RURAL-URBAN LINKAGES
in the context of Sustainable Development and Environmental Protection

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1. INTRODUCTION

Regional development is an uneven process, which leads to geographical inequality. The production of uneven regional spatialities signifies an out-of-equilibrium economy, based on the coexistence of regionalized growth with localized decline; this concept similarly presupposes political economic colonization, and subsequent abandonment, asymmetrical power relations between cores and peripheries, and qualitatively variegated modes of dis/connection to the global economy (Peck, 2016). There is increasing evidence that the growing integration of the global economy, combined with the intensification of trade liberalization, and the rise in importance of the knowledge-based economy tend to disproportionately benefit large urban agglomerations in comparison with rural areas (Mayer et al. 2016; Pike et al., 2017). In the context of increasing global urbanization, and a policy focus on the ‘trickle-down’, or spillover, effects of urban agglomeration economies, there is a danger that this spatial inequality will increase. This form of development can be unsustainable, unjust and environmentally damaging.

This working paper examines the role of rural-urban linkages in the context of sustainable development and environmental protection, analyzing how harnessing linkages between urban and rural areas can potentially reduce spatial disparities. Emphasis is placed on examining the flows of people, goods, money and information between rural and urban areas, as well as upon the linkages that form between different economic sectors. The importance of places - namely the peri-urban interface, and small- and medium-sized towns that tend to muddy the clear-cut distinction between ‘urban’ and ‘rural’ - is also considered. As well as examining rural-urban flows, linkages between sectors, and intermediary places - ‘in-between’ the rural and urban -, this working paper also aims to emphasize why the relation between rural and urban is transforming, and how these transformations affect the quality of land and land use change. Recommendations are put forward based on an integrated and flexible territorial planning approach, which takes the wider planning issue into consideration, rather than confining planning decisions to discrete administrative units and, in particular, limiting them to the rural/urban division. It is herein argued that this flexible perspective offers a more sustainable and equitable approach to regional development, with a view to minimizing environmental degradation and promoting integrated and balanced regional development.

The paper proceeds as follows: The next section discusses uneven regional development and how economic growth is geographically varied. This is followed by a discussion on how rural and urban areas become globally connected, and, at the same time, locally disconnected. In Section 4, out-migration, especially from rural areas, as well as the development of peri-urban areas, are then analyzed in connection with uneven regional development and their environmental effects. This is followed by a discussion on how rural-urban linkages – in particular small- and medium-sized towns, and networked infrastructure – can potentially realign uneven development. In Section 6, recommendations are given based on an integrated approach to planning and territorial development.
2. DIS/CONNECTIONS: UNEVEN REGIONAL DEVELOPMENT

Regional spatial imbalance is not a simplistic divide between poor, disconnected, marginalized rural areas, and rich, globally connected, central urban areas. The geographical sources of economic growth are varied, with potential for growth existing in a diverse range of areas. Some rural areas are prospering, while, in contrast, some urban areas, or urban neighborhoods and especially peri-urban areas, are becoming increasingly marginalized. This marginalization is not solely to do with absolute geographical location, such as being on the edge of the city or forming part of the remote ‘rural frontier’, but also refers to the ‘relational situatedness’ of particular spaces within broader, asymmetrically organized frameworks of power (Brenner, 2009). Spatially uneven development is, therefore, produced through the unequal distribution of socio-economic assets, geopolitical power and ideologies, and environmental challenges. The embedding of uneven development within power hierarchies means that the core and periphery are not rigidly bound, or permanently fixed, and that areas and regions can shift from core to periphery, over time (Soja, 1985).

Growing interdependencies between rural and urban areas alter the traditional role of ‘rural’ and ‘urban’ spaces (Eppler, et al., 2015; Berdegué and Proctor, 2014; Tandoh-Offin, 2010). Agriculture, for example, continues to play an important role in rural areas, especially in terms of food production, but this is complemented by growth in other industries, such as manufacturing and the service sector (Akkoayunlu, 2015). The countryside, just like cities, is also a place of increasing consumerism (tourism, for example), and is equally a centre of non-agricultural production (Dashper, 2014). Rural households rely on non-agricultural employment, such as tourism, as a means of diversifying their income in order to become less dependent on farming. Just as rural areas show signs of urban practices, traditional ‘rural’ characteristics, such as farming, also take place in urban areas. Urban and peri-urban agriculture can play an important role in self-sufficiency and food security issues, while at the same time improving community relationships and facilitating social ties (Poulsen and Spiker, 2014). Produce is either consumed by the producers, or sold in urban markets directly to street-food stands and market stalls, for example, with more income going to the farmers than traders or middlemen. Moreover, urban enterprises often rely on rural produce, or rural demand and consumerism, for their own profitability (Tacoli, 1998). Rural and urban economies are therefore interdependent, intertwined and complementary (Akkoayunlu, 2015).

Despite these increasing connections between rural and urban areas, and the merging of traditional urban practices with rural ones, the rural-urban divide - from a policy and governance perspective - remains an important distinction, in certain contexts. Figure One shows the key distinctions often drawn between rural and urban areas, as well as the mixing of urban and rural characteristics. While in some regions, rural and urban areas are becoming increasingly connected, in other areas, disparities are tending to increase: spatial differences still exist. Addressing this spatial disparity requires a policy approach that, with certain issues, recognizes the rural-urban divide. Urban areas often provide functions and public services that would be too costly to provide to rural areas, while rural areas provide ecosystem services that are fundamental for environmental sustainability (OECD, 2013). Moreover, depopulation of rural areas, a process clearly evident, for instance, in Russia, reduces the supply of labor, and potentially endangers the sustainability of rural communities (Wegren, 2016). A policy approach that minimizes the effects of out-migration, especially of young people, is therefore needed.

Despite these interlinkages and overlaps, however, the ‘growth pole’ strategy often remains a dominant approach to territorial planning and development. The growth pole focuses on urban-based manufacturing, with a top-down approach, viewing rural areas as backward and dependent on ‘trickle-down’ impulses (Douglass, 1998). While agglomeration can offer development advantages (see Rostow’s ‘Transition theory’ (1960), for example, where investment in industry and services creates a higher return than in agriculture) as well as positive externalities - such as easier movement of goods over shorter distances, the spread of ideas, and the fostering of creativity -, rural areas do not always benefit from these. Rural–urban linkages rarely operate in an ‘isolated state’ based on a single market that consists of the city at the core, surrounded by concentric circles of agricultural land use (see von Thünen’s model). While immediate links do typically exist between the city and its surrounding agricultural region, especially in the global South, in a globalizing economy, these rural–linkages are far more complex. There is no single demand point; instead, farmers operate in multiple markets.

1 Soja (1985, 178) goes on to note that the production of geographically uneven development is necessary to the origin, development, and survival of capitalism: “[p]roduced and reproduced at multiple scales, from the local to the global, GUD [geographical uneven development] is inherent in the concretization of capitalist social relations, both as a medium and an outcome, as presupposition and as embodiment.”

2 See the urban agriculture portal of the Food and Agricultural Organisation of the United Nations at: http://www.fao.org/urban-agriculture/en/
Moreover, an urban bias can lead to extractive and discriminatory policies against the rural sector (Lipton, 1977). These policies can include price distortions against agriculture in the form of trade and industrial policies operating on a domestic level, as well as the decrease in foreign aid for agriculture at the international level (Bezemer and Headey, 2008).

