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Sustainability Factors in National Housing Programmes for the Urban Poor in the Case of India

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Abstract

Since 2007 more people have lived in urban than in rural areas worldwide. Rapid urbanisation poses several challenges for national, state and local governments. Provision of formal, affordable and adequate housing is a central task for municipalities with large and gradually rising populations, especially for those in low-income countries. Shortage of formal housing becomes evident in the growing number of slums and informal settlements and is widely acknowledged by the international community as one of the most significant challenges of the 21st century.

Since decades, national governments have aimed to tackle housing shortage by initiating government-sponsored housing programmes. However, sustainability factors on several levels of such government-financed schemes have been a matter of discussion. Constraints in implementing the programmes are often faced and long-term improvement of livelihoods is questioned. Lack of infrastructure paired with poor connectivity to workplaces could lead to impoverishment of the dwellers through displacement and further deteriorate their livelihoods.

This thesis discusses sustainability challenges in government housing policies and programmes targeting the urban poor. Government housing provision in India is examined as a case study. An analysis of the recent *Pradhan Mantri Awas Yojana – Housing for All* (PMAY) mission through indicators concerning economic, social, institutional and physical/environmental sustainability in context of international frameworks as the *Sustainable Development Goals* and the *New Urban Agenda* is conducted. It is shown that housing for the urban poor is a multi-faceted challenge, and that an adequate house does not necessarily result in adequate housing.

Kurzfassung

Seit dem Jahr 2007 leben weltweit mehr Menschen in Städten als ländlichen Gebieten. Nationale, regionale und kommunale Regierungen stehen daher vor zahlreichen Herausforderungen. Schon heute kann in vielen Kommunen mit großen und stetig wachsenden Bevölkerungen der Zugang zu angemessenen und erschwinglichen Wohnungen am regulären Markt oft nicht gewährleistet werden, insbesondere in einkommensschwachen Ländern. Der Mangel an Wohnraum wird in der wachsenden Zahl von Slums und informellen Siedlungen deutlich und ist auch von der internationalen Gemeinschaft als eine der größten Herausforderungen des 21. Jahrhunderts anerkannt.

Seit Jahrzehnten versuchen nationale Regierungen der Wohnungsknappheit mit staatlich finanzierten Wohnbauprogrammen bei zu kommen. Nichtsdestotrotz wird diskutiert, ob Nachhaltigkeitsfaktoren bei derartigen Programmen entsprochen wird. Oft treten in der Umsetzung der Programme Hürden auf, des weiteren ist auch die tatsächliche Verbesserung der Lebensqualität der Betroffenen über einen längeren Zeitraum fraglich. Mangel an Infrastruktur in Zusammenhang mit schlechter Verkehrsanbindung zu bestehenden Arbeitsplätzen, kann bei Umsiedlungen die Lebensgrundlage der Bewohner verschlechtern und auch zu Verarmung führen.

Diese Diplomarbeit diskutiert die Nachhaltigkeit staatlicher Wohnbaupolitik und -programmen für städtische Armutsbevölkerung in einkommensschwachen Ländern. Als Fallstudie wird der Wohnbausektor in Indien seit den 1950er Jahren beleuchtet. Eine Analyse des aktuellen *Pradhan Mantri Awas Yojana – Housing for All* (PMAY) Programms wird durch ökonomische, sozio-ökonomische, physische/ökologische Nachhaltigkeitsindikatoren im Kontext internationaler Agenden wie den *Nachhaltigen Entwicklungszielen* und der *New Urban Agenda* durchgeführt. Deutlich wird, dass Wohnungsversorgung für Armutsbevölkerung eine vielschichtige Herausforderung ist und dass angemessener Wohnraum allein nicht zwangsläufig zu einer verbesserten Wohnsituation führen muss.

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List of Acronyms

AHP	Affordable Housing in Partnership
AIP	Annual Implementation Plan
BLC	Beneficiary-Led Individual House Construction or Enhancement
BSUP	Basic Services to the Urban Poor
CDP	City Development Plan
CLSS	Affordable Housing through Credit-Linked Subsidy Scheme
CSMC	Central Sanctioning and Monitoring Committee
DPR	Detailed Project Report
EIUS	Environmental Improvement of Urban Slums
GDP	Gross Domestic Product
GoI	Government of India
HFAPoA	Housing for All Plan of Action
EU	European Union
EWS	Economically Weaker Section
FAR	Floor Area Ratio
FYP	Five-Year Plans
HFI	Housing Finance Institution
HIG	High-Income Group
HUDCO	Housing and Urban Development Corporation
ICLEI	International Council for Local Environmental Initiatives
IDSMT	Integrated Development of Small and Medium Towns
INR	Indian Rupee
ISSR	In-Situ Slum Redevelopment
JNNURM	Jawaharlal Nehru National Urban Renewal Mission, 2005-14
LIG	Low-Income Group
MDG	Millennium Development Goals
MFI	Microfinance institution
MIG	Middle-Income Group
MoHUPA	Ministry of Housing and Urban Poverty Alleviation
MoUD	Ministry of Urban Development
NHB	National Housing Bank
NHP	National Housing Policy, 1988
NUA	New Urban Agenda
PLI	Private Lending Institution

PM	Prime Minister
PMAY	Housing for All – Pradhan Mantri Awas Yojana (Urban) Mission, 2015
PPP	Public-private-partnerships
RAY	Rajiv Awas Yojana Mission, 2013-15
RCA	Rent Control Act
SDG	Sustainable Development Goals
SFCPoA	Slum Free City Plan of Action
SLNA	State Level Nodal Agency
SRS	Slum Rehabilitation Scheme, Mumbai
ULB	Urban Local Body
ULCRA	Urban Land (Ceiling and Regulation) Act, 1976
UN	United Nations
USD	US Dollar
WB	World Bank
WCED	World Commission on Environment and Development
74th CAA	74th Constitutional Amendment Act, 1992

Glossary

Detailed Project Report: Plan documents including information about a project, as analysis of the construction site, number of dwelling units, location plans or floor plans.

Floor Area Ratio: The ratio of the total floor area of a building and the area on which the building is constructed. In India, the Floor Area Ratio is referred to as the Floor Space Index as an equivalent. However, this thesis adheres to the term Floor Area Ratio.

Five Year Plans: Issued by Government of India, they are guiding economic programmes, initiatives and frameworks affecting all layers of public administration, including directions for rural and urban development as well as the promotion of housing.

Government of India: The government on national level of India. In this thesis, the terms Central government, the Centre and Government of India are used interchangeably.

Indian Rupee: Indian currency in this thesis is converted and rounded into USD, for comparability reasons. The exchange rate used in this thesis as from 30 March 2017: 64,84 INR = 1 USD.

Jawaharlal Nehru National Urban Renewal Mission: India's first comprehensive and to-date largest urban rehabilitation programme for infrastructure, governance and housing, active from 2005 to 2014.

Kutcha house: A house constructed with a temporary, non-solid, or makeshift structure.

Pucca house: A house constructed with a durable and solid structure, like brick or concrete.

Rajiv Awas Yojana: An integrated citywide housing programme targeting India's slum households operating from 2013 until 2015.

States: India comprises of 29 states and 7 union territories, the former having elected state governments and the latter being directly governed via the Central government through administrators. In this thesis the terms state and state government refer comprehensively to Indian (federal) states and union territories, respectively their administrations.

1 Introduction

1.1 Context

Since 2007, people in urban areas have outnumbered those living in rural areas worldwide (United Nations et al., 2015). While since the 1990s the percentage of global urban slum dwellers has decreased, the absolute number has increased through continuous growth of urban agglomerations alongside lack of formal housing (United Nations, 2015b). The international community acknowledges urbanisation as one of the most significant challenges of the 21st century, which is also reflected in the *New Urban Agenda* (NUA), the most influential document guiding international urban policy and recently adopted by the *United Nations* (UN), declaring that continuing urbanisation “*poses massive sustainability challenges in terms of housing, infrastructure, basic services, food security, health, education, decent jobs, safety, and natural resources*” (United Nations, 2016a).

Housing is considered an essential component of human life as reflected in Art. 25 of the Universal Declaration of Human Rights, with housing contributing towards “*a standard of living adequate for the health and well-being of himself and of his family*” (United Nations, 1948). For governments around the globe, supply of adequate housing for their citizens is therefore a main challenge, especially in dense urban environments with scarcity of vacant land. Since the 1950s, international policy particularly in regard of housing provision for the urban poor in low-income countries has transitioned through three periods (see Figure 01): (i) direct housing provision, (ii) in-situ upgrading and site-and-service schemes, and (iii) the enabling markets approach, the latter still being prevalent today with governments not acting as a distributor but as a facilitator of housing. While the ‘enabling approach’ proved successful in some emerging economies by decreasing housing shortage for middle- and higher-income groups, it did not succeed as expected for citizens at the lower end of the income pyramid. Therefore, many national, state and local governments are seeking to directly intervene in the housing sector by subsidizing the supply- and the demand side.

However, large-scale national housing programmes and their contribution to sustainable development in economic, social and environmental terms has been questioned. On the surface, national housing programmes often appear to improve housing supply, while giving a nation’s construction economy a boost through the production of a large number of dwelling units in a short time period. In turn, they do not necessarily improve the socio-economic situation of the targeted beneficiaries, and could severely affect ecological systems throughout the planning and construction processes.

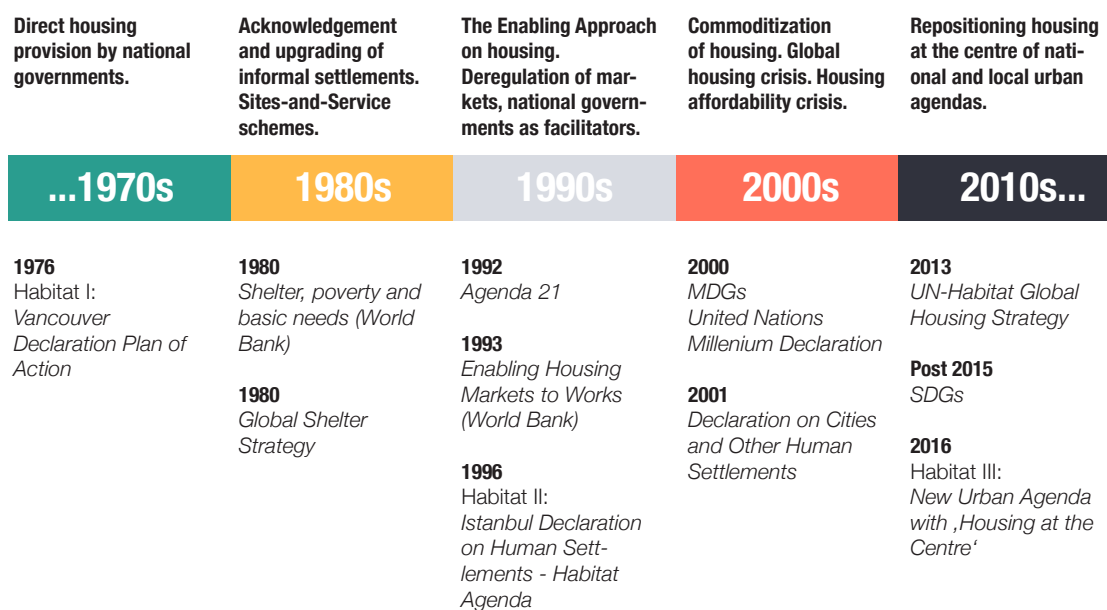


Fig. 01: Evolvement of the International Housing Agenda

Source: UN-Habitat, 2015, p. 4

The largest proportion of future urban growth is predicted to occur mostly in African and Asian countries (United Nations et al., 2014). India is considered a main contributor overtaking China with a projected urban population growing up to 40 per cent or 600 million people by 2031 (Ahluwalia et al., 2014) In India, already today public service delivery and access to adequate housing in many cities is stressed, the most affected being slum dwellers and low-income households (ibid.). Inadequate housing, insufficient infrastructure and insecure tenure lead to constant threats of eviction, unhealthy living conditions and a decline in economic productivity (Government of India, 2013).

Since independence from the British Empire in 1947, the *Government of India's* (GoI) *Five Year Plans* (FYP) have included several programmes and schemes to increase the housing stock and ameliorate housing conditions for the urban poor (Ahluwalia et al., 2014). Following this tradition of government housing provision for low-income groups in India, in 2015 the newly elected Prime Minister (PM) Narendra Modi announced the *Housing for All (Urban) – Pradhan Mantri Awas Yojana (Urban)* (PMAY) programme to provide a decent housing units for all Indian citizens in need by 2022. However, preceding housing missions in India have led to mixed results, many of them facing challenges concerning their implementation. In many cases, despite rhetoric of in-situ upgrading of settlements, evictions and resettlements have often been common practice, approved projects were not finished and newly constructed homes remained unoccupied. Low occupancy rates often result from the practice of relocation of slum dwellers to new developments on the periphery of large cities, with slum dwellers being reluctant to part

with their former livelihoods (Parekh, 2014). Lack of infrastructure, paired with poor connectivity to their former workplaces and lack of jobs could lead to even further impoverishment through displacement (Patel, S. & Mandhyan, 2014).

This thesis addresses the evolvement of national housing programmes and housing policies in low-income countries since the 1950s, and as a case study focuses on Indian housing policy for the urban poor with an analysis of the recent PMAY mission upon its sustainability in economic, socio-economic, physical/environmental and institutional terms.

Personal interest on this topic emerged through several travels in the Indian subcontinent between 2009 and 2012, and an internship at the Gesellschaft für Internationale Zusammenarbeit (GIZ) in New Delhi from November 2015 until February 2016. There, the author was able to gain insight into India's housing sector and current national housing schemes.

1.2 Research Goals and Questions

This thesis aims to examine the role of national housing programmes as a solution for housing provision for the urban poor, and elaborates ways on how they could move towards increased sustainability over long term. It illustrates lessons learned from experiences of international housing agendas and national schemes. In conclusion, recommendations for housing programmes for the urban poor are given.

In order to reach those research objectives, the following key questions are addressed:

In what way are national housing programmes contributing to sustainable housing provision for the urban poor?

As an overall research question, sustainability of national housing programmes for the urban poor is discussed with a focus on economic, socio-economic, physical/environmental and institutional spheres of sustainability. This is exemplified through the analysis of the PMAY programme.

What are the implications of international agendas on sustainable housing provision for the urban poor?

Recent international agendas guiding housing provision for the urban poor are scrutinized and their implications for national housing programmes and policy discussed.

How can the concept of sustainability in housing programmes for the urban poor be defined?

How can their sustainability be assessed?

The concept of sustainability applied on housing provision for the urban poor is discussed. Methods to assess the sustainability of a national housing programme are introduced.

How can participatory approaches influence the implementation of national housing programmes? What stakeholder environments are enabling successful implementation of national housing programmes?

Impacts of participation and collaboration of stakeholders on all levels in the implementation of a housing programme, especially those on the local level, are assessed. Furthermore, conducive stakeholder environments and their roles in the design and implementation process of a programme are discussed, especially in regards to the PMAY mission.

What are the potentials of rental housing in national housing programmes? How can rental housing schemes reach out to the urban poor?

Rental housing as an option in housing the urban poor is examined. Ways of how to reach the lowest income groups through rental housing are discussed.

1.3 Structure

This thesis is structured in five comprehensive chapters.

In the first and current chapter an overview of the topic is given. Context, research goals and research questions, as well as the scope and possible limits of the research are introduced. Additionally, key terms used throughout the thesis are explained.

In the second chapter the concept of ‘sustainability’, ‘sustainable development’ and its implementation in urban development and housing for the urban poor is discussed. Particularly aspects of economic, social, physical/environmental and institutional sustainability are hereby considered. Agendas and policy frameworks by the international community, especially the NUA and its implications on affordable and adequate housing are scrutinized.

In the third chapter an overview about international housing policy aiming at the provision of dwellings for the urban poor since the 1950s is given. Informal, self-construction and state-led promotion of housing is discussed. Approaches of support by the government concerning housing provision, ranging from small subsidies to complete houses, are scrutinized. Housing affordability and finance mechanism available for the urban poor are introduced. The

potential of rental housing and home-ownership in housing provision for low-income groups is discussed. Matters of land use and increased densities in urban areas are examined. Finally, the current debates on urban housing policy are presented.

The fourth chapter addresses the case study analysis and focuses on India's urban housing sector and the PMAY programme. First, a framework for the assessment of national housing programmes based on Frank (2008) and its indicators are introduced. Second housing issues in the context of India, including recent programmes, are discussed. Third, the implications of the PMAY mission are scrutinized and assessed via the aforementioned indicators. Fourth, results of the analysis are presented and discussed.

The fifth chapter interprets the findings of the thesis, critically discusses the current sustainability debate and includes scope for further research on the topic. Additionally, recommendations are given in regard of design and implementation of national housing programmes for the urban poor, to further move towards sustainability.

The sixth and concluding chapter summarizes the thesis in regard of the PMAY programme and describes lessons learned in the broader context of international housing policy for the urban poor.

1.4 Method

At first, current state of research is examined through screening of secondary literature and background research on the concept of sustainability and evolvement of current international housing policy as a base of the subsequent analysis. The analysis is considered as an *ex-ante* programme analysis (Sedlacek, 2004), however, includes interpretations of insights into first outcomes of the PMAY programme if already available.

The analysis of the PMAY programme is structured in several steps, based on the approach described in *Urban Sustainability Reporting* of Maclaren (1996, p. 188):

1. **Defining goals and directions:** The concept of sustainability, its emergence and accompanying policies are examined. The most recent document guiding urban development and housing, the NUA, is scrutinized and main topics and guiding principles relevant for sustainability in housing are extracted.
2. **Selection of a framework:** For this thesis, an adapted *domain-based* framework including economic, social, physical/environmental and institutional spheres of sustainability, representing the foregoing topics of sustainability the most, has been chosen (Maclaren, 1996). The framework limits itself upon the housing sector. Under consideration of preceding studies on sustainability of national hous-

ing programmes, the framework developed by Frank (2008) in *Sustainable Housing Finance for Low-Income Groups* was considered highly suitable for this thesis and the addressed topics.

3. **Selection of indicators:** Indicators used in the analysis are based on the aforementioned framework. To suit the scope of this thesis, some have been adapted and aligned, while others have been omitted. Furthermore, indicators have been added to represent the directions given in the NUA. Frank groups the indicators in economic, socio-economic, physical/environmental and institutional aspects of sustainability. This classification has been adhered to in this thesis.
4. **Data collection and analysis:** Available data on the PMAY mission is collected and analysed according to the aforementioned indicators. It is assessed, if aspects of the mission are contributing to move towards sustainability, are partly applicable, or likely to be antipodal. The analysis is conducted as follows:
 1. examination of emergence of housing policies for the urban poor in India since the 1950s to understand the context and to give understanding of recent developments
 2. analysis of PMAY mission guidelines and additional documents, minutes of government meetings, progress reports including quantitative data and other available resources
 3. analysis of secondary literature addressing Indian housing policy and the PMAY mission. Additionally, newspaper and media reports about the mission are scrutinized
 4. *semi-structured* interviews with experts familiar with the Indian housing sector, current policy and the PMAY programme, are conducted. Those interviews are carried out online via Skype or likewise communication media.
5. **Preparation and presentation of the results:** A matrix (see Annex) explaining the indicators and if they have been met, partly met, or not met, is presented. Furthermore, short comments elaborate upon each indicator. In conclusion, a summary is given to provide an overview of the results of the analysis, and an outlook is given if the programme meets its goals and directions.

1.5 Scope and Limits of the Study

This thesis focuses on housing policies for the urban poor issued on a national level. However,

in India, issues of housing and urban policy as by the Constitution of India are matters of state governments. The Central Government's role in the process is to "issue directives, provide advisory services, set up model legislation and fund programmes which the states can follow at will" (Shaw, 1996, p. 224). Although state governments are entitled to formulate policies on their own will, they often do not execute that right, and follow recommendations or models of the Centre (ibid.). Hence, the Indian state level urban housing policies reflect the national policies only in a fragmented way (Batra, 2009; Shaw, 1996). This becomes evident in the implementation process of PMAY. For a complete picture of Indian urban housing policy, therefore the policies of all 36 Indian states would have to be taken into consideration, however, this would go beyond the scope of this thesis.

The case study analysis of the PMAY programme is therefore conducted in regard to the mission and its outcomes on a national level. The PMAY programme was rolled out nation-wide in 2015 but many states are implementing it just now and results are yet to be presented. With the mission being in the first phase of its rollout during research on this thesis, it includes interpretations of first results until March 2017, deviating from trends as the mission is further progressing.

1.6 Definitions of Key Terms

This section describes and gives clarifications on several terms that are frequently used throughout this thesis.

Defining Affordability and Affordable Housing

The cost of housing is universally defined as affordable when a dwelling has adequate space for an individual including basic services and when monthly rent or housing loans range from 20 to 40 per cent of the total household income (McKinsey Global Institute, 2010). The definition of adequate living space is variable amongst countries and also amongst different income-groups (ibid.).

In India, the *High Level Task Force on Affordable Housing* 2008 defined affordable housing for different income-groups as follows, with variants prevailing throughout the country today:

- **Economically Weaker Section (EWS)/Low Income Group (LIG):** a housing unit with living space ranging from 300 to 600 sq. ft. (27,9 – 55,7 sq. m.), with monthly cost not more than 30 per cent of the gross income,

- **Middle Income Group (MIG):** a housing unit with living space less than 1 200 sq. ft. (111,5 sq. m.), with monthly cost not more than 40 per cent of the gross income to pay back mortgages or rents (HLTF, 2008).

Defining Urban Poverty and Low-Income Groups

This thesis deals with housing provision for the urban poor, citizens of low-income groups living in urban areas. As urban poverty differs from rural poverty, in the following, characteristics of poverty concerning individuals, families and communities are given (adapted from Mitlin & Satterthwaite, 2004):

- Insufficient and insecure means including income, physical (e.g. shelter and infrastructure) and social capital (e.g. healthcare and education)
- Inadequate, congested housing and precarious livelihood environments
- Insufficient access to basic infrastructure (e.g. water and sanitation, electricity, waste management, roads) and its negative effects on health, workforce and quality of life
- Insufficient access to public services (e.g. public transport, education and health-care facilities, commercial areas and markets, police force)
- Lack of social security
- Insecurity in front of the law, and insufficient conservation of the individual's or community's rights
- Lack of security of land tenure and property rights
- Lack of political participation and decision-making, as well as representation in front of administrative entities
- Disproportionate cost for basic services and infrastructure due to informal and corrupt providers

In the context of India, current definitions of urban poverty also utilised by the government are referring to their income levels, as follows:

- **EWS** with incomes up to 300 000 INR (4 627 USD) per annum (MoHUPA, 2016f, p. iii)
- **LIG** with incomes ranging from 300 001 to 600 000 INR (4 627 to 9 254 USD) (ibid.).

In this thesis, when referring to the classification specific to India, the abbreviations *EWS* and *LIG* are utilised as described above. However, in the global context, most sources utilize the terms *low-income group* and *urban poor* interchangeably, which is followed in this thesis if referring to citizens living in the aforementioned conditions on a broader scale.

Defining Low-Income and Less Developed Countries

The World Bank (WB) classifies a ‘low-income country’ or economy as a country with a gross national income less than 1 025 USD, which applies for many countries occurring in this thesis (World Bank, 2017). The term ‘developing country’, while also referring to countries with lower incomes, on the contrary, is not clearly defined, and it is a matter of discussion, whether to classify a country as ‘developing’ or ‘developed’ at all. Another term frequently used in literature is ‘less developed country’ to classify countries with lower income levels. In various sources used for this study, the terms ‘low-income country’ and ‘less developed country’ are used interchangeably, and this notion is continued throughout this thesis.

Defining Urbanisation and Urban Growth

‘Urbanisation’ can be defined as the “*proportion of the total population [of a country] concentrated in urban settlements*” (Kingsley, 1965, p. 3). Therefore, urbanisation is not necessarily referring to urban growth, due to the gross population of a country consisting of citizens living in urban and rural areas likewise, and with the ‘proportion urban’ being “*a function of both of them, [...] cities can grow without any urbanization, provided that the rural population grows at an equal or a greater rate*” (ibid.).

‘Urban growth’ in general refers to the increase of the population living in a respective city or urban area, whether by natural growth, rural-urban migration, or reclassification of rural villages as ‘urban’, including expansion of administrative boundaries (Ellis & Roberts, 2015).

There are various classifications of what is an ‘urban area’ by international organisations, nations and even provinces. In India, the Census of India defines the statutory classification of cities and towns. *Urban areas* are either classified as *Statutory Towns* or *Census Towns*. Statutory Towns are those urban areas with a “*municipality, corporation, cantonment board or notified town area committee*” (Government of India, 2011, p. 1). Census Towns are those urban areas with

- i. a population exceeding 5000
- ii. more than 75 per cent of the male population not working in the agricultural sector
- iii. a population density with more than 400 people per sq. km (ibid.)

Furthermore, those towns exceeding a population of 100 000 are referred to as *Class-I* or *Tier-I* cities, which currently number 465. Those 53 cities amongst them exceeding a population of one million, are classified as *Million Plus Urban Areas/Towns*, while the three urban areas exceeding ten million people are called *Mega Cities* (ibid.).

2 Concept of Sustainability

'Sustainability' and 'sustainable development' have found its way into everyday discussions as general principles used in policies, programmes and political debates, with an abundance of different definitions and interpretations of the concept. Due to its vague definition, there is a broad scope for agreement on the concept, however, as Mitlin and Satterthwaite (1996) point out, "*the disagreements surface as there are so many interpretations as to what is 'development' and how it should be achieved, what constitutes adequate attention to environmental aspects and what is to be 'sustained' by sustainable development*" (1996, p. 23). In a similar way, Marcuse (1998) criticises that while in theory the concept is widely acknowledged, in practice, it still often lacks a general consensus, which could cause conflicts in implementation. While definitions that are too general could render it ineffective, interpretations that are too precise could narrow its scope. Thus, limitations concerning 'sustainability' and 'sustainable development' need to be clearly defined and agreed upon by stakeholders for every specific context, to make progress valuable, measurable and visible.

To give an idea about the emergence of the concept and its implications, this chapter highlights the evolvement of 'sustainability' and 'sustainable development', while providing a critical overview of some common definitions. Furthermore, the transition of the concept into urban development as in 'sustainable urban development' is described. Finally, the implications of 'sustainable housing' are discussed.

2.1 Emergence of the Concept of Sustainability and Sustainable Development

The concept of 'sustainability' nowadays is often characterized as a condition supporting the persistence of humanity and natural environments over long-term, to maintain a present state also for future generations. In contrast, while often presented as a synonym, 'sustainable development' represents a process-oriented approach, aiming to change prevailing models that are exploitive to natural and human resources, while implying that also those in need for better living conditions have to be provided with the possibility to overcome and ameliorate their present livelihoods (Mitlin & Satterthwaite, 1996; Wheeler, 1998).

The origins of the term 'sustainable' can be traced back to the 13th century, deriving from the Latin verb of "subtenere", which translates into "keep" or "uphold" (Wheeler, 1998, p. 500). Until the 18th century it was mainly used in juridical affairs, when the term was applied for the first time in a similar way to today's understanding: a ruling referring to forestry claimed that

only as much wood should be lumbered, as would grow back naturally in a certain timeframe (Aachener Stiftung Kathy Beys, 2015a). Nevertheless, it took until the 1970s to gather a strong momentum in the environmental and development context.

The roots of the academic debate about ‘sustainability’ can be traced back to the publication *The Limits to Growth* by Meadows et al. from 1972 (Wheeler, 1998). Commissioned by the *Club of Rome*, the publication linked ‘sustainability’ to environmental challenges for the first time. The authors discuss aspects of growth in the context of humanity and the steady increase of resource use. Meadows et al. state – in a positive outlook – that “*it is possible to alter these growth trends and to establish a condition of ecological and economic stability that is sustainable far into the future*” (1972, p. 24). For the first time, the publication set directions in the necessity of sustainable development, by declaring that maintaining a balanced environment and securing it for future generations needs to follow a general change in humanity’s attitude towards the use of the Earth’s resources before irrevocable damage is done.

The significance of the concept grew through the *UN Conference of the Human Environment* in 1972 in Stockholm, which can be seen as the starting point of international environmental politics (Aachener Stiftung Kathy Beys, 2015b). The conference pointed out further directions concerning global environmental consciousness, and paved the path towards the discussion concerning ‘sustainability’ itself. At the conference, human environment and humanity’s role to preserve it was debated, and finally resulted in the adoption of the *Stockholm Declaration*, containing several guiding principles concerning environment and development. Moreover, the conference initiated the founding of the United Nations Environmental Programme (ibid.).

The first official definition of ‘sustainable development’ was given in 1987, in the report of the *World Commission on Environment and Development* (WCED) also known as the *Brundtland Commission*, in a reference to its chair, the Norwegian PM Gro Harlem Brundtland. Their report titled *Our Common Future* or *Brundtland Report* provides today’s mostly used and acknowledged definition of ‘sustainable development’:

“*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*” (WCED, 1987, p. 41)

The Brundtland Report led to a broader notion of the interconnections between the environment and economic growth and further fuelled the international debate about sustainability and sustainable development in particular (Wheeler, 1998). However, Wheeler criticises the definition of a ‘need’ and that it would be a difficult task to make out who is in the position to define such a ‘need’ and rather prefers the definition of ‘sustainable development’ as “*development that improves the long-term health of human and ecological systems*” (1998, p. 502), as a concept to be integrated in a process to be followed over a larger time frame. The definition of a ‘need’

especially becomes important in the development context, where specific social, economic and cultural aspects have to be considered when moving towards 'sustainable development'. When incorporating an anthropocentric perspective in sustainable development and discussing 'human needs', discrepancies concerning 'needs' appear, also under consideration of an inter- and intra-generational perspective.

Another milestone in emergence of 'sustainable development' was the *UN Conference on Environment and Development* (also *Earth Summit*) held in Rio de Janeiro in 1992. The summit led to the adoption of the *Agenda 21*, an action plan for sustainable resource use and sustainable development of the human environment. The Agenda 21 presents actions to be executed at the global, national, regional and local stage under the proposition of 'think global – act local' to set directions for a more sustainable future. National governments are expected to implement (sustainable) development plans on the national level in accordance with international agendas. As the closest link to the public and as an important force to set actions, local stakeholders, such as city governments and municipalities are asked to implement policies and development programmes towards the actions of the agenda. Municipalities and local governments being closely linked to citizens are therefore in the crucial position to execute policies and programmes at the local level while "*educating, mobilizing and responding to the public to promote sustainable development*" (United Nations, 1992, p. §28.1). Interaction with public society and citizen's feedback to proposed actions, therefore, is seen as a key for successful implementation of the Agenda 21 (Aachener Stiftung Kathy Beys, 2015c).

In a similar way the *International Council for Local Environmental Initiatives* (ICLEI), an organisation of national and local governments established in 1990 for the promotion of the implementation of programmes working towards sustainable development (e.g. Agenda 21, Habitat Agenda), emphasizes the need for local action in the context of sustainable development. ICLEI defines 'sustainable development' as "*a program of action for local and global economic reform*" with the challenge to "*develop, test and disseminate ways to change the process of economic development so that it does not destroy ecosystems and community systems (e.g., cities, villages, neighbourhoods, and families) that make life possible and worthwhile*" (ICLEI, 1996, p. 1). Even though ICLEI questions whether the target of sustainable development can ever be reached, it emphasizes that without success on the local level, 'sustainable development' could not be achieved on a global scale at all. ICLEI furthermore stresses that for sustainable development, "*local economic development*" needs to support "*community life and power*" (ibid.). ICLEI's approach considers economic development as a main factor of development, of which the environmental and social spheres are affected and interdependent upon. In ICLEI's definition, 'sustainable development' is not depicted as an abstract notion, but is directly influencing the life of citizens on a micro-level, from communities, down to families and the individual citizen. Wheeler shares the view that participation on the local level is of importance on the way

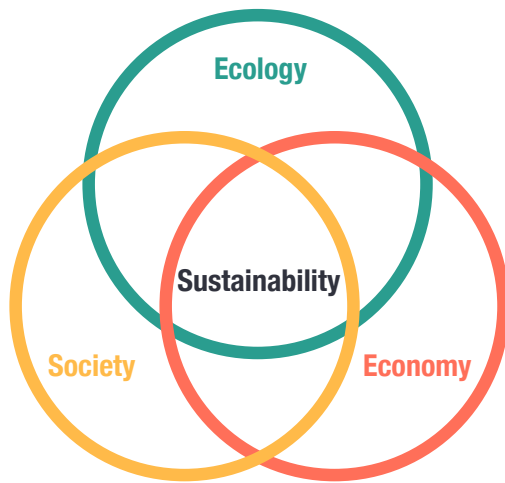


Fig. 02: Three Spheres of Sustainability, Venn-Diagram

Source: author

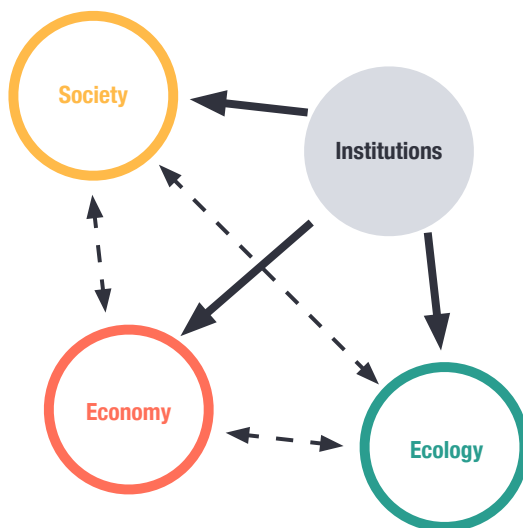


Fig. 03: Spheres of Sustainability including Institutions

Source: adapted from O'Connor, 2006, p. 2

towards sustainable development. He points out that “the directions of this process can be agreed upon through participatory processes in which all relevant stakeholders are represented” (Wheeler, 1998, p. 502), also stressing the need for interaction and feedback between all parties involved.

