Indicators for Measuring Spatial Justice and Land Tenure Security for Poor and Low Income Urban Dwellers

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Received: 29 May 2018; Accepted: 12 July 2018; Published: 17 July 2018

Abstract: There exist various indicators that measure land tenure security for urbanites. Most of those indicators measure the degree to which land titling promotes the security of tenure. Based on the reviewed literature, it is admitted that land titling is not a panacea to land tenure security. Measuring the degree of land tenure security should not rely only on the legalisation of landownership. This paper makes a meta-analysis and conceptual modelling to connect spatial justice and land tenure security. It discusses the potential of inclusive urban development grounded on the claim that spatial justice enhances land tenure security. A comprehensive framework of indicators which can measure the degree of land tenure security from a spatial justice lens is thereafter derived. The meta-analysis and conceptual modelling were coupled with research synthesis to perform an in-depth review and qualitative content analysis of the literature on concepts of spatial justice, land tenure security, and urban (re)development processes. This study proposes 60 indicators which measure the degree of spatial justice and land tenure security along a continuum of spatial justice and land tenure security. Those indicators provide a more holistic approach for measuring land tenure security from a spatial justice lens than the separated sets of existing indicators.

Keywords: urban (re)development; poor and low-income groups; urban dwellers; spatial justice; land tenure security

1. Introduction

Urban redevelopment and regeneration are spatial development processes that consist of revitalising or reorganising cities that are declining or have been developed without compliance to modern principles of spatial planning in order to create new and futuristic cities [1,2]. The main features of urban (re)development and regeneration include the clearance and/or upgrading of slums and declining areas, housing renewal, and the development of new structures, including public amenities [1,3]. Other actions consist of extending urbanised areas into urban fringes through the development of new zoning rules and the conversion of agriculture lands into other types of land use, such as residential and commercial. When those processes are undertaken following a neoliberalisation paradigm they result in spatial injustices. These injustices perpetrate land tenure insecurity for some categories of urbanites, such as the poor and the low-income groups, under different systems of land tenure. Those people are excluded from the city and deprived of the opportunities to use their real properties through unfair compensation or forced sale that leads to the concentration of land resources into the hands of rich people [4,5]. Any attempt to mitigate such land tenure insecurity can promote spatial justice, which is a crucial opponent of just urban development [6].

The concept of spatial justice originates from the conceptualisation of social justice into space. Spatial justice is referred as to “justice into the physical space” to denote a just distribution of
spatial resources within and across geographical spaces ranging from dwelling units, villages, cities, regions, nation-states, and continents to the whole globe [6,7]. The connection between social justice and space is largely debated in the seminal work “Social Justice and the City” of Harvey [8] who distilled that connection within rules, processes, and outcomes of urban organisation and development. From a social justice discourse, spatial justice entails the respect of fundamental human rights for all people within a society. It also entails the promotion of inclusive spatial development in order to reduce economic inequalities and social polarisation which is driven by the neoliberalisation of urban development [9]. The pursuit of spatial justice can be attained if the organisation of space and allocation of its resources abide to the principles of equity and respect of human rights [7,10–12]. However, spatial justice is not a substitute for social justice [7]. It is a form of justice which is based on compliance with the principles of social justice in the allocation of spatial resources. It also includes the development and implementation of spatial development rules that provide all categories of people with the options or opportunities to use those resources [9,13–16]. Within the context of land management, Lall and Freire [17] argue that social justice has to be entrenched into societal rules so that the rights of all categories of citizens to own or use land resources can be granted. This argument is inscribed in the framework of promoting the right to the city which is the analogous conceptualisation of spatial justice across the city [7,16,18,19]. The right to the city encompasses two main metrics: participation and appropriation. Participation embraces the active involvement of all urban dwellers in making decisions and implementing strategies that contribute to the development of urban space. Appropriation includes the actual right of urbanites to access, occupy, habit, and use the urban space so that they can pursue their livelihoods and actually participate in the production of the urban space [19,20]. A common aspect to those metrics is the equality of opportunities for all people to access or use spatial resources, including the land [21–23]. It also includes the respect and protection of rights to land and housing for all people, regardless of their social and economic status [24].

The emphasis is put on redressing the exclusion and advancing the inclusion of poor and low-income groups in the processes of spatial development [25,26]. In other words, spatial justice claims for the respect and protection of the rights of those people to land [27,28]. This increases the tenure security for the owners or the users of the land under any system of land tenure. This is very crucial for all people, including the poor and low-income groups, to improve their livelihoods [29,30]. They can, therefore, be protected against arbitrary eviction from their homes and working places [31,32]. Land tenure security is defined as the individuals’ perception of the ownership of a piece of land and or attached properties, such as dwelling units, on a continuous basis or over a sufficient time. It derives from being free of interference from outside sources in individuals’ property ownership and the ability to reap the benefits that accrue from the investments made in that land or free transfer of an individual’s property rights to another person [33,34]. Land tenure security protects properties’ owners from an arbitrary removal from their land or residence. It provides them with a degree of confidence that they will not lose the physical possession of those assets within a future time period [35]. The loss of those properties can occur in specific circumstances through a legal procedure which must be objective and equally applicable to all properties’ owners [36].

The existing literature distinguishes three types of land tenure security: legal (or de jure), de facto, and perceived security [37–39]. The legal or de jure tenure security stems from the provision of the certificate of property ownership through titling. This type of tenure security protects any property owner from arbitrary eviction based on legal implications. The de facto tenure security results from social and political institutions which recognise or accept “legitimate” property rights of people, even if the (formal) registration is absent. This legitimate right is part of the continuum of land rights philosophy which states that there are many types of rights between formal and informal rights or claims. The perceived tenure security relates to individuals’ perceptions on the likelihood of eviction,

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1 This paper will discuss spatial justice in a similar way as the right to the city.
the risk of spatial disintegration, and land conflicts. The relations between those three types of land tenure security are discussed and established in further sections of this paper.

In the contemporary literature, there are several indicators that measure de jure and perceived land tenure security [40,41]. The development of those indicators relies on a conviction that effective land administration systems and land titling are catalysts to land tenure security. However, having a landownership title is not necessarily a panacea for tenure security [22]. In most of the world’s cities, land tenure insecurity still prevails. It affects the land rights of the owners or users of land resources when those rights are not respected in the framework of reorganisation and development of the urban space [42–45]. In the current urban development agenda, the United Nations Secretariat [24], the UNESCO, and Un-Habitat [46] stress the need for pursuing spatial justice in all aspects of urban (re)development in order to prevent all forms of spatial injustices that can escalate resources deprivation or fuel land tenure insecurity [47,48]. They urge urban authorities and planners to protect the rights of all urban dwellers to land resources and housing regardless of their tenure systems. Following the world charter on the right to the city [49], most of the world’s countries have been implementing a global agenda for human rights in the city since 2012. The envisioned goals include the promotion of access to decent housing and the protection of people’s rights to land [50]. There are numerous instances where political leaders, decision-makers, and urban planners have been attempting those actions, such as in Latina America [51,52], Europe, Asia, and Africa [53–59]. Those actions are embedded in the promotion of the right to the city [24]. However, they can be complex and undertaken within an arena of interactions between people and space which either reinforces certain deliberate actions or hides others. In this line, the global agenda to the development of inclusive cities calls for a continuous evaluation of progress in the promotion of the right to the city. The existing evaluation framework focuses on the promotion of access to urban amenities and sustainable development from an environment perspective [50]. There are no specific frameworks for the evaluation of this progress with a focus on the promotion of land tenure security. It is worth noting that such security is the basic condition for urbanites to enjoy the benefits that accrue from sustainable urban development [31]. There is therefore a need for developing a comprehensive and holistic set of measurement tools or indicators that can evaluate if contemporary urban (re)development programmes are responsive to the claims of spatial justice.

In view of that need, the main aim of this paper is to develop spatial justice indicators that can be applied to evaluate if urban (re)development approaches and options deliver spatial justice and promote land tenure security especially for poor and low-income urban dwellers. The concern for land tenure security for those categories of people is pertinent. The poor are most affected by the vicious effects of spatial injustices which displace them from their land properties [7,48]. The proposed spatial justice indicators can be useful for scholars, urban planners, decision-makers, and various organisations interested in urban (re)development. Those include the United Nations and Un-Habitat, who are interested in monitoring the progress towards the development of inclusive cities and the promotion of land tenure security from a right to the city lens [24,60]. As the security of tenure is of paramount importance for the access to or use of other urban resources [14,31], the contribution of this paper is to develop indicators that address access, ownership, and use of land and related assets, including the basic urban amenities. Prior to the development of those indicators, it is worth distilling different forms of spatial justice from contemporary approaches to and options for urban (re)development as it is relevant to link them to those indicators. Our research questions are therefore formulated as follows: Which urban (re)development approaches and options aim to deliver spatial justice and promote land tenure security? How do they deliver spatial justice and tenure security in practice? Which indicators measure spatial justice and land tenure security in the course of urban (re)development?

