Urbanization - Linking Development Across the Changing Landscape

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SOFA - Special Chapter on Urbanization

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Urbanization is the increase in the proportion of a population living in urban places. While it is measured in relative terms, it refers to a complex process of social transformation. It is arguably the most significant demographic trend to emerge over the twentieth and twenty-first centuries, and it has deeply affected rural development, agriculture and overall food security.

At the heart of urbanization are cities. Over the last few decades, cities in both developing and developed countries have emerged as the major form of human settlement. Today more people live in and around cities than in rural areas. In 1800, only 50 million people lived in towns and cities worldwide. By 1975 there were 1.5 billion, and in 2000, there were three billion—more than the entire population on Earth in 1960. Cities are seen as indicators of humankind's "progress" into the 21st century, but it remains to determine the ways in which this progress is beneficial and those in which it is detrimental. Concentration of the economic, social, political and administrative organs of a nation or region in cities have made them magnets for rich as well as poor households[1]. Yet cities are only one part of urbanization; urbanization is also the transformation of rural consciousness and the summation of many individual decisions although they are not the whole picture.

Unable to earn a livelihood in the countryside an Indonesian family sells off its livestock, gives away many of its possessions and moves to the city in search of jobs and the promise of a better life. In Ghana a worker in the informal sector moves his family from their home in a small rural village to Accra where they struggle to find secure housing and a stable livelihood. In rural India a woman leaves her parents' home with her children to join her husband who is working in Calcutta. Each of these individual and household decisions is part of the decision-making process leading to migration. Migration decisions such as these cumulatively form a significant component of urbanization.

The significance of urbanization for agriculture is qualitatively varied and quantitatively large. Both as cause and effect urbanization is related to the declining percentage of population in agriculture in rural areas, migration, changing household livelihood strategies, transformation of rural-urban linkages, and the increasing importance of urban and periurban agriculture.

What are the mechanisms of urbanization?

While the levels and rates of change vary from region to region in the world today, no region has been unaffected by urbanization. Urbanization occurs in five principle ways:

- natural increase by urban dwellers,
- international immigration to cities,
- internal rural-to-urban migration,
- reclassification, and
- metropolitanization.

Natural increase is simply the excess of births over deaths in an area. It's impact on urbanization comes chiefly through rural-urban differences in these two vital forces. Overwhelmingly, fertility rates have remained higher in rural areas than in urban areas, although there are exceptions—particularly in some African nations and in developing countries with systems of public welfare. On the other hand, the relationship between death rates and urbanization has been more variable. Historically when the now industrialized nations were urbanizing, death rates in cities were higher than in rural areas.[2] This relationship was reversed with improvements in sanitation, communication and transportation. In the modern era improvements in the ability to resist death passed largely from the industrialized world to the developing countries, and the diffusion of death control spread from cities to the countryside. Thus, for the past several decades throughout most of the world death rates in cities have been lower than in rural areas. Proportionately, changes in mortality have had a greater impact on migration than changes in fertility.

International migration involves the movement of individuals across national boundaries. Most international migrants wind up in urban areas. However, the majority migrate to cities in countries that are already highly urbanized. Consequently, international migration has a limited *quantitative* impact on urbanization. *Qualitatively* the impact of international migration is much greater, since it increases both cultural diversity and demand for services in the urban areas of the receiving country. Additionally, many international immigrants come from rural areas of the donor country. This further diversifies the composition of the urban population in the host country, while at the same time linking rural areas of the donor country to urban areas of the host country.

The economic effects of migration run both ways. On the one hand, migrants make an important contribution to the economy of a receiving area. To the extent that migrants bring with them useful skills and knowledge, receiving areas benefit from this new source of human capital without bearing the cost of its development. On the other hand, throughout the world remittances by migrants from more- to less-developed countries remain an important mechanism through which international migration influences development. For example, it is estimated that in 1999 remittances from Mexican immigrants to the U.S.A totalled 6.795 million U.S. dollars and was equal to 1.4 percent of Mexico's GDP, 60 percent of all foreign direct investment (FDI) in Mexico, or 164 percent of all Mexican agricultural exports.[3]

BOX 1: **International Migration**

International migration is becoming a more visible and important issue in international relations and in national self-concepts. Globally, the number of international migrants increased from 75 million to 120 million between 1965 and 1990, keeping pace with population growth. As a result, the proportion of migrants worldwide has remained around 2 percent of the total population[4]. In 1990, international migrants were 4.5 percent of the population in developed countries and 1.6 percent in developing countries. These global estimates mask important difficulties in measuring migration. Few countries regularly count inflows of foreigners and returning citizens, so it is virtually impossible to make estimates of foreign-born migrants except via periodic censuses. Migrants sometimes avoid or are neglected by census-takers, and they are counted or classified in different ways by different countries. Migration is often the result of conflict, persecution or weather-related hardship, consequently it fluctuates greatly from year to year and may be accompanied by chaos, making precise counts difficult. Virtually all countries have been the destination of some migration over the past 100 years due to the emergence of rapid and universal transportation. Recipient countries for migrants have become more diverse since 1965, both in terms of the number of migrants they receive and their share of total population[4]. The number of countries with a migrant population of 300,000 or greater increased by more than 50 percent between 1965 and 1990. The percentage of women migrants has increased in recent decades, to 48 percent of all international migrants in 1990. Most women who migrate for employment tend to be concentrated in low-status jobs, and many are particularly vulnerable to exploitation and harassment. The globalization of capital and trade flows is causing unpredictable changes in the fortunes of developing countries, as investment capital rapidly moves in and out of fragile economies. In turn, these movements drive both internal and international migration. The growing informalization of the economies of many countries has also intensified the interaction between irregular employment and irregular migration. Increased immigration has been recommended by a number of demographers and economists as a means of balancing the effects of fertility decline and the resultant ageing of the population. For instance, a labour shortage in Japan has been met by expanding the number of foreigners (including descendants of former Japanese emigrants) who can be admitted to the country. Between 1985 and 1995, the legally resident foreign population in Japan increased by 60 percent, and the number of undocumented aliens also grew[4].

Source: THE STATE OF WORLD POPULATION 1999, Chapter 2, Population Change and People's Choices", UNFPA, 1999

Internal rural-to-urban migration has always been a significant contributor to the existence and persistence of urban populations. For example, prior to the eighteenth century most European nations would have experienced deurbanization without continued rural-to-urban migration due to the excess of deaths over births in cities (i.e., a negative rate of natural increase). Since then, the combined effect of increasing rural-to-urban migration and the reduction in death rates has led to expanding urban populations, hence rapid urbanization. The effect of rural-to-urban migration is compounded since each action effects simultaneously both a reduction in the rural population (i.e., *deruralization*) and an increase in the urban population (i.e., urbanization). This process has become increasingly important throughout the world since the middle of the twentieth century.

BOX 2: **Agricultural Land Loss**

Urbanization affects food production in two ways—by removing agricultural land from cultivation, as cities expand, and by reducing the number of family farms, as more farmers move to the cities[5]. The spread of cities alone consumes enormous tracts of farmland in much of the world. Between 1987 and 1992, for example, China lost close to one million hectares of farmland each year to urbanization and the expansion of roads and industries[6]. In the US, urban sprawl takes over nearly 400,000 hectares of farmland each year [7, 8].

In view of rapidly growing cities and sectoral change with a declining contribution from agriculture to the national product and employment, the change of land use from cropland to other forms is increasing rapidly. From 1990 to the year 2020 a total of approximately 14 million hectares (approx. 475,000 ha/yr.) in developing countries will be converted for urban purposes[9]. Even though this loss of potential cropland does not limit agricultural growth globally, in countries like China in which only nine percent of the area can be used for agricultural purposes, major concern about loss of land due to infrastructure and urbanization exists or, at least, should exist.

Reclassification or in-place urbanization occurs when a particular location reaches the administratively defined threshold to be redefined as urban. It depends both on underlying demographic processes and on administrative-political definition. It is the administrative component that is particularly important here. Unlike births, deaths, and migration which accrue on a largely individual basis, reclassification affects urbanization in an aggregated fashion. A particular place increases in population until it reaches a given administratively defined threshold. At this point all of its residents are reclassified from rural to urban at one time. Reclassification is most likely to occur in places with a perceived economic advantage and the capacity to absorb non-agricultural labor. In some cases reclassification occurs as a direct result of *annexation* of areas that are distinctly non-urban. Thus, by administratively

incorporating residents with non-urban lifestyles into the political jurisdiction, all of the residents become “urban”.

BOX 3: **Consequences of reclassification**

Dhaka's rate of population growth has declined slightly over the past three decades, but it still remains among the highest in Asia (4.2 percent annually). The continuing growth reflects ongoing migration from rural areas to the Dhaka urban region. Such growth accounted for roughly 60 percent of the city's growth in the 1960s and 1970s, but more recently the city's population has also grown as a result of the expansion of its administrative boundaries, a process that added 1 million people to the city in the 1980s. In contrast, the rate of natural increase (growth due to the excess of births over deaths) in the city has been falling, as is the case in most other Asian cities[10].