An over-emphasis on the city is not only detrimental to rural areas; urban agglomeration can also have a negative effect on city residents. Unchecked and unplanned urbanization can lead to negative externalities, such as land degradation, pollution, higher levels of crime and congestion, and the spread of disease (Davis, 2006; Eisenstein, 2016). Slums are often framed as the archetype of ‘over-urbanization’, whereby settlements develop informally without adequate infrastructure and sanitation; building materials, meanwhile, are substandard, and often located in vulnerable, peripheral areas subject to natural hazards, such as flooding. Policies to reduce the effects of these negative externalities need to be considered.

3. THE WEALTH GAP: GLOBAL INTEGRATION, LOCAL DISCONNECT
The growth of the world’s global urban population has led to economists, policy-makers and urban theorists declaring this as an era of the ‘Urban Age’ (Glaeser, 2011; Burdett and Sudjic, 2007; 2011; UN-Habitat, 2016). In 2007, the world crossed the tipping-point in which 50% of its population became urban, in comparison to 1960, when only 34% of the world’s population lived in cities (UNFPA, 2007). The growth in the size of cities, especially in Africa, Asia and Latin America, means that far more people are living in cities today than was the case fifty years ago, a figure which is predicted to increase (see Figure Two; Ash et al., 2008). It is not just the population growth of cities that is emphasized by policy-makers and theorists, but also their economic importance. Policy makers emphasize cities as being ‘crucial’ to development, and they are heralded as hubs for job creation, innovation and growth (OECD, 2013a).

Urbanization, under the right circumstances, is the future driver of growth and development in emerging economies. The UN-Habitat – the United Nations programme working to promote socially and environmentally sustainable human settlements – emphasizes that urbanization and growth go hand in hand: “no one can deny that urbanization is essential for socio-economic transformation, wealth generation, prosperity and development” (UN-Habitat, 2016).
The claims of the Urban Age have, however, been called into question by a range of scholars. Brenner and Schmid (2014) raise concerns over the statistical accuracy of global urban growth, given national inconsistencies of what is classified as ‘urban’. These inconsistencies of definition result from discrete analyses being based on a range of different indicators, including population size, density threshold, and administrative/governance classification, as well as unreliable methods of data collection, resulting in arbitrary and incompatible data sets (Shaw, 2015). While increasing urbanization in the global North has historically equated with economic development, development in the global South is not necessarily following the same trend. Whereas in 1960, the general trend revealed that increases in urbanization correlated with increases in GDP per capita (see Graph One), in 2010, a cluster of countries’ data reveals only a negligible increase in GDP per capita with increasing urbanization (see Graph Two). Urbanization is typically based on short-term economic benefit, unbridled consumption, and production practices that compromise the sustainability of the environment. This uncontrolled growth, typically paired with privatization, leads to deeply divided and unequal cities, raising the question: who is benefitting from the Urban Age?

The process of urbanization unfolds unequally, creating winners and losers (Mehta, 2015). As Graph Three shows, the world’s largest cities are also, simultaneously, the most unequal. The Gini coefficient is the standard economic measure of economic inequality: the larger the value of the coefficient, the higher the share of total income is concentrated in the pockets of the most affluent population. The data reveal that although inequality in China is increasing in general, this inequality is most evident in cities. In Brazil, meanwhile, inequality decreased for the whole country from 61.5%, in 1991, to 51.7%, in 2011. Despite this decrease, disparities in cities remain wide. In 2011, the difference between the average income of the country’s most affluent 10% and its poorest 10% was equivalent to a factor of 38. This rose, however, in Brazil’s main cities: the difference was of a factor of 39 in Sao Paulo, 58 in Rio de Janeiro, and 67, in Salvador.

Figure 2: World Population By Size Class of Settlement (United Nations, World Cities in 2016, Data Booklet).

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<td>Number of settlements</td>
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<td>10 million or more</td>
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These growing disparities within cities are coupled with the increasing disconnection of urban areas from their surrounding rural areas, and even from their national economies (Sassen, 2005). Thus, the traditional notion, in line with von Thünen and Christaller, that urban settlements function as ‘single markets’ or ‘central places’, in a vertical hierarchy with their surrounding rural areas, within the container of the nation-state, becomes untenable in certain contexts. Based on the restructuring of the capitalist system and the technological revolution (Castells, 1989), the city has, in fact, become detached from the nation-state. Economic activities are geographically dispersed around the globe, but also continue to rely on agglomeration, namely other ‘global cities’, in order to anchor multiple cross-border dynamics in a network of places. This trend of local-global connections, and the by-passing of the nation-state and its hinterlands, is a re-scaling of “strategic territories that articulate a new system” where there is “partial unbundling or at least weakening of the national as a spatial unit due to privatization and deregulation and the associated strengthening of globalization” (Sassen, 2005, 27).

Commercial interests, by way of domestic investment and FDI, are threatening the livelihoods of smallholders, pastoralists, indigenous communities, and other vulnerable groups, by restricting their access to land. On the one hand, large-scale land acquisitions by domestic and foreign investors, and local residents’ corresponding loss of access to land, can directly jeopardize rural development. Zagema (2011) reports that in Mozambique, where 35% of households are chronically food insecure, only 32,000 hectares – out of a total 433,000 approved for agricultural investment between 2007 and 2009 – were used for food crops. Research by the World Bank, the International Institute for Environment and Development (IIED) and Oxfam further concluded that taxes, thought to benefit the local community, were rarely collected (Zagema, 2011). As well as leading to the destruction of valuable forests, such international trade deals tend to bypass local urban centers for processing and marketing; furthermore, much of the added value is retained by international partners, and not reinvested in the producing region of the nation from which it was extracted (Bah et al. 2003).
On the other hand, large-scale land acquisitions can have a positive impact because of the capital in-flow, tax income and the subsequent transfer of know-how, which can ignite rural development more broadly (GTZ, 2009), while also giving deserved attention to the agricultural sector following two decades of neglect in development discourse. As the World Bank’s Development Report highlighted in 2008, “it is time to place agriculture afresh at the center of the development agenda.”

Similar to the case of urban development, placing agriculture at the center of the development agenda might be more beneficial to some than to others. Palm oil plantations in Uganda, for example, have led to the displacement of communities, often with no compensation or alternative livelihood options. Meanwhile, 95% of employment has gone to migrants, paid a wage below the average, from other areas of Uganda, and not to the local communities. There are also environmental consequences to such plantations. A large proportion of Ugandan palm oil plantations are located in areas previously covered by natural forest; 3,600 ha of forest have to date been destroyed. Livelihoods of people who depend on the forest for food and medicine are affected, while water sources are rendered unusable by pollution, leaving people without access to clean water. Moreover, the plantations have led to rising food insecurity as large areas of food crops previously produced for local consumption have been converted to palm oil. The plantations have fueled land speculation, with negative social effects, notably for society’s most vulnerable. Women, especially, become increasingly marginalized as access to communally-owned land, forest and other resources that they rely on is restricted (Milieudefensie, 2013).

4. EXAGGERATING REGIONAL DIFFERENCE? OUT-MIGRATION AND PERI-Urbanization

Migration, especially from rural to urban areas, is often framed - particularly in neoclassical theory - as a natural consequence of uneven regional development (Todaro, 1969), with spatial gaps in earnings between rural and urban dwellers cited as the key driver for this movement (Lucas, 2015). In other words, the free movement of labor will eventually lead to the scarcity of labor, coinciding with a higher marginal productivity of labor, and increasing wage levels in migrant-sending countries (de Haas, 2010). This analysis tends to disregard other motives for migrating - such as improved amenities, educational possibilities, climate change and natural disasters --, as well as constraints placed on migration - such as finance, distance, access to information, social networks and limitations set by policy. Moreover, migration is multi-directional and includes movements from rural areas to more remote regions, as well as from urban areas to other urban areas.