After the research methodology, the paper discusses the theoretical foundations of spatial justice, its relationship with land tenure security, and the relevance of the development of indicators that measure spatial justice and land tenure security. Thereafter, it discusses the relationships among spatial justice and urban (re)development approaches and options and presents indicators that measure
spatial justice and land tenure security in an integrated and practical manner. These steps lead to a general conclusion.

2. Research Methodology

The concepts of spatial justice and injustice, urban development and redevelopment, and land tenure security and insecurity are inter-connected through a set of key themes and concepts. Those are largely discussed by the proponents of social or spatial justice and spatial planning [9,10,15,19,23,28,61,62]. Those themes and concepts include spatial and social justice, equity, urban (re)development or regeneration, urban and spatial planning, inclusive urban development, and land tenure security. They were used to query and select literature using the Web of Science Citation Index. Subsequently, the literature search was categorised focusing on: the conceptualisation of spatial justice, its theoretical foundation, the forms and principles of spatial justice, the connection between spatial justice, urban (re)development, and land tenure security, and indicators for land tenure security. The meta-analysis and research synthesis of the selected and categorised literature helped to identify variables of interest and their relationships. Those research methods provide an understanding of the concepts and the connections among them to develop their explanatory frameworks and formulate a conclusion [63,64]. The conceptual modelling through graphical modelling consisted of identifying and describing the relationships between those concepts and themes and the connections between their sub-components [65].

In order to develop indicators measuring both spatial justice and land tenure security, this study relied on the theoretical framework of spatial justice. Within that framework, three dimensions are identified: rules, processes, and outcomes [8,9,14,19,48,66]. An evaluation of spatial justice and land tenure security can therefore be carried out at each of those three dimensions using the relevant indicators as per Figure 1.

![Figure 1. Framework for measuring spatial justice and land tenure security. Developed based on [9,15,18,20,28,66–68].](image)

According to the above framework, the starting point for the evaluation of spatial justice and land tenure security is the rules. This is because seeking spatial justice and land tenure security presupposes the institutionalisation of rules which provide all people with equal opportunities to access and or use spatial resources [69,70]. It is from this equality of opportunities that one can derive the security of property rights [21,22]. Rules include formal policies, laws, constitutions, and government directives and informal social norms, codes of conduct, conventions, and political decisions [71,72] that affect the management of the urban space. The subsequent dimensions and variables constitute the processes.
They consist of designing and implementing plans and activities that pertain to the management of space through active participation and collaboration among users of spatial resources, decision-makers, and planners [73]. Finally, the outcomes are evaluated through the analysis of the results of the dialectical processes of the production and reorganisation of the space. The outcomes cover the aspects of peoples’ relations to space. They include the access to spatial resources, their ownership, their uses, and the inhabitancy of the space [20,73]. The relationship between the three dimensions is reflected by the arrows, which stipulate that rules provide the guidelines for the processes from which the outcomes derive. According to the theoretical framework of spatial justice, just rules lead to just processes, which in return lead to just outcomes. Therefore, there are solid arrows that link rules to processes and processes to the outcomes.

As the framework reads, rules are the independent variables while processes are intermediate (both dependent and independent) variables. On one hand, processes are dependent variables because they derive from the interpretation and implementation of the rules by the agencies and actors who put those rules into action. On the other hand, the processes become independent variables as they are the determinants of the outcomes which are the dependent variables. This constitutes the ideal and generic model of the framework. There can be cases of spatial injustices at the level of rules or processes, which can result into either justice or injustice. This can depend on the behaviour of actors who are involved in the management of spatial resources and the way they interpret and implement the related rules and processes. Therefore, it is worthwhile to evaluate the trends of spatial justice in each of the three dimensions and evaluative indicators will be developed at each of those dimensions. The dashed lines show that all indicators are applied at each of the three dimensions. Rather, there are three sets of evaluative indicators which are in one box. From that box, one set of indicators is linked to one of the three dimensions under evaluation (rules, processes, and outcomes).

The development of evaluative indicators follows a deductive research approach. It is guided by a systematic review of existing indicators that measure land tenure security. The review aimed at distilling the connection between land tenure security and spatial justice and other related concepts, such as inclusive urban (re)development, community participation, respect and recognition of fundamental human rights, and equity in the allocation of spatial resources. Those patterns were distilled from the works of Barry [74], Elkin, McLaren [75], Gilbert [76], Haughton [77], Jabareen [78], McCall and Dunn [79], Mega [80], Michael and Noor [81], Michael, Noor, and Figueroa 2014, Rahman [82], Roberts [83], the United Nations Secretariat [24], Un-Habitat [84], and the United Nations [85]. All these are sought to be the ingredients to land tenure security. The evaluative indicators were therefore developed based on those patterns and at three scales: the macro, meso, and micro levels. Those levels are absolutely observed for the development of indicators that evaluate any development program [86,87]. The macro level relates to a high level, such as the regional or national scale. The meso level refers to the province, district, or other low level while the micro level relates to the household or individual scale. Those levels can be aggregated at other hierarchies depending on the geographical scale of the study [88–90]. For this reason, the indicators will be aggregated at the scales of the city: macro (1), urban neighbourhood: meso (2), and household: micro (1). This means that any of indicators which is proposed can measure spatial justice and land tenure security at one or more levels among the three depending on the scale of the aspect under evaluation. As spatial justice and land tenure security are the concerns, this paper discusses first the theoretical foundation of those concepts in the next section and their connection. Thereafter, it will establish their connections to different approaches and processes of urban (re)development.

3. Theoretical Background

3.1. A Brief Review of the Theoretical Framework of Spatial Justice

Spatial justice is the first virtue of social and political institutions and resources management rules that should be responsive to all individuals’ needs [62,91]. In urban areas, spatial justice can be
achieved through urban (re)development rules, processes, or options that are meant to meet the basic needs of all urban dwellers regardless of their living areas. Those needs include, amongst others, equal, non-discriminatory, and unbiased access to decent housing and basic infrastructures and services which are inseparable from the access to land resources [92]. Those needs are also embedded in the philosophical and political framework of the concept of the right to the city. This concept stands for the principle that all urbanites have a basic right to live in the city of their heritage or choice. They also have the right to contribute to the development of their city. Those rights should not be prioritised based on socio-economic status of each category of people. A city is spatially just if in all its parts individuals’ rights, including land rights, are upheld [19,24,46,51,93].

One of the required conditions for that end is the security of tenure, which allows all urbanites to inhabit the city and access its resources. It is in this vein that the concept of land tenure security from a spatial justice lens can be decoded. Land tenure security derives from a good environment enabled by spatial development rules and processes which are grounded on social-political institutions that recognise and respect individuals’ rights to land [31]. Similarly, advocates of spatial justice argue that if a geographical space is to be justly managed, the rights of all people to own and use spatial resources, including land rights, should be recognised and protected [20,24,62]. Before discussing how current urban development programmes are responsive to that concern, it is worthwhile to identify different forms of spatial justice and establish their connections to land tenure security.

3.2. Relating Spatial Justice to Land Tenure Security

Contemporary literature distinguishes four forms of spatial justice: procedural, recognitional, redistributive, and intra- and inter-generation justices. Procedural justice focuses on the justness of the rules and processes governing the management of spatial resources which have to be crafted and implemented in a participatory manner to permit all users or owners to access or use those resources to meet their basic needs [62,66,94]. Recognitional justice reflects the principle of a fair allocation of spatial resources to all people, especially the creation of opportunities for people who suffer from resources deprivation to access and/or use spatial resources [95]. This form of spatial justice embraces two aspects, a metric and a rule [62]. The metric aspect encompasses types of resources and capabilities to use them. The rule aspect requires compliance with the principles of equality and equity while allocating those resources or devising the options to use them [6]. Redistributive justice seeks a fair distribution of spatial resources to all users, including the poor and disadvantaged groups, or equal opportunities to use their properties relative to their needs [66]. Intra-generational justice strives for a fair distribution of and access to resources for all people of the same generation, with more focus on the needs of the least advantaged in the society. Inter-generation justice demands a fair distribution of spatial resources to allow all people of the present and future generations to use those resources in order to meet their basic needs [75]. This form of justice focuses on general aspects of peoples’ needs for developing a prosperous society through good institutions that enable resources’ users to pursue their survival and to bequeath a share of those resources to future generations.

