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Formalizing the Informal: Understanding the Position of Informal Settlements and Slums in Sustainable Urbanization Policies and Strategies in Bandung, Indonesia

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Abstract: Sustainable urbanization policies and strategies are posited as a major tool by which to achieve the sustainable development of growing towns and cities. A major challenge for sustainable urbanization policies and strategies is how to address the complexity of urbanization, especially the ongoing growth of informal settlements and slums in developing countries. It is acknowledged that those living their lives in such housing and settlements suffer greater levels of spatial, economic and social exclusion from the benefits of urbanization that other segments of the urban population. Using a case study approach, this paper examines the range of challenges associated with the growth of informal settlements and slums, seeking to understand how they are positioned via upgrading policies in city urbanization plans and strategies in Indonesia's third largest city, Bandung. The research finds that there has been a shift in kampung and slum upgrading policy from in-situ solutions to vertical housing towers which appear incompatible in accommodating the way of life practiced in kampung adaptive urbanism contexts. The manner in which city governments manage informal settlements and slums by seeking to reshape and restructure the lifestyles of residents to align with formal market measures has a major impact on existing disadvantaged communities. The paper concludes with a call for greater leadership, political commitment and recognition of contextual responses when developing slum upgrading policies set within urbanization policies and strategies branded as sustainable.

Keywords: sustainable urbanization; informal settlements; slums; kampungs; Indonesia; plans

1. Introduction

A major theme emanating from the United Nations Habitat 111 conference in Quito, Ecuador, October 2016, was that sustainable urbanization is now globally acknowledged as one of the major transformative drivers of the 21st century. In 2015, it was estimated that approximately 54% of the world's population lived in cities, and it is expected that some 70% of the world's population will be residing in urban areas by 2050 [1]. Economic change, population growth, and social and cultural activities are all increasingly being concentrated in towns and cities as populations seek an urban lifestyle with commensurate levels of services, infrastructure, amenity and livability. This transformation and continued evolution of the nature of urbanization brings with it many planning challenges in terms of an adequate and equitable supply of basic services, housing and land, employment, health, education, and protection of the natural environment [2]. Set within this context, a major Habitat 3 outcome was the adoption of the New Urban Agenda, a blueprint for achieving sustainable urbanization for the next twenty years. While the New Urban Agenda is non-binding agreement, it was formally adopted by 170 countries, thus setting out a path to realize a new urban vision on sustainable cities.

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In the context of achieving better sustainable global urbanization outcomes, the New Urban Agenda embraced sustainable urban development as a major conduit for achieving sustainable development in an integrated manner at global, regional, national, and local levels [2]. Sustainable development is commonly defined as development that meets the needs of present generations without compromising the ability to meet the needs of future generations [3]. In a city context, it is concerned with the achievement of multiple environmental and development objectives [4]. The concept of sustainable urbanization therefore is based on a similar understanding and has been defined as practices of urbanization that comply with the principles of sustainable development. There is a consensus that like sustainable development, sustainable urbanization can be assessed from a number of dimensions, namely, the state of economic, social, environmental and resource sustainability of a town or city [5]. In this context, urbanization, cities and sustainable development are strongly intertwined, with a sustainable city viewed as aiming to achieve economic, environmental and socio-cultural objectives that comprise formal and informal rules and set within a governance framework [6].

One of the major consequences of urbanization that is most prominent in developing countries is the persistence and rise in informal settlements including slums. While such terms are not synonymous, these and similar settlement types are part of the wider urbanization process which facilitates and allows their residents extra-legal access to housing, land, infrastructure, services, and economic activity. Their permanency and scale of growth in the urban landscape of developing countries reflects their emergence as a universal city phenomenon which may be tolerated, accepted or their residents designated for eviction by government. As such, policy approaches to addressing informal settlements and slums are diverse and may include in situ upgrading, demolition and resettlement [7–9]. Terms such as "slum rehabilitation" and "slum improvement" can have multiple meanings from in-situ upgrading to eviction depending on local, city and national contexts and drivers of change [10]. Despite the casualness and specificity of the latter terminology in national and global reports, these settlement typologies' continue to be applied to illegal and or sub-standard residential enclaves that exist in varying forms, shapes and patterns in towns and cities (see, for example, their fluid use in the New Urban Agenda versus adherence to the word slum in the Sustainable Development Goals (SDGs)).

Since 2003, the United Nations has defined a slum as a residential household characterized by an absence of basic services including adequate drinking water and sanitation, lack of security of tenure, inadequate and overcrowded living areas, and structurally unsafe housing [11]. At the national, city and local levels, a multiplicity of terms such as informal, squatter, unplanned settlements and "urban villages" are also used and are nuanced with varying local meanings and interpretations. Their usage and application varies from place to place according to historical political, economic and social circumstances. This includes the impact of the legacies of colonization and persistence of dominant Euro-American planning ideologies and conceptualizations especially in developing countries [12]. Informal settlements have a wider meaning than slums as they refer to "unplanned" settlements not authorized by the State. Slums specifically refer to dwellings which have become substandard through construction, age, subdivision or neglect, and which generally have low to negligible levels of services. They have been categorized as "the most deprived form" as typically expressed in informal settlements [13]. While an informal settlement may be illegally settled, or have extra-legal approval from the landowners or current residents to allow occupation, slums are not necessarily illegal [14]. Thus, depending on context, an informal settlement may not necessarily have slipped into the category of a slum, while on the other hand depending on scale, an informal settlement may contain pockets of slum housing dispersed throughout (or outside) its territory. Similarly depending on context and scale, slums and informal settlements are often concentrations of urban poverty, yet not all those living in informal settlements and slums are poor [7,12].

In 2015, it was estimated that approximately 25% of the world's urban population continued to make their home in a slum [13]. In 2014, this equated to approximately one billion slum dwellers worldwide and this is expected to double by 2030. Of these one billion persons, some 881 million residents (a conservative estimate) resided in slums in developing countries compared

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to 689 and 791 million persons in 1990 and 2000 respectively. Since 2000, this represents an increase of approximately 28% in the absolute numbers of slum dwellers' despite a percentage decrease from 39 to 30% of people living in slums in developing countries between 2000 and 2014 [15]. Thus, in the developing world, nearly one out of every three people living in cities resides in a slum often located within an informal settlement (see Figure 1).



Figure 1. A key feature of informal settlements and slums in South-East Asia is the diverse rooftop architecture. Analysis of patterns of rooftop materiality can provide deeper insights into household connections to governance and political alliances. Image of kampung Lebak Siliwangi, Bandung Indonesia. Source: Dadi Rusdiana.

The adoption of the Millennium Development Goals (MDGs) in 2000 especially MDG 7d—to achieve a significant improvement in the lives of a least 100 million slum dwellers—provided impetus for many global, national and city stakeholders to take action to reduce one or more of the definitional attributes of slums [16]. However, the reality is that despite sub-regional differences, absolute numbers have continued to rise globally during the last two decades. Despite the recent policy adoption of the New Urban Agenda and endorsement of similar high level sustainable urban policy aspirations which have replaced the MDGs such as SDG Target 11.1, informal settlements and slums remain alongside climate change and poverty the most enduring sustainable urbanization challenges of the twentieth century. Most importantly, the challenge of rising informal settlements and slums is anchored in developing countries where 90% of global urban growth is centered [1], and where many local governments do not have the technical and financial capacity to develop and implement such plans [4].

One perspective of the New Urban Agenda is that it is a frank admission by stakeholders that current urban and city management plans, policies and processes have not been able to adequately address the many challenges of urbanization. This includes the persistence of poverty, growing inequalities, deprivation and environmental degradation. Despite the admirable goals of many global, regional and national policies, planning has failed to deliver with many developing countries not having national or city urban policies in place. As implied in the New Urban Agenda, a key tool to

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articulate and lay out a vision for city planning and development is through sustainable national, city and local urban plans which need to be contextually specific and tailored to reflect the circumstances of each country and the condition of its towns and cities. In the twenty first century, urban policy has slowly shifted from rigid sectoral programs, time bound projects and special incentives towards policy which reflects the pillars of sustainability based on collaborative and integrated approaches and structures. This means countries and their cities and towns need to be treated differently from others to address and better understand the nature of their urbanization process and outcomes. While there are some basic principles to be applied in preparing national urban policies and related frameworks, such as cooperation between tiers of government, what is clear is that plans and policies must be contextually specific with nuanced solutions and implementation pathways. Different social and political contexts, varying histories, technical and capacity constraints means each country's urbanization process and their varying goals differ. As such, a suite of programs and policies must be implemented to address the needs of sustainable urbanization [10].

