	> 199,000 / 159	
Migrant members of labor force, % per bracket**	17.0	42.0	18.0	5.9	17.1	100

* MoLES/ILO 2016.

** ILO Mya 2015.

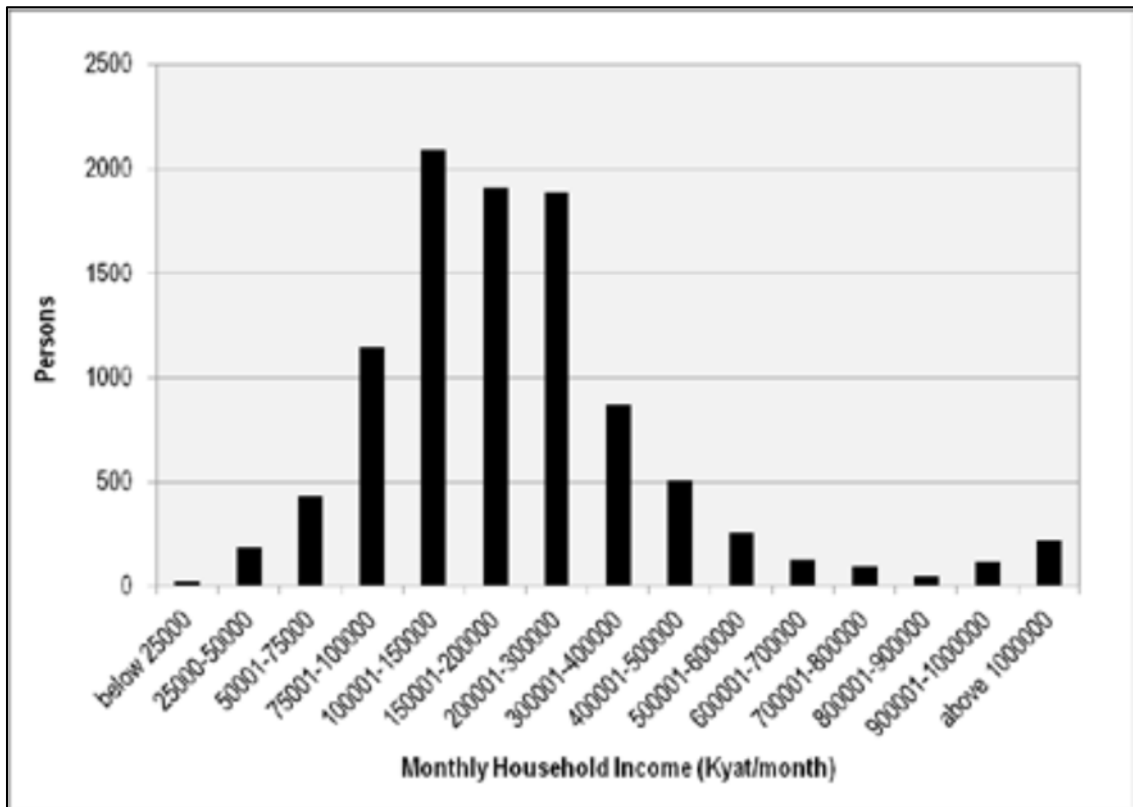
Selected exchange rate: 1 USD = 1,250 MMK.

80. Table XVIII indicates that more than 50 percent (probably 55 percent to 57 percent, but less than 60 percent) of all individuals earn less than 100,000 MMK per month. As is frequently the case in the area of income distribution, arithmetic averages do not properly reflect the real situation. This is, because values of arithmetic averages are prone to be skewed by the 10 percent of individuals with the highest incomes, which tend to be far higher than the rest. This effect is further amplified by the over-proportionally large incomes frequently observed among of the top two percent of individuals. Thus, a much more accurate impression can be gained by determining the **median** of a sample. The **median** indicates the 50th percentile – the middle value that splits the distribution into two halves. From data above it can be estimated that the mean value of monthly incomes stands at around 85,000 to 90,000 MMK. This implies that **50 percent of all respondents earned less than 85,000 to 90,000 MMK per month, and 50 percent make more than 85,000 to 90,000 MMK per month.**

Levels of Earnings in Greater Yangon Area (GYA)

81. For the Strategic Urban Development Plan of the Greater Yangon Area, JICA carried out a major survey on living conditions in Yangon (HIS - Household Interview Survey) in 2012. HIS covered about 10,000 households and gathered data on households' incomes. Results are comprised in Graph I below.

GRAPH I: MONTHLY HOUSEHOLD INCOMES IN GREATER YANGON AREA, 2012



Source: Reproduced from Japan International Cooperation Agency (JICA), The Project for the Strategic Urban Development Plan of the Greater Yangon, Final Report I, (Yangon) 2013, p. 2-219.

82. Figures in Table XIX below were derived from the columns in Graph I. Thus, an approximate overview of the percentage shares of each income group was generated. Data from Table XIX were used to calculate a weighted average of household incomes, which in 2012 was standing at around 220,000 MMK.³²

83. The median value is certainly lower than the mean and is estimated to stand between 170,000 and 180,000 MMK of monthly income for households. Household incomes below 100,000 MMK are low, yet with a view on identifying potential additional capacities to spend for housing it is suggested to add the income bracket between 100,000 and 150,000 MMK to the low-income group, which then would encompass approx. 40 percent of all households. Well-off households presumably start at the 400,000 to 500,000 MMK bracket. Together with the subsequent higher income groups, well-off households just comprise about 13.6 percent of all households. When taking into account that a household's aggregate income may be based on more than one salary, it is striking that the individual level of incomes in the Greater Yangon Area roughly corresponds to average wages recorded on a nationwide level through the surveys carried out in cooperation with ILO.³³

TABLE XIX: DISTRIBUTION OF HOUSEHOLDS' INCOMES, GREATER YANGON AREA 2012

Income Bracket (MMK)	Number of Households In Income Bracket	% of all Households in Sample
< 25,000	10	0.1
25,000-50,000	144	1.5
50,001-75,000	404	4.1
75,001-100,000	1,144	11.7
100,001-150,000	2,106	21.6
150,001-200,000	1,904	19.5
200,001-300,000	1,865	19.1
300,001-400,000	856	8.8
400,001-500,000	500	5.1
500,001-600,000	250	2.6
600,001-700,000	115	1.2
700,001-800,000	87	0.9
800,001-900,000	48	0.5
900,001-1,000,000	115	1.2
>1,000,000	212	2.2
All Households:	9,760	100

D. Housing and Land Governance

84. The effectiveness of housing output is inextricably intertwined with land supply, hence land governance. Thus, it is essential to interlink land governance with the National Housing Policy and to examine current land governance through the lens of NHP. The cadastral registration of land parcels, their physical dimensions, and their value as a basis for taxation in rural and in urban areas are extremely important for short-term and long-term urban and economic development. The same holds true for the systems of altering the use of farmland, of other agricultural land and of other non-built-up land to residential or commercial land. Driven by recent relaxation of regulations through the Farmland Law as well as by growing demand, substantial land price appreciations in peri-urban areas are exerting profound impacts on the modes of urban settlement expansion.

D.I Land Transactions and Changes of Land Use

Land transactions

85. By easing land transactions, the Farmland Law of 2012 instigated significant and rising demand for formal titling and the issuance of land use certificates (LUC). This demand places a heavy and sudden burden on the local Departments of Agricultural Land Management and Statistics (DALMS)³⁴, suffering from 60 years of underfunding and technological neglect. As a result, land records (files) and land registrations are frequently found in a suboptimal state, necessitating immense efforts to improve operational performance.

86. Like land use changes, there are many **land transfer cases** which have never been presented for registration, encompassing informal transactions of registered urban land and unregistered settlements as well as unregistered transactions concerning farmland, such as buying, inheritance, leasing and sub-dividing. Technically, these activities are not in accordance with the laws but so numerous that a smooth process to formalize them is needed, as well as a new system which encourages formalizing of all future transactions from the outset.

Changes of land use

87. With regard to **alterations of land use**, a codified legal framework governs formal changes of farmland to **town land** or **village land**. The single components comprising this legal framework are scattered and, at their core, go back more than a hundred years to colonial times. In effect, they constitute a de-facto spatial planning system, since permissions concerning farmland conversion frequently lead to immediate functional and physical effects. The National Land Use Policy of 2016 encompasses additional elements such as land use zoning, which further point towards the development of a spatial planning system distinct from the classical urban planning system.

88. **Town land** and **village land** are long-established land use categories, on which the construction of dwelling units is permitted. So far, in secondary cities local committees under the supervision of the General Administration Department (GAD) have been responsible for the formal processing of applications for use changes, whereas in Yangon, Mandalay, and Nay Pyi Taw, the City Development

Committees (CDC) are responsible. Roughly one percent of the entire area of Myanmar is classified as townland. For the primary classification of land as town land (urban wards), the Ministry of Home Affairs (MoHA) was in charge.

89. Despite well-established formal procedures based on laws and related bye-laws, **alterations of land categories** frequently occur in informal ways. Furthermore, even formal approvals of land use alterations happen without approved site plans or approved spatial plans, as the urban concept plans do not have any legal validity. Major portions of the populations living in settlements in rural areas do not have a formal security of tenure of the village land on which their dwellings were erected. Land release for residential or commercial/industrial purposes is mostly determined by land availability and by land demand on an unplanned basis. Thus, **haphazard development driven by private interests without basic spatial planning makes it very difficult for local authorities to secure areas for rights-of way for public roads, trunk infrastructure, and for public spaces, let alone the acquisition of large tracts of land for affordable housing.**

Fiscal and macroeconomic aspects of land transactions

90. In addition, there is no working mechanism for the government to participate in the massive increase in land price when land is converted from agricultural uses to residential and commercial uses. Current rules concerning the taxation of land transactions through a substantial one-off rate serve as an effective incentive to circumnavigate any formal transactions. As a result, local authorities forego major sources of fiscal revenue urgently required for providing urban services. In addition, with a legal framework to govern spatial development largely absent, and due to significant weaknesses in the entire legal system, opportunities to capture rises in land values generated by public sector infrastructural investments from private sector real estate developers and from other private owners, virtually do not exist.

91. The fact that the majority of land transactions are officially unrecorded induces a substantial negative impact with regard to economic development: It leaves the economic **potential of capital creation and mobilization through mortgaging land via uncontested and secure titles widely underutilized. This is essential with regard to developing formal systems of housing finance, including micro-finance.** In the limited number of cases of mortgaging through commercial banks, interest rates appear to be relatively high, arguably reflecting a significant risk premium, which can be attributed to the insecurities and uncertainties surrounding land markets. A comprehensive and transparent titling system could bring about substantial macro-economic benefits and accelerate growth and is urgently needed. Its creation needs to be prioritized.

D.II Expansion of Informal Settlements and Land Prices in Peri-Urban Yangon

D.II.1 Land Prices

92. Contrasting the general income situation of households, this section depicts available data on **land price developments** and rents for dwelling units. As in other economic sectors as well, the data situation is fragmented and challenging. The high-end formal markets of Yangon are covered by the

research units of international real estate advisory firms. Yet for the informal markets, so far just a single case study is available, which illuminates the situation in peri-urban Yangon.³⁵

93. Data indicate (Table C, Annex) that before the Land Law became effective in 2012, the price of an acre (approx. 4,050 m² / 43,600 ft²) of farmland was fairly stable at 400,000 to 500,000 MMK. After the Land Law, prices multiplied and rose by 1,400 percent up to 9,000 percent, provided the area traded was located close to or inside a village **and** accessibility through road construction was substantially improved - an obvious *qua non*, as data in Table C reflect. Prices for farmland, whose accessibility remained unchanged and which was not subdivided into plots, rose from about 400,000 to 500,000 MMK per acre to a range of 800,000 to 16,000,000 MMK per acre in 2015. The key driving force of land price appreciation is subdividing the farmland into plots for residential purposes, which leads to momentous increases of around 4,000 percent or more (e.g. land ID 2 or land ID 9). Once subdivision is established, price appreciation significantly decelerates, as can be seen with land ID 4.³⁶ Village land plots of a size of 2,400/3,000 ft² can cost up to 20,000,000 MMK (2015). It can be argued that the price increases of the plot with land ID 4 of approx. 86 percent from 2013 to 2015 reflects real demand/supply conditions in the sector of cheap housing in the township's area given the job opportunities in manufacturing in the vicinity as well as stronger property rights attached to village land.

94. The quoted prices for building land are an outcome of the simultaneous confluence of various factors whose respective contributions to the final price are hard to quantify. The permission to sell and buy land generated a market place for building land, which facilitated immediate price discovery processes of peri-urban residential land. Final prices discount following demographic, financial and political factors:

- Real demand for additional housing units due to internal migration and new household formation;
- Expected future cash flows from leasing out land/and or housing units;
- Consumers' real ability to pay of demanders;
- Expected level of elasticity of land supply;
- Regulatory constraints impeding the conversion of farm land for residential purposes;
- Relative advantages or disadvantages of investment in land vis-à-vis alternative modes of investment such as cash; savings accounts, equities, and bonds;
- Prevailing structure of interest rates in the national economy;
- Perceived inflation rate and expectations concerning the future development of the inflation rate;
- Perceived trustworthiness of Myanmar's national monetary policies, its central bank and its banking system;
- Issues associated with the repatriation of "hot money" from abroad (e.g. due to increasing regulatory scrutiny in banking hubs such as Singapore);
- Individual preference of different groups of investors;

- The taxation regime governing land properties.