Metropolitanization exerts its influence through a process of dominance whereby rural and periurban areas are either absorbed into the city itself or brought significantly within its sphere of daily activities. This has become a dramatic component of urbanization since the middle of the twentieth century in the developed countries and is increasing rapidly in most developing countries.

All countries make a variety of administrative distinctions between places of varying size. The most important of these distinctions is the definition of “urban” since it underlies the measurement of urbanization. It is at this point that a village or unincorporated place *officially* becomes urban, hence urbanized.

BOX 4: **Cross cultural definitions of urban**

While the term "urban area" is typically used as a synonym for "city," the two are not the same. All cities are urban areas, but not all urban areas are cities. "Urban" is a statistical concept defined by a country's government. A city, on the other hand, is more than just large numbers of people living in close proximity to one another; it is a complex political, economic, and social entity. Cities around the world symbolize their nation's identity and political strength. Cities are also centers of economic production, religion, learning, and culture.

Because each country sets its own definition of "urban," there is a bewildering array of definitions around the world. Governments of small or relatively rural countries may simply declare one or more settlements urban, regardless of size or function.[11] In many countries, the definition is based on a threshold number of inhabitants; when the population of a region exceeds a certain threshold, that region is considered urban.[11] This threshold ranges from a few hundred, as in Peru and Uganda, to more than

10,000, as in Italy and Senegal.[12] Other governments base their definition on a combination of criteria, such as population density, political function, or predominant activity of the region.[13]

Definitions of 'urban' and 'rural' also vary widely across Africa. Many African countries use a population figure of 2,000 to distinguish between rural and urban settlements. However, the figure varies from 100 in Uganda to 20,000 in Nigeria and Mauritius. Almost half the countries in Africa use a quantitative definition to indicate the areas that qualify as urban.[14]

For the 2000 census the Census Bureau of the United States defined "urban" as comprising all territory, population, and housing units in urbanized areas and in places of 2,500 or more persons outside urbanized areas.[15]

These definitional differences can skew international comparisons. For example, if the Indian government adopted Peru's definition of urban, India would suddenly become one of Asia's more urbanised nations. This, in turn, would change the regional urbanisation levels for South Asia.[11] In China, the urban population more than doubled between 1982 and 1989 because of a change in definition.[16]

The extent of urbanization

The level of urbanization is increasing nearly everywhere in the world today. Yet there remain significant regional differences in both the level and rate of urbanization (See Appendix A). The impacts are felt at all levels of the urban hierarchy from the growth in the number of mega cities to rapid population increases in small towns and medium sized cities.

The developing world has been predominantly rural but is quickly becoming urban. In 1950 only 18% of people in developing countries lived in cities. In 2000 the proportion was 40%. By 2030 the developing world will be 56% urban.[17] While the developed world is more urban, 76% urban in 2000, developing countries have much faster urban population growth — an average annual urban growth rate of 2.3%, which far exceeds the developed world's urban growth rate of 0.4%.[18]

Table 1: Various Indicators of Urbanization for the Regions of The World, 1950, 2000 and 2030

	Urban population (millions)			*Percentage urban*			*Urban growth rate (percentage)*		*Growth rate of the total population (percentage)*		*Urbanization rate (percentage)*	
Major area, region	*1950*	*2000*	*2030*	*1950*	*2000*	*2030*	*1950-2000*	*2000-2030*	*1950-2000*	*2000-2030*	*1950-2000*	*2000-2030*
Africa												
Eastern Africa	3	65	205	5.3	26.1	44.1	5.88	3.86	2.68	2.11	3.21	1.75
Middle Africa	4	34	109	14.2	35.4	53.2	4.41	3.90	2.58	2.54	1.83	1.35
Northern Africa	13	88	174	24.7	50.8	66.2	3.80	2.27	2.36	1.38	1.44	0.89
Southern Africa	6	23	36	38.2	48.1	62.0	2.66	1.57	2.20	0.72	0.46	0.84
Western Africa	6	88	242	10.2	39.8	58.2	5.31	3.36	2.58	2.09	2.73	1.27
Asia												
Eastern Asia	121	572	933	18.0	38.5	54.6	3.11	1.63	1.59	0.47	1.52	1.16
South-Central Asia	83	455	1 027	16.6	30.6	47.9	3.41	2.71	2.19	1.21	1.22	1.50
South-Eastern Asia	27	193	397	14.8	37.2	55.9	3.94	2.41	2.09	1.05	1.84	1.36
Western Asia	13	132	248	26.7	70.2	79.1	4.57	2.10	2.64	1.70	1.93	0.40
Europe												
Eastern Europe	86	219	226	39.3	71.2	80.1	1.86	0.11	0.67	-0.29	1.19	0.39
Northern Europe	57	79	84	72.7	83.8	88.4	0.66	0.21	0.38	0.03	0.28	0.18
Southern Europe	48	96	101	44.2	66.4	76.3	1.37	0.16	0.56	-0.30	0.82	0.46
Western Europe	96	151	160	67.9	82.6	87.8	0.92	0.19	0.53	-0.02	0.39	0.21
Latin America and the Caribbean												
Caribbean	6	24	36	35.4	63.0	73.3	2.76	1.33	1.61	0.82	1.15	0.51
Central America	15	91	150	39.8	67.2	75.9	3.65	1.66	2.59	1.26	1.05	0.40
South America	48	276	419	42.8	79.8	87.3	3.48	1.39	2.24	1.09	1.24	0.30
Northern America	110	239	314	63.9	77.2	84.4	1.56	0.91	1.18	0.61	0.38	0.30
Oceania												
Australia/New Zealand	7.6	19.3	25.4	74.6	84.9	88.7	1.88	0.91	1.62	0.76	0.26	0.15

Source: UN (2000) [19]

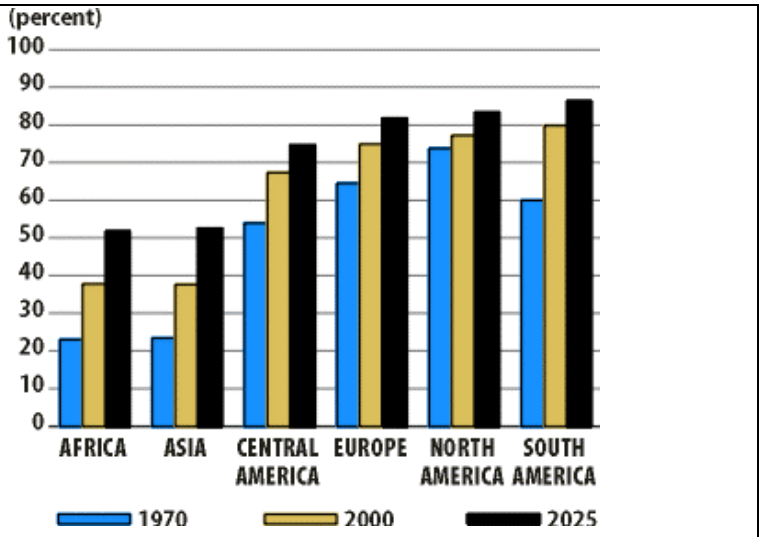
With the exception of Southern Africa and South-central Asia, the rate of urbanization throughout the world will slow down between 2000-2030 (Table 1). Yet paradoxical as it may seem, in every region urbanization has increased since 1950 and is estimated to continue increasing through 2030. The population in urban areas of the less developed regions will likely rise from 1.9 billion in 2000 to 3.9 billion in 2030. These areas will absorb most of the overall population increase expected during 2000-2030. Because the more developed regions and Latin America are already highly urbanised, their urban populations are expected to increase only slowly, passing from 0.9 billion in 2000 to 1 billion in 2030. During 2000-2030, the world's urban population will grow at an average annual rate of 1.8 percent, nearly double the rate expected for the total population of the world (1 percent per year). At that rate of growth, the world's urban population will double in 38 years. Growth will be particularly rapid in the urban areas of less developed regions, averaging 2.3 percent per year during 2000-2030, consistent with a doubling time of 30 years. In contrast, the rural population of the less developed regions is expected to grow very slowly, at just 0.1 percent per year during 2000-2030.

Rapid urban growth in developing countries reflects substantial rural-to-urban migration and natural increase (the net effect of births minus deaths) among city residents. On average, of these two sources of urban population growth, natural increase has played the greater role. For example, among developing countries (excluding China) an estimated 60% of urban growth between 1960 and 1990 was from natural increase and 40% from in-migration from rural areas and the expansion of urban boundaries.[17] However, these numbers underestimate the true impact of rural-to-urban migration, lumping the fertility of in-migrants together with existing urban dwellers.