The inability to effectively grapple with the complexity of urbanization is most visibly reflected in the growth of informal settlements and slums in developing countries. The latter reflects a disconnect between effective spatial management and inclusive planning processes, economic equality, the provision of services and infrastructure and poverty reduction. Urbanization through its role as a "magnet" for jobs, economic exchange and social interaction magnifies the complex challenges of sustainable development and especially informal settlements and slums [1]. For example, research in the sub-Saharan African context has highlighted informal settlements and slums as a product of "disjointed urbanization", emphasizing the legacy of the colonial era in underinvesting in inclusive urban infrastructure and urban governance. Research emphasizes the importance of analyzing the dynamics of local political economies that sustain and embed informal settlements and slums through local political networks and land arrangements in order to understand informal settlement and slum policies, patterns and trends [17]. Within this setting and noting the new global standards now being set via the SDGs and New Urban Agenda to guide national, city and local sustainable urbanization plans and policies, there is an increasing focus on understanding the effectiveness of policy that addresses informal settlements and slums and their position within national and city urbanization policies and strategies. Case studies in Asia show that there are wide discrepancies in how city governments manage and perceive informal settlements and residents including the policies they put in place to support their needs [18]. Sometimes policies for informal settlements are fluid as the stated intentions are not followed through on the ground [19]. Some slum improvement projects, for example, fail to achieve their stated purposes [7], while some city governments projects are led by neo-liberal development policies that reflect strong policy connections between city governments, developers and the emergence of large scale urban development projects [20,21]. Research reflects that a deeper understanding of the perspectives, interests and values of politicians and policymakers is critical to better outcomes in urban development generally and informal settlements and slums specifically [17,18].

In the context of seeking sustainable urbanization, this paper examines the position of informal settlements and slums in the developing country of Indonesia with a specific focus on understanding how city government policies and strategies seek to reshape and restructure kampungs and their residents as part of the formal upgrading process in the city of Bandung. While this is not the place to review the full range of literature on informal settlements and slum improvement, informal settlements and slum upgrading in this paper is viewed as a multi-stakeholder process to enhance the physical, social, economic, and environmental and governance dimensions of the urban poor and their rights to the city [1,4,13,15,18,22]. Types of interventions vary and can incorporate all or some of the following dimensions underpinning improvements to living standards and the wellbeing of residents and their communities, for example, the provision of basic infrastructure and services, housing, land supply and security, livelihood support, microfinance, environmental improvements (including flooding and natural hazard reduction), and the protection and enhancement of socio-cultural assets [1,23]. Within this setting, this paper unpacks how city urbanization plans and policies address, support and

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conceptualize "formal" policy intended to improve the living standards of those living in informal settlements and slums, including a shift to "new" physical outcomes. Thus, there is an emphasis on exploring underlying attitudes of city governments on how they want the urban poor reshaped as they manage increasing numbers of residents living in informal settlements and slums. The paper draws out some broad policy lessons about the nature of policies for informal settlements in developing countries.

2. Methodology

The research method for this paper is based on a case study approach using the city of Bandung, Indonesia. A case study approach has been argued as a valuable tool for gaining deeper insights into complex social phenomena as it allows the opportunity to focus on attributes such as social change processes and management [24]. Prior to the field work, a literature review was completed, focusing on Indonesian national urban policy, the outcomes of the New Urban Agenda and implications for improvement of informal settlements and slums. Further literature follow-up was undertaken after the in-country fieldwork as key themes emerged from the detailed analysis of plans, policies and findings.

The field work was undertaken in Bandung 17–26 February 2017. Four major activities were carried out. Firstly, secondary data, reports and plans were collected and perused at the offices of Bandung City Government, primarily from the Housing and Settlement, Land and Landscaping Department. Regarding the high rise apartment proposal for kampung Kabon Kembang (case study discussed later), plans, sections, montages and perspectives were available for analysis. A major challenge in the fieldwork was clarifying the sequence of Bandung City plans over the last decade for both city development and kampung improvement generally, and their alignment with evolving national policy and laws on alleviating slums and sustainable urban development.

Secondly, with the assistance of academics from the Department of City and Regional Planning, School of Architecture, Planning and Policy Development, Institute of Technology Bandung (ITB) University, site visits were made to 10 of 13 kampungs classified as in "very poor" condition and prioritized for redevelopment by Bandung City Government including kampung Kabon Kembang. Thirdly, site visits were made to the three medium to high rise public flats as already completed by Bandung City Council to accommodate kampung residents, namely, Cingised, Sadang Serang and Rancacili. The latter visits focused on observation and visual recording through photography and mapping. In terms of observing livelihood transition, these visits were important as immediately adjoining new apartments such as Rancacili were signs of growing informal activity via street hawkers and movable stalls already utilizing the formal "planned public spaces". Observing transformation via direct observations in a field environment has been noted as a valuable tool for deducing and understanding urban trends and patterns [25]. Fourthly, the author observed and documented discussions at a public meeting with community residents in RW7, kampung Lebak Siliwangi, 22 February 2017, as facilitated by academics from the Department of City and Regional Planning, ITB University. This public meeting occurred as part of ITB student work on better understanding the dynamics of the existing condition of kampung housing, infrastructure and residents views on changing kampung built forms [26]. The latter provided a valuable opportunity to observe first-hand community governance and social capital, such as the Indonesian notion of gotong-royong (the sense of community spirit and co-operation) as residents articulated their concerns on development change, including possible eviction from their kampung.

3. The Diverse Challenges of Informal Settlements and Slums

The proliferation of informal settlements and slums can be seen as part of the wider phenomena of informality where a myriad of social, economic and physical activities fall outside the domain of the State [27,28]. It is well accepted that the notion of informality developed in the 1970s as part of the need to explain the emergence of the "informal sector" and "informal economy". These concepts evolved at that time so as to assist in understanding the processes and consequences of large flows of rural urban migrants to cities in search of jobs and housing outside formal unregulated systems. Settlements

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deemed as informal and illegal flourished as a solution to the affordable housing problems facing cities. As a result they have now become one of the most visible signs of informality generated by "bottom-up" and adaptive processes independent of State control [29,30]. From a number of perspectives, their development can be termed "transgressive" as residents cross over and work outside formal state based urban codes, protocols and regulations that historically have shaped tenure, planning, and urban design and built form outcomes [31,32].

The continued growth of informal settlements and slums is driven by a myriad of factors both generic and context specific. These vary from population growth, migration including the push factors of civil unrest and war, climate change, ethnic and religious minorities, the need to cluster with similar kin and ethnic groups thus providing urban security, safety and employment, the pervasiveness of poverty and a lack of policies that deliver affordable and accessible housing [1]. At a broader level, it can be argued that informal settlement and slums emerge as a response to the incapacity of formal institutions and policies of the State to provide basic human needs and rights including adequate housing within the formal market [13,21,33]. Conversely, such inability can be seen as performing a valuable opportunity in facilitating affordable housing for millions of poorer residents [34]. What is clear in their proliferation is that there is a positive correlation with poverty as where poverty exists, so do enclaves of informal and sub-standard housing [35]. There is also a strong nexus between the growth of informal settlements and the emergence of governance approaches that promote and sustain marginalization and discrimination [4].