The three forms of spatial justice portray patterns that can promote land tenure security for all people, including the poor and low-income urbanites. Procedural justice boosts land tenure security through the institutionalisation of land management rules and processes which are crafted and implemented in participatory manner. Participation provides the opportunities for voicing, hearing, and recognising all people’s needs. This allows the local community to adopt strategies that preserve its rights over land resources for their livelihoods [16,62,70]. However, when spatial development programmes infringe upon those land rights, the pursuit of procedural justice in combination with recognition and redistribution permits the design and implementation of rules and strategies for fair compensation to affected people so that they can continue their lives [62,96–98]. In a nutshell, recognition justice promotes land tenure security through the respect and protection of all people’s right to land resources through inclusive and participatory management of land resources. Redistributive justice promotes the allocation of land resources or rights to use them to
all people equally. The combination of those two forms of spatial justice can promote access to land for poor people and others who are deprived of access to land resources through land redistribution strategies [67] and other processes of spatial organisation, such as the relocation of squatters or slum dwellers to serviced sites. Those strategies and processes enhance land tenure security through strengthening people’s relations to land. Inter- and intra-generation justice claims a perpetual respect of people’s rights to land resources within the framework of human rights and which considers access to land as a precondition for the survival of all users of land resources [26]. The pursuit of that form of spatial justice can enhance the security of tenure as it can permit all people, including poor, low-income, and marginalised groups to access and/or use land resources on a long-term or continuous basis. Having discussed the connection between spatial justice and land tenure security, the next section provides the framework for the development of their evaluative indicators.

3.3. Towards Developing Indicators Which Measure the Trends in Spatial Justice and Land Tenure Security

Existing indicators which measure land tenure security in urban areas address the questions related to the effectiveness of land administration systems in countries where those systems are operational and or have started to record individuals’ rights to land. Those indicators evaluate contemporary trends in the promotion of land tenure security focusing mostly on perceived and de jure tenure security. The existing indicators include those developed by experts and different international organisations that have attempted to monitor land tenure security based on both systems of land administration and global land governance, such as Un-Habitat and GLT [45] and the World Bank group [40]. They cover all the three elements of land tenure security, but focus mostly on the legal aspect of landownership. The World Bank developed indicators that focus only on de jure tenure security, which derives from the legalisation of land rights and affordability of land administration systems [99]. The Un-Habitat and the United Nations developed indicators that measure land tenure security in urban areas based on the perceived security [100,101]. There exist other indicators that are centred on the perceived security and are driven by the legalisation of land rights and the effectiveness of land administration systems and their reforms [41,102,103].

De facto tenure security, which is another form of land tenure security, is still under-evaluated. Maybe this is due to the fact that de jure tenure security is driven by de facto tenure security [104]. Perceived tenure security is assessed either when the de jure tenure does not exist yet (within informal and customary land tenure systems) or after its establishment to evaluate individuals’ perceptions on tenure security against the formalised land rights [104,105]. The questions of land tenure security from the spatial justice lens are highly related to social, legal, and political contexts rather than the registration of land rights [39,106]. This paper proposes indicators that measure land tenure security beyond de jure tenure without excluding de facto tenure, which is the basis for the recognition of all forms of land tenure. In Figure 2, the relationships among the three elements of tenure security, which are perceived, de facto, and legal tenure security, and spatial justice are established. These are based on the way land tenure security can be conceptualised following the meta-analysis of the connection between spatial justice and land tenure security and the existing relations between the three elements of land tenure security [104,105].

Based on Figure 2, the development of indicators that measure spatial justice follows its conceptualisation with consideration to the existing indicators and the connection to the three elements of tenure security, which are discussed in the reviewed literature [39,106–108]. Perceived security relates to individuals’ perceptions on the likelihoods of eviction or loss of their property rights, especially within informal or customary tenure systems. This form of tenure security can also be depicted from the de facto or de jure tenure security or spatial justice lens based on the perceptions of people on the effectiveness of legal and political institutions to recognise and protect their rights to land. Perceived tenure security is therefore placed at the core of Figure 2. De facto tenure security derives from perceived tenure security and does not necessarily derive from the possession of the ownership documents. It rises from the political and legal framework of spatial organisations. This framework
includes spatial planning rules, building codes, and constitutional laws that politically recognise landowners’ rights to land and protect them against evictions [106]. This recognition evolves into de jure tenure security through the establishment of formal land administration systems that record individuals’ rights to land [39]. Figure 2 demonstrates how the improvement in one of those elements promotes the status of the other (the green arrow which goes up) and how the established tenure security (de facto or de jure) can boost spatial justice based on the effectiveness of land tenure systems. This is illustrated by a dashed arrow, which shows that land tenure systems can contribute to some elements of spatial justice, especially the equality in access to or use of land and related assets, but not all spatial resources. The figure shows that spatial justice is above the three elements of land tenure security. Spatial justice can spur the security of tenure even where there is no established de jure tenure security, though an increased de facto tenure security can thereafter evolve into de jure tenure security [109,110]. This is evidenced for instance by the processes of slum upgrading. The process can confer de facto security through a legal recognition of slums as components of the urban neighbourhoods [111–115]. This recognition leads to de jure tenure security through the formalisation of the landownership within those slums [116]. In other words, spatial justice can boost the three elements of tenure security separately or gradually (left arrow in inverted direction).

Figure 2. Scale of land tenure security and relation to evaluative indicators. Developed based on [39,104,105,107,108].

The aspirations of spatial justice are met through increased recognition and respect of individual differences within any society [20,66]. This is emphasised by Dikec [117], who broadened the scope of the right to the city by incorporating the right to difference. As diversity is concerned, Chatterton [21] argues that seeking spatial justice involves building inclusive cities that integrate the diverse categories of their inhabitants. One way to promote land tenure security from the standpoint of individual differences is to protect rights to land resources for all people whatever their systems of
land tenure [4,118]. Land tenure is thus defined as a system that regulates the relationships between people and the land [119]. Such system can be grounded on the formal or informal political and administrative or religious institutions within any society. Those institutions define the ways in which individuals or groups of people acquire or access land, the rights they hold, and the manner those rights can be transferred to other users [35,38,120]. They also determine the duration of those rights and conditions which are bounded to those rights [121]. There can exist different forms of land tenure systems, such as legal or statutory, customary, religious, or non-formal tenures [33]. A statutory or formal tenure is based on documented landownership. It is governed by the written law, while a customary land tenure system is governed by unwritten traditional norms. A religious tenure system is a system which is based on religious law, such as Islam or Hindu. A non-formal tenure system is a situation where the land owners can use land without having acquired it through a statutory, customary, or religious system. It is frequent in peri-urban areas where squatters can occupy state land and develop informal settlements. Land tenure is often defined based on property regimes, which are determined according to the types of landownership or use rights. Those include a private property regime under which the ownership of land may consist of freehold or leasehold. Others include a communal property regime where the community enjoys some rights over land parcel which is shared by the community. There is also an open-access regime that provides all people with the access to land resources and a state property regime where the land is held by public organisations that control and/or develop it [119].

Within developing cities, land rights, which can be held under any of the above defined land tenure and property regimes, can be jeopardised through spatial injustices. Those injustices displace dwellers in low-income and poor urban neighbourhoods or outskirts under urbanisation and therefore result in land tenure insecurity [5,15,32,122]. The implementation of urban development schemes that are based on spatial justice can therefore boost land tenure security for owners or users of land resources [5,7,16]. As mentioned above, we intend to develop indicators that focus on de facto land tenure security that upholds and spurs other elements of tenure security (de jure and perceived) and spatial justice as illustrated in Figure 2. As de facto tenure security derives from inclusive and effective spatial development rules [106], we posit that it can therefore promote other forms of tenure security. Before the presentation of the developed indicators, we grasp (in Table 1) the focus of the existing land tenure indicators and highlight the focus of those ones which are proposed as a supplement to those which already exist.