Some cities, however, are growing much more rapidly because of migration from rural areas. Dhaka's population increased by 7% per year between 1975 and 2000, 3.5 times the average annual growth of Bangladesh, and Lagos grew 5.6% per year at almost twice the growth rate of Nigeria's overall population[20].

In terms of sheer numbers, urban concentrations are greatest in Asia, where about one third of the region's population lives in cities. The level of urbanization in Asia will increase sharply over the coming decades. The urban population is forecast to more than double from about 1.1 billion to about 2.5 billion by the year 2025, by which time Asia will contain half the world's urban population.[21] In Latin America it is estimated that at least three out of every four persons are already urbanized[22]. In Africa urbanization is relatively new, but still over a third already live in cities and the rate of rural-to-urban migration is increasing. Rapid development of new cities is to be expected over the next twenty years (Figure 2). In West Africa, for example, the number of cities is expected to increase from 2500 in 1990 to 6000 in 2020 (see

Figure 1).



Source: UN Population Division[18]

Figure 1: Regional trends in Urbanization 1970 - 2025

The next 30 years will see the explosive growth of cities with world urban populations reaching 4.9 billion or 60% of the world's population, nearly all of which will occur in developing countries. Governments will face enormous challenges to "generate jobs and to provide the services, infrastructure and social supports necessary to sustain livable and stable environments"[23] while at the same time preventing environmental devastation due to urbanization. These challenges will exist across settlements ranging from the most rural to the most urban (the *rural-urban continuum*).

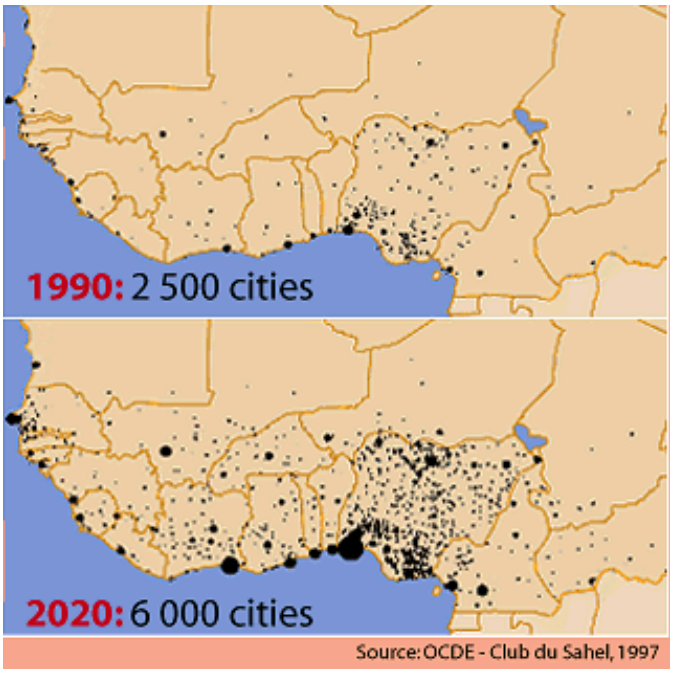


Figure 2: Urban Growth in West Africa (1990 – 2020)

				Urbanisation rate		Urban growth rate	
	Percentage urban			(percentage)		(percentage)	
Rank Country	1950	2000	2030	1950-2000	2000-2030	1950-2000	2000-2030
1 China	12.5	32.1	50.3	1.89	1.50	3.55	2.02
2 India	17.3	28.4	45.8	0.99	1.59	3.08	2.62
3 United States of America	64.2	77.2	84.5	0.37	0.30	1.51	0.89
4 Brazil	36.0	81.3	88.9	1.63	0.30	3.93	1.23
5 Russian Federation	44.7	77.7	85.2	1.11	0.31	1.83	0.03
6 Japan	50.3	78.8	84.8	0.90	0.24	1.73	0.01
7 Indonesia	12.4	40.9	63.5	2.39	1.47	4.35	2.43
8 Mexico	42.7	74.4	81.9	1.11	0.32	3.65	1.36
9 Germany	71.9	87.5	91.7	0.39	0.16	0.76	0.03
10 Pakistan	17.5	37.0	55.9	1.50	1.38	4.25	3.31
11 United Kingdom	84.2	89.5	92.4	0.12	0.11	0.42	0.15
12 Turkey	21.3	75.3	87.3	2.53	0.49	4.85	1.54
13 Nigeria	10.1	44.0	63.5	2.94	1.22	5.51	3.12
14 France	56.2	75.6	83.2	0.59	0.32	1.28	0.46
15 Philippines	27.1	58.6	73.8	1.54	0.77	4.11	2.12
16 Iran (Islamic Republic of)	27.0	61.6	74.6	1.65	0.64	4.43	1.91
17 Italy	54.3	67.0	76.2	0.42	0.43	0.81	-0.06
18 Republic of Korea	21.4	81.9	90.5	2.68	0.33	4.35	0.74
19 Ukraine	39.2	68.0	76.6	1.10	0.40	1.73	-0.02
20 Argentina	65.3	89.9	93.9	0.64	0.15	2.18	1.07
21 Bangladesh	4.2	24.5	43.8	3.53	1.94	5.76	3.17
22 Colombia	37.1	73.9	83.0	1.38	0.39	3.81	1.70
23 Egypt	31.9	45.2	59.9	0.70	0.94	2.98	2.21
24 Spain	51.9	77.6	84.7	0.80	0.29	1.50	-0.07
25 Poland	38.7	65.6	76.8	1.06	0.53	1.95	0.52
26 Algeria	22.3	60.3	74.4	1.99	0.70	4.55	2.20
27 Saudi Arabia	15.9	85.7	91.5	3.37	0.22	7.19	2.51
28 Iraq	35.1	76.8	85.0	1.57	0.34	4.56	2.48
29 Viet Nam	11.6	19.7	33.7	1.06	1.79	3.02	2.94
30 Democratic Rep. of the Congo	19.1	30.3	49.1	0.92	1.61	3.81	4.34
31 Netherlands	82.7	89.4	92.4	0.16	0.11	1.05	0.08
32 Ethiopia	4.6	17.6	35.3	2.68	2.32	5.13	4.69

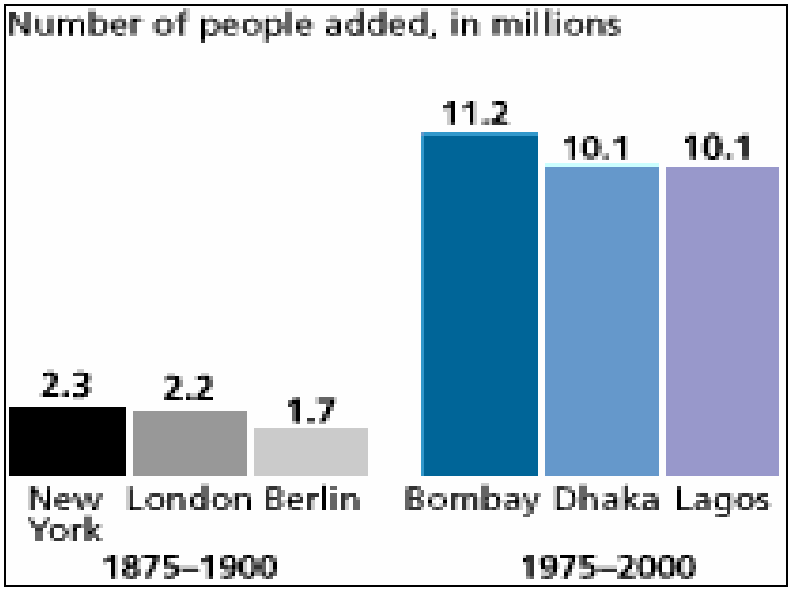
Source: UN (2001)[24]

Table 2: Level of urbanisation and urbanisation rates for the countries with the largest urban populations, 1950 to 2030