This working paper focuses on rural-urban migration, but also draws briefly on migration to the rural frontier and its resulting environmental consequences, as well as migration from cities to rural areas. Often cited as a reason to curb rural-urban migration, the paper explores the development of peri-urban areas as a result of often uncontrolled urban sprawl, and the development of informal settlements. Emphasis is placed on the reasons such urban development occurs, based on wider structural factors, and also upon the environmental consequences resulting in this shift in land-use.

4.1. Out-migration: urbanization, the rural frontier, and back to the country

The decision to migrate often depends on a variety of factors operating simultaneously that range from global structural changes to personal circumstances. From a global perspective, shifts in migration relate to economic restructuring. The twentieth century saw a decline in the profitability of traditional mass-production industries, and the crisis of Keynesian welfare policies; states of the older industrialized world began to dismantle institutional components established after the second World War in favor of policies that extended market discipline, competition and commodification throughout all sectors of society. Neoliberal ideologies drawing on an alternative version of classical liberalism, espoused by Friedrich Hayek and Milton Friedman, and based on open, competitive, and unregulated markets, were, in turn, inserted into economic development policies.

With the ongoing Latin American debt crisis of the early 1980s, followed by the collapse of the Soviet Union, the neoliberal ideology gained persuasive momentum for understanding how economies - especially those in the global South - should function. Bretton Woods institutions such as the General Agreement on Tariffs and Trades (GATT), World Trade Organization (WTO), the World Bank, and the International Monetary Fund (IMF) were “subsequently transformed into the agents of transnational liberalism and were mobilized to institutionalize this extension of market forces and commodification in the Third World through various structural-adjustment and fiscal austerity programs” (Brenner and Theodore, 2002). Structural Adjustment Programmes were enacted extensively across Latin America, the former Soviet Union, and Africa, consisting of loans provided by the Washington institutions, furnished with conditionality clauses. These conditionality clauses stipulated the lowering of interest rates or approval of new loans provided the loan beneficiary implemented privatization and deregulation strategies, or reduced trade barriers.
The results of these Structural Adjustments Programmes became embedded in certain localities, resulting in spatial shifts that have realigned the relationship between rural-urban areas. Liberalization of agricultural policies in Sub-Saharan Africa, for example, led to the removal of subsidies and the subsequent failure of some farmers to meet the challenges before them, leading to a switch in livelihoods. These livelihood changes included migrating to cities or diversifying income by engaging in non-farm activities in rural areas (Owusu, 2005). Similarly, following the collapse of the Soviet Union, newly formed independent states, such as the Kyrgyz Republic in Central Asia, realigned their economies, with the support of loans from the IMF and the World Bank, towards a free-market ideology (Abazov, 1999). These loans were conditional upon the Kyrgyz Republic privatizing land by dismantling collective farms. At the same time, funding from Moscow, previously used to support industrial activities in rural areas, was also cut (Nasritdinov, 2012). Following this dismantling, the land was redistributed. However, although the distribution process was implemented at the local level through local district councils, old Soviet hierarchies and patronage networks remained important. This left some individuals with land parcels that were difficult to maintain, or far away from irrigation channels, or far away from where they were living. These uneven land distribution practices, coupled with the abandonment of factories, led individuals to seek alternative income opportunities in cities, moving especially to Bishkek, the capital city and home to Central Asia’s largest trade market, the Dordoi Bazaar, where many internal migrants work (Hatcher 2015; Isabaeva, 2014; Nasritdinov, 2012).

Alongside global processes, such as the implementation of Structural Adjustment Programmes, the enactment of national macro-economic policies, based on reform and adjustment, has also had an impact on rural-urban relationships, and especially on the movement of individuals. Rural China has experienced rapid transformation in the past three decades since economic reforms were implemented in 1978. These reforms resulted in a transition from a planned to a market economy, with associated processes of industrialization and urbanization alongside mass migration from rural to urban areas, growth and urban sprawl, loss of agricultural land in peri-urban areas, and rural industrialization in areas close to cities with liberalized economies (Long et al. 2012). Increased regional disparities have resulted in land use changes which have transformed development in both rural and urban areas (Long, 2014). These regional differences have led to a series of land use problems, such as land degradation due to improper use, land pollution because of increased industrialization, food security issues due to the conversion of agricultural land and/or over-intensive farming, as well as ecological issues caused by land use change, land use engineering and technological problems (ibid.).

The introduction of the household-responsibility system in China, in 1979, allowed rural residents to contract land, and to manage agricultural production on their own initiative, while the farmland remained in the ownership of the rural collective. Farmers were expected to sell a certain amount of their harvest at a predetermined price, while any remaining output could be sold at market prices, or consumed personally. This shift from communal decision-making to a system based on economic incentives and rewards, together with increased technological uptake and fertilizer usage, created a high national grain output: between 1978 and 1984, output in the Chinese agricultural sector increased by 61% (McMillan et al., 1989). Nevertheless, productivity increases slowed down after 1985, with some analysts blaming the partial reform of property rights: in that ownership remained collective, rather than private. Farmers were not transferred secure rights over the land, and therefore investment, and enthusiasm, in farming remained low (Oi, 1999). Farmers in China have been granted use rights over individual land plots by the government since the 1980s, by way of a 30-year lease; the state still retains ownership of the land, however. Thus, when collectively owned village land is converted to urban land, although villagers may be somewhat compensated for their loss, there is no constitutional entitlement that the compensation in question be ‘just’ (Ye, LeGates and Qin, 2013). This means compensation can often be negligible, or, indeed, non-existent. Moreover, the incentive of more lucrative work - particularly in coastal areas, where cities were selected as Special Economic Zones (SEZs), based on flexible economic policies to attract foreign investment - has further spurred rural out-migration (Zhu, 2016).

The flow of rural migrants to cities in China increased following market reforms in 1992: “urban labour markets expanded significantly and demand for rural labour skyrocketed as township and private enterprises flourished” (China File, 2014). This movement of rural labor to cities created an urban underclass, however. Rural migrants living in cities were treated as second-class citizens, suffering from constant prejudice and exclusion, deprived of legal rights, and leading a precarious existence. A large number of rural migrants who live in Chinese cities still lack an official certificate of urban residence (hukuo). Initially established in 1958, the hukuo was implemented to control internal migration (Liang, 2016). While internal movement is no longer as strictly controlled, without a hukuo, rural migrants struggle to access basic services, such as education and health care, as well as to access social protection programmes. In 2012, 710 million individuals were living in cities in China, but more than 200 million of these lacked legal resident status. Meanwhile, 2012 saw a steep rise in the cost of urban living that resulted in the migration of rural workers living in cities moving back to the countryside.
Akin to the hukuo, the propiska system was also a population registration system; it was enforced throughout the Soviet Union to restrict unchecked migration from rural to urban areas (Hatcher and Thieme, 2016). The propiska system involved gaining approval from local passport authorities prior to moving to a new locality. Obtaining approval was dependent on acquiring a job: a task that was particularly difficult in urban areas. The propiska is still maintained in many countries of the former Soviet Union, although the restrictions on physically moving to a new residence are not so severely regulated and enforced. Problems arise, however, when a rural migrant attempts to access basic services, social protection programmes, or tries to vote - without having an official residence permit for the city (Hatcher and Balabaeva, 2013). Moreover, obtaining a residence permit for the city is extremely difficult for residents who do not own property. Those residents who live in rental properties, or informal settlements, find it especially difficult to obtain a valid residence permit (Hatcher, 2015).