Table 1 demonstrates the main focus of the existing indicators that are largely used to measure land tenure security and the scope of the indicators that are developed through this study. The new indicators relate to and complement the existing indicators. Spatial justice inputs derive from its central focus, which is equity in rules and processes related to spatial development and its direct connection to de facto tenure security. De facto tenure security can promote de jure security and informs perceived tenure security, while spatial justice subsumes all those elements of tenure security as demonstrated in Figure 2. The evaluation of spatial justice has to be based on urban development approaches and options from which the trends of tenure security can be distilled. The next section therefore presents the results of the literature review on different approaches to and options for urban (re)development and their relations to land tenure security. It is followed by the presentation of the proposed evaluative indicators.
Table 1. The central focus of the existing and proposed land tenure security indicators.

<table>
<thead>
<tr>
<th>Main Focus and Scope of Existing and Proposed Indicators for Land Tenure Security</th>
<th>Global Land Governance</th>
<th>Land Administration Systems and Their Reforms</th>
<th>Land Tenure in Urban Areas</th>
<th>Similar Focus as Spatial Justice</th>
<th>Comments and Specific Focus for Spatial Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main driver for land tenure security</strong></td>
<td>Accessible land administration and registration services: cost and time</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Main type of tenure which is evaluated</strong></td>
<td>de jure</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
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<td></td>
<td>de facto</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td></td>
<td>perceived</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Main evaluated aspect</strong></td>
<td>Long duration of property ownership</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Risks or experiences of eviction</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
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<td></td>
<td>Great number of or bundle of held land rights</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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<td></td>
<td>Equalities of opportunities to use land</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td></td>
<td>Policies for land redistribution</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<td></td>
<td>Effective planning and management of public land</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<tr>
<td></td>
<td>Enforcement of individual or community property rights</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td></td>
<td>Recognition of informal tenure</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 1. Cont.

<table>
<thead>
<tr>
<th>Main Focus and Scope of Existing and Proposed Indicators for Land Tenure Security</th>
<th>Global Land Governance</th>
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<th>Similar Focus as Spatial Justice</th>
<th>Comments and Specific Focus for Spatial Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land-use and development plans that integrate all neighbourhoods, including slums or informal settlements, into spatial development.</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Beyond the integration of rights for the owners or users of land into spatial planning processes, spatial justice requires the participation of those groups in those processes.</td>
</tr>
<tr>
<td>Dispute resolution and conflict management among landowners</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Spatial justice focuses more on conflicts that break out between agencies that implement spatial development rules and the owners or users of land resources.</td>
</tr>
<tr>
<td>Access to well-functioning formal land markets</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Spatial justice places more emphasis on fair real property compensation and access to other similar properties when spatial development requires the expropriation of those properties.</td>
</tr>
<tr>
<td>Non-discrimination and gender equality in access to land-related services</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Beyond the demand for gender balance, spatial justice claims for equality of opportunities to access and use land resources for all people.</td>
</tr>
<tr>
<td>Prevention of forced eviction and promotion of fair property compensation</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Protection against eviction and fair real property compensation are among the main claims of spatial justice for the promotion of land tenure security.</td>
</tr>
<tr>
<td>Promotion of access to adequate housing, basic amenities, and services</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Equal access to land and housing is the precondition for access to other urban facilities.</td>
</tr>
<tr>
<td>Promotion of equal access to credit</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Beyond this claim, spatial justice demands equal opportunities to use land for meeting all basic needs of landowners.</td>
</tr>
<tr>
<td>Aligning land management rules and processes to local community capacity</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Beyond this claim, spatial justice demands specific options for poor and low-income groups to use their land resources.</td>
</tr>
</tbody>
</table>

Source: [40,41,45,99–103].
4. Results and Discussion

4.1. Framing Spatial Justice and Land Tenure Security in Terms of a Just Spatial Planning Process

Spatial planning encompasses the technical and political processes concerned with the guidance and control of the use of the land, the provision of infrastructures and services, and the development of adequate settlements [123]. Linking this to the aim of this study, the concern is about justice in spatial planning. Justice in spatial planning processes is consistent with the theories of justice and common property resources that state that the virtue of justice is to provide all individuals with opportunities to use societal resources for meeting their own needs [62,68,124]. The claimed justice relates to the ethical perspectives that shed light on good and right actions that affect spatial resources and the interests of their users. This is therefore connected to spatial justice claims [69], namely equal access to urban resources and/or opportunities to use them for all urbanites. The connection between those claims and the needs for land tenure security requires urban planners and designers and decision-makers to play a central role in promoting land tenure security [125]. They have to institutionalise a collaborative framework among civil society, the local community, and the public and private sectors and find a consensus on effective spatial planning and actions for the development of inclusive cities [126,127]. This collaborative planning approach is echoed in communicative planning theory. This theory recommends the establishment of democratic and participatory resources management that integrates all people into urban development processes [128,129]. In a similar vein, Alexander [61] and Fainstein [15] advocate for urban (re)development which is grounded on inclusive, collaborative, and communicative planning. Such an approach is developed through shifting from a Public–Private Partnership (PPP) to a decentralised and discursive Public–Private–Community Partnership.

The partnership and communicative planning approach is a key driver for spatial justice. Such an approach helps to craft fair urban development rules that are implemented in a democratic manner and supports governance imperatives of equity and respect for all people’s rights [130,131]. In land management, this approach empowers all people, including poor and low-income communities, as they are provided with equal opportunities to use and control their land resources [79,130,132]. Those opportunities to use individuals’ lands are grounded on procedural, recognition, and redistributive justice, which remedies inequalities in resources allocation or capabilities to use them [15,66,95]. The recognition of the rights of all people to access and/or use spatial resources, especially those of poor, vulnerable, and economically weak groups, is fundamental to inter- and intra-generation justice. It also promotes the development of an inclusive city [69,133]. This integrated urban development approach takes into account the socio-economic conditions of poor and low-income groups. It provides them with opportunities to use their lands [134] and that results in increased land tenure security [15,135].

4.2. Integrating Spatial Justice into Urban Redevelopment Processes

Within any process of urban (re)development, the claim for land tenure security from a spatial justice lens encompasses a fair allocation of land resources and the adoption of strategies through which all users or owners of those resources can access or use those resources to meet their needs [104,136]. They should be given opportunities to live in the city and use its resources. They also have to be protected from eviction [56]. This requires the participation of all categories of urban dwellers in urban planning and the (re)development of the areas they live in. Having discussed the discourse of participatory planning and its role in promoting spatial justice and land tenure security in the above section, the next paragraph reviews different urban (re)development processes that are likely to promote spatial justice and land tenure security. The most important reviewed processes include slum upgrading, affordable housing development, mixed-housing development, and sites and services schemes. The processes also comprise incremental housing development, urban regeneration and housing renewal, resettlement or relocation, community land trusts (CLTs), condominium housing,
Slum upgrading consists of improving the quality of life in poor and low-income urban neighbourhoods through the provision of basic infrastructures and services. The development of affordable housing consists of developing affordable houses that are sold or rented at low prices. This helps poor and low-income groups mitigate the problems of non-access to shelter. Mixed housing development is the process of designing and developing variegated housing standards and typologies that accommodate various categories of people based on household sizes and differences in incomes, ages, or household status, etc. Sites and services schemes stand for the process of subdividing public land or land acquired through public funds into buildable lots. Those lots are improved through the provision of basic infrastructures and services. Thereafter, they are allocated to poor and low-income people at low prices for self-housing development. Incremental housing consists of developing low-cost housing for poor and low-income households gradually. Developed houses are improved over time through the provision of the basic amenities and infrastructures in collaboration with the government, private investors, and Non-Governmental Organisations (NGOs). Urban regeneration and housing renewal consists of improving the physical, social, economic, and ecological aspects of old urban neighbourhoods. The process involves also the revitalisation of individual or community properties, including dwelling units. This gives the local community options to renovate their existing buildings or demolish them in order to develop new ones. Resettlement or relocation of squatters or slum dwellers consists of relocating those people into serviced sites or supporting them in the development of decent houses in those sites. The process can include fair compensation for lost properties and the disturbance caused by displacement. Community land trusts (CLTs) are groups of households that, through mutual support and empowerment of poor and low-income households, develop their lands according to spatial planning schemes. The process includes the development of decent housing and the preservation of environmentally sensitive areas and farming land for people whose income depends on agriculture. Condominium housing consists of developing residential shared buildings on a single parcel or track of land with mixed property regimes where separate housing units are held individually. Urban villages are developed at urban outskirts. They are sustained by a strong local community partnership and government support for the development of self-contained residential neighbourhoods with access to basic facilities. A joint venture for land/housing development consists of developing land for residential or other use through an agreement between the landowners and developers. Those actors share developed structures and other benefits that accrue from such cooperation. All these discussed approaches and processes of urban (re)development show different patterns which connect them to spatial justice and land tenure security. That connection is established in Table 2 below.
Table 2. Connecting spatial justice to selected urban (re)development approaches and processes.