The definitions presented above share the notion that ‘sustainable development’ is a process that can only be followed in a holistic approach, interconnecting the most common three spheres of sustainability: environmental, economic and social. These three sectors interacting with each other are described as the three main pillars of sustainability, and are often illustrated in a triangle or a Venn-diagram, as shown in Figure 02 (Vos, 2007). Vos points out that the three spheres are interdependent, therefore, “neither social development nor economic growth is permitted to take ecological underpinnings for granted or [...] ecological preservation schemes should not take economic outcomes or public support for granted” (2007, p. 335). The scope of the three sectors are often broadened by an additional sphere representing institutional, governance and political sustainability, to encompass structural processes in administration and policy, as depicted in Figure 03 (O’Connor, 2006; Winston & E. Pareja, 2008).

Satterthwaite (1997) argues that interdependence amongst the sectors could have the

effect that while progress in one aspect of sustainable development is made, another sector could deteriorate. Furthermore, he criticises that the variety of issues associated with ‘sustainable development’ could lead to public administrations and institutions claiming that at least some of their actions are part of the process leading to sustainable development. The strength of the broad and holistic interpretation of ‘sustainable development’ could at the same time also result

in a weakening of the concept itself.

Concerning the development sector, it has been argued that imbalance between factors of sustainability could also induce development having effects contradictory to sustainable development resulting in depletion of livelihoods and increase of poverty (Mitlin & Satterthwaite, 1996). Additionally, existing societal inequalities need to be respected by policymakers when implementing national development plans promoting sustainable development, and a recognition of present unequal distribution of resources is necessary to tackle possible inequalities caused when sustainable development plans are implemented (ibid.). Marcuse (1998, p. 106) further highlights this notion: *“the problem for the most of the world’s poor is not that their conditions cannot be sustained but that they should not be sustained”* and argues for taking sustainability not as a goal, but as a constraint in a programme.

In the following section, the integration of sustainable development in the urban context, the emergence of ‘sustainable urban development’ and its implications on human settlements is discussed.

2.2 Sustainable Urban Development

The Brundlandt report highlights the importance of cities in the context of sustainable development stating that *“the future will be predominantly urban, and the most immediate environmental concerns of most people will be urban ones.”* (WCED, 1987, p. 212). Nevertheless, until the beginning of the 1990s, many scholars excluded cities in the discussion about sustainable development. Sustainability and urban development for many seemed antipodal to each other. Cities were often regarded as ‘unsustainable’, being accountable for numerous environmental issues, also experiencing impacts on the environment as the most severe (Haughton & Hunter, 1994). Environmental challenges were rather discussed on a global scale, with criticism concerning existing systems in development and economics, often postulating a shift in prevailing paradigms (Wheeler, 1998). Cities, with their densities, high grades of resource use and pollution and the energy consuming way of lives of urban dwellers were not regarded as being consistent with the environmental movement. Promotion of lifestyles close to nature in a rural setting appeared to be more appropriate to tackle challenges concerning sustainability (Haughton & Hunter, 1994), while disregarding the huge potential of integrating sustainability aspects into urban development.

The international community officially recognised the major role of cities within sustainable development by documents such as the aforementioned Agenda 21, specifically referring to cities as an important factor to moving towards sustainable development (Wheeler, 1998). Objectives and activities for improvement of *“the social, economic and environmental quality of*



Fig. 04: Millennium Development Goals

Source: United Nations, 2015a

human settlements and the living and working environments of all people, in particular the urban and rural poor” (United Nations, 1992, p. 45) are given. Sustainable development and its three main spheres of environmental, economic and social sustainability are hereby brought into context with human living environments and cities, respectively. Subsequently, the *UN Habitat II Conference* in 1996 in Istanbul, endorsed the principles of the Agenda 21 and further linked ‘sustainable development’ to urban planning while having an essential role on the emergence of the idea of ‘sustainable cities’. The conference focused on ‘adequate shelter for all’ and ‘sustainable human settlements development in an urbanizing world’ (United Nations, 1996) and discussed the integration of sustainable development into urban planning and urban policies. At the summit, 171 countries finally adopted the *Istanbul Declaration on Human Settlements* and the *Habitat Agenda*. The Habitat Agenda provides a rather optimistic approach towards urban agglomerations, emphasizing the potential of cities, calling them ‘incubators of civilization’, and highlighting their importance as hubs for cultural and economic development. At the same time, the Habitat Agenda acknowledges that cities could have severe environmental, economic and social impacts on its surrounding (often rural) areas too (United Nations, 1996). On the matter of housing, the document asks for immediate action concerning shortage of housing and deterioration of human settlements in many parts of the world due to continuing rapid urbanisation and insufficient provision of infrastructure (ibid.).

The provisions of the Habitat Agenda are also reflected in the *Millennium Development Goals* (MDGs), which emerged from the *UN Millennium Summit* held in New York City in 2000. The framework consists of 8 goals and 18 targets with respective indicators to measure progress, as shown in Figure 04.



Fig. 05: Sustainable Development Goals

Source: United Nations, 2016b

MDG goal seven, *Ensure Environmental Sustainability*, specifically brings urban poverty on the sustainable development agenda. Goal seven's target nine refers to environmental sustainability and to “*integrate the principles of sustainable development into country policies and programmes*” (United Nations, 2003, p. 1), while target 11, the target on ‘*Cities without Slums*’, aims to enhance the quality of life of 100 million slum dwellers until 2020 (United Nations, 2003, p. 1). Nevertheless, Watson criticises that the MDGs lacked reference and emphasis specific actions for the respective areas and awareness for the fundamental differences between urban and rural, calling MDG’s ‘space-blind’ (2016, p. 436). According to her, this notion emerged through a lasting tendency in the development discourse often favouring the rural context, also backed by the political concern in countries with large rural populations considering them as an important voter base (ibid.).

On 25 September 2015, at the *UN Sustainable Development Summit* in New York the international community adopted the *2030 Agenda for Sustainable Development* including the 17 *Sustainable Development Goals* (SDGs), as shown in Figure 05. With a focus on challenges relating to poverty, diseases, gender equality and climate the 17 SDGs with 169 targets also include aspects of urban development in goal number 11, addressing “*Sustainable Cities and Communities: make cities inclusive, safe, resilient and sustainable*” (United Nations, 2015c) and adding cities as an emerging challenge in development, as depicted in Table 01.

Satterthwaite (2016) criticises the MDGs and SDGs lack of emphasis on tasks and specific stakeholders that are meant to implement the goals. Unlike the MDGs, the SDGs claim to be global, universally applicable goals, valid for middle- and high-income countries as well as for lower-income countries. This notion also applies for goal 11 that aims to include targets valid

Tab. 01: SDG 11 and Targets

Sustainable Cities and Communities: make cities inclusive, safe, resilient and sustainable
<ul style="list-style-type: none">• By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums• By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums• By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons• By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries• Strengthen efforts to protect and safeguard the world's cultural and natural heritage• By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations• By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management• By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities• Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning• By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels• Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Source: United Nations, 2016b

for all kinds of cities, regardless of their location. 65 per cent all SDGs targets contain aspects that need to be implemented by local stakeholders in urban areas (Misselwitz & Villanueva, 2015). The 'urban' aspects of the SDGs are translated into the NUA, an action oriented implementation agreement relevant for urban areas.

However, the universal approach followed in the SDG goal 11 and the NUA is open for criticism due to cities in middle- and higher-income countries often having different requirements in planning and development than cities currently experiencing fast urban growth in low-income countries. It also renders difficulties in the assessment of the targets due to unbal-

anced availability of urban data in the world's cities. This could constrain the significance of the indicators and lead to universal assumptions without reference to specific local and cultural circumstances (Watson, V., 2016).

An in-depth analysis of the NUA and its implications on provision of adequate housing is given at a later section.

Defining Sustainable Urban Development

While - since the Brundtland Report in 1987 - the significance of 'sustainable urban development' and 'sustainable cities' was undoubtedly present and growing in urban policy and planning, *"there is still a lack of precise conceptualisation"* (Keivani, 2010, p. 14) and there are contrasting perceptions about what the term 'sustainable cities' means when implemented in practice (Bulkeley & Betsill, 2005). The concept of a 'sustainable city' is a diverse one, and it is difficult to pin it down to a single, normative dimension or definition (Williams, 2010). For example, Satterthwaite (1997) argues that at the Habitat II conference, while all attending national government stakeholders were in favour of the concept, though, a general definition of the term was still not provided. Also in the urban context the broad interpretation of 'sustainability' allows governments and agencies to agree and identify at least some parts of their programmes and politics with it. Guy and Marvin (1999, p. 273) point out that the 'sustainable city' could be considered an *"open or empty concept"*, that could be enriched with the diverging ideas of those individual future visions of a sustainable city.

Two main challenges that come along with the concept of 'sustainable urban development' are identified by Williams (2010, p. 1): firstly, the distinct definition of 'the sustainable city' itself, and secondly, the mechanisms needed in practice for a transition towards 'sustainable urban development'. This is caused by a variety of visions of the disciplines working within the sector, creating their own definitions. For example, in engineering, 'sustainable cities' are more likely to be defined through efficiency in processes and resource use, while in the social sector the concept might refer to 'social sustainability' (ibid.). At the same time, ways of how to achieve this variety of 'sustainable cities' are as diverse, some *"will be 'top down' [...] other changes may be 'bottom-up' [...] and will happen at different paces (some over weeks, some decades), and at difference [sic!] spatial scales (for example, the home, the neighbourhood, city and city-region)"* (ibid., 2010 pp. 2-3)

Also Keivani (2010) suggests to respect the diverse character of the urban sustainability discourse due to the immense number of economic and social activities concentrated in cities, often causing intense ecological impacts on air, soil, and water. This is especially relevant for low-income countries, with urban agglomerations attracting a growing number of industries

and production plants. Maclaren defines urban sustainability through

“intergenerational equity, intragenerational equity (including social equity, geographical equity, and equity in governance), protection of the natural environment (and living within its carrying capacity), minimal use of non-renewable resources, economic vitality and diversity, community self-reliance, individual well-being, and satisfaction of basic human needs” (Maclaren, 1996, p. 186).

To represent that diversity in challenges and matters of spatial scale, Haughton and Hunter characterise a sustainable city as *“one in which its people and businesses continuously endeavour to improve their natural, built and cultural environments at neighbourhood and regional levels, whilst working in ways which always support the goal of global sustainable development” (Haughton & Hunter, 1994, p. 25f).*

Wheeler defines ‘sustainable urban development’ as *“development that improves the long-term social and ecological health of cities and towns” (1998, p. 504f.)*. He also emphasizes the notion that cities need to move *towards* sustainable development and also argues that a ‘sustainable city’ cannot be regarded as a self-sufficient entity, not being independent of processes and networks on a global scale.

Wheeler furthermore argues that the social component in sustainable urban development should be as important as those concerning the environment, always under consideration of a long-term perspective. He also refers to the aspects of ‘livability’ [sic!], which goes beyond the more general definition of social sustainability. Livability incorporates aspects such as *“a healthy environment, decent housing, safe public places, uncongested roads, parks and recreational opportunities, vibrant social interaction” (ibid., p. 503)* and refers to a smaller and local scale putting the immediate surroundings and the daily needs of the citizens into focus. Moreover, he argues that ‘quality of life’ in societies of middle- and higher income countries has often the highest priority, unlike in many developing countries, where basic service delivery is often still the most important challenge (ibid.).

Wheeler conclusively (ibid., pp. 504-507) proposes nine guidelines to be followed for sustainable urban habitats:

1. Compact settlement planning with increased densities
2. Decrease motorised transportation via small distances within neighbourhoods
3. Energy efficiency, avoidance of polluting and waste producing activities
4. Rehabilitation of natural habitats
5. Adequate shelter and livable neighbourhoods

6. Sense of community and social responsibility
7. An economy considering environmental and social effects
8. Decision-making and participatory processes for communities
9. Conservation of local knowledge, traditions and culture

While guidelines one to five relate to the built environment of cities and need to be addressed mainly by technical measures in planning and construction, six to nine address mainly social and economic aspects of cities. Particularly guideline eight, to include responsive participatory processes, could be considered as an enabling mechanism. On the one hand, targeted measures in governance and urban policy are required for progress, while on the other, these guidelines focus on the immediate social-economic surroundings of urban citizens, and therefore require their active participation and decision-making.

The definitions of Haughton and Hunter (1994) and Wheeler (1998) share the notion that sustainable development, especially when applied in the urban context, is a multi-layered process, that a city itself is part of a dynamic process supporting the move *towards* broader sustainable development goals on a global scale. Governing authorities need to consider that (economic, industrial, etc.) activities in urban areas could affect municipalities, regions, states or even countries located outside of the cities' administrative borders (1994, p. 16). In a similar way Satterthwaite (1997, p. 1699) criticises the difficulties for municipal authorities with their mandates ending at the administrative boundaries. He explains that the true dimension of impacts on the environment caused by economic reasons often remains unseen, due to dislocation in other geographic and social contexts, especially when regarding disparities between low-, middle- and high-income countries (ibid.).

Different contexts are in need of different interpretations of the urban sustainability concept. Cities in more developed countries have other visions and expectations on what a 'sustainable city' might be than cities in developing countries. While in middle- and high income countries programmes integrating sustainable urban development might focus on the retrofitting of existing neighbourhoods with the improvement of ecologically and socially sound environments (Wheeler, 1998), in many cities in low-income countries, provision of adequate housing, infrastructure and open spaces still are some of the most important needs in urban development, and, therefore also matters of urban sustainability.

Contradictions in Sustainable Urban Development

The aforementioned locational shifts when applying the concept of urban sustainability illustrates the challenge to meet the different interests in urban development and between social,

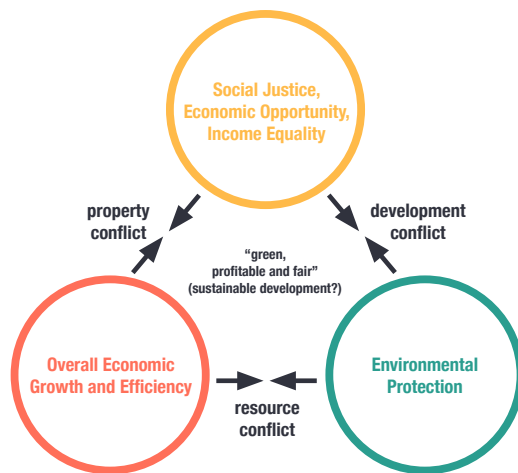


Fig. 06: Conflicts of Sustainability Goals in Planning

Source: adapted from Campbell, 1996, p. 298

economic and environmental goals, often causing constraints between the intentions of the different stakeholders in administration, planning, private sector and citizens, as depicted in Figure 06.

Progress through actions addressing one goal of sustainability or a specific geographical area might cause a setback in another goal or area (Satterthwaite, 1997). Campbell notes that also “*planners usually represent one particular goal – planning perhaps for increased property tax revenues, or more open space preservation, or better housing for the poor – while neglecting the other two*” (Campbell, 1996, p. 297). Mell and Sturzaker (2014) hold the view

that contradictions caused within economic interests and matters of ‘growth’ are main causes for neglecting other aspects in debates. Those constraints caused while interlinking the aspects of sustainability and following an integrated approach in development could in some cases also lead to an impediment of realising the concepts into projects. Mell and Sturzaker take issue with the contention that “*sustainability and development are compatible, especially in marginal environments*” (ibid, p. 4). They argue that because of opposing views between the advocates of ‘growth’ and ‘need’, to achieve a balance between those two factors is one of the most severe challenges to tackle in development programmes.

2.3 Concept of Sustainability in Housing Provision

Housing forms a fundamental part of urban and rural life. It enables socio-economic progress within a society, forms a significant pillar in a country’s economy, while being highly resource-intensive and requiring large amounts of energy. Housing influences many layers of sustainable development: environmentally, economically, socially, and culturally (Chiu, 2003). At the same time, provision of sustainable housing requires sustainable institutions, politics, and finance (Frank, 2008). Therefore, housing and housing policy form a vital aspect of sustainable (urban) development, with both being interdependent to each other (Tosics, 2004; Winston & E. Pareja, 2008). However, Marcuse points out that sustainability in housing, as with other sectors in urban development, should not “*be considered as a goal [...] but as a constraint whose absence may limit the usefulness of a good programme*” (1998, p. 103).

UN-Habitat emphasizes that “housing is where successive generations find shelter to keep healthy, develop, socialize, be educated and prepare for fulfilling adult lives” and that it “speaks to every dimension of personal human development” (UN-Habitat, 2016, p. 52). UN-Habitat further elaborates that for sustainable development of cities, “the housing conditions of one billion slum residents must become sustainable” (ibid.). However, for the last two decades, priority of housing was low in international and national development agendas, considering it primarily as an opportunity for capital investment, rather than an essential part of socio-economic life (UN-Habitat, 2016). This was also influenced by the ‘enabling approach’ that is discussed at a later stage of this thesis, with shortfalls in housing provision most severely affecting rapidly urbanising low-income countries. Thus, UN-Habitat promotes to make housing provision a priority again, aiming to integrate housing as a core theme of international, national and local urban development agendas, following an integrated, sustainable planning approach (UN-Habitat, 2015; UN-Habitat, 2016).

Choguill highlights that sustainable housing policy requires to “be economically viable, socially acceptable, technically feasible and environmentally compatible” (2007, p. 145). In a similar way, Bredenoord et al. (2014) identify measures that could be taken for sustainability in housing provision for low-income groups¹:

- *Economically*, the limited scope of liberalisation of the housing market for low-income housing needs to be acknowledged, and local employment opportunities, as well as possibilities for home-based occupations in the respective dwellings provided, and involve local construction workers to strengthen micro economic value.
- *Socially*, in construction regional cultural aspects should be considered to maintain identity of place, community participation and decision-making integrated, and local partnerships fostered, to create ownership and identity for the settlements.
- *Ecologically and technically*, measures to reduce greenhouse gases through pre-fabrication, local production and recyclability of building materials, while reducing toxic waste in production are key. High densities and compact settlements, would further decrease environmental impacts through reduction in distances of commuting and infrastructure construction.
- *Institutionally*, targeted policies should consider measures to mitigate the carbon footprint of housing construction and settlement planning with integrated instru-

1 While Bredenoord et al. group the measures in ‘ecology, technical and production, economic, social components, and targeted policies’, due to overlapping of some aspects, the author decided to summarize them in the depicted four groups.

ments targeting the urban poor. Strong administrative linkages between national, state and municipal governments are necessary, and collaboration of urban development authorities stimulated (ibid.).

Olotuah and Bobadoye define sustainable housing provision as “*gradual, continual and replicable process of meeting the housing needs of the populace, the vast majority of who are poor and are incapable of providing adequately for themselves*” (2009, p. 59). A stable political climate is necessary and housing policy irrespective of political tensions. Shelter requirements for the target group need to be specified, and involvement of communities is necessary to fulfil the housing needs for the urban poor in the long run (ibid.).

Winston and E. Pareja identify following aspects relevant for sustainability in housing:

“sustainable land-use planning; resisting scattered settlements; housing close to employment and public transport; higher residential densities; sustainable construction; high standards of energy efficiency in use of dwellings; housing availability, affordability and quality; access to green space, and a high quality residential environment” (2008, p. 3)

Wheeler (1998) argues that for sustainable housing, there is a need of active government participation in housing construction for the urban poor, promotion of not-for-profit developers, individual subsidies for renters, as well as market enabling mechanisms and incentives for private developers to include affordable housing units in their projects. In all developments, housing should go hand in hand with the development of appropriate social infrastructure, to fulfil the needs of the urban dwellers to make their surroundings more ‘livable’ and create strong communities.

Conclusion

The aforementioned definitions of sustainable housing share several aspects. Sustainable housing provision is dependent on spheres of environmental and physical, economic and social sustainability, as well as sustainable institutions, policy and governance structures. A holistic approach, integrating those sectors well balanced into a housing programme at an early stage is indispensable for its sustainability. An active urban planning regime promoting adequate densities and compact settlement planning combined with sustainable production and delivery of building materials reduces the environmental impact of housing developments. Also, participation of the affected dwellers, and an assessment of the needs of individuals and communities is reflected as an imperative in most definitions. Housing is not only considered as an option

for shelter, but as integrating several aspects for human development including possibilities for employment and promotion of local economies.

Many debates about sustainability in the context of housing consider mainly environmental sustainability, especially in high- and middle-income countries. While the scope to integrate those aspects in housing also for low-income countries is clearly abundant, in reference to Frank (2008), this thesis perceives sustainable housing provision with a focus on socio-economic aspects interlinked with policy, governance and institutional sustainability, under consideration of environmental and physical terms of the built environment, to achieve sustainable housing provision for the urban poor on the long-term. For this thesis, the definition of sustainable low-income housing of Frank is especially relevant and applied: “Sustainability means that the housing situation is permanent and self-sustaining for low-income families” (2008, p. 32) and is also reflected in the indicators presented at a later stage.

2.4 New Urban Agenda on Housing

The NUA adopted at the *Habitat III* conference in October 2016 in Quito, Ecuador, reflects the UN ambitions towards sustainable urban development, translates targets of SDG 11 and other SDGs with relevance to the urban context into specific commitments and actions for policymaking and planning. The Habitat conference is held every 20 years, following a long-term perspective due to the long processes within urban development and planning.

Habitat I was held in 1976 in Vancouver, and produced the *Vancouver Declaration on Human Settlements*, including an action plan consisting of 64 recommendations for improvement of settlements, shelter and infrastructure (United Nations, 1976). As previously mentioned, Habitat II was held in 1996 in Istanbul, where the NUA's preceding document, the Habitat Agenda, was adopted.

The NUA seeks to guide nations, federal states, municipalities, institutions, scholars, NGOs etc. in their decision making process in urban development. As a non-binding document, sanctions are not given to nations, in case the commitments are not fulfilled, however, this could possibly impede its implementation in national urban policy (Amann & Juraszovich, 2017). The UN-Habitat's principal Joan Clos refers to the main instruments that are represented in the NUA as the ‘three-legged approach’, that incorporates ‘rules and regulations’, ‘municipal financial planning’ and ‘national urban policies’ for change in urban development (Scruggs, 2016).



Fig. 07: Habitat III Logo

Source: United Nations, 2016a

With many national governments not regarding housing as a main priority in urban development policy in the last two decades, UN-Habitat aimed to put “*Housing at the Centre of the New Urban Agenda*” (UN-Habitat, 2015). UN-Habitat strives to “*integrate housing into national urban policies and into UN-Habitat’s strategic thinking on planned urbanization*” (2016, p. 65) and local policies should locate housing “*within appropriate urban planning and as part of the development of cities and people*” (ibid.). The following analysis thereby specifically focuses on promulgations made in the NUA that take housing in urban areas into account. The review breaks down the different sections and gives a general overview about the NUA’s directions, while especially considering implications made concerning adequate housing provision in urban areas.

Quito Declaration on Sustainable Cities and Human Settlements for All

In this section of the NUA it is emphasized that the concentration of human activities in cities is making urbanisation one of the 21st century’s biggest challenges, and that sustainable solutions for “*housing, infrastructure, basic services, food security, health, education, decent jobs, safety, and natural resources*” (United Nations, 2016a, §2) in cities are therefore urgently needed. However, urbanisation at the same time is also considered having a high potential for humankind, in regard of economic, social and cultural development, as well as environmental conservation. Through the NUA, it should be readdressed how cities “*are planned, designed, financed, developed, governed, and managed*” (§5).

Shared Vision, Principles and Commitments, Call for action

The vision included in the NUA strives for “*cities for all*” (2016a, p. §11) which “*fulfil their social function*” especially in terms of “*the full realization of the right to adequate housing*”, that cities “*are participatory*” and “*achieve gender equality*”, “*meet the challenges of [...] sustained, inclusive, and sustainable economic growth*”, “*fulfil their territorial functions across administrative boundaries*”, “*promote age- and gender-responsive planning and investment*”, “*adopt and implement disaster risk reduction and management*”, and that they “*protect, conserve, restore and promote their ecosystems*” (§13a-h). The ‘Principles and commitments’ (§14) state to leave “*no one behind, by ending poverty in all its forms and dimensions*”, creating “*sustainable and inclusive urban economies*”, and adhering to “*environmental sustainability*” (§14a-c). The subsequent call for action underlines the importance of the general validity of the NUA, and the inclusion of all nations, stakeholders, and forms of political administration on all levels.

Quito Implementation Plan for the New Urban Agenda

In ‘The Transformative Commitments for Sustainable Urban Development’ the potential of the NUA’s paradigms upon implementation under the aspects of social, economic, and environmental development is explained. Interestingly, this section refers directly to projects related to urban planning and design, while taking relevant policy measures to achieve their implementation into account.

First, the subsection ‘Sustainable Urban Development for Social Inclusion and Ending Poverty’ (§25) regards the promotion of “*housing policies that support the progressive realization of the right to adequate housing*” (§32) on all levels, “*age- and gender-responsive housing policies*” (ibid.), as well as the “*supply of a variety of adequate housing options*” (§33) as an important task towards social sustainability. Furthermore, the need for provision of basic services and infrastructure is underlined. Alongside the commitment to adequate housing and shelter in general, the importance of a broader variety of tenure choices is highlighted, as well as the recognition of the need for different types of tenure by governments, such as ownership or rental housing (§35). The need for open spaces in surrounding neighbourhoods is mentioned as well (§37).

Second, the subsection ‘Sustainable and Inclusive Urban Prosperity and Opportunities for All’ discusses paradigms for urban development relevant for economic sustainability. The importance of design-related aspects in relation to economy is stressed by stating that “*urban form, infrastructure, and building design are among the greatest drivers of cost and resource efficiencies*” (§44). Especially the promotion of “*the role of affordable and sustainable housing and housing finance [...] in economic development*” (§46) is depicted as a supporting growth of a sustainable and sound micro- and macro-economic environment, affecting many other economic sectors indirectly. Also, open spaces are considered as relevant facilitators of growing economic productivity on the local level (§53).

Third, the subsection ‘Environmentally Sustainable and Resilient Urban Development’ concentrates on aspects concerning environmental sustainability. Recyclable building materials and energy-efficient construction techniques should reduce carbon emissions while staying affordable, and are considered opening up new employment markets (§75 - 76). The need for improvement of existing slum settlements and improvement of dilapidated buildings is further pointed out (§77).

For implementation of the aforementioned social, economic, and environmental measures, amongst national and international stakeholders of the public and multilateral sector, the private sector is also included in fulfilment of the NUA’s goals (§82).

The section ‘Planning and Managing Urban Spatial Development’ highlights the importance of functionally and socially mixed (housing) developments for existing and new settlements, including all layers of society, avoiding socio-spatial segregation within cities, also in

central areas (§94, 97, 99, 106). In building design, ground floor levels should integrate commercial usages to improve local formal as well as informal economies, under the ‘human scale’ taken into account (§100). The section stresses the importance of housing policies on all levels (§105) under reference to “*social inclusion, economic effectiveness, and environmental protection*” (§106) and the actual utilisation of public funds for housing production (ibid.). Furthermore, the supply of a variety of affordable housing options tailored for different target groups is underlined, with different modes of tenure, under consideration of progressive housing models such as “*co-housing, community land trust, and other forms of collective tenure*” (§107). Here, the mentioning of prevention of “*segregation and arbitrary forced evictions and displacements, to provide dignified and adequate re-allocation*’ as well as assistance in ‘*incremental housing and self-build schemes*” (ibid.) is especially relevant for slum improvement programmes, reflecting earlier rhetoric in housing provision for low-income groups. Throughout the NUA, a holistic approach including educational and job healthcare facilities is promoted (§108).

Additionally, the establishment of a regulative environment of “*resilient building codes [...], development permits, land use by-laws and ordinances, and planning regulations*” (§111) targets to counter property speculation and associated impacts like artificial vacancies. Paragraph 112 especially elaborates in design of housing programmes, no matter what target group is addressed, decision makers should refrain from “*peripheral and isolated mass housing developments*” unlinked to a city’s network.

Also cultural aspects are reflected in the NUA, by advising to take them into account in strategic planning. Especially traditional knowledge in housing construction could be integrated in design and planning in accordance with progressive building technologies (§124 – 125). However, consideration of contemporary culture, architecture and design, lacks throughout the document, which could be regarded as an important factor for a cities’ image and long-term community development (Amann & Jurasszovich, 2017).

The section ‘Means of Implementation’ focuses on funding of the postulated measures. Here, investment to establish a sound affordable housing finance sector is stressed on the macro as well as on the micro-level through motivating “*private sector lenders and investors, cooperatives, money lenders, and microfinance banks*” (§140) to offer products for different kinds of housing tailored for the respective target group.

Conclusion

The NUA attempts to address a broad range of existing and emerging topics in urban development and housing, universally for higher income as well as for less developed countries and emerging economies. Several topics and directions can be identified throughout the NUA that

are either directly or indirectly addressing the provision of housing for urban citizens:

- Cost effective design, construction and urban planning
- Support of housing finance and the housing finance sector, especially to increase supply of finance instruments for low-income groups
- Creation of local jobs and support of local economy
- Social inclusion, especially under consideration of the elderly and vulnerable groups
- Support of gender equality and empowerment of women
- Respect of local culture and traditional modes of construction
- Promotion of socially-mixed housing developments avoiding segregation of income-groups
- Locating new settlements within city centres and increasing proximity to services
- Provision of basic infrastructure in existing and new settlements
- Creation of accessible public spaces and recreational areas
- Energy efficient buildings and construction technology
- Support of cooperative and community housing
- Support of incremental construction by citizens
- Promotion of mixed-use neighbourhoods including commercial areas
- Urban renewal and upgrading of slums in-situ, eliminating forced evictions
- Including all stakeholders in housing provision, particularly the private sector
- Participatory planning and decision-making on all levels
- Importance of subnational and local governance in housing provision
- Variety of tenure choices for different needs
- Provision of security of tenure and title of land
- Elimination of homelessness

Nonetheless, some shortcomings in the NUA can be identified. Most significantly, participatory approaches under inclusion of individuals and communities is stressed throughout the document, however, ways how to implement them in practice are not referred to. Amann & Jurasszovich (2017) argue that this notion derives from the document overlooking forms of community organisation and existing democratic frameworks, necessary to implement participation in a programme. Another aspect with room for clarification is participation of the private sector. While it is stressed for all sectors of urban development throughout the NUA, at the Habitat III conference, private stakeholders were reportedly underrepresented (*ibid.*).

3 Sustainable Housing Provision for the Urban Poor

Today, affordable and adequate housing provision for all is one of the most complex challenges accompanying rapid urban growth. Even though the global proportion of slum dwellers to urban citizens decreased from 46.2 per cent in 1990 to 29.7 per cent in 2014, the absolute number of urban slum dwellers worldwide increased from an estimated 689 million in 1990 to 863 million in 2014 (United Nations, 2015b). Increase in the number of slum dwellers results from continuing urban to rural migration, natural population increase, and a lack of efficient housing and land management policies. Lack of strong policy frameworks combined with low per capita incomes, makes the formal housing market still inaccessible for huge proportions of the population, especially in low-income countries (Bredenoord et al., 2014). Lower-income groups therefore often need to rely on supply of housing provision or financial support by the government, or, if possible, to adhere to self-help-housing, which for many remains the only, and also preferred, option for shelter.

In this chapter, different ways of shelter provision for urban poor are presented, including informal and formal approaches promoted by national governments since the 1950s until today. Furthermore, different forms of tenure, their advantages and disadvantages are introduced, forms of housing finance and land use are discussed, and conclusively current trends in housing policy are described.

3.1 Definition of Informal Housing

Informal, incremental, progressive or self-help housing, sometimes also dubbed *auto-construction* – all these terms describe the establishment of a house by and for oneself, as an individual, family or community. In low-income countries, this often happens on illegally acclaimed land, lacking infrastructure and secure tenure, forming so called *informal settlements, favelas, shanty towns or gecekondu*s, and amongst many other definitions, the probably most widely known term *slums*. Emergence of slums could be considered “*an informal and free-market response to the unaffordability of housing that meets with the legal requirements imposed by revenue and planning regulations*” (Patel, B. et al., 2011, p. 46).

Hereby it is important to differ between self-help housing where the housing process is incrementally organised as a whole by communities and/or individuals, often on illegally acclaimed land, and the later described assisted self-help housing, where plots and infrastructure is provided by government institutions, and sometimes also technical assistance in housing construction is available.

While some consider slums as a threat, places of deterioration and social unrest (Davis, 2006), elsewhere slums and similar informal settlements are regarded as stepping stones to climb up the social ladder in the long run (Saunders, 2012). UN-Habitat describes a 'slum' as a "heavily populated urban area characterised by substandard housing and squalor" (UN-Habitat, 2007), or as a settlement, missing at least one of the subsequent indicators (UN-Habitat, 2016, p. 57):

- *Access to clean water*
- *Access to improved sanitation*
- *Sufficient living area that is not overcrowded*
- *Durable housing*
- *Secure tenure*

While the first four indicators refer to physical aspects of slums, the last one refers to lawful ownership of property, a factor often difficult to assess. However, the UN-Habitat's definition of a slum is a fairly generalized approach in describing such a settlement. Many nations, states and even cities therefore have various definitions and indicators to define a slum, which often differ widely (Nolan, 2015).