At a global level, the challenges that residents endure in informal settlements and slums have been well documented [1,20,23,36–42]. These can be summarized as follows:

- lack of basic services and infrastructure, such as water supply, sanitation, roads and waste management, noting the burden of inadequate and poorly accessible water supply often has the greatest impact on women;
- substandard housing, including inadequate and structurally unsafe buildings;
- overcrowding and high density, noting this varies between regions, towns and cities;
- rise in unhealthy conditions due to the high spatial concentration of population, animals and resultant disease (such as the impact of Avian bird flu), environmental risks, physical conditions, and a lack of basic services;
- development in high risk hazardous locations such as flood prone lands where impacts are exacerbated by adverse housing construction, non-engineered physical adaptation measures, and high population densities;
- insecure rights over land and housing and hence, uncertain and vulnerable tenure; and
- the presence of poverty including exclusion from other human rights, such as the ability to vote and access services.

As increasing numbers of residents move to cities and are unable to access land and housing through formal systems, many have no option but to gravitate to vacant lands and existing informal settlements which are "accessible and affordable". This invariably means a trade off in terms of the location of the land, its legal status, the availability of basic services, level of amenities, environmental attributes, and the quality of housing. In the Asian context, three processes have been identified by which informal settlements grow and claim their space. These are: (i) settling such as the initial occupation of land and beginning of a settlement which morphs into a village or town; (ii) inserting into the existing urban boundaries such as on vacant lands; and (iii) by attaching, such as adding onto the existing structures of the formal city [30]. As part of these processes, informal settlements emerge not only on developable private and state lands but on lands considered by the formal system to be unsuitable and marginal for development, such as lands under freeways and adjoining rail corridors.

Studies in other regions such as the Pacific indicate that as populations intensify the pattern of location types where informal settlements embed themselves become both increasingly clearer and diverse. Spatial patterns of informal settlements reflect the utilization of the edges of rivers and

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estuaries, accretion lands on ocean and lagoon foreshores, electricity easements, mangrove wetlands, tidal lagoons and swamps (including their location-induced impacts such as flooding), cemeteries, peri-urban "edge" lands, waste disposal sites and land locked traditional "native villages" [12]. While this typology helps us to understand the morphology of informal settlements in the city, it also reinforces that informal settlements and slums emerge and flourish in locations that are at higher risk to climate change and environmental hazards, such as land slips, steep slopes, flood-prone areas and poor drainage [40–42] (see Figure 2). In developing countries, it is estimated four out of every ten non-permanent houses are located in areas subject to landslides, flooding and other natural disasters [43], with informal settlements in such areas with non-compliant technical codes and construction increasingly vulnerable to extreme natural events [44].



Figure 2. Informal settlements on steep slopes deemed for environmental protection in Jayapura, provincial capital of Papua, Indonesia. Source: Ninik Suhartini.

Demand for affordable housing and proximity to jobs in inner city locations exerts pressure on existing landowners, settlers and their housing stock, and as such intensification of informal settlements and the emergence of slums are inevitable. This invariably leads to uncontrollable land fragmentation, such as subdivision, as well as smaller housing and room tenancies, and in some settings, the transition to slums. Increasing population and smaller sized house plots mean the building footprints are maximized, and the interface of the private and public domains ubiquitous and fluid. As settlements become overcrowded and denser, they also become more difficult to provide "formal" networked services including rights of way and access for emergency services. Clarity on property rights can also become more uncertain and unclear [27]. A mix of state, customary and other land types underpinning informal settlements means formal planning rules and regulations are applied intermittently or not all as they have little relevance to the social and community structure governing life in informal settlements [21,35]. It is not surprising therefore that western conceptions which perceive informal settlements as a "problem to be fixed" stem from the fact they evolve and exist in often highly visible areas which have not been legally planned, "laid out" and sanctioned by the planning, building and land registration systems of government. Such situations include a lack of advanced planning to facilitate the orderly provision of upfront basic urban services and compliance with wider strategic plans, regulations and governance policies. As such, informal settlements are Sustainability **2017**, *9*, 1436 8 of 27

rightly or wrongly seen as unsustainable and have been termed a "dysfunctional" form of urban development [10].

What has become clear in the new millennium is that informal settlements are increasingly seen by State and city governments as a constraint to attracting city investment, suppressing market forces and constraining globalization [10,21]. Informal settlements are often at odds with glossy strategic city documents which set visions of modern neo-liberal development underpinned by enhancing and improving city competiveness, economic growth, job creation and growing "agglomeration economies". The economic importance of cities as hubs of innovation and investment is now well recognized by city and national governments and the private sector, and has reenergized interest by myriad stakeholders in diverse "urban renewal" opportunities [39]. Increased capital flows, relaxed planning controls and guidelines and increasing pressure to secure alternative sources of revenue for public infrastructure has meant city governments facilitating large scale urban development project [20]. Within this setting, the chaotic appearance of "unplanned" informal settlements and the adverse image they create conflicts with city policies and strategies which promote efficient and attractive cities connected to the global economy. As a result, many inner city informal settlements have been subject to redevelopment schemes for the middle classes and may include eviction and resettlement of existing residents by the government and developers. For those informal settlements and slums which are longstanding and where government support has remained vexed or minimal, governance structures can become strongly embedded through "bottom-up" processes. Thus, when governments do take an interest in resettlement and upgrading such as providing access ways and infrastructure, negotiations can become drawn out and problematic when considering evictions [10].

It could be argued that the biggest challenge for more effective urban policy which tackles both the causes and impacts of informal settlements and slums is not continuing the strong focus on narrow slum based definitions which center on household inadequacies and ignore communities, people and the spatial entities they occupy [42]. Rather, a key focus should be on addressing how and why policymakers and subsequent plans and policies conceptualize the issues and processes of upgrading. This includes a deeper understanding of the existing nature of how urbanism processes in informal settlements and slums unfold as well as clarity on the explicit and implicit policies and plans of government, especially those of city governments. Research has argued that the failure of formal governance frameworks and the inability of urban planning to make a sustained difference is the result of a lack of human resources and technical capacity or ignorance, a lack of political willingness to intervene, and a deliberate policy to leave urban development decisions to the market [45]. Complex political interplays and self-interest groups also strongly contribute to perpetuating urban inequities such as slums [17]. It has been observed in a similar vein in South East Asia that with the exception of Singapore, the planning and policy tools as applied are outdated, with many inherited from the twentieth century and are unsuitable for dealing with contemporary urban issues. As a result, city planning has been muddied and shaped by market-led approaches, local political settings and a collective lack of clarity as to what constitutes public interest, resulting amongst other factors in a deficit of urban infrastructure and services [46].

There are many contradictions and dilemmas in urban policy and these are most apparent in developing countries where cities struggle to keep pace with the demand for affordable land, housing, infrastructure and services, as well as support from effective planning systems. Some governments formally recognize and acknowledge the permanency of informal settlements and slums and involve them in hybrid governance forms [47], while at the same time many exclude them from city planning because they are considered illegal by the formal planning system [35]. As a result of such laws and policy positions, local governments and utility providers do not provide residents of informal settlements with infrastructure and services. As well, there is the reality that there are many agencies, organizations and groups which fall within the ambit of what constitutes government, with many institutions struggling to be coordinated, integrated and accountable when implementing urban policies and strategies of government. Arguably, informal settlements are also excluded from city plans

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by officials and policymakers because of the persistence of deeper middle class and elite attitudes and prejudices which require that cities, for example, must be controlled and have "order" to be functional and efficient [12].

A consequence of this trend is that mainstream planning and design theory has not embraced the dynamic form, complexity and understanding of urbanism that creates the communities living in informal settlements and slums [29]. This is a reflection of a number of factors including minimal appreciation by many stakeholders of the local forms of planning, design rules and regulations that are at play by residents in shaping settlement outcomes [30]. Similarly, it is also due to a lack of understanding by governments and international donors of the key local actors, their networks and organizations who are directly involved in supporting "bottom-up" poverty reduction efforts [48]. The persistence of such views at a number of levels further adds to the continuation of broad scale conceptualizations of informal settlements and slums which dominate the global literature. Non-contextual generalizations and categorizations using "catch all" terms such as informal settlements and slums are used for all types of "unplanned" settlements, and as a result fail to capture the nuances and locational differences that comprise the complexity of these communities [49]. All this contributes to the permeation of stereotypes and attitudes towards "unplanned" informal settlements and slums which have been recognised as strongly negative and reinforcing exclusion. Studies investigating the language used regarding slums, for example, have found the overarching theme was one of slums consistently stigmatized as places of crime, violence and social degradation. As a result, rhetoric consistently repeated in slum language such as disease, informal and eradication have been used to discriminate against the urban poor [50].