<table>
<thead>
<tr>
<th>No.</th>
<th>Approach or Process</th>
<th>Connection to Spatial Justice</th>
<th>Tenets of Tenure Security</th>
<th>Indicative References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Collaborative planning</td>
<td>Participation of and collaboration with all categories of people in spatial planning permits the integration of their needs and rights into urban development programmes.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Recognition, respect, and protection of all people’s rights to land resources.</td>
</tr>
<tr>
<td>2</td>
<td>Slum upgrading</td>
<td>Participation of slum dwellers in the transformation of their living places enhance their land rights.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Decreasing spatial inequalities and strengthening people’s relations to their neighbourhoods.</td>
</tr>
<tr>
<td>3</td>
<td>Affordable housing development</td>
<td>Inclusion into a zoning scheme of affordable units for poor and low-income groups.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Decreased risks of forced eviction and integration of slum dwellers into the city.</td>
</tr>
<tr>
<td>4</td>
<td>Mixed housing development</td>
<td>Housing development aligned with financial capacity of all urban households.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Integration of a mix of all people into the urban fabric.</td>
</tr>
<tr>
<td>5</td>
<td>Sites and services schemes</td>
<td>Local community participation in the selection of residential sites, which are developed through a public–private and local community partnership.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Decreased risk of marginalisation and integration of poor and low-income groups into the city.</td>
</tr>
<tr>
<td>6</td>
<td>Incremental housing development</td>
<td>Strategies and opportunities for urban dwellers to develop their dwelling units over time.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Decreased risks of forced eviction for poor and low-income groups.</td>
</tr>
<tr>
<td>7</td>
<td>Urban regeneration and housing renewal</td>
<td>Inclusive urban renewal schemes provide the local community with opportunities to meet their housing needs.</td>
<td>Rights and needs to access or use land resources for all people; specifically, poor groups, vulnerable groups, and low-income groups are recognised.</td>
<td>Integration of revitalised areas and their inhabitants into the modern city.</td>
</tr>
<tr>
<td>No.</td>
<td>Approach or Process</td>
<td>Connection to Spatial Justice</td>
<td>Tenets of Tenure Security</td>
<td>Indicative References</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------</td>
<td>-------------------------------</td>
<td>---------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Procedural</td>
<td>Recognition</td>
<td>Redistributive</td>
</tr>
<tr>
<td>8</td>
<td>Resettlement or relocation of squatters or slum dwellers</td>
<td>Government collaboration with squatters or slum dwellers from planning to the development of new dwelling units.</td>
<td>Recognition of rights to land and decent housing for poor urban dwellers.</td>
<td>Land redistribution and promotion of access to decent housing.</td>
</tr>
<tr>
<td>9</td>
<td>Community land trusts (CLTs)</td>
<td>Decentralisation of spatial planning and land management processes through the citizenship engagement. Integration of self-help housing strategies into urban development schemes.</td>
<td>Recognition of individual rights to land and housing.</td>
<td>Government support through the provision of basic amenities or the allocation of land to be developed.</td>
</tr>
<tr>
<td>10</td>
<td>Condominium housing</td>
<td>The process is grounded on community census and a public–private partnership in the development of social mixed housing development.</td>
<td>Promotion of access to decent and affordable housing for poor, low-, and middle-income groups</td>
<td>Development of affordable and decent housing for poor, low-, and middle-income groups.</td>
</tr>
<tr>
<td>11</td>
<td>Urban Villages</td>
<td>Decentralised land use planning and development permits the local community and authorities to collaborate in the development of their neighbourhoods.</td>
<td>Promotion of access to decent housing for poor and low-income groups.</td>
<td>Boosting the provision of affordable housing through government support in the acquisition of land or provision of basic facilities.</td>
</tr>
<tr>
<td>12</td>
<td>Joint ventures for land/housing development</td>
<td>Promotion of the partnership between landowners themselves or landowners and private land developers or government for housing development.</td>
<td>Recognition of landowner’s rights to land and the needs to comply with land development rules.</td>
<td>Promotion of access to housing for landowners who cannot develop the land at their own financial resources.</td>
</tr>
</tbody>
</table>
Table 2 summarises the connections between different urban (re)development approaches and processes and different forms of spatial justice and their implications for land tenure security. The main patterns of spatial justice that can be deconstructed from those approaches and processes are inclusive urban development rules and options. Those rules and options have to be developed and implemented in a participatory and communicative manner as an arena for the spatial integration of all users of urban resources into the urban fabric. This arena advances the recognition and respect of all people’s rights to urban space, including access to housing, land, and basic urban facilities. A cross analysis of the connection between those urban development options and spatial justice was also carried out based on a qualitative content analysis of 83 resources among 188 reviewed materials. The results (see Appendix B) show that among the forms of spatial justice that can be distilled from urban development processes, procedural and recognition justices are at the forefront, while redistributive and inter- and intra-generation justices are less prominent. This finding correlates with the theoretical perspectives of justice which are discussed by Fraser [70], Fraser and Honneth [95], Lefebvre [20], Rawls [62], and Young [66]. Those scholars posit that the procedural and recognition forms of justice are above the other forms of justice. Those two forms of spatial justice originate from inclusive societal norms and resources management rules that are required for an effective recognition of resource users’ rights and a fair redistribution of those resources. Spatial justice scholars further recommend that the active participation of all users of spatial resources be the core component of procedural and recognition justice. Active participation has to be envisioned from the development of spatial development rules to their implementation in order to come up with fair outcomes [176].

The data that are compiled into Appendix B helped to identify the prominent approaches and processes of urban (re)development that are likely to promote spatial justice and land tenure security. Those approaches and processes embrace participatory and collaborative urban planning, slum upgrading, and affordable housing development. They also include mixed housing development, sites and services schemes, incremental housing development, urban regeneration, and relocation of squatters or slum dwellers into serviced sites. In order to evaluate if those approaches and processes deliver on the promise of spatial justice, a series of indicators for such evaluation is provided in the next section.

4.3. Indicators for the Evaluation of Spatial Justice and Land Tenure Security

Given the connection between spatial justice and land tenure security as presented in Table 2, the next step is to derive a framework of indicators which measures trends between the two aspects within any processes of urban (re)development. The development of those indicators follows the recommendations related to the formulation of an evaluation framework or measurement indicators for any development programme, such as those formulated by the Organisation for Economic Co-operation and Development (OECD). This organisation recommends the use of simple measures which are defined as parameters that can be tracked over time in order to provide information on trends in the condition of a phenomenon or achievement of a development programme [177]. Those measures provide a sign or a signal that something exists or is true and shows the presence or state of a situation or condition [86]. From the general claim of spatial justice to the question of land tenure security, the desired indicators embrace three aspects. Those aspects include the development and implementation of urban development rules that are inclusive, the promotion of the participation of all people in the management of the city, and the adoption of urban development options which provide those people with opportunities to access or use their land resources, including access to housing and basic amenities [62]. In this way, seven features of spatial justice and land tenure security have been identified as the common patterns of urban development approaches and options. Those features are associated with the proposed indicators and include:

1. Citizen engagement in urban (re)development programmes;
2. Equality of opportunities to use or develop their land resources;
3. Recognition and protection of their rights to land resources;
4. Promotion of access to land and/or housing for poor and low-income groups;
5. Fair compensation when any urban (re)development programme infringes on the rights of property owners;
6. Decreased spatial inequalities and promotion of access to urban amenities for all people; and
7. Integration of all people into the urban fabric and a decreased risk of eviction.