95. The list, while not necessarily exhaustive, indicates the complexity of factors which affect current levels of land prices. It would be rather one-dimensional to contribute the huge increases in land values to “speculation” in a mono-causal fashion. Eventually, land prices (mostly) reflect the **current** real economic value of a piece of land as perceived by market participants. With a view on policy levers, it needs to be noticed that tax policies which tax **valuable vacant land** at appropriate levels can have significant dampening effects on land prices, as taxation can substantially raise the opportunity costs of holding vacant land.

D.II.2 Rents for Dwelling Units

96. Information on levels of rents for the informal dwelling units in the urban extension areas of Yangon is scattered and mostly anecdotal. The same holds true for the costs of constructing a simple house. A regular mode of basic shelter provision in peri-urban Yangon is the construction of wooden “barrack houses” with roofs made of corrugated sheets, which consist of about five rooms of a size of 100 ft² each which are rented out to in-migrants. In 2015 monthly rents for such a room were reported to range between 20,000 MMK to 50,000 MMK (USD 16 to USD 40³⁷)^{38,39}, depending on location and quality of building, which translates into 2,000 MMK/5,000 MMK per ft². Construction costs for a single basic unit – mostly on a self-help basis - are estimated to range between 100,000 MMK and 500,000 MMK.⁴⁰

D.II.3 Expansion of Informal Settlements

97. Unplanned development outside the formal land delivery systems embodies one of the biggest challenges facing Myanmar’s cities. The growth of informal (technically illegal) urban areas is a distinctive features of Myanmar cities, and has been taking place for a number of decades, mostly tolerated by the municipal authorities. Interviews with key informants and first hand observation suggest that it is relatively common, particularly in cities which are experiencing a rapid population growth. The most common informal land supply system is the (technically illegal) subdivision of farmland and agricultural land in peri-urban areas to be used for housing.

98. Under this practice, individual farmers who own a large area of land – which is determined to be used for rice farming or other agricultural uses on the perimeter of urban areas – subdivide the land and lease it to individual households. The land will be leased either as a developed plot with a basic shelter constructed, or as undeveloped land for the lessee to construct a dwelling or small business. Generally, this occurs on a large scale, with most or all of land subdivided and leased out.

99. This practice occurs both in peri-urban areas on the perimeter of cities, as well as in more established townships outside the center of the city where land has not been reclassified from agricultural/farmland to town/village land. These settlements are often tolerated by government, and

may pay land use fees to local officials; in parts of Yangon such unplanned and informal developments have been in place for over thirty years, despite being formally illegal and well-known by government. Some of the settlements include basic roads and concrete walkways, with the residents paying a regular maintenance fee to the landlord in addition to their rent. Drainage infrastructure in these settlements is generally poor, and they are not connected to municipal infrastructure and services. Owners of land that has been subdivided and occupied for some time do not generally appear to be concerned about interference from different levels of government. This practice is occurring to some extent in almost all cities and towns in Myanmar, as the planned growth of urban areas is unable to match the pace of urban population growth.

100. Consultation with stakeholders suggests that unplanned development and informal settlements are widely tolerated by government across the country, on both agricultural land and farmland. While regulations and legislation are in place that would allow for stricter enforcement of land use rules and formal development, these have not been systematically employed for some time. Consequently, a precedent has been set some decades back that unplanned development will generally be tolerated, which makes reintroduction of strict enforcement very difficult. In some townships, regulations and laws against squatting are in place; however even within townships this is rarely systematic or uniform across settlements. As there is no general guidance from central (or even state/regional) government, the enforcement of laws and regulations is very much at the discretion of individual township administrators.

101. From a more positive angle, the production of technically informal dwelling units is a prime example of effective self-organization by private market actors in response to real needs. The economics of land as expressed through land price differentials powerfully work against the repeatedly stated objectives of preserving agricultural land within the perimeters of the large cities and towns. In particular, this holds true for Greater Yangon. **Well located agricultural land facilitates future cash flows after conversion that are much higher than revenue streams which can be possibly achieved through any kind of agricultural production.** It needs to be accepted that the closer the agricultural land is located to Yangon, the less likely it is that it can be preserved, as the metropolitan area further expands.

102. Contrary to laws of physics, economic “laws” are not immutable and can be affected by regulatory and legal interference. Rigorous and persistent regulatory efforts make it possible to implement and preserve farmland and other open space even if located directly adjacent to high-value built-up urban land. **Yet only a fully effective regime of spatial regulation supported by unwavering long-term political commitment will be able to keep in check persistent pressures to convert agricultural land and other space into building land.** Unless these spatial planning instruments are developed to the degree of strength as e.g. in Singapore or Korea, attempts of regulatory intervention will remain quite futile. International experience indicates that regulatory effectiveness in spatial planning significantly correlates with levels of GDP per capita.

103. Observations indicate that the general capacity of local authorities for spatial planning, enforcing land uses, and steering alterations of land uses are limited. Acknowledging this, the government needs to prioritize and focus its activities. A central primary task is the production of strong legal titles for land. This needs to be accompanied by the abrogation of land ownership rights of the state with **the vital exception of areas needed for infrastructure and the provision of public goods such as parks and recreational areas**, which the private markets do not provide.

D.II.4 Informal Settlements in Yangon

104. Recent comprehensive research by UN-Habitat Myanmar on size and typology of informal settlements in Yangon complements discussion of land economics and land price appreciation in peri-urban Yangon.⁴¹ The study investigates housing and living conditions of the poorest segments of the population. In this it is a follow-up to UN-Habitat's seminal Myanmar Human Settlements Sector Review of 1991, which for the first time addressed and mapped squatter areas and resettlement areas in Yangon.⁴² The new study's findings provide a solid basis to inform the policy dialogue on future strategies for regularizing and upgrading informal settlements through incremental sites-and-services schemes, not just in Yangon, but throughout the country.

105. The study's analytical framework to identify settlements as informal is based on following criteria:

- (1) High settlement density - dwelling units that are overcrowded and constructed without compliance with planning and building regulations.
- (2) Low durability of houses – dwelling units that are made of substandard construction materials, such as bamboo poles, woods, thatches, corrugated iron sheets, plastic sheets.
- (3) Lack of a systematic road and drain network - settlements that are typically characterized by dirt or unpaved roads, narrow foot bridges constructed with substandard material and roads without drains in or around settlements.
- (4) Lack of piped water supply and poor sanitation conditions - settlements that have no networks for distribution of piped water and where the extant sources of water in the immediate proximity of dwelling units are not suitable for drinking and thus water has to be obtained at high cost relative to household income. Poor sanitation conditions are defined as sanitation systems that are usually characterized by open pit toilets or bamboo ring pit toilets, without water seal bowls and septic tanks.
- (5) Lack of solid waste management systems - settlements that have no access to either municipal or community organized solid waste management services.
- (6) High vulnerability to hazards - settlements where homes are erected on bamboo poles and located at or near geographically hazardous locations such as lowlands, swamps, drainage lines, river banks, creeks, ponds etc. that are highly susceptible to flooding and/or housing collapse.⁴³

Four out of six criteria had to be met for categorizing a settlement as informal. As a threshold for size, settlements have to consist of at least ten dwelling units or, alternatively, ten households.

106. Security of tenure, the criterion which is commonly used to define informal settlements was deliberately excluded from the study. This is because questions around security of tenure are complex, given the multiple property regimes of property and legal regulations that govern land in Myanmar. In addition, issues surrounding land are highly sensitive and some communities might not be comfortable responding to questions on security of tenure and ownership of land.^{44,45}

107. Based on these criteria, the study develops a typology of informal settlements,⁴⁶ which is straightforward and can be easily transferred to other cities in Myanmar:

- (1) **Roadside settlement:** Settlements where houses built along roadsides, at a typical depth of one street.
- (2) **Riverside/creek-side settlement:** Settlements where houses are built on unoccupied (often flood-prone) land along rivers and creeks.
- (3) **Peri-urban land settlements:** Settlements where houses are built on agricultural land that has been subdivided without authorization and where plots are rented, sold, or leased for residential purposes. These settlements are in the process of being absorbed into the municipal boundary and incorporated into the urban fabric as the city expands.
- (4) **Resettlement area subdivisions:** Unauthorized subdivisions on resettlement sites from the 1980s and 1990s, typically with minimal infrastructure including drainage, which have resulted in high density settlements with small, overcrowded houses.
- (5) **Village tract subdivisions:** Settlements where houses are built on land that is categorized as rural but has been recently incorporated into the authority of an urban area local government (urban ward). In these settlements, plots are often illegally subdivided, and are characterized by overcrowding and poor or nonexistent infrastructure.
- (6) **Inner-urban infill:** Small, often opportunistic settlements built on or adjacent to developed areas, which are characterized by clustering around areas of employment generation such as construction sites or factories.
- (7) **Slum settlements:** Settlements that are built on illegally occupied public or private land such as vacant land, park land, or under-developed sites.

108. Overview I comprises basic findings.

OVERVIEW I: NUMBER, TOTAL AREA AND POPULATION OF SETTLEMENTS BY TYPE OF SETTLEMENT

Type of settlement	Number of settlements	%	Total area (acres)	%	Population	%	Number of households	Persons/acre	Persons per sqkm
Slum settlement	134	31.0	1063.2	52.3	180,675	49.6	36,135	170	41,992
River/Creekside Settlement	76	18.7	248.0	19.7	68,060	18.7	13,612	274	67,814
Roadside Settlements	147	34.8	220.1	12.1	58,495	16.1	11,699	266	65,672
Village tract	27	6.4	129.9	7.1	33,300	9.14	6,660	256	63,346
Resettlement area subdivision	18	4.3	37.7	2.1	12,160	3.34	2,432	323	79,703
Peri-urban land subdivision	8	1.9	112.7	6.2	8,550	2.35	1,710	76	18,747
Inner urban infill	13	3.1	10.2	0.6	3,075	0.84	615	301	74,495
Totals	423	100	1821.7	100	364,315	100	72,863	200	49,418

Source : UN-Habitat Myanmar, Mapping Yangon: The Untapped Communities (Phase I), p. 48.

Core findings⁴⁷

109. Total area of informal settlements in Yangon encompasses about 1,820 acres. In mid-2016, the number of inhabitants stood at approx. 364,000 persons, about seven percent of Yangon's population (YCDC) area. It is estimated that approx. 73,000 thousand households are residing in the areas.

110. Based on remote sensing it was found that from 2010 to 2016, the number of informal settlements in peri-urban Yangon significantly increased. 270 out of 423 settlements identified were formed between January 2010 and July 2016. Almost all of these are located in Yangon's peri-urban boundaries. 149 of the newly created settlements are located in the township of Hlaing Tharyar alone.

111. The estimated population in the new settlements is likely to encompass more than 200,000 persons and covers a total land area of approximately two square miles. In conversations with residents in these settlements, several key factors that plausibly explain the increase in the number of informal settlements in the city's peripheries were identified. First, a large section of the population migrating to Yangon in recent years came from the Ayeyawady delta region, a finding confirmed by data on internal migration based on the census of 2014.

112. Second, the recent migration is also caused by the economic reform, which led to sharply increased inflows of FDI, hence establishment of industries and businesses, and a resulting increase in demand for labor. The employment opportunities created by these industries serve as a major pull factor for migration from neighboring regions. Another driver for migration to Yangon is the decline in employment opportunities for landless inhabitants of Ayewaddy Region; in part also caused by the devastation brought about by cyclone Nargis in 2008.

Infrastructural Services

113. Informal settlements are virtually devoid of services. Preliminary assessments indicate that none of the informal settlements in Yangon has access to vital municipal services including private piped water, sanitation facilities connected to a septic tank and municipal drainage and treatment networks, and solid waste management services. While more than 50 percent of settlements have a built internal road network provided either by ward or township offices or self-built by the community, only five settlements are serviced by a storm water drain.

114. Settlements often depend on shallow water tube wells or, in rare instances, on deep water bore wells for water supply. Public tube wells are often the most common source of water supply in these settlements. Due to the ubiquitous risk of water logging and the flow of waste into these settlements, the water extracted from these shallow water wells is prone to high levels of pollution and contamination. Sanitation facilities are mostly limited to open pit latrines that are connected to shallow pits dug in the ground, which frequently overflow. The combination of unfavorable factors has resulted in a serious public health crisis in informal settlements in Yangon, which so far has not received sufficient attention from both city authorities and international aid agencies. A 2011 survey conducted by the Ministry of Health and YCDC ranked the townships with a high share of informal settlements as worst affected by vector and water borne diseases including malaria and tuberculosis.

115. The lack of municipal services forces residents to rely on private, informal markets as substitutes. Privately provided services are often expensive, unreliable, and poorly maintained. The average cost of electricity for a single bulb overnight can cost up to 150 MMK, while water for drinking and bathing for a day can cost up to 400 MMK. Lack of public services notwithstanding, several settlements have received housing registration numbers from township authorities and were connected to the main electric grid. In several areas, informal settlements exist side by side with formal ones and illegally tap services including piped water and electricity serving the formalized homes.

D.III Land Supply – Current Constraints

116. Development of land prices clearly indicates that - on an aggregate level - land as central input for housing production is in short supply in peri-urban Yangon. Price trends could be dampened by large-scale releases of vacant public land. In particular, public land should be dedicated to extensive sites-and-services schemes, which enable incremental self-help construction of dwelling units. Yet it became known that since around 2010/2011 large swathes of publicly owned land were transferred to private groups of developers and individuals associated with the military. As an outcome, an extreme shortage of government-owned land has emerged⁴⁸, which is a key constraint to expanding all major types of publicly subsidized housing developments. The current amount of land still held by public entities is not known at the moment. It is intended that DUHD creates an inventory of government owned land. Yet so far, DUHD lacks the legal empowerment to do this (see section F.II below).

