Understanding Inadequacy: The View from Urban India

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Goal 11 of the Sustainable Development Goals (SDGs) is to 'make cities and human settlements inclusive, safe, resilient and sustainable'. For housing, the specific target within this goal seeks 'to ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums', and this is measured by the 'proportion of the urban population living in slums, informal settlements or inadequate housing'. In its location within the overall set of goals, its choice of target as well as in its indicator, the Goal represents an expansion in thinking about housing from the Millennium Development Goals (MDGs). In the latter, the indicator for housing was a limited one ('proportion of population living in slums'). It was part of erstwhile Goal 7 ('Ensuring Environmental Sustainability') and the target was more narrowly focussed on improving 'the lives of 100 million slum dwellers'.

This is a welcome expansion with two clear gains. First, the presence of an urban goal allows a more appropriate location within which to consider housing. The new SDG sees housing not in isolation but alongside gains in transportation, access to land, participation in urban political life, and the reduction of environmental and disaster risk, with improvements in infrastructure and services being provided for in other SDGs. Second, the goal scales the housing question to the city rather than limiting it to the 'slum', whose role as an adequate spatial or empirical proxy for inadequate housing has increasingly come into question (Bhan & Jana, 2013). Together, these allow for a more expansive view of the housing issue—adequacy, safety and affordability are foregrounded in the target, and informality and inadequacy tangibly enter the indicator of progress and monitoring.

Immediately, however, a new set of challenges also appears. 'Adequate', 'safe', 'affordable' and 'formal' are contested and relative terms that are difficult to define and hold, especially in the rapidly transforming cities of the global south. As the inclusion of these terms provokes useful discussions at the local, national and global level on what they should mean, these debates will have to navigate two extremes. Too narrow an understanding will defeat the purpose of the expansive reading of the new Goal, just as too expansive a reading will possibly result in the loss of a pragmatic anchor for incremental and difficult progress. This choice has to be made even within the indicators—whether to credibly measure the best manifestation of the Goal's spirit and the target's specificity, or to try and mirror existing national reporting systems so as to get information from the maximum number of countries. The former makes the indicator more robust relative to the target, but without the latter, many nations may be excluded altogether as simply lacking data.

Our task, then, is to assess—locally, nationally, globally—what adequacy, affordability and safety represent in different contexts and how they can be usefully captured in indicators. Some part of this involves anchoring ourselves in existing local and national data practices, though we must not limit ourselves to these. Indeed, one of the possibilities that a new set of global targets throws up is that of new forms of measurement. This commentary attempts to initiate conversations around new ways of measuring inadequacy in the Indian context. It

proceeds in three parts. First, it briefly assesses India's current housing scenario with respect to the MDGs, outlines the current housing policy framework and asks what 'inadequate' housing in India looks like. In doing so, it reveals the layers and details of the idea of inadequacy. Second, it offers a framework, drawing on the Karnataka Affordable Housing Policy 2016, for approaches to engage with inadequate housing, thereby pushing the boundaries of what the existing indicator for Goal 11 can achieve. It concludes with an assessment of the current national housing policy in India and the potential for it to incorporate a more nuanced understanding of inadequacy.

Housing in India since the MDGs

According to reports tracking progress on the MDGs, not enough has been achieved in India, though the country's performance varies across the goals. The Habitat Commitment Project, for example, found 'virtually no change in the last 20 years in the Habitat Commitment Index (HCI) score for India. Among the dimensions, the country has improved in the Gender (+6.3) and Poverty (+15) dimensions. However, it received negative scores in Institutional Capacity (–19) and Infrastructure (–3.8)' (Cohen et al., 2016). Housing seems to have followed this pattern of simultaneous gains and losses. The Indian government's own progress report leading up to the Habitat-III Conference acknowledges this.

Two excerpts from the report illustrate this. The first states that while 'urban housing stock has increased from 52.06 million to 78.48 million (51 per cent increase) in the last decade' and 'absolute housing shortage in terms of the difference between the number of existing households and existing housing stock in urban areas has significantly reduced from 1.63 million in 2001 to 0.39 million in 2011', there remain significant gaps in access precisely where need is highest (MoHUPA, 2016, p. 83). The report thus acknowledges:

> [The] dilemma is that while the sustained effort of the government to improve the condition of the housing sector is reflected in the above numbers, a further review reveals that the urban housing shortage has increased considerably due to housing congestion and obsolescence factor, of which 96 per cent pertains to the Economically Weaker Sections (EWS) and the Lower Income Groups (LIG) (ibid., p. 83).