Megacities of the world

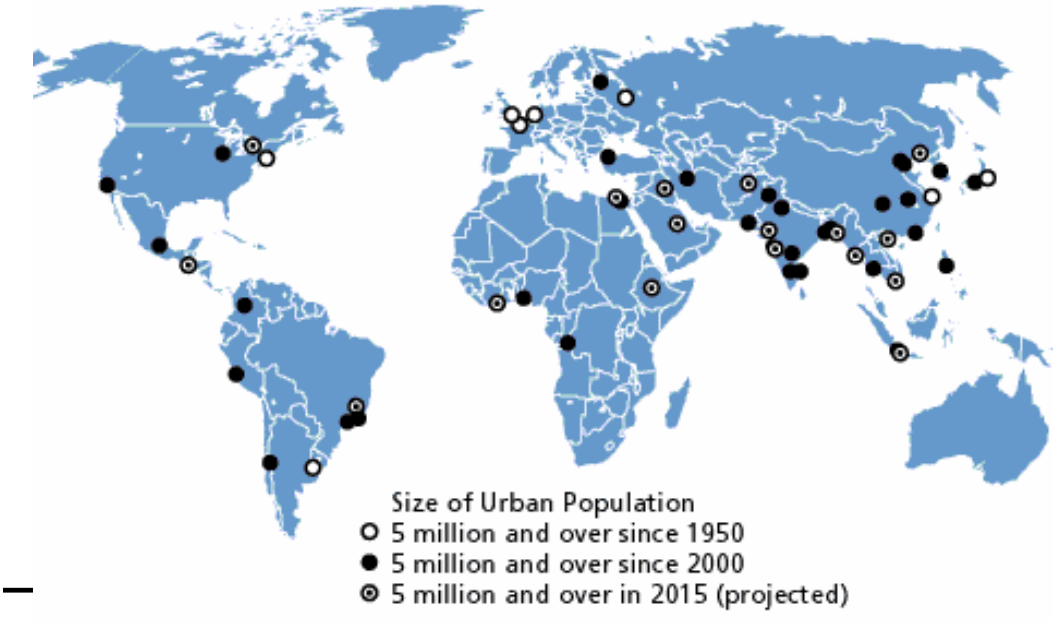
Defined as those with populations greater than 10 million, megacities, will increase in number from 5 in 1975 to 23 by 2015. All but four will be in developing countries. By 2015, according to the UN Population Division[24], four of these will have populations in excess of 20 million.

Present growth of these developing megacities, compared to the growth rates of New York, Berlin and London in the late 19th century, is about five times higher (Figure 3). The past has shown that rapid city development coincides with increasing poverty. The provision of shelter, food, water, infrastructure, and security is an enormous challenge to the new developing megacities.



Sources: UN (2000)[19]

Figure 3: Growth rates of Cities - historical and recent



Source: UN (2001)[19]

Figure 4: Largest Urban Agglomerations 1950, 2000 and 2015

City	Population in 1975 (millions)	City	Population in 2000 (millions)	City	Population in 2015 (millions)
Tokyo New York	19.8	Tokyo	26.4	Tokyo	26.4
Shanghai	15.9	Mexico City	18.1	Mumbai	26.1
Mexico City	11.4	Mumbai	18.1	Lagos	23.2
São Paulo	11.2	São Paulo	17.8	Dhaka	21.1
	10.0	Shanghai	17.0	São Paulo	20.4
		New York	16.6	Karachi	19.2
		Lagos	13.4	Mexico City	19.2
		Los Angeles	13.1	Shanghai	19.1
		Calcutta	12.9	New York	17.4
		Buenos Aires	12.6	Jakarta	17.3
		Dhaka	12.3	Calcutta	17.3
		Karachi	11.8	Delhi	16.8
		Delhi	11.7	Metro Manila	14.8
		Jakarta	11.0	Los Angeles	14.1
		Osaka	11.0	Buenos Aires	14.1
		Metro Manila	10.9	Cairo	13.8
		Beijing	10.8	Istanbul	12.5
		Rio de Janeiro	10.6	Beijing	12.3
		Cairo	10.6	Rio de Janeiro	11.9
				Osaka	11.0
				Tianjin	10.7
				Hyderabad	10.5
				Bangkok	10.1

Sources: UN Population Division, 2000[25] and Population Reports (2001)[26]

Table 3: Cities with 10 Million or More Inhabitants, 1975, 2000, and 2015

Today, Asia has eleven megacities: Tokyo, Mumbai, Shanghai, Calcutta, Dhaka, Karachi, Delhi, Jakarta, Osaka, Metro Manila, and Beijing - and it will soon have four more, including Istanbul, Tianjin, Hyderabad, and Bangkok. The Asian Development Bank estimates[21] that relative to their level of development, Asian developing member countries (DMCs) have a greater proportion of their urban population in megacities than any other region in the world.

Megacities have both positive and negative features. On the positive side they:

- generate a higher-than-average proportion of the nation's output of goods and services;
- are centers of innovation in science, the arts, and lifestyles;
- contain many of the cultural assets of the country; and
- offer some of the best opportunities for people to lead full and satisfying lives.

Yet they also suffer from:

- environmental pollution,
- traffic congestion,
- a shortage of water, and
- the proliferation of slums, crime, and social alienation.

With the increasing globalization of business and industrialization of Asian economies, most of the region's megacities will continue to grow and play a significant role in economic production, social organization, and knowledge

generation. At the same time, their quality of life and their productivity could be adversely affected unless steps are taken to improve their management. [21]

Some sobering statistics underscore the physical and financial risk of disaster to megacities in the developing world:

- about 50 percent of the world's largest cities are situated along major earthquake belts or tropical cyclone tracks; and
- the average number of victims is 150 times larger during disasters than in the developed world, and the economic loss, as a percent of GNP, is 20 times greater.

The concern over the risk to megacities, particularly in the developing world, is their growing vulnerability caused by their hyper-concentrations of population, dependence on complex and aging infrastructure, and unprepared local institutions.[27]

Indeed, many of the megacities in Asia, Africa and Latin America have long become unruly places that no one seems to be able to control. In a globalising world, urban agglomerations play a vital role as centres of production, distribution, and consumption, and as nodes of power, command, creativity, and innovation.[28] However, the emergence of what has often been termed *global cities*[29] (i.e., cities which have become the key economic command centres around the globe) has largely taken place in North America, Western and Central Europe, and East Asia. Despite their unquestioned national primacy, most megacities of the developing world remain almost excluded from innovative and influential global economic and political processes, and certainly do not belong to the group of high ranking *global cities*.[30]

Thus, there is a clear difference between cities of global influence (many with less than 1 million inhabitants), and cities that are very large, but which lack economic, financial or political power. Unfortunately, the latter are growing much faster than the former. Moreover, because the latter are not “in command” on a global scale (i.e., they do not accumulate any power that is of worldwide significance) they have no means to command themselves. Whether they are private (e.g., multi-national companies) or public (e.g., municipalities, governments, the state), institutions that are capable of influencing political, economic or cultural processes on a global scale may also be influential enough—and may have the tools—to make sure that regulations and rules are followed on the local layer (i.e. in 'their' city). Where there are no such institutions, controllability is lost and what might be called unruliness sets in. Although there has been little evidence in the past, some authors point out that there might be an increasingly close connection between urban growth and, for instance, urban violence in those regions where institutional capacity to cope with political, economic or social challenges is reduced.[31] This is certainly true for many urban centres in the developing world.[32] UN data suggest that there is a strong correlation between low human development aggregates and high homicide rates.[33] Urban crime, of course, is only one of many challenges for secure livelihoods in the city, but it certainly is an indicator for unsustainable living conditions.

The population of megacities in the developing world will continue to increase by over 5 per cent per year, and many secondary urban centres will have even higher growth rates. Some argue that all attempts to capture the city (i.e., to transform it into a liveable, sustainable, humane place of high standards by means of infrastructure and architecture) have failed due to the sheer extent and scale of urban population increase[34]. The argument being that ideas and strategies of urban planning have simply been overwhelmed by the power of chaos, which has been built up in the wake of the massive growth of urban settlements.

Despite this view and the vigour of the uncontrolled expansion of urban settlements, there is a widespread resistance of urban planners, architects, and politicians to accept defeat. So the struggle against unruliness goes on. And planners continue to conceptualize urban governance as a struggle between orderliness and unruliness. In consequence, many livelihood adaptations of urban dwellers are viewed in polarized terms and categorized as either wholly desirable or exclusively problematic. Unfortunately, this is too often been the case for urban agriculture which has been seen as prima fascia evidence of urban unruliness and individual maladaptation. In these instances planners and urban administrators have held it in disdain, actively opposed it, and failed to either incorporate it as either a potential solution to urban problems or a sector in its own right in need of planning within the broader rural-urban context.

Linking rural and urban — The role of small and medium size cities and towns

Besides the 23 megacities, which will host only about 400 million people in 2015, there are the numerous small and medium size towns, with less than 5 million inhabitants each that will be home to nearly 3.2 billion people or about 45% of the total population in 2015, approximately 3.34 million (Figure 5 and Table 4).

Slightly less than that will live in rural areas. There is no universal definition of “small towns”. Small towns usually have populations between 5,000 and 50,000 but can be larger or smaller. In India for example, urban settlements with populations of up to 100,000 can usefully be considered as small towns[35].

In Peru, the migration and urbanization processes of the past 20 years have been characterized by a higher rate of growth of medium-sized cities as compared with metropolitan Lima. Departmental and provincial capitals have achieved accelerated growth through migration from the countryside. Migrants expect greater advantages in medium-sized and small cities because of the emergence and vitality of local and regional markets that make up urban systems in several areas of the country, such as the southern Andean region[36]. Another important reason for the emergence of small and medium size cities in some countries is forced displacement due to violence perpetrated by terrorist groups and war. Often these places provide more security than rural areas while avoiding the higher prevalence of crime in bigger cities.