E. Housing Finance

E.I Myanmar's Banking Sector

117. The financial sector in Myanmar is the least developed of all countries in Southeast Asia and cannot adequately fulfill its role as a financial intermediary. Key elements of a transparent and inclusive financial system are not in place. As Myanmar's overall institutional capacity for economic management is low⁴⁹, Myanmar's financial sector reflects the country's early developmental stage. Consequently, before addressing the topic of housing finance, a brief look at Myanmar's financial sector is warranted, where lingering legacy issues are particularly prominent.

118. After 1962 Myanmar's financial sector was largely designed for a closed socialist-style economy. For decades, various governments pursued a policy of financing national budget deficits through having the Central Bank of Myanmar (CBM) and its precursors print money, which resulted in persistently high annual rates of both consumer price inflation and food price inflation, with rates frequently above 20 percent per year. Concomitantly, a steady depreciation of the external value of the MMK vis-à-vis foreign currencies has been occurring. Informal ("black") currency markets emerged, which the government tried to suppress through command-and-control measures. As a result of government-induced demonetizations in 1985 and 1987, mismanaged events such as the banking crisis of 2003, and recurring spikes of inflation, the public's general trust in money in Myanmar is low until today. The domestic landscape of banking is still dominated by four major state-owned banks. In addition, about twenty minor private banks and semi-governmental banks exist. Some of the private banks are associated with industrial conglomerates dominated by military interests, while semi-governmental banks are affiliated with national-level ministries. Hence, they are also labelled policy banks.

119. This notwithstanding, in the banking sector impacts of economic and political reform that started in 2011/2012 have begun to become visible. Macro-economic indicators appear to be relatively stable when compared with preceding decades. Real GDP growth is in the range of between seven and eight percent per year. Since 2011, consumer price inflation and food price inflation have been oscillating between approx. six percent and ten to eleven percent per year with food price inflation persistently slightly higher than overall consumer price inflation⁵⁰ – a substantial progress when compared with double-digit inflation rates prevailing during previous decades. Since 2007/2008, the national fiscal deficit is hovering at around four to five percent of GDP, which is manageable.⁵¹ On the downside, the steady depreciation of the MMK against the USD continues to be of concern. Partly, the downward trajectory is caused by factors which lie outside the remit of Myanmar's monetary policy, as the USD has been appreciating against most emerging market currencies for more than a year now, driven by - among other factors - expectations of rising interest rates in the USA. Yet the persistent decline of the MMK's external value also reflects both domestic and international markets' perceptions of overall political and economic framework conditions. Hence, currency movements require consistent monitoring.

120. A few stylized facts illustrate current trends:

- Starting from a very low base, credit to the private sector grew by 50 percent annually on average from fiscal year (FY) 2011/12 until 2014/15, yet decelerated somewhat in 2015/16.⁵²
- Year-over-year rates of credit growth are projected to fall to approx. 37 percent in 2016/17 resp. 30 percent in 2017/18.
- As a result, aggregate credit to the private sector expressed as percentage of (nominal) GDP stood at 13.7% at the end of FY 2013/14, was expected to have risen to about 16 percent in 2014/15 and is estimated to reach about 24 percent of GDP by the end of 2018.⁵³
- Two-thirds of credit to the private sector was provided to trade, manufacturing, construction and real estate, and agriculture.⁵⁴
- The ratio of credit to the economy to GDP is the lowest in the ASEAN countries. In 2014, in Bangladesh the credit to GDP ratio stood at around 45 percent, in Mongolia and Nepal at around 60 percent, in Vietnam at around 100 percent in 2014, while in Myanmar it just reached approx. 20 percent.⁵⁵
- Only about 20 percent of all adults in Myanmar have a deposit account with a commercial bank

121. Credit expansion has been accompanied by a significant structural shift in the relative allocation of assets between state owned banks (SOB) and private banks. A number of private banks emerged from a partial liberalization of the banking industry in 1988/1992, which are mostly connected to private business conglomerates. Outside the SOBs' oligopoly, business activities of banks remained constrained by regulatory barriers. As an outcome of on-going reforms, private banks could expand their spheres of activity, embarking on a trajectory of relative success. The share of banking assets held by SOBs fell from about 67 percent in 2013 to 46 percent in 2016.⁵⁶ Private banks gained substantial market shares in deposits and loans from 2013 until 2016. Private banks' share of domestic deposits grew from 50 percent to 64 percent, while their share of domestic loans grew from 57 percent to 82 percent. The widening differentials between SOBs and private banks indicate that private banks are more effective than SOBs when it comes to transforming deposits into loans, implying a significantly higher level of operational efficiency.

Semi-Governmental/Policy Banks

122. During the last years, the spectrum of banks was augmented by the creation of several policy banks, which cannot be considered to be private, but need to be categorized as state-sponsored entities, creating contingent liabilities to the public sector. The Construction and Housing Development Bank, the Small & Medium Industrial Development Bank, the Rural Development Bank, and the Myanmar Microfinance Bank belong to the group of newly created policy banks.⁵⁷ Like commercial banks, policy banks take deposits and extend loans at CBM's administratively controlled interest rates, except when they receive donor funding at lower costs. Policy banks also borrow in foreign currencies and on-lend in MMK. Hence, they are exposed to substantial exchange rate risk.

E.II The Construction and Housing Development Bank (CHDB)⁵⁸

123. CHDB is a joint-venture between MoC/DUHD and private sector construction firms. It is a for-profit business and provides loans to individual customers at interest rates as currently set by CBM. CHDB received a license from the CBM with an authorized capital of 200 billion MMK (approx. 160 million USD⁵⁹) in July 2013. At the end of March 2016, the amount of paid-up capital stood at 100.11 billion MMK, of which 83.61 billion MMK were contributed by private firms and contractors. DUHD contributed seven billion MMK in cash, and the Department of Public Works at MoC contributed nine billion MMK in kind (land) as well as 0.5 billion MMK in cash. Hence, 83.5 percent of all shares are held by private investors in the bank, and just 16.5 percent are owned by the government, definitely a minority stake. It is claimed that the total number of private shareholders may encompass between 40 and 50 entities. CHDB is building up full-scale bank operations and provides the entire set of banking services. CHDB commenced operations in January 2014. At present, CHDB's main purposes are:

- i. To provide large-scale loans for the construction industry⁶⁰;
- ii. To serve as financing arm for the housing delivery system of MoC/DUHD.

124. Since 2014, CHDB is closely working with the Japanese Housing Finance Agency (JHF), complementing the on-going cooperation of MoC with the Japanese Ministry of Land, Infrastructure, Transport (MLIT). MLIT recruited AT Kearney to provide banking consultancy services to CHDB. During spring 2016, AT Kearney supported CHDB in developing its five-year and ten-year business plans. MLIT (Housing Bureau), MoC/DUHD, JHF, and CHDB signed a Letter of Intent for intensifying cooperation at the beginning of September 2016. Workshops are held regularly, with the last one held at JHF in Tokyo at the end of November. In addition, CHDB receives support from Korea's Kookmin Bank (KB). KB supports the development of CHDB's IT-systems and the development of small loan microfinance for rural housing.

125. CHDB is growing fast. Total operating income reached 11.81 billion MMK (approx. 9.45 million USD) in FY 2014/15. For FY 2015/16, a total operating income of 45.2 billion MMK (approx. 36 million USD) is expected. Deposits rose from 28 billion MMK at the end of FY 2015 to 67.83 billion MMK at the end of FY 2016. Total lending stood at 116.77 billion MMK at the end of FY 2015/16, up from 56.94 billion MMK at the end of FY 2014/15. Construction firms and DUHD are CHDB's largest borrowers. In contrast at the end of FY 2015/16, the bank just had 258 mortgage accounts with aggregate loans of 2.22 billion MMK outstanding. The average loan amount is about 8.62 million MMK, approx. 6,900 USD. Lending for mortgages is less than 2% of total credit volume. In addition to mortgages, 562 million MMK are outstanding for hire-purchases of dwelling units, on average 4.29 million MMK per account.

126. CHDB is currently in the process of developing a deposit base. The bank has set up an installment plan to circumnavigate the need to provide collateral for credit based on ownership of other real estate. This is the unique feature that distinguishes CHDB from formal housing finance offered by competing banks. The interest rates CHDB charges are not subsidized. Yet in the eyes of the

investing public, CHDB may be considered as a trustworthy bank, since it enjoys an implicit backing by national government as a result of the minority stake of MoC/DUHD.

127. A set of constraining provisions accompanies CHDB's concept. Would-be borrowers, who cannot submit other real estate as collateral, must have a savings account with the bank to later qualify for a loan from CHDB. Accounts can be opened with a minimum deposit as little as 10,000 MMK (approx. eight USD). Interest paid on savings accounts stands at 8.25 percent per year. Once savers have deposited 100,000 MMK each month without any interruption until required down payment required is reached (the trust-building period), they qualify for a housing loan, which has to be paid back within eight years.

128. Apartments which CHDB/DUHD advertise as affordable/low-cost are priced between 8.3 million and 11 million MMK (approx. 6,600 to 8,800 USD). Senior officials at CHDB and DUHD quote high land prices as well as high costs of construction materials as main drivers for the high costs of apartments. There are two preferred mortgage options. Option one is for a 60 m² apartment, which costs 11 million MMK. The down payment is 3.3 million MMK. For the bank loan of 7.7 million MMK, 12 percent interest is charged. At a loan maturity of eight years, the monthly installment rate amounts to 130,000 MMK. Households are only eligible, if monthly household income at least reaches 430,000 MMK per month. This holds true for about 13.7 percent of households in Yangon (Table XIX). Option two is for a 45 m² apartment, which costs 8.3 million MMK. The down payment is 2.49 million MMK, loan size 5.81 million MMK. A maturity of 96 months leads to monthly installments of 90,000 MMK. Minimum monthly household income is 300,000 MMK to keep the housing cost at 30% of household income, making about 22.5 percent of households in Yangon eligible (Table XIX). Buyers are restricted to use their loan for buying units from the housing delivery system of MoC/DUHD. CHDB claims that this limitation is necessary to be able to repossess apartments in case of default.⁶¹ In this case, DUHD acts as institutional guarantor and pays back the residual loan amount to CHDB.

129. Accessory charges to buyers are substantial. A stamp duty of seven percent has to be paid. Furthermore, for apartments prized under 20 million MMK, since the beginning of fiscal year 2016 a tax of fifteen percent of sales value is levied on the property. In sum, additional costs of 21 percent of a unit's sales price may prohibit another substantial portion of households from buying. Consequently, CHDB is lobbying for a waiver of the property tax for would-be buyers of DUHD units for which it provides financing.⁶²

130. With regard to housing loans for individual households, CHDB's long-term central goals are:

- a. To develop long-term savings' systems for purchasers without collateral aspiring to buy low-cost-housing delivered through MoC's DUHD;
- b. To establish a mortgage-based lending system for housing purposes, which is not only active in urban agglomerations but will serve rural towns as well; and
- c. To eventually establish a pure not-for profit unit to serve the housing needs of the poorer segments of the population.

131. At CHDB it is acknowledged that vital components for a regulatory framework governing housing finance such as land titling and foreclosure legislation are not at hand. In particular, secure land titles are considered to be of outstanding importance for further expanding credit. Secure land titles and implementable swift foreclosure procedures in case of default are also seen as critical preconditions for extending repayment periods up to twenty years. In addition, instruments for borrowers such as cheap credit insurance to cover themselves against individual inability to pay monthly installments are not available. CHDB itself is supervised by the Ministry of Construction, which also acts as one of its main share-holders. Significant risks of major conflicts of interest are associated with this arrangement.

132. The de-facto absence of mechanisms for lending for maintenance purposes of existing stock further constrains CHDB's expansion of activities. Lending to owner-occupied apartments is restricted by ambiguities regarding property titles, issues surrounding value appraisal for determining limits to mortgage size, and, most important, the absence of swift and reliable foreclosure procedures. The development of the modernization segment for rental units is further frustrated through the low levels of rent induced by rent control legislation. This drives cash flows for landlords down to levels which preclude paying the monthly instalments for maintenance and modernization loans.

133. Like any other bank, CHDB needs to match assets with liabilities. A crucial challenge CHDB (and other banks in Myanmar) face is the mismatch between short-term funding provided to the bank through deposits (liabilities to the bank), whose current duration is limited to twelve months, and the need to offer long-term credit (assets to the bank). The current duration gap is substantial and drives up lending costs, since it exposes CHDB to a number of risks, against which hedging instruments are not available at present.

134. Notwithstanding these constraints, consumer demand for the types of loan arrangements provided by CHDB seems to be growing. As of March 31, 2016, about 14,500 deposit accounts were reported. CHDB recently asked the new government for a low-interest loan of 30 billion MMK (approx. 24 million USD) to raise the bank's capital base to enable it to expand credit. Furthermore, CHDB is considering to extend the repayment period from eight years to fifteen years, as severe needs to reduce the monthly financial burden for purchasing households have been emerging.⁶³ Table D (Annex) shows how extending periods for repayment (maturities of loans) and lower interest rates reduce monthly instalments for households. Extension of maturity is the core driver of reduction of monthly instalments. Provided maturities could be extended, probably more than 50% of households in Yangon could qualify for a loan. Yet this expansion of demand would in turn drive up apartment prices, until a new relative equilibrium at higher prices level would emerge. At long maturities, top-level households also could afford much higher loans and acquire larger apartments. Changed parameters for credit would expand financial inclusion, fuel aggregate demand and generate additional growth, leading to much needed job creation through residential construction.