What is clear is that urban planning policy has shifted in its position regarding substandard housing, poverty and slums traditionally associated with the "working class" and the rise in urbanization in the nineteenth and twentieth centuries [51]. The lack of recognition, unwillingness to understand local circumstances and context, or the deliberate exclusion of informal settlements and slums from mainstream plans and policies by absent, vague or non-existent policies and action has meant they are subject to greater spatial, economic and social exclusion than other city residential and geographic areas [1]. As cities have evolved, urban planning has struggled to find the balance between applying order and control via structured and modernistic machine like approaches, versus seeking variety, understanding and responding more equitably to city complexity by adopting tailored policies reflecting local circumstances. It is not therefore surprising that the predominant response to the complexity and heterogeneity of the city (including its social, economic and environmental dimensions) is to apply a "one size fits all" approach to plans, policies and strategies [52].

Within this context, towns and cities have applied generic urban planning theories, plans and policies often without questioning the underlying assumptions necessary to achieving multiple local goals, aims, and objectives in city development. Many of these plans, policies and processes originate from major global forums, such as the Athens Charter of 1933, Habitat 1 in Vancouver, 1976, Habitat 2 in Istanbul in 1996, and the more recent 2016 Habitat 3 conference in Ecuador. Their outcomes are embraced by global development agencies that are at the "cutting edge" of implementing best practice urban policy and plans and are responsible for overseeing policy, institutional and regulatory change. For example, UN-Habitat, a key stakeholder in setting global housing policy, make it clear in their Participatory Slum Upgrading Program (PSUP) that a key objective of slum and informal settlement upgrading is the adoption of a programmatic city wide approach that aims for integration of slums into the formal planning systems that govern the city [15]. There is an explicit objective in this policy to "formalize the informal" by bringing the condition of informal settlements and slums into line with the current suite of practices and approaches which span modalities from in-situ upgrading, eviction, relocation and resettlement. If such policies continue to be perpetuated from global to local without caveats and represent "good" urban practice, what does this policy of integration into the "formal system" mean for local government when assessing informal settlements and slums? With processes of formalization at city and local levels increasingly recognized as underpinned by an

interplay of global agencies, state power, capital interests, local political economies and socio-cultural constraints and opportunities [12,17,53], there is a need to critically question who really gains when residents must conform to the imposition of "new" values and attitudes in how they live their lives. Governments at varying levels are not impartial in providing services and infrastructure. Rather, they have been recognized in varying contexts as a major conduit by which interests and classes intervene to "formalize" and regulate choices and behavior often to the detriment of other stakeholders [54].

As policy towards informal settlements continues to evolve, there is a recognition that a focus primarily on economic growth and neo-liberal urban planning and development does not necessarily translate to sustainable urbanization and city development [1]. Different policies are applied by different government agencies and their officials, NGOs, international agencies, vested interests and local communities, and as such, the policy driving "on the ground" outcomes in informal settlements is arguably contested, complicated and messy at multiple levels. Pivotal to improving the social, economic and environmental needs of those living in informal settlements are the policies and strategies of city governments, especially understanding the values and attitudes they represent and embed in their planning models and how this is reflected in implementation [7,12,21,45]. Do city governments involve the poor in the governance of upgrading, or do governments know what is best? Do city governments have pro-poor policies that promote inclusive and equitable involvement of residents in informal settlements and slums, and what are the policies and structures to achieve this? For those living in informal settlements and slums, how do city policies seek to "formalize the informal" and what does "formalization" look like? These key questions are explored in this case study.

4. Case Study Context—Bandung, Indonesia

4.1. Regional and Indonesian Setting

Indonesia sits within South East Asia and the larger region of Asia and the Pacific which accommodates around 50% of the world's urban population of which 28% reside in slums [15]. With major urban transformation occurring, planners and policymakers are unified by the scale, pace and increasing complexity of the urbanization process now underway. Over the past two decades, economic growth and urbanization have transformed the lives of millions of urban residents in Asia, moving many out of income poverty and spurning a growing middle class with increasing disposable income, mobility and political influence. However, Asia remains home to the world's largest urban slums and the largest concentrations of people residing below the poverty line. In terms of the urban population living in slums in South East Asia, for example, some 70 million persons in 1990 were in slums and this had risen to 83.5 million persons in 2014 [1]. Housing and land security, sanitation and clean water, health services and public transport are rights still not shared by all, and some of the worst consequences of urbanization remain manifested in the urban areas of South East Asia [11].

South East Asia includes the countries of Indonesia, Philippines, Thailand, Brunei, Malaysia, Singapore, Cambodia, the Lao PDR, Myanmar, Timor-Leste and Vietnam and all continue to experience rapid economic growth and urbanization. Based on the World Cities Report 2016, South East Asian cities comprised 47% of the region's population in 2014 compared to 41.3% in 2005 and 44.5% in 2010. National urbanization rates in 2015 ranged from a low of 21% in Cambodia and 34% in Vietnam to a high of 75% in Malaysia and 100% in Singapore. With an urban population of 301,579 million persons in 2015, the number of urban residents is expected to rise to 370,921 million persons by the year 2025 [1].

As a general rule, the three economically most advanced countries in South East Asia, namely, Malaysia, Singapore and Brunei have the highest levels of urbanization (over 70%) while the economically least developed countries of Cambodia, the Lao PDR, Myanmar, Timor-Leste and Vietnam have the lowest urbanization levels in the range of 21 to 39%. The countries of Indonesia, Philippines and Thailand are mid-range having around 45 to 55% of their populations as urban [1]. The cities of South East Asia are economically productive and pivotal to national growth, with the

2014 urban population generating 80% of the region's economic output [46]. While South East Asia contains some of the world's largest cities such as Manila, Bangkok and Jakarta, approximately 70% of the urban population of South East Asia does not live in these large urban agglomerations. Rather, they reside in small to mid-sized towns and cities with less than 500,000 inhabitants [45]. As such, confronting the challenges of sustainable urbanization including the urban governances of informal settlement and slums in small to mid-sized towns and cities at an early stage is critical to improved urban development outcomes [11].

Located between the two major continents of Asia to the north and Australia to the south, Indonesia has a strong history of urbanization concurrent with sustained economic growth since the 1960s. Many of Indonesia's urban decentralization policies relate to tackling the high concentration of population and metropolitan urban centers located on the main island of Java, including the three largest cities of Jakarta, Surabaya and Bandung. In 2016, Indonesia had an urban population of 137,422 million persons and an urbanization rate of 53.7% that has been gradually rising since the 1990s [1]. In urban areas, the poorer segments of the population tend to live in kampungs, a term used to describe a village, community or rural or urban settlement, and as such, urban kampungs have a long history of being accepted as enclaves of low income settlements. The most vulnerable kampung residents are often those living in the original rural kampungs absorbed into the urban milieu who are now located in inner city locations on State lands adjoining riverbanks and railway lines and are subject to major city center development pressures [39,55]. The evolutionary cycle of kampung development means edge rural kampungs will gradually be consumed within the greater city and metropolitan areas. Importantly, kampungs occupy land according to a mix of tenure arrangements some of which are not recognised by formal land law regimes, thus making them ripe for redevelopment by government and private developers [56].

4.2. National Policy

While not all kampungs can be classed as slums given their mixture of housing conditions including land tenure arrangements, the proportion of the urban population living in slums in 2014 was estimated to be 22%, which is a dramatic decrease compared to a high of 51% in 1990 [1]. A large proportion of this decline in slums can be attributed to two main factors. Firstly, Indonesia reduced urban poverty levels from 48% in 1990 to 13% in 2010. This is a major gain envied by other Asian countries given that reductions in urban poverty in South East Asia and Asia generally are problematic for three reasons, namely, (i) the redistributive mechanisms targeting the urban poor are not strong; (ii) the incomes required to sustain an urban household are far higher than those in rural areas; and (iii) the focus on poverty alleviation programs still remains anchored in rural districts [46]. Secondly and importantly, there is a sustained history of a commitment to kampung and slum improvements policies and strategies in place in all National Development Plans (*Repelita*) since the mid-1960s [7].