This is telling. The disjuncture is one not just of the number of housing stock but, in fact, in the adequacy of the existing stock. This parallels the shift in thinking about housing from the MDGs to the SDGs. It also indicates the nature of India's housing problem. A skewed housing market marked by high vacancy as well as worsening inadequacy indicates that the new housing stock being built is not targeting unmet need but, in fact, worsening over-production at the upper end.

The second relevant part of the report is related directly to the MDG's indicator of improving 'the lives of 100 million slum dwellers'. One of the authors of this commentary has elsewhere argued for caution in interpreting public data on slums in India (Bhan & Jana, 2013), but even regardless of that, if we take slums as our unit of analysis, we find the same paradox. The

Government report argues that while the 23.5 per cent of urban slum households in 2001 had reduced to 17 per cent in 2011, the absolute number of households living in slums has, in fact, 'increased from 10.15 million in 2001 to 13.75 million in 2011'. India's housing shortage is thus not a result of absolutely scarcity but primarily due to inadequacy and affordability. As a commentator astutely summarised, it is the trap that 'affordable housing is not adequate and adequate housing is not affordable' (MoHUPA, 2012).

Capturing Inadequacy

How then should our approach change as we transition to the SDGs? As argued earlier in this commentary, a shift to thinking about inadequacy as our central concern may be the appropriate starting point. However, inadequacy is a highly layered concept. Debates on physical and infrastructural thresholds of adequacy are complex enough in themselves without adding criteria of social and cultural acceptability, affordability, secure tenure and legality, and safety. Given the limited space of this commentary, we focus on one fault-line: balancing physical measures of the material quality of housing with concerns about secure tenure.

It is well established that a significant proportion of residents in cities across South Asia, Africa and South America inhabit the city in some tension with formal logics of law and planning. The ubiquity of the terms 'informal' and 'unauthorised' used to describe such settlements mark this tension. But what does an informal settlement tell us about an inadequate one? Physical and infrastructure standards may vary widely within all that is loosely grouped within the idea of the informal settlement precisely because the relationship between income-poverty, secure tenure and the presence of adequate housing and infrastructure cuts many ways.

Some settlements are marked by deep physical, material and tenurial inadequacies because the informal settlement brings together income-poverty with spatial vulnerability and insecure tenure. This is our cleanest case. Yet, a long-settled, consolidated slum may, in fact, have incrementally grown to offer adequate housing and infrastructure without secure tenure. In such a case, it may meet the physical and infrastructural standards of adequacy but not those of tenure. Should it then be considered inadequate? On the other hand, a settlement that is both formal and legal, or one that is not a slum, though it is unauthorised in a different way, may have more secure tenure but be physically far more deficient than a slum. The dilapidated state of housing in the historical cores of many Indian cities is a case in point, and the irregular division of land on the peri-urban edges of expanding cities is another. These are often not slums by legal or empirical definition—they may have secure tenure—but are still marked by deep physical and infrastructural inadequacies that often go unrecognised.

It is difficult to empirically capture the complexity of these relationships. The MDGs, in fact, have not managed to resolve this. While the slum has been defined as including adequate housing units, access to basic services and secure tenure, the last was never included in the data measured because most nations—even those that wanted to—didn't know how to report or collect data regarding tenure. As was argued, it was 'not as easy to measure or monitor, since the tenure status of slum dwellers often depends on de facto or de jure rights—or lack thereof'.[1] How, then, do we use an expanded SDG to challenge this limitation? How can we capture the multiplicity of relationships that underlie different forms of inadequate housing?

Measuring Inadequacy

Current empirical practices in India have begun to try and move—slowly, if steadily—to more expansive ways of measuring inadequacy. One of the ways they have done this is to build on a set of measures that the Census of India has so far used, in isolation, to approach housing—gauging the materiality of the roof, wall and material used to build the house, which are the source of the Indian categories, '*pucca*' (permanent; literally 'fully formed, solid') and '*kutcha*' (temporary; literally 'raw'). These stand separately from measures of access to water and sanitation and estimations of 'serviceable' and 'non-serviceable' housing. Definitions of 'slum households' are further qualified, with the description of slum differing significantly from the household-level definition that the MDGs sought, unsuccessfully, to use.