135. CHDB/DUHD is also experimenting with microfinance solutions. Together with Korea's KB (Kookmin-Bank), options for setting up a housing microfinance company based on household groups as savers/borrowers are being explored. Target zone are rural areas, with small loans for the development of rural units. An initial feasibility study is being prepared.

136. Senior executives are aware of the fact that juxtaposing commercial units of CHDB with a (still to be established) developmental (not-for-profit) pro-poor unit may generate blurred spheres of accountability within the bank. A future mixing of commercial activities with envisaged not-for-profit lending activities may lead to adverse outcomes.

137. CHDB is an evolving organization. Shortcomings notwithstanding, CHDB's operations in the area of housing loans represent a commendable approach to expand the formal sector of housing finance in Myanmar. With regard to developing savings-and-loans schemes for the upper-middle class segment, CHDB's operations are presently positioned at the beginning of a learning curve, from which eventually the entire sector of formal housing finance in Myanmar may benefit. With support from development partners, it would be advisable to establish at CHDB a national capacity and training building center for the formal segment of housing finance.

E.III Informal Finance/Microfinance Institutions

138. In developed countries, even under optimal conditions a decent new dwelling unit costs three to four times the average yearly income. In Myanmar, the price for a new decent apartment provided by the formal sector sized about 55 m² to 60 m² comes at ten to twelve times the amount of the average yearly household income. From this, it becomes evident that at present the formal housing finance sector in Myanmar is limited to the top fifteen percent (at most) of households.

139. Self-built houses constructed with plant-based materials cost around 100,000 MMK to 500,000 MMK. Yet even at this seemingly low price levels, taking out a loan is a frequent precondition for being able to construct such a unit. Since access to the formal banking system is restricted, pawn shops⁶⁴, other money lenders, as well as family members and friends are sources for informal funding.

140. Interest rates charged are reported to easily range between twenty and thirty percent per month. This might be viewed as extortionary, yet such cost levels for borrowing money mostly result from a combination of following factors:

- Level of default risk involved;
- Quality of collateral provided by the borrower (if any); and
- The relative scarcity of local credit, including local monopolies of credit supply.

Thus, such interest rates are to a significant degree an expression of conditions prevailing on localized credit markets and do not primarily signify extortionary practices. On levels of interest charged within among relatives and friends, little is known.

Microfinance

141. Predominantly in rural areas a relatively broad based microfinance infrastructure has been developing since the mid-1990s, brought about by the seminal long-term UNDP/PACT microfinance project. Since the Microfinance Law has been promulgated in 2011, the number of providers of microfinance has been steadily increasing. As a result of the law and accompanying directives and notifications and the creation of supervisory bodies, microfinance institutions (MFIs) cannot be considered anymore as informal. Microfinance products – understood as financial services for low-income people - are now offered through a wide array of financial institutions. Microfinance institutions encompass state-owned banks (e.g. MADB), international NGOs (such as PACT, World Vision, Save the Children), rural cooperatives (Central Cooperative Societies), as well as specialized agricultural companies.⁶⁵ Non-bank MFIs charge interest rates of 2.5 percent per month flat, the monthly maximum permitted by Microfinance Law. The maximum annual rate is 30 percent.⁶⁶ In contrast, commercial (private) banks' lending is capped by an interest rate ceiling of 12 percent per year, while they have to pay a minimum interest rate on deposits of 8 percent. Yet for commercial banks, this spread of five percentage points is much too low to be able to profitably offer microfinance products, since administrative costs per loan relative to loan size are high in comparison with larger loans.

142. For 2012, information on average sizes of loans handed out by microfinance outlets is available. Total loans amounted to 236.5 billion MMK, about 0.5 percent of GDP in FY 2012/2013.⁶⁷ Total credit to the private sector stood at ten percent of nominal GDP in 2012/13⁶⁸, which implies that loans from MFIs obtained share of just five percent of credit to the private sector. Average loan size stood at 120,000 MMK. The number of borrowers totaled 2.8 million persons, about eight percent of the rural population.

143. Microfinance loans' limited share of credit to the private sector, average loan sizes, and the short-term character of those loans indicate that microfinance can only play a minor role in the area of housing finance, even for new informally built units. MFI loans may, however, contribute to repairs and gradual home improvements. In addition, the relatively wide-spread societal experience with micro-loans may provide institutional cornerstones for future large-scale borrowing through community savings groups for low-income housing purposes.

F. Governmental Activities in the Housing Sector

F.I Housing Program of MoC/DUHD

144. MoC/DUHD⁶⁹ and the governmental entities anteceding it have a long history of delivery housing units since Myanmar's independence in 1948, a sizeable share of which was (and continues to be) dedicated to the provision of housing for government employees. According to DUHD, about 144,000 dwelling units were provided from 1951 until 2016, of which about 27,000 were for rental purposes, while about 116,000 units were provided as owned units – about 38 percent as low-cost units, 51 percent as mid-level cost units, and eleven percent as high cost units.⁷⁰ More than 64 percent – about 74,000 units - of total DUHD output since 1951 were delivered after 2010. Of the latter, 65,000 units were designated as owner-occupied. Of these, approx. 62 percent belong to the low-cost category, 22 percent to the mid-cost category, and 16 percent to the high-cost category.

145. From 1990 until 2000, the government also pursued a sites-and-services scheme, which is related to the large-scale resettlements of parts of the population of Yangon to the city's then peripheral areas. About 233,500 plots were allotted with plot sizes ranging between 1,200 ft² or 1,500 ft². DUHD feels that it was a rather common approach for addressing low-income housing problems. Arguably due to political decisions, the sites-and-services scheme was terminated.⁷¹

OVERVIEW II: OUTPUT TARGETS OF 20-YEAR PLAN 2011 - 2030

Five-year period Sectors	2011-2015	2016-2020	2021-2025	2026-2030	Entire 20-year period 2011-2030
DUHD total	20,000	36,000	60,000	84,000	200,000
DUHD low-income	18,000	32,400	54,000	75,600	180,000
DUHD middle-low income	2,000	3,600	6,000	8,400	20,000
Market	80,000	144,000	240,000	336,000	800,000
Total	100,000	180,000	300,000	420,000	1,000,000
Output per year	2011-2015	2016-2020	2021-2025	2026-2030	Entire 20-year period 2011-2030
DUHD total per year	4,000	7,200	12,000	16,800	10,000
DUHD low-income per year	3,600	6,480	10,800	15,120	36,000
DUHD middle-low income per year	400	720	1,200	1,680	4,000
Market per year	16,000	28,800	48,000	67,200	40,000
Total per year	20,000	36,000	60,000	84,000	50,000

Source: DUHD documents.

The One Million Housing Units Plan

146. Since 2011, DUHD has been pursuing a long-term program called the “One Million Housing Units Plan”. It is DUHD’s objective that by 2030 current housing stock will have been augmented by one million units, of which twenty percent (200,000 du) shall be provided through the delivery system of DUHD. The remaining 80 percent have to be provided by developers and through other private sector actors. Overview II below comprises output targets of the 20-year plan.

147. The total plan period is divided into four Five-Year-Plans. Quantitative targets for the period 2011-2015 are 100,000 units and for the period 2016-2020, 180,000 units. 300,000 units shall be provided in 2021-2025, and 420,000 units in the last period from 2026-2030. On average over the entire plan period, aggregate annual output in Myanmar is expected to amount to 50,000 units, starting with 20,000 unit per year the period 2011-2015. Annual output targets of DUHD’s program are rather modest. During the first and second five-year periods, DUHD’s annual output reaches 4,000 resp. 7,200 units.

148. At present, the funding for DUHD’s housing program is mainly based on a revolving fund which amounts to about 100 billion MMK (80 million USD). This fund was established in 2014. Revenue flows into this fund mostly come from sales of housing units. From this amount, 50 billion MMK are used for low-cost housing. In addition, DUHD manages a separate fund of about 58 billion MMK (46 million USD) for the provision of 4,000 rental units per year in states and regions. Finance for this fund comes from the national budget. Furthermore, DUHD is responsible for a managing a yearly budget for housing-related infrastructure of about 10 billion MMK (8 million USD). Public land controlled by MoC is used for the housing program. It is claimed that costs for land are not included in the calculation; hence the land input is a public-sector subsidy.

149. Total output of DUHD from 1951 until 2016 roughly amounts to 144,000 units. Provided total housing stock stands at around 9.3 million units, DUHD assumes a share of just 1.6 percent. The real share should be lower, as it is reasonable to assume that not all of units delivered in the past still exist. Hence, it can be argued that governmental housing programs have contributed slightly more than one percent of current stock so far.

150. DUHD indicates that a total of 50,000 units per year are sufficient to satisfy the country’s housing needs. The output target does not take into account replacement needs. When contrasted with findings presented in Table XIV above, it becomes obvious that the quantitative target of DUHD is significantly lower than real housing needs. Estimates in Table XIV indicate that about 400,000 to 600,000 dwelling units need to be added to existing stock **per year** to jointly make up for pent-up shortfall, continuing annual net household growth, and replacement needs.

151. DUHD confirm statements from CHDB that prices for newly built apartments (which DUHD labels as low-cost) stand at about 10 million (100 lakhs) MMK. Only the top-level of households can afford this price level. As in other South-East Asian countries, this segment of the population is able to take

care of its housing needs through private sector developers. Hence, for the top-level segment of households, any major market failure does not appear to be evident. Seemingly, DUHD's program at present contributes in a relatively limited way to improving the housing and living conditions of the vast majority of relatively poor households, as it fails to address the target group of the really needy.

152. Thus, the question arises where the rationale for a state-sponsored housing developer - other than providing units for government employees - can be found. Under the conditions of a market economy, state interventions through subsidies (in whichever form they may come) are justified **if they mitigate** perceived market failures. Purpose of interventions is to create distributional effects in favor of the poorer segments of the population. Against his backdrop, DUHD's current activities need to be comprehensively scrutinized with a view on increasing the efficiency of fiscal resources employed. A discussion of DUHD's role as housing developer may help clarify.

F.II Legal and Regulatory Framework Affecting the Housing Sector

153. Housing is multi-dimensional by nature. Consequently, a multitude of laws and legal regulations affect the housing sector simultaneously. Several legal norms key to the sector, such as e.g. rules on land governance, date back to the colonial period or to the immediate post-independence period and need to be streamlined and modernized. With regard to land, the joint MoAI/UN-Habitat Land Administration and Management Program (LAMP) makes a convincing case for consolidating land-related legal norms in a modernized new umbrella law.⁷²

154. Another major law influencing urban housing markets is the Urban Rent Control Act of 1952 resp. 1960/61. The law aims at keeping rents in urban areas on low levels. The Urban Rent Control Act is considered to favor tenants over owners in contractual arrangements and is deemed to be in need of a major revision.⁷³ Recent urban research indicates that housing rents are artificially kept too low. As a result, adequate maintenance of rental units is impaired.^{74,75} An analysis of the current practical implementation of the law and its impact on investment behavior of private property owners is clearly warranted.

155. Two major legal initiatives affecting the housing sector are underway, positioned at rather different stages of the legislative process: The **Condominium Law** and the **National Housing Development Law**. The Condominium Law was passed by the previous National Parliament in January 2016 after protracted discussions. Core purpose of the Condominium Law is to revive the market for high-end luxury apartments predominantly in Yangon. Prices for luxury apartments significantly dropped as the real estate boom that as a result of economic liberalization had begun in 2010/2011 severely slowed down in 2014. The construction boom led to a substantial oversupply of luxury apartments, which hardly could find domestic buyers anymore due to high prices (300 million MMK and more), which only a tiny majority - about 0.1 percent - of Myanmar households can afford. Despite the fact that some wealthy households bought ten to twenty apartments (as physical storages

of wealth), aggregate domestic demand eventually faded. Therefore, the law aims at making the high-end of the housing market accessible to foreign nationals to stimulate demand.

Condominium Law

156. The Condominium Law only addresses residential high-rise buildings with six floors or more. The land on which the building is erected must be registered under the category “collectively owned land”. Plot size minimum is 20,000 ft² (0.5 acres or about 2,000 m²). “Collectively owned land” is land that is owned by persons who have obtained an “apartment ownership registration certificate” from local authorities in charge. The land must have an official recognition as “collectively owned land” from local authorities. The condominium’s developer must be licensed and obtain a special building permit for the condominium from the Ministry of Construction. Up to 40 percent of all apartments within each building can be sold to foreign nationals. Rules and procedures associated with the law appear to be cumbersome and costly. As of February 2017 though, the law has not become effective, since by-laws and regulations required for practical implementation have not been promulgated by MoC.

157. So far, little evidence has emerged that the law – during the run-up to its eventual implementation – reignited sluggish demand for high-end apartments. This notwithstanding, the law has some merits. For the first time, it opens up a niche of property rights for non-Myanmar investors. In addition, the condominium law establishes a legal foundation for strata titles and for their official registration with specialized registrars for condominiums.⁷⁶ Furthermore, the law introduces perpetual property rights to the owned apartment and associated fractional ownership with regard to the land on which the structure is erected. This combination makes it possible to mortgage the apartment to individuals or banks, which is explicitly permitted by the law (Section 26 e). Hence, the law implies significant legal steps towards strengthening property rights in general.

158. In addition, the condominium law establishes a legal foundation regarding maintenance issues in condominiums, another first for Myanmar. Section 27 (a) unequivocally stipulates that it is the duty of the co-owners to contribute to a fund to be kept for the maintenance and management of the building. Section 1 (g) states that the developer assigns to each apartment an *ownership share value*. The *ownership share value* serves as foundation for determining the size of the contribution an owner has to make for the condominium’s management and maintenance fund. This fund’s specific characteristics are not defined by the law. Yet the fund as such and its purposes are mentioned several times in the law, establishing a clear legal requirement for the creation of such funds.