Development grouping	Type of settlement and number of inhabitants	Total population in millions			Percentage distribution			Growth rate (percentage)	
		1975	2000	2015	1975	2000	2015	1975-2000	2000-2015
World	10 million or more	68	263	375	1.7	4.3	5.2	5.4	2.4
	5 to 10 million	127	155	248	3.1	2.6	3.5	0.8	3.1
	1 to 5 million	327	704	1,006	8.0	11.6	14.1	3.1	2.4
	500,000 to 1 million	175	300	373	4.3	5.0	5.2	2.2	1.4
	Fewer than 500,000	847	1,423	1,816	20.8	23.5	25.4	2.1	1.6
	Rural areas	2,531	3,210	3,337	62.1	53.0	46.6	1.0	0.3
	Total population	4,075	6,055	7,154	100.0	100.0	100.0	1.6	1.1
More developed regions	10 million or more	36	67	69	3.4	5.7	5.7	2.5	0.2
	5 to 10 million	62	45	51	5.9	3.8	4.2	-1.3	0.8
	1 to 5 million	145	219	250	13.9	18.5	20.6	1.6	0.9
	500,000 to 1 million	69	91	96	6.6	7.6	7.9	1.1	0.4
	Fewer than 500,000	422	481	503	40.2	40.5	41.4	0.5	0.3
	Rural areas	315	285	246	30.0	24.0	20.3	-0.4	-1.0
	Total population	1,048	1,188	1,214	100.0	100.0	100.0	0.5	0.1
Less developed regions	10 million or more	3333	195	306	1.1	4.0	5.1	7.1	3.0
	5 to 10 million	64	110	197	2.1	2.3	3.3	2.1	3.9
	1 to 5 million	182	485	756	6.0	10.0	12.7	3.9	3.0
	500,000 to 1 million	106	209	277	3.5	4.3	4.7	2.7	1.9
	Fewer than 500,000	425	943	1,314	14.0	19.4	22.1	3.2	2.2
	Rural areas	2,217	2,925	3,091	73.2	60.1	52.0	1.1	0.4
	Total population	3,026	4,867	5,904	100.0	100.0	100.0	1.9	1.3
Less developed countries	10 million or more	0	12	21	0.0	1.9	2.3	--	3.6
	5 to 10 million	0	5	32	0.0	0.8	3.5	--	12.2
	1 to 5 million	6	44	84	1.6	6.8	9.3	8.2	4.3
	500,000 to 1 million	6	15	17	1.7	2.3	1.9	3.8	1.0
	Fewer than 500,000	39	91	162	11.1	14.1	18.0	3.4	3.9
	Rural areas	298	477	586	85.6	74.0	64.9	1.9	1.4
	Total population	348	645	902	100.0	100.0	100.0	2.5	2.2

Table 4: Distribution of World Population and That of More and Less Developed Regions by Size of Urban Settlement 1975, 2000 and 2015[18]

The Asian Development Bank believes problems related to urbanization are best addressed at the level of secondary cities and smaller urban areas, before they become megacities. Interventions should begin at this stage to prevent problems worsening as cities grow. Further, interventions should support the programs and policies that many developing member countries (DMCs) have instituted for the:

- dispersal of industries;
- development of regional growth centers, corridors, or zones; and
- promotion of an equitable and balanced hierarchy of urban settlements.

Most national urban strategies have adopted some variant of this approach, incorporating explicit and implicit polices that guide urban growth and development to designated urban growth centers[37].

The economies of small urban centres are largely based on agriculture and administration and the provision of services. In general terms production and manufacturing activities are limited in scope and scale and local enterprises tend to be under-financed and lack access to credit. In many cases more firms are closing than are opening, as result of agricultural restructuring and economic stagnation or recession in the towns and their hinterland. Capacity and resource constraints characterise local administration.

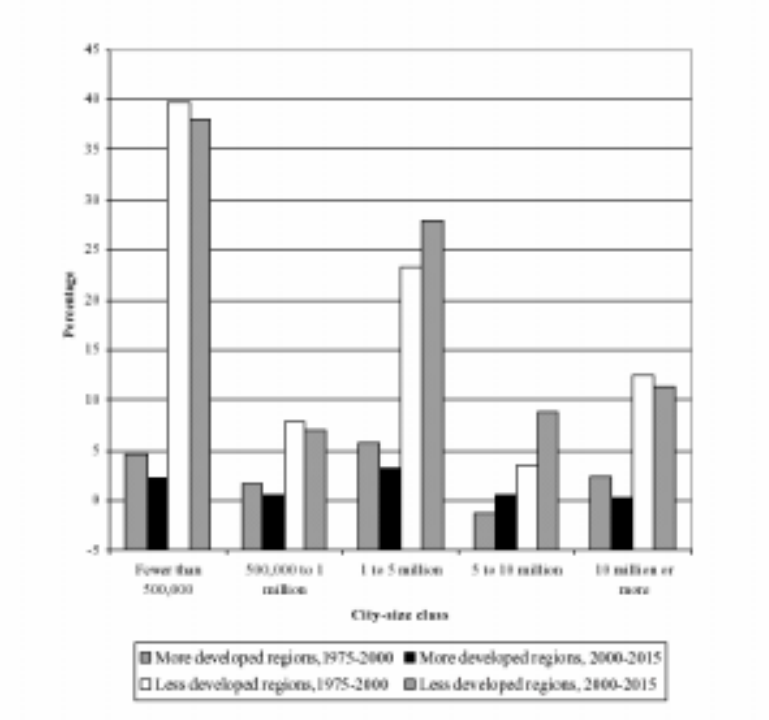


Figure 5: Annual Increment of Population by City Size Class [18]

Most small towns are experiencing rapid population growth, hence demands for urban services that cannot be met. Such growth is not matched by corresponding economic growth. Employment and income generating opportunities are limited and unemployment levels are high. The centers are poorly serviced in terms of infrastructure and often lack adequate water, sanitation, health and educational facilities. Low employment and income levels are a serious local constraint to development endeavors. In many cases there are far fewer males than there are females, which results in a high incidence of female headed households and low levels of income[38].

Nearly half of the world population will be concentrated in small and medium size towns in the future. Improvement of living conditions in these cities can contribute to rural development as well as to the avoidance of further growth of megacities.

In the European context small and medium sized towns are viewed as key for the acceptable development of rural regions. Regarding small and medium sized towns in rural regions, a main target is support for the process of structural change by

further diversification of the economy[39]. Small urban centers could aid regional development in pastoral regions by setting into motion mutually reinforcing local linkages between otherwise unintegrated urban and predominantly pastoral rural areas[40]. Thus, small towns can act as intermediate places of economic transition between urban and rural areas promoting both farm and non-farm employment while simultaneously playing an important role as market and service centers supporting the rural sector. To promote the sustainable development of rural settlements and to reduce rural-to-urban migration, governments and local authorities, should take appropriate measures to improve the living and working conditions in regional urban centers, small towns and rural service centers[41].

The impact of globalization on small towns and villages is an issue that needs to be analyzed, and appropriate policy responses formulated. It is already clear that policies encouraging both horizontal and vertical linkages with settlements at regional (sub-national), national and international levels will be necessary to improve the competitiveness of small towns and rural regions. It is no longer simply a question of how they integrate into the national economy, but how they do so in the global economy as well[42].

The growth of small and medium-sized cities in Africa, Asia and Latin America poses special problems, particularly in water provision, sanitation and garbage collection. The planning and regulatory systems of such cities are often rudimentary. They do not receive the government investments and attention that large cities can command, and they are unable to achieve comparable economies of scale—in service provision, land use, transport and water and energy provision[43].

BOX 5: **Small towns in South Africa**

Small Towns are a largely overlooked dimension of the settlement hierarchy and space economy of South Africa[44]. The role of the small urban centre in the movement and flow of people, goods, services and finances is important. Although the small towns do not appear to serve as major markets for locally produced farm and industrial products, they are important retail and service centres for their own communities and those in the surrounding hinterlands. There clearly appears to be scope to encourage the ability of towns to meet their own needs in terms of local production of food and manufactured goods. Towns seem to act as conduits for a complex, nationally integrated system of retailing, manufacturing and employment which reflects the dominance of metropolitan interests and the limited nature of economic independence of the study area.

Small towns and resettlement camps in the former Homelands have appallingly high levels of destitution and poverty and any conceptualisation of small town development issues must address not only their development, but also their welfare needs, as a matter of urgency. Small towns and their populations clearly cannot be ignored or, worse still, abandoned from a policy and planning perspective. Any conceptualisation of small towns cannot divorce them from their rural hinterlands. Simultaneously rural development intervention cannot ignore the key role which small towns play in rural life and as central points in which support systems are concentrated[45]. It is hence critical not to regard rural and urban development as separate entities, but rather to appreciate that both dimensions intersect in small towns[46].