The above seven features represent the order of importance with regard to their connection to the forms of spatial justice (namely procedural, recognition, and redistribution justice) [62,66,67]. For example, citizen engagement in urban (re)development programmes is highly connected to procedural justice, whereas the equality of opportunities to use or develop their land resources and recognition and protection of their rights to land resources are highly connected to recognition and redistributive justice and relatively connected to procedural justice. The study therefore proposes indicators that situate those seven features into urban (re)development rules, processes, and outcomes. Further, the connection of the proposed indicators to different forms of spatial justice is established on an ordinal scale with four levels. Those levels range from very high (for indicators that relate to procedural justice), high (for indicators that relate to recognition justice), and moderate (for indicators that relate to redistributive justice) to low (for indicators that relate to intra- and inter-generation justice). The choice of this scale and classification approach is informed by the cause–effect relationships that exist among the four forms of spatial justice. Those relationships are largely discussed by the scholars of justice and spatial justice. Those scholars place procedural justice at the forefront because it is a key driver for recognition and distributive justice [15,66,95,178,179]. The two forms of spatial justice promote access to spatial resources, social inclusion, economic growth, and good quality of life for all users of those resources [180] and from them inter- and intra-generation justice is decoded [78,181,182]. That categorisation implies that if the evaluation of the urban (re)development approaches and processes reveals good scores on the aspects that relate to a highly ranked form of spatial justice (such as procedural and recognition justice), one can expect a very good trend of spatial justice and land tenure security. However, the reverse case will imply low trends or little likelihood of spatial justice and land tenure security. Table 3 presents the developed indicators, their connection to spatial justice, and the existing indicators that measure land tenure security. The degree to which the aspects under evaluation can promote spatial justice and land tenure security is also indicated.

In Table 3, 60 indicators which measure spatial justice and land tenure security are proposed. These cater for different aspects of urban (re)development. Those aspects include zoning rules and spatial planning processes, the acquisition of land through expropriation for the implementation of different urban (re)development programmes, affordable housing development, slum upgrading, relocation of squatters and slum dwellers, and provision of and access to urban amenities. Among the developed indicators, 23 relate to the aspects of urban (re)development that can spur a very high level of spatial justice. Another 18 indicators relate to aspects that can boost spatial justice at a high level. The remaining 11 and 8 indicators relate to the aspects that can promote spatial justice at the moderate and low levels, respectively. If any urban (re)development follows those aspects which are highly contributing to the promotion of spatial justice, one can expect an increased land tenure security. The developed indicators are also linked to different concepts which are discussed in different sections or paragraphs of this paper. However, Appendix A provides a succinct description of some of the concepts that need to be clarified because they are not largely explained in the paper.
Table 3. Evaluative indicators for spatial justice and land tenure security.

<table>
<thead>
<tr>
<th>No.</th>
<th>Developed Indicator</th>
<th>Level of Spatial Justice and Land Tenure Security the Indicator Leads to</th>
<th>Scale for Evaluation</th>
<th>Supplement to Existing Indicators that Measure Tenure Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indicators that evaluate the rules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Presence of zoning rules that are designed in a participatory manner</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Presence of legal or policy provisions for the provision of basic facilities and services in all urban neighbourhoods</td>
<td>High</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Presence of specific legal or policy provisions for the provision of basic facilities and services in poor and low-income urban neighbourhoods</td>
<td>High</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>Percentage of specific zoning rules that promote the development of housing for poor and low-income groups</td>
<td>High</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>Presence of zoning rules that promote mixed housing development</td>
<td>High</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>Presence of specific rules for the allocation of land or housing to poor and low-income groups</td>
<td>High</td>
<td>1, 2</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>Presence of spatial development plans designed for the informal upgrade of settlements</td>
<td>High</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>Presence of spatial development plans to relocate squatters or slum dwellers to serviced sites</td>
<td>High</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>9</td>
<td>Presence of legal provisions for the resolution of conflicts resulting from urban development</td>
<td>Very high</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>Presence of rules that relate to the development of affordable housing</td>
<td>High</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>11</td>
<td>Presence of spatial plans for the relocation of slum dwellers into serviced sites</td>
<td>High</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>12</td>
<td>Presence of legal provisions on the purposes of property expropriation and compensation at fair prices</td>
<td>Very high</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>13</td>
<td>Presence of legal provisions that justify the intervention of government institutions in the expropriation of private property</td>
<td>Very high</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>14</td>
<td>Presence of legal provisions that determine the time span during which compensation for the expropriated property has to be paid</td>
<td>Very high</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>15</td>
<td>Presence of legal provisions for the collaboration and negotiation between property owners and expropriating agencies during the expropriation processes</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
</tbody>
</table>

2 This refers to water, electricity, education (nursery, primary, secondary), health centres, sanitation, and transportation, which are considered to be the main amenities for which access to should be enhanced to promote socio-economic development for all people. During the evaluation, each of those elements will be assessed separately from others.
Table 3. Cont.

<table>
<thead>
<tr>
<th>No.</th>
<th>Developed Indicator</th>
<th>Level of Spatial Justice and Land Tenure Security the Indicator Leads to</th>
<th>Scale for Evaluation</th>
<th>Supplement to Existing Indicators that Measure Tenure Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Presence of legal provisions for the development of affordable housing units within the housing development schemes</td>
<td>High</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>17</td>
<td>Presence of legal provisions for the allocation of affordable housing units to poor and low-income groups within the housing development schemes</td>
<td>Very high</td>
<td>1, 2</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td><strong>Indicators that evaluate the processes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Percentage of households who participate in the development of zoning rules and land use plans</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>19</td>
<td>Percentage of poor and low-income groups who participate the development of zoning rules and land use plans</td>
<td>Very High</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>20</td>
<td>Presence of spatial plans for the provision of basic facilities and services in all urban neighbourhoods</td>
<td>Moderate</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>21</td>
<td>Presence of specific spatial plans for the provision of basic facilities and services in poor and low-income urban neighbourhoods</td>
<td>High</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>22</td>
<td>Presence of budget lines for the provision of basic facilities and services in all urban neighbourhoods</td>
<td>Moderate</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>23</td>
<td>Presence of specific budget lines for the provision of basic facilities and services in poor and low-income urban neighbourhoods</td>
<td>High</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>24</td>
<td>Area ratio of residential land allocated to poor and low-income groups</td>
<td>Moderate</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>25</td>
<td>Presence of a budget line for the development of affordable housing within the urban development funds</td>
<td>Moderate</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>26</td>
<td>Presence of a budget line for the development of housing for poor and vulnerable groups within the urban development funds</td>
<td>Moderate</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>27</td>
<td>Presence of physical plans that promote the development of mixed housing</td>
<td>Moderate</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>28</td>
<td>Percentage of informal settlements planned for upgrading</td>
<td>High</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>29</td>
<td>Percentage of households who participate in the planning for the informal upgrade of settlements</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>30</td>
<td>Percentage of specific zoning rules that promote the development of housing for poor and low-income groups</td>
<td>Very high</td>
<td>1, 2</td>
<td>No</td>
</tr>
<tr>
<td>31</td>
<td>Percentage of affordable housing units that are planned for poor and low-income groups within the housing stock</td>
<td>High</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>32</td>
<td>Percentage of slum dwellers who perceive a likelihood of relocation to serviced sites</td>
<td>High</td>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3. Cont.

<table>
<thead>
<tr>
<th>No.</th>
<th>Developed Indicator</th>
<th>Level of Spatial Justice and Land Tenure Security the Indicator Leads to</th>
<th>Scale for Evaluation</th>
<th>Supplement to Existing Indicators that Measure Tenure Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Percentage of slum areas that are planned for clearance with relocation or compensation plans</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>34</td>
<td>Percentage of slum dwellers who participate in the planning for their relocation</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>35</td>
<td>Percentage of property owners who participate in a property valuation for expropriation</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>36</td>
<td>Presence of accessible institutions resolving disputes arising from urban development programmes</td>
<td>Very high</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>37</td>
<td>Amount of private properties that is expropriated by government institutions for public interests</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>38</td>
<td>Percentage of properties owners who can access institutions handling disputes arising from expropriation</td>
<td>High</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>39</td>
<td>Percentage of properties owners who can access institutions handling disputes arising from urban development programmes</td>
<td>High</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>40</td>
<td>Percentage of households affected by land conflicts resulting from an expropriation process</td>
<td>Low</td>
<td>1, 2</td>
<td>Yes</td>
</tr>
<tr>
<td>41</td>
<td>Percentage of households affected by land conflicts resulting from an urban development programme</td>
<td>Low</td>
<td>1, 2</td>
<td>No</td>
</tr>
<tr>
<td>42</td>
<td>Number of working days taken to resolve a land conflict resulting from an expropriation process</td>
<td>Low</td>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>43</td>
<td>Number of working days taken to resolve a land conflict resulting from an urban development programme</td>
<td>Low</td>
<td>1</td>
<td>No</td>
</tr>
</tbody>
</table>