National Housing Development Law

159. The draft of the National Housing Development Law (NHDL) has been discussed for a number of years now. Its focus is completely different than the Condominium Law, which provides a regulatory framework for **market-based private sector activities**. NHDL predominantly provides framework rules for housing-related public sector bodies and their activities. It serves as legal basis for setting up

the National Urban and Housing Development Committee and outlines the Committee's tasks. NHDL also defines the primary set of duties assigned to DUHD. Those are:

- Formulating housing development policies including the National Housing Policy;
- Planning and implementing housing development projects;
- Providing technological assistance to implement housing projects nation-wide;
- Cooperating, coordinating and communicating with international organizations in the area of housing development;
- Conducting housing research and fostering technological development.⁷⁷

160. NHDL also establishes a framework for DUHD to get access to land for its housing projects. The law assigns to DUHD the task of preparing inventories of government-owned land which may be mobilized for construction purposes. In the context of land acquisition, NHDL asks state/region governments for cooperation to mobilize project land. In addition, NHDL opens up an avenue to forming development partnerships with private land owners. Furthermore, the draft law creates the legal foundation for the Housing Development Fund, whose creation is subject to approval by Union Government. The draft law outlines the sources and streams of revenue for the Housing Development Fund, which encompass:

- Annual funding contribution from the national budget;
- Annual total funding allowance for housing development projects;
- Profits from housing development projects;
- Foreign loans grants, foreign loans, and bank loans;
- Interest payments from housing customers;
- Savings from housing customers;
- Rents from rental contracts; and
- Funding from selling lucky draws for housing.

161. The draft also addresses the issuance of licenses for private developers and their supervision. State and region governments must nominate a controller for supervising housing developers. This person must be a staff member of DUHD. Yangon CDC, Mandalay CDC, and Nay Pyi Taw CDC are exempt from this rule and can nominate their own controller. The draft lists negative criteria which preclude issuing a license to an applicant. Excluding factors are previous personal or business insolvency as well as the lack of a bank guarantee for the developer's company. The envisaged regulatory task of licensing and supervising private sector developers implies substantial risks of conflicts of interest, as private sector developers evidently will compete with DUHD in the arena of housing provision. The draft of NHDL is in a rather early stage, opening up opportunities for potential revisions within the context of an appraisal of foci and orientations of DUHD's housing program.

G. Housing Sector and Labor Market

162. Construction output encompasses a residential (housing) segment, industrial and commercial segments, a social and cultural segment, and an infrastructure segment. In both developed and developing countries, a high degree of labor intensity characterizes the construction industry. Demand is high for unskilled workers compared with other industrial sectors. The construction sector spawns demand for building materials and requires a wide range of engineering and consulting services. Hence, construction entails strong economic multiplier effects for the entire national economy.

163. In constant (i.e. inflation-adjusted) 2010/11 MMK the value of the construction sector grew from about 1.84 trillion MMK in FY 2010/11 to about 2.96 trillion MMK in FY 2014/15, an increase of approx. 61 percent. The average annual growth rate (CAGR) from the end of FY 2010/11 until FY 2014/15 reached 12.6 percent (Table E, Annex). Construction's share of total GDP grew from 4.6 percent in 2010/11 to 5.6 percent in 2014/15 (Tables E and F, Annex). Provided growth continues at this rate, in 2020 the sector's value could stand at about 5.35 trillion MMK (in constant 2010/11 prices).

164. As the data situation is challenging, it is difficult to dissect the construction's sector composition into its four core constituents housing, infrastructure, commercial, and industrial. Overview III comprises some estimates for 2011 and 2013⁷⁸:

OVERVIEW III: ESTIMATED SHARES OF CONSTRUCTION'S CORE COMPONENTS

Year	2011	2013	2014/15 - Estimated value of output, million MMK* (components' proportions as in 2013)
Housing (Residential)	35	40	1,182,380
Infrastructure	45	35	1,034,582
Industrial	8	14	413,833
Commercial	12	11	325,154

*In 2010/11 constant MMK (author's calculation).
Source: Oxford Business Group, The Report: Myanmar 2016.

Provided estimated proportions are roughly correct, annual output value of the housing sector in FY 2014/15 could have stood at about 1.2 trillion MMK (approx. one billion USD).

165. In developing countries, the construction sector and particularly its residential component are of outstanding importance for labor market segments. Since construction can absorb substantial amounts of unskilled labor, any expansion of residential output contributes to job generation and hence poverty alleviation. The estimated allotment of GDP-based construction value to sub-components serves as a useful proxy for estimating the distribution of the construction labor force among those sub-components.

166. From 1983 to 2014, the construction labor force grew at an average annual rate of 6 percent from about 155,000 persons to about 940,000 persons; a rate much higher than the growth rate of the entire employed population (Table G, Annex). From the overview, it can be approximated that in 2014 around 367,000 persons may have worked in the housing component of construction. International comparisons indicate that construction sector's share of both GDP and employment will significantly increase, as the economy continues expanding.

H. Diagnostic Summary

Data Quality

167. The current number of occupied housing units in Myanmar is unknown. Data quality is deficient and requires immediate improvement to generate sound evidence on which to base future policy work. Without a major housing survey, essential preconditions for evidence-based long-term policy making are missing.

168. A housing survey similar to UNDP's poverty survey of 2009/2010 based on sample sizes of 20,000 to 23,000 households needs to counterpoise omissions of the 2014 census. This survey must establish solid data on the combined annual incomes of households, since households can consist of several individuals who jointly contribute to aggregate household income. In addition, the survey needs to identify types of labor arrangements and the quality of job contracts to assess steadiness and reliability of households' annual revenue flows. This is required to better appraise the scope for formal housing finance as well as for microfinance instruments to improve existing yet low-quality dwelling units.

Housing Stock and Housing Needs

169. The census of 2014 neither identified the number of dwelling units nor the number of structures. The same holds true for density conditions in units, which are significant indicators with regard to quality of life. It can be estimated that in 2014 about 9.3 million dwelling units (encompassing all standard levels) existed, indicating a severe undersupply of about two million units when benchmarked against the dwelling unit/household ratio of 1.04 which the census of 1983 measured. Various data point towards a structural undersupply of units, which has negatively influenced household formation rates during the last decades and continues to do so.

170. Based on an estimated housing stock of 9.3 million in 2014, between 1983 and 2014 arguably a mere 2.55 million units were added, about 82,000 units per year on average. This amounts to a modest average annual growth rate (CAGR) of 1.04%. To keep the proportion between households and dwelling units stable at the level as measured in 1983, from 1983 until 2014 an average annual (net) output of about 147,000 units would have been required. This quantity does not account for replacement needs. Ballpark estimates of annual output needs until 2024 - which factor in replacement needs - suggests that annual outputs of between 400,000 units to 600,000 units would be required, if a ratio between dwelling units and households as measured in 1983 were to be (re-)established. Of this quantity, approx. 200,000 units would serve to meet replacement needs.

Basic Infrastructural Services for Residential Areas

171. Data from the census of 2014 indicate that in residential areas the level of basic urban services needs to be improved and extended. In particular, in the closely interconnected water/wastewater sectors significant risks to public health are becoming evident emerging; particular in urban areas. Due to the absence of wastewater collection networks, households use septic tanks, which frequently leak contaminated seepage into the ground water. From the same ground water, however, many

households abstract their drinking water through tube wells. Hence, as urbanization increases densities in townships, public health risks grow in tandem. A major nationwide inclusionary investment program to upgrade supply of drinking water and improve sanitation is warranted including all types of informal settlements. Operationally reliable infrastructure facilities require constant power supply as an indispensable precondition. Thus, in Myanmar power grid extensions have much greater impacts on core aspects of urban development than in other developing countries with much higher levels of electrification.

172. Water supply, sanitation, solid waste removal, and electricity are of particular concern for all residential areas, no matter whether they are formal, provided through informal markets, or settlements of squatters. All neighborhoods including informal ones and squatters' areas should be able to enjoy basic minimum living and health standards. Basic services and basic upgrading should be provided regardless of tenure situation, since the provision of basic services and basic upgrading through local authorities does not necessarily imply any formal recognition of residential areas perceived to be illegal. There is much room for expanding mobile supply of drinking through water trucks to supply subsidized safe drinking water and for expanding services to remove sludge from dwelling units' septic tanks. With regard to newly established services, it needs to be ascertained right from the start that households pay user fees for services to contribute to cost recuperation; if possible tiered according to income situations.

173. With regard to levels of infrastructural services, clear urban/rural dichotomies emerge, as is the case with building materials. Infrastructural supply gaps between urban wards and rural village tracts are wide. In particular, this holds true for power supply. Only about fifteen percent of all households in rural areas enjoy a level of power supply which enables them to use electricity as a source of energy for lighting, while this is the case for about 78 percent of all urban households. Remedial policy action with regard to rural electrification is clearly warranted.

Income Situation

174. Income is critical to determine the purchase power of households and their range of choices to cope with housing markets conditions. Average monthly incomes of individual laborers stand at around 90,000 to 100,000 MMK. ILO's labor survey of 2015 mostly omitted identifying annual incomes. Consequently, survey results as published create the need to estimate total annual income based on the assumption that registered monthly incomes are available twelve times a year. In many cases this may not be the case, given the high share of own-account laborers supplying labor within informal contractual arrangements. Annual average incomes of individuals may fluctuate around 900,000 MMK to 1.1 million MMK per year, approx. 800 to 880 USD. In Yangon, average monthly incomes of households are estimated to have stood at 220,000 MMK per month in 2012, yielding an average annual household income of about 2.64 million MMK (approx. 2,100 USD). Since entry-level prices for newly built apartments in the formal market in Yangon start at around 10 million MMK, the average-house-price-to average-income-ratio may vary between about six to eleven in Yangon, which is typical for developing countries yet rather high compared to developed countries.

Land Governance - Expansion of Settlements in Informal Markets

175. Conversion of agricultural land to residential land frequently occurs in informal ways, ignoring codified legal procedures. Even formally approved land use alterations happen without approved site plans or approved spatial plans. Spatial plans, if existing at all, have hardly any capacity to guide land uses. Land release for residential or commercial/industrial purposes is mostly determined by land availability and by land demand on an unplanned basis. Thus, haphazard development driven by private interests without basic spatial planning makes it very difficult for local authorities to secure areas for rights-of-way for public roads and for public spaces, let alone the acquisition of large tracts of land for affordable housing. Recent UN research indicates that the number of informal settlements in Yangon is swiftly increasing. From 2010 to 2016 the number of informal settlements nearly tripled, growing by 270 settlements from 153 settlements in 2010 to 423 settlements in 2016. About 200,000 persons were added to the city. Migration to Yangon can be expected to strongly continue, as further job opportunities emerge.

176. At present, there are no working mechanisms for public authorities to fiscally participate in the massive gains in land values occurring when agricultural land is converted and subdivided for residential uses. Current rules concerning taxation of land transactions through a huge one-off rate serve as an effective incentive to circumnavigate any formal transactions. As a result, local authorities forego major sources of revenue urgently required for providing urban infrastructural services.

177. The majority of land transactions are not officially recorded. Quality of informal deeds and contracts is less than robust. Situations of ambiguous land tenure and vague property rights create high risk levels for occupants and dis-incentivize private investment in existing dwelling units, leading to substantial negative impacts on economic development. The economic potential of capital creation and capital mobilization by mortgaging land based on uncontested and secure property titles remains widely underutilized. With regard to the housing sector, this is of absolutely fundamental relevance.

178. Due to insecurities and uncertainties surrounding land titles, deeds, and the problems of enforcing repossession in case of borrower's default, banks are forced to factor into lending rates significant risk premia. The absence of secure titles for both land and apartments forms a major barrier to extend maturities of housing loans to fifteen or twenty years, which would bring about substantial reductions of monthly instalments for borrowing households. A comprehensive and transparent titling system could generate substantial macro-economic benefits and thus accelerate long-term accumulation of aggregate national wealth. Making land supply for residential purposes as elastic as possible is a major policy lever for governments to reduce the costs of housing.

Land Prices Trends in Peri-Urban Yangon

179. The core areas of urbanization are the Greater Yangon Area and Mandalay. In peri-urban areas of Yangon located close to industrial zones, land prices for vacant village land in not regulated markets are rapidly rising and reached 20 million MMK (approx. 16,000 USD) for plots sized 2,400 ft² (8,333

MMK/7 USD per ft²; 89.700 MMK/72 USD per m²). These are international prices, which can be found in peri-urban areas of middle and upper-middle income countries as well. Driven by land prices, prices for rental units follow. Rooms of a size of about 100 ft² (slightly more than 9 m²) are rented out for between 20,000 MMK and 50,000 MMK per month, translating into prices/m²/month of about 2,150/5,380 MMK (1.72/4.3 USD). In USD terms, rental prices of 4.3 USD per m² are approaching international levels, in particular, when the quality of rooms offered in peri-urban Yangon is compared with the quality of rooms middle income and in upper-middle income countries.

180. Demand for building land caused by migration to Greater Yangon and (also to Mandalay) combined with local net household formation will not cease. Land prices will continue rising. Apparently, the quantity of government-owned land has been strongly decreasing since economic reforms began in 2010/2011. Hence, with regard to price developments, options for governmental intervention appear to be limited. To dampen price appreciation, refraining from any measures which would impede the creation of building land is advisable. The creation of an inventory of all government-owned or government-controlled vacant land is required. International comparative research indicates that the amount of government-owned land frequently is substantially larger than assumed originally.