In India, the emergence of slum settlements were recognised in the first FYP, 1951 (Batra, 2009). Officially, GoI defines slums as settlements, that

"are by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors, are detrimental to safety, health or morals [...]" (Government of India, 1956, §3)

In comparison, Uganda adds the following indicators to the UN definition to define a slum as

"an area that attracts a high density of low income earners and or unemployed persons, with low levels of literacy, (ii) an area with high rates / levels of noise, crime, drug abuse, immorality (pornography and prostitution) and alcoholism and high HIV/AIDS prevalence, (iii) an area where houses are in environmentally fragile lands e.g. wetlands" (Republic of Uganda et al., 2008)

While in India slums are defined primarily through physical factors that are contradictory to the wellbeing of the dwellers, in contrast, Uganda's indicators concentrate on the citizens themselves, and assumes that their mere presence in a specific area contributes to the emergence of

a slum settlement.

Such discrepancies between the UN definition and specific national indicators could result in dispersed and inconsistent policy actions in the development and planning discourse (Nolan, 2015). For governments, as in India, the definition and thereby legal recognition of the existence of a slum, also called 'notified slum', is often necessary for investments in possible regularisations and infrastructure improvements (ibid.). Though, an official recognition of a slum could also determine the status of a slum, keeping it in limbo between formality and informality.

The term 'slum' itself and the categorisation of a settlement as a slum has been criticized, producing stereotyped pictures of settlements, and stigmatizing the respective dwellers. In reference to the UN 'cities without slums' campaign of 1999, Gilbert argues that the

“use of the word ‘slum’ will create many of the myths about poor people that years of careful research have discredited [...] The very word ‘slum’ confuses the physical problem of poor quality housing with the characteristics of the people living there [...] the stereotype may be used to justify programmes of slum clearance.” (2007b, p. 710)

According to UN-Habitat, slum settlements are resulting from *“failed policies, poor governance, corruption, inappropriate regulation, dysfunctional land markets, unresponsive financial systems, and a lack of political will”* (UN-Habitat, 2016, p. 57). When the formal sector fails to provide shelter, in low-income countries, citizens in need for a house turn to self-construction, a process sometimes also tolerated or stimulated by governments, making homeownership, even if not legally granted, affordable for the poor (Gilbert, 2016).

Emergence of Slums

Informal settlements and slums in most cases happen to occur in three different forms. First, slums grow through 'settling', by construction of shelter on unused land that is not rightfully owned by the individuals or households, with land often available in abundance (Dovey & King, 2011, p. 13). Second, they emerge via 'inserting' of structures in unused areas amidst dense areas of cities (ibid.). Third, they occur through 'attaching' of shelters on buildings or constructions of the existing, formal urban fabric (ibid.). The result and typologies of those informal modes of settling down vary globally, depending on available space and materials, building traditions, climate, and specific topographic and geographic conditions.

Ferguson and Narravete (2003, p. 313) explain that slums often emerge in similar patterns. While naturally regional and cultural discrepancies exist, some general aspects can be deduced. When developed in an unorganised manner, first, individuals or families settle down on land

without formal land title and often construct a provisional house to assert their claim on the respective piece of land. Second, this construction over time is replaced step by step by permanent elements, later improved and expanded. This occurs when funds or support are available by savings or (often informal, high interest) credit, and additional help for construction of the buildings by the community is available. Houses are usually expanded room by room (Dovey & King, 2011). In areas with high densities and less availability of land, households enlarge their buildings vertically through adding another level. When densities are low and land is available in abundance, rooms are usually added in a horizontal way. Third, basic services in many cases are accessed by tapping electricity and water illegally. After time, community organisations might be formed to represent the settlement in front of municipalities and put demands on them. Subsequently, if settlements are regularised, further investments are taken by the dwellers to improve their houses and value of the property could increase. Finally, after some time, the neighbourhood could become part of the existing urban fabric, beyond recognition that it once was a slum. In other cases, if the settlement originates in a more orderly way, the layout of the settlement is informally planned and parcels of land split up by pioneering (informal) developer groups.

3.2 Housing Provision by National Governments

If the formal private market remains inaccessible for citizens, governments need to take action to supply shelter for the respective income groups. Though, governments have limited options to increase housing provision. On the one hand, governments have to deal with the improvement of informal settlements that are already established. On the other hand, governments need to enable the supply of new dwelling units, to face the growing demand for housing, especially in urban areas.

Governments can take three main variants of policy measurements, to improve access to housing for the respective population. First, governments can construct dwellings, let them out at low-rents, sell them at subsidized rates or give them away for free. Second, governments can take measures to support dwellers in construction processes of their buildings technically or financially, by decreasing construction cost in general, or support them with allowances. Third, governments can take steps to alter the housing market and create an environment which supports housing construction, e.g. by increasing release of land reserved for housing developments, and fostering owner-occupation by promotion of housing banks, improving access to loans and mortgages for low-income citizens. Those three approaches have been supported by various international agencies, especially by the WB, and focused on in the development discourse for certain timeframes since the 1950s, strongly influencing national housing policy of

less developed countries (Choguill 2007; Gilbert 2007).

In the following section, the emergence of the aforementioned three approaches or periods, dubbed here ‘*Public Housing*’, ‘*Sites-and-Services*’ respectively ‘*Slum Upgrading*’ and ‘*Enabling Markets*’ approach, are explained in further detail.

3.2.1 Public Housing Approach

In a first period from the 1950s until the 70s, national governments were mostly acting as a direct facilitator of housing through the construction and allotment of dwellings. The notion of constructing a large number of houses in a short time was followed in many post-colonial countries in Asia and Africa, similar to the model applied in industrialised European states in the post-war period. Though the impacts for the urban poor remained limited, primarily through lack of funds and resources and resulting increase of cost, which often led to only a few units being constructed (Bredenoord et al., 2014; Choguill, 2007). Gilbert argues that these public housing programmes were only successful in some places, like “*in petrol-rich nations such as Saudi-Arabia, socialist regimes such as Egypt under Nasser, the apartheid regime in South Africa, certain cities facing massive influx of refugees, such as Hong Kong and Singapore, South Korea, and ‘planned’ cities such as Brasilia and Ciudad Guyana*” (2014, p. 175), or, as Bredenoord and van Lindert (2010) point out, mostly only in countries experiencing strong economic growth (e.g. in China).

In other low-income countries carrying out public housing programmes, beneficiaries were often not the initial target group but people with middle and higher incomes, often public officials, with the poor unable to pay the expenses or return rents due to limited incomes (Choguill, 2007). Moreover, incapability of governments in maintaining the dwellings led to houses initially made for rental purposes being sold to the tenants, which resulted in further challenges, due to the dwellers often being unable or unwilling to service the apartments themselves, causing deterioration of the units (Bredenoord et al., 2014; Choguill, 2007). The concept has been criticised due to many cases resulting in the relocation of dwellers to the outskirts of urban centres, away from employment opportunities or educational facilities, without access to transportation infrastructure to connect them to the centres (Bredenoord et al., 2014).

The inaccessibility for the urban poor to direct housing provision by the state resulted in aspirations to support them to construct dwellings by themselves either financially or technically, in the so called ‘*Sites-and-Services*’ or ‘*Slum Upgrading Approach*’. Today, only some countries continue with programmes constructing houses for lower income groups, for example, Brazil, Chile, China, Ecuador, Malaysia, Singapore, South Africa and, as detailed later, India (Frank, 2008; UN-Habitat, 2016).

3.2.2 Sites-and-Services and Slum-Upgrading Approach


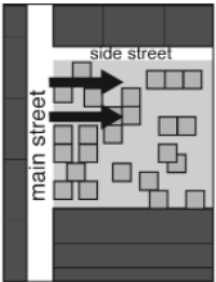
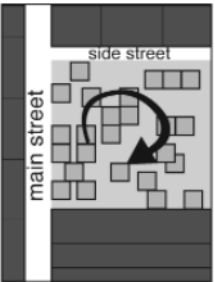
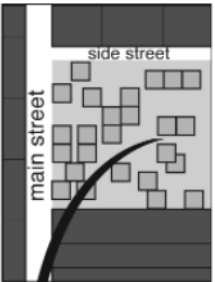


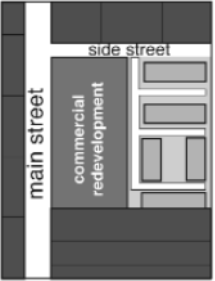

A second period with a focus on 'sites-and-services' or 'assisted self-help-housing' and also 'settlement-' or 'slum-upgrading' schemes began in the 1970s. These approaches were introduced in the academic debate by scholars as John Turner (Turner & Fichter, 1972) and Charles Abrams (Abrams, 1969). They argue that a normative answer to the housing question in low-income countries is not possible, due to dwellers having their individual needs, e.g. family growth or varying incomes. They spearheaded the idea to empower citizens to construct their houses themselves and to keep building standards low enough, that self-construction remains affordable. By that, dwellers are able to construct their houses step by step, according to their available funds and requirements. Also international agencies like the WB were realising that mere state-led construction of dwellings alone would not improve access to shelter for the urban poor to the expected extent and they started to target programmes under the site-and-service approach (Choguill, 2007).

The 'sites-and-service' approach aims at the provision of developed, regularized construction land, with basic infrastructure such as water, sewerage and electricity for the prospective dwellers already in place. Those dwellers subsequently construct their houses by themselves, sometimes technically assisted, in an incremental way. The factor that dwellers themselves provide their own workforce, also often referred to as 'sweat equity', is also considered an important asset in cost-reduction, making owner-occupation more affordable for low-income groups (Bredenoord et al., 2014; Choguill, 2007).

However, many sites-and-service projects were carried out on peripheral land. Though land prices in the periphery of cities are often relatively low, prices for the establishment of infrastructure often are exorbitantly high, leading to the total costs of the units being too expensive for the low-income-groups. Additionally, due to the location in suburban areas, the provision of already finished small units to allow dwellers to stay on-site while expanding their houses and reduce transportation from their former neighbourhoods sometimes is necessary (Bredenoord & Lindert, P. van, 2010). The basic concept foresaw to be implemented without major subsidies in the long run, which would have been an incentive for the private sector to upscale the concept. Nevertheless, high construction standards for the houses demanded by government agencies often were obstacles for the private sector to participate, hindering financial viability (Bertaud, 2010).

The 'slum-upgrading' approach aims at regularisation and improvement of already existing settlements, 'in-situ'. This concept is made up of two interlinked pillars. First, the settlements are supplied with e.g. basic infrastructure and roads, without permanent relocation of the dwellers. Second, the dwellers are granted formal land titles, to enable tenure security, and therefore enhance their own investments in houses and neighbourhoods (Bredenoord & Lindert, P. van,

Tab. 02: Instruments for Slum-Upgrading measures

Instruments	In-situ Upgrading	In-situ Land-Sharing	In-situ Redevelopment	Relocation
Features of Physical Intervention	Minimal intervention: site & housing exist	Site and most housing exist	Only site exists	Relocation site
		Some new housing	New housing	New housing
	Basic infrastructure & services	Basic infrastructure & services	Basic infrastructure & services	Basic infrastructure & services
Before intervention				
After intervention				
Determining Conditions	<ul style="list-style-type: none"> Community preferences Formal landowner is not entitled to a significant compensation from project revenues Low land cost constrains internal cross-subsidies from sale of land 	<ul style="list-style-type: none"> Community preferences Formal landowner is entitled to a high compensation from project revenues Moderate land values pay for shifting slum residents and new infrastructure 	<ul style="list-style-type: none"> Community preferences Formal landowner is entitled to a moderate compensation from project revenues High land values pay for housing and infrastructure redevelopment 	<ul style="list-style-type: none"> Community preferences Current site not suitable Secure tenure at new site

Source: Patel, B. et al., 2011, p. 48

2010). During the upgrading process, dwellers are usually relocated to transit homes, preferably close to the original location, to avoid disconnection from their social and job networks. This concept proved widely successful in physical and socio-economic terms, nevertheless, the WB criticised that full cost recovery of the projects could hardly be achieved, which led to governments not being able to finance such concepts over the long term (Mayo & Angel, 1993, pp. 5–6). In general, retrofitting of neighbourhoods with infrastructure is two to four times more expensive than the provision of infrastructure for a newly constructed settlement (Ferguson &

Navarrete, 2003, p. 313).

In the 1970s and 80s both concepts did usually did not exceed the status of pilot projects. Without cost-covering approaches, the private sector being reluctant to participate and up-scale the concept, the projects were kept mostly separated from the general housing market (Ferguson et al., 2014, p. 41). Additionally, political support was often not that enthusiastic, for slum-upgrading projects being not as presentable as newly constructed buildings on the ground (Gilbert, 2007a). Lobbying of the construction industry of the poor quality of self-help houses also led to weakening of the approach (ibid.).

Today, as exemplified in programmes as CODI in Thailand, Favela Bairro in Brazil, or the later described PMAY programme, the slum-upgrading approach again attracted attention of international agencies and national governments, however, with programme designs varying widely. As shown in Table 02, current approaches in slum-upgrading can be summarised in four different approaches, with different interventions carried out at varying preconditions (Patel, B. et al., 2011, p. 48).

3.2.3 Enabling Markets Approach

The third period promoting an ‘enabling housing market environment’, spearheaded by the WB, started in the 1980s. This notion increased through the fall of the Iron Curtain and increased tendencies for international donor agencies to implement principles of market liberalisation in former socialist economies, which were also applied on land, housing and other policy sectors (Bertaud, 2010). The ‘enabling approach’ represents a paradigm still widespread today, promoting that governments should turn away as active stakeholders in the residential sector, and reduce constraints for the private sector to participate in housing provision. Governments should manage financial, legislative and institutional aspects of housing instead of providing dwellings by themselves. Under the paradigm of ‘enabling housing markets to work’, Mayo and Angel of the WB state:

‘Policies which constrain market efficiency and the responsiveness of the housing supply system result in reduced investment, housing which is less affordable and of lower quality, and a lower-quality residential environment (...). Housing policymaking (...) must now guide the performance of the housing sector as a whole, including that of the formal and informal private sector, with a stronger emphasis on its overall role in national economic development.’ (1993, pp. 3–4)

Mayo and Angel list seven main tools for enabling mechanisms: development of property rights, development of mortgage finance, rationalisation of subsidies, provision of infrastructure for residential land development, regulation of land and housing development and the organisation of the building industry. These tools should be strengthened by an institutional

framework, to guide the residential sector as a whole, also linking the various stakeholders together (ibid., p.4). Additionally, subsidized mortgages by the state or affiliated banks were emphasized as an instrument to enable the affordable housing market (Ferguson et al., 2014). The effects of the 'enabling approach' have been diverse. While the paradigm shifted from direct affordable housing provision by the state and sites-and-services programmes in many countries, implementation of the above-listed instruments in national housing policy faced constraints, even in countries with existing strong governance systems (ibid.).

The 'enabling approach' mostly was transferring principles supporting middle- and low-income groups from industrialised, middle- and high-income countries to less developed and transitioning economies, failing to adapt the principles accordingly to reach deep down to the bottom part of the lower-income section (Bredenoord et al., 2014). In some countries the middle- and higher income groups were profiting through enabling market policies, however, results for low-income groups were often not as profound as expected. While governments reduced their participation in direct housing provision, they did not strengthen their frameworks relevant for planning and housing enough, which would have been essential for private stakeholders to be proactive in the provision of affordable housing at the required pace. The absence of public housing by the national governments, combined with other stakeholders being reluctant to take over the role, in many cases led to less availability of housing options for the poor, making them turn towards often more expensive providers of housing and infrastructure in the informal sector (Ferguson et al., 2014).

In the past three decades, efforts to transfer traditional housing finance concepts to the lower-end of the market had only minor effects, with 60-80 per cent of this income group still having to acquire shelter by self-help approaches (ibid., p. 44) Also, the reluctance of governments to invest in the affordable housing sector contributed to a certain ignorance for housing for the poor also in the global development discourse, a mindset, which appears to have changed only recently (UN-Habitat, 2015).

3.2.4 Good Practice

This section showcases several housing programmes that could be considered as good examples in the production and improvement of shelter for urban poor. While differing in their nature, they are including some characteristics as discussed above. At the time of implementation and beyond, the presented programmes were receiving considerable international attention. Their success is also rooted in their small scales, however, achieving considerable large impacts on the local level.

Community Organizations Development Institute (CODI), Thailand

CODI enables poor dwellers to facilitate savings groups within their communities and to establish networks that enhance the organisation of available capital and credit, for the improvement of the livelihoods of communities. The programme emerged in 2000 from the Urban Community Development Office that was introduced in 1992 by Thailand's national government to decrease urban poverty. Since the formation of CODI, rural and urban poor are both addressed in the programme. As a public

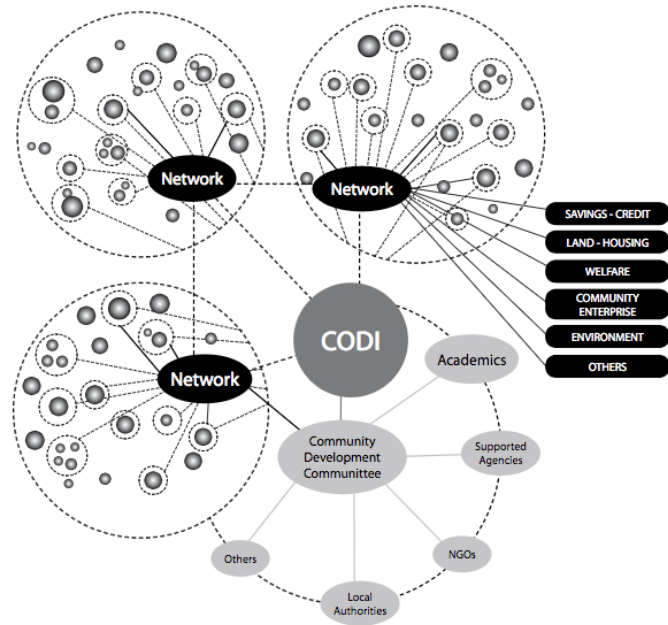


Fig. 08: CODI's Network Approach

Source: Boonyabanha 2009, p. 17

agency, CODI receives its budget from the national government, with an initial budget of 82.85 million USD back in 2000 (Boonyabanha, 2009).

Community organizations are at the centre of an upgrading process by CODI and it empowers them in decision making and steering of the development programme (Boonyabanha, 2002). Several community organisations join together to community networks, to negotiate with public authorities or to share their knowledge and skills, as illustrated in Figure 08. While setting up savings groups, CODI gives out cost-covering, low-interest loans to the communities. Community organizations or networks themselves decide upon the utilisation of the subsidized loans, which have to be paid back in a process allowing greater flexibility to the communities than regular loans (ibid.).

CODI closely collaborates with local administrations, planners, architects, NGOs and all relevant agencies already established when implementing a project. In housing projects, following measures have been supported:

- acquisition of private land that was already occupied informally or lies in the proximity of the former site
- relocation of whole communities to a new site

- construction of top-structure of a house, with land and infrastructure supplied by *National Housing Authority*
- upgrading of infrastructure in existing settlements

In 2003, the Thai government introduced the *Baan Mankong Collective Housing Programme* especially targeting at the establishment of housing for the urban poor, with CODI as its implementing agency. Communities were advised by architects in the design of the new houses, and then required to participate in the construction process. If adequate, reuse of materials from their former buildings was also possible. Until 2011, 90 813 households have profited of the programme, although not reaching the initial goal of 200 000 households within the first five years (Boonyabanha, 2009; CODI, 2011)

CODI shows, that through establishing a process strengthening community groups and setting up networks and not primarily focusing on housing, could lead to long-term poverty alleviation and improve livelihoods. The Baan Mankong Programme, with a focus on housing provision, was already set up in this stimulating environment of community groups. However, despite its success on the local level, as numbers show, the challenge remains to further expand CODI projects, while avoiding decrease of quality that could come along with increased quantity.

Favela Bairro, Rio de Janeiro, Brazil

In 1994, Rio de Janeiro's municipality introduced the first phase of Rio de Janeiro's citywide Favela Bairro slum improvement scheme, trying to remove barriers between the favelas and other neighbourhoods, by improving basic physical services and integrating public infrastructure. The second phase of Favela Bairro ceased in 2007, with a third phase approved in 2010 (IDB, 2011).

Amidst other schemes targeting Rio's poor, the Favela Bairro programme sticks out due to having had "*the most resources, the greatest scale, and highest political profile*" (Riley et al., 2001). The programme's goal was to improve Rio's middle-scale favelas consisting of 500 to 2500 households, which covered roughly a third of the total numbers of favelas in the city but included about two thirds of the total population living in favelas. In each of the two completed phases from 1994 to 2000 and 2000 to 2007, the municipality and IDB together supported the programme with about 300 million USD. In total, approximately 500 000 citizens have profited from the scheme (Cabral, 2014).

A strong focus was laid on improvement of public spaces as an engine to stimulate exchange between the informal and the formal areas of the city both in physical and social terms.

The holistic upgrading approach of Favela Bairro was delivered via several instruments:

- Improvement or establishment of water- and wastewater services
- Widening of roads, public and green spaces and installation of public lighting
- Protection against natural risks
- Waste management
- Construction and refurbishment of houses and improvement of tenure security
- Establishment of community centres and facilities for education, healthcare, commercial uses and sports (Riley et al., 2001)

Despite the programme envisaging civic participation, the programme was mostly carried out as a top-down process. Architects conducted most of the planning process, with residents only being able to participate and give feedback to a certain extent. Professional companies carried out the subsequent construction process, with the municipality later maintaining the established social infrastructure (Riley et al., 2001).

Favela Bairro was internationally applauded for its progressive, multi-sectoral approach, and is considered a model scheme for slum upgrading for the UN and the IDB (Cabral, 2014). Nonetheless, the programme relied strongly on international funds, and after the first two programme phases ended, it was also reported that municipal maintenance of established social facilities often ceased (ibid.). However, Favela Bairro marked a move away from approaches focusing on housing provision only by taking social infrastructure into account, and it has been shown that it significantly improved basic service provision, and access to education, increased value of the houses and available income of the households (IDB, 2011).

Aranya Community Housing, Indore, India

In 1983, the public development authorities of the city of Indore initiated the Aranya Community Housing project for about 60 000 people, guided by architect B.V. Doshi's research and design foundation. With direct provision of fully subsidized houses proving to be too expensive on the required scale, for the new neighbourhood it was envisaged to follow a progressive sites-and-service approach. After time, the new township should blend into the existing urban fabric of Indore (Doshi & Himanshu, 1988)

The project was financed by *Housing and Urban Development Corporation* (HUDCO) and the WB, with the latter demanding that 65 per cent of the total 6500 plots were targeted at the EWS, at an affordable, non-subsidized rate. Envisaging a social mix, the remaining plots were for the LIG, MIG and HIG, partly generating additional funds via cross-subsidization. On

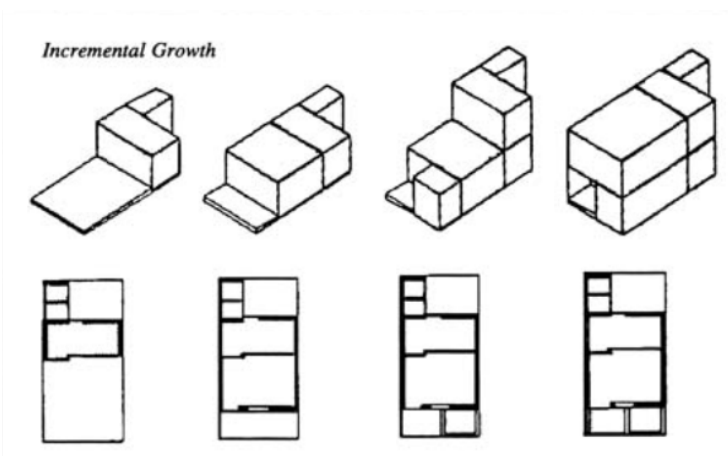


Fig. 09: Scheme of Envisaged Incremental Growth of a House in Aranya

Source: Ekram, 1995, p. 5

houses by themselves (see Figure 09). Roads were constructed, including drainages and storm water management. For incremental construction, dwellers were able to choose their preferred building materials and construction method, however, 80 model houses with different designs and layouts were displayed to guide them in the process (Ekram 1995).

In the Aryana Community Housing project, it was possible to lead many slum dwellers out of poverty, and to generate a surplus through plots sold at market rate to HIG (Ekram, 1995). Today, the development is part of the city of Indore. However, it has been criticised, that while proposals for possible construction were given, a strong difference exists between those models and the incrementally constructed houses, due to lack of professional assistance (Khosla, 1995). Steep price increases for individual plots after the project started, led to many former slum dwellers soon selling plots at very high rates. It has also been reported, that community participation was not carried out in the implementation of the project, which led to conflicts between dwellers (ibid.).

3.3 Rental Housing and Homeownership

Since the 1950s, many governments have replaced rental housing as prevailing tenure option and have focused on the promotion of homeownership. Globally, the share of renters has decreased in the last decades (Gilbert, 2014). The reasons for a shrinking rental sector as a whole vary from country to country, sometimes even from city to city. Gilbert (2014, p. 87) lists several reasons accountable for the rise of homeownership in the last decades: growth of the private mortgage sector, especially allowing for the middle and upper income classes to take out a

the roughly 85 hectares, 58 per cent of land was reserved for residential purposes, and the remaining area split up between open spaces and roads, as well as commercial and community buildings (Ekram, 1995).

The individual building plots for EWS were distributed with a basic service core and foundations, with future residents required to construct and expand their

loan for buying a house; the promotion of mortgages through tax incentives by governments; increased mobility of dwellers through the establishment of new modes of public transport, accompanied with increased construction activity in the urban fringes, where land and therefore prices for houses are more affordable. Additionally, adoption of rent control laws in some countries led to a reluctance of landlords opting for rental housing, and to the private construction sector preferring investments in housing meant for owner-occupation (ibid.). This, combined with increasing salaries and growing middle-income sectors in some countries, the number of households being able to afford their own property increased, and through campaigning of governments, a societal notion considering homeowners as 'better citizens' than those who rent sometimes is predominant (Gilbert, 2016; UN-Habitat, 2003). This tendency in preference of homeownership in the last 50 years led UN-Habitat calling tenancy 'the neglected sector' (UN-Habitat, 2003, p. 1).

In spite of the worldwide tendencies in policy promoting homeownership, estimates show that about roughly 1.2 billion dwellers are tenants today, and that about a third of all urban dwellers live in rental housing (Gilbert, 2016). Especially in less developed countries with high grades of urbanisation, the share of tenants appears to rise (Gilbert, 2016). For people moving to cities from rural areas, formal and informal renting is often the only affordable option for shelter.

In general, rental housing can be considered an *"urban tenure, because in the countryside people own land and a self-built dwelling, have traditional rights to a home or have temporary or permanent access to housing through their employer"* (UN-Habitat, 2011a, p. 5), causing homeownership on the countryside being rarely below 80 per cent (ibid.). The ratio of tenancy in urban areas varies with the size of the respective cities, with smaller cities experiencing fewer percentages of tenants than large cities. UN-Habitat explains that

"metropolitan areas tend to have higher land and property prices [...]. The proportion of renters in any city also depends on the nature of the local land market, the proportion of recent migrants, the amount of public employment, and topography that determines availability of affordable, well located land suitable for residential purposes" (2011a, p. 7).

Middle- and high-income countries experienced significant reductions in the rental sector in the last decades. In Western European countries, while in the middle of the twentieth century the proportion of tenants still outnumbered homeowners due to vast public rental housing construction, from the mid-70s onwards, the discussion about homeownership and tenancy increased, and not least through neoliberal market tendencies, the role of governments as a housing facilitator was put into question, and the ownership-rent ratio slowly changed (UN-Habitat, 2011b). In 1945 in the UK about 70 per cent were tenants, politics from the 1980s onwards

fostering homeownership and sale of social rental housing units, also called ‘right to buy’, decreased the rental housing stock significantly (Gilbert, 2016), with 35.6 per cent of citizens renting in 2014 (Eurostat, 2014). Throughout the European Union (EU), owner-occupancy is the prevalent form of tenure, with only 29.0 per cent renting in 2014 (Eurostat, 2014). Nevertheless, the rates vary widely throughout the EU-28, ranging from 3.7 per cent in Romania to Germany experiencing the highest percentage of tenancy with 47.6 per cent. In Switzerland, however, citizens living in rental housing outnumbered homeowners with 56.0 per cent in 2013 (ibid.). According to Gilbert (2016) the large scale of the rental housing market in both countries is caused by policies supporting both tenure options, relatively consistent house prices and therefore low incentives to invest, lucrative rents for landlords despite active rent control laws, and, as in Germany, the existence of a large subsidized housing sector. Despite the relatively low ratio of tenancy today, which can be traced back to “sustained house price growth coupled with relatively low interest rates and policies favouring homebuyers” (Housing Europe, 2015, p. 14), in recent years, many countries throughout Europe have experienced growth in tenancy again. Despite low interest rates, “less people can afford to buy a home and/or would rather rent due to mobility reasons” (ibid.). Nevertheless, this differs widely within the EU, with rising percentages of renters amongst the EU-15 member states since 2007, but increasing rates of homeowners amongst the New Mem-

Tab. 03: Ratio of Households Living in Tenancy

Country	Year	Tenants	Year	Tenants
High Income countries				
Australia	1981	26%	2007-08	28%
Austria	1981	40%	2010	41%
Canada	1981	36%	2006	32%
Finland	1989	23%	2010	26%
France	1978	43%	2009	37%
Germany	1981	63%	2005	53%
Japan	1978	34%	2003	39%
Netherlands	1981	56%	2009	32%
New Zealand	1976	27%	2001	33%
Spain	1980	23%	2009	17%
Sweden	1975	56%	2009	30%
Switzerland	1981	67%	2000	65%
UK	1981	43%	2009	30%
USA	1980	36%	2010	33%
Former Communist nations				
Bulgaria	-	-	2009	13%
China	-	-	2005	9%
Czech Republic	-	-	2009	23%
Hungary	1980	30%	2010	10%
Poland	1974	51%	2009	31%
Romania	-	-	2009	4%
Slovakia	-	-	2009	11%
Slovenia	-	-	2009	19%
Developing and Emerging Economies				
Argentina	1980	16%	2001	11%
Bolivia	1976	15%	2001	21%
Brazil	180	23%	2010	18%
Chile	1982	31%	2002	18%
Colombia	1985	24%	2005	31%
Dominican Republic	1981	22%	2002	28%
Ecuador	1982	23%	2006	18%
Ghana	-	-	2010	31%
India	1981	16%	2011	11%
Indonesia	-	-	2010	21%
Mexico	1980	21%	2010	14%
Peru	1981	15%	2007	15%
South Africa	-	-	1999	36%
Taiwan	1976	20%	2007	12%
Thailand	-	-	2000	11%
Tunisia	1975	14%	2004	23%
Turkey	1985	23%	2006	39%
Uruguay	1975	32%	2006	15%
Venezuela	1981	18%	2007	10%

Source: adapted from Gilbert, 2016, p. 174; Statistik Austria, 2016

ber States² in Central- and South Eastern Europe (ibid.).

In Central Eastern European and South Eastern European countries, public rental housing formed the vast majority of the housing stock until the 1990s, when those former socialist and communist countries with strongly regulated economies transitioned towards more liberal market economies, privatising their housing sector and selling their public rental housing units to the renters (Gilbert, 2016). The units were usually sold at very cheap rates, often less than 20 per cent of the value needed to build an equivalent new unit (Amann, 2016; Gilbert, 2016). With many residents being reluctant or unable to afford the arising maintenance costs of their obtained units, buildings would fall into decay and again, the public sector was needed to support poor dwellers living in such units (ibid.). Spearheaded by Romania with 96.2 per cent, most Central Eastern European and South Eastern European countries being part of the EU today still have ownership rates over 80 per cent (Eurostat, 2014).

In most low-income countries, public rental housing historically remained mostly small scale due to the lack of resources, and accompanied by self-help construction, many of the urban poor refrained from participating in the (also often non-existent) formal rental sector and thus became informal homeowners (Gilbert, 2014). Political parties were sometimes even backing informal settlers to gain votes and popularity, as experienced in Chile and Venezuela in the 60s or South Africa in the 90s, when government land was made available for free. The self-help housing process happened not as fast when there was lack of public land, especially in the urban fringes, or governments prohibiting informal construction, nevertheless, over the long term, it proved difficult to ban such settlement processes (Gilbert 2016, p. 176). Therefore, as shown in Table 04, in many major cities in developing and emerging economies, high percentages of owner-occupation prevail today.

However, in some Latin American countries the homeownership rate has been in decline since the 2000, as in Bolivia, Chile, Costa Rica, the Dominican Republic, Ecuador, Peru and Uruguay, as depicted in Table 03 (Gilbert, 2016, p. 176), while in others it has been stagnating mostly due to “*increasing house prices relative to incomes, government discouragement of land invasions and a growing shortage of accessible urban land*” (ibid.). In India, the percentage of citizens living in rental housing is declining and homeownership still growing, though, the absolute number of tenants is rising. While there were 15.3 million tenants in 2011, the number increased to 21.7 million in 2011 (ibid.)