Source: Government of South Africa[47]

If access to land for small-scale farming and services in the countryside and small towns were to be increased, a majority of the rural population would stay there rather than move to a dense township in a big city[48]. A major reason for migration into bigger cities is the lack of access by the rural population to town services and infrastructure in small towns[49]. Yet, traditional development programs have largely overlooked the importance of improving services and infrastructure in small cities and towns even though there inadequacy is an especially acute driver of migration for young people the world over and is speeding up the aging of rural populations in both developed and developing countries[50]. Young people want the entrepreneurial opportunities, types of services, and control over livelihoods currently unavailable in most smaller cities and towns.[51]

The decline of services and infrastructure in small towns has the same effect. An example from Mongolia clearly demonstrates this fact and the importance of small-scale regional development in preventing migration.

The Lost City of Öndörchaan: De-Urbanisation and Migration in post-socialist Mongolia

The political, social and economic transformation of Mongolia has led to substantial changes in the livelihoods of the urban and rural populations. Numerous small and medium size settlements in the rural periphery of the country have been abandoned in the last few years. People live once again as nomads or have moved into the remaining economic centres, (mainly the capital, Ulaanbaatar) in search of opportunity and well-being.

Under socialism massive investment in the economy and in settlement infrastructure produced a continuous increase in the urban population and a decrease in the nomadic population. By the end of the socialist era more than half of the population of Mongolia lived in the urban provincial centers (*ajmag*) and in the capital of Ulaanbaatar[52].

During the period of socialist rule, the government also aimed to urbanize the rural areas of the country[53]. Here small and medium size settlements and service centers were established. These settlements provided comprehensive social and technical services and were equipped with supply and marketing structures[54].

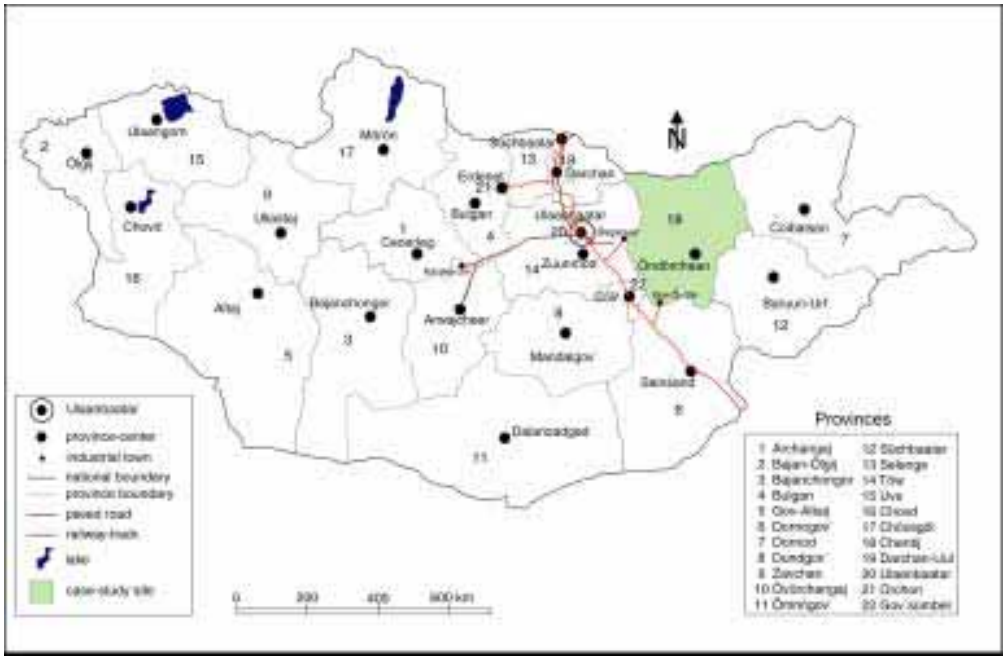


Figure 6: Provinces of Mongolia

The decline of the planned socialist economy beginning in the early 1990s led to the deterioration of the urban settlements and service centers in rural areas. Many employees of the government and in the various enterprises of the service centers lost their jobs. Today the provision of education and health care for the rural areas can no longer be ensured. A case study dealing with the transformation of rural Mongolia, carried out in the Province of Chentij, shows the dramatic increase in nomadic pastoralists and the decrease of employees in nonpastoral jobs (see Figure 7)[55].

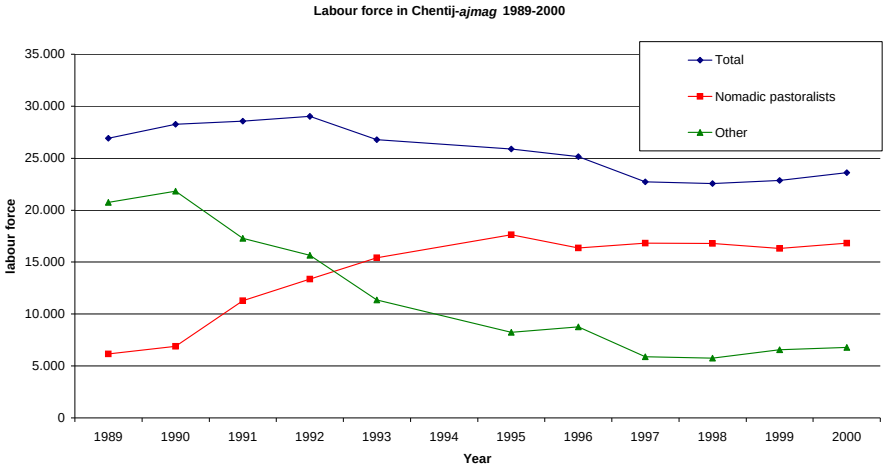


Figure 7: Changes in labor force in Chentij ajmag 1989 - 2000

Following the end of the socialist era and the privatization of livestock husbandry, those individuals entering the occupation left the rural towns. Consequently, many of the rural towns were completely abandoned.

District centers and provincial capitals were affected as well. In contrast to the capital, Ulaanbaatar, no more financial investments were made in district centers and provincial capitals after the end of the socialist era. The capital of Chentij, Öndörchaan, still officially numbers 15,000 inhabitants, yet empty factories and public buildings stand witness to the pervasive depopulation and disinvestment giving rise to "ghost cities".

Table 5 shows the reduction of nonpastoral jobs in Öndörchaan:

Type of employment	**No of employees 1990 (approx.)**	**No of employees 2000 (approx.)**	**Year of closure/privatization**
Service Centre	500	-	1992 closed
Shopping Centre	400	-	1993 closed
Construction	400	-	1996 closed
Grain Milling	300	50	1993 privatised
Transportation	350	-	1992 closed
Lebensmittelkombinat	150	30	1992 privatised
Road Construction	100	No activities at present	Not closed/not privatised
Agricultural Building Construction	100	-	1991 closed
Total	2.300	80	

Table 5: Decline of working places in Öndörchaan[55]

Today two-thirds of the inhabitants of Öndörchaan are owners of animals. The animals are kept on fenced properties in the settlement and graze on nearby pastures during the days. They are a clear indicator of the *ruralization* of the provincial capital in the last few years. Aside from animal keeping, the only possibility for livelihood improvement among the urban population rests with informal trading of goods and animal products (e.g., cashmere, wool, furs and meat).

The migration of the formerly sedentary population into rural areas and to the nomadic lifestyle has been occurring since the mid 1990s. However, more recently there has emerged an accelerated migration from small and medium size towns to the capital, Ulaanbaatar, and to the mining areas of Erdenet and Baganuur.

Photo 1 : Outskirts of Ulaanbaatar with recently constructed yurt-settlements at the hill slope

Over the past decade, every fifth inhabitant left the Province of Chentij[55] resulting in a serious brain drain of highly qualified physicians, technicians and administrative staff who were among the first to leave the area. Since mid 1990, each citizen of Mongolia has been legally guaranteed the right to own a plot of about 1000 square meters. For some this has provided the means of effecting a new livelihood in animal husbandry. For others, the losers in the larger economic transformation, migration to the large cities has been their only recourse. Thus since 1990, Ulaanbaatar officially increased by 40% to 787,000 inhabitants, and today it is home to nearly one of every three Mongolian citizens.

BOX 6: **Small Towns in Kenya**[56]

In Kenya, small towns have a population of between 5,000 and 80,000 and cover areas ranging from 5 km^2-50 km^2. These small centres are growing by 6-12% a year due to migration from rural areas, expansion of town boundaries, and natural population growth. They usually have an administrative centre, a commercial centre, and housing areas for various income groups.