A recent authoritative public report on adequate housing in India has tried to bring these isolated indicators together and, in doing so, to speak of 'housing poverty'. The report, colloquially known as the Kundu Committee Report after its chair author Amitabh Kundu (MoHUPA, 2012), seeks to measure housing poverty as households living either in unacceptable dwelling units, or in 'unacceptable physical and social conditions'. To the known measures of physical inadequacy, it has added the criterion of congestion, which is defined in terms of houses where married couples do not have an exclusive room. Table 1 lays out the estimation of this shortage (18.78 million units), along with comparisons with both the earlier report of the task force on urban housing shortage as well as the Census of 2001 (Government of India, 2001; MoHUPA, 2008).

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[1] See '7.10 Proportion of Urban Population Living in Slums', available at http://mdgs.un.org/unsd/mi/wiki/7-10-Proportion-of-urban-population-living-in-slums.ashx (accessed on 13 October 2016).

Table 1: The Kundu Committee Report on 'Housing Poverty'

Housing Deficit	2001	2007	2012
Total Number of Households (HH)	55.83	66.30	81.35
Total Housing Stock (HS)	50.95	58.83	78.48
Housing Deficit (HH-HS)	4.88	7.47	2.87
	Households Requiring New Housing		
Upgradation of Kutcha Housing	1.70	Not Included	
Living in Non-serviceable Kutcha Housing	-	2.18	0.99
Living in Obsolescent Housing	2.01	2.39	2.27
Living in Congested Housing	1.97	12.67	14.99
Homeless	Not included		0.53
Sub TOTAL (1+2+3+4)	5.68	17.24	18.78
Housing Deficit (HH-HS)	4.88	7.47	Not included
Total Housing Shortage	10.56	24.71	18.78
	Source: MoHUPA, 2012. All figures are in millions		

In one way, the Kundu Committee Report is a step forward. By measuring the physical and social facets of housing more generally, it moves away from viewing the slum as a proxy of inadequate housing. It therefore compels us to see inadequacy as existing across the city rather than just in the slum. By paying attention to congestion and the idea of serviceable housing, it brings in infrastructural conditions as well as some measure of a social ideal of how people should live. However, many have argued that congestion is a limited indicator to measure such a social ideal, once again reminding us of the difficulty in choosing indicators that are available versus those that better fit the spirit of what we are trying to capture. Despite these limitations, however, the report shows that it is possible to hold and pragmatically construct empirical and broader understandings of housing inadequacy that are multidimensional.

Meanwhile, the Kundu Committee, like the MDGs, has evaded the issues of tenure and legality of housing. The role of insecure tenure in creating physical, social and other inadequacies is thus underappreciated, as is the threat that insecure tenure poses to the sustainability of even current adequacy. Yet again, we find ourselves at the same crossroads: how can we hold tenure, the materiality of the unit and access to infrastructure together?

Re-framing the Inadequacy Measure: A Possible Framework

We have argued earlier that SDGs and the welcome expansion in their thinking about housing must be used as an opportunity to challenge the practices of data collection and monitoring globally. There are three components of a possible new framework: (a) taking concerns about affordability more seriously and including them in measures of progress; (b) seeing more clearly the links between socio-economic inequalities (gender, caste, race, ethnicity, religion,

among others) and inadequate housing; and (c) bringing together physical and infrastructural measures of inadequacy with the spectrum of secure and insecure tenure. Given constraints of space, we have chosen to focus on the third.

SDGs do not operate in a vacuum; in each nation, they are invariably enmeshed with an existing set of policies, political paradigms and data practices. In India, one aspect of the contemporary housing paradigm is the emergence of several new policy instruments at both city and state levels. These range from new state policies on housing (for example, the Karnataka Affordable Housing Policy 2016) to the requirements of new national missions on housing, like the Prime Minister's housing scheme, Pradhan Mantri Awas Yojana (PMAY), which generates a Housing for All Action Plan. What is important here is that within each of these new sites of policy and programme development, there are new practices to measure, map and empirically assess inadequate housing at the city level. This is an important opportunity to be bolder than we have been so far in thinking about new forms of data that can capture inadequacy in a multidimensional manner.