There have been three main phases of these policies and strategies which can be viewed as part of Indonesia's evolving approach to dealing with urban poverty alleviation [53]. The first was the highly successful Kampung Improvement Program (KIP) initiated in Jakarta in 1969 and funded by the World Bank and the Jakarta City Administration. The KIP placed strong emphasis on the provision of basic physical infrastructure such as water supply, sanitation systems, footpaths, drainage, and public amenities such as open space, street lighting and health clinics [57]. The World Bank, which was the major partner of KIP with the Indonesian Government, estimates over 18,000 hectares of kampungs received some form of improvement with some 7 million urban poor positively impacted by the year 2000 [58]. While there was negligible community participation by civil society and NGOs in KIP in the initial stages [53], the KIP and subsequent in-situ iterations became a model for slum improvement in many Indonesian cities including Surabaya and Bandung. The citywide program has been attributed as a major driver in improving kampung living conditions during and following the formal KIP period of 1969–1999 [19].

Building on lessons learned from the KIP, the second phase came into play from the late 1980s to the early 1990s and aimed to integrate physical changes with social and economic improvements. However, the advent of the 1997 Asian financial and monetary crisis led the government to develop a third phase of programs to cater with the rapid rise in poverty. This included the JPS Jaring Pengaman Sosial (Social Safety Net) and P2KP Program Pengentasan Kemiskinan Perkotaan (Urban Poverty Alleviation Program), the latter focusing on housing programs promoting informal and community-based housing arrangements. These programs incorporated a combination of livelihood improvements and a suite of social, economic and physical improvements primarily targeted at kampungs. These programs were adopted as part of the National Medium-Term Development Plan 2004–2009 [7]. The National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah/RPJM) 2014–2019 prioritized the development of housing and settlements for households that fall within the 40% lowest income range. Slum eradication was selected as the first national housing development priority by aiming for zero slums by 2019. In this setting, kampung and slum upgrading has been consistently prioritized by utilizing several development and management schemes. These include the provision of mortgage facilities for low-income households, integration of housing with social-net support facilities, community-based in-situ slum upgrading programs, and the building of row houses, namely, attached apartments, low or high rise.

Concurrent with the above efforts to improve the settlement conditions of the poor and reduce poverty has been a range of other national initiatives that have also benefited kampungs and urban and rural populations generally. In 1981, the National Agrarian Operation Project was commenced aiming to increase tenure security for economically vulnerable segments of the populations such as those in kampungs [19]. In the late 1990s, a suite of far-reaching national reforms were introduced that focused on enhancing decentralization. This shift from highly centralized to decentralized governance promoted accountable systems of government and more pluralistic democratization thus allowing greater stakeholder participation than allowed under the earlier New Order authoritarian regimes [59]. In 2011, for example, the introduction of The Housing and Settlement Areas Law provided the legal framework to advance housing for low-income residents, and importantly gives the authority to local and provincial governments to identify slum areas, prevent their expansion and upgrade the quality of life for slum residents [53].

National Law 1 of 2011 regarding The Housing and Settlement Areas Law provides a legal framework for regional governments to prepare plans that contain programs and projects on slum eradication using the steps of relocation, rehabilitation, and regeneration. Law 23 of 2014 regarding Regional Government defines the range of slum areas to be handled by each tier of government: central 15 ha, province 10–15 ha, and municipal/regency 10 ha. As a general observation, Indonesian policies on slum eradication are increasingly based on SDG targets, and are outlined in the national mid-term development plan (MDP) of 2015–2019. The MDP targets are contained in the Sectoral MDP Plan of the Ministry of Public Works and People Housing and provide a framework for kampung and specifically slum upgrading programs.

Within this setting, kampung and slum upgrading programs now being implemented in Indonesia consist of a mix of programs driven by local and provincial level government with national support. This includes a range of urban development activities focused on joint venture high-rise public housing, basic healthy housing (*Rumah Sederhana Sehat*), Urban Poverty Alleviation (P2KP), Community-Based Neighbourhood Upgrading (PLP-BK), and the Neighbourhood Upgrading and Shelter Sector Project (NUSSP). As a general rule, national kampung and slum policy has promoted the application of the "build without eviction" concept which seeks to resettle existing residents who can afford the new housing to temporary buildings and their relocation back to the same or different area when possible. When land is acquired for public purposes such as flood mitigation and freeways corridors, the national government will consider compensation for land, housing and economic activities that are affected so residents can attempt to continue their livelihoods in the new locations. These national initiatives have allowed city governments and other stakeholders such as community groups and

non-government organizations (NGOs) to balance former "top down" central government approaches emanating from Jakarta with "bottom-up" initiatives, including those specifically aimed at improving the condition of kampungs and slums [39,53].

5. Bandung Development Context

5.1. The Bandung Setting

The capital of West Java Province, Bandung is the third largest city in Indonesia after Jakarta and Surabaya, and is located some 150 km southeast of Jakarta (see Figure 3). Bandung was designated an autonomous city municipality by the Dutch East Indies in 1906, and as such, its planning, architecture form and structure has been strongly influenced by the Dutch colonial administration both before and after Indonesia gained independence in March 1945. The first kampungs in Bandung were the original lowland rural villages and it was around these settlements that the city developed and marked out its structure. The Dutch colonial administration respected these villages as legal entities as operating under traditional customary laws (adat), and did not apply formal land provisions as contained in the Dutch Civil Code. After the struggle for independence, West Java was subject to major civil unrest between the Darul Islam movement and Republican Army leading to major upheaval in rural areas. With the exit of the Dutch colonial administration, rural migrants flooded into the city in the late 1940s and 1950s and settled into the patchwork of existing kampungs with little resistance from the city government. New kampungs comprising squatters also emerged on vacant lands [56]. During the New Order period (1966–1998), labor migration meant kampungs continued to intensify, thus developing into swathes of low income settlements with high population densities. This transformation led to many kampungs displaying all the hallmark characteristics of informal settlements, including tenure insecurity, sub-standard housing and inadequate levels of infrastructure and services [19].



Figure 3. Bandung promotes itself as the modern capital of Asia-Africa building on the legacy of the 1955 Bandung conference held to strengthen cooperation between the newly independent states of Asia and Africa. Source: Author.

By the late 1980s, Bandung's administrative area had expanded to twice its original size. As a result, the Bandung Metropolitan Area (BMA) was created in 2001 with the bulk of urban activities falling within the jurisdiction of the Bandung City Government. The latter has a population of 2.5 million persons while the total area comprising the BMA, which includes the jurisdictions of

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Bandung City, Cimahi City, Bandung and West Bandung Regency, had a population of 8.2 million persons in 2014 [60]. Bandung's rapid growth reflects the wider industrialization of Indonesia at the national and regional levels, including the growth of the greater Jakarta–Bandung Region. Bandung has grown into a large metropolitan centre of manufacturing, hi-tech industrial estates, commercial services, and a strong tertiary sector which has attracted both domestic and international investors [61]. Like other major urban centers in Indonesia, resultant in-migration has caused a significant increase in housing demand with poorer residents unable to buy housing from the State Housing Provider Agency (*Perumnas*) or secure housing from formal private developers due to their low or unstable incomes. As a result, much of the low-cost housing including slums remain concentrated in high density kampungs and adjoining interstitial spaces under state and to a lesser degree private land ownership. After Jakarta, Bandung has the second highest levels of urban population living in slums; some 26,000 plus dwellings with an estimated population of 120,000 residents. Many of these slums are located alongside rivers, railways, the airport, industrial areas and inner city commercial areas (see Figure 4). Despite varying efforts to improve physical and socio-economic conditions of kampungs and their residents, there has been little improvement in the physical extent of Bandung slums [60].