In low-income countries, according to Huchzermeyer, many citizens consider cities “*as a market in the pre-industrial sense of the term*” where “*they seek access [...] not for the urban promise of formal (industrial) employment, mortgage and homeownership, but for their promise of a small stake in the informal retail and services market*” (2010, p. 160), and their primary interest is

2 Countries having joined the EU since 2004: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia (2004); Bulgaria, Romania (2007); Croatia (2013)

Tab. 04: Ownership in Cities of Emerging and Developing Economies

City	Proportion of Homeowners 2001/11
Bogotá, Colombia	46%
Barranquilla, Colombia	66%
Delhi, India	68%
Sao Paulo, Brazil	70%
Lima, Peru	78%
Cusco, Peru	68%
Chimbote, Peru	92%
Johannesburg, South Africa	55%
Santiago, Chile	73%
La Paz/El Alto, Bolivia	55%
Accra, Ghana	41%
Bangkok, Thailand	54%
Mexico City, Mexico	76%

Source: adapted from Gilbert, 2016, p. 174; Gol, 2012. Available data ranges from in between 2001-2011.

not necessarily to own a house, as often promoted by academics and practitioners in the development sector. Huchzermeyer criticises that both are often disregarding the opportunities of a healthy rental sector for low-income groups, while action to improve the quality in the often informal rental housing stock would be needed (ibid.).

Governments advocating homeownership link this form of tenure with increasing shelter security and rising independence for the respective dwellers. As a collateral, homeownership is considered an entry point for mortgage finance and often a first step out of poverty (Huchzermeyer, 2014). Therefore, low-income countries one-sidedly promoted mostly homeownership as a tenure, a notion, also backed by academics, donor agencies and NGOs (Huchzermeyer, 2010). However, in low-income countries, property ownership is often accessible informally through self-help construction only and to use the value of dwellings with low quality as an asset could prove difficult (Gilbert, 2016).

Thus for the respective income groups, ownership on the formal market is rarely affordable due to subsidies not reaching deep down into the lower-end of the market, and high priced formal, serviced land in central locations (Watson, V. & McCarthy, 1998). Huchzermeyer (2010, p.161) argues that through globalisation affecting major cities in low-income countries, sale of publicly owned construction land and its transfer into the private housing market get accumulated. Shatkin (2004, p. 2470) also criticises that even though citizens of low-income groups cities in Asia have growing incomes, this does not naturally result in access to affordable housing. He argues that transformation in spatial patterns that could be linked with *“globalisation has resulted in skyrocketing property values [and] have translated into increases in the cost of (legal) housing, increased distances between places of employment and residence, and a deterioration of the urban environment”* (ibid.).

Huchzermeyer (2014) explains that governments of low-income countries have mostly applied two different approaches for the promotion of homeownership. Firstly, a number of countries (as experienced in South Africa, Colombia, Chile, Costa Rica, Ecuador, Brazil) have tried to increase homeownership by direct subsidy schemes, providing citizens with houses free of charge or at subsidized rates. This has been criticised due to those new settlements often being situated at urban fringes where land prices are relatively low (ibid.). Combined with poor connectivity to urban centres, and thus employment and education opportunities as well as healthcare, this could lead to even more social marginalisation and increased poverty (Patel, S. & Mandhyan, 2014; Patel, S. et al., 2015). Moreover, low-densities in the periphery and ur-

ban sprawl counter the concept of environmental sustainability in cities. Secondly, owner-occupancy can be promoted by regularisation of existing informal settlements by registration of land and property titles. De Soto (2000) claims that legal property ownership could transform informal houses and businesses into economic assets that could be used as a collateral, thus paving the path for the urban poor to access formal mortgages and thus increased wealth. If applied on a large scale, de Soto argues that this activation of 'dead capital' on a large scale could link whole informal economies to the formal markets. However, this argument has been criticised, due to formal financial institutions probably not accepting such previously informal houses as a guarantee (Fernandes, 2002). Gilbert (2002, p. 2) argues that "*it is hard for the poor to make money from ownership when they are unable to sell their houses*". When land titles are provided as informal property, additional actions need to be taken to improve the settlements or houses physically, e.g. by provision of infrastructure, to access the formal market (Gilbert, 2002; Huchzermeyer, 2014). Huchzermeyer explains that when promoting homeownership, it is important that "*a formal property market that enables buying and selling and a move up the housing ladder*" (2014, p. 13) is already established and moreover, "*deeds registries, effective town planning and strictly implemented zoning and building regulations*" (ibid.) exist as a foundation for a regulated, formal market.

Lack of clear and secure titles for the land or houses citizens are residing, results in a constant threat of forced eviction by authorities, accompanied by several other disadvantages. Absence of tenure security is considered a crucial aspect in improvement and upgrading of informal settlements (Boonyabanha, 2009; Patel, B. et al., 2011).

Durand-Lasserve and Royston describe land tenure as referring "*to the rights of individuals or groups in relation to land*" (2002, p. 7) with the degree of tenure security of a household or community directly affecting their utilisation of the respective land they are residing. Land tenure includes freehold and leasehold titles, as well as other forms within a legislative framework, which are guaranteed either via habitual or statutory rights (ibid.).

Insecure land tenure hampers households and communities from further developing their neighbourhoods in the long run. Unclear land and property titles augment reluctance of public administration to establish basic infrastructure, and limits the potential of dwellers to pose claims to public stakeholders. Additionally, it could hinder households to make investments in their homes, despite having sufficient earnings. Informal settlers therefore often find themselves trapped in a vicious circle of poor housing (Patel, B. et al., 2011).

To ensure security of tenure, Durand-Lasserve and Royston (2002) identify two frequently used instruments to secure land tenure for informal dwellers. The first instrument concentrates on whole settlements, providing households with individual titles, nonetheless, this approach is often facing constraints in implementation. Balancing all interests and rights of the involved parties within existing legal boundaries, norms and processes, is a complex undertaking. The

second instrument focuses on security of tenure only, by that avoiding evictions, without provision of an individual land title as an essential condition. In this case, settlers are protected from involuntary evictions via 'occupancy' rights or arrangements with authorities, and provided with basic infrastructure, despite not being completely legally recognized. This could initiate a subsequent process of incremental upgrading and thus formalisation, where in the long run, land titles are provided. This approach decreases potential "*market pressures on the settlement and limits market evictions*" (Durand-Lasserve & Royston, 2002, p. 14) in the early stages of the process.

Promotion of Homeownership

In the past, many governments in low-income countries have not made positive experiences with public supported rental housing programmes, which partly accounts for today's reluctance to invest in the sector. Watson and McCarthy (1998) point out that public housing supply was too low during the 1950s to be in line with the demand. Rents were often kept too low while costs for servicing were increasing. Rent collection and forced evictions were difficult to enforce, and a growing divide between the subsidized and private rental market often lead to subleasing of apartments by the dwellers at higher rates than the ones charged by the landlord.

UN-Habitat (2003, pp. 103–126) lists eight prevailing 'myths' that have influenced government policy on rental housing. First, it is often claimed that the majority of citizens are homeowners in richer nations. The association between a country's wealth and the ratio between ownership and rental housing is low, as depicted e.g. in Germany and Switzerland, where where tenancies outnumber homeownership. Second, the notion that citizens would be in favour of homeownership per se could be criticised. As shown above, homeownership has its advantages, however, tenancy has assets in affordability, flexibility and financial independence, which many people moving to cities are looking for. Third, homeownership is often considered a better opportunity than renting. An arbitrary notion of regarding homeownership "*making people into better citizens*" (ibid., p. 113) exists, claiming that homeownership increases ties within communities and neighbourhoods. Fourth, the private and public sectors are considered to be reluctant to invest in rental housing. In many countries, investments in rental housing has lost its popularity, however, in most cities, the total number of rental housing units increases, due to construction of smaller dwellings being completed by small-sized investors. Fifth, rental accommodation is often considered to be 'inequitable'. This might have been true in the past, where a gap between 'rich' landlords and 'poor' tenants existed, though today small-scale landlords mostly let their dwellings to people of the same income-group. Sixth, low-quality rental housing has been criticised with many governments trying to ban it. The destruction

of substandard housing without the provision of alternative housing solutions, nevertheless, often worsened the livelihoods of the dwellers. Seventh, increased independence through rental housing has been criticised for causing insecurities for the dwellers. While this is partly true for some people, mobility could also be considered one of its main assets, allowing the tenants to move when e.g. new job opportunities are arising. In conclusion, amongst many policymakers the notion prevails that homeowners are more settled than renters, compared to tenants who are believed to have more negative traits than those people who own their houses.

Security of Land Tenure and Property Rights

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are believed to have more negative traits than those people who own their houses.

Tenants and Landlords

Tenancy is especially sought after by “*youngsters, students, retired people and low-income families without purchasing power for decent housing, as well as temporary workers and first stage migrants who do not have the possibility of self-managed housing*” (Bredenoord et al., 2014, p. 5), new arrivals to cities trying to gain a foothold and also households led by women, due to their incomes often being lower (Gilbert, 2014, p. 92). UN-Habitat specifies five main reasons for renting:

- increased mobility, especially for young people who need to move for jobs
- increased flexibility, especially financial flexibility
- freedom from major financial commitment, by refraining from mortgages and burdensome maintenance cost of property
- remittances, allowing renters to transfer spare money to their often rural origins (2011a, p. 14)

In general, households with higher incomes are inclined to opt for homeownership, with less people of this group renting, except when they first move into their own homes. While this usually applies for most cities in middle- and high-income countries, it might vary in low-income countries. There, informal squatting and self-construction for the poor often is cheaper than renting in the formal market, therefore, those who rent in the formal market, might have higher incomes than owners in the informal sector, while informal renters actually might have incomes superior to their informal landlords. To meet the different requirements for this heterogenic user groups, an equally heterogenic supply of several kinds of rental housing would be needed (ibid.).

Multiple sorts of landlords with different scales, motives and origins exist. UN-Habitat specifies five different sorts of landlords: the small-scale landlord, the commercial landlord, the public sector landlord, the social landlord and the employer landlord (2011a, p. 12). Today, in low-income countries, the small-scale private landlord is the prevailing kind, unlike in the past, when renting was either supplied and subsidized by national governments and public institutions, or elitist private investors producing a number of profitable, small-scale units. In some countries, statutory regulations by rent caps led to a decrease of investments of the private sector in rental housing. Low rents hamper landlords to make investments, and with evictions often being difficult, landlords often refrained from further investing in the sector (Gilbert,

2014). Therefore, the small-scale landlord predominates today. Gilbert describes landlords in low-income countries as follows:

“They tend to be former migrants [...] have lived in the city longer [...] tend to be much older than their tenants [...] are much more likely to be retired people, to live in larger properties than other families and to have lived longer in their current home.” (2014, p. 91)

Watson and McCarthy (1998, p. 53) highlight that the small-scale landlord is one of the most important enablers for rental housing for the poor in low-income countries, both in urban centres and fringes, with the majority of landlords owning only one or generally few houses, and most of them living on the same estate as the respective renters. In a similar way Gilbert (2016, p. 176) emphasizes on the role of private landlords, claiming that despite not acting within the formal sector, not paying taxes or having legal contracts, and increase of rents and evictions are difficult, the ‘informal landlord’ has an unique and powerful role in housing provision in low-income countries. Though landlords are of high importance in urban housing markets of low-income countries, they hardly ever are considered relevant stakeholders by urban policy-makers (Huchzermeyer, 2014).

Policy Trends in Rental Housing

Striving for a full homeownership quota in a country is usually neither hardly possible to achieve, nor preferable, also in middle- and high-income countries (Gilbert, 2014; UN-Habitat, 2011a). Therefore, especially in less developed and emerging economies, a healthy housing market is needed, that not only emphasizes on homeownership, but also creates a variety of options for rental housing. Small-scale landlords as well as private investors need incentives to invest into the rental-housing sector. UN-Habitat suggests several measures that should be undertaken to stimulate the emergence of a rental housing market:

- Bring tenancy back on national housing agendas
- Promotion of a ‘tenure neutral’ policy, both supporting tenancy and owner-occupancy
- Steer clear of rent controls, leading to distortions in the market and discouraging potential landlords from investing in rental housing
- Increase of means of tenants by increasing incomes or applying subsidies
- Stimulation of housing production by provision of subsidies to private landlords
- Improving existing rental housing and upgrade settlements
- Promotion of tenure security, without disadvantages for landlords
- Promotion of written agreements or contracts

- Promotion of tenancy in projects of technical and financial development
- agencies (UN-Habitat, 2011a, pp. 27–34)

Huchzermeyer (2014, p. 15) suggests several measures for the promotion of a rental housing market. First, housing banks are required that offer small and large loans to private landlords to increase the rental housing stock. Second, a legislative system should assure renters tenure security, while permitting landlords and developers adequate floor-area-ratios to gain sufficient revenues in the long run. This would prevent landowners to make excessive revenues through maximised densities in a short timeframe, which would often lead to deterioration of the apartments, making them refrain from expensive maintenance of the apartments after the initial investment is compensated. Third, new construction land in appropriate locations needs to be provided and reserved for rental housing e.g. by tax incentives, and the existing rental housing market needs to be regulated, to allow governments to tax rents and increase funds existing and new infrastructure. Conclusively, the establishment of not-for-profit housing associations could regulate competition in the sector and naturally moderate rents.

In fast urbanising low-income countries, both, a homeownership sector as well as a rental sector is necessary to tackle the housing crisis and provide substantial shelter options for the poor. While homeownership clearly has its benefits when formally titled and used as a financial asset as a first step out of poverty, not every city dweller is in need to own a house, especially new arrivals, due to affordability, mobility, and financial independence that comes along with tenancy. As with homeownership, a major role is attached to the private sector in the rental housing sector, for whom governments need to create incentives and a regulative environment to produce rental housing that is safe, adequate and affordable for the tenants, as well as profitable and economically sustainable for the landlords.

3.4 Finance Mechanisms

Finance for low-income housing in low-income countries is predominantly acquired without help of formal finance providers. In many cases, own savings, self-construction by households, informal agreements made between friends, family and other residents are utilised for housing construction to save expenses, which make up to 80 per cent of the total cost. Most low-income households are only able to spend 10 per cent of their monthly earnings for housing (Ferguson, 1999; Frank, 2008).

The capital expenditure in incremental housing construction is composed of cost of additional workforce, land to build and construction material. The latter is often produced on-site, by households themselves, or purchased in the neighbourhood. While this could support local

small-scale economy, costs could be decreased through bulk-orders through large distributors (Frank, 2008).

For many of low-income dwellers, formal housing finance such as mortgage finance of finance institutions is difficult to acquire. This can be traced back to low and unstable incomes of the households, whereas formal loans require monthly, steady repayments, at often high and therefore unaffordable rates. Dwellers residing on land they do not officially own also cannot produce a required title for their property, which is often required. Also, many private finance institutions are not that interested in lending to low-income dwellers, due to small loans with low returns, still have high administrative cost for the lending institution (Ferguson, 1999).

Therefore, low-income dwellers often need to rely on other finance sources for their housing developments within their milieu, such as *“individual and group savings, windfalls, fabrication of their own building materials, sweat equity, small loans from neighbourhood money lenders, barter arrangements and communal self-help and remittances from family living abroad”* (Ferguson, 1999, p. 189), sources that are often unstable and unreliable, resulting in a slow incremental construction process (ibid.).

However, since the last two decades, other sources for self-construction have slowly emerged in some countries. Apart from micro-finance institutions (MFIs), they include *“pawnshops, savings and credit associations, pension accounts, credit cards, consumer credit from building materials manufacturers/retails and commercial banks for the purchase of building materials”* (Ferguson et al., 2014). Some governments try to boost the small-scale mortgage market by providing loans at subsidized interest-rates (ibid.).

Housing Micro-Finance

MFIs are private lending firms that give out credit to low-income households, specialised on their respective needs of amount, low-threshold and interest rates, and general flexibility in amount and duration. At first, loan takers are given out a small-scaled credit running for a short time period to prove their reliability in paying it back, and then steadily acquire higher credits for longer time-periods (Frank, 2008). To reach deep down into the market, portfolios of MFIs need to provide individual, tailored loans for the dweller's needs, e.g. smaller loans for maintenance repairs at an existing house or larger loans for construction of a new house, at low interest rates over long-term (Ferguson et al., 2014). In many cases, credit of MFIs is supported by a household's savings, and often combined with a subsidy of the government. That kind of hybrid finance mechanism between the household, the private finance sector and the government is established, not relying on only one financial source, could increase sustainability of the process to finance a house (Ferguson & Navarrete, 2003).

In many low-income countries, established private finance institutions are giving out loans primarily to middle- and higher income groups. However, experiences of those also including low-income groups in their portfolios, whether in low- or higher-income countries, as well have had reasonable returns and economic performances (UN-Habitat, 2015). However, many MFIs organised as NGOs, are sometimes still relying on external finance and not able to develop self-sustaining mechanisms over long-term and therefore not able to transformation into an institution of the regular finance market (Frank, 2008).

If finance through MFIs can be obtained, often technical support is offered for the respective dwellers for them to meet the expected demands and time-frames of the finance institution. However, many MFIs lack capacity to supply dwellers with such support (Frank, 2008). Increasingly, the construction material industry discovers the low-income sector as a market opportunity, also providing such technical advice. Ferguson et al. (2014) argue that there would be a lot of potential with manufacturers acting as MFIs and supplier at once, giving out loans to the dwellers, who are then able to afford the respective material from the same provider, especially through collaborations with NGOs.

Housing finance for low-income groups is in need for a steady, reliable market, offering a broad range of products suitable for needs of low-income dwellers. MFIs in the sector have to act on the local level, in close cooperation with other actors such as NGOs, and to have experience in incremental construction or expansion processes, as well as technically supporting the respective dwellers in the construction process. Through finance opportunities shaped and targeted at the local level, external dependency on funds of government-programmes and housing policies is decreased, and first steps toward an independent, private finance market environment for low-income dwellers made.

3.5 Urban Land and Density

Acquiring centrally located, suitable land for low-income housing developments at low-cost is considered one of the highest constraints of housing affordability. To reduce land area needed for residential developments, exceptions in FAR regulations to increase densities are often made by public authorities. While entailing economic and environmental benefits, several socio-economic factors need to be considered, also depending on the targeted income group.

3.5.1 Land Use and FAR Regulations

“The spatial concentration of economic activities creates the value of urban land” (Bertaud, 2010,

p. 6). For the majority of 'economic activities' in cities, however, land itself plays a minor role. The need is expressed in requirement of floor area within a building, where those activities usually are carried out (ibid.). In growing cities with limited availability and thus expensive land in central areas, this is compensated by monetary investments of developers in the construction of extra storeys, raising usable floor area and height of the building, resulting in an increased FAR. This leads to higher densities in terms of built environment, economic activity and population. Ideally, this would reduce land consumption in a city while decreasing demand (ibid., p. 6).

In less developed and emerging economies, citizens often have wide disparities of their income levels, as well as disparities in land consumption. Urban citizens at the bottom of the income pyramid are more likely to use land at a FAR corresponding to 1 or lower, therefore requiring more land for one unit of floor area (Bertaud, 2010). This results from

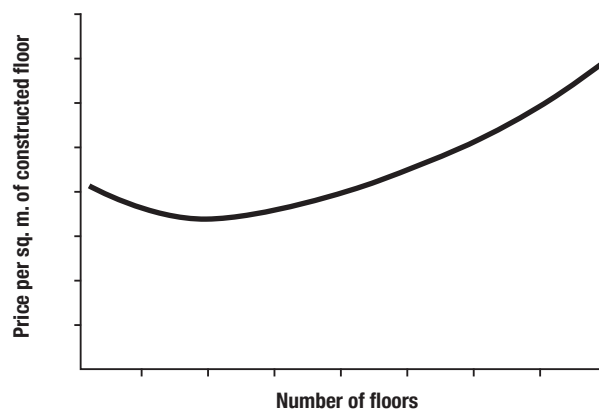


Fig. 10: Construction Price per sq. m. with Rising Number of Floors

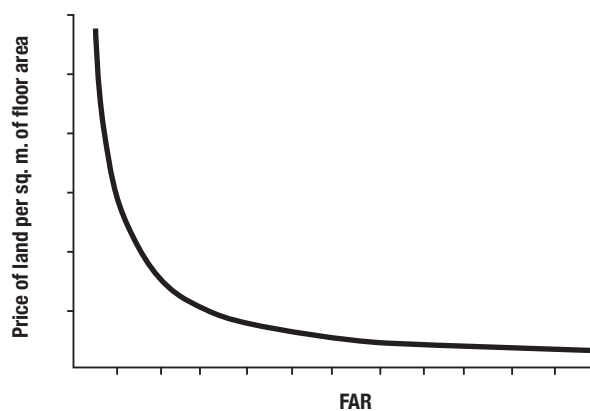


Fig. 11: Price of Land per Constructed Floor Area when FAR Increases

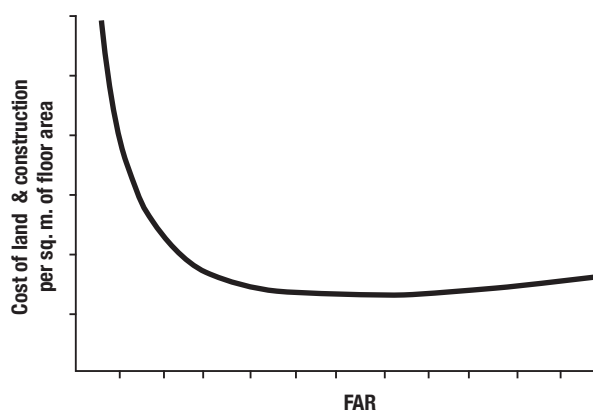


Fig. 12: Cost of Land & Construction per sq. m. of Floor Space when FAR varies

Source Fig. 8-10: adapted from Bertaud, 2010, p. 6

mostly horizontally constructed houses and settlements. On the contrary, urban citizens with higher incomes living in multi-storey, high-rise buildings, tend to use land with a FAR ranging far above 1, consuming less land in relation to their available floor area (ibid.). For low-income households, construction of a one-storey housing unit in an urban area is usually much more affordable than construction of a multi-storey building. For example, in India, construction of a low-rise house with makeshift materials costs about one third of a multi-storey building. Additionally, for the latter, usually higher construction standards and technologies are required as well (Bertaud, 2010, p. 8).

Reimbursing cost for land through additional storeys is only possible to a certain extent and dependent on “*relative cost of land and construction*” (Bertaud, 2010, p. 6). As Figure 01 shows, in an ideal market, while initially the construction cost per sq. m. of floor area could be compensated with additional floors, however, with increasing number of storeys, the construction cost per sq. m. rises again. This differs concerning land prices as shown in Figure 02, where with rising FAR also the land price could be compensated gradually. Figure 03 illustrates a balance with the price of land and construction combined, where the price of a unit floor area could be optimised at a certain point.

However, in practice, compensation of land prices with increased FAR and stories is dependent on several other factors and building regulations. In most cities, land markets are usually regulated by public administration and the range of minimum and maximum FAR and densities is limited, to control a city’s visual appearance and spatial growth.

3.5.2 High-Rise Developments and Land Acquisition

As discussed earlier in this thesis, compact settlements with short distances between public modes of transportation, education and employment facilities as well as to public and open spaces, are considered an important aspect for sustainable neighbourhoods. Apart from increasing a project’s financial viability and having other economically desirable effects, compact and dense settlements diminish environmental impacts through efficient resource use, for example, by reducing soil sealing and distances in transportation.

Increased density in residential developments implies different impacts for either low- and higher-income settlements. S. B. Patel (2007) criticises that while in richer areas, higher densities could result in an increase of available living space per capita, in poor areas, it could stress existing basic services and community facilities, and reduce availability of open, public and green space per capita. The latter could especially be experienced in slum rehabilitation projects, where additional, free-market dwellings are needed to cross subsidize the project (ibid.).

For such ‘vertical resettlements’ through slum rehabilitation projects, Gill and Bhidé (2012,

p. 10) identify adaption of citizens that are used to dwell in 'horizontal', low-rise settlements to 'vertical', high-rise constructions as the biggest constraint. In the case of Mumbai's *Slum Rehabilitation Scheme* (SRS), first, buildings were not allowed to exceed seven storeys due to issues in keeping up the building. This regulation was relaxed when the project developers declared to take over building maintenance for a timeframe of several years after allotment of the units. Additionally, SRS foresees extensive consultation of communities to describe the benefits of a well-located apartment, to motivate them to shift. Furthermore they are instructed on necessary maintenance of collectively used areas, such as hallways, staircases and lifts (ibid.).

Nonetheless, when centrally located areas cannot be utilised for low-income housing construction, or developers prefer to target higher income groups due to increased profit margins in those areas, slum redevelopments are often carried out through resettlements in a city's periphery, where land prices are low. While the quality of a dwelling is increased, it does not necessarily improve the socio-economic background of the relocated dwellers (Barnhardt et al., 2015). Studies show, that relocations of slum settlers into the periphery often increases distance to workplaces, educational and healthcare facilities. Combined with insufficient transportation or higher cost for transportation, daily expenditures of low-income households could rise as well (Patel, S. & Mandhyan, 2014; Patel, S. et al., 2015).

To leverage land acquisition while reducing cost, both for central and peripheral areas, S.B. Patel suggests interlinked actions to be addressed in a housing development project, amongst others (2015, p. 65):

- *Identification, listing and ranking of land* that is considered to be the most suitable for low-income housing construction is needed. Larger sites are preferable, due to easier legitimization of bulk infrastructure establishment in front of public administration.
- *Land acquisition* by public authorities or private developers, should be carried out under the precondition that the number of planned units reflects the demand while cost remains affordable for all targeted income groups.
- *Supply of bulk infrastructure* especially concerning the establishment of public transportation and links to major transportation hubs right from the start, before first settlers move into the area. While initially often uneconomical due to few passengers, in the long run, "*the pay-off in terms of rising demand and land prices is more immediate*" (ibid.), which could be channelled to pay back loans that were required for establishment of the transportation infrastructure.

3.6 Policy Measures

All of the abovementioned approaches to encounter the lower-income group's need for shelter have been dominant at a certain period in the last decades and proved successful at a certain scale, and they often in altered and combined variants still find their way into many countries' housing policy. Nevertheless, the number of dwellers requiring adequate housing still increases worldwide.

Therefore, informal self-help construction is the sometimes only and also preferred option to obtain shelter for poor urban dwellers in low-income countries. High cost and scarcity of construction land remains one of the biggest constraints in housing provision for authorities as well as for self-help-dwellers themselves. With increasing income levels in transitioning and emerging economies, also the willingness to pay higher prices for attractive construction land at suitable locations in cities rises for certain income groups. This leads to increasing prices for formal housing in emerging cities with liberal land market policies, making it remain unaffordable for the poor (Ferguson et al., 2014).

Alternative approaches in housing provision for the lower end of the income pyramid are needed. Choguill (2007, pp. 147–148) suggests five policy sectors that should be focused on to achieve substantial improvements in the housing challenge for the urban poor. Firstly, participation of the respective dwellers and communities is necessary on all levels ranging from design, building and maintenance of the houses. This could be facilitated by the formation of community groups, which act as a link between the government and, if involved, the private sector. Secondly, access to affordable and environmental-friendly construction material of high quality for the private construction sector and incremental builders should be possible. In many cases, unavailability of construction materials hampers progress in building processes, increases cost and decreases quality of the houses. Thirdly, rigid construction standards can be obstacles to cost-reduction in housing. While certain construction standards are undoubtedly required to reduce sanitary and health conditions and to ensure fire safety, they should be kept at a minimum. The adherence to a variety of standards leads to high cost and therefore an obstacle in housing affordability. In a similar way, Mitlin and Satterthwaite (2004, p. 272) stress that all possible steps should be taken to reduce the price per dwelling, to make use of available funds the most efficient. Fourthly, unconventional approaches regarding housing finance are needed in addition to existing finance mechanisms like mortgages. While traditional mortgages continue to form an important part of finance in the residential sector, housing micro-finance schemes could help to reach deep down in the sector to the poor, either provided by private stakeholders, or by a community organised funding structure. Fifthly, the provision of adequate and affordable construction land should be highest priority for governments at all levels. Only when formal land is made available, land titling and security of tenure for the dwellers could be achieved. In

conclusion, according to Choguill, municipal governments in low-income countries could gain ground again in planning and urban development by e.g. levying specific taxes on construction land to redeem public infrastructure investments made.

Also Ferguson et al. (2014) point out that with governments alone not being able to tackle the growing demand for affordable housing for the urban poor, the participation of private developers in this particular residential sector needs to be scaled up. They explain that there are many opportunities for private stakeholders in low-income housing. A variety of models of housing micro-finance of different scales for different requirements would be needed, ranging from the support of small home improvements to the construction of whole houses, with the possibility of targeted subsidies for the lower end of the sector. With increasing demand for affordable housing, a wide range of products suited for the differentiated needs of the low-income group is urgent, with models assisting housing construction and finance combined with the provision of technical support.

Mitlin and Satterthwaite (2004, p. 272) explain that to enhance quality of housing for dwellers in informal neighbourhoods, involvement of municipalities at the local level is necessary. Moreover, a change from pilot-projects to continuous processes at the local level with participation of citizens and an integrated approach including not only housing (improvements, extensions, credit) but also infrastructure, tenure and incomes should be fostered, with the support of proactive high-level government authorities.

4 Case Study: National Housing Programmes in India

In this chapter, first the indicators used for the analysis of the PMAY programme are explained. Second, an overview about India, administrative hierarchies in municipal governance, and emergence of urban housing policy since the 1950s is given, and most recent housing programmes for the urban poor are introduced. Third, the PMAY programme is illustrated and subsequently analysed via the indicator framework. The roles of the most important stakeholders are examined, and in conclusion, preliminary results of the analysis conducted are addressed.

4.1 Assessing Sustainability of Housing Programmes: Indicators

For the analysis, a domain-based sustainability framework including indicators relating to the economic, social-economic, physical/environmental and institutional spheres of sustainability is used (Maclaren, 1996, p. 186). With housing being an “*essential component of both quality of life and SD [sustainable development]*” (Winston & E. Pareja, 2008, p. 1), an assessment of a housing programme is not only relevant for the programme itself, but its overall contribution to move towards sustainability. The analysis framework of this thesis is based on the indicator set developed by Frank (2008), which was developed for analysis of national housing programmes in similar contexts. Here, the aforementioned spheres are respected in the indicator groups of economic sustainability (e.g. Macroeconomic Environment and Government Finance), socio-economic sustainability (e.g. Decision-Making by Beneficiaries, Informal Land-Titling), physical/environmental sustainability (e.g. High Quality of Constructed Units, Energy-Efficient Materials and Design) and institutional sustainability (e.g. Political Backing, Involvement of different stakeholders, Rapid Processing). Some indicators of Frank have been adapted in this thesis, while others have been omitted or added to better suit its scope. Additionally, implications of the NUA have been added to the framework. The respective indicators are further described in the subsequent section.

Indicators enable an assessment of individual aspects of a programme relating to four spheres of sustainability, while respecting throughout the analysis that “*the term ‘indicator’ should be taken literally in the sense that it provides only an indication of conditions or problems*” (Maclaren, 1996, p. 186). The use of a broad range of indicators is of importance to provide a broader picture of the analysed programme, “*to characterize the different dimensions or aspects of a situation*” (Maclaren, 1996, p. 186). Additionally, Maclaren lists four qualities that indicators relating to urban sustainability should possess, they should be “*integrating; forward-looking; distributional; developed with input from multiple stakeholders in the community*” (Maclaren,

1996, p. 186).

After first explaining the context where the PMAY housing programme is implemented, subsequently, the potential of PMAY to move towards sustainability is assessed through available data and compared with the indicator set. However, interpretation of the data, if they are indicating 'sustainable' directions or not, could be biased by subjective judgements, and relevant of the respective geographical and cultural context (Maclaren, 1996). Results are first presented in an overview of the singular indicators and then summarised.

4.1.1 Economic Sustainability

A housing programme is rather considered to be economically sustainable if finance over a longer time period can be guaranteed. Funding combining government subsidies, savings or loans of beneficiary households, participation of the private sector and funds of international donor agencies could be included in the budget of a programme. However, crucial for a housing programme's economic sustainability is the capacity of a beneficiary household to afford the expenses needed for their house over a longer time period after project implementation (Frank 2008). Indicators are described in Table 05.

Tab. 05: Economic Sustainability Indicators

No.	Indicator name	Description
A1	Macroeconomic Environment	A programme embedded within a growing national economy and decreasing inflation allows a government to allocate funds more easily. A stable political administration ensures continuity of a programme over long-term.
A2	Government Funding	A national government that is able to allocate large proportions of a programme's total budget could increase a housing programme's sustainability. Dependency on external, international donors increases flexibility of a programme's implementation and decreases dependency of the focus of international development policy.
A3	Contribution of Beneficiaries	Households participating through their own financial contributions or through their workforce (sweat-equity) could increase sense of ownership for the beneficiaries while decreasing the financial burden on the exchequer and private sector finance.
A4	Accessibility of Loan Finance	Provision of loans at tailored sizes to the beneficiaries could lower the overall financial burden on the government, and raise accountability of beneficiaries via discipline in repayments.

No.	Indicator name	Description
A5	Low Proportion of Subsidies	A lower rate of subsidies given to the beneficiaries could be beneficial to keep a programme running over long-term. High subsidies provided over a long time period, could increase dependency of beneficiaries and private stakeholders on government or international funds, drain the budget and lead to a collapse of a programme.
A6	Subsidies Routed Directly to Beneficiaries	Government subsidies routed directly to the respective beneficiaries could ease bottlenecks through intermediate agencies such as private developers involved in the process. Additionally, allocation of subsidies needs to be closely monitored to prevent corruption and improper use of funds.
A7	Cost Efficient Construction	Production of good quality housing while keeping the construction cost low via cost of material and technology should be envisaged in a housing programme. Local construction techniques could be used and combined with new technologies.
A8	Low Costs for Construction Land	High cost of construction land is considered as a main constraint for affordable housing production. Lack of suitable, centrally located construction land should not result in relocation of communities to the outskirts of a city.