Housing Finance, Aggregate Demand, and Economic Growth

181. Core indicators suggest that Myanmar's macro-economic and monetary environment has been stabilizing since 2010/2011. Facilitated by relative macro-economic stability as well as by economic and political liberalization, Myanmar's banking sector is undergoing substantial changes. The relative importance of the four major SOBs is declining, and the banking landscape has been augmented by about twenty private and semi-governmental banks. One of the semi-governmental banks, the MoC-sponsored Construction and Housing Development Bank (CHDB) is developing a savings and loans scheme aimed at circumnavigating physical collateral needs. Savers deposit at least 100,000 MMK per month for a period of about two and a half or three years to secure a down payment of 30 percent of the apartment's price. After this - with certain provisions – saving households qualify for a loan of between 5.81 million MMK to 7.7 million MMK to purchase an apartment provided through the housing delivery system of MoC/DUHD in Yangon. The loan has to be paid back within eight years, at an interest rate of twelve percent. Consumer demand for such savings and loans agreements is swiftly rising. With a view on expanding the share of eligible households, deliberations are underway to try out longer repayment periods to reduce burden of monthly installments. At present, microfinance products are in nascent stages and cannot contribute to sustainable housing finance.

182. Expanding housing finance will transform housing needs into real demand for additional dwelling units. Provided the supply-side responds adequately, physical output will increase and demand for labor will grow. Construction and, especially, residential construction are industries which are labor-intensive. Substantial quantities of unskilled labor can be absorbed. In Myanmar, all employment opportunities are welcome and the construction industry has no difficulty attracting labor. Potential for further growth through construction and its manifold multiplier effects is significant.

The Housing Delivery System of MoC/DUHD

183. DUHD and its precursors have been operating a housing delivery system since 1951. Unit output from 1951 until 2015/16 reached about 144,000 units, which may translate into about one percent of current housing stock estimated to comprise about 9.3 million units. In 2011 DUHD embarked on a Million Housing Units Plan, which aims at augmenting the country's housing stock until 2030 by one million, twenty percent of which shall be provided through DUHD and the construction firms affiliated with it. While output planning roughly parallels the population pyramid, it is questionable whether the goal of 50,000 units per year is sufficiently sized to allow for (i) net household formation, (ii) replacement needs, and (iii) reduction of pent-up demand. Since MoC/DUHD apartments apparently are not subsidized and private developers/contractors are reported to deliver new apartments in Yangon at similar prices, the justification for the government's activities needs to be examined. Subsidies need to be precisely identified and their targeting improved. DUHD's current mandate should to be reviewed. Working towards the needs of the population presently excluded from formal housing finance – the low-income and poor households - may become a clear orientation of MoC/DUHD's program. A review of the current draft of the National Housing Development Law should accompany this.

I. Policy Recommendations

184. Myanmar's housing sector is facing daunting challenges characterized by a multitude of simultaneous and interconnected factors. While taking simultaneous action in various areas is necessary, the long-term recommendations for Myanmar's National Housing Policy can be formulated as a single overarching goal:

Establish a formal market for private large-scale provision of dwelling units for different levels of income in Myanmar.

185. The following recommendations are divided into five priority areas which need to be tackled immediately and simultaneously. Since evidence-based policy making requires sound data, measures to improve the data situation are included in the set of priority areas. The suggested priority areas are:

- Data on housing sector;
- Examination of data on demographic trends;
- Land registration and land supply;
- Housing finance; and
- Basic services for residential areas.

186. Priority Area I: General Data on Housing Sector

- Execute as soon as possible a comprehensive survey of the housing sector based on a sample size comparable to the joint MoLES/ILO's Labor Survey of 2015 or the joint MoNPED/UNDP's Integrated Household Living Conditions Survey of 2010.
- The survey's sample must be designed in such a way as to clearly reflect disparities and variances between village tracts and urban wards across states and regions.
- Identify the quantity of the national housing stock across all levels of standard.
- Identify annual replacement rates of dwelling units across all levels of standard.
- Identify the number of habitable rooms per dwelling unit, including temporary units.
- Identify aggregate annual incomes of households to determine purchase power for housing purposes both owned and rented.
- Establish comprehensive monitoring of real estate markets, including all informal segments.
- In this context, make sure that prices for land and dwelling units of all categories are regularly collected and made available to citizens at free of charge (e.g. through the internet).

187. Priority Area II: Examination of Demographic Trends

- Perform a detailed review of results of the census of 2014 with a view on identifying underlying trends in household formation. Prepare a detailed projection of additional (net) household formation for the next ten to fifteen years.
- In the housing survey, complement results from the census of 2014 with an investigation of preference of adult individuals' living in bi- or multigenerational households on their preferences with regard to forming own (spatially separate) households.

- In the housing survey, review patterns of internal migration and cross-check with migration results derived from the census of 2014 to update migration developments with a particular view on Yangon and Mandalay.

188. **Priority Area III: Land Registration and Land Supply**

- Improve the cadastral registration process in both rural and urban areas (village tracts and urban wards) through swift digitization of land records.
- Increase the number of registered land titles as swiftly as possible to maximize security of tenure for households and, conversely, minimize incentives for land grabs.
- Implement the Condominium Law including titling for property rights as soon as possible to advance the legal framework for property titling and registration.
- Devise and establish a set of incentives to formalize all previous informal land transactions.
- Based on digitized land records, revamp the systems of taxation of both rural and urban land.
- Use land and property taxation of land and property as predominant means for capturing rises of land values.
- Base taxation on land values with a view on generating acceptable yet steady annual revenue flows to townships, while minimizing incentives to act informally for all parties involved. Review tax rates annually. If land values rise, raise tax rates moderately yet steady to capture incremental increases of land values.
- Immediately begin setting up an accurate and comprehensive inventory of government-owned land as soon as possible, starting with Yangon Region. Impose a moratorium of any sales of government-owned land to private real estate developers to implement this.
- Both the Union Government and State/Region Governments need to release large quantities of available publicly owned vacant land to enable large-scale sites-and-services schemes to satisfy housing needs of the poorer segments of the population for whom formal housing is out of reach; particularly, in Yangon Region and Mandalay Region.
- To mobilize privately held land, levy punitive tax rates for holding vacant urban land suited for residential development.
- Avoid evictions of informal settlements and squatter settlements. Accept the urban poor as integral and productive components of cities' economies.

189. **Priority Area IV: Housing Finance**

- Enhance stability of national level macro-economic framework.
- Further improve stability of the banking system.
- Enhance competition between state owned banks, semi-governmental banks and private banks in order to improve efficiency of banking operations and drive down costs for banking transactions.
- Extend the formal banking system to remote rural areas.
- Expand the potential scope of formal housing finance – including for modernization and maintenance of existing units both owner-occupied and rental - by swiftly improving land titling and foreclosure procedures.

- Accompany the general modernization of land titling by implementing the Condominium Law and its specific regulations concerning strata titles, collective ownership of land, and maintenance funds.
- Closely monitor consumers' responses to CHDB's savings and loan program. In this context, review DUHD's housing delivery system.
- Set-up a center for capacity building and training in the area of housing finance in cooperation with development partners at CHDB.

190. Priority Area V: Basic Services for Residential Areas

- Basic infrastructural services need to be improved in all residential areas regardless of whether they are located in both urban wards or rural village tracts.
- In particular, in peri-urban areas in Yangon Region, infrastructural services need to be expanded in parallel with urban expansion and densification.
- All residential areas regardless of their perceived or established legal status (formal, informal, squatter settlements) should be provided with basic services such as water trucks, sludge removal, solid waste removal, and get connected with the power grid.
- Local authorities need to make sure to secure rights of way for future construction of roads and water/wastewater networks.
- Focus limited spatial implementation and enforcement capacity on planning and safe-guarding marked-out routes for road networks, which later will also serve as publicly owned corridors for water/wastewater networks and the local power grid.
- Initiate the development of a National Urban Policy to provide a binding framework for advancing spatial development management and spatial management.

Annex

TABLE A: STREAMS OF RECENT MIGRATION (2010 – 2014) BY STATE/REGION

State/Region	Migration b/w townships in same district by state/region		Migration b/w districts in same state/region		Migration b/w states/regions	
	Number of persons who migrated between townships within district by state/region during the 5 years prior to census of 2014	% of all persons who migrated between townships within district by state/region during the 5 years prior to census of 2014	Number of persons who migrated between districts in state/region during the 5 years prior to census of 2014	% of all persons who migrated between districts in state/region during the 5 years prior to census of 2014	Number of persons who migrated into state/region from other state/region during the 5 years prior to census of 2014	% of all persons who migrated into state/region from other state/region during the 5 years prior to census of 2014
Kachin	42,305	3.28	20,772	3.96	67,491	4.37
Kayah	5,201	0.40	1,573	0.30	11,546	0.75
Kayin	26,005	2.01	10,480	2.00	71,082	4.61
Chin	5,461	0.42	1,131	0.22	5,211	0.34
Sagaing	55,059	4.26	42,845	8.17	62,537	4.05
Tanintharyi	40,636	3.15	11,801	2.25	39,555	2.56
Bago	65,942	5.11	13,289	2.53	77,862	5.04
Magway	31,771	2.46	15,420	2.94	35,075	2.27
Mandalay	159,985	12.39	77,526	14.77	182,510	11.83
Mon	36,569	2.83	3,106	0.59	53,058	3.44
Rakhine	26,732	2.07	20,278	3.86	15,592	1.01
Yangon	586,916	45.46	208,476	39.73	648,836	42.04
Shan	84,611	6.55	53,058	10.11	136,108	8.82
Ayeyawady	88,753	6.87	41,894	7.98	40,168	2.60
Nay Pyi Taw	35,239	2.73	3,087	0.59	96,790	6.27
Sum	1,291,185	100	524,736	100	1,543,421	100
% of all migrated persons (3,359,342)	38.44		15.62		45.94	100

Source: Ministry of Immigration and Population/Department of Population (supported by UNFPA Myanmar): Migration and Urbanization, unpublished mimeo (Nay Pyi Taw 2015), p. 34.

TABLE B: RECENT MIGRATION (2010 – 2014) BY STATE/REGION

	Recent migration								Total Population (4) + (8)
	Between townships within districts	Between districts within states	Between states/ regions	Total migrant population (1) + (2) + (3)	Migrant persons (2) + (3)	% share column (5) of column (4)	% share column (3) of column (4)	Non-migrant population	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Kachin	42,305	20,772	67,491	130,568	88,263	67.60	51.69	1,248,476	1,379,044
	3.10%	1.50%	4.90%	9.50%	6.40%			90.50%	100.00%
Kayah	5,201	1,573	11,546	18,320	13,119	71.61	63.02	252,616	270,936
	1.90%	0.60%	4.30%	6.80%	4.90%			93.20%	100.00%
Kayin	26,005	10,480	71,082	107,567	81,562	75.82	66.08	1,336,582	1,444,149
	1.80%	0.70%	4.90%	7.40%	5.60%			92.60%	100.00%
Chin	5,461	1,131	5,211	11,803	6,342	53.73	44.15	457,987	469,790
	1.20%	0.20%	1.10%	2.50%	1.30%			97.50%	100.00%
Sagaing	55,059	42,845	62,537	160,441	105,382	65.68	38.98	4,924,061	5,084,502
	1.10%	0.80%	1.20%	3.10%	2.00%			96.80%	100.00%
Tanintharyi	40,636	11,801	39,555	91,992	51,356	55.83	43.00	1,254,400	1,346,392
	3.00%	0.90%	2.90%	6.80%	3.80%			93.20%	100.00%
Bago	65,942	13,289	77,862	157,093	91,151	58.02	49.56	4,598,560	4,755,653
	1.40%	0.30%	1.60%	3.30%	1.90%			96.70%	100.00%
Magway	31,771	15,420	35,075	82,266	50,495	61.38	42.64	3,712,364	3,794,630
	0.80%	0.40%	0.90%	2.10%	1.30%			97.80%	100.00%
Mandalay	159,985	77,526	182,510	420,021	260,036	61.91	43.45	5,434,388	5,854,409
	2.70%	1.30%	3.10%	7.10%	4.40%			92.80%	100.00%
Mon	36,569	3,106	53,058	92,733	56,164	60.57	57.22	1,853,646	1,946,379
	1.90%	0.20%	2.70%	4.80%	2.90%			95.20%	100.00%
Rakhine	26,732	20,278	15,592	62,602	35,870	57.30	24.91	1,973,519	2,036,121
	1.30%	1.00%	0.80%	3.10%	1.80%			96.90%	100.00%
Yangon	586,916	208,476	648,836	1,444,228	857,312	59.36	44.93	5,479,149	6,923,377
	8.50%	3.00%	9.40%	20.90%	12.40%			79.10%	100.00%
Shan	84,611	53,058	136,108	273,777	189,166	69.09	49.71	5,205,349	5,479,126
	1.50%	1.00%	2.50%	5.00%	3.50%			95.00%	100.00%
Ayeyawady	88,753	41,894	40,168	170,815	82,062	48.04	23.52	5,895,520	6,066,335
	1.50%	0.70%	0.70%	2.90%	1.40%			97.20%	100.00%
Nay Pyi Taw	35,239	3,087	96,790	135,116	99,877	73.92	71.63	932,566	1,067,682
	3.30%	0.30%	9.10%	12.70%	9.40%			87.30%	100.00%
Total	1,291,185	524,736	1,543,421	3,359,342	2,068,157	61.56	45.94	44,559,183	47,918,525
	2.70%	1.10%	3.20%	7.0%	4.3%			93.00%	100.00%

Source: Ministry of Immigration and Population/Department of Population (supported by UNFPA Myanmar): Migration and Urbanization, unpublished mimeo (Nay Pyi Taw 2015), p. 34.