Figure 4. Kampungs adjoining the Cikapundung River in the Tamansari locality in northern Bandung. Source: Author.

Sitting below national, provincial and municipal tiers of government, the BMA is divided into 26 *kecamatan* (sub-districts) and 139 *kelurahan* ("villages"). As a general observation, kampung upgrading projects and initiatives have been targeted at the *kelurahan* level or below [7] and build on the using the network of smaller government administrative units known as *rukun warga* (RWs) and *rukun tetangga* (RTs). The latter village groupings are strong in social capital and neighborhood outreach [32]. The key stakeholders involved in the kampung and slum upgrading programs coordinated by Bandung City Government include the National, Provincial and Municipal Governments, the, private sector, NGOs and affected residents. The Bandung City Government facilitates the implementation of the upper-level government policies on housing as well as private sector investment in housing provision. It also assists the community in implementing housing policies and projects, particularly in land sharing and land distribution. However, the private sector and the Bandung City Government are the main decision makers in determining land sharing arrangements in kampungs including options for new public housing, community infrastructure, and the provision and layout of commercial space [62].

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5.2. Bandung City Government Policies for Kampung and Slum Upgrading

The preparation and implementation of kampung and slum upgrading policies and programs in Bandung are based on a number of elements as contained in the 2010 Urban Infrastructure Development Strategies (*Strategi Pembangunan Permukiman dan Infrastruktur Perkotaan*) [63]. These are: (i) the need for overarching policy that connects spatial and develop plans; (ii) evidence-based strategies to underpin urban development and sectoral plans; (iii) integrated sectoral development strategies focusing on urban development; (iv) recognition that the current policies and strategies are inadequate in dealing with the pace and scale of issues arising in the rapid urbanization process; and (v) many policies and strategies of different levels of government need to be coordinated to more effectively deal with dealing with urban housing and infrastructure.

Since 2010, programs and strategies for kampung and slum improvement in Bandung have influenced by a range of key national and city planning documents, such as the Mid-Term Development Investment Plan (RPIJM), Regional Housing and Settlements Development Plan (RP4D), the Spatial Plan of Bandung City (RTRW, 2011–2031) the Plans for the Prevention and Improvement of the Quality of Urban Slums (RP2KPKP), and the Environment and Building Block Plan (RTBL). The Spatial Plan of Bandung City (RTRW, 2011–2031) sets the overall vision for Bandung city. Within the context of Bandung striving towards becoming a modern and global Asian city, the city promotes itself as the "City with Dignity" (Kota Bermartabat). Under this overarching vision, the Bandung City Government focuses on the improvement of the quality of life by addressing the provision of improved housing and basic urban services such as water, waste management, transportation linkages, urban space safety and amenities, standardized service provision at neighborhood level and disaster mitigation. The Spatial Plan of Bandung City (RTRW, 2011–2031) divides the city into three main areas: restricted areas for development in North Bandung (such as water catchments), controlled areas for development in West Bandung, and areas for housing and local center expansion such as in East Bandung. Under the Spatial Plan, kampungs are promoted as key element in "city revitalization" with the City Government branding swathes of kampungs as "eco districts". These areas emphasize activities contributing to neighborhood-scale sustainability, such as the provision of open space and setbacks from key rivers and tributaries, as well as providing emergency vehicle access to high density housing areas [64].

The Bandung City Government has identified three types of programs for kampung and slum upgrading, namely, short, mid and long term [65]. Short term improvements focus on housing and precincts in adverse condition by undertaking a "make-over" such as painting, small scale drainage and environmental improvements, while mid-term policies focus on in situ improvements for housing, infrastructure and public facilities. Long term programs increasingly focus on the provision of low cost flats (*rusunawa*). With rising inner city land costs, vertical tower solutions potentially offer the same or increased population densities on a reduced building footprint whilst providing increased open space and environmental amenity at ground level (see Figure 5). The national and provincial governments also financially assist the provision of vertical housing whether for rent and sale. In this context, there is an increasing focus by the Bandung City Government on the provision of vertical tower housing within kampungs by using the logo "Apartment Rakyat" (peoples' apartments or row housing) so as to promote and publicize its commitment to providing lower cost housing accommodation through its slum upgrading programs.

Building on national policies of slum eradication as developed by the Ministry of Public Works and People Housing targeting the achievement of Zero Slums by 2019, the Bandung City Government has designated specific priority slum upgrading locations of which the majority are in kampungs [62]. The main criteria used by the Bandung City Government to identify slums include the alignment of the locations with the strategic land use policies contained in the Spatial Plans, land ownership, population and building density, and socio-economic and cultural condition of the community. Using these national criteria, the Bandung City Government has categorized slums into three classes: very poor condition, poor condition and less poor condition slums (see Figure 6). In total, slums in Bandung comprise an area of 253 hectares being located across 18 districts and 29 kelurahans. Based on slum

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upgrading plans contained in RP2KPKP, 2015, there are five prioritized locations recommended for relocation of residents (that is, proposed non-residential development) and 24 locations for slum upgrading programs. These latter locations include 13 kampungs which contain slums classified as "very poor condition" and which have been identified as a priority for apartment development during the period 2014–2019 [62]. The popular Bandung City Mayor, Ridwan Kamil, confirmed in April 2015, that his administration planned to construct these 13 apartment towers for low-income residents currently living in slums, with development involving national and local funding plus the involvement of the Public Housing Ministry and the Directorate for Human Settlements (*Ditjen Cipta Karya*) in Public Works [66].



Figure 5. A shopping complex and private residential tower developments adjacent to kampung Lebak Siliwangi in northern Bandung. Source: Author.

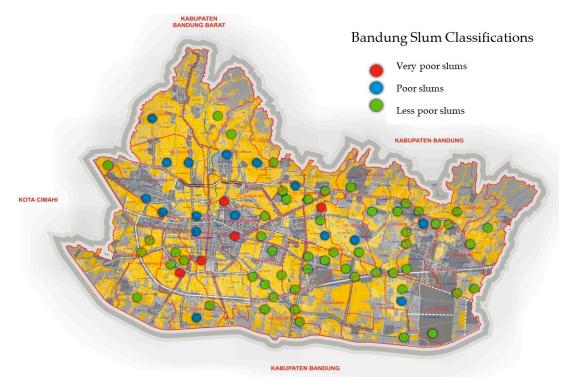


Figure 6. Bandung slum classification based on the RP2KPKP Kota Bandung, 2015. Source: [62].

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Within the context of overseeing the rollout of vertical tower proposals, the Bandung City Government tries to implement where possible a "build without displacement" strategy which includes consideration of key development principles in the transition process from slum to new apartments. These include, for example: (i) that livelihoods should be at least equal to the "practices" before program implementation; (ii) eligible residents will be moved temporarily to flats provided by the Bandung City Government during the construction phase; (iii) residents will be advised of their "rights and responsibilities" of occupation by the Bandung City Government during project implementation; and (iv) the rental and or sale of any apartments by the Bandung City Government will be at affordable levels. As well, alternate residential schemes maybe developed and implemented by the private sector after consultation with the Bandung City Government [65]. However, the Bandung City Government does apply a "build with displacement" policy where kampung slums are to be developed for non-housing use, such as public works, or for commercial, retail and shopping complexes facilitated and funded by the private sector. Increasingly, the Bandung City Government works in partnership with the private sector and uses the concepts of land sharing and land distribution, including financial market returns, as key drivers in defining the nature of kampung and slum upgrading programs [62].