**Indicators that evaluate the outcomes**

<table>
<thead>
<tr>
<th>No.</th>
<th>Developed Indicator</th>
<th>Level of Spatial Justice and Land Tenure Security the Indicator Leads to</th>
<th>Scale for Evaluation</th>
<th>Supplement to Existing Indicators that Measure Tenure Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Percentage of households who can develop their lands according to zoning rules</td>
<td>Very high</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>45</td>
<td>Percentage of households who have access to basic facilities and services³</td>
<td>Low</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>46</td>
<td>Percentage of households in poor and low-income neighbourhoods who have access to basic facilities and services</td>
<td>Moderate</td>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

³ During the evaluation, we consider the percentage of households who have water, electricity within their premises, the distance to school (nursery, primary, secondary), health, sanitation, and transportation services, and the distance to public tape and power grid for households whose dwelling units are not connected to those amenities. The measurement of the distance will be based on international recommended indicators or country disaggregated indicators based on national development goals and indicators that are used to evaluate progress in those aspects.
<table>
<thead>
<tr>
<th>No.</th>
<th>Developed Indicator</th>
<th>Level of Spatial Justice and Land Tenure Security the Indicator Leads to</th>
<th>Scale for Evaluation</th>
<th>Supplement to Existing Indicators that Measure Tenure Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>Proportion of affordable housing units to each income group within the housing development schemes</td>
<td>High</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>48</td>
<td>Percentage of monthly household income allocated to housing rent</td>
<td>Moderate</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>49</td>
<td>Percentage of serviced land plots which are allocated to poor and low-income groups for housing development</td>
<td>Moderate</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>50</td>
<td>Percentage of housing units which are affordable to poor and low-income groups within social housing stock</td>
<td>Moderate</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>51</td>
<td>Percentage of upgraded informal settlements relative to their total number in an urban area</td>
<td>Moderate</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>52</td>
<td>Percentage of slum dwellers relocated into serviced sites</td>
<td>Low</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>53</td>
<td>Percentage of slum dwellers who are satisfied with the relocation processes</td>
<td>Very high</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>54</td>
<td>Percentage of property owners who are satisfied with the expropriation process</td>
<td>Very high</td>
<td>1, 2</td>
<td>Yes</td>
</tr>
<tr>
<td>55</td>
<td>Percentage of property owners whose properties are expropriated at market value</td>
<td>Very high</td>
<td>1, 2</td>
<td>Yes</td>
</tr>
<tr>
<td>56</td>
<td>Percentage of expropriated people who can acquire other similar properties in the open market</td>
<td>Low</td>
<td>1, 2</td>
<td>Yes</td>
</tr>
<tr>
<td>57</td>
<td>Area ratio of the private land expropriated for public interest which is put in use within three years</td>
<td>Low</td>
<td>2, 3</td>
<td>Yes</td>
</tr>
<tr>
<td>58</td>
<td>Percentage of expropriated people whose compensation has been paid within the time span as defined by the related legal framework.</td>
<td>Very high</td>
<td>2, 3</td>
<td>No</td>
</tr>
<tr>
<td>59</td>
<td>Percentage of households who are satisfied with the resolution of conflicts resulting from expropriation</td>
<td>Very high</td>
<td>1, 2</td>
<td>Yes</td>
</tr>
<tr>
<td>60</td>
<td>Percentage of households who are satisfied with the resolution of conflicts resulting from urban development programmes</td>
<td>Very high</td>
<td>1, 2</td>
<td>No</td>
</tr>
</tbody>
</table>
As Table 3 reads, measuring spatial justice and land tenure security can be carried out at different levels: city (3), urban neighbourhood (2), or household (1). This can depend on the fact that the rules, processes, or outcomes of the urban (re)development affect the dwellers of the whole city, a specific neighbourhood, or some individuals, respectively, at one, two, or all three levels at the same time. In this case, spatial justice and land tenure security can be measured either at one level or more than one level at the same time. The measurement can be performed in different ways. One option is to apply a quantitative metric through the use of a numerical scale that assesses the performance or achievement of a programme and the accountability within the implementation of that programme [86]. In this case, the evaluation will be based on the percentage of households who are satisfied with urban (re)development programmes. One can carry out the assessment based on the percentages of urban dwellers who participate in or benefit from different programmes of urban development, including access to urban amenities and housing. It is also possible to apply an ordinal scale based on the level of satisfaction of the users of spatial resources on the processes related to urban (re)development and their outcomes. In this case, one can adopt the use of a Likert scale with five levels, ranging from a very low level of satisfaction to a very high level of satisfaction. The data for this evaluation can be collected through a household survey, interviews, a review of available reports on socio-economic and urban development, and aspects related to land management (including land acquisition, land allocation, and land rights). The evaluation can therefore combine the two types of scales or can apply one of them according to Figure 3 below.

Figure 3. The continuum of spatial justice and land tenure security (LTS). Developed based on [5,7,15,16,48,61,69,95,127,128,132]. LTiS, land tenure insecurity.
There can be a high level of performance, with very good trends towards spatial justice and land tenure security [185] or a very low level of performance, with trends of spatial injustices and land tenure insecurity (LTiS). Between the two edges, there can be other variations depending on the degree of commitment of different actors who participate in spatial management to pursue spatial justice within any programme pertaining to urban (re)development. The assessment can therefore reveal the following trends:

- **Very high level of spatial justice and land tenure security (level 5):** between 80% and 100% of scores. There are very good trends of spatial justice that lead to a high level of land tenure security through decentralised, participatory, and communicative planning. The local community participates in the development of the urban space and this promotes access to urban facilities for all dwellers and their integration into the urban fabric.

- **High level of spatial justice and land tenure security (level 4):** between 60% and 80% of scores. There are good trends of spatial justice towards the inclusion of disadvantaged areas into the urban development process. The process is decentralised, but with limited participation of the local community whose representatives participate in the management of the city in collaboration with public and private institutions.

- **Medium level of spatial justice and land tenure security (level 3):** between 40% and 60% of scores. Users of spatial resources perceive some attempt to promote spatial justice and improve land tenure security. Though the urban development is decentralised, it is driven by the Public–Private partnership. Unaffordable zoning rules which are developed through that partnership do not promote either the use of land resources for all people or access to other spatial resources in all urban neighbourhoods. Therefore, it can result in the loss of individuals’ property rights through forced sale or unfair compensation.

- **Low level of spatial justice and land tenure security (level 2):** between 20% and 40% of scores. Users of spatial resources perceive little attempt to promote spatial justice and improve land tenure security. Most of the urban dwellers, such as the poor and low-income groups, are deprived of access to urban resources at the privilege of rich middle classes.

- **Very low level of spatial justice and land tenure security (level 1):** with less than 20% of scores. Users of spatial resources perceive high trends of spatial injustices together with associated risks for land tenure insecurity. This is driven by urban development rules and processes that exclude dwellers of informal settlements, poor people, and low-income groups from the processes of spatial organisations and force them to leave the city.

It is worth noting that the decentralisation of urban development is not necessarily meant to promote spatial justice. Spatial injustices can be produced within any spatial development process, centralised or decentralised. This can be determined by endogenous or exogenous factors that affect the behaviour of political leaders and decision-makers who overwhelmingly guide and control the management of spatial resources [7]. Good outcomes of urban (re)development and trends of spatial justice result from conformance to just rules and processes by all actors who take part in the management of spatial resources. From the different properties of rules, processes, and the behaviour of actors in spatial resources management [15,62,66,68], there can be five instances of outcomes of urban (re)development, which can be just or unjust as it is illustrated by Figure 4 below.

Figure 4 shows that:

1: When both rules and processes are just, the outcomes are just. Actors in resources management maintain rules and processes to achieve the desired outcomes. In this case, there is a direct connection (solid dark arrow) to show a direct influence between just rules, just processes, and just outcomes.

2: If rules are unjust (a dashed dark arrow shows that there is no direct influence between rules and processes), the actors may adopt a different behaviour and design just processes that lead to the just outcomes they aspire to achieve (solid dark arrow connects processes and outcomes to show a
Those actors will henceforth have to revise the rules (a dashed red arrow connects the processes to rules) to maintain the adopted processes and desired outcomes.

(3): If rules are just but the actors adopt unjust processes, the outcomes are unjust (a dashed dark arrow shows that there is no direct connection between rules and processes, but a solid dark arrow connects unjust processes and unjust outcomes to show a direct influence). The actors have to revise the processes to come up with desired just outcomes (a dashed red arrow connects the outcomes to processes to show the required revision).