TABLE C: DEVELOPMENT OF LAND PRICES IN YANGON'S HTANTABIN TOWNSHIP FROM 2010 TO 2015

Land ID	Year	Current Land Use	Land Category	Price in Lakh (Plot sizes vary between 1,200 ft ² and 2,400 ft ²)	Price in USD (1 USD = 1,250 MMK)	Price/ft ² (USD); (@plot = 1,200 ft ²)	Price /m ² (USD); (@plot = 1,200 ft ²)	Change of land value, in multiples of first quoted price	Change of land value, %*	Location of land / road infrastructure
1	1989	Farmland	Farmland	0.03/plot	2.40	0.002	0.02			No roads, located in paddy fields
1	2014	Housing	Village Land	50/plot	4,000	3.33	35.88	1,667	166,667	Main village road
2	b. 2014	Farmland	Farmland	5/acre	400	0.01	0.10			No roads, located in paddy fields
2	2015	Housing	Village Land	8/plot	640	0.53	5.74	44*	4,356*	Village road (concrete)
3	b. 2012	Farmland	Farmland	5/acre	400	0.01		35		Village road (dirt road)
3	2014	Farmland	Farmland	230/acre	18,400	0.42	4.55	46.0	4,600	After purchase, concrete road/bridge were erected by buyer
4	2009	Housing	Village Land	1/plot	80	0.07	0.72			Small dirt road - inside village
4	2013	Housing	Village Land	35/plot	2,800	2.33	25.12	35** (**Total change 2009/13)	3,500** (**Total change 2009/13)	Concrete road
4	2015	Housing	Village Land	65/plot	5,200	4.33	46.64	1.857/65*** (**Total change 2009/15)	185.7/6,500*** (**Total change 2009/15)	Concrete road
5	b. 2015	Farmland	Farmland	3-5/acre	240 - 400	0.0055 - 0.0092	0.059 - 0.099			No road, located in the fields
5	a. 2015	Farmland	Farmland	70/acre	5,600	0.13	1.38	14 - 23	1,400 - 2,333	Dirt road, will be improved soon, connecting to Htantabin
6	b. 2015	Farmland	Farmland	3-5/acre	240 - 400	0.0055 - 0.0092	0.059 - 0.099	2.7	267	No roads, located in paddy fields
6	2015	Farmland	Farmland	8-11/acre	640 - 880	0.015 - 0.020	0.16 - 0.22	3.7	367	No roads, located in paddy fields
7	b. 2012	Farmland	Farmland	4-5/acre	320 - 400	0.0073 - 0.0092	0.079 - 0.099			No roads, located in paddy fields
7	2015	Farmland	Farmland	400-500/acre	32,000 - 40,000	0.73 - 0.92	7.91 - 9.88	100 - 125	10,000 - 12,500	Field inside of village
8	b. 2012	Farmland	Farmland	5/acre	400	0.01	0.10			Located next to main road
8	2014	Farmland	Farmland	16/acre	1,280	0.03	0.32	3.2	320	Located next to main road
9	b. 2015	Farmland	Farmland	16/acre	1,280	0.03	0.32			Located next to main road
9	2015	Housing	Farmland	20/plot	1,600	1.0	10.67	33.8	3,375	Located next to main road
10	2010	Housing	Farmland	5/acre	400	0.01	0.10			Field inside of village
10	2015	Housing	Farmland	450/acre	36,000	0.83	8.90	90	9,000	Field inside of village

Source: Maxine Boutry, Khin Pyae Sone, Sung Chin Par, Tin Myo Win (GRET Yangon): Land Dynamics and Livelihoods in peri-urban Yangon, Yangon (May 2015), p. 22; author's calculations.

* With regard to plot subdivision, it is assumed that 75% of an acre is used for plots with a plot size of 1,200 ft². The remainder of 25% of an acre is assumed to be used for infrastructural purposes, such as roads, which might be too optimistic. Yet under the assumption chosen, one acre yields 27 plots at 1,200 ft² each per acre (1 acre = 43,560 ft², 75% of which are 32,670 ft²; divided by 1,200 yields approx. 27 plots).

TABLE D: DEVELOPMENT OF MONTHLY INSTALMENTS FOR LOAN AMOUNTS OF 5,810,000/ 7,700,000 MMK AT VARYING MATURITIES AND INTEREST RATES

Mortgage: 7,700,000 MMK					Mortgage: 5,810,000 MMK		
Interest rate p. a.	Maturity (months)	Monthly instalment (MMK)	Monthly income of household	Approx. percentage of households in Greater Yangon Area eligible*	Monthly instalment (MMK)	Monthly income of household	Approx. percentage of households in Greater Yangon Area eligible*
12	96	125,147	417,157	13.7	94,429	314,763	21
12	180	92,413	308,043	22.5	69,730	232,433	39
12	240	84,784	282,613	25	63,973	213,243	41
8	96	108,852	362,840	22.5	82,134	273,780	25
8	180	73,585	245,283	31	55,523	185,077	42
8	240	64,406	214,687	41	48,597	161,990	60

Source: Author's calculations.

TABLE E: GDP AT CONSTANT (2010/2011) PRODUCERS' PRICES BY SECTOR OF ACTIVITY, 2010/2011 - 2014/15 (MILLION MMK); SECTORS' PERCENTAGE SHARE OF GDP; RATES OF CHANGE, 2010/11 – 2014/15 (CAGR)

Sectors	2010-2011	Share of GDP, %	2011-2012	Share of GDP, %	2012-2013	Share of GDP, %	2013-2014	Share of GDP, %	2014-2015	Share of GDP, %	CAGR, 2010/11-2014/15 [^] (abs. values)	CAGR, 2010/11-2014/15, Share of GDP
AGRICULTURE	14,658,961	36.9	14,562,114	34.7	14,807,052	32.8	15,346,115	31.4	15,845,668	29.8	2.0	-5.2
Agriculture	11,108,404	27.9	10,750,197	25.6	10,724,797	23.8	10,959,271	22.4	11,199,342	21.1	0.2	-6.8
Livestock and Fishery	3,392,103	8.5	3,641,800	8.7	3,900,919	8.7	4,217,600	8.6	4,519,893	8.5	7.4	-0.1
Forestry	158,454	0.4	170,117	0.4	181,337	0.4	169,245	0.3	126,433	0.2	-5.5	-12.1
INDUSTRY	10,528,140	26.5	11,604,661	27.6	12,533,395	27.8	13,964,076	28.6	15,689,686	29.5	10.5	2.8
Energy	66,995	0.2	64,244	0.2	63,390	0.1	65,283	0.1	88,841	0.2	7.3	-0.2
Mining	299,433	0.8	336,973	0.8	310,685	0.7	407,171	0.8	612,899	1.2	19.6	11.3
Processing and Manufacturing	7,900,494	19.9	8,754,616	20.8	9,483,383	21.0	10,388,880	21.3	11,399,273	21.5	9.6	1.9
Electric Power	421,883	1.1	443,981	1.1	484,041	1.1	551,844	1.1	632,724	1.2	10.7	2.9
Construction	1,839,335	4.6	2,004,847	4.8	2,191,896	4.9	2,550,899	5.2	2,955,950	5.6	12.6	4.7
SERVICES	14,589,664	36.7	15,834,101	37.7	17,740,214	39.4	19,569,723	40.0	21,596,989	40.6	10.3	2.6
Transportation	4,594,356	11.6	5,170,857	12.3	5,588,692	12.4	6,241,229	12.8	6,605,472	12.4	9.5	1.9
Communications	332,227	0.8	403,578	1.0	1,211,652	2.7	1,546,393	3.2	2,435,077	4.6	64.5	53.1
Financial Institutions	37,715	0.1	77,956	0.2	110,139	0.2	147,614	0.3	175,238	0.3	46.8	36.6
Social and Administrative Services	915,720	2.3	989,006	2.4	1,129,436	2.5	1,271,001	2.6	1,421,442	2.7	11.6	3.8
Rental and Other Services	738,484	1.9	851,621	2.0	988,907	2.2	1,145,558	2.3	1,269,456	2.4	14.5	6.5
Trade	7,971,161	20.0	8,341,083	19.9	8,711,390	19.3	9,217,928	18.9	9,690,305	18.2	5.0	-2.3
GROSS DOMESTIC PRODUCT	39,776,765	(n/a)	42,000,876	(n/a)	45,080,662	(n/a)	48,879,914	(n/a)	53,132,343	(n/a)	7.5	(n/a)

Source: IMF Myanmar, August 2016

TABLE F: RELATIVE PERCENT CHANGES OF SHARES OF GDP BY SECTOR, 2010/2011 - 2014/15 (CONSTANT 2010/2011 PRODUCERS' PRICES)

Sectors	2010-2011, Share of GDP, %	2011-2012, Share of GDP, %	Change y-o-y, %	2012-2013, Share of GDP, %	Change, y-o-y, %	2013-2014, Share of GDP, %	Change y-o-y, %	2014-2015, Share of GDP, %	Change y-o-y, %	Change of share of GDP, %; 2010/11 - 2014/15
AGRICULTURE	36.9	34.7	-5.9	32.8	-5.3	31.4	-4.4	29.8	-5.0	-19.1
Agriculture	27.9	25.6	-8.3	23.8	-7.1	22.4	-5.8	21.1	-6.0	-24.5
Livestock and Fishery	8.5	8.7	1.7	8.7	-0.2	8.6	-0.3	8.5	-1.4	-0.2
Forestry	0.4	0.4	1.7	0.4	-0.7	0.3	-13.9	0.2	-31.3	-40.3
INDUSTRY	26.5	27.6	4.4	27.8	0.6	28.6	2.8	29.5	3.4	11.6
Energy	0.2	0.2	-9.2	0.1	-8.1	0.1	-5.0	0.2	25.2	-0.7
Mining	0.8	0.8	6.6	0.7	-14.1	0.8	20.9	1.2	38.5	53.2
Processing and Manufacturing	19.9	20.8	4.9	21.0	0.9	21.3	1.0	21.5	0.9	8.0
Electric Power	1.1	1.1	-0.3	1.1	1.6	1.1	5.1	1.2	5.5	12.3
Construction	4.6	4.8	3.2	4.9	1.9	5.2	7.3	5.6	6.6	20.3
SERVICES	36.7	37.7	2.8	39.4	4.4	40.0	1.7	40.6	1.5	10.8
Transportation	11.6	12.3	6.6	12.4	0.7	12.8	3.0	12.4	-2.6	7.6
Communications	0.8	1.0	15.0	2.7	179.7	3.2	17.7	4.6	44.9	448.7
Financial Institutions	0.1	0.2	95.8	0.2	31.6	0.3	23.6	0.3	9.2	247.8
Social and Administrative Services	2.3	2.4	2.3	2.5	6.4	2.6	3.8	2.7	2.9	16.2
Rental and Other Services	1.9	2.0	9.2	2.2	8.2	2.3	6.8	2.4	1.9	28.7
Trade	20.0	19.9	-0.9	19.3	-2.7	18.9	-2.4	18.2	-3.3	-9.0
GDP	(100)	(100)	n.a.	(100)	n.a.	(100)	n.a.	(100)	n.a.	n.a.

Source: IMF Myanmar, August 2016

TABLE G: NUMBER AND PERCENTAGE OF EMPLOYED PERSONS AGED 15 YEARS AND OVER BY INDUSTRY, 2014⁷⁹ AND 1983⁸⁰(MAJOR GROUPS, 1983 ONLY AGRICULTURE AND CONSTRUCTION); RATES OF CHANGE 1983 - 2014

2014			1983*		Average Annual Growth Rate (CAGR) 1983 - 2014, %
All	20,545,607	100	11,554,323	100	1.9
A - Agriculture forestry and fishing	10,726,809	52.2	7,394,384	64.0	1.2
B - Mining and quarrying	164,881	0.8			
C - Manufacturing	1,395,314	6.8			
D - Electricity gas steam and air conditioning supply	44,436	0.2			
E - Water supply; sewerage waste management and remediation activities	25,870	0.1			
F - Construction	940,231	4.6	155,416	1.3	6.0
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	1,923,400	9.4			
H - Transportation and storage	810,625	3.9			
I - Accommodation and food service activities	962,270	4.7			
J - Information and communication	47,713	0.2			
K - Financial and insurance activities	42,859	0.2			
L - Real estate activities	10,800	0.1			
M - Professional scientific and technical activities	29,472	0.1			
N - Administrative and support service activities	248,138	1.2			
O - Public administration including civil servants	616,557	3.0			
P - Education	390,092	1.9			
Q - Human health and social work activities	112,966	0.5			
R - Arts entertainment and recreation	57,771	0.3			
S - Other service activities	463,951	2.3			
T - Activities of households as employers; undifferentiated goods and services	278,354	1.4			
U - Activities of extraterritorial organizations and bodies	2,859	0.0			
Not stated	1,249,789	6.1			

*Industry groups of 2014 in most cases do not match industry groups used in 1983 - with notable exceptions such as agriculture and construction. Hence most cells in the 1983 column were left vacant.