One of the current vertical housing towers proposed by the Bandung City Government is in kampung Kebon Kembang in RW11 in kelurahan Tamansari in northern Bandung [65]. The tower development is situated immediately adjacent to the south of the Pasopati Bridge located between the Cikapundung River and the Pasar Perelanjaan Balubur Town Square shopping complex (see Figure 7). The vertical tower proposal strongly aligns with the wider precinct-based Cikapundung Revitalization Program which promotes the provision of riverside open space, service roads and improvements to infrastructure concurrent with the provision of low income housing in Tamansari. Kampung Kebon Kembang has a population of approximately 550 persons comprising 154 households situated in 81 houses. Over half of the existing kampung residents work as street sellers (27%), laborers (17%) and private and self-employed (23%), with the remaining 43% employed as public servants or are retirees. The land is owned by the Bandung City Government. Under the publicly released plans, the apartment complex will accommodate 479 flats of minimum 33-39 square meters in area The tower development comprises a series of interconnected complexes ranging from 4–10 storeys, with 79% of flats assigned for residential use, 4% of flats to include commercial use, 8% to function as boarding houses, while the remaining 10% will be rooms for rent [65]. The proposal tries to apply the concept of a Sundanese kampung to a vertical housing solution, whereby a mixture of traditional physical elements based around houses (flats), gardens and landscaped "forest" are key features in the design. As a result, attached row houses with individual garden and greenery (trees) define the building plans.

Like many other kampungs in Bandung, RW11 in Tamansari is faced with issues of overcrowded housing, lack of functioning infrastructure and low environmental quality. Furthermore, this area encounters continuous water pollution caused by open wastewater drainage, improper septic tanks, overuse of ground water and direct waste disposal into the Cikapundung River. Under the tower proposal, landscaped street spaces are allocated for street vendors, communal open space including footpaths and parking are provided, and commercial rental space is available to accommodate the current alleyway based social-economic livelihoods of residents. The development also has bio-digesters, bio-pores, rainwater catchment installation and waste separation facilities. Other "formal" public facilities such as a mosque and a kindergarten are also provided [65].



Figure 7. Perspective of the Tamansari Vertical Tower Housing. Source: [65].

Compared to the scale of public vertical tower developments in Jakarta, vertical *rusunawa* developments in Bandung are new with only three public apartment complexes completed in the new millennium, namely, Cingised (483 flats completed 2005), Sadang Serang (93 flats completed 2012) and Rancacili (273 units completed 2016) (see Figure 8). As the Bandung City Government publicly promotes its kampung and slum upgrading via the *rusunawa* vertical towers, many kampung residents remain concerned about future plans for tower development and importantly, their inability to comply with the prescribed kampung development template being implemented by the Bandung City Government. At a community meeting in RW7 in kampung Lebak Siliwangi situated to the north of the Tamansari tower proposal on 22 February 2017, residents expressed both reservation and confusion regarding designation of kampungs for future tower development and importantly, where their residents' concerns fit within the process [26]. Discussed within an atmosphere of development inevitability where developers are seeking land with unclear land status and the Bandung City Government is encouraging urban renewal (including joint venture with the private sector), residents raised the following concerns and issues:

- levels of financial compensation for land and housing improvements, if any, for those residents claiming they hold government issued land registration certificates.
- the future of resident livelihoods currently undertaken at a ground level as part of existing multi-functional housing apartments fronting alleyways.
- the inability of residents to meet the minimum rental thresholds in tower apartments, and hence the likelihood of having to source alternative accommodation in other kampungs.
- the inability to consistently meet monthly payments for water and electricity by public utilities (plus rental payments).
- the applicability of Islamic law for land/dwelling inheritance amongst families as applied to "highly regulated" vertical towers complexes where western law and regulation applies.
- change in regulatory and governance arrangements as embedded in the current strongly knit RW arrangements in contrast to dealing with an unknown management contractor for "code of conduct" issues in an apartment block (such as household capacity, security and cleanliness issues, for example); and

• the increase by private developers in "pressuring" residents to sign over their properties for redevelopment as developers claim many residents are illegal occupants. Given this atmosphere of muddied land tenure status and possible eviction, combined with developers who can access capital increasingly working on kampung land sharing and redevelopment options with Bandung City Government, kampung residents have permanently marked on their exterior dwelling walls the words "kami bukan penghuni liar" (translated in English "we are not squatters")



Figure 8. Recently completed 5-storey public walk-up flats at Rancacili, Bandung. Source: Author.

6. Discussion

Like many South East Asian cities, Bandung represents a fast growing city undergoing transformation at many levels. Bandung continues to grapple with the consequences of rapid urban growth including a shortage of affordable housing supported by adequate levels of public services, infrastructure and environmental amenity. The result is overcrowding, low quality of and access to public services, fragmentation of land and increasing intensification of kampungs especially those within the inner city. Set within a complex national hierarchal system of top down planning that has for some time advocated the use of neo-liberal planning approaches [59], the Bandung City Government is developing and evolving a range of policies, strategies and programs for city development, including addressing the problematic challenges associated with kampung and slum upgrading. These initiatives are based around the achievement of development themes such as improved economy, cultural recognition, expansion of tourism and the provision of eco-districts all set within a wider vision of Bandung positioning itself as a "sustainable city" [62].

What is clear in Bandung is that there has been an evolution of kampung and slum upgrading strategy. This has spanned the phase of in-situ approaches associated with KIP commencing in the 1970s and moving to the provision of new housing stock, including large scale vertical tower housing with resettlement. This transition has paralleled changes at the national level such as Law No. 1 of 2011, which has placed the task of housing and settlement development including slum upgrading as a responsibility to be overseen by the State and implemented by local government [67]. While the objectives of kampung and slum upgrading of the Bandung City Government are admirable as part of wider poverty alleviation measures, namely, improved housing quality, economic growth, new

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infrastructure and services and environmental opportunities for better "connectivity" within the city, the use of existing ideal urban development models to transform the lives of residents who are disadvantaged and already marginalized remains flawed. The process of upgrading that uses highly technocratic Masterplan-driven solutions which repeat formal and functional approaches are models whose logic has little traction within existing patterns of kampung urbanism. Assuming residents can meet the rental threshold, they are being forced to move from fine grain, tight knit 2–3 storey horizontal housing to vertical tower housing in accordance with a new regime of order and uniformity which embraces neo-liberal development policies. The visually strong plans for the Tamansari rusunawa development reflect highly linear and geometric ground level and tower solutions for lifestyles that are currently carried out in a multi-functional and dynamic human scale housing-alleyway interface. Plan montages show residents and their children, for example, as middle class residents neatly dressed in fashionable clothes in highly formalized clean and green spaces (see Figure 9). Street vendors are allocated pre-determined modules of space with no adaptability allowed. These idealistic images of a particular kind of social and economic interaction and transformation are in stark contrast to the informality and diversity of gender, appearance, sociality and lifestyle complexity that define current kampung life in Tamansari and wider Bandung.



Figure 9. Image of residents in "new" sanitized expressions of public/private interface in the Tamansari Vertical Tower Housing. Source: [65].

The implications of the above is that decisions on desired outcomes such as physical form and norms and boundaries for livelihoods and social interaction as embedded in tower developments have already been made via formal regulatory, institutional and policy settings. Urban poverty issues have been positioned as a housing challenge to which problems can be resolved by transferring residents to live in vertical towers. The involvement and consideration of affected communities and their needs as impacted by development appears tokenistic with social sustainability concerns regarding how resident's use, live and work in their current kampung space not taken seriously. The transition of residents from informality to formality in terms of having to find regular disposable income for electricity, water, building management, city property taxes and possible new forms of public transport appears to get little attention in upgrading processes [68]. As a result, understanding key concepts underpinning social sustainability such as social capital, cohesion and place attachment increasingly appear unimportant in urban development processes. This ethos of an imposed planning solution to reshape kampung "territory" means existing and future social goals of residents are not connected with the design of places and spaces. Relocation and vertical tower development as a means of kampung and slum improvement is increasingly replacing in-situ upgrading which has been anchored on community participation and empowerment. As a Bandung resident and beverage seller commented

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when discussing his forced eviction to a new public housing *rusunawa* 12 km from his former home: "What will I sell on the fifth floor? I don't even have any capital. I am ashamed that I have to beg for food now" [69].