Source: author, adapted from Frank, 2008

4.1.2 Socio-Economic Sustainability

A housing programme is considered socio-economically sustainable if the socio-economic background of the beneficiaries is improved after completion over long-term. A participatory approach and decision-making capabilities of potential beneficiaries and communities at an early stage of project implementation could increase quality of living by maintaining social networks and ensure access to education and jobs in the vicinity of the area. Additionally, low recurring payments for the beneficiaries and inclusion vulnerable groups and empowerment of women in the process, are as well conducive for a programme. Indicators to increase socio-economic sustainability are presented in Table 06.

Tab. 06: Socio-Economic Sustainability Indicators

No.	Indicator name	Description
B1	Decision-Making by Beneficiaries	Beneficiaries are given decision-making powers throughout the process. Including beneficiaries in the process creates sense of community, ownership and could increase satisfaction with the neighbourhood when projects are completed.
B2	Inclusion of Vulnerable Groups	Vulnerable groups and socially disadvantaged persons should be considered in the eligibility criteria of a programme. Designs should reflect needs of the elderly and also disabled persons.

No.	Indicator name	Description
B3	Empowerment of Women	If women's rights should be supported and decision-making power given to females in a housing programme. Women are often amongst the most vulnerable groups within a society, often take up important roles during housing construction, and have higher reliability concerning loan repayments.
B4	Amelioration of Socio-Economic Background	The socio-economic background of a beneficiary household should improve through the housing programme over long-term, also after completion of the programme. This includes access to education and employment opportunities, strengthening local economies and a sound community life.
B5	Low Recurring Cost	Recurring payments of beneficiaries, including monthly instalments of loans, rents, payments for basic service delivery or maintenance cost of the dwelling over long-term, should be low to increase a housing programme's sustainability.
B6	Establishment of Local Employment Opportunities	Creation of local employment opportunities should be considered in a housing programme. Establishment of commercial areas, opportunities for home-based work or inclusion of local workers in the construction process could support the neighbourhood's local economy.
B7	Proximity to Former Places of Employment	If resettlements are carried out, locating the new settlements in the vicinity of former places of employment could increase sustainability of a housing programme. By that, uprooting of communities could be avoided, and existing socio-economic networks sustained.
B8	Broad Range of Eligibility Criteria	Application of a number of different eligibility criteria in the process of selecting beneficiaries is important to reach the intended target group successfully. Only relating to their respective income levels could lead to unwanted in- or exclusion of beneficiaries.
B9	Informal Land Titling	With many low-income households and slum dwellers residing on illegally acclaimed land and lacking formal titles, acceptance of such informal land as an asset could increase sustainability of a housing programme. This could broaden the scope of the programme, through broadening the target group.
B10	Developments for Mixed-Income Levels	Envisaging settlements catering for different income levels could avoid segregation of low-income dwellers from other layers of society. By that, ghettoization could be prevented, and economic activities for both low- and higher-income dwellers facilitated.
B11	Variety of Tenure Options	Integration of other tenure options than ownership could broaden the scope of a housing programme. Especially younger families and individuals migrating to cities, sometimes temporarily, could benefit from the greater independency through rental housing.

Source: author, adapted from Frank, 2008

4.1.3 Physical/Environmental Sustainability

A housing programme is considered to be physically and environmentally sustainable if the constructed housing units are suitable for the target group over long-term. Quantitative outcomes, qualitative aspects of construction technique and materials used, disaster-proof design, options to expand the constructed dwelling, combined with appropriate provision of basic infrastructure contributes to physical sustainability. Moreover, mitigation of environmental impacts through production of building materials and the construction process should be considered in the housing programme. Indicators are as follows:

Tab. 07: Physical/Environmental Sustainability Indicators

No.	Indicator name	Description
C1	High Quantity of Constructed Units	A large number of constructed units, in different areas throughout the country, could contribute towards sustainability of a housing programme. A continuous physical output in a programme is also likely to increase support of political stakeholders.
C2	High Quality of Constructed Units	Quality of a dwelling should not be compromised through lowering construction cost. Through high quality construction methods and material, life span of the units is extended, lesser repairs are necessary, and spending for maintenance could be decreased for the beneficiaries over long-term.
C3	Energy Efficient Materials and Design	Utilisation of ecologically sound construction material should be considered in a housing programme. Respecting climatic and geographic conditions of the project site and adhering to principles of sustainable urban settlement layout could lower environmental impacts, decrease CO2 emissions and lower cost through energy savings.
C4	Assistance in Self-Help Construction	Support in self-help processes carried out by beneficiaries in aspects of construction, finance and other processes involved with the programme should be provided. This could improve quality of the improvements and constructed houses, create sense of ownership and responsibility and improve the settlement over long-term.
C5	Mixed-Use Developments	A number of different uses should be integrated within a settlement apart from residential purposes. Commercial spaces, educational and health facilities, amongst others, could foster a support a vivid environment, and encourage uses of ground floor zones other than housing.
C6	Centrally Located Settlements	New housing or resettlement projects strategically located within an urban centre should be envisaged. Lack of social and physical infrastructure, increase of transportation costs to education and work, and uprooting of beneficiaries by that could be avoided.
C7	Compact Settlements	Compact settlement planning could reduce environmental impacts of construction processes, by reducing distances, countering soil-sealing and urban sprawl. Additionally, compact settlements with adequate densities could increase financial viability of a project.

No.	Indicator name	Description
C8	Provision of Social and Physical Infrastructure	In in-situ upgrading and new housing projects, establishment of adequate social and physical infrastructure could increase its sustainability. This could be achieved through permanent provision of water and electricity, sanitation facilities, access to transportation as well as access to recreational and open spaces, community centres and health facilities.
C9	Public and Open Spaces	The creation of publicly accessible open and green spaces within close distance of the settlements should be envisaged in a housing programme. While improving the microclimate and serve recreational purposes, open and green spaces also could foster small scale economic activities.

Source: author, adapted from Frank, 2008

4.1.4 Institutional Sustainability

A housing programme is considered institutionally sustainable if it is embedded within a sound political environment with good governance and structures, supporting the implementation process throughout all administrative tiers. Linkages between the public and private sector, related implementing agencies, international organisations providing technical or financial support, and cooperation with NGOs, community groups, and the programme's beneficiaries are needed for addressing the challenge of provision of adequate housing. Indicators are:

Tab. 08: Institutional Sustainability Indicators

No.	Indicator name	Description
D1	Political Backing	Political stakeholders backing the programme's implementation could ensure the continuation of a programme. However, governments should not participate directly in housing delivery, rather than facilitating housing provision through creating a sound environment.
D2	Involvement of Private Developers	Involvement of the private development sector in project implementation could create self-sustaining mechanisms in low-income housing production and lead to faster processes in project implementation and thus to a higher number of units completed.
D3	Involvement of Private Finance Sector	Involving the private finance sector in parts of a programme could help to develop a formal market for low-income housing finance and increase accessibility of loan finance the respective target groups.
D4	Low Involvement of International Donor Agencies	A low amount of funds provided by international donor agencies could support the continuation of a housing programme over long-term. While favourably boosting finance of a programme on an early stage, on the long run, it could establish dependencies on external finance and impede decision-making processes.

No.	Indicator name	Description
D5	Involvement of NGOs	Involvement of NGOs in the implementation process of a programme could help to involve communities and individuals in the process. While assisting in the design and implementation process of a project, while considering socio-economic aspects of beneficiaries, NGOs could function as a linking entity between public, private stakeholders and the respective citizens.
D6	Involvement of Community Organisations	Participation of organisations representing matters of the community during and after project implementation in front of authorities should be considered. Links to established social groups could be maintained also in case of resettlements, and households could get involved with improvements in their settlements.
D7	Implementation at Local Level	Devolving aspects of the decision-making process to local authorities and communities in project implementation could result in tailored projects for the respective communities' needs. Stakeholders on the local level are more aware of cultural and geographical characteristics and able to regard them in the planning process, than those on other administrative tiers.
D8	Rapid Processing	Rapid processing of beneficiaries' applications and reducing bureaucratic barriers for all stakeholders could speed up the implementation process and result in a higher output. Fast-tracking of the application process, payment of subsidies, and construction and allotment of dwellings could ensure a higher number of houses while reducing risk of cost increase through delays in construction or external factors like inflation.

Source: author, adapted from Frank, 2008

4.2 Housing in Urban India

“India does not live in its towns but in its villages. (...) When the cities realize that they must live for the welfare of the poor, they will make their palaces and institutions and the life of their inhabitants correspond somewhat to our villages.”
(Gandhi, 1931, p. 12, as cited in Joshi, 2002, p. 15)

India, the world's largest democratic country, is likely to overtake China as the most populous nation by 2030 (see Figure 14) (United Nations et al., 2015). In the latest census of 2011, India had a population of 1,210 billion people (Government of India, 2011). Geographically, the Indian subcontinent is bordered by the Himalaya Mountains in the North, the Arabian Sea in the West, and the Indian Ocean in the East (see Figure 13). With more than 3.2 million sq. km area, India is the seventh largest nation in the world. India is a federal republic, and consists of 29 states and seven union territories.

From the 1980s onwards, India loosened its formerly rather protectionist and socialist inspired economic politics deriving from the decades after Independence from the British



Fig. 14: India, Administrative Divisions and Largest Urban Agglomerations

Source: adapted from Wikimedia, 2014

Tab. 09: India Facts

Area	3 287 263 sq. km	Total Population	1 210 193 422
Population Density	368 people per sq. km	Capital City	New Delhi
Administrative Subdivisions	36 (29 states and 7 UTs)	Official Languages	23 (41 per cent Hindi)
Largest Cities (Urban Agglomerations)	1. Mumbai (18.4 million) 2. New Delhi (16.3 million) 3. Kolkata (14.1 million)	Literacy Rate	71 per cent

Source: author; Government of India, 2012; World Factbook, 2017

Empire in 1947. India slowly opened its economy, promoting foreign investment, trade reforms and deregulations resulting in accelerated economic growth, exceeding seven per cent growth in 2014. While the service sector accounts for about two thirds of total economic growth, only one third of the total population is employed there, with still about half of the population working in agriculture (World Factbook, 2017).

The current government is represented by the Bharatiya Janata Party under polarising PM Narendra Modi, replacing the long-ruling Congress Party at the national elections in 2014. Since then, initiatives to promote foreign investment in India, as well as several development initiatives for the urban sector have been launched, which are described at a later section in this thesis.

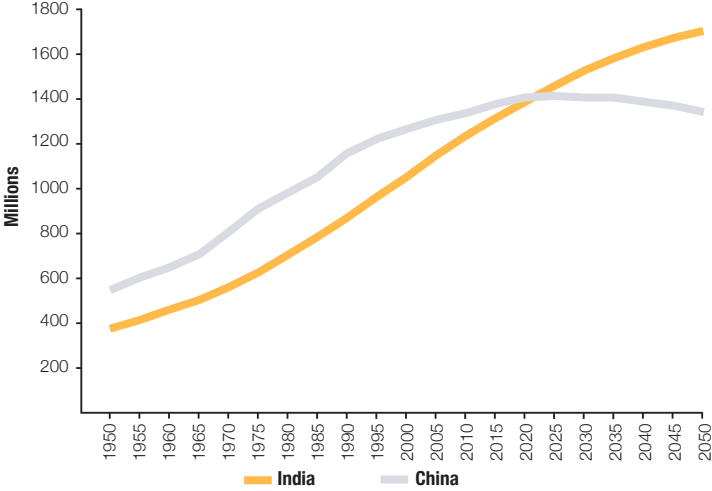


Fig. 15: Projected Population Growth, India and China 1950 - 2050
 Source: adapted from United Nations et al., 2015

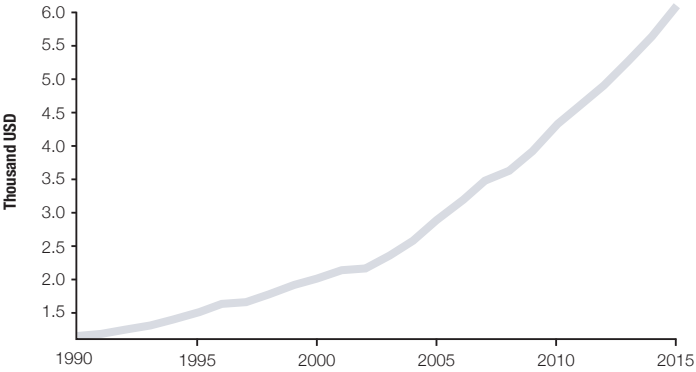


Fig. 16: GDP per Capita in USD, 1990 - 2015
 Source: adapted from World Bank, 2016b

4.3 Urban Growth in India

In 2011, throughout India, about 31 per cent or 377,1 million people were living in urban areas, growing at a slow but constant rate of 3.4 per cent in the last decade (Government of India, 2011). By 2031, it is expected that India’s urban population will continue to increase up to 40 per cent or 600 million people with India becoming the largest contributor of urban citizens worldwide

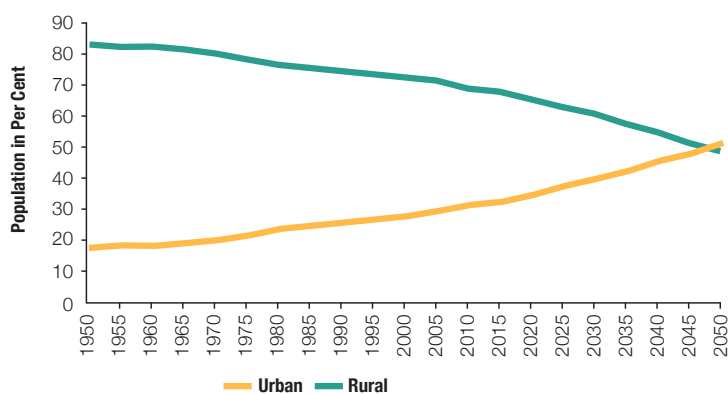


Fig. 17: Projected Urbanisation in India from 1950 to 2050 in Percent

Source: adapted from United Nations, 2014

by 2050 (Ahluwalia et al., 2014; United Nations et al., 2014). By 2050, India’s urban population is also projected to outnumber its rural population, as depicted in Figure 16. Incremental growth³ of the urban population was responsible for 44 per cent and urban growth by reclassification was at 29.5 per cent of the total urban growth from 2001 to 2011 (Ellis & Roberts, 2015, p. 54). Rural to urban migration or internal migration respectively is considered a minor contributor for urban growth only, therefore following a trend of other nations in the South Asian region (ibid.).

In India, in the last decade, primarily *Class-I Cities* and *Million Plus Urban Areas* experienced increased population growth, while in *Mega Cities* it was slightly slowing down (Government of India, 2011). For example, in Greater Mumbai growth decreased from 30.5 per cent between 1991-2001 to 12 per cent from 2001-2011 (ibid.). However, growth outside statutory borders combined with hidden urbanisation⁴, could lead to underestimations in urbanisation trends of cities not classified as urban areas (Ellis & Roberts, 2015, p. 24; Kingsley, 1965).

Urbanisation in India is considered to be closely interlinked with the country’s economic growth. Even though India’s population today still is mainly rural, the GDP generated in urban areas already reached 66 per cent. Through continuing urbanisation, it is expected to climb up to 75 per cent by 2030 (Ahluwalia et al., 2014). Nonetheless, wrong estimations or misinterpretations of urban growth could result in challenges of municipal governance. Lack of finance and capacity on relevant administrative levels could result in deterioration of infrastructure and basic public services, limited economic effects of urbanisation for the poor, and hamper the potential of urbanisation as driver of macro-economic growth throughout India (Nandi & Gamkhar, 2013, p. 55).

3 Incremental urban population growth can be understood as growth occurring naturally through citizens that are already residing in urban areas (Ellis & Roberts, 2015).

4 With ‘hidden urbanisation’ Ellis and Roberts define urbanisation that is insufficiently measured by official government censuses due to changes in classifications of rural settlements to urban towns (2015).

4.3.1 Municipal Governance

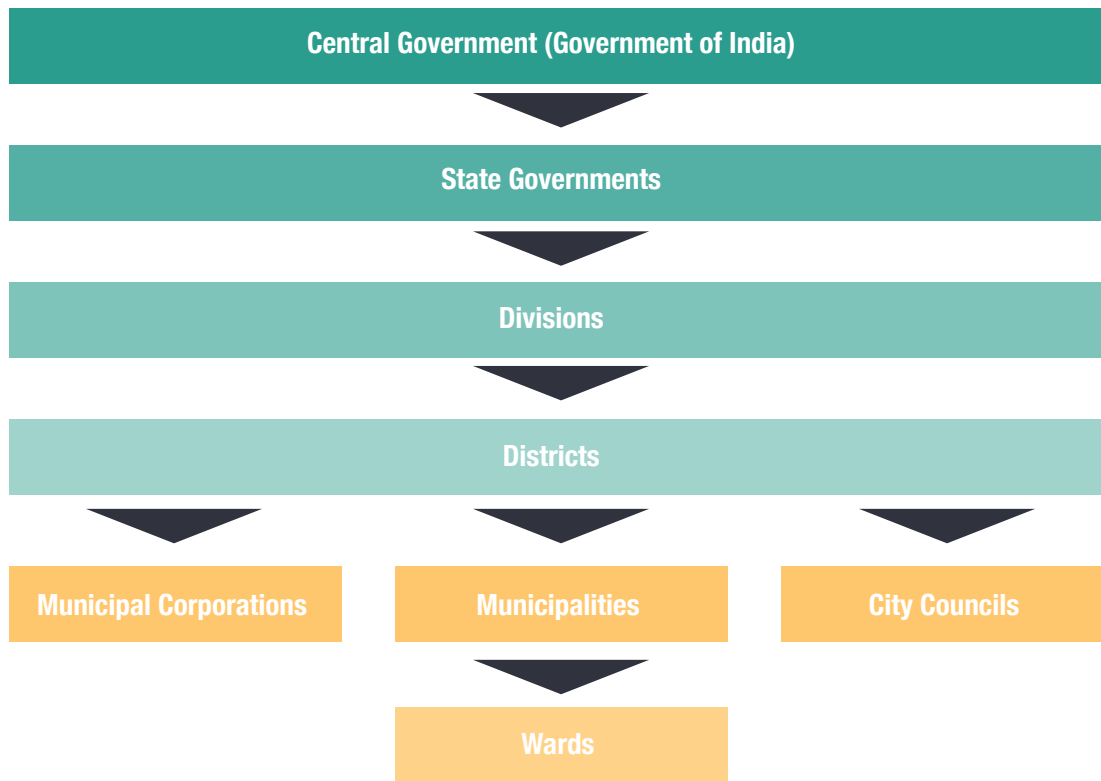


Fig. 18: Levels of Governance in India

Source: author

After Independence, two tiers of government were mainly responsible for matters in urban development: the Central government as the authority in charge of developing policy frameworks and city planning, while State governments were responsible for urban administration and the implementation of policy frameworks on city level, while steering the funding process. Also the Indian Constitution mostly neglected the role of municipal governments in urban development. The powers of municipal governments were gradually curtailed by state administration. In this period, the only possibility of local citizen participation was through often erratically held elections (Kuruville & Waingankar, 2013).

However, Central government was mostly ineffective in steering the development of cities, and criticism was raised that State governments unequally distributed the respective funds to the cities (Kundu, 2011). Kundu explains that “*para-statal agencies that had taken over many of the functions of local bodies also came in for sharp criticism on grounds of inefficiency, lack of cost-effectiveness and continued dependence on grants*” (2011, p. 37). This led to shortfalls in provision of urban infrastructure, and ambitions to counter these factors triggered by lack of

financial capabilities of state and local authorities.

Thus the 74th Constitutional Amendment Act, 1992 (74th CAA), regarded as one of the most important legislations concerning city administration (Kuruvilla & Waingankar, 2013), acknowledged ULBs as the statutory third tier of government, aiming to capacitate them with powers of self-governance under elections on a regular base (MoHUPA, 2016b). Today, municipal governance in India is a matter of states, with the central government taking up a guiding role in policy (Nandi & Gamkhar, 2013). States delegate authority in urban development and administration of infrastructure and services to ULBs (Kundu, 2011). The levels of administration are depicted in Figure 17. In the following, today's most important administrative divisions and their competences concerning urban development and are introduced.

Central Government / Government of India

GoI primarily advises state governments and union territories in their matters of urban policy, setting national targets for urban development in line with national economic development strategies and goals (MoHUPA, 2016b, p. 101). By the Constitution, GoI is empowered to “*issue directives, provide advisory services, set up model legislation and fund programmes which the states can follow at will*” (Shaw, 1996, p. 224). Important guiding principles on urban development policy are reflected in the national FYPs (ibid.).

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA) and Ministry of Urban Development (MoUD) are the two institutions on national level addressing topics of urban development and housing, guiding the state governments in the following focal areas:

- formulation of policy frameworks
- implementation of national schemes
- assistance from multilateral/bilateral institutions
- technical advice in promotion of planned urbanisation (MoHUPA, 2016b, p. 101)

State Governments

State governments are implementing national urban development strategies under consideration of FYPs, and recent policies on urban development. They are entitled to develop state policies, and decide upon their execution by means of legal provisions. State governments decide upon following main thematic fields:

- urban poverty
- regulation of land
- housing
- establishment of basic infrastructure (MoHUPA, 2016b)

States implement national urban development agendas, and frame national programmes and schemes for implementation on state level. The Urban Development Departments on state level are the authorities responsible for planning, development and implementation of the plans and schemes (MoHUPA, 2016b). Nevertheless, it has been argued that despite their competences in matters of urban policy and development, only a handful of states have been progressively implementing urban policy, and large parts of existing policy is still originating directly from model-policies of GoI, without adaption on state level (Shaw, 1996).

Municipalities / Urban Local Bodies

ULBs are described as “*constitutionally provided administrative units that provide infrastructure and municipal services in cities*” (Nandi & Gamkhar, 2013, p. 56), acknowledged by the 74th CAA, due to the former role of ULBs being “*weak and ineffective on account of a variety of reasons, including the failure to hold regular elections, prolonged supersessions and inadequate devolution of powers and functions*” (Ministry of Law and Justice, 1992, §1).

States are advised to devolve power in eighteen functions to ULBs in the fields of “*land use, economic development, water, roads and urban poverty alleviation*” (Nandi & Gamkhar, 2013, p. 56). ULBs are furthermore asked to conduct quinquennial, direct elections (ibid.). Apart from decentralisation of central and state governance, the 74th CAA also envisaged a devolution of fiscal powers to ULBs, by establishing so called State Finance Commissions, “*to recommend resource distribution and mobilisation methods that further fiscal decentralisation from state governments to local governments*” (Nandi & Gamkhar, 2013, p. 56). However, while administrative powers mostly have devolved to ULBs through the 74th CAA, financial capacity often still has not, hindering municipalities to fulfil their administrative duties.

Depending on their size, the 74th CAA classifies cities and towns in three different administrative tiers, with varying independence and competences:

- Municipal Corporation: ‘*larger urban areas*’ (Ministry of Law and Justice, 1992, para. 3), with a population over one million
- Municipality (or Nagar Palika): ‘*smaller urban areas*’ (ibid.), with a population more than 100 000

- Nagar Panchayat (or City Council):’ *areas in transition from a rural area to urban area*’ (ibid.), with a population ranging from 11 000 to 100 000 (MoHUPA, 2016b, p. 104)

The Mayor of a Municipal Corporation mostly fulfils representative functions. The Municipal Commissioner holds executive powers, with Municipal Offices overseeing several fields and implementing local policy.

Ward Committees and Citizen Participation

Cities and towns with a population exceeding 300 000 are further divided into *wards*. As body for citizen participation, periodically elected *ward committees* should be established, to represent the interest of the ward’s citizens in the municipal body (Ministry of Law and Justice, 1992). Ward committees should “*act as institutions of neighbourhood governance and increase proximity between elected representatives and citizens and also provide a space for citizen participation in local level planning*” (Kuruvilla & Waingankar, 2013, p. 6). Ward committees are capacitated with decision-making powers in e.g. provision of infrastructure for their area of influence, and also decide over quality of services, depending on their financial capacities, leading to strong disparities in neighbourhoods with different income groups (Kundu, 2011).

However, the extend of a ward committees’ powers are limited and decided by state legislature as decided in 74th CAA, to avoid GoI influence local governance (Kuruvilla & Waingankar, 2013; Ministry of Law and Justice, 1992). Implementation of ward committees lacks behind in many states and if existing, they often perform insufficiently, with some exceptions (Sivaramakrishnan 2006, as cited in Kuruvilla and Wainagankar 2013, p. 6).

While ward committees are considered the local representation of the municipal government, in many cities, so called *residents’ associations* in middle- and upper-class neighbourhoods were established by the communities themselves, responsible for public services and safety, while representing residents in political decision making more effectively and transparent (Kundu, 2011).

However, depending on the income levels of the people living in the neighbourhood, residents’ associations have sometimes led to different quality of infrastructure in the respective area, fostering segregation between different income groups in cities (Kundu, 2011). This is also sometimes supported by government policies, strengthening rights of residents’ associations and similar neighbourhood organisations, often allowing them to evict emerging squatter settlements in their area of influence (ibid.).

4.3.2 Urban Planning and Housing

Since Independence, urban challenges in India have been approached via different policy measures at national, state, and municipal level. However, in some cases, urban policy was lacking a consistent, streamlined approach caused by scattered authorities and liabilities for urban areas, and to a certain extent, an ambivalent view of cities and their role in society in Indian history (Gnaneshwar, 1995). For example, while Mahatma Gandhi was as a strong opponent of urban life promoting an ideal form of Indian life in villages on the beginning of the 20th century, in post-Independent India influenced by PM Jawaharlal Nehru, the notion was towards cities' role as seminal, industrial hubs (Gnaneshwar, 1995; Batra, 2009). However, both ideals did not provide a “*role of cities in their respective visions of the future of India*” (Batra, 2009, p. 2), neglecting emerging challenges in urban areas.

Today, there is widespread acknowledgement of the importance of planned urban development both with politicians and scholars. Recent development programmes are explicitly focusing on urban areas and available research concerning the urban form and planning, spatial socio-economic developments, and matters on urban governance, is growing rapidly (Batra, 2009). As described earlier, urbanisation today is not regarded as a threat anymore, but as a facilitator of a growing economy, although Indian cities are facing many challenges due to challenges in planned urbanisation. Nevertheless, the linkage between urban and economic growth, has become one of the guiding visions of national macroeconomic development planning, which is executed via the FYPs.

Housing Shortage

The Technical Group on Urban Housing Shortage estimated a lack of 18.78 million housing units in 2012 (MoHUPA, 2011), indicating that about 28 per cent of all urban households in India are in lack of a decent house. With about 96 per cent or 17.96 million units, EWS and LIG are the most affected⁵, as illustrated in Figure 18 (Government of India, 2011; MoHUPA, 2011). Housing shortage comprises of households living in houses that are temporary constructions (so called *katcha* houses), in dilapidated or congested⁶ condition, and those households that are homeless (see Figure 19). About 80 per cent of the total urban housing shortage is accounted by congested living conditions, while in comparison, acute homelessness is accounting for three

5 It has to be noted, that the classification of EWS and LIG have changed since the Technical Group on Housing Shortage's report. This is further elaborated at a later section in this thesis.

6 Congested housing describes housing environments that are too small to ensure high quality of living for the number of people living on the respective space.

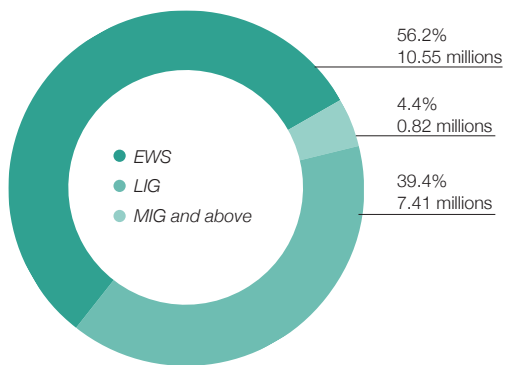


Fig. 19: Distribution of Housing Shortage amongst Income Groups 2012

Source: adapted from MoHUPA, 2011, p. 4

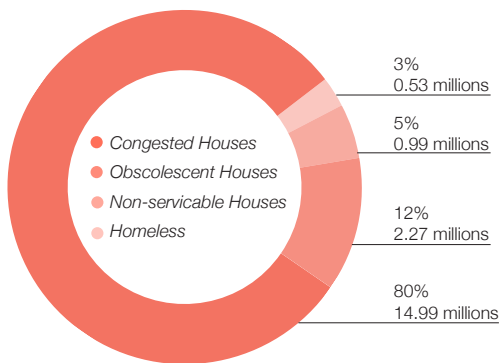


Fig. 20: Urban Housing Shortage 2012

Source: adapted from MoHUPA, 2011, p. 7

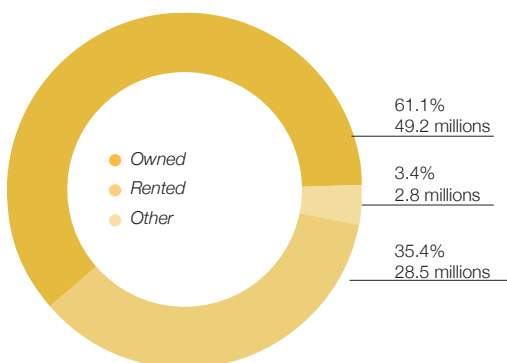


Fig. 21: Share of Homeownership and Renters in 2012

Source: adapted from Kumar, 2011, p. 1

per cent of the total numbers (Government of India, 2011; MoHUPA, 2011).

The national average household (rural and urban) comprises of 4.9 members, and lives in a dwelling consisting of two rooms (Government of India, 2011; Tiwari & Rao, J., 2016). While in urban areas 2.3 people share one room outside slums, in slum settlements more than three persons share a single room. Additionally, average living space about 8.6 sq. m. per capita is available outside slums, the average in slum settlements with 4.5 sq. m. per capita being much lower (ibid.). Those numbers indicate that a large proportion of urban citizens and especially slum dwellers, are affected by congested living conditions and thus lack of privacy and personal space. Insufficient household incomes, combined with large household sizes, lead to acceptance of such living environments out of necessity (ibid.).

While the number of newly constructed housing units is growing in absolute terms, housing shortage is not decreasing. This derives from newly created housing stock often being unsuitable and not affordable for those households lacking shelter. The target group in need for housing is therefore not catered for by supply created on the open market (Tiwari & Rao, J., 2016, p. 9). The growing number of currently about 20 million housing units in urban areas lying vacant, including speculative investment objects or houses lacking proper infrastructure, reflects this tendency (Gopalan & Venkataraman, 2015; KPMG, 2014; Kumar, 2016). Nevertheless, accurate description about the state of the vacant units and rea-

Tab. 10: Form of Tenure of Households in Urban India

		1993		2002		2008-09		2012	
		Numbers (Millions)	Households (in %)	Numbers (Millions)	Households (in %)	Numbers (Millions)	Households (in %)	Numbers (Millions)	Households (in %)
Owned	Freehold	-	-	-	-	39.9	60	48	59.6
	Leasehold	-	-	-	-	1.0	1.5	1.2	1.5
	Sub-total owned	23.9	58.5	35.0	59.9	40.9	61.6	49.2	61.1
Rented	Employer quarter	3.1	7.6	3.4	5.8	3.1	4.7	3.1	3.8
	Written contract	11.2	27.4	16.9	29.0	3.3	5.0	5.2	6.4
	Without written contract	-	-	-	-	16.9	25.4	20.3	25.3
	Sub-total hired	14.3	35.1	20.3	34.7	23.3	35.1	28.5	35.4
No dwelling		0.1	0.3	0.1	0.1	0	0	0	0
Others		2.5	6.2	3.1	5.3	2.2	3.3	2.8	3.4
Total		40.8	100	58.5	100	66.5	100	80.5	100

Source: adapted from Kumar, 2016, p. 1

sons why they are lying vacant is not given (Kumar, 2016). However, those numbers show that already with the existing stock, hypothetically, the current housing shortage could be relieved, whether by retrofitting of deficient units or legislating release of vacant units onto the market.

Neglect of official policy promoting rental housing after Independence, and hindrances such as tight rent control laws throughout the country, led to a relatively small proportion of tenants compared with homeowners in India today. While in total about ten per cent of citizens were renters in 2011, about 80 per cent of the total number of tenants were living in cities (Kumar, 2016). The number of tenants is rising, both in formal and informal rent agreements (see Table 10). Today, especially middle to higher-income groups are able to access rental housing, while those on the bottom of the income pyramid are lagging behind, especially in regard to formal arrangements. Approaches towards increased supply of rental housing options in the JNNURM and RAY programmes for the urban poor did not have the expected results (Kumar, 2016), however, the upcoming recent rental housing policy of the Central government shows tendencies towards an increased focus on tenancy in low-income housing provision.

Since 2001, the number of Indian citizens living in notified slums grew from 52 million back in 2001 up to 65 million in the census 2011, with 2613 or 64.6 per cent of the 4041 Statutory Towns having identified slums within their boundaries, with projections pointing towards further growth in absolute numbers (Government of India, 2011; Shaw, 2017). Also the number of so-called Scheduled Castes⁷ within slum settlements grew significantly, increasing from

7 Scheduled Castes and Scheduled Tribes represent statutory acknowledged groups of Indian citizens historically discriminated and therefore are often respected through privileged rights in policy issued by GoI.