Acronyms

CBM	Central Bank of Myanmar
CDC	City Development Committee
CHDB	Construction and Housing Development Bank
CSO	Central Statistical Organization
du	Dwelling unit
DUHD	Department of Housing and Urban Development
FY	Fiscal Year
GAD	General Administration Department
GYA	Greater Yangon Area
hh	Household
IFC	International Finance Corporation
IHLCS	Integrated Household and Living Conditions Survey
ILO	International Labor Organization
IMF	International Monetary Fund
JHF	Japanese Housing Finance Agency
JICA	Japanese International Cooperation Agency
KB	Kookmin Bank (Korea)
MADB	Myanmar Agricultural Development Bank (SOB)
MFI	Microfinance Institution
MLIT	Ministry of Land, Infrastructure, Transport, and Tourism (Japan)
MMK	Myanmar MMK
MoAI	Ministry of Agriculture and Irrigation
MoC	Ministry of Construction
MoHA	Ministry of Home Affairs
MoNPED	Ministry of National Planning and Economic Development
MoLES	Ministry of Labor, Employment and Social Security
NHP	National Housing Policy
NUP	National Urban Policy
PACT	Partner Agencies Collaborating Together (Consortium of NGOs which partnered with UNDP in the 1990s in the area of microfinance)
SOB	State Owned Bank
UNDP	United Nations Development Program
USD	United States Dollar

Endnotes

- ¹ A strategy can be conceived of as a structured plan guided by the superordinate policy, chosen to bring about a desired future, such as the achievement of a goal or an objective. Strategies tend to be oriented towards a single topic or theme, which can be clearly separated from other themes. Strategies often consist of a bundle of mutually aligned work programs and serve to inject the policy into the 'machinery of government', which realizes the strategies, and, in doing so, implements elements of national urban policy. Strategies need to be based on clearly assigned resources of funding for implementation.
- ² World Bank, *Housing: Enabling Markets to Work*, Washington, DC, 1993, p. 10 f.
- ³ *Ibid.*, p. 11.
- ⁴ *Ibid.*
- ⁵ According to the Census of 2014, approx. two million Myanmar citizens are residing abroad. Since these persons were not in the country on census day, they are not included in the total of individuals of 51,486,253. If one were to include the persons living abroad, growth rate would increase correspondingly. The Census Report 1983 just enumerated about 7,000 citizens residing abroad, a minor number hardly affecting size of growth rate.
- ⁶ Units might become obsolete through 'standard' wear and tear or might be destroyed through fire or through natural disasters such as typhoons.
- ⁷ Ministry of Immigration and Population, *The 2014 Population and Housing Census, The Union Report – Census Report Volume 2, Table B-1*, p. 115.
- ⁸ Substantial impact of these cultural preferences was confirmed in various interviews with domestic experts.
- ⁹ UNFPA Myanmar, *2014 Myanmar Population and Housing Census – Thematic Report on Housing Conditions, Household Amenities, and Assets*, (unpublished mimeo, Nay Pyi Taw, March 2016), p. 29. This document provides data on the share of buildings constructed with Dhani/Theke/In Leaf for the tenure category "ownership" only. To enable comparisons with other types of tenure in Table IX, Dhani/Theke/In Leaf had to be pooled with materials "earth", corrugated sheet, and "other".
- ¹⁰ WHO, *Progress on Sanitation and Drinking Water – 2015 Update and MDG Assessment*, Geneva 2016, p. 50.
- ¹¹ Ministry of Immigration and Population, *The 2014 Population and Housing Census, The Union Report (Census Report Vol. II)*, Nay Pyi Taw, May 2015, p. 232 f. Category I also corresponds to the classification of WHO, *ibid.*
- ¹² The rate of 50% is an assumption.
- ¹³ The rate of 50% is an assumption.
- ¹⁴ UNFPA Myanmar, *2014 Myanmar Population and Housing Census – Thematic Report on Housing Conditions, Household Amenities, and Assets*, p. 62 (unpublished mimeo, Nay Pyi Taw, March 2016). It needs to be noted that the Thematic Report does not reveal how the number of homeless was determined.
- ¹⁵ UNFPA Myanmar, *ibid.*, p. 57.
- ¹⁶ The Republic of the Union of Myanmar, *The 2014 Myanmar Population and Housing Census – Thematic Report on Fertility and Nuptiality*, Nay Pyi Taw 2016 (September), p. 3.
- ¹⁷ For mathematical simplification, it is assumed that replacement only occurs in stock existing in 2014.
- ¹⁸ Ministry of Immigration and Population/Department of Population (supported by UNFPA Myanmar): *Migration and Urbanization*, unpublished mimeo (Nay Pyi Taw 2015), p. 21.
- ¹⁹ Data collated in Tables in Annex are based on Table 4.8 in: Ministry of Immigration and Population/Department of Population, *ibid.*, p. 34.
- ²⁰ This survey needs to employ a depth of investigation similar to the IHLCS Poverty Survey referred to below.
- ²¹ Cf. McKinsey Global Institute (MGI), *A Blueprint for Addressing the Global Affordable Housing Challenge*, Seoul/San Francisco/Shanghai, 2014, p. vii.
- ²² Ministry of National Planning and Economic Development / UNDP Myanmar / UNICEF Myanmar / SIDA, *Integrated Household and Living Conditions Survey in Myanmar (IHLCS) (2009-2010)*, p. 18, Yangon/Nay Pyi Taw 2010.
- ²³ Ministry of Labor, Employment and Social Security(MoLES)/Central Statistical Organization/ILO Myanmar, *Myanmar Labor Force, Child Labor and School to Work Transition Survey 2015 (Executive Report Summary)*, Nay Pyi Taw/Yangon, August 2016.
- ²⁴ ILO, *Internal Labor Migration in Myanmar (Building an evidence-base on patterns in migration, human trafficking and forced labor)*, Yangon 2015.
- ²⁵ Japan International Cooperation Agency (JICA), *Strategic Urban Development Plan of the Greater Yangon Area, Final Report I*, (Yangon) 2013.
- ²⁶ The increase in the share of food/healthcare could even be interpreted as an indicator for a deterioration of livelihood conditions from 2005 until 2010. On the other hand, the increase could be caused by an augmentation of daily caloric intake and/or more spending for health care purposes, reflecting an actual improvement of living conditions. In sum, the latter is supported by other findings of IHLCS such as the development of small asset ownership IHLCS, *ibid.*, p. 19 (Table 10).
- ²⁷ Ministry of Labor, Employment and Social Security(MoLES)/Central Statistical Organization/ILO Myanmar, *Myanmar Labor Force, Child Labor and School to Work Transition Survey 2015 (Executive Report Summary)*, Nay Pyi Taw/Yangon, August 2016, p. 7 (Table 3).
- ²⁸ ILO's study, "Internal Labor Migration in Myanmar" provides the information that the average share of debt of the average annual income of households associated with internal migration stood at 29 percent. This share is significantly higher than the data gathered by IHLCS. It needs to be taken into account that the sample of ILO's Internal Labor Migration is (i) smaller than the sample of IHLCS and (ii) was constructed in a non-random way. Relatively high debt levels may be a cause for internal migration as they push people to search for improved income opportunities.
- ²⁹ The Myanmar Labor Force Survey of 2016 (MoLES/ILO 2016) gives some deviating data on quantitative aspects of land owned. (*ibid.* p. 6f). The Labor Force Survey distinguishes between "land possessed" and "land cultivated". According to the survey, the average area of land possessed is just 3.4 acres in rural areas and one acre in urban areas (wards). On the other hand, the Labor Force Survey indicates that the average area of land cultivated is 6.1 acres in (urban) wards and 6.4 acres in rural areas (village tracts). The latter data come close to the findings of IHLCS 2010, which with regard to land ownership issues is the more authoritative study.
- ³⁰ FAO Myanmar country data on expansion of agricultural land corroborate this notion.
- ³¹ In addition, due to inflation between 2009 and 2015, a juxtaposition of nominal values is of limited diagnostic value.
- ³² The arithmetic average of households' incomes is also a "trimmed" average, as the lowest income group (Bracket 1) and the highest income group (Bracket 15) were excluded from computation of the mean to reduce distortions.
- ³³ MoLES/ILO 2016 presumably used a random sample. This may have ensured that data from GYA already had adequate impact on aggregate survey results due to the proportionally large share of respondents from GYA.

³⁵ Maxine Boutry, Khin Pyae Sone, Sung Chin Par, Tin Myo Win (GRET Yangon): Land Dynamics and Livelihoods in peri-urban Yangon, Yangon (May 2015).

³⁶ It needs to be noted that village land is a land use category, on which the construction of dwelling units is permitted in principle. Hence, prices of village land tend to be higher, as village land is perceived to provide high levels of security of property rights. Put differently, village land is associated with lower levels of risks of interference through local authorities compared to farmland.

³⁷ Exchange rate: 1 USD = 1,250 MMK

³⁸ M. Boutry et al., *ibid.*, p. 18.

³⁹ UN-Habitat Myanmar: Thematic Paper on Land and Infrastructure (in preparation of National Housing Policy), unpublished mimeo (Yangon 2015), p. 16.

⁴⁰ *Ibid.*

⁴¹ UN-Habitat Myanmar, Mapping Yangon: The Untapped Communities (Phase I) – A Preliminary Study of Informal Settlements in Yangon, Yangon 2016 (August), Draft Report, unpublished mimeo. The Study is based on remote sensing, various GIS-techniques and on-ground verifications in all settlements identified.)

⁴² United Nations Centre for Human Settlements (Habitat): Human Settlements Sector Review – Union of Myanmar, pp. 76-81. Report prepared by T. Standley and D. Etherton, Nairobi, 1991.

⁴³ UN-Habitat Myanmar, Mapping Yangon: The Untapped Communities (Phase I), p. 3f.

⁴⁴ This concern assumes greater significance in the light of the recent announcement by the Yangon Government to undertake a large-scale resettlement of slums in the city.

⁴⁵ UN-Habitat Myanmar is preparing a qualitatively oriented Phase II of the study to cover tenure issues in detail based on a sample of 500 households.

⁴⁶ *Ibid.*, p. 4.

⁴⁷ *Ibid.*, *passim*.

⁴⁸ Widely unanimous view of senior officials and senior advisers of DUHD at joint MoC/UN-Habitat Workshop on National Housing Policy held in Yangon on 18 January 2017.

⁴⁹ IMF, IMF Country Report 15/267, Myanmar 2015 Article IV Consultation, Washington D.C., 2015 September, p. 4.

⁵⁰ *Ibid.*, Figure 1, p. 21.

⁵¹ *Ibid.*

⁵² *Ibid.*, p. 28 (Table 1).

⁵³ *Ibid.*, p. 31 (Table 4).

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*, p. 26 (Figure 6, data for 2014).

⁵⁶ Roland Berger: Myanmar Banking Sector 2025: The Way Forward (Study), Munich 2016 (Sept.), p. 7.

⁵⁷ List not exhaustive.

⁵⁸ Section in part based on personal information and unpublished documents received from senior staff at CHDB in April 2016 and August 2016.

⁵⁹ Based on exchange rate of 1 USD = 1,250 MMK.

⁶⁰ Large-scale projects include financing of Mingaladon Industrial Park as well as the Pun Hlaing Golf Estate (source: Thematic Paper on Housing Finance, *ibid.*). Further information on CHDB's loan portfolio for construction businesses is not available.

⁶¹ Personal information received from senior staff at CHDB in August 2016.

⁶² Personal information received from senior staff at CHDB in January 2017.

⁶³ Myanmar Times, October 18, 2016 "Construction and housing bank to extend duration on lending for low-cost housing".

⁶⁴ Pawn shops have to be registered with the a regulatory/supervisory body called "Myanmar Small Loans Enterprise (MSE)".

⁶⁵ IFC/CGAP (P. Duclos, P. Luchtenburg, Li Ren, Li Yan Chen), Microfinance in Myanmar – Sector Assessment, Yangon/Hanoi/Washington D.C., 2013 (January), p. 9.

⁶⁶ *Ibid.*, p. 15. "Flat" means that the amount of interest charged per month is not added to the loan (principal outstanding). On an annualized basis, this implies that the maximum rate permitted per year stands at 30 percent. Example: borrowed amount – 10,000 MMK. The monthly charge to be paid to the bank is 2.5%, i.e. 250 MMK. Monthly charges add up to 3,000 MMK per year, i.e. 30% of loan amount on an annual basis.

⁶⁷ Nominal GDP in FY 2012/13 amounted to 47,722 billion MMK.

⁶⁸ IMF, *ibid.*, p. 5.

⁶⁹ Information presented in this section is based on interviews with senior officials from the Housing Development Division of MoC/DUHD in August 2016 and several unpublished documents from the Housing Development Division dating from 2015 and 2016.

⁷⁰ Information on cost-levels and of units' features explaining cost differentials were not provided.

⁷¹ Reasons for termination of sites-as-services could not be identified.

⁷² MoAI/UN-Habitat (Myanmar), Land Administration and Management Program (LAMP), Terminal Report, Yangon 2016 (March). p. 59, p. 36.

⁷³ UN-Habitat Myanmar, Discussion Paper on the Legislative Framework of the Housing Sector of Myanmar (in preparation of National Housing Policy), unpublished mimeo (Yangon 2015), p. 6 ff.

⁷⁴ As economic research on rent control predicts.

⁷⁵ Japan International Cooperation Agency, *ibid.*, p. 2-127.

⁷⁶ Strata titles are separate individual titles issued to units of houses, apartments or offices jointly developed within a development that shares common facilities such as gated & guarded, security, car parks and facilities governed by a common deed of mutual covenants.

⁷⁷ Listing not exhaustive.

⁷⁸ Oxford Business Group, The Report: Myanmar 2016, Construction & Real Estate, (<https://www.oxfordbusinessgroup.com/node/901480/reader>).

⁷⁹ Ministry of Immigration and Population (Department of Population), The 2014 Myanmar Population and Housing Census - The Union Report: Occupation and Industry - Census Report Volume 2-B, Nay Pyi Taw, 2016 (March), Table 5, p. 11.

⁸⁰ The Socialist Republic of the Union of Burma, Ministry of Home and Religious Affairs, Burma – 1983 Population Census, Yangon (Rangoon) 1986 (English version), Table 24, p. 2-123.

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