From the perspective of the Bandung City Government, it is argued that notions of integration and formalization of kampung and slums dwellers are anchored around reshaping and restructuring their existence so that they can be transformed to a new "order". This is reflected in:

- the push to re-educate poorer and disadvantaged communities so that their norms and values align
 with modern city life, such as the need to pay taxes for the provision of improved public services;
- the positioning of kampungs as spatial objects of development, where the emphasis is on place
 potential rather than an understanding of community and their nexus with locality;
- the correction of "unsustainable and undesirable" patterns of land use "chaos" by imposing the application of unitary State rules and regulations, such as zoning, building and environmental policies and laws; and
- increasing use of neo-liberal and market-orientated principles to impart "modern" urban development into kampungs such as private-public partnerships including private market development and management of government land.

At the beginning of the new millennium, it was observed that the Bandung City Government had an emerging policy of attracting new investors to transform the city into a center for service industries and commercial innovation. Central to this strategy to upgrade Bandung to a global city was targeting the well located inner city kampungs for development [56]. Based on current vertical tower housing programs being implemented, it appears this strategy is increasing in currency as the Bandung City Government experiments with a policy model strongly based on tower developments to attain its social, economic and environmental objectives of kampung and slum upgrading (see Figure 10). This model includes increasingly aligning with the private sector to assist with options for land sharing and funding backed by the promise of shared revenue and increased taxes to support local government spending. As noted in other contexts as part of the evolution of upgrading policy, private sector and government goals are increasingly intertwined with the result that public and private interest is blurred in market-driven outcomes [68]. Government-private sector alliances and ensuing market orientated solutions are used to justify the "successful" achievement of global, national and city goals and the imposition of "top-down" solutions at the expense of minimally driven local community participation. In this contemporary setting, the Bandung City Government with national policy backing and a suite of laws and regulations uses the full weight of legality to legitimize land acquisition in kampungs for major tower developments. This authoritarian approach is in strong contrast to the short and mid-term intervention strategies based around in-situ kampung and slum upgrading which recognized the socio-cultural nuances of communities and the strong role of RT/RW governance as main upgrading tools over the last thirty years.

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Figure 10. New urban forms and spaces expressed in the Tamansari Vertical Tower Housing. Source: [65].

7. Conclusions

There is a need to critically question the assumptions and rationale that lie behind local government policies and strategies that purport to be directed towards the sustainable upgrading of informal settlements and slums. What is reflected in the analysis of the evolving Bandung experience and the shift towards vertical housing is that existing patterns of local scale urbanism based on neighborhood recognition of residents' views and a strong relationship between shelter, place and livelihoods are given little consideration in the planning process. In the current unfolding development setting, kampungs and their residents are positioned as issues "to be corrected" by the middle, elite and ruling class, and are essentially sidelined in the decision-making process. The planning system with its varying tools are manipulated by vested interest groups, and used as a conduit to assist in "social cleansing". Set against a background of entrenched socio-cultural protocols, limiting institutional processes and economic disparity as noted in other kampung contexts elsewhere in Indonesia [53], residents and communities struggle to be accepted as relevant stakeholders.

Kampungs with their uncertain land tenure and disadvantaged communities represent a pawn in a development game by governments supported by the private sector who seek to implement control and order to "normalize" and make residents conform to a secular vision based on preconceived urban ideals. As observed in the Bandung process, government decision-makers including planners and designers see vernacular informality as equating to increasing "chaos" which must be formalized. Targeting kampung residents labeled illegal means that despite their tolerance from time to time by the formal system, residents and their settlements remain vulnerable to being designated for redevelopment and eviction by the government. Such stigmatization fuels "harassment" by private developers who wield their socio-political connections with Bandung City Government to influence the outcomes of the planning and development process. In an era of joint ventures and ascendancy of neo-liberal market policy, residents are increasingly at risk of being subject to the "full force" of formal state law to enable the redevelopment process to proceed.

Do city governments really understand the implications on resident's lives when applying key concepts such as "formalizing the informal"? Are city governments replacing one slum with another in vertical housing by not considering residents' genuine concerns and addressing underlying poverty and human development issues, such as health and education? Can the concepts of traditional mixed-use kampung living that offers affordable housing and a melting pot of ground level social and economic exchange be sustainably embedded in vertical housing solutions? The policy setting

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in Bandung reaffirms that cities are complex and interdependent with many diverse stakeholders holding varying vested interests, yet not equally participating in the shaping and making of the city. City policy is messy, unclear and complex at many levels, including pressure by global and international development partners to implement policy such as the SDGs and the New Urban Agenda into national and city contexts. If planning can embrace the logic of rights-based policy in cities, a wider challenge of ensuring equity and equality in the provision of infrastructure, services, housing and involvement via good governance comes into play [13].

In the new millennium, the notion of the right to the city has become far more than individual access to the resources of the city, but a right for residents to change themselves by recalibrating the nature of the city [70]. This shift is fundamental as what we see in the Bandung context is that decisions for change for kampung dwellers are made by other decision-makers who apply their interpretations of rights slanted towards market and techno-managerial solutions. As observed in a recent urban slum upgrading project assessment in Central Kalimantan, Indonesia, participation and related community involvement or exclusion are tightly controlled and vetted by "top-down" approaches which legitimize the planning process per laws and regulations [71]. Arguably, these are all traits of "controlled" order in the modern neo-liberal and global connected city where notions of public interest, inclusiveness, good planning, participation and governance are emergent, contested and continually being reframed in the urban milieu.

Continuing with prescribed policies founded on "formalizing the informal" requires deconstructing the rationale of "business as usual" attitudes, motivations and values of city officials and politicians as applied in varying local political settings to informal settlements and their resident's. With a push by global institutions for "localization and partnerships" [72], such actions remain critical to understanding sustainable and equitable urbanization outcomes across spatial and temporal domains and should be front and center of the upgrading and poverty alleviation debate. Within this setting, a number of thematic areas emerging from this research suggest themselves for further inquiry. These include: (i) the design, form, functionality, adaptability and governance of private and public spaces in new tower developments; (ii) the setting of minimum performance standards and benchmarks to be achieved in the process of undertaking "participatory" community participation; and (iii) the nature of the specific values that local stakeholders, including the varied decision-makers in Bandung City Government, private sector and the community/civil society, consider most important in kampung development. This could involve before and after interviews with former kampung residents who have been "formalized" by their relocation to high rise apartments, or transfer to another kampung.

With an increasing gap between rich and poor, including a decline in the share of affordable housing stock within the city, the globally derived "one size fits all" approach where cities should function and look the same must be resisted when seeking sustainable urbanization [10]. Formal approaches which promulgate functional, hierarchal and deterministic modernistic planning solutions will continue to have limited utility unless they embrace an understanding of how cities are really made and shaped. Research recommendations advocating greater location specific and customized nuanced upgrading solutions that incorporate community participation and local knowledge to address informal settlement and slum diversity need to be unpacked [42]. This will require deconstructing and "exposing" city complexity including local stakeholder diversity, the political and power dynamics of vested interest groups, local socio-cultural practices, existing institutional arrangements and modes of self-organisation and adaptive urbanism [17,52,73].

While Bandung is at the beginning of its transition to building high rise rental flats in kampungs, other major Indonesian cities such as Surabaya have already embarked on constructing *rusunawa* and have been criticized for a lack of consideration of alternative approaches to housing disadvantaged urban residents. This includes recognizing the local "glue" that binds alleyway based communities together, such as their socio-cultural assets and livelihood networks [20]. More than ever, city governments need to be held accountable for applying market-oriented policy and practice which are not supported by robust inquiry into their implications on resident needs at many levels. While there

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are no "silver bullet" solutions for Bandung, the underlying governance of such processes and outcomes need far greater leadership, transparency, political commitment and questioning of "who, how and why" decisions are made In this setting, the role of global urban institutions such as UN-Habitat as well as national and city governments is pivotal in demonstrating new visions and means of "doing business" in implementing informal settlement and slum upgrading policies and strategies via the SDGs and the New Urban Agenda if we are to collectively contribute to "better" sustainable urbanization outcomes. Otherwise, "formalizing the informal" using standardized and regularized policies without questioning their ability to support and achieve fundamental people-driven change will only continue to perpetuate non-contextual practices and ineffective approaches in managing of informal settlements and slums [12].

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