Economically, these small towns fulfil a crucial market and information function. In the towns, large official markets are held once or twice a week; they serve the rural hinterland and act as an intermediary between rural areas and larger cities. Levies on goods and services form a source of revenue for the town government. In the towns, wealthy citizens are usually involved in small-scale businesses while lower-income people are either employed in informal sector services, agriculture or are unemployed.

Spatially, most small towns in Kenya have three land use patterns. There is a densely built-up but small core, which often covers less than a square kilometre. The central government and/or the local authority usually own the land. A belt of periurban settlements surrounds this core. Urban housing is mixed with small-scale agriculture, scattered markets and shops. Finally, there is a much wider outer zone, which is used for agricultural purposes[57].

Today development programmes are needed for the rural areas to reduce migration from the economically depressed former small and medium towns[58]. A small-town development approach could be useful for establishing a network of cities and regenerating the rural-urban balance. However, the contrasting experiences in Peru and Mongolia suggest that such approaches must take account of systems of governance and unique regional variations.

Nonetheless the great opportunity of small towns is the better integration of rural and urban lifestyles, thus bridging the divide between those areas. Through the creation of regional, municipal and rural councils, they also might play a major role in decentralization and deconcentration processes vis-à-vis territorial administration.

Urbanization and the rural - urban continuum

The characteristics defining “urban” typically include density and size of settlement in a contiguously built-up area, structure of economic activity, administrative attributes and aspects of human social-psychological consciousness. The rural-urban continuum refers to the continuous abstract distribution of human settlements with respect to these characteristics. This distribution runs from clearly rural environments at one end through a variety of intermediate or periurban forms and on to dense built-up environments culminating in megacities such as Jakarta and Mexico City. While urban and rural areas form a continuum, they are nonetheless internally very **heterogeneous.** Village clusters, towns, medium-sized cities, large and "mega" cities

present very different problems and institutional capacities. Policy responses to address poverty must take account of these details. Inequalities in income and welfare *within regions of a country* can be at least as important an issue for poverty and development strategies as generalized urban and rural distinctions.

In its analysis of poverty reduction strategies the World Bank[59] has provided a stylized comparison of key characteristics of rural and urban areas, and of the challenges faced by the poor. Other researchers[60] have addressed the comparison in terms of the holistic rural-urban continuum. This work is synthesized below in Table 6. The Bank in particular notes that their depictions are broad generalizations since most urban and rural areas demonstrate some combination of the characteristics listed. However, a more important limitation of this characterization is its obvious omission of regional differences and specificity with respect to periurban environments generally.

Characteristic	Rural	Periurban	Urban
Economic activity and livelihoods	Livelihoods based mainly on primary production using land and other natural resources.		Livelihoods tied mostly to concentrated economic activity mainly based on trade, manufacturing, and services.
Basis of exchange	Fewer opportunities for earning cash; more for self-provisioning (subsistence); greater reliance on favorable weather conditions.		Greater reliance on cash for access to food, water, sanitation, employment, garbage disposal
Primary assets needed	Access to natural capital as basis for livelihood	?	High reliance on house as an economic resource (as a direct economic asset, a production site and/or rental commodity)
Land Access	Access to land and building materials for housing not generally a problem; higher reliance on usufruct and informal tenure systems		Land access difficult; highly commercialized housing and land markets, dominance of formal land tenure system
Governance	More distant from government as regulator and provider of services, higher reliance on traditional governance systems	?	High reliance on formal government; highly regulated; more vulnerable to bad governance and unruliness
Demographics	Population dispersed in small clusters.		Population concentrated and growing.
Physical access	Scattered, low quality infrastructure and services; time/ travel costs high, access limited, often costly		Primary locus of services and infrastructure but quality of service variable (e.g. due to congestion), and access difficult for poor due to high prices, illegal nature of their homes, and poor governance
Environmental risks	Related largely to productive processes and deterioration of natural resources	?	Related to both production and population density (wastes, air pollution)
Social footprint	Urban characteristics in rural locations (e.g., successful recreation and tourist areas, rural areas with strong economic links to cities, and areas with high-value agriculture and concentrated local multiplier links)		Rural characteristics in urban locations (e.g., urban agriculture, "urban villages" and enclaves, barter systems, non-monetary based access to land and housing)

Table 6: Characteristics Associated with the Rural-Urban Continuum[61]

The unruly urban governance condition identified in Table 6 is nowhere more apparent than in periurban environments the world over. The unruliness is here so evident that there exists pervasive confusion as to the very definition of periurban. Yet, it is here that the process of urbanization most clearly expresses itself. A major benefit of focusing on the periurban is that it fosters holistic thinking simultaneously on urbanization, rural-urban linkages and the rural-urban continuum. The need for understanding this arena of human expression is well expressed in the **BOX 7** on "Urban plus Rural".

BOX 7: Urban *plus* Rural as opposed to Urban *versus* Rural

A number of trends regarding rural-urban linkages have been observed in the last decade.

1. The implementation of structural adjustment policies, especially in Africa, has forced many urban households to seek additional sources of food and income, including urban agriculture (UA). Increasingly, high and middle-income households are also engaging in UA to supplement declining incomes.
2. Retrenchment and deepening of urban poverty occasioned by structural adjustment has triggered a process of 'return migration', with households returning to their rural homes in order to survive.
3. Urban-to-rural household remittances are declining, while the ability of poorer urban households to import food for their own consumption from their rural relatives is increasingly difficult due to spiralling costs of transport.
4. In a number of countries, large numbers of temporary agricultural workers employed by commercial farms, especially during the harvest season, are urban-based, giving rise to a diversification of income sources among poor urban households. This, together with UA, is putting to test traditional definitions of 'urban' and 'rural', as both their physical and occupational boundaries are becoming increasingly blurred.
5. Globalization is creating new forms of linkages for small towns and rural areas, often called the 'metropolization of the world economy'. A web of horizontal and vertical networks among settlements is emerging, fuelled by recent technological advances in information and communication technologies.

From Hierarchies to Networks

Rural-urban linkages need to be understood and addressed in the context of increasing global urbanization. The strength of these linkages will, to a large extent, determine the living conditions of people in both urban and rural areas. Towns, cities and villages are all experiencing significant socio-economic and spatial transformations that are likely to intensify during the first few decades of the new millennium.

Source: UN Habitat (2001)[62]

Conceptualisation of rural-urban linkages

There is growing recognition that the conventional distinction between 'urban' and 'rural' as discrete and clearly identified areas is insufficient to characterise patterns of settlement and production which fall between these areas. This is because rural and urban features tend increasingly to coexist within cities and beyond their limits, and because related issues are emerging as priorities for action in a significant number of development interventions.

Attempts to conceptualise this new development landscape range from the emphasis on rural-urban linkages as footloose processes rapidly transforming territories, to the notion of the 'periurban' as a term qualifying areas with mixed rural and urban features. In the first case, place seems to be less important than flows of people and materials, commodities, resources and waste. In the second case, periurban areas are often characterised either by the loss of 'rural' features (reduced soil fertility, degraded natural landscape) or a dearth of 'urban' attributes (low density, lack of accessibility, lack of services and infrastructure). The term periurban has arisen as a way of analysing the relationship between urban and non-urban areas, focusing in the first instance on the immediate surroundings of cities. However, insofar as rural areas develop links with different cities according to different needs, the heterogeneity of cities and the way in which they relate to their hinterlands and to more distant sources of growth and sustenance should also be included in the analysis. Many intensive urban-rural interactions concerned with the supply of resources or migration of people increasingly occur over very considerable distances and not merely within a rather confined city hinterland.

From an ecological perspective, periurban areas can be characterised as an interface or heterogeneous mosaic of 'natural', 'productive' or 'agro-ecosystems' and 'urban' ecosystems, affected by material and energy flows demanded by urban and rural systems. The periurban interface is not only distinctive because of its ecological features but also due to its socio-economic heterogeneity and fragmented institutional context. In socio-economic terms, the composition of periurban systems is highly heterogeneous and subject to rapid changes over time. Small farmers, informal settlers, industrial entrepreneurs and urban middle class commuters may all coexist in the same territory but with different and often competing interests, practices and perceptions. In institutional terms, the periurban interface is characterised by a general lack of institutions capable of addressing the links between urban and rural activities. This is reinforced by the convergence of sectoral and overlapping institutions with different remits[63].

A regional example of the complex interaction between urban, rural and periurban environments is the holistic process of metropolitanization unfolding in Southeast Asia, *desakotasi* (see **BOX 8**). However, it appears to be specific to Southeast Asia and to have questionable applicability to other regions. Second, since it is descriptive, desakotasi gives only limited insight to the underlying processes from which desakota arise or to the institutional consequences that they imply.