Based on extensive fieldwork across the southern Indian state of Karnataka, we offer one such alternative framework for the spatial and empirical mapping of inadequate housing in Indian cities. This framework takes what can be done with existing public and census data, and pushes the frontier of our current data practices by directing new forms of primary data collection that must emerge as part of governmental and public practice. It was developed as part of the Karnataka Affordable Housing Policy 2016 (KAHP 2016) and thus has been approved by an existing bureaucratic framework as being within the imagination of its capacities.

We suggest that inadequate housing must be mapped through a set of categories that represent different forms of housing in the Indian city. These forms of measurement operate not at the individual household level but at the level of the locality or neighbourhood, at a scale that is able to capture individual housing units as well as services and tenure, which are determined at a more collective level. Below is a set of definitions of these forms, each of which has a defensible location in existing Indian law or policy, and therefore represents government-recognised categories.

1) Pavement Dwellers and the Homeless: Individuals and families living in the open or on the sides of roads, pavements or open public spaces and parks, under flyovers and staircases, or regularly taking refuge in places of worship, community halls, railway platforms and bus stations and stops, etc. These households have no legal right to occupy the space they live in.
2) Untenable Housing Clusters: Settlements in dangerous locations, such as along drains and railway lines, in flood and waterlogging-prone areas, abutting major transport corridors or pollution prone areas, which amount to a physical risk to the safety of the residents. Residents of such clusters typically have little or no right to occupy the land they live in.

3) Tenable Slums: Areas that are overcrowded, dilapidated, lack basic services, lack settlement level planning to ensure light and ventilation and, as such, constitute a risk to the health, safety and environment of the residents.

4) Resettlement Colonies: Formal and legal neighbourhoods of households evicted from other parts of the city, but not yet adequately rehabilitated, i.e., still lacking adequate opportunities for work, basic services, social infrastructure, etc.

5) Irregular Subdivisions: Formally purchased housing, though the titles are not legally recognised since they are located outside planned areas, or are in violation of land use. Typically, these areas lack adequate connectivity to the city in terms of trunk infrastructure and basic services, including transportation.

6) Congested Housing: As per the census, a household in which a married couple does not have an exclusive room is deemed a congested household. Congestion may occur in formal or informal housing, in city centres as well as peri-urban areas.

7) Dilapidated Housing: Households residing in houses that show significant signs of decay or breaking down and require major repairs, or in houses that are decayed or ruined and are far from being in a condition where they can be restored or repaired. Dilapidation may occur in formal or informal housing, in city centres as well as peri-urban areas.

Each of these forms of housing has been defined by tenure, access to services, as well as the general variation in type of individual housing unit. Another way to look at them is presented in Table 2.

Table 2: Categories of Inadequate Housing

S. No.	Housing Inadequacy	Tenure?	Services?	Degree of Physical Inadequacy?	Illustrative Image
1	Pavement Dwellers and Homeless	No	No	High	
2	Untenable Clusters	No	No	High	

3	Tenable Slums	Mixed	Mixed	Medium	
4	Irregular Subdivisions with Inadequate Housing	Mixed	Yes	Medium	
5	Dilapidated Housing	Yes	Yes	Medium	
6	Congested Housing	Yes	Yes	Medium	
7	Resettlement Colonies	Yes	Mixed	Medium	

Inadequacy and Current Housing Policy

While KAHP 2016 marks a positive moment of possibility in taking a nuanced notion of inadequacy on board, the broader prevailing policy context in India offers a slightly bleaker outlook. This section looks briefly at the current national housing scheme of the Government of India and assesses its approach to housing shortage. PMAY is a significant financial and political intervention that impacts state government action, even though housing falls under the jurisdiction of the state government. How, then, does PMAY view housing?

The story of PMAY actually begins with its predecessor—Rajiv Awas Yojana (RAY), the main housing scheme of the previous government. In operation from 2010 to 2013, RAY marked a significant development in the Indian housing landscape. The vision statement aimed to create 'inclusive and equitable cities in which every citizen has access to basic civic infrastructure, social amenities and decent shelter' (MoHUPA, 2013, p. 5). Housing was seen not just a dwelling unit or shelter but also infrastructure and amenities. This lent itself to a broader, more holistic understanding of why different kinds of housing are inadequate in different ways. RAY's core objective was thus similarly scaled: 'improving and provisioning of housing, basic civic infrastructure and social amenities in intervened slums' (ibid., p. 5). The site of intervention was the neighbourhood, not the individual housing unit.