Land ownership issues also create challenges in other areas. In India, for example, the urban population has increased from 62 million to 377 million, between 1951 and 2011, - numbers which continue to expand. This increase has created huge pressure on housing: nearly 50% of Mumbai’s population lives in slums (Tulloch, 2011). One reason for migration to cities in India is the lack of available land for cultivation. Inheritance laws in India mean that all children get a share of their father’s property. This method of transferring property after death has led to the over-division and fragmentation of landholdings, which become so small that they are rendered uneconomical. Therefore, in search of alternative forms of income, rural residents migrate to cities, and also to ‘Green Revolution’ agricultural areas, such as western Uttar Pradesh and Punjab, regions where new, more intense, agricultural practices were introduced in the 1960s.

Migration from rural to urban areas often results in a flow of money (remittances) back to rural areas. This can finance innovation and the intensification of the farm sector, but it can also lead to decreased engagement with farming and diversification towards rural non-farm activities (Eppler et al., 2015). The relationship, meanwhile, between changes in rural population and forest cover is ambiguous, and prone to modification by local and non-local factors (Gray and Bilsborrow, 2014). Some studies on rural out-migration concur with the ‘Forest Transition Theory’ (Mather and Needle, 1998) which states that out-migration leads to reforestation as well as agricultural land abandonment (Kull et al. 2007). On the other hand, Walters (2016) notes that the assumption that declining rural populations due to out-migration leads to reforestation has been both theoretically and empirically challenged. Rather, out-migration, in some contexts, has led to an increase in cultivation, particularly when migrants return with cash savings to reinvest in farming, or hire labor in their absence (Gray and Bilsborrow, 2014).

Although it is often assumed that most migration takes place from rural to urban areas, in many nations, rural to rural migration also takes place on a large scale – and most nations equally have a significant urban to rural movement (Satterthwaite and Tacoli, 2003). Rural migrants move to other rural areas for a variety of reasons, including: the effect of policies promoting migration to less populated areas; the response to commercial farming having affected livelihoods in some rural areas; the self-perception of some migrants of being insufficiently capable of competing in urban areas (Carr, 2009). Like urban sprawl, and the development of peri-urban areas, population movements to rural areas, and the unfolding of globalizing processes in such areas, can be environmentally damaging. Moreover, as land prices increase, the pressure to deforest intensifies, as farmers bring more of their land into agricultural production in order to recoup the initial investment. Forests left standing represent an opportunity foregone for farmers (Holland et al., 2016). As Carr (2009) notes, only a small amount of forest margin recession is due to the expansion of existing farms in population-dense areas; instead, the forest retreats mainly because of new farms established by migrants in population sparse areas. This small-farmer frontier colonization, and subsequent land use, has been identified as the proximate cause of forest clearing. Low population density is often a pull-factor driving people to move towards the frontier, while high population density in the origin area can also serve as a push factor, together with land scarcity and the potential of rural unemployment (Carr, 2009).
Box: Rural out-migration and land management in Nepal

- The relationship between land degradation and population trends has always been of great concern in the Himalayan region; an increasing population pushed people to rural frontiers, and deforestation was one of the main causes of land degradation.
- The current exodus to foreign countries, or to urban areas, has led to marked changes in the demographics of the hills. The task of managing land thus falls to those left behind, mainly women and elderly.
- Labor shortage in rural areas leads to a change in agricultural practice and land use, often resulting in insufficient land management and land abandonment.
- The decision to abandon land may occur as a result of the labor shortage, distance to fields, production level, water scarcity, and, sometimes, the consequences of natural disasters.
- Instead of selling land, locals prefer to leave it fallow, or to practice a rental system called adhiya (the owner rents the land and receives 50% of the production). Reasons for retaining the land include the expectation that the area will be developed in the future, or the land will increase in value, while some respondents cited symbolic reasons.
- Lower population pressure and better forest management measures fostered forest growth, as less fodder and fuelwood was collected.
- Extensive vegetation cover within the watershed stabilized the slopes and decreased natural erosion amid favorable ecosystem recovery conditions.
- Monitoring is important: in other areas of Nepal with a longer history of abandonment, collapse of terraces has led to significant damage, such as erosion and gullying.
- Soils in areas experiencing out-migration, on the slopes or uphill, are less fertile as there is less livestock, and therefore less manure. The villages at the valley bottom are also experiencing fertility decline, but this is due to removal of biomass – a consequence of having increased cropping cycles from two to three a year.
- Invasive species appear to be the biggest challenge for land users in the area. Invasive species have taken hold in the watershed over the past decade, hindering growth of natural vegetation.

(From Jaquet et al., 2015)

Institutional push factors include the availability of cheap farmland and government incentives promoting agricultural settlement. Conversely, rural landlessness within the context of an expanding agricultural sector can push migrants both from rural areas to other rural areas, as well as to urban areas. The construction of roads towards the rural frontier can also open up areas for colonization. The Trans-Amazonian highway, for example, was hailed as a solution to overpopulation in Northeast Brazil, and would, it was believed, assist with the development of timber and mineral resources. The road has also brought environmental problems to the area – including the illegal colonization of undisturbed areas, as well as mining, hunting and land speculation. More than 95% of deforestation, fires and atmospheric carbon emissions in the Brazilian Amazon occur within 50 kilometers of a road (Laurance and Balmford, 2013). Similarly, in Ecuador, the 1979 ‘Law on National Security’ promoted the bolstering of Ecuador’s Amazon region by populating frontiers with military forces and civilian settlements. The resulting influx of migrants has led to a deforestation rate of almost 2% per annum in Ecuador’s Amazon – the highest of any Amazonian nation (Carr, 2009).

An over-emphasis on urbanization, viewed from a global perspective, can divert attention from the economic realities unfolding in individual countries (Potts 2013). Potts maintains that urbanization rates in Sub-Saharan Africa are rising more slowly than is often asserted because there is an increased level of circular-migration (i.e., migrants returning to ‘rural’ areas, but not necessarily their original rural village) because of weak urban economies. Beauchemin and Bocquier (2004), drawing on the case-study of out-migration in the Cote d’Ivoire, highlight that migration to rural areas also includes migrants with an urban background who did not originally come from a rural area themselves. The post-1980 Structural Adjustment Programmes implemented in Sub-Saharan Africa transformed the underlying income gaps between rural and urban areas, whereby rural incomes became higher because urban economies weakened; de-industrialization was common, many formal jobs were lost, and real urban incomes dropped severely. Potts (2013) emphasizes that this was because urban economies in Sub-Saharan Africa found it hard to compete for investment on the global stage:

“SSA [Sub-Saharan African] countries lacked the following: adequate and efficient infrastructure (e.g. in energy); the capacity to invest strategically in urban employment-creating sectors in ways that did not directly flout the strictures of the World Trade Organization; and large educated labour forces.”
On the other hand, Asian countries managed to establish the basic human and institutional capital required to compete on the international stage for urban jobs. Potts (2016) notes that during a real economic crisis, issues related to high costs of living - particularly in relation to housing and transportation to work - affect those living in larger cities more intensely than those living in small- to medium-sized ones. In smaller towns, it is often easier to walk to work, regulations in relation to informal development are, typically, less rigidly enforced, and food security is less challenging to ensure, due to links to nearby rural areas, as well as easier access to surrounding agricultural land.

Studies on life-course migration further emphasize that there are times when an individual is more likely to move to the city or to rural areas. This is particularly evident during retirement when migrants who originally migrated to the city for employment reasons, return to the countryside, and often to their villages of origin, where living costs are lower, and where they can continue to engage in agricultural work (Ofuoku, 2012). Return migrants often return to land and housing that they own.