18.5 in 2001 to 20.4 per cent in 2011 (ibid.). According to Shaw (2017), the growing number of slums as well as the increasing number of especially vulnerable groups within slum communities, point out trends towards the rise of larger disparities in cities and “*the failure of existing land and housing policies*” (2017, p. 9).

4.3.3 Emergence of Urban Housing Policy in India

For a better understanding of India’s current urban housing policy, the following section gives a brief historical outline against the backdrop of macroeconomic and political developments. In the style of Tiwari and Rao (2016) and Shaw (1996), also here, Indian urban housing policy is roughly grouped into four periods under reference to relevant FYPs: *Post-Independence* under PM Nehru (1950 to mid-60s), *Pre-Liberalisation* under PM Gandhi (mid-60s to early 90s), *Post-Liberalisation* (early 90s – 2000s) and *Globalisation* (2000s - today). Table 20 provides a further overview.

Post-Independence (1950s to mid-60s)

In the first twenty years after Independence, the most important housing provider, especially for lower-income groups, was the Central government. The private sector was mostly catering for the housing supply of the MIG and HIG. This period was strongly influenced by PM Nehru, whose macroeconomic policies concentrated on “*self-reliance, import substitution, and development of capital goods industries*” (Tiwari & Rao, J., 2016, p. 5). Housing was above all considered as a social need, and not as an economic investment or contributor to India’s economy (Hingorani, 2011). This was also reflected in the Constitution, where the right to housing has not been integrated till today (Tiwari & Rao, J., 2016).

GoI attempted to reduce prices for housing through high subsidies for projects targeted at the LIG and by decreasing building cost through seminal, cost-efficient construction material. Though, the initial target group often resold those highly subsidized dwellings to MIG and HIG to take the profits, with the actual beneficiaries often moving back to their previous, precarious livelihoods (Hingorani, 2011). This form of highly subsidized shelter provision led to housing for the urban poor becoming a strong burden on the Central government’s budget.

At that time, India’s urban housing shortage was primarily caused due to two factors: first, a high number of refugees was migrating from Pakistan to cities of North India due to Partition of British India in two nations, Pakistan and India, in 1947. Second, many industrial production plants emerged during World War II in major urban hubs and were a pull factor causing rural

to urban migration. While housing for the latter was provided by the employers to a certain extent, soon demand exceeded supply, resulting in mushrooming slums and poor quality of housing (Tiwari & Rao, J., 2016). In the first FYP (1951-56) GoI addressed the emerging housing crisis with the creation of housing for refugees and workers (Batra, 2009), which led to so called refugee 'colonies' in cities and the creation of planned 'model towns', like Chandigarh (Hingorani, 2011).

The policy of highly subsidized housing continued during the second (1956-61) and third FYP (1961-66) with a stronger focus on the lower end of the income pyramid. This was accompanied by attempts to counter shrinking supply and regulate increasing prices of housing by legislation. Thus, by-laws were passed and master planning for cities was introduced to further regulate land use (Shaw, 1996). Notably in 1959, the *Rent Control Act* (RCA) was adopted to counter increasing rents, caused by little supply and huge demand. Until today, the RCA is considered to hamper private sector investment in rental housing and having caused today's sluggish development of a formal rental housing sector in India. The RCA has put landlords at a disadvantage, while making rental housing unprofitable in the long run (Hingorani, 2011). The third FYP formalised the aspirations to streamline master-planning through urban policies (Shaw, 1996) and in some cities (e.g. Delhi and Mumbai), *Development Authorities* were created to implement them (Batra, 2009). Several housing institutions were established that are still relevant today:

- *Ministry of Works, Housing and Supply*, which later transformed in today's MoHUPA
- *National Buildings Organisation*, for research and promotion of seminal, low-cost construction material and technologies
- *State housing boards*, routing Central government funds to State governments instead of individual beneficiaries to fund projects (Hingorani, 2011; Tiwari & Rao, J., 2016)

Post-Independence was heavily influenced by intervention of the Central government in housing production, however, the housing units supplied could not meet the growing demand. The government's programmes, while targeting low-income groups in their policies, did often not reach the intended target groups, remaining too expensive unsuitable for the poor, with new developments often located in the badly connected periphery. Acquisition of land remained expensive and lack of possibilities for participation of communities was hampering implementation (Tiwari & Rao, J., 2016). Therefore, self-help housing in slums remained an affordable, though illegal form of housing provision (Hingorani, 2011). Nonetheless, at that time, policies were mostly leaning towards slum prevention and eviction rather than upgrading, a notion,

which transitioned not until the late 60s (Batra, 2009).

Pre-Liberalisation (mid-60s – early 90s)

Stagnating and unstable economic growth led to increased regulations in economy, industry and foreign investments during this period. This regulative policy was strongly influenced by the government of PM Indira Gandhi, causing disputes between the private sector and the government, and finally leading to political instabilities and the *Emergency*⁸ (Tiwari & Rao, J., 2016). Central budgets were stressed and the notion evolved that housing demand could not only be met by the public sector alone (Hingorani, 2011).

Housing policy was experiencing a slow paradigm shift from new housing construction, evictions and resettlements to recognition of informality as an asset within cities (Hingorani, 2011). Meeting the housing demand for the poor only by highly subsidized construction was regarded as unsuccessful and financially unsustainable, thus, the design of the programmes shifted to in-situ slum upgrading or sites-and-service schemes also reflected in the rhetoric of the fourth FYP (1969-74), not least influenced by the WB's initiatives promoting potential cost-recovery through such schemes (ibid.), and advocating of self-help housing concepts by academics as John Turner.

An important programme reflecting this notion was the *Environmental Improvement of Urban Slums* (EIUS) programme, that launched during the fourth FYP in 1972, to improve basic services in slums such as water and wastewater provision, storm water management and community sanitation, with the State governments as implementing entities (Batra, 2009). EIUS proceeded for the next two decades, gradually widening its scope and integrating other schemes on urban poverty and infrastructure (Mathur, O. P., 2009).

The fifth FYP (1974-78) included the adoption of the *Urban Land (Ceiling and Regulation) Act* (ULCRA) from 1976 by Central government. ULCRA intentioned to reduce accumulation of vacant land in urban areas to counter land speculation and to stimulate its release for construction, aiming to better distribute land between income groups (Shaw, 1996). However, ULCRA was not implemented by many state governments, and if so, often achieved the contrary of the intended goals. Land speculation even increased due to artificially reducing availability of construction land and causing rising prices (Shaw, 1996). This led to the abrogation of the Act in 1999, although, it did not result in immediate repeal of the act in many states (Wadke, 2006).

The sixth FYP (1980-85) recognised that urban poverty needs to be addressed differently

8 *The Emergency* describes the period between 1975 and 1977, when Prime Minister Indira Gandhi imposed state of emergency due to 'internal disturbances' throughout India, authorizing the Prime Minister to rule by decree, leading to the curtailment of civil rights, press censorship and suspension of elections (Singh, R., 2016).

than rural poverty via specialised programmes. The plan also envisaged steering strong urban growth away from large cities by strengthening less populated towns (Tiwari & Rao, J., 2016). This was reflected in the *Integrated Development of Small and Medium Towns* (IDSMT) programme introduced in 1979 continuing until 2005. IDSMT targeted implementation of infrastructure and housing projects while stimulating economic development in smaller and medium sized towns (Shaw, 1996).

The seventh FYP (1985-90) continued with the rhetoric of focused programmes whether on urban or rural areas. Programmes such as the *Urban Basic Services* (UBS) programme were introduced in 1986 targeting specifically urban poor. UBS aimed to improve the situation of women and children living in slums, by providing them with educational and healthcare facilities and integrating community infrastructure within slum settlements (Mathur, O. P., 2009, p. 46). Poverty was mostly addressed through sectoral schemes, lacking a holistic approach including social, physical infrastructure and housing at the same time.

During the Pre-Liberalisation period, first steps were made away from directly subsidized housing, towards the creation of a housing finance sector including private and public stakeholders. Amongst the first and most important housing finance institutions (HFIs), were the following:

- *Housing and Urban Development Corporation* (HUDCO) founded in 1970 to provide Central government funds to ULBs for housing and urban infrastructure projects, primarily targeted at EWS and LIG, and assist with land procurement
- *Housing Development Finance Corporation* founded in 1977, as a private financial institution giving out loans targeting at individuals of MIG and HIG and housing cooperatives (Shaw, 1996)

Adoption of India's first *National Housing Policy* (NHP) in 1988 highlighted the change of the Central government's role from a housing provider to a facilitator. Central government gradually relied more on the private sector to take over housing production for middle- and higher income groups, while keeping the responsibilities for direct housing provision for LIG and EWS (Batra, 2009; Tiwari & Rao, J., 2016). In the same year, the establishment of the *National Housing Bank* (NHB) took over the role to route Central funds into the housing finance sector to private institutions. This further strengthened the role of private housing finance for middle- and higher income groups (Batra, 2009). "*Lower interest-rate regimes, rising disposable incomes, relatively stable property markets, fiscal incentives offered (...), and the viability of housing finance as a business*" (Tiwari & Rao, J., 2016, p. 21) resulted in a growing number of private banks gaining interest in the sector. Also the target groups, mostly with middle- and higher incomes, became more aware and less reluctant to mortgage debt to finance their house constructions (ibid.).

Despite the rhetorical changes towards slum settlements, forced evictions and resettlements still were common practice and the schemes again did often not reach down to the households at the bottom of the income pyramid as much as intended (Hingorani, 2011). Contradictory competences of the implementing agencies at national and state levels and the often small, silo-oriented structure hampered successful implementation of programmes (Mathur, O. P., 2009). Nevertheless, middle- and higher-income groups profited through the establishment of HFIs and broadening the scope of private housing finance during this period (Tiwari & Rao, J., 2016).

Post-Liberalisation (early 90s – 2000s)

Liberalisation of the macro-economy led to a transformation from an 'old' middle-class consisting mainly of public sector employees to a 'new', broader, inclusive consumerist middle-class (Shaw, 2017). Market liberalisation also affected the housing sector. More efforts to increase participation of private developers in housing construction were made, not least influenced by the aforementioned 'enabling approach' that was promoted by the WB. In the Post-Liberalisation period, the importance of cities as major economic drivers within the country and the trends pointing towards further urbanisation were acknowledged, leading to an increase of policies and programmes tailored and targeted specifically at the development of urban areas (Tiwari & Rao, J., 2016).

The seventh (1985-90) and eight FYP (1992-97) further highlighted the development of small and medium towns with channelled funds through the IDSMT. Emphasis on continuing decentralisation of administrative powers to ULBs culminated in the earlier described 74th CAA in 1992 (Shaw, 1996). While administrative competences were transferred to ULBs, finance and administrative capacities often were not, hampering ULBs in implementation of the designated programmes (Hingorani, 2011). ULBs and states were required to increase their efforts to raise funds from private finance institutions and the market, and to consult private firms for matters of urban development, especially for those projects in sectors that were not explicitly pointed out in the FYPs (Batra, 2009, pp. 23–25).

The *National Housing and Habitat Policy* (NHHP) in 1998, aimed to achieve 'shelter for all' by 2001 and underlined this notion by promoting to strengthen PPPs in the real estate sector. The private sector should hold the main responsibility of housing construction throughout the country, with GoI further removing existing constraints and regulations in housing development, such as offering tax incentives for developers. However, due to market mechanisms failing in housing provision for the most vulnerable and lowest income groups, GoI should still cater for their housing needs (Batra, 2009; National Housing Bank, 2012).

Efforts were made to follow an integrated approach in reduction of urban poverty through various programmes, combining alleviation of urban poverty with housing provision. For example, the on-going UBS got subsumed and up-scaled in the *Urban Basic Services for the Poor* programme and in 1997, a slum-upgrading scheme, and the *National Slum Development Program* launched, both backed by increased Central funds. In 2001, the *Valmiki Ambedkar Awaaj Yojana* (VAMBAY) scheme was introduced to improve the housing quality for slum dwellers in urban areas, alongside a programme focusing on the provision of healthcare and community sanitation facilities (Hingorani, 2011).

While official policy such as the NHHP further strengthened housing finance higher income groups, liberalisation did not ameliorate housing conditions for the poor. The holistic approach promoted in policy, was still not followed in the rather small-structured programmes, with different ministries responsible. While community participation often was envisaged in the rhetoric, it still was hardly carried out in implementation of the programmes. HFIs continued to be inaccessible for the lower income groups, mostly due to lack of official land titles and proof of regular incomes, although the government under PM Singh raised efforts to provide slum citizens with proof of identification (Tiwari & Rao, J., 2016).

Globalisation (2000 until today)

The period after 2000 was coined by a global shift towards globalisation of economies, with cities taking up the most important roles in the process. *“The global focus shifted from competitiveness of nations to competitiveness of cities”* (Tiwari & Rao, J., 2016, p. 22), with Indian cities lacking behind due to constraints in provision of infrastructure, facing congestion, growing environmental impacts, and continuous growth of slums. The tenth FYP (2002-07) recognized that EWS and LIG were suffering most of the housing shortage. Municipalities had failed in integrating by-laws ameliorating housing situation of the lowest income groups and constraints between the responsible agencies led to difficulties in implementation of the fragmented slum upgrading schemes, in spite of theoretical availability of funds (Hingorani, 2011).

Despite the unsatisfactory results market liberalisation had on the low-income housing sector and land prices, the eleventh FYP (2007-12) further promoted liberalisation, which was also reflected in the *National Urban Housing and Habitat Policy* (NUHHP) of 2007. The NUHHP again emphasized ‘Affordable Housing for All’ for all layers of society, moving away of fully subsidized programmes, towards mixed, cost-recovery approaches also for vulnerable and lower-income groups (MoHUPA, 2016b). A revision of the NUHHP is expected to be released in 2017, integrating the directions given by the SDGs and the NUA in the policy (MoHUPA, 2016a).

The eleventh FYP also marked a turn away from the experiences made in the previous periods concerning alleviation of urban poverty and housing shortage. The rhetoric of integrated approaches, even if often implemented with mixed results, including on-site upgrading and amelioration of socio-economic backgrounds shifted back to direct housing provision and construction of new settlements. Against this backdrop, the comprehensive *Jawaharlal Nehru National Urban Renewal Mission* (JNNURM) was launched, the first programme comprehensively addressing a wide range of sectors relevant for urban development and city planning. Through further supporting private sector investments in matters of urban development, JNNURM could be regarded as a confirmation of previously described tendencies of market liberalisation in India (Birkinshaw, 2014). However, despite its high ambitions, JNNURM has had mixed outcomes, as described in detail in the subsequent section. The housing and slum improvement vertical of JNNURM, titled *Basic Services to the Urban Poor* (BSUP), was later followed up in the *Rajiv Awas Yojana* (RAY) programme in 2013. RAY pursued an integrated, city-wide approach, by formalising existing slums, drawing conclusions of the lessons learned of the implementation of the BSUP programme.

However, RAY was soon subsumed under the PMAY programme with the election of PM Modi's government in 2014. PMAY continues to follow the city-wide approach that was promulgated in RAY, promising to include all citizens living in inadequate housing of poor standard in the programme. Integrating lessons learned from previous periods, PMAY's verticals foster participation of the free markets and private sector, direct provision of subsidies and loans to citizens, and the utilisation of the value of construction land as a leverage (Interview B, 2017). PMAY is part of GoI's recent focus on development of urban areas through several programmes:

- *Atal Mission for Urban Rejuvenation and Transformation* addressing provision of basic infrastructure for the urban poor
- *Swachh Bharat Abhiyan/Clean India Campaign* aiming for establishment of adequate sanitation in cities
- *Heritage City Development and Augmentation Yojana* on preservation of urban heritage
- *Smart Cities Mission* promoting urban development backed by ICT solutions

Alongside those programmes, GoI is further addressing housing shortage through development of several policies. The development of a *National Urban Rental Housing Policy*, which is currently in draft mode aims to promote the establishment of a formal rental housing sector in India, by establishing legislative frameworks. Additionally, the *Model Tenancy Act 2015* aims to balance “rights and responsibilities of landlords and tenants through rental contracts” (MoHUPA, 2016a, p. 14).

To increase participation of the private sector in low-income-housing construction, in the budget of 2016, a service tax exemption for houses up to 60 sq. m. and full deduction of profits made through affordable housing construction has been introduced (Sharma, 2016). In 2017, GoI changed the official status within India's central budget of affordable housing to infrastructure, alleviating allocation of loans for housing programmes to increase private sector investment (Ramnani, 2017).

Jawaharlal Nehru National Urban Renewal Mission (JNNURM)



Fig. 22: Logo of the JNNURM Mission

Source: MoUD, 2016

The comprehensive JNNURM was active from 2005 until 2014, aiming to reform urban governance structures, land markets and the property sector (Hingorani, 2011). The mission covered 63 cities, and comprised of two main verticals⁹:

- The *BSUP* sub-mission for the improvement of infrastructure, housing and urban poverty including integrated redevelopment of slum settlements,
- *Urban Infrastructure and Governance* sub-mission to promote the consistent implementation of the 74th CAA and further decentralize and restructure urban administration (Nandi & Gamkhar, 2013).

BSUP was focusing on the improvement of livelihoods of slum dwellers. The declared goal of the mission was to construct 1,5 million homes until 2012 (Government of India, 2010). In the programme guidelines, the rhetoric shows that measures were contemplated to improve slums in an integrated way, considering security of tenure and delivery of basic services as well as social security, health, and community aspects. Moreover, the mission objectives explain that “care will be taken to see that the urban poor are provided housing near their place of occupation” (MoHUPA, 2005, p. 3) which is considered an important part for the dwellers to maintain

⁹ For cities and towns not covered by those sub-missions, the *Urban Infrastructure Development Scheme for Small and Medium Towns* and the *Integrated Housing and Slum Development Program* were introduced with slightly different scope and required preconditions.

their former jobs and personal social networks. However, while the guidelines supported such measures, it still remained a matter of interpretation open to the ULBs. The appraisal checklist for the *Detailed Project Reports* (DPRs) required to access funds asks, if the construction site of the new settlement is “*in proximity to the original site/work-place*” (Patel, S. et al., 2015, p. 6), but lacks a statutory definition of the term ‘proximity’, leaving room for the ULBs to interpret it in their own way (ibid.). Whereas according to the guidelines in-situ upgrading should be preferred in project implementation, Patel et al. argue that in most cases, projects under BSUP were carried out as relocation projects and subsequently often developed in unfavourable areas in the periphery of the respective cities, causing loss of economic, social and human capital (ibid.).

While JNNURM made significant progress concerning urban infrastructure provision in general, in turn, the outcome did not meet the expectations concerning housing for the urban poor. Despite the postulated integrated approach, many of the implemented projects remained small-structured and faced difficulties in implementation due to constraints in administrative competences, on national, state and municipal level. Even though the programme aimed at project design and implementation via a participatory approach, in many cases it was not carried out, which resulted in deferrals during housing construction, relocation of dwellers, and finished projects not being appropriate for the target group. In spite of the rhetoric towards in-situ upgrading, the majority of the projects were carried out through newly constructed buildings. This also led to an increase of cost through slow implementation and rising building material cost which resulted in a reduction of the number of units, also making dwellings too expensive for many of the target group. Only half of the approximately one million approved dwellings was built until the end of the BSUP mission in 2014, with only 36 per cent of the constructed units being inhabited by 2015 (Bhise & Singh, S., 2013; Patel, S. et al., 2015).

Even though the abrogation of the UCLA was a mandatory precondition for states to access funds, it did not mobilise land as expected. Preparation of *City Development Plans* (CDPs), that were required to access funds and included visions for future development of the respective cities, were often outsourced to independent consulting firms. As a consequence, the CDPs often lacked behind in implementation through missing links and discrepancies between the actual urban planning agencies of the municipalities and the consulting agencies. Another constraint in implementation was shortage of capacity on all levels, and lack of a capacity building component within the programme to address this factor. Additionally, ULBs did not succeed in procurement of additional funds on the finance market (Hingorani, 2011; Tiwari & Rao, J., 2016).

Rajiv Awas Yojana (RAY)

In 2011, the RAY scheme was approved by GoI, directly aiming at the improvement of livelihoods of the urban poor, including lessons learned from the BSUP programme. Its goal was to make India free of slums until 2022, by improving the state of houses, and directly providing dwelling units as well as civic and social infrastructure for urban slum dwellers (MoHUPA, 2013b). With 50 to 75 per cent, most of the funds were taken up by Central government (Nair, 2016a). Main goals of the programme included:

- improvement and provision of housing, physical and social infrastructure in slums and provision of secure tenure
- reforms countering factors that result in emergence of slums, and reforms in legislation and regulation of urban development and planning, including promotion of rental housing models and overhauling of rent-control laws
- increasing supply of affordable housing units
- capacity building and participation as well as decision-making of slum communities at all stages of the scheme (MoHUPA, 2013b; Tiwari & Rao, J., 2016)

RAY furthermore aimed to include the private sector in affordable and rental housing construction for the urban poor, e.g. by public-private partnerships, via an *Affordable Housing in Partnership* component. RAY foresaw the preparation of city-wide *Slum Free City Plan of Action* (SFCPoA) documents by the ULBs under participation of slum communities. SFCPoA should list existing slums targeted for improvements, as well as strategies including measures to counter future emergence of new slums. RAY was strictly aiming to prevent slum resettlements unless completely inevitable (ibid.).

One of the most significant aspects of RAY in comparison to preceding schemes were its guidelines including participation of affected communities on the macro-planning level for creation of the SFCPoAs and all other stages of the implementation process. However, despite the strong encouragement of community participation, the rhetoric was not followed consequently during implementation by many states and ULBs (Bhise & Singh, S., 2013). Also the classification in tenable and untenable slums, the former being open for improvements while



Fig. 23: Logo of the RAY Mission

Source: MoHUPA, 2013a

the latter considered completely unsuitable for upgrading and therefore relocation, led to many settlements simply declared as untenable (ibid.).

RAY had a very short timeframe to show off definite results and the full potential of its rather progressive, inclusionary approach. Furthermore, during its early phase of implementation, RAY was not received and implemented that enthusiastically by ULBs (Tiwari & Rao, J., 2016). Additionally, unexpected increases in construction cost resulted in many approved buildings not getting constructed, and only about 30 per cent of the constructed dwellings being occupied by April 2016 (MoHUPA, 2016d). The on-going projects under RAY got subsumed in the PMAY programme, which is described in the subsequent section.

4.4 Housing for All (Urban) – Pradhan Mantri Awas Yojana

The PMAY¹⁰ mission aims to decrease India's housing shortage in urban areas by addressing the housing shortage of 20 million dwellings by constructing solid and permanent housing units including water, sanitation and 24 hour electricity for all Indian citizens in statutory towns by 2022. The nation-wide programme was introduced by the newly elected government under PM Modi on 17th June 2015 and is scheduled to continue until 31st March 2022.

PMAY aims to include not only slum but all households corresponding to the income criteria of EWS and LIG and are in need for improvement of their existing house or residing in a *kutcha* house and therefore being eligible for a new house (MoHUPA, 2016f). In general, an eligible household under PMAY comprises of “*husband, wife unmarried children*” and “*should not own a pucca house either in his/her name or in the name of any member of his/her family in any part of India*” (ibid., p. iii).

The PMAY mission is regarded as a Centrally Sponsored Scheme, except the CLSS vertical that is implemented as a Central Sector Scheme¹¹, as described below. GoI supports the construction of a housing unit with a sum ranging from 100 000 to 150 000 INR (1 542 to 2 313 USD) (MoHUPA, 2016b). Therefore, the programme relies strongly on public funds of states and ULBs, and especially on the participation of the private sector (Nair, 2016b).

PMAY is structured in three supply- and one demand oriented vertical as follows (see Figure 24) (MoHUPA, 2016f):

10 Pradhan Mantri Awas Yojana translates into „The Prime Minister's Housing Scheme“. In 2017, a scheme supporting rural dwellers, PMAY (Gramin) has been launched (Business Standard, 2017). However, with the programme not being interlinked with the urban programme, it is not discussed in this thesis.

11 Centrally Sponsored Schemes are partly financed by GoI with States contributing a defined share of the total budget, ranging from 50:50, 70:30, 75:25 or 90:10. States and their agencies also are responsible of implementation of a Centrally Sponsored Scheme. In turn, Central Sector Schemes are completely funded and implemented by GoI (Srija & Vettickan, 2015).

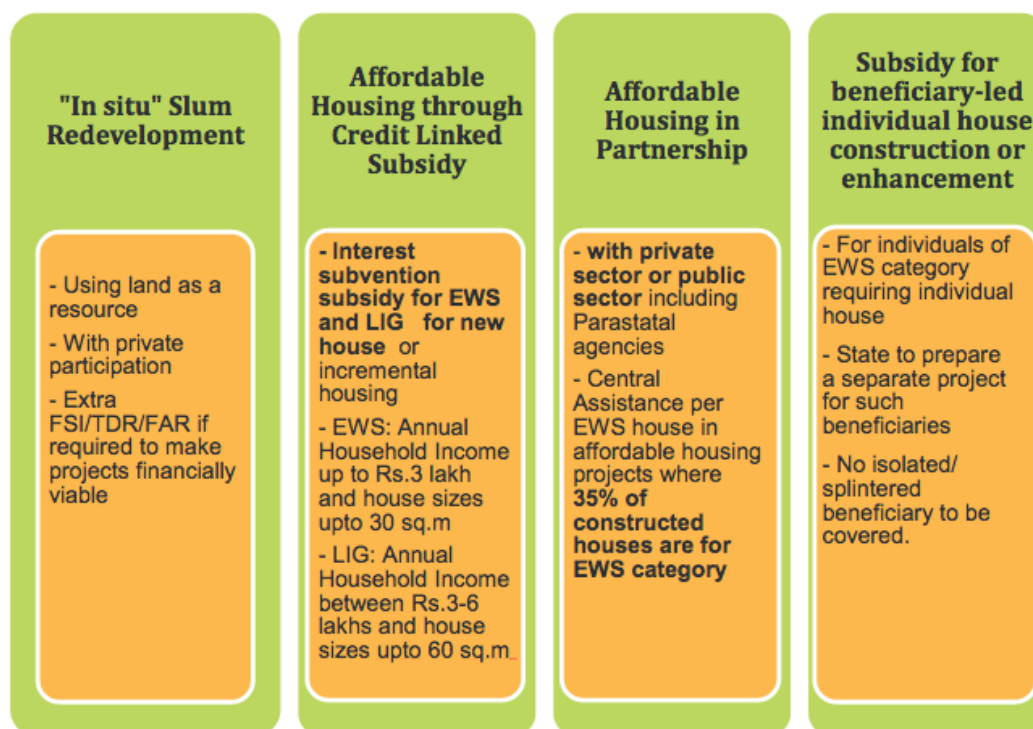


Fig. 24: Four Verticals under PMAY

Source: MoHUPA, 2016a, p. 4

- **“In-situ” Slum Redevelopment Using Land as a Resource (ISSR):** existing slums are improved on the original location, with households moving to transit homes during the construction period,
- **Affordable Housing through Credit Linked Subsidy Scheme (CLSS):** aiming to make low-interest loans accessible for housing construction and improvement to LIG and EWS households,
- **Affordable Housing in Partnership (AHP):** aiming at public-private partnerships in housing construction for LIG and EWS,
- **Subsidy for Beneficiary-Led Individual House Construction or Enhancement (BLC):** targeting EWS households for new housing construction or improvement of existing buildings.

In general, in PMAY GoI subsidizes the construction of housing units with a maximum of 30 sq. m. living space for EWS and 60 sq. m. for LIG, with states allowed to adapt the respective dwelling size through their own budget. All projects realised under PMAY should have access

to basic physical infrastructure, established via State governments or ULBs. Constructed houses are allotted under the name of the female head or both the heads of the household. In new developments, local authorities should envisage the establishment of residents' associations or other forms of community organisations to maintain the buildings and neighbourhoods over long-term (MoHUPA, 2016a).

Implementation Process

The implementation of PMAY requires states to integrate several reforms on urban policy as a precondition to access funds. The mandatory preconditions address mostly urban land release, due to availability of land in urban areas considered as the biggest constraint in affordable housing provision (MoHUPA, 2016f, §11). The most notable preconditions are as follows:

- Adaptation of city master plans and identification of land that remains reserved for affordable housing only,
- Reform and loosen of existing regulations concerning FAR to increase densities of new developments and to further incentivise construction for private developers,
- Adjustment of rental housing legislation, drawing on the Model Tenancy Act of 2015,
- Single-window approval systems for layout plans and construction permits should be introduced for ULBs to speed up the process of project implementation¹².

Furthermore, states and ULBs are required to prepare so-called *Housing for All Plan of Actions* (HFAPoA) for each city (see Figure 25). HFAPoAs need to include potential areas selected for development, and a list of beneficiaries that are eligible for a house under a respective vertical of PMAY. Furthermore, they are required to give detailed information about existing slums for the ISSR verticals, and other areas relevant for the remaining verticals. ULBs are also asked to identify existing but vacant dwellings and to consider them in their demand survey (ibid., §8.3). States are responsible to define a cut-off date, to include only those residents in the programme who are living in the respective urban area since a specific date.

12 Currently, in India, more than 35 procedures required to acquire a building permit on average, ranking India amongst the countries which require the most building permits in the world (World Bank, 2016). This could stall processing, lead to increase of construction time and cost.

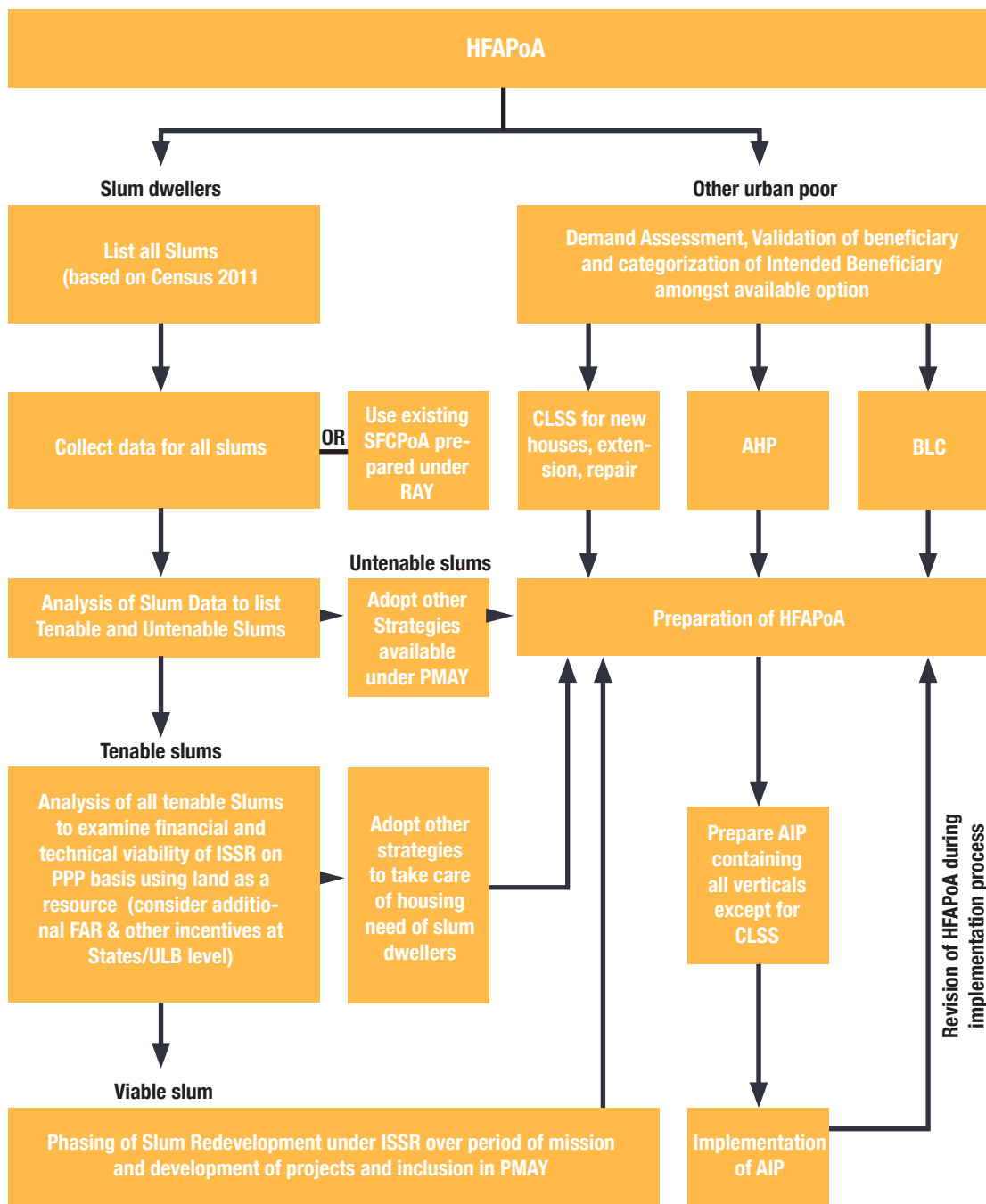
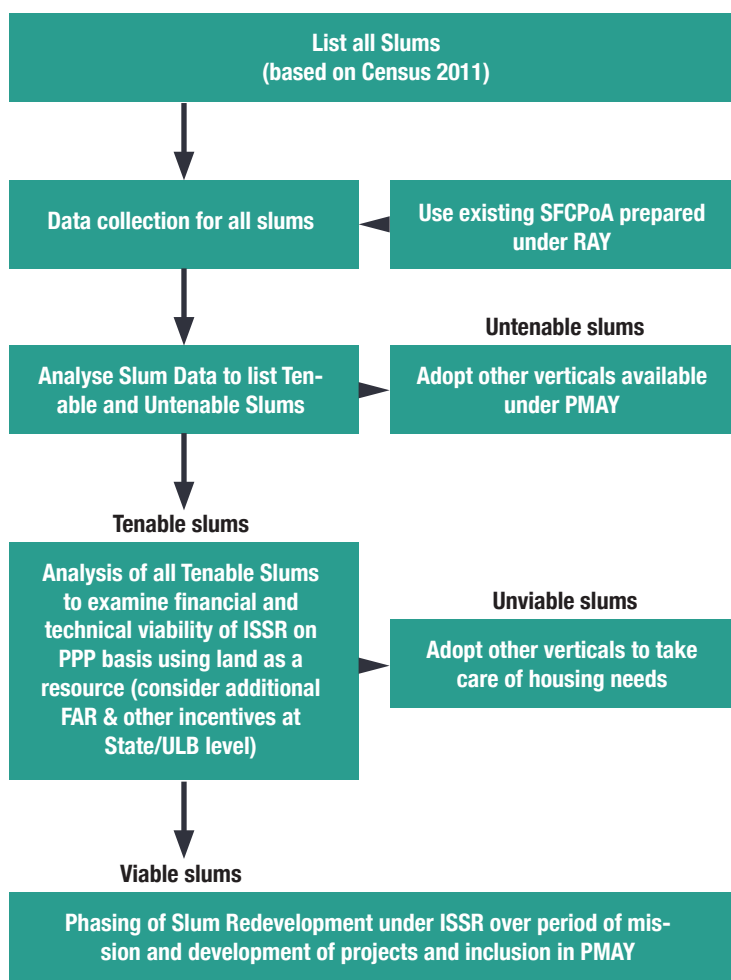


Fig. 25: Implementation Process of PMAY via HFAPoAs

Source: adapted from MoHUPA, 2016a, p. 4



Technology Sub-Mission and Capacity Building

PMAY includes a ‘Technology Sub-Mission’ to integrate ecologically sustainable building technologies and designs within PMAY projects. The mission scope includes “*Design & Planning, ii) Innovative technologies & materials, iii) Green buildings using natural resources and iv) Earthquake and other disaster resistant technologies and designs*” (MoHUPA, 2016f, §9.3), suitable for the respective geographic areas, and to scale it up to all administrative levels including the implementing agencies. Above all, the mission is targeting to integrate prefabricated housing construction using concrete and steel-frame technologies instead of tradi-

Fig. 26: Implementation Process of ISSR

Source: based on MoHUPA, 2016a, p. 5

tional brickwork for PMAY.