Appropriate modes of intervention then followed. In-situ development was encouraged and, crucially, this was separated into two distinct modes. The first was termed 'redevelopment' and involved the re-making of a slum after its demolition into new units. This was distinguished from 'in-situ upgradation', which was to develop 'the entire slum by filling gaps in housing and infrastructure (civic and social) to the slum dwellers *without complete demolition* of the existing structures' (ibid., p. 9; emphasis mine). This distinction is crucial. Redevelopment implies the re-building of an entire slum, focussing on the construction of new houses. Here, vertical apartment style construction quickly became the norm, laid out on grid patterns and rising from two to five floors. This was called 'new housing' (Ibid., p. 10). It drew on a history of efforts towards neighbourhood improvement that focussed on 'filling gaps' by enhancing collective infrastructure and allowing individual houses to improve slowly through private investment in their own time. This was termed 'incremental housing' (ibid., p. 10). Upgradation in housing, in this mode, can be defined and understood as improvements in community level infrastructure and social amenities, attributes that make housing liveable and viable without necessarily enhancing the materiality of the house itself. It also recognises that the solutions to easing 'housing shortage' are not the same across different kinds of housing.

In contrast, PMAY's objectives describe it as a mission to 'support the construction of houses up to 30 square meter carpet area with basic civic infrastructure' (MoHUPA, 2015, p. 1). The

shift from 'housing' to 'houses' is not just a semantic one—the manner in which PMAY funds projects is markedly different from that of RAY. The main mode of spatial intervention is in-situ slum redevelopment, described as the use of 'land as a resource' with 'public private participation' to create 'houses for slum dwellers' (ibid., p. 2). These houses are apartments spanning 30–60 square metres, which are to be allotted with property titles to individually delineated nuclear families. This is similar to RAY's imagination of 'new housing'. Unlike RAY, however, here the possibility of up-gradation or incremental housing has been removed— only new houses are to be built. Under another part of the scheme, some incremental construction does seem possible. Individual households can avail of subsidised loans to enhance their existing house rather than build a new one. However, ownership has been made mandatory: beneficiaries have to have 'adequate documentation regarding availability of land owned by them' (ibid., p. 10). Given that the slum is often defined precisely by the absence of such documentation, this condition means that the option of incremental improvement remains open to very few households.

The focus of PMAY on the housing unit, and on building one's way out of existing shortage, contrasts directly with the assessment of the Government of India's own progress as per its report to Habitat III. Not only does this disregard the learnings from RAY, under which governments and private developers were unable to reach anywhere near their targets for building new housing, it also ignores the fact—recognised by the Kundu Committee Report— that increasing housing stock has not led to reductions in housing shortage. This disjuncture is rooted in an incorrect diagnosis of the housing problem and a limited notion of inadequate housing. New housing is certainly required but the scale of India's housing shortage makes it clear that it cannot be the primary strategy for addressing the shortage faced by low-income households. Instead, incremental improvement and upgradation, which has the advantage of using existing land footprints and can be done at a fraction of the cost, must become the core focus of a new housing paradigm. For that to happen, however, there is a need for, among other things, a new empirical approach to thinking about the adequacy of housing.

Lessons from here

The framework outlined above is not intended as a template. In fact, it is not the categories of housing themselves that are important but the approach and processes involved in working with existing housing stock. For this, we need to prepare a complete typology of the different forms of inadequacy, as was done in KAHP 2016. While such a typology would be locally specific across different cities, regions and nations, it is this very specificity that could give life to the new SDG indicator, which compels us to grasp the relevant meaning and expression of 'inadequate' at a given time. Not only does this take us much beyond the 'slum,' it also offers a spatially defined and implementable intervention strategy at the neighbourhood scale for the city. It allows us to identify different kinds of inadequacies that can then be addressed with appropriate interventions rather than following a one-size-fits-all approach.

Measured this way, the indicator no longer remains a static threshold. It is able to bear witness to a multi-dimensional and dynamic understanding of inadequacy, informed by the realisation that different forms of inadequate housing fall short of our targets in different ways and with different consequences. It is also able to scale itself between the individual household level, at which physical inadequacy is measured, and the settlement level, at which services and tenure and provided. If used expansively, such a measurement framework can accommodate and hold the new SDG's expansive sense of housing meaningfully, leveraging its ability to be monitored through data as well as the opportunity it presents to push housing policy and practice further.

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