4.2 Peri-urbanization: urban sprawl and slum urbanism

The peri-urban represents the spatial and territorial interface between the city and the countryside, resulting in a hybrid landscape of rural and urban characteristics. As Marshall et al. (2009) note: “The peri-urban is characterised by a high and often increasing population density, small holdings, rich countryside homes, poor slums, diverse sources of income, a lack of regulation, contested land tenure rights, uncoordinated conversion of farmland to housing, pollution, environmental problems, intensified resource exploitation, considerable economic dynamism, and severe lack of service provision”. In planned circumstances, peri-urban areas are zoned for specific purposes, such as landfill sites or out-of-town shopping centers, as well as new residential developments. Unplanned developments, on the other hand, can result in political contestations over access to land, and marginalization of certain social groups, such as poorer rural migrants, who are more likely to settle in peri-urban areas, where – as compared to urban areas – property values are cheaper, and land is more readily available.

Urban sprawl is loosely defined as dispersed, excessive and wasteful urban growth (Fang and Pal, 2016). Cities are expanding at twice the speed of their population growth rates (Angel et al. 2011). Urban sprawl, as a result of planned or unplanned development, induces land use transformation; cultivated and non-cultivated lands are converted to buildings and infrastructure. In China, for example, land fragmentation occurs in peri-urban areas wherein property rights over land are usually held by both the state and the collective, depending on whether the land is classified as urban (i.e., state-owned), or rural (i.e., collectively-owned). While urban, state-owned land is managed by city governments, collectively owned rural land is managed by a three-tier governance system (the township, the administrative village and the natural village) (Tian, 2015). This results in a fragmented form of governance in peri-urban areas, with both levels required to deal with processes of environmental and development change (Allen, 2003). Similarly, writing on peri-urban spaces in Mexico, Ruiz (2013) highlights how regulatory schemes still assume the existence of a clear border between urban and rural, a division that is inadequate to address problems associated with urban sprawl and natural resource management.

The transformation of natural, open or agricultural land into urban land is one of the most substantial environmental impacts suffered in urbanized and urbanizing countries; it includes the rise of dispersed developments, mono-functional and low-density land uses, and reliance on private car-ownership (Nuissl et al. 2009). While cities expand their footprints, land plots in inner-city areas remain empty or abandoned. The environmental effects of urban sprawl include: loss of fertile and productive land, reduced regional open space, greater air pollution, higher energy consumption, increased runoff of stormwater, increased risk of flooding, excessive removal of native vegetation, and ecosystem fragmentation (Johnson, 2001).

As Tacoli et al. note (2015, 6) “[u]rban areas are defined differently in different countries, but are generally taken to be settled areas that are more populous and dense than rural settlements, and more suitable for locating administrative facilities and functions … Most of the population-based cut-offs fall between 1,000 and 5,000 inhabitants, with a few significant outliers” (Tacoli et al., 2015). Such population figures might only consider the administrative boundary of the city and the surrounding agglomeration areas or commuting numbers. For example, Manhattan has a population of 1.5 million, yet this doubles in size everyday, to 3 million: (http://www.census.gov/hhes/commuting/data/daytimepop.html).

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Various factors are linked to the rise of urban sprawl. Overall, urban sprawl is exacerbated by weak urban governance structures and lack of institutional coordination. ‘Flight from blight’ - i.e., the retreat from unappealing elements - results in the greater decentralization of urban areas, driven by push factors such as higher tax rates, higher crime rates, crumbling infrastructure and low-performing public schools (see Wasserman, 2008 in Owusu 2013). Property tax, for example, can vary between the central city - where it is often higher - and the periphery, which encourages growth on the outskirts of the city (Song and Zenou, 2009). Land speculation on the urban periphery is also caused by investors purchasing land plots, and - rather than developing them - leaving them vacant with the expectation that land values will increase over time when the city expands. This can happen on a small-scale, individual basis where buyers purchase a land plot on an existing estate, or on a larger basis, by companies who purchase large tracts of land.

‘Slums’ account for a significant proportion of development on the edge of cities, particularly in the global South. ‘Slum urbanism’ defines how the global South has been experiencing its own urban transition since the 1950s, and the challenges this has brought. In Sub-Saharan Africa, 62% of the population lives in slums (UN-Habitat, 2003). Governments focusing on ‘Turnkey’ projects (i.e., projects constructed to be sold to buyers as a completed product), driven by investments that produce unsustainable outcomes, such as shopping malls, highways and other vanity projects, result in sprawl, ecological degradation, inequality and underinvestment in slum areas. The lack of available affordable housing alongside the simultaneous demand for cheap land by migrants can result in the development and expansion of unplanned or informal settlements. Movements of people from rural to urban areas put pressure on city housing markets and reduce the availability of cheap land.

Unplanned settlements are often formed by individuals 'seizing' or 'invading' land that does not belong to them. This process of land-taking often becomes labeled as 'illegal' or 'criminal', with the residents being described as criminals and even, occasionally, as terrorists see de Soto, 2002). This labeling of 'criminality' creates a climate of fear, felt by those who do not live in such settlements. This, in turn, leads to certain reactions and planning decisions, such as gated communities and other aspects of the securitized city, as well as, ultimately, slum demolition (Gilbert, 2007). Often, however, these settlements develop as a consequence of larger structural economic and political changes, a fact which brings into question the nature of the 'illegality' of their existence (Hatcher, forthcoming). Inequitable land distribution as a result of land privatization schemes can lead individuals to grab land as a survival mechanism. The grabbing of land by squatters is, therefore, merely realigning the injustice of inequitable land distribution. For example, following the collapse of the Soviet Union, the newly independent Kyrgyz Republic began a policy of land privatization and distribution. It should be emphasized that the so-called 'illegality' is not only associated with the urban poor, as is often emphasized. Other wealthy urban groups also establish high profile, luxury neighborhoods on the urban periphery through similarly 'illegal' means and unofficial planning strategies, but this illegality is ignored and the settlement is given official status. Informality and the unplanned settlement is therefore a negotiated labeling (McFarlane, 2012).

Although the reasons for the development of such settlements, typically on the peri-urban area of cities are, in part, due to structural inequalities, these unplanned settlements are often built on land that is not suitable for urban development (e.g., land that is prone to flooding). Dhaka, the capital of Bangladesh, for instance, receives approximately 500,000 new residents every year, as people move from coastal and rural areas often because of environmental factors (Friedman, 2009). Coastal flooding is destroying crops and rice fields, as saline water pushes further inland. Forced to migrate to the city, people move to urban slums to start a new life. Experts fear, however, that urban areas in low-lying coastal zones, such as Dhaka, will also bear the brunt of climate-change-related disasters; planned governance is thus needed to prepare for such situations (Friedman, 2009). Slum settlements are, moreover, often located in areas worst affected by these changing climatic conditions.

The development of informal settlements on the peri-urban interface can have environmental consequences as a result of unplanned growth. Simultaneously, construction of residential dwellings on land unsuitable for buildings - and especially buildings formed of unsuitable materials - can also have a negative effect on the very residents of such settlements. Informal settlements can threaten biodiversity, as Benitez et al. (2012) highlight in their report on informal development occupying ecologically valuable ejido land in Xalapa, Mexico. These expanding developments threaten preserved remnants of montane cloud forest, which not only have intrinsic biological importance, but also regulate the local climate and urban microclimate because of their tree cover.