Additionally, about five per cent of PMAY’s budget is reserved for capacity building of stakeholders on several levels, including research and dissemination of case studies, organisation of workshops or study trips. The component also includes handholding in the development of HFAPoAs (ibid., §12).

4.4.1 Programme Components

States and ULBs can choose from four verticals included in the PMAY programme. The eligibility criteria for beneficiaries in each vertical, the maximum amount of subsidy, and processes

involved are described in this section.

“In-Situ” Slum Redevelopment Using Land as Resource (ISSR)

ISSR aims to improve housing conditions in existing, notified slums located on land owned by Central, State, Municipal governments as well as on private land, under participation of the private sector (see Figure 25). Initially, states and ULBs identify eligible slums in their HFAPoA. In those slums that are selected for redevelopment, a certain percentage of dwellers defined by the state, has to give a written consent to their agreement to the redevelopment (Interview B, 2017). Subsequently, via an

open bidding process, a private developer is selected as a partner to the state or municipal development agency. The slum is then redeveloped with increased densities through multilevel buildings, with dwellings not exceeding 30 sq m, subsidized by GoI with up to 100 000 INR. Slum dwellers are provided with the new units free of charge. On the remaining land made available through increase of density, developers are given construction land free of charge and are then allowed to construct and sell dwellings with higher FAR on the open market to cross-finance the slum-improvement project (MoHUPA, 2016f, §4).

ISSR aims to integrate notified slum settlements into the ‘formal’ urban fabric. Therefore, when projects are completed, the settlement is ‘denotified’ as a slum, changing its legal status to a formal neighbourhood of the city (MoHUPA, 2016f, §4.1). States are asked to provide sufficient legislation to prevent immediate resale of the free units, though allotment “on own-

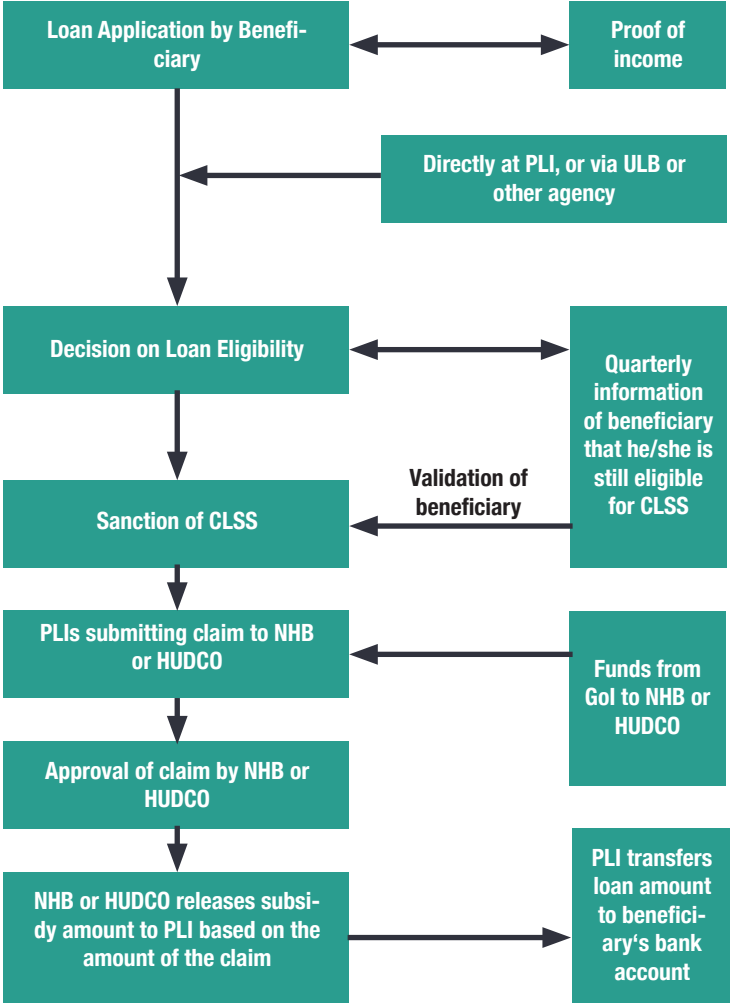
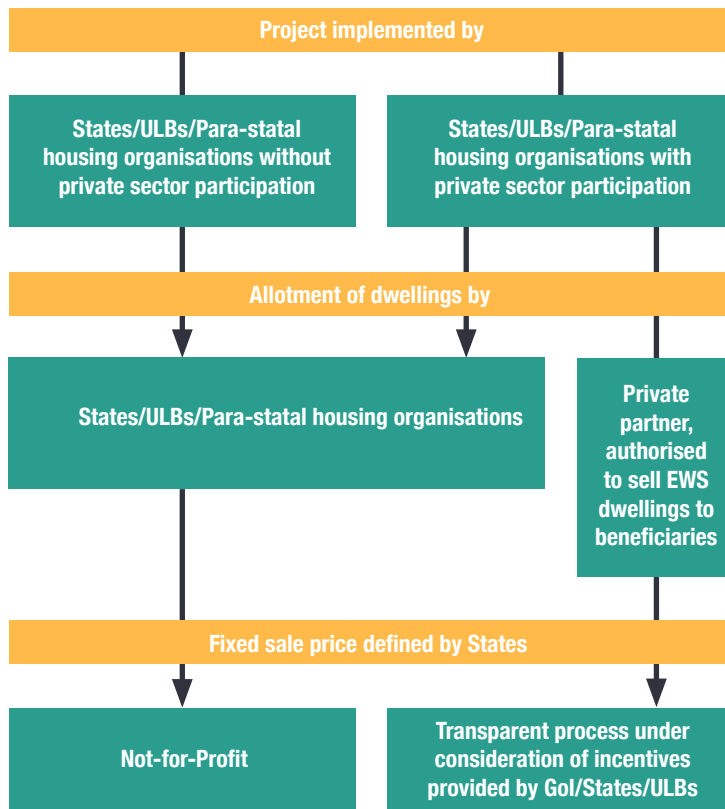


Fig. 27: Implementation Process of CLSS
 Source: based on MoHUPA, 2016a, p. 8



ership rights, or on renewable, mortgageable and inheritable leasehold rights” (ibid., §4.7).

Affordable Housing through Credit Linked Subsidy Scheme (CLSS)

CLSS is a demand-based instrument open for beneficiaries from EWS and LIG, to access centrally subsidized loans. The subsidy is channelled via *Private Lending Institutions* (PLIs) at an interest rate of 6.5 per cent with loan durations up to 15 years for incremental construction, expansion or purchase of a house. PLIs include “*Commercial Banks, Housing Finance Companies, Regional Rural Banks (RRBs), State Cooperative Banks, Urban Cooperative Banks*” (MoHUPA, 2016f, p. iii). The maximum subsidized loan amount is 300 000 INR (4 627 USD) for dwellings with 30 sq. m usable area for EWS and 600 000 INR (9 254 USD) for dwellings with 60 sq. m usable area for LIG (MoHUPA, 2016f, §5). The procedure of acquiring the CLSS is depicted in Figure 26. After release of funds to the respective bank by the Central agency, the loan is directly routed to the beneficiary’s bank account, which is a precondition to access funds (MoHUPA, 2017a). Moreover, beneficiaries need to prove that they have a regular income (MoHUPA, 2016f, §5). The CLSS vertical supports incremental construction or enhancement of a top-structure only. Purchase of serviced or non-serviced construction sites is not covered by CLSS or any other component of PMAY.

Fig. 28: Implementation Process of AHP

Source: adapted from MoHUPA, 2016a, p. 9

Affordable Housing in Partnership (AHP)

As the only supply-oriented vertical, AHP aims to incentivise and increase private sector partic-

ipation in housing construction for lower income groups through PPPs. PPP is considered of high importance to fulfil the housing needs of the urban poor in India (KPMG, 2014). States, municipalities or their para-statal development agencies, under participation of private developers and the construction industry, are able to apply for the subsidy. AHP subsidizes housing for EWS with 150 000 INR (2 313 USD) per constructed unit. The remaining share has to be obtained through state, municipal or private funding. Eligible projects for this vertical need to reserve at least 35 per cent of a project for the EWS category, and at least 250 housing units in total, a factor, adaptable by State governments (MoHUPA, 2016f, §6.4). Dwellings are then allotted via state or local public or private agencies, at a subsidized rate to respective beneficiaries of the EWS group, as illustrated in Figure 27.

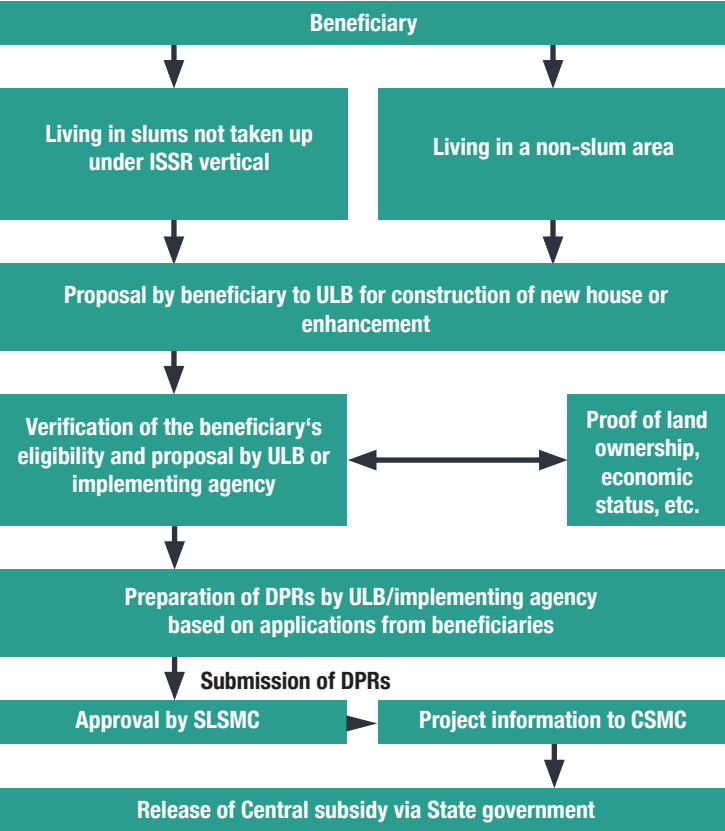


Fig. 29: Implementation Process of BLC
 Source: adapted from MoHUPA, 2016a, p. 11

Subsidy for beneficiary-led individual house construction or enhancement (BLC)

This demand-oriented component supports EWS households with a subsidy of 150 000 INR for the construction of a new house or the improvement of an existing one. BLC enables beneficiaries to take part in the implementation of the component, by improving or constructing the house by himself or herself. Beneficiaries need to provide evidence that they already own land for potential housing construction, whether in non-slum areas, or slum areas that are not eligible for other components of the scheme (MoHUPA, 2016f, §7.1). For BLC, this proof of ownership is a precondition to access the grant. However, especially those illegally claiming

land or having a disputable land title might not be able to produce such, and could be excluded from this component. When eligible, the subsidy is then transferred directly to the respective beneficiary's bank account by the State government, as shown in Figure 28 (MoHUPA, 2016c).

4.4.2 Stakeholder

This section describes the roles of the main actors that are directly involved in processing and implementing PMAY.

Target Group

PMAY targets households of the EWS category with incomes up to 300 000 INR and the LIG with incomes between 300 001 to 600 000 INR per annum, however, states have the possibility to adapt those ranges according to local definitions (MoHUPA, 2016f, p. iii). In the last decades, the definition of income groups underwent several changes, gradually including more people from the former middle-income ranges, as illustrated in Table 11 (Abraham, 2016).

Beneficiaries of the PMAY programme need to reside in designated areas as defined in the HFAPoA, whether a notified slum or other areas eligible for support under the other components, and are then listed, when they are considered eligible.

Data listing slum dwellers in HFAPoA is mostly based on SFCPoAs, which have been developed for the preceding RAY mission. However, the data used for the SFCPoAs mostly dates back to slum data from the Census performed in 2011, and might not illustrate the actual number of dwellers accordingly. If not adapted to the current situation on the ground, dwellers could be left out of the mission (Interview D, 2017).

In general, all components of PMAY require at least some proof of identity by legal documents by the beneficiaries to make them profit of one component of the scheme only. Beneficiaries need to verify that they are residing in the respective area or slum since a designated cut-off date declared by the State government, e.g. via property tax cards or bills for basic service provision (Interview B, 2017). While by that avoiding to include people that actually are not living in the slums from benefiting irregularly, in turn, proof of residence is often difficult to acquire for many dwellers without assistance of NGOs (Mahadevia et al., 2015). The CLSS and BLC component additionally require bank accounts to transfer of the loan or grant, which many of the EWS and LIG do not possess. For BLC, beneficiaries also require evidence of their land title where they plan to construct their new house.

Furthermore, a cut-off date could often date back several years and to be eligible, ben-

Tab. 11: Change of Income Ranges for Defining EWS and LIG from 2012 to 2015

Income Group	Before 2012, INR per year	2012 to 2015, INR per year	After 2015, INR per year
EWS	up to 60 000	up to 100 000	up to 300 000
LIG	60 001 - 120 000	100 001 - 200 000	300 001 - 600 000

Source: Abraham, 2016; MoHUPA, 2016a

eficiaries need to reside in a house without a permanent, solid structure. However, many of those citizens living in a city since several years, also many dwellers in notified slums or similar informal conditions, managed to improve their formerly makeshift-constructions into a solid structure and therefore would not be eligible under most of the verticals (Interview D, 2017). On the other hand, with the scheme including only people living permanently in the respective city, and does not include households residing there temporarily or since a short timeframe (MoHUPA, 2016f, §8.3). This is also reflected in the lack of a rental-housing component, often sought after by young and often unmarried migrant workers. Due to the eligibility criteria only including families, they are not reflected in PMAY. Additionally, with many of those migrating to cities and in need for accommodation owning a house in their location of origin, they are excluded of the scheme.

MoHUPA has aimed to design an inclusive scheme covering vulnerable groups of society. First, titles of the subsidized houses are primarily given to the female head, or shared between the male and the female (MoHUPA, 2016f, §2.5), to empower women within communities. Research shows that women take higher responsibilities in the housing process than men, and it is more likely that females repay loans (Frank, 2008, p. 46). Second, the CLSS and AHP component explicitly prioritize other vulnerable groups in the allotment of loans or dwellings, stating, “*manual scavengers, women (with overriding preference to widows), persons belonging to Scheduled Castes/Scheduled Tribes/Other Backward Classes, Minorities, Persons with disabilities and Transgender*” (MoHUPA, 2016f, §5.8; MoHUPA, 2016f, §6.5).

The difficulties to streamline eligibility criteria for beneficiaries of the programme throughout India with its large and diverse population are evident. Sizes of the dwellings, which are capped at 30 and 60 sq. m., might differ depending on different income levels and land-prices depending on the respective region or city. While in tier-1 cities usage areas under 30 sq. m. could be sufficient or standard for many EWS and LIG households, in many smaller, tier-2 and tier-3 cities the areas exceed 60 sq. m. (Singh, S., 2016).

In general, the potential for participation of individual beneficiary households within PMAY’s components are limited. Participation of the affected dwellers is recommended in ISSR, however, not compulsory (MoHUPA, 2016f, §4.8.6). The implementing state government, ULB or agency decides upon including communities in decision-making. In turn, there is scope for

incremental housing construction or improvement under the CLSS and BLC scheme that needs to comply with respective national building standards.

Public Administration at National, State, and Municipal level

Provision of housing for the urban poor is a main priority for GoI under current PM Modi, which is also reflected in the programmes title, ‘The Prime Minister’s Housing Programme’. PMAY is administrated at national level by the MoHUPA and GoI mainly in the role of a facilitator, issuing guidelines for the programme, advising states and monitor the implementation progress, with the states and state development authorities partnering up with the private sector in form of PPPs. The strong dedication of the Centre towards the programme could be considered beneficial, however, it is likely that under a new government, as preceding RAY, it could get replaced again due to its strong branding.

The components ISSR, AHP and BLC are implemented via three administrative levels: national, state, and municipal level. At national level, GoI introduced a *Central Sanctioning and Monitoring Committee* (CSMC), to steer the process and approve proposals by the states. At state level, state governments need to confirm their participation in the programme, to comply with the mandatory preconditions and to define a *State Level Nodal Agency* (SLNA), responsible for implementation for PMAY. This is usually an existing Urban Development Authority within the state government. In collaboration with cities, states assess the demand for housing. Subsequently, cities prepare the HFAPoA, including a list of all potential beneficiaries. To steer the process on the local level, a *City Level Technical Cell* is installed, however, for preparation of HFAPoAs, mostly international or local consulting firms are contracted. Additionally, *Annual Implementation Plans* (AIP) are prepared, splitting up the projects into several phases until 2022. Cities are also asked to finalise their DPRs, including further information about each proposed projects, such as detailed analysis of the sites, number of dwelling units, location plans, floor plans. HFAPoAs and AIPs are then scrutinized by the SLNA and submitted to the centre, where CSMC conducts a review and approval process, to estimate the financial share of the central government. Finally, DPRs need to be acknowledged by the CSMC and then the central financial contribution is released to the states in staggered payments.

In the CLSS component, NHB and HUDCO are the agencies responsible on central level to route the subsidies to participating PLIs (MoHUPA, 2016f, §5.4). At state level, a separate SLNA takes up a more passive role than in the other PMAY components, and is responsible advertise the scheme and handholding the application process for the beneficiaries, due to CLSS differing widely from the other PMAY components (MoHUPA, 2016f, §5.9). Funds are then directly released from to the respective PLI to the beneficiaries’ bank account (MoHUPA, 2016f, p. 8).

Private Sector

An essential aim of the PMAY programme is to incentivise private sector participation in low-income housing construction, through PPP models. Since several decades, GoI promotes private sector participation for the low-income sector. Nonetheless, with some exceptions, in the past, PPPs have often not proved very effective to provide low-income housing (KPMG, 2014). With the total budget released by the Central government for PMAY being relatively low, PMAY's success relies on funds of state governments, ULBs or private finance (Nair, 2016b). PMAY's dependence on private sector participation and combined finance could impede construction of the required number of dwelling units, if the sector remains reluctant to participate (Nair, 2016a).

In the AHP component, developer incentives provided through relaxation of development control regulations and increase of FAR could possibly not be enough to incentivise private sector participation in low-income housing, especially in large class-1 cities, such as Delhi or Mumbai, with very high land prices in central areas. Additionally, the present prerequisite of a minimum of 250 dwellings with 35 per cent reserved for EWS, could be regarded as an additional constraint for the private sector. With construction land in central locations being difficult to acquire and rather expensive, for developers carrying out projects under AHP it could prove difficult to reach economic viability (Interview B, 2017). If constructed in the outskirts of cities, beneficiaries could be reluctant to shift or acquire a subsidized unit, or could be buying the housing unit only as an investment for subsequent generations (Interview A, 2017). When additional incentives are provided to the developers, such as the provision of construction land by the government, either for free or at a long term subsidized lease, interest of private developers could be raised (Interview B, 2017).

Since PMAY's rollout, still, broad participation of private developers is missing, with most projects under the AHP vertical being carried out by State Housing Boards or similar para-statal institutions (Akhauri, 2017). The *“high gestation period of housing projects, lengthy and least transparent approval process, expensive capital, non-availability of land with absence of infrastructure and connectivity, spiralling land and construction costs, high fees and taxes as well as unfavourable development norms”* (Akhauri, 2017), as well as the aforementioned low profit margins, are considered a hindrance for participation, despite the huge market opportunities for low-income housing. However, the aforementioned classification of affordable housing as infrastructure in 2017 could ease fund raising from private finance institutions for developers.

In PMAY, private finance institutions are particularly participating in the CLSS component as PLIs, through which the loan payments to the beneficiaries are routed directly from the central level, without states taking part in the process. Commercial banks, specialised housing finance agencies as well as cooperative banks are able to participate in this component (MoHU-

PA, 2016f, p. III). In December 2016, 201 financial institutes in total were involved as a PLI, with 71 designated housing finance institutions (MoHUPA, 2016e, p. 1).

NGOs and Community Participation

PMAY integrates a paragraph recommending the participation of dwellers through community organisations in the ISSR component, but does not elaborate on its integration in the implementation process (MoHUPA, 2016b, §4.8.6). The authority to integrating participatory approaches in a project therefore lies at state or ULB level, or with the agency implementing the respective project. However, participation is not a compulsory aspect in project realisation, although official rhetoric in India in the past decades has been strongly promoting participation of slum dwellers (Mathur, O. P., 2009), and also elaborated in some programmes, as shown in the guidelines of the RAY mission.

Other preceding housing missions such as the BSUP component of JNNURM also envisaged in-situ upgrading of slums, however, in practice, resettlements were carried out in many cases. Research shows, that in resettlements of slum communities, a support process conducted by NGOs at an early stage could be beneficial to ensure a smooth implementation and to lessen potential socio-economic deterioration of the dwellers (Mahadevia et al., 2015; Patel, S. & Mandhyan, 2014; Patel, S. et al., 2015).

PMAY as a whole and particularly the ISSR component do not aim for upgrading of settlements in terms of physical infrastructure or refurbishment of existing houses. Through ISSR, the whole slum is redeveloped, with an increase of densities. The programme guidelines recommend consultation of residents' associations in the process, especially after project completion to maintain the redeveloped settlement (MoHUPA, 2016b, §4.8.6).

Permanent resettlements are not considered, due to redevelopments taking place on land where the slum was originally located. However, also in on-site redevelopments, NGOs role on the ground is considered essential in assisting the slum dwellers for producing the necessary documents to proof their eligibility for a new housing unit in preceding surveys. With PMAY guidelines touching the topic of community participation only slightly and not making them compulsory, it remains questionable if states and ULBs include them in the implementation process at several levels. Moreover, rhetoric concerning PMAY is pointing towards quick implementation and production of a large quantity of houses, where intense participation of community, often a time-consuming process, could be regarded as a hindrance (Interview B, 2017).

4.5 Indicator Analysis

Since PMAY rolled out in June 2015, 1 563 150 houses have been identified for construction or improvement, 437 766 housing units were approved for construction and 74 505 units finished¹³ by February 2017 (MoHUPA, 2017b). Out of total project cost of 844.59 billion INR (13.02 billion USD) throughout India, 246.96 billion INR (3.78 billion USD) of central assistance have been projected, with 73.24 billion INR (1.13 billion USD) released so far (ibid.). The rather slow implementation of the programme and release of funds compared with the initial goal of constructing about 3 million units per year, shows that in the second year since the scheme's rollout, the pace of implementation needs to be fastened to achieve the proclaimed objective.

GoI's share of 100 000 INR up to 150 000 INR per dwelling unit takes up a rather small proportion of the total cost of a unit. Construction cost for a low-income dwelling, without land acquisition and establishment of infrastructure, roughly ranges from 18 000 to 20 000 INR (228 – 309 USD) per sq. m. (Interview C, 2017). Other sources report, that total cost of an EWS unit could range up to 800 000 INR (12 338 USD) in class-I cities like Delhi or Mumbai (Shaw, 2017, p. 14). In both cases, the contribution of GoI seems rather low, compared with the remaining share that needs to be allocated by state governments or ULBs, investments of private developers or by beneficiaries' contributions. The large proportion of funds still required of states and local governments might be contributing to some state governments' reluctance to participate deliberately in rolling out the mission (ibid.).

With its citywide approach, including all citizens living in insufficient housing to enable their access to an adequate housing unit, PMAY integrates lessons learned from previous programmes that focused only on specific groups, such as slum dwellers in the RAY mission. However, the progressive rhetoric of PMAY stands in contrast to the implementation process. PMAY requires states and ULBs to create HFAPoAs, listing all beneficiaries under each vertical already at an early stage of project implementation. Local governments are under pressure to prepare their HFAPoAs in a time frame of six months, and often lack capacity for this process (Interview B, 2017).

ISSR targets whole notified slum neighbourhoods provided in the HFAPoA or previous slum surveys, such as RAY's SFAPoAs. With ULBs deciding upon a slum being redeveloped or not, the implementation component could be regarded as a top-down approach, with households and communities having little influence on their neighbourhoods being redeveloped or not when notified as a 'slum'.

Design of the ISSR component and the paradigm of 'using land as a resource' to make

13 However, the listing also includes projects, who were still running under the RAY scheme, when PMAY subsumed RAY. Data about the total number of dwellings that have been already allotted to the beneficiaries is not listed.

slum-upgrading projects financially viable derives from aforementioned SRS, that was introduced in the 1990s in Mumbai. The goal of SRS to construct 800 000 dwelling units in five years resulted in construction of slightly more than 100 000 units so far (Nair, 2016). However, it is considered “*a win-win situation for all stakeholders*” (Shaw, 2017, p. 14) and today the standard slum improvement approach used in Mumbai, applied on private as well as land owned by the government (ibid.). The challenges of slum resettlements into high-rise buildings have been described earlier in this thesis.

For Mumbai’s SRS and also the ISSR vertical under PMAY, slum settlements considered for redevelopments need to be located on land of very high value. Only then private developers are able to participate in the bidding process, due to them relying on profits made with the free-market dwellings sold on the free market. Those profits made have to cost-cover the other units given out free of charge to the former slum dwellers, and furthermore guarantee a profit margin for the developer (Interview B, 2017).

Slum redevelopment schemes including a free sales component usually multiply the built-up area and population densities on the former slum sites drastically. This is also outlined in the ISSR vertical’s guidelines, and further promoted due to PMAY’s mandatory reform calling for relaxation of density regulations in the states. On the one hand, through construction of multilevel buildings, large parts of the former densely populated, but primarily horizontally constructed areas are cleared and could be used to install public infrastructure such as open spaces, parks, and widening of streets, that was not available before. On the other hand, and as shown in projects of the SRS scheme, the newly acquired area is instead used as construction land for further developments with high densities only, prioritizing the developers’ before the dwellers’ behalf (Interview C, 2017). The severe increase of population density, without catering for accessible and adequate recreational spaces, increases the possibility of deteriorating the living quality of both new, and old residents (Patel, S. B., 2016).

ISSR completely redevelops a slum, without taking into account existing buildings, that probably are already made of a solid construction. Many slum dwellers residing in slum settlements since long term, transformed their former kutcha houses into a pucca or semi-pucca house (Interview D, 2017). Those settlements would only require upgrading, but, according to the programme guidelines, would be completely redeveloped with higher densities instead. There are no tailored instruments for different forms of slums included in the programme.

The CLSS vertical provides loans that directly flow to the beneficiary’s bank account by the respective PLIs. In general, this form of direct provision of small loans to the beneficiary is considered as a component with very high potential, and it is noteworthy that a government-programme as PMAY included a component with subsidized loans (S. Watson, 2016). While MFIs for housing finance are already established, other formal lending institutions are lacking behind. The component could further promote the concept and raise awareness concerning loans

to low-income groups, and influence growth of the sector.

As a precondition, CLSS requires the beneficiaries to prove that they have a stable and regular monthly income, to be able to pay back the EMIs. For many, especially those on the lowest end of the income pyramid, who are often self-employed and based in informal jobs, providing this evidence is difficult. Therefore, despite its rhetoric, CLSS mostly remains inaccessible for those at the base of the income ladder, instead opening up another loan market for the LIG group, which includes also those households who could be regarded as having lower middle-class incomes (Interview D, 2017).

CLSS as well as BLC promote the incremental construction of a house by beneficiaries themselves. However, it remains a matter of interpretation and implementation on state level, to what extent the beneficiaries are given liberties in those process, and how the construction process is technically supported by the local governments. With some banks in CLSS insisting on provision of “*collateral security, land ownership/hypothecation of DUs [dwelling units], income tax return, loan repayment capacity*” (MoHUPA, 2017a, p. 18) or similar official documents to give out loans to beneficiaries and with many of the EWS/LIG failing to produce those, there is still room to lower the accessibility of the CLSS instrument for the target group.

However, while CLSS supports the incremental extension and construction of a house (MoHUPA, 2016f, §5.3), it does not subsidize the purchase of a serviced or non-serviced piece of land, which has been proved successful in the past (Patel, S. B., 2016). Beneficiaries therefore already need to possess such a piece of land. The focus of CLSS lies on providing a solid shelter structure than integrating holistic improvement of physical and social infrastructure at the same time (Patel, S. B., 2016).

The AHP vertical promotes inclusion of EWS dwelling units within a housing project, and to integrate people with different socio-economic background in the same neighbourhood. Different income groups do not necessarily have to occupy dwellings in the same building, but could also be integrated in other houses on the same project site. This could be beneficial for low- and higher income groups, also fostering local economic activity. However, for dwellers working in the vicinity of the development, only non-polluting occupations could be taken into consideration (Interview C, 2017). The AHP vertical could be regarded as first steps towards inclusionary zoning. However, while a minimum of 35 per cent EWS units is defined within the AHP guidelines, no fixed upper ceiling is clarified within a project. This again could lead to ghettoization and segregation of the dwellers from other income groups (Patel, S. B., 2016). A brief review of recent project applications at the CSMC by the States shows, that while some proposals include LIG and even HIG groups in projects, the majority of the proposed projects under AHP are exclusively targeting the EWS group and not opting for mixed-use developments (Gov. of Gujarat, 2016; Gov. of Maharashtra, 2016)

The BLC vertical envisages to provide dwellers with grants of 150 000 INR directly, how-

ever, the guidelines on national level are not completely clear upon its implementation on state and local level and how the funding is routed to the respective beneficiary household. Hence, state governments have to consider in what way the subsidy reaches the respective beneficiary, whether through a direct lump-sum payment under provision of project plans to the household, or a payment to the respective ULB, providing assistance in construction or improvement of the beneficiary's house.

However, the BLC component also shows strong contradictions within PMAY's framework. While the programme envisages housing provision for those who do not own a house by themselves, the BLC component requires proof that the respective household formally possesses a piece of suitable land (or a house, if housing improvement is sought), which could prove difficult for the respective target group living on informal or illegally acclaimed land. With about 1/10 of all urban dwellers living in some form of rented accommodation, ownership of a parcel of land open for construction is often out of reach for a large number of citizens (Interview B, 2017).

Concerning rental housing, PMAY does not include a vertical respecting the growing number of migrants coming to cities seeking for this form of accommodation. For those migrating to cities not able to afford formal housing, still, the only possible option is to seek housing in the informal market, which often results in settling down in slums. Except for the AHP component, PMAY focuses on households already living in cities, in substandard livelihoods or dwellings. While reducing the current number of slum dwellers and those living in sub standard housing through PMAY, the number could grow further, with continuing migration and lack of formal, affordable rental housing options provided. While private initiatives for middle-class working migrants emerge (The Economist, 2017) and a Rental Housing Policy is in the making (MoHUPA, 2016a), however, so far, rental housing is not given the importance on national level yet. Nonetheless, this could change with release of the rental housing policy or further implementation the Model Tenancy Act 2015, which is postulated in the PMAY guidelines as a prerequisite for the release of funds.