(4): If both rules and processes are unjust, the outcomes are automatically unjust. In this case, the matrix shows that there is a direct connection (solid dark arrow) between unjust rules, unjust processes, and unjust outcomes. There will be, therefore, a need for the revision of rules and processes in order to redress the unjust outcomes that previous unjust rules and processes could lead to (a dashed red arrow connects the unjust outcomes to unjust processes and unjust rules to show the required revisions).

(5): Both rules and processes can be unjust for most of the users of spatial resources and just for some categories of people, such as the poor and others who have been deprived of the access to or use of those resources. In this case, (un)just rules and (un)just processes are directly connected by a solid dark arrow to show a direct influence. This results in inequalities that do not benefit all people [179]. Instead, they lead to just outcomes (solid dark arrow between (un)just processes and just outcomes) for the target groups. This happens in specific or exceptional circumstances. This stands for the instance of spatial injustices that are intended to restore justice through the principles of positive discrimination for some people, such as poor, vulnerable, and marginalised groups, who suffer from the historical injustices that have deprived them from access or opportunities to use spatial resources [62,74].

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**Figure 4.** The matrix of the three dimensions of spatial justice. Developed based on [8,9,11,20,62,66,117,139].

---
As Figure 4 shows, the first row shows the desired outcome of spatial (re)development grounded on just rules and just processes. Such an outcome can therefore spur land tenure security for all categories of urban dwellers. The last row shows an instance which is not necessarily pertinent to poor, vulnerable, and marginalised groups for whom the arrangement promotes spatial justice and access to or use of spatial resources. Yet, those categories of urban dwellers contain the majority of people for whom proponents of spatial justice advocate when they claim for a fair allocation of spatial resources and the institutionalisation of spatial management rules and processes. The access to or use of spatial resources for those people can be advanced through the pursuit of spatial justice in the first instance of Figure 4.

5. Conclusions

This paper analyses the approaches used to measure and monitor land tenure security. It reveals that these approaches are based only on the promises of formalised land rights. They do not take into account the security of land tenure that may derive from effective spatial (re)development rules and processes. The paper also grasps how different approaches and processes of urban (re)development that are grounded on the promises of spatial justice can spur land tenure security. In that way, a synthesis on the main forms of spatial justice and their relationship to land tenure security is provided. Among the forms of spatial justice that spur the security of tenure, procedural, recognition, and redistributive justice are at the forefront. They promote equality of opportunities for all people (including the urban poor and low-income groups) to have access to or use land resources. This is achieved through the participation of all categories of urban dwellers in the design and implementation of rules, processes, and plans that guide the (re)development of the urban space. Those rules, processes, and plans have to be aligned with the needs of all urban dwellers, including those who are deprived of spatial resources. Participatory and collaborative urban planning constitutes the main urban (re)development approach that most highly promotes spatial justice and land tenure security.

The paper discusses also the main urban (re)development processes that have potential to promote spatial justice and land tenure security. These include slum upgrading, the development of affordable or mixed housing, incremental housing development, urban regeneration, and the relocation of squatters or slum dwellers to serviced sites. To assess whether these approaches and processes promote spatial justice and land tenure security, the paper proposes a holistic set of 60 evaluative indicators. Among them, 30 are connected to and supplement the existing indicators that measure land tenure security. Others extend the existing indicators and evaluate the hidden and dynamic trends of spatial justice in the course of urban (re)development. As urban (re)development can be achieved through the implementation of different actions and programmes, the developed indicators relate to those various actions and programmes that one can encounter. The evaluation can therefore focus on one or more actions and programmes. There are 18 indicators that evaluate the participation of all urban dwellers in crafting rules guiding the development of their cities and the promotion of access to housing and urban amenities for poor and vulnerable groups. The other 12 indicators are linked to the relocation and resettlement of poor and low-income groups into suitable residential areas. Spatial justice recognises the inevitable urban (re)development programmes that may infringe on the rights to private properties of some urban dwellers, such as in the case of real property expropriation. The framework therefore includes a series of indicators (16) that assess whether those actions are carried out in a just way; i.e., a way that leads to fair compensation.

Generally, all proposed indicators are specific to land tenure security from a spatial justice lens for which there is no existing framework for evaluation. The evaluation of land tenure security using those indicators can be performed at different stages of urban (re)development. The evaluation can give an insight into the aspects that relate to the protection of the rights to land for all people, especially poor and low-income urban dwellers. The users of those indicators can include decision-makers, municipality authorities, urban planners, and different organisations who intend to measure trends of spatial justice and land tenure security in the course of any urban (re)development programme.
The results of the evaluation can be used to recommend aspects for improvement in the management of urban space in order to boost land tenure security in cities. However, this paper does not provide an evaluation test of the framework using a specific case study. Instead, it shows that it is possible to create a holistic framework of indicators that addresses multiple themes. The extent to which, the conditions under which, and the kinds of cases for which the framework can be used practically will be the aim of a subsequent publication.

**Author Contributions:** This manuscript is a part of ongoing Ph.D. research. Both authors set up the structure and approach of the manuscript. E.U. who is the Ph.D. candidate, contributed to all sections under the guidance of W.T.d.V. who is the supervisor. The Supervisor also made a large contribution to the revision and editing of the whole manuscript.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

**Appendix A**

Definition of key concepts and terminologies used in the development of indicators

1. Dispute resolution is a mechanism to handle disputes arising from the management of land within a country. In this study, it refers to disputes that break out between the local community and governmental organisations. It also refers to formal or informal dispute resolution mechanisms.
2. Dwellings are living places of people or households of families, including their houses.
3. Expropriation refers to the acquisition of the rights to private properties, such as land and buildings, without the willingness of property owner to concede his/her rights. It can be carried out in order to serve a public interest or needs, such as the development of infrastructure, or for private interest when private investors need to develop the land [186].
4. Eviction is removal against the will of individuals, families, and/or communities from the homes and/or the land which they occupy, without the provision of, or access to, other land and housing.
5. Fair compensation is the value of the expropriated property at market price. Such compensation has to be paid within a determined time (time span for compensation) which has to be determined by the law guiding the expropriation in any country [98].
6. A land use plan is a plan that identifies areas for a designated use for the purpose of the management of land resources, including descriptions of permitted and planned developments.
7. A legal framework constitutes judicial, statutory, and administrative systems, such as court decisions, laws, regulations, bylaws, directions, and instructions that regulate society and set enforcement processes.
8. Legal or policy provisions for the development of basic facilities and services are the clauses or articles of rules, such as land law and policy and urban development policies on the development and provision of those facilities and services [187].
9. Low-cost or affordable houses are residential houses that can be provided at a price that does not exceed 25 to 30 percent of the household income [141–143]. The promotion of access to low-cost housing involves the inclusion of some land lots into residential sites that can be allocated at low prices or through general land redistribution processes to poor people. The proportion of those lots ranges from 15% to 20% of zoned land for residential housing [188].
10. Informal settlements are illegal settlements which are developed within a geographical and administrative entity without construction permits.
11. Informal settlement upgrading is a mechanism for increasing access to basic urban amenities and services in informal settlements, including opportunities for property owners to improve their buildings. This can result in the formalisation of property rights through land titling.
12. Mixed housing refers to different typologies of residential buildings that can be developed at low prices relative to the income of some people, such as poor and low-income households.
13. The relocation of slum dwellers is the resettlement of the inhabitants from a slum into new serviced sites.
14. A serviced residential site is a residential area which is subdivided into construction plots according to the physical development plan and provided with basic facilities, such as water, electricity, a sanitation system, and a road network.
15. Slum clearance is the demolition of housing in slums due to environmental concerns or for other urban development purposes.
16. Zoning rules are spatial development regulations at the municipality or city level that subdivide the land into different types of use, such as residential, commercial, industrial, and public and green spaces.

Note: Most of those definitions or explanations were compiled from [32,40,106].

Appendix B

Table A1. Cross analysis of the forms of spatial justice and main urban development processes.

<table>
<thead>
<tr>
<th>Urban Development Approach and Options</th>
<th>Number of Reviewed Resources</th>
<th>Frequency of Spatial Justice Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Procedural</td>
<td>Recognition</td>
</tr>
<tr>
<td>Inclusive, participatory, and collaborative planning</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Slum upgrading</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Affordable housing development</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Mixed housing development</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Sites and services schemes</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Incremental housing development</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Urban regeneration and housing renewal</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Resettlement or relocation of squatters or slum dwellers</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Condominium housing</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Urban village</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Community land trusts (CLTs)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Joint venture for land or housing development</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>70</td>
</tr>
<tr>
<td>Percentage</td>
<td>100%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Source: Qualitative and content analysis of the retrieved literature.

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