As well as threatening ecosystems, expansive urbanization is also resulting in the loss of cultivated agricultural land. In China, for example, this is unfolding via a dual process whereby existing cultivated land is lost in coastal and central provinces, and, at the same time, new areas of cultivated land are expanding into other regions, especially the northern and border provinces of the country. Moreover, there is some degree of consensus that this newly reclaimed cultivated land is less productive than the previously converted land (Jiang et al. 2013).
The decline in cultivated land, as well as in its productive capacity, creates problems for maintaining food production capacity, posing challenges for both the security of food provision, as well as the preservation of ecosystems.

Poor urban dwellers suffer disproportionately from environmental impacts. Informal settlements are typically established near livelihood opportunities (employment), as well as next to local transportation infrastructure, industrial zones and rubbish dumps. Land next to such sites has little or no economic value, leaving it open for the urban poor. Furthermore, informal settlements are built on land not deemed appropriate for habitation, for example, due to the land’s steep terrain, inadequate geological characteristics, or, instead, being low-lying, and thus subject to flooding.

5. REBALANCING DEVELOPMENT THROUGH RURAL-URBAN LINKAGES

This section examines how to tackle uneven regional development by fostering urban-rural linkages. Emphasis is placed on small- and medium-sized towns, and on information and trade flows. While agglomeration economies and urbanization processes provide an important explanation for patterns of growth, they do not offer a complete account (Pike et al., 2017). Intermediate and peripheral territories also display significant potential for balanced growth, together with connections and flows between rural, peri-urban and urban areas.

5.1. Small- and medium-sized towns

A quarter of the world’s population (and half of its urban population) lives in urban centers with fewer than half a million inhabitants, with the majority living in cities of between 5,000 and 100,000 inhabitants (Satterthwaite and Tacoli, 2003). Of the 1.5 billion people living in these small urban centers, nearly three-quarters of them live in Africa, Asia and Latin America (Satterthwaite, 2006).

The dominance of the ‘agglomeration narrative’ (Cox and Longlands, 2016), which also enforces the divide between ‘urban’ and ‘rural’ development (Tacoli, 2003), means that the role of small- and medium-sized cities – and their respective contribution to national economies – is often overlooked (Bolton and Hildreth, 2013). This not only neglects the amount of people living in small- and medium-sized cities, but also the linkages that form between cities and their rural hinterland, as well as those between other smaller-sized towns and larger cities.

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5 Whether a place is a ‘city’ or not is a question of definition; this varies depending on the country.
6 This is an arbitrary number of inhabitants for a small- or medium-sized town. Countries have official definitions of what is ‘urban’, or what is classified as a ‘city’, but usually no definitions exist on whether a town is ‘small’ or ‘medium’. This definitional problem makes the study of small- and medium-sized towns difficult, particularly since data are often severely limited and outdated (Roberts, 2014). UN-Habitat (1996), for example, defines a ‘secondary city’ as being one of between 100,000 – 500,000 inhabitants. Other theorists, such as Christaller (1966) and Hall (2005), suggest that secondary cities are not so much defined by their populational hierarchy, but as integrated functional systems of national and/or global cities (Roberts, 2014).
Small- and medium-sized towns play an important role for their surrounding rural communities, acting as the first-tier markets and service providers for rural enterprise and development (UN-Habitat, 2006). These ‘market towns’ are well positioned to positively influence rural development and agricultural productivity; they hold a long and established role as redistribution centers in trade relations between town and country. Their position as an intermediary between rural communities and urban centers has reinforced the role of small- and medium-sized towns as the ideal platform from which to boost local economic development and reduce poverty. Small- and medium-sized towns are, therefore, seen as efficient nodal points for connecting rural producers to markets, for locating social services within easy reach of rural dwellers, and for transmitting government policies and increasing modernization (see Owusu, 2008; Satterthwaite and Tacoli, 2003). The availability of physical infrastructure and affordable transport are therefore crucial in connecting small urban centers with surrounding rural areas, as well as with other small- and medium-sized towns and urban centers. At the same time, socio-economic changes resulting from globalization and liberalization of markets have tended to modify the role of small- and medium-sized towns, since new trade relations have formed between local farmers and other investors – either global ones, or ones from larger towns that choose to by-pass the intermediary role of smaller cities.

Small- and medium-sized towns typically have the potential to trigger equitable regional development that is spatially equal, and benefits all groups (Bolton and Hildreth, 2013). They are often, however, unable to fulfill their potential of facilitating development of their rural hinterland because of inadequate financial and infrastructural resources, as well as lack of power and authority to initiate development. The potential role of small- and medium-sized cities in regional development and rural-urban linkages depends on how functional the local government is, and upon whether they have adequate resources and authority (Owusu, 2008). Policies of decentralization allow for local input and decision-making in the designing of nation-wide or region-wide programs, and for the transfer of resources to small towns, especially district councils. Decentralization is “any political act in which a central government formally cedes power to actors and institutions at lower levels in a political-administrative hierarchy” (Ribot et al. 2006).
Decentralized institutions are often identified as being best placed to identify local needs and priorities, and to act upon them accordingly. Their local position is thought to lead to better-targeted and more democratic policy-making, in comparison with that of centralized institutions (see Box on decentralization in Kenya). Conversely, there can be problems with legitimacy and corruption: democratic structures still need to be in place and local governments need to be financially capable of delivering these services. This involves real decision-making at the local level, rather than token gestures, and presupposes the meaningful transfer of decision-making powers, together with control over municipal budgets and resources. At the same time, localized decision-making needs to be better integrated with national macro-economic and sectoral policies (Satterthwaite and Tacoli, 2003). This integration of the local context with macro-economic planning ensures that the uniqueness of each small town and surrounding rural areas is taken into account via specific implementation strategies, avoiding generalizations (Owusu, 2008).

There is a discrepancy, however, between ‘deconcentration’, meaning the transfer of political, administrative and fiscal responsibilities to lower units within the central line of ministries – and ‘devolution’, similarly meaning the transfer of power to a lower administrative level, albeit one which is directly accountable to their citizens. Moreover, decentralization has rarely lived up to expectations. Simply because a planning system is more ‘local’, for example, does not mean it will circumvent patronage and personal power struggles. Owusu (2005) notes that (as is typical with developing countries) the main thrust for invoking decentralization in Ghana – with its relatively weak infrastructure and poorly developed participatory political structures - is the desire to roll back the state in order to take pressure off resource-stricken central governments, and not an impulse towards better and more localized decision-making and planning.

**Box: Decentralization processes in Kenya**

In a 2010 referendum, two-thirds of voters approved a new constitution that included measures of devolution, alongside a new Supreme Court and Bill of Rights. The referendum was a response to the 2007-2008 post-election violence. The political system has been historically over-centralized and dominated by a powerful president. Decentralization created a two-tier system of governance at the national and county levels. There has been genuine reform and not just superficial measures with limited significance. The decentralization measures were extensive, providing for county governments, complete with elected governors, assemblies, and municipalities, all with greater authority, as well as a development fund.

Kenya is a very diverse country, with ten major, and more than thirty minor, ethnic groups. Needs are very different between the arid and semi-arid North, and the highlands; between the rural Northern Rift, and the urban centers of Mombasa, Nairobi, and Kisumu; and between the coast, and western Kenya. This also includes devolution of land management (where land administration and management functions are run at the level of the county, of which 47 were created). Similarly, a National Land Commission was created in 2013. Roberts (2014) notes, however, that central government is obstructing meaningful decentralization by delaying payments and support to the newly established counties. There are also corruption accusations in the case of funds transferred to the county level.