In many of the preceding housing missions in India, constructed dwellings often remained unoccupied. This was primarily caused due to many new settlements being constructed on the outskirts of a city, where land prices are relatively cheap. Nonetheless, many projects were poorly connected to the city centres and therefore also to job opportunities, education and healthcare. Thus people often were reluctant to move to such new developments and again opted for informal housing in close to the core of the city (Rao, P., 2015). PMAY does not include funding for community and social infrastructure in the programme, and only supplies a budget for the construction of a house top-structure, assuming that such facilities are already in place. Currently, unlike preceding programmes targeting urban poverty, GoI's urban missions do not include a vertical targeting the improvement of the socio-economic background of low-income

dwellers.

New construction technology focusing on concrete and steel-frame-constructions is considered as an important driver in the programme, speeding up the construction process while reducing costs and environmental impacts (Rao, P., 2015; The Hindu, 2016). Initially, concrete and steel-frame materials might have higher cost between 15 to 20 per cent compared with construction through traditional methods (Interview A, 2017). In turn, they are providing better structural safety in disaster prone areas, and through increased durability, decrease maintenance cost over long-term than traditional brickwork for beneficiaries (Interview B, 2017). Nonetheless, there is still scope for additional research on countering rising material and construction cost via innovative assembling technologies, also lowering greenhouse gas consumption and provide affordable housing options while rising quality of dwellings. While international expertise is widely available on the topic, increased research on the topic would be necessary on local level (Interview A, 2017).

In prefabricated housing construction, local cultural traditions and construction techniques are often not reflected and not as many workers are needed as with traditional brickwork or similar techniques. This could therefore affect local economies, with local small- and middle-scale industries not able to produce the required amount of construction material. Reluctance to implement new technologies and lack of capacities on the local level could hamper dissemination and up-scaling, and therefore slow-down implementation processes (Smith & Narayanamurthy, 2008). Within PMAY, integration of local workers in the construction process is therefore not considered a priority.

4.6 Preliminary Results

This section presents an overview of the analysis conducted via the economic, socio-economic, physical/environmental and institutional sustainability indicators. Tables 12-15 give a quick overview on the outcome of the analysis. A detailed break down of the individual indicators with additional comments is provided in Tables 17-20 in the Annex of this thesis.

Economic Sustainability

The PMAY programme is embedded within relatively good political and macroeconomic pre-conditions to achieve its long-term goals, assuming the present and subsequent government at the national level continues its focus on housing provision for the urban poor. India's national economy is expected to continue to grow, with rising incomes and purchase power of its

Tab. 12: Economic Sustainability

ID	Indicator name	Indicator met
A1	Macroeconomic Environment	●
A2	Governmental Funding	●
A3	Contribution of Beneficiaries	●
A4	Accessibility of Loan Finance	●
A5	Low Proportion of Subsidies	●
A6	Subsidies Routed Directly to Beneficiaries	●
A7	Cost Efficient Construction	●
A8	Low Costs for Construction Land	●

Tab. 13: Socio-Economic Sustainability

ID	Indicator name	Indicator met
B1	Decision-Making by Beneficiaries	●
B2	Inclusion of Vulnerable Groups	●
B3	Empowerment of Women	●
B4	Amelioration of Socio-Economic Background	●
B5	Low Recurring Cost	●
B6	Establishment of Local Employment Opportunities	●
B7	Proximity to Former Places of Employment	●
B8	Broad Range of Eligibility Criteria	●
B9	Informal Land Titling	●
B10	Developments for Mixed-Income Levels	●
B11	Variety of Tenure Options	●

citizens. GoI continues with its focus on the urban missions, including promotion of the affordable housing sector in general, as reflected in recent budget speeches of 2017.

Notwithstanding, the total budget outlay for PMAY and the proportion of subsidies per housing unit of GoI remain relatively low. With state governments having a lot of decision-making power in the implementation of urban policies, they could be reluctant to carry on with PMAY due to political reasons, or due to changing priorities within a state's long-term budget. To secure a programme's implementation over a longer period of time, however, a programme not relying on central subsidies could also be beneficial, due to changing political actors and agendas, if other self-sustaining mechanisms including private players and other stakeholders are successfully integrated in a programme. While PMAY aims for that, so far, the sector seems reluctant to participate.

In turn, initial lack of governmental subsidies and therefore financial resources, with high cost of suitable land could result in bottlenecks in land provision and hamper the beginning implementation process. With costs of land being disproportionately high and a main constraint in the process, lowering the

construction costs of the top structure could hardly compensate the additional costs.

The CLSS component is trying to make small housing loans accessible to the lowest income groups. While some MFIs are already targeting lower-income groups, they have often not been taken into consideration by other formal lending institutions. Nonetheless, to gain access to a subsidized loan, proof of regular income is necessary with CLSS, which could be a main constraint for many low-income dwellers with often unsteady monthly wages.

To lower construction cost, prefabrication is envisaged in PMAY. To achieve relevant cost reduction, however, large quantities have to be produced, where so far it lacks capacities. While

slums located on high-value land could be beneficial for the ISSR component, on the other hand, insufficient supply of centrally located land is a major constraint for the other components of PMAY.

Socio-Economic Sustainability

Possibilities for beneficiaries to participate during implementation are relatively low, given that participation plays only a minor role in PMAY's guidelines. However, through incremental construction in CLSS and BLC, citizens are able to steer the process. To access the subsidy under BLC and CLSS, formal ownership of land is necessary. Titling of informal land therefore is not a priority of the programme. The programme follows an inclusive approach targeting vulnerable groups and women and opens up potentials for individual construction by beneficiaries via the CLSS and BLC component. However, in ISSR, Only those dwellers living in a notified slum are included in the component. Others living in similar informal conditions, not listed as a notified slum in the preceding surveys, are therefore omitted of the scheme. Dwellers living in slum settlements, but failing to produce proof of their eligibility for a new house, are prone to get evicted. Homelessness is also not addressed.

With resettlements not envisaged in ISSR, the vertical aims at improvement of slum settlements on-site. Measurements to integrate commercial activities and establish small scale economic activities of the dwellers are therefore not highlighted, assuming that beneficiaries can stay in their former places of employment.

PMAY aims to increase homeownership as an asset for low-income groups and does not reflect rental, cooperative or community housing in any of the components. Especially young,

Tab. 14: Physical/Environmental Sustainability

ID	Indicator name	Indicator met
C1	High Quantity of Constructed Units	●
C2	High Quality of Constructed Units	●
C3	Energy Efficient Materials and Design	●
C4	Assistance in Self-Help Construction	●
C5	Mixed-Use Developments	●
C6	Centrally Located Settlements	●
C7	Compact Settlements	●
C8	Provision of Social and Physical Infrastructure	●
C9	Public and Open Spaces	●

Tab. 15: Institutional Sustainability

ID	Indicator name	Indicator met
D1	Political Backing	●
D2	Involvement of Private Developers	●
D3	Involvement of Private Finance Sector	●
D4	Low Involvement of International Donor Agencies	●
D5	Involvement of NGOs	●
D6	Involvement of Community Organisations	●
D7	Implementation at Local Level	●
D8	Rapid Processing	●

Indicator met: yes ● partly ● no ●

small or single households migrating to cities temporarily are in need of such flexible, low-cost housing options. In PMAY, only those who have been residing in a city since a designated cut-off date, are considered for the programme. Additionally, beneficiaries are not allowed to own a house anywhere else in India, a constraint for many migrants possibly owning a house in rural areas.

Physical/Environmental Sustainability

PMAY aims to promote construction of a large number of dwelling units to address the rising housing shortage and to increase the quality of housing for low-income citizens in all states throughout India. It envisages utilisation of high-quality and energy efficient construction materials and methods, focusing on prefabrication, assembled by professionals. Inclusion of local workforce in the construction process not considered as a priority.

In redevelopment of slums, centrally located, compact settlements at high-densities are therefore fostered. Due to relaxed density norms in the AHP vertical, private developers might also opt for multi-story buildings to make their projects financially viable. Nevertheless, PMAY lacks encouragement for mixed-use developments, which would further stimulate compact city design, and guidelines reflecting green, public and open spaces in the vicinity of housing developments.

PMAY is supporting construction of a top-structure of a house only. For measurements in physical infrastructure, other sources of funding need to be accessed. Furthermore, social infrastructure targeting at amelioration of the socio-economic background of dwellers, concerning public and open spaces or community centres, are not addressed in the programme.

Institutional Sustainability

The implementation of PMAY receives strong political support under the current government of PM Modi and the MoHUPA. However, success of the programme relies heavily on the support on state and ULB level. Apart from the public sector, the private construction and finance sector is needed and therefore encouraged to participate in the implementation of the scheme. While private developers are still reluctant to participate, several private financial institutions are already embedded in the process as PLIs giving out loans to beneficiaries. International donors are not directly involved in project finance.

On the ground level, participation of NGOs and community organisations would be essential to increase long-term success of the housing programme, however, is not enforced by the

programme guidelines. In general, implementation at state and ULB level is envisaged, however, final project approvals are given at Central level.

Another constraint in implementation of preceding housing programmes is long processing time, increasing cost through stalled developments. This is reflected in PMAYs precondition that single-window approaches to cut down the number of processes needed until a project is approved.

5 Results

This thesis shows that housing provision for the urban poor is a multi-dimensional challenge that can only be addressed by a variety of sectors that are either directly or indirectly linked with the amelioration of livelihoods. The case study exemplifies this notion, addressing and interlinking several spheres of sustainability.

5.1 Discussion

It has been shown that the holistic concept of sustainability is highly applicable not only for matters of urban development, but equally on housing provision for low-income groups. Despite the broad scope of the concept and being debated and defined since several decades, it has not ceased its relevance today. The current implementation process of SDG 11 and the NUA exemplifies that the principle will continue to guide the development discourse on several levels in low- and higher income countries for the upcoming decades.

In general understanding, sustainability in housing provision is often reduced to environmental aspects with regard to the construction process. However, it has been illustrated through the analysis of PMAY that a broad scope of economic factors, socio-economic impacts and institutional dependences need to be taken into account by stakeholders.

GoI and many other governments of developing and emerging economies were, and still are not able to stem housing shortage with their own capacities. There is a need for active participation of all three major stakeholders – the government, the private sector, and the affected citizens – to achieve sustainable, adequate and affordable housing. Efforts by national governments to incentivise the low-income housing sector for private developers has mostly failed so far. The ‘enabling’ paradigms, that were spearheaded by the WB, with reliance on ‘the invisible hand of the market’ in housing construction for the poor has not succeeded in most countries. National governments are required to again intervene directly in the housing sector for the bottom of the income pyramid, however, take into account lessons learned from the previous decades.

The mere construction of a house is not likely to improve the livelihood of the affected citizens. For many of the poor, the quality of a house plays a secondary role – first priority is availability of basic services in the vicinity of the dwelling, and proximity to workplaces, both to save time and thus expenses. In the end, matters of income generation are the prevailing basis of decision-making, and for many, also the reason why they moved to a city and took up with deteriorated living environments. This becomes apparent through cases where citizens, provided

with a new house free of charge, tended to sublet or sell their newly acquired property, to move back again to poorer neighbourhoods and utilise profits elsewhere. Programmes try to avoid such occurrences via regulations, however, it remains questionable if not other measures should be taken, to avoid those processes in the first place.

Proximity to facilities is therefore one of the most important, while at the same time most constraining factor in housing provision for the urban poor (and also for other urban dwellers). Within cities, demand and land prices are high, and both, public and private developers are competing for available land, and in many cases, those aiming for housing the poor have to make way for constructions that allow higher profit margins. Allowing higher densities is a viable option to relieve pressure. However, especially for dwellers who were not used to live in high-rise apartment buildings, they slowly need to be introduced to this way of living.

Construction of new settlements in the periphery is rarely an alternative. Those programmes trying to relocate slum dwellers to the outskirts of towns hardly succeeded, except for those well-connected with transportation infrastructure. While in the long run, a sound transportation network would render more land accessible and pay back initial investments over long term indirectly, the initial high cost of such public transportation networks is often a constraint.

As also shown in PMAY, municipalities are required to become active participants in the urban land market again. Strict regulations however, need to be avoided, as experiences with ULCRA show, where artificial land shortage has resulted in land speculation. Governments could instead intervene by establishing frameworks promoting mixed-income developments, including minimum and maximum quotas for low-income units. Additionally, governments are required to establish other options and low-threshold interfaces for citizens. Networks of housing microfinance providers catering with a variety of tailored options to improve houses from small to large scale, and even neighbourhoods, could be an important factor for individual citizens and families to have the financial opportunity for incremental improvements by themselves.

Room for Further Investigation

From now on, the PMAY programme is going to continue at least for five more years until 2022. So far, in regard of the programme's ambitious goal of 20 million units, only a small number of dwellings has been constructed, and long-term impacts of the programme are still to be assessed, which opens up further room for investigation. Furthermore, the final outcomes of PMAY most likely will vary widely throughout the country. With states and local governments taking up a major role in implementation and interpretation of the programme guidelines, it is their

behalf to steer PMAY towards sustainable housing provision. Comparison between various regions or even cities throughout India, where projects have been successfully implemented, might result in additional perspectives.

5.2 Conclusion

The focus of the international community, not least influenced through the Habitat III conference and the adoption of the NUA, shifted back to a focus on housing provision for the lower-end of the income pyramid. The NUA aims to put “housing back at the centre” of national urban policy, due to the growing significance of the housing problem all over the world, with continuous growth of megacities as well as middle- and small scale cities, accompanied with the emergence of slums and congested, and often hazardous living environments. This entails not only severely affections of health and quality of living, but also micro- and macroeconomic growth that usually have accompanied countries experiencing urban growth in the past.

The history of international housing policy for low-income groups shows, that many different attempts were conducted, especially with diligently conducted in-situ upgradings and renewals, under respect of the beneficiaries needs, as a viable solution to improve livelihoods of the target group over long-term. However, these programmes mostly failed to present a business case securing their finance after initial governmental subsidies faded away, also leaving the private sector reluctant to participate through financially viable models. Moreover, inclusion of beneficiaries in the process is a rather time-consuming process, further increasing cost of developments. With the growing number of people living in inadequate conditions due to lack of formal space to settle, governments need to act, whether through further enforcement of the enabling approach – primarily succeeding for middle- and higher-income groups, by letting them access mortgage finance – or direct subsidies of the respective groups not reached by such formal housing finance instruments. While provision of dwellers with a decent house structure might be the first target of a housing programme, on second sight, access to basic physical infrastructure including modes of public transportation to central areas where formal and informal job opportunities are located, is crucial for long-term success of a housing programme.

Provision of several options of tenure is another crucial facet in housing provision for the urban poor. Official housing policy of many countries in the past decades has focused on homeownership as an asset for the poor and neglected rental housing as an adequate tenure for them. However, especially for young citizens migrating when searching for a job, in need for flexibility and not looking for a permanent residence in cities, would rather prefer tenancy before ownership. With affordable options on the formal market often unavailable to them, the only option is to move into a slum or similar informal neighbourhood, where they would be-

come informal tenants of informal landlords, who are often demanding high rents despite lack of quality. Security is needed for the tenants against unlawful evictions which they are exposed in such informal arrangements, whereas landlords need legal power to draw consequences from tenants not paying rents or similar wrongful behaviour. Therefore, national governments need to introduce legislation respecting and balancing rights of tenants, landlords or developers willing to invest in rental housing, to increase production of rental housing units.

The analysis conducted in this thesis is based on an existing analysis framework developed by Frank (2008) for assessment of housing programmes for low-income groups. The author of this thesis adapted the framework suitable for the scope of this study, and extended it with indicators reflecting the directions given in the recent NUA. The many facets of housing programmes are reflected in the set of indicators considering all three main spheres of sustainability, extended by an institutional sphere, indicating that political and stakeholder environments are crucial for a long-term perspective of a programme. The initial framework thereby was found suitable for adaptations and inclusion of other indicators reflecting recent research and international agendas. In this regard, the framework might be used for subsequent adaptations with current state of research for future assessments of housing programmes upon their sustainability in similar contexts.

The case study of this thesis focused on an examination of Indian urban housing policy since Independence, recent urban housing missions and a thorough analysis of the current PMAY mission. Since 1950s, India is continuously addressing the lack of housing in their FYPs, but so far only had mixed successes in countering the emergence of slums and ameliorate the living conditions of dwellers living in inadequate conditions at the required pace. With the large scale JNNURM programme failing to produce the required amount of houses and resulting in many evictions and deteriorated living environments, and the short time period RAY was running, there are now high expectations towards the PMAY programme to successfully addressing the housing crisis.

The analysis of PMAY through the sustainability indicators showed that the programme has a lot of potential, but, like preceding programmes, could face constraints in its implementation. While the programme is supported at highest level, it might not reach down onto the state and local level, with large parts of the administrative and financial burden transitioning down as well, without increase of capacities on subnational level. Envisaging participation of the private sector and being presented as a large opportunity for private developers to enter the affordable housing market, however, the present incentives seem not to have motivated private stakeholders enough yet to get into the sector. It has been criticised that provision of free housing units to dwellers is beneficent, with many regarding their claim to a free housing unit as a personal right, hindering other models of housing provision, where contributions of beneficiaries is included. Therefore, the introduction of a loan finance component via the government could be consid-

ered as a breakthrough, encouraging low-income dwellers to improve their houses themselves, creating sense of ownership and responsibility.

PMAY does not include rental housing in its rhetoric and by that possibly missed a chance to kick-start the evolution of a vibrant rental-housing sector, accompanied by proper legislation, that renders investments for the sector also attractive for private developers. An official recognition of rental housing will come alongside the new Rental Housing Policy which is still in draft mode. A rental housing component included within PMAY could have been a pioneer for the policy and probably led to upscaling of existing small initiatives, which are slowly emerging throughout India, however, mostly targeting emerging middle-class citizens so far.

Despite the rhetoric in urban development in India to include poor urban dwellers in decision making processes, especially in new housing developments involving resettlements, the PMAY programme does not reflect compulsory measurements toward the involvement of affected citizens in its guidelines. Anyway, PMAY does not envisage large-scale resettlements due to its rehabilitation component. In turn, even small-scale uprootings of dwellers from mostly horizontal settlements transitioning in highly dense, vertical settlements, imply new living conditions and again create completely new (vertical) neighbourhoods. Again, community groups and NGOs working together with the developers and ULBs should closely accompany this process, to avoid tensions between dwellers and authorities, and to ensure a streamlined process for their transition into their new homes.

In PMAY, GoI is trying to lower the cost for construction via research on new technology. However, with research carried out parallel to the programmes implementation, impact of this research on current developments remains questionable, also concerning energy efficiency of the constructed dwellings. In general, housing construction on greenfield is accompanied by strong ecological impacts including greenhouse gas emissions during of the construction material industry. Therefore, efforts towards higher densities in developments under PMAY are not only favourable for the project's financial viability, but at the same time, decreases its ecological footprint over long-term via compact settlement structures and subsequent reduction of transport distances.

The PMAY programme has high capabilities in providing urban poor with adequate shelter. The programme already reflects aspects of the NUA, and moving towards fulfilling the SDGs goal 11 of making 'cities and human settlements inclusive, safe, resilient and sustainable'.

However, there is room for enhancement, particularly in (i) streamlining of participation and decision-making of affected dwellers, (ii) effectively including a rental housing component and thus reflecting rural-urban migration in the programme, (iii) further acknowledgement of dwellers without formal land title, (iv) intensify incentives for the private sector and strengthening concepts of inclusionary zoning, (v) fostering mixed-use developments and facilitate non-polluting commercial activities within settlements, and (vi) incorporate recreational

zones, including open, public and green spaces within the guidelines.

5.3 Recommendations

This thesis shows, that an adequate house does not necessarily lead to adequate housing. Provision of adequate shelter is only one aspect of the multi-faceted progress in improvement of living environments of low-income dwellers. Conclusively, lessons learned of the foregoing scrutiny of housing policy and analysis of the PMAY programme, are reflected in following recommendations, and could be relevant for development of future housing programmes:

- i. *Housing as a verb*: in reference to Turner (1972), housing provision is a process including many aspects, starting with a safe and adequate physical structure, and including many other economic and social processes like access to jobs, education and healthcare, to improve livelihoods on the long run.
- ii. *Variety of tenure*: homeownership alone is not the only option. Housing includes several modes of tenure, ownership, rental housing, community housing, or housing cooperatives, and a progressive housing programme should provide a broad range of options tailored for the target group's needs.
- iii. *Safe tenure*: a housing programme should include aspects to provide secure tenure for those who do not formally own a piece of land or property, and face constant threats of eviction by government or private entities. Assistance in producing proof of residence should be provided.
- iv. *Empowerment of communities, households and individuals*: rhetoric towards inclusion of communities in the development of a housing project should follow dedicated actions. A framework for inclusion of all stakeholders in the process is required to ensure a sound implementation of a project.
- v. *Building capacity at the local level*: deduction of administrative powers should also take deduction of relevant skills and capacities at state and municipal levels. Thereby, sufficient capacities and therefore funds are required at the local level to successfully implement low-income housing projects.
- vi. *Adequate and accessible housing finance*: a housing programme should include a component regarding individual construction from small repairs to new construction, and provide tailored, accessible loan options for low-income dwellers who possibly take first steps in mortgage finance.
- vii. *Energy efficient urban design and construction*: compact design of neighbourhoods and resource effective, innovative building design reducing emissions in

construction and maintenance cost, should be reflected in a housing programme, and, while initially increasing cost, could reduce them on the long run for the respective dwellers.

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Interviews

Interview A: Chief Architect and Researcher on Sustainable Construction, New Delhi, India. Conducted via Skype on 24 February 2017.

Interview B: University Researcher and State Government Advisor on PMAY, CEPT University, Ahmedabad, India. Conducted via Skype on 25 February 2017.

Interview C: Researcher and Head of Structural Engineering and Urban Planning Enterprise, Mumbai, India. Conducted via Google Hangouts on 7 March 2017.









Interview D: Programme Coordinator of a NGO (YUVA), Mumbai, India. Conducted via Skype on 13 March 2017

Annex

Indicator met:

yes  partly  no 

Tab. 16: Economic Sustainability - Comments on Indicators

No.	Indicator name	Indicator met	Comment
A1	Macroeconomic Environment		Since the 2000s, India experiences strong growth of GDP, even if slightly slowing down in recent years. As the world's biggest democracy, India can look back at a relatively stable political administration.
A2	Government Funding		Funds for the PMAY programme on national level are allocated via the national budget and not dependent on international donors. However, the Central government's participation is a relatively small subsidy to the states and ULBs, who have to allocate additional funds via their own budgets. Additionally, the programme heavily relies on private sector participation in project development and finance.
A3	Contribution of Beneficiaries		Amount of financial participation of beneficiaries in the programme is dependent on implementation on state and local level. In general, though, the policy allows financial contribution of beneficiaries, and the CLSS and BLC component participation by own workforce.
A4	Accessibility of Loan Finance		The CLSS vertical aims to make housing loans accessible for low-income groups. CLSS subsidizes direct loans to beneficiary households at a rate of 6.5 per cent up to 600 000 INR for the construction or improvement of a house. However, access of the component requires steady income to pay back EMIs, hampering access to the component for the lowest end of the income pyramid.
A5	Low Proportion of Subsidies		The subsidy to the beneficiaries ranges from provision of a house free of charge (ISSR), to loans at low interest rates (CLSS) and rather small loans up to 150 000 INR (BLC). In general, PMAY programme supplies a wide range of options.
A6	Subsidies Routed Directly to Beneficiaries		The subsidized loans of the CLSS vertical as well as the BLC subsidy is directly routed to the beneficiaries' bank account by the nodal institutions.
A7	Cost Efficient Construction		The technology sub mission aims at decreasing construction cost through prefabricated construction. In general more expensive than brickwork, the economies of scale have to be met. With current lack of large-scale production plants, achieving the goal appears difficult.
A8	Low Costs for Construction Land		Depending on the class and size of the city, cost of construction land is usually high and with prices still increasing. Unavailability of suitable, centrally located or well-connected construction land at adequate price is considered the biggest constraint in the implementation of PMAY. At the same time, for ISSR, high-value construction land is needed to sufficiently incentivise private-sector construction.

Source: author

Tab. 17: Socio-Economic Sustainability - Comments on Indicators

No.	Indicator name	Indicator met	Comment
B1	Decision-Making by Beneficiaries		The BLC and CLSS verticals allow incremental construction by the beneficiaries. ISSR recommends consultance of relevant community groups, however, does not integrate participation of beneficiaries as compulsory in the implementation process.
B2	Inclusion of Vulnerable Groups	●	Inclusion of vulnerable groups is addressed, such as the elderly, disabled, Scheduled Castes and Scheduled Tribes, as well as other minorities and transgenders. Preference in allotment of dwellings is given to those groups. Physically handicapped beneficiaries should preferably be supplied with dwellings on ground-floor level.
B3	Empowerment of Women	●	House titles are given to the female head of households, or shared between the male and female head of household.
B4	Amelioration of Socio-Economic Background	●	PMAY focuses on construction and improvement housing units only. Additional components for creation of facilities e.g. education, healthcare and jobs, to improve the local economy and socio-economic background of dwellers are not regarded in the programme.
B5	Low Recurring Cost	●	PMAY aims at housing construction with state-of-the art technology, preferring concrete and steel structures and by that aiming to keep maintenance cost low. Loans of the CLSS component are paid back at a rate lower than the current rate of the free market, by that, allowing monthly installments potentially to be lower than payment of rents.
B6	Establishment of Local Employment Opportunities	●	PMAY does not reflect integration of small-scale economic activity integrated in housing developments and designs.
B7	Proximity to Former Places of Employment	●	ISSR's rhetoric does not consider resettlements, due to slum redevelopments conducted on the original site using its land as a resource. Experience with preceding housing programmes shows, however, that those aspects are susceptible to misuse and misinterpretation, if not clearly defined and monitored.
B8	Broad Range of Eligibility Criteria	●	Compliance with EWS and LIG category, based on incomes only, is necessary to be eligible for a vertical. Additionally, for ISSR, the respective slum has to be listed in the HFAPoA, and slum residents live in the settlement since a defined cut-off date. Nonetheless, other socio-economic criteria are not considered for eligibility.
B9	Informal Land Titling	●	The ISSR includes slum dwellers not formally own land. In contrast, both for the CLSS and BLC component, formal ownership of land or a house is required to access the subsidy.
B10	Developments for Mixed-Income Levels	●	The ISSR component aims for redevelopments including free sale components, which would also aim at middle- and higher-income groups on the open residential market, therefore bring different income groups closer together. AHP aims for socially mixed components, however, does not integrate a maximum limit of EWS households within a project, which could lead to social segregation.
B11	Variety of Tenure Options	●	PMAY focuses on the promotion of homeownership only and does not integrate other forms of tenure, such as rental housing. Establishment of cooperative or community housing options are not reflected in the programme.

Source: author

Tab. 18: Physical/Environmental Sustainability - Comments on Indicators

No.	Indicator name	Indicator met	Comment
C1	High Quantity of Constructed Units	●	Gol aims to construct 20 million houses until 2022, with about 3 million dwelling units constructed per year, throughout the country. However, the current pace of implementation is rather slow and it remains questionable if the ambitious goal could be reached until completion of the mission.
C2	High Quality of Constructed Units	●	The technology sub-mission aims to increase construction quality through research and capacity building. Promotion of high-quality prefab construction is a main aim of the mission.
C3	Energy Efficient Materials and Design	●	The technology sub mission aims at providing energy efficient materials and modes of construction.
C4	Assistance in Self-Help Construction	●	The CLSS and BLC vertical allow incremental construction by the beneficiaries, while AHP and ISSR aim mostly at professional prefab construction modes that do not target at semi-skilled self-help workers. Technical assistance in self-help construction, however, is not provided as by the programme guidelines.
C5	Mixed-Use Developments	●	PMAY allows usage of land for commercial purposes within project development. However, they do not enforce mixed-use developments via statutory reservation of land for other purposes than housing. Also, potential economic uses of ground floor areas are not pointed out.
C6	Centrally Located Settlements	●	PMAY does not aim at permanent resettlements in project implementation of the ISSR vertical. Therefore, the location of settlements should remain the same as before redevelopment. Nevertheless, loopholes in the guidelines could be utilised to resettle communities anyway, as shown in previous slum-improvement schemes issued by Gol. High land prices could render project development in centers impossible.
C7	Compact Settlements	●	PMAY does not legislate specific density norms in the guidelines. States have to comply with their existing standards. However, states are recommended to relax their norms if necessary, to incentivise private sector participation. The ISSR vertical could lead to highly dense developments, due to private developers having a need to make their projects financially viable.
C8	Provision of Social and Physical Infrastructure	●	PMAY does not include funds for integration of physical and social infrastructure in projects. Due to the programme not aiming at resettlements, it is assumed that such infrastructure might already be in place on the original site.
C9	Public and Open Spaces	●	The programme does not consider integration of public and open spaces in developments as a priority. High densities to make projects financially viable could lead to scarcity of recreational areas within developments.

Source: author

Tab. 19: Institutional Sustainability - Comments on Indicators

No.	Indicator name	Indicator met	Comment
D1	Political Backing	●	Current political backing of PMAY is strong. Govt under PM Modi launched several programmes focusing on urban development, making urban infrastructure provision and housing for the poor a main task of the current government's agenda. This is also reflected in measurements of India's budget 2017.
D2	Involvement of Private Developers	●	PMAY's success relies heavily on participation of the private construction sector in the programme. The ISSR component incentivises participation via provision of free land and a free sale component. The AHP vertical subsidizes 150 000 INR per housing unit to the developer. However, this is considered as too low to make projects financially viable for the developer. Since rollout, the private sector has been rather reluctant in participation.
D3	Involvement of Private Finance Sector	●	The CLSS vertical includes the private financial sector as PLIs. CNA are giving out funds directly to the PLIs, who are subsequently routing loans directly to the beneficiaries.
D4	Low Involvement of International Donor Agencies	●	International Donors are not involved in directly financing the PMAY programme.
D5	Involvement of NGOs	●	Involvement of NGOs in implementation is not envisaged in the programme guidelines.
D6	Involvement of Community Organisations	●	Participation of community groups is outlined in the ISSR component, though not compulsory in implementation. Rhetoric towards citizen participation is low.
D7	Implementation at Local Level	●	ULBs are requested to prepare HFAPoA, and thereby strongly involved in project development. However, first, State level agencies have to approve the requests, and final approvals are given at National level.
D8	Rapid Processing	●	Aware of cost increase and rather slow processing of building permits through high bureaucratic processes in India, the PMAY guidelines ask for integration of a single-window clearance of building permits on state level to speeden up the implementation process. However, also when implemented, bureaucratic processes at state and central level to release funds could again lead to stallments in project implementation.

Source: author

Tab. 20: Historical Outline on Indian Politics, Economy and Urban Housing Policies

	1950-60s	1970-80s	1990-2000s	2010s onwards
Politics	1947-6 J. Nehru 1964-66 L.B. Shashtri	1966-77 I. Gandhi 1977-79 M. Desai 1980-84 I. Gandhi 1984-88 R. Gandhi 1989-90 V.P. Singh	1990-91 C. Shenkar 1991-96 N. Rao 1996-97 H.D. Gawda 1997-98 I.K. Gujral 1998-04 A.B. Vajpayee	2004-14 M. Singh 2014 onwards N. Modi
	Independence from British Empire in 1947 alongside Partition of Pakistan and India	Unrest leading to The Emergency from 1975-77	Change of political ties between central and state governments	Rising importance of cities as economic hubs
Economy	<ul style="list-style-type: none"> strong investments in industrial production cities as industrial hubs 	<ul style="list-style-type: none"> Slow transition from a command- to a demand-economy Strong regulations on national economy Goal to reduce poverty 	<ul style="list-style-type: none"> Economic reforms inspired of Thatcherism & Reaganism Economic growth through privatisation and governmental incentives industrial corridors 	<ul style="list-style-type: none"> Programmes to boost foreign investments in India Increase of production capacities in India (Make in India and National Skills Mission)
	Average growth of GDP	1950s 3.6% 1960s 3.2%	1970s 3.4% 1980s 5.6%	1990s 5.7% 2000s 7.3%
Housing & Urban Development	<ul style="list-style-type: none"> Housing provision for refugees and industrial workers Creation of first governmental housing institutions RCA (1959) to decrease rising rents 	<ul style="list-style-type: none"> Creation of HUDCO (1970) and other HFIs Introduction of ULC-RA (1976) Establishment of NHB (1988) to boost housing finance Introduction of first NHP (1988) 	<ul style="list-style-type: none"> 74th CAA (1992) to decentralise urban governance NHHP (1998) envisaging “shelter for all” via PPPs NUHHP (2007) aiming for “Affordable Housing for All” 	<ul style="list-style-type: none"> Incentives on affordable housing for private sector Model Tenancy Acto 2015 Draft Rental Housing Policy 2015 Revision of NUHHP including directions of NUA (forthcoming 2017)
	Average urban	1950s 2.37% 1960s 3.29%	1970s 3.87% 1980s 3.15%	1990s 2.77% 2000s 2.80%
Important schemes	<ul style="list-style-type: none"> Public housing by government housing boards 	<ul style="list-style-type: none"> EIUS to improve slum infrastructure IDSMT for decentralisation of urban growth UBS for urban poor 	<ul style="list-style-type: none"> VAMBAY to improve livelihoods of slum dwellers JNNURM (BSUP and IHSDP) 	<ul style="list-style-type: none"> RAY PMAY AMRUT Smart Cities Mission Clean India Campaign

Source: adapted from Tiwari & Rao, 2016, p. 4; Hingorani, 2011; MoHUPA, 2011; MoHUPA, 2016; UN-Habitat, 2016; United Nations et al., 104; World Bank 2016b;