Rather than migrating per se, individuals can benefit from small- and medium-sized towns for the diversification of their income sources, by commuting. Sharma and Chandrasekhar (2014) note that commuting is especially important in Bangladesh, India, Indonesia, Nigeria and Tanzania. Accessing housing and land can be prohibitively expensive and difficult, therefore working and living across the rural-urban divide allows rural residents to continue farming their own land, while at the same time earning ‘non-farm’ income. Indeed, the latter can account for between 30 and 50% of household income in Sub-Saharan Africa (Satterthwaite and Tacoli, 2003). This non-farm income includes services and manufacturing related to the transformation and processing of agricultural produce, as well as non-related services and manufacturing activities. Commuting reduces migration to both larger cities and to small- and medium-sized cities, which are already experiencing overcrowding and unsustainable development. Therefore, promoting the importance of small- and medium-sized towns can potentially reduce rural-urban migration to larger cities (Owusu, 2008). Yet, in order to maintain these important commuting linkages, and to harness the potential for regional development, maintenance and investment in transport infrastructure is required.
5.2. Information, connections and trade flows
Fostering the advantages of rural-urban linkages for more balanced regional development means ensuring open channels of communication – both physical and virtual. Physical infrastructure, developed with sustainable principles, allows for easier transport of goods and people between rural areas, small- and medium-sized cities, principal cities and peri-urban areas. Sustainable transport planning involves a transport system that is accessible to all, including the poor, and which encourages non-motorized and public transportation forms, relying on principles of compact and resource-efficient city planning (UN-Habitat, 2015). Improvement in Information Communication Technology (ICT) is potentially beneficial to rural areas by limiting the need for small rural business owners to relocate to cities.

Flows of information between rural and urban areas include information on market mechanisms, such as price fluctuations and consumer preferences, as well as information on employment opportunities for potential migrants. Financial flows include, primarily, remittances – from migrants, to relatives and communities in sending areas –, as well as transfers, such as pensions to migrants returning to their rural homes, and also investments and credit from urban-based institutions (Tacoli, 2003).

Interlinkages emerge between sectors both at the household level, and at the level of local and national economies. They include backward and forward linkages between agriculture, manufacturing, and services, such as production inputs and the processing of agricultural raw materials. Most urban centers, especially small and intermediate ones, rely on broad-based demand for basic goods and services from surrounding populations to develop their secondary and tertiary sectors. Overall, synergy between agricultural production and urban-based enterprises is often key to the development of more vibrant local economies and, on a wider level, to less unequal and more ‘pro-poor’ regional economic growth (Tacoli, 2003).

Access to information can improve agricultural value chains and agribusiness. Inequity in access to information allows those with information to take advantage of those without it (often farmers), even though this information is technically available in the public domain. In many agriculturally based local economies, for instance, the low availability of timely and necessary information is skewed in favor of more ‘networked’ individuals or organizations. This can force disadvantaged farmers to sell their harvests below fair value (FAO, 2013). To ensure equity across agricultural production chains, information channels need to be harnessed and improved. Various kinds of ICT can assist in offering a low-cost entry access point to critical information that can help improve productivity, yields and, consequently, farmers’ profits, as well as improving their negotiation leverage with intermediaries.

Writing on the role of entrepreneurs in developing rural-urban linkages, Mayer et al. (2016) note how ‘entrepreneurial rural-urban linkages’ potentially play a role in decreasing spatial disparities between centers and peripheries. They provide three key reasons. First, these entrepreneurial linkages create an awareness of core market demands and trends. Second, rural entrepreneurs strategically utilize rural-urban linkages to increase the value of rural assets traditionally perceived as backwards or disadvantageous. Third, rural-urban linkages are used to combine rural and urban sources of knowledge for innovation, giving entrepreneurs a competitive edge.

From a land management perspective, ICT is especially useful for the documentation of land and property rights claims: 75% of the world’s population do not have access to formal systems to register and safeguard their land rights. The key bottleneck in land administration services relates to the availability of traditional, high accuracy, expensive land surveying techniques to record land rights (the World Bank and FAO, for instance, use drone technology). Moreover, in order to reduce emissions from deforestation, one must first know how much forest land there in fact is (as well as information regarding canopy cover, species, and quality); one must also know how much carbon it contains, and how it much is being lost. Only after such data are available can one then plan for the sustainable management of forests. Such data collection often relies on using smart phones, for example, in Vietnam and Tanzania.

6. RECOMMENDATIONS FOR HARNESSING RURAL-URBAN LINKAGES
The nub of regional development planning lies in recognizing the linkages and networks that form between ‘rural’ and ‘urban’ territorialities. These linkages and networks diminish the separation between what is rural and what is urban. From a policy perspective, this requires developing a strategic approach to planning that accounts for these linkages, rather than thinking of rural and urban areas as distinct and isolated from one another. Moreover, it also involves recognizing the intermediary spaces that do not easily fit into – or that fall in between – conventional definitions of ‘rural’ and ‘urban’, such as the peri-urban interface – where many informal settlements are based-, as well as small- and medium-sized towns that form important intermediary nodes between city and countryside. These spatial territories are often subject to overlapping, and sometimes competing, forms of planning governance that undermine their spatial importance.
Each recommendation, below, is based on the overarching suggestion that sustainable development and environmental protection need to be addressed through territorial planning strategies that are not confined by administrative boundaries, being, instead, issue-based and relying on an integrated and participatory form of governance. This involves the inclusion of both urban and rural stakeholders in rural-urban partnerships in order to reach common goals and enhance urban-rural relationships, viewed as a collective, instead of as an opposing duality. These partnerships include both public authorities (urban and rural municipalities), and private enterprises, recognizing both spatial differences, as well as linkages, between rural and urban areas.

6.1 Overarching recommendation: linked governance and territorial integration
Linked governance and territorial coherence relies on a regional form of planning whereby the ‘issue’ at hand (e.g., transport network, housing and spatial planning, economic development, joint service provision) determines the region and the scale. The sustainable development of urban areas, surrounding rural areas, and, especially, the peri-urban interface, require that competing demands for environmental, social, and economic land uses be dealt with in an integrated manner (Eppler et al., 2015). Needs and challenges therefore are not confined by administrative boundaries, but instead involve aggregating relevant partners with stakes in, and responsibilities regarding, the issue at hand. This avoids fragmented and conflicting actions; it requires a flexible form of planning that can adapt to a multitude of issues. Emphasis is placed on results-oriented planning, rather than on an administrative and compliance approach. In other words, integrated planning involves a flexible approach that links spatial plans to wider issues, such as the development of infrastructure, land development and public finance (Roberts, 2014).

6.2. Planning for the peri-urban interface
Governance and issues of planning in relation to peri-urban areas are often institutionally fragmented, since peri-urban areas typically share the territory of more than one administrative unit. Furthermore, one settlement might be under the territorial control of a rural administrative unit that does not have the resources or political will to provide services for the settlement in question. This means that infrastructural provision and planning issues often develop in an unregulated and piece-meal fashion. Planning for the peri-urban interface involves striking a balance between local planning that recognizes the small-scale characteristics of separate communities in peri-urban areas, combined with the broader dimension of urban regional planning (Allen, 2003).

There is also a need to ‘contain’ uncontrolled urban development through a distinct boundary (‘urban growth boundary’), and through the enforcement of development control regulations. An urban growth boundary is a common strategy for urban growth management and attaining sustainable development, focusing on efficient land use and the preservation of rural functions, such as ecosystem services. There is still a danger of ‘leap frogging’ occurring whereby new developments merely jump beyond the protected ‘green’ boundary. Strong development control legislation is thus needed to ensure that this does not occur. The enactment of an urban growth boundary also requires that any new urban development take place within the existing urban framework, thus highlighting the need for compact cities. Compact cities not only reduce the ecological footprint of cities, but also reduce the cost of providing additional services and infrastructure to what – in an uncontrolled scenario – would be newly urbanized areas, all the while promoting economic agglomeration advantages.

6.3 Fostering small- and medium-sized towns
As small- and medium-sized towns become increasingly important in regional development issues, it is necessary to ensure that their growth is planned in order to guarantee their sustainable development. Small- and medium-sized towns play an important role in providing key services for rural populations, providing non-farm diversification opportunities, and absorbing the stress placed on larger cities, where rural migrants tend to move to. Small and medium-sized towns can plan for this growth and learn from the challenges that larger cities have faced.

Harnessing the benefits of small- and medium-sized towns in regional development requires improving connectivity – especially transport links – both between rural areas and villages, as well as from these, to larger cities. Small- and medium-sized towns are nodal points in between the ‘rural’ and the ‘urban.’ Improving connectivity ensures easier access for those individuals who commute back and forth to the city, and also boosts trade linkages, especially across the agricultural sector. Connectivity with larger cities is similarly important for trade linkages, as well as for onwards product distribution.

6.4 Enhancing rural diversification rather than out-migration
Focusing on rural-urban migration, it is clear that out-migration can have clear economic and, in some cases, environmental advantages in rural areas. From a household perspective, out-migration, often used as a survival strategy, can lead to income diversification for rural households, and income gain from remittances. Yet negative externalities of urban growth – especially urban sprawl, pollution and the development of informal settlements on vulnerable land – are environmentally damaging and lead to land degradation, while the loss of young workers can deprive rural areas of agricultural labor and drain rural communities of certain skills.
From a rural development perspective, providing alternatives to out-migration is important so that the decision to migrate is a choice rather than the only available option (Suttie and Vargas-Lundius, 2016). This involves providing youth in rural areas with alternatives to out-migration, such as opportunities for decent work and access to credit, as well as promoting investment in rural infrastructure, such as transport to small- and medium-sized cities, which then allows for the possibility of commuting rather than migrating. Expanding access to education and apprenticeships for men and women in rural areas is equally of importance.

6.5 Green cities: infrastructure and urban agriculture
As Roberts (2014, 66) stresses “the paradigm that the nations can continue to foster economic development using a business as usual approach while continuing to ignore environmental and social costs to raise a nation’s overall development is no longer sustainable.” Approaching city development through the ‘Green Cities’ paradigm, recognizes that cities need to grow – and will continue to grow – but ought to do so in a less wasteful and energy consumptive manner. Urban agriculture enables social inclusion, poverty alleviation, and reduces food security risks. It requires land use planning, and especially zoning regulations. The promotion of unused or vacant land within the city for farming practices through tax incentives is one example of such a strategy. Green infrastructure can, moreover, reduce the ecological footprint of the city and the urban heat island effect (see Box below).

**Box: Green Space Planning in Addis Ababa, Ethiopia**

- A new Master Plan is in preparation for Addis Ababa, of which Green Space Planning is one of the components. While it also formed part of the previous Master Plan, there were a number of issues which reduced its efficacy, including: a poor classification of green space components, land degradation, new developments in the upper mountainous catchment leading to water runoff, low levels of publicly accessible green space, informal settlements, industries on river banks polluting the water, a loss of urban agricultural lands, and few street trees on pedestrian roads.
- The new Master Plan uses a green space classification based on the urban morphology types. Specifically, five green proposals have been introduced that will be implemented at the structural plan level. The aims of each of these proposals, and the associated ecosystem services, are outlined below:
  - 1. Multifunctional forest development on mountainous areas. The development of forests on all mountains, and land with a slope greater than 15%, to provide fruits, honey, and wood for fuel and construction, carbon sequestration and storage, watershed management, habitat for wild animals and indigenous plants, and recreation.
  - 2. River corridor rehabilitation. Rehabilitation of the river banks of the city and plant cover, to provide vegetables, fruits and honey, recreation, slope stabilization, flood mitigation and provision of water for irrigation. Since the rivers pass through most areas of the city, planting the river corridors is expected to connect the various green spaces of the city.
  - 3. Development and management of recreational parks. The development and management of a hierarchy of parks for public recreation. Following closely the administrative structure of the city, four hierarchical levels have been identified for the management of recreational parks (city park, sub-city park, woreda (district) park and neighborhood park). These will provide recreation, temperature regulation, and flood mitigation services.
  - 4. Street tree and corridor plantation. The development and management of street tree and corridor plantation to create ecological networks, and provide multiple ecosystem services, such as shade, reduction of air temperature, air pollution mitigation, improved aesthetics, and recreation.
  - 5. Maintain land for urban agriculture. Maintaining the fertile land of the city, and gentle river corridors, primarily for providing cereals and vegetables, respectively, as well as groundwater recharge and flood mitigation.
- There are many challenges for Green Space Planning in Addis Ababa. These include informal settlements along the riverbanks; relocating the residents would have high economic and social costs. Additionally, there is currently a high demand for land in the city, leading the municipal government to convert agricultural land into industrial and housing developments, in order to generate more revenue for the municipality.

(From: Lindley et al. (2013))
6.6 Inclusive agricultural value chains

Although rural producers are the starting point of most value chains, imbalanced power relations mean that powerful players can have a detrimental effect on small producers, reducing the income they receive for their produce. Improving the bargaining power of rural producers plays a strong role in rural development. One way of doing so is to introduce ICT to farming practices in order to allow for the dissemination of knowledge, which can improve their bargaining position. Moreover, diversifying 'off-farm' activities related to the agricultural product – such as packaging and processing – can increase the worth of a product and increase economic gains for the producers (ILO, 2011).

7. CONCLUSIONS

Regional development is an uneven process producing spatial variation. The development of asymmetric spatial imbalances does not necessarily occur along urban/rural divisions, despite evidence that structural changes to the global economy - such as trade liberalization, and the development of a knowledge-based economy - tend to benefit urban agglomerations in comparison with rural areas. Instead, some rural and urban areas are prospering, while others – in both categories – are declining. An additional element is the fact that economic growth in a city creates both winners and losers, as the spread of development is both uneven and inequitable.

Out-migration responds to the uneven process of regional development as individuals seek to close spatial gaps in earnings. The decision to migrate, beyond the consideration of earnings, is also based on a range of other factors, including, for example, educational attainment and possibilities, improved amenities, as well as environmental push factors, such as drought or quick onset natural disasters. As well as natural population growth in cities, migration to cities - especially to primary cities - has led to increased pressure on land and public services. This has, in part, led to informal developments, especially in peri-urban areas, that threaten biodiversity and result in the loss of cultivated land. Poor urban dwellers tend to suffer disproportionately from these environmental impacts.

In order to allay these processes, regional development policies based on an integrated planning approach should aim to curtail the negative externalities of urban agglomeration and uneven growth. In order to achieve this, emphasis must be placed on small- and medium-sized towns, as well as upon the improvement of connectivity, via both sustainable transport connections, and ICT; the goal of these measures is, in addition to environmental revitalization, to redirect the benefits of development more equitably. This integrated approach also involves developing better ways of governing and managing existing informal areas in the peri-urban interface, which currently tend to fall between administrative units. An integrated approach, therefore, confronts the issue at hand by developing rural-urban partnerships through a broad range of different stakeholders in an attempt to collectively resolve these regional challenges.
8. REFERENCES