BOX 8: **Desakota**[64]

The term refers to the development of the new Southeast Asian cities. The implication is that the paradigm of the Third World City is obsolete in Southeast Asia. A new form has emerged. The term kotadesasi[65] to describe the process by which urbanization occurs in the hinterland without massive in-migration. The term derives from three words *kota* for town, *desa* for village and *si* signifying process. Subsequently, the term was changed to desakotasi for the process and desakota for the pattern of settlement.[66] Desakota areas have six main features:

- a dense population engaged in smallholder-cultivation, commonly of wet rice;
- an increase in non-agricultural activities;
- a well-developed infrastructure of roads and canals;
- a reservoir of cheap labor; highly integrated 'transactive' environments in terms of movements of people and commodities; and
- a state perception as being 'invisible' or 'grey' zones (65:15-18).

A more broadly based synthesis/typology provides a terminology for understanding both the periurban and its tangible expression of urbanization vis-à-vis the entire rural-periurban-urban continuum.[67] The synthesis is based upon seven basic pemises:

- *Rural*, *Periurban*, and *Urban* form a linked system (R/PU/U)—an uneven or *lumpy*, multidimensional continuum.
- In terms of migration and urbanisation periurban environments play a mediating role between rural and urban.
- Periurban environments are places of *social compressio*n and dynamic social change.
- The potential for food production and its relationship to food security must be evaluated across the entire R/PU/U system.
- Understanding the nature and operation of the system requires a focus on the underlying dynamic processes and flows rather than the "fixed states."
- Effective policy interventions rest on interdisciplinary understanding, which incorporates physical, biological and sociocultural paradigms
- The social footprint of urbanization manifests differently in the urban, periurban and rural context but is only understandable when addressed in view of a linked system (R/PU/U).[68]

Based upon these premises, five “types” of periurban are identified. They are depicted Figure 8 and summarized in the accompanying **BOX 9**. The synthesis emphasizes links in the continuum from rural to urban along two principle axes, migration (horizontal arrows) and time (vertical arrows).

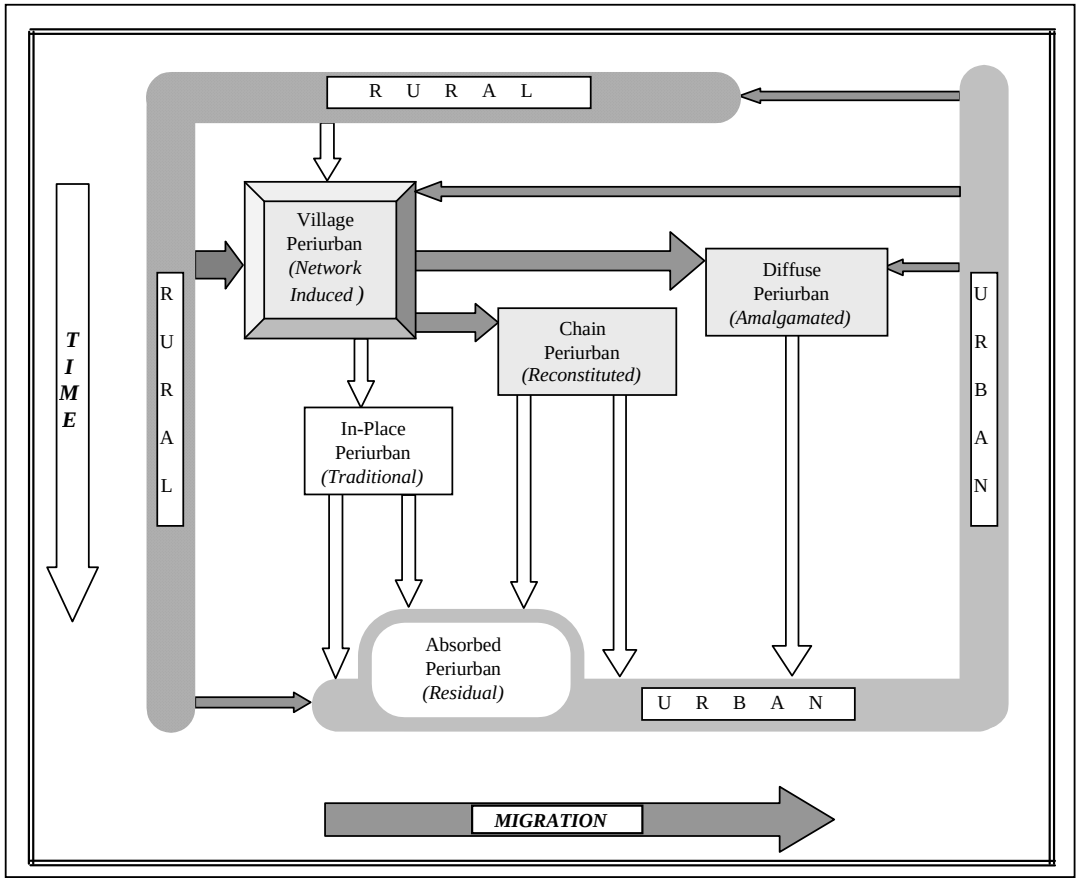


Figure 8: Periurban Synthesis of the Rural-Urban Continuum

BOX 9: **The Periurban Typology**[69]

Village Periurban *(VPU)*

- Non-proximate to the city either geographically or in travel time
- Derives from sojourning, circulation and migration
- Embodies a ***Network Induced Institutional Context (IC)*** wherein change is effected through diffusion or induction while institutions remain traditional in orientation and stable.

Diffuse Periurban (DPU)

- Geographically a part of the urban fringe
- Derives from multiple point-source in-migration
- Embodies an ***Amalgamated IC*** where there is a high demand for negotiating novel institutional forms to address conflicting traditions and worldviews.

Chain Periurban (CPU)

- Geographically a part of urban fringe
- Derives from chain migration
- Embodies a ***Reconstituted IC*** wherein links to the donor area remain strong and traditions and institutions are transplanted with some modification from the donor area and take on a somewhat defensive character.

In-place Periurban (IPU)

- Geographically close to the city; urban fringe
- Derives from in-place urbanisation, natural increase and some migration
- Embodies a ***Traditional IC*** with long-term stable institutions evidencing strong defensive insulation.

Absorbed Periurban (APU)

- Geographically within the city, having been absorbed
- Derives from succession/displacement and traditionalism (ritualism)
- Embodies a ***Residual IC*** wherein the roots of social arrangements lie in the traditions of a previously resident culture group and are now maintained through ritualism.

*VPU: Village Periurban or Perirural ("Rural" places with "urban" consciousness**)***

This category refers to areas that are geographically non-proximate to an urban area, yet are experiencing substantial urbanism (i.e., social psychological dimension of urbanisation). While such influences can accrue solely through mass media and the diffusion of consumerist ideologies, they are more likely in developing countries to occur vis-à-vis such processes as:

- The inflow of out-migrant remittances,
- Out-migrant infusion of "urban" ideas and modes of behavior,
- Out-migrant infusion of non income resources, and/or
- Out-migrant participation—particularly strategic—in community decision-making.

This is the category of place that is most often omitted in the consideration of periurban environments. In essence its designation as periurban rests on its social

psychological transformation rather than its geography or size. This transformation is itself results from the demographic process of migration. However, rather than focusing on the geographic movement of the out-migrants, it emphasizes the continuing linkages by which migrants effect the infusion of things urban into the village culture.[70] Importantly, these are environments which are generally very stable yet capable of absorbing and accommodating "urban values". The mechanism of accommodation rests on the stability of the community and the structured network of participation by out-migrants. These are environments where periurban agriculture and land based livelihoods figure prominently in overall household strategies.

DPU: Diffuse Periurban (In-migration from various places)

A separate category of periurban is comprised of areas proximate to the city (urban fringe), which are settled vis-à-vis in-migration from a variety of geographic point-sources rather than a single one. In-migration to these environments often also includes migrants from urban areas. These areas are characterized by greater ethnic heterogeneity and greater density of varied beliefs about customary institutions and arrangements than other "fringe" periurban environments. Also, the institutional patterns here reflect much greater inclusion of "urban" forms than is the case for chain and in-place periurban environments (discussed below).

Diffuse periurban environments have a greater potential than chain periurban environments for both conflict and for negotiating new institutions that are more "urban" oriented. Such areas of settlement may arise from a "staged" occupation, whereby unoccupied land is settled by the landless acting in a coordinated take-over at a time specific[71]; they may also arise from spontaneous processes of migration over a period of time, whereby people from diverse origins--mostly the poor and landless--settle together. Importantly, the heterogeneity of cultures of origin requires that any collective organization must be negotiated across—rather than along—customary lines. Simple adherence to tradition is insufficient to settle conflicts, which derive directly from differences between traditions. Therefore, there must be increasing appeals to modern (i.e., urban) or transcultural modes and methods of dispute resolution and community building which transcend particular traditions. The likelihood of such cross cultural negotiation is increased by the in-migration of "urban" residents, whether they have been long-time urbanites or more recent in-migrants from rural areas temporarily making use of urban ghettos as auspices of migration.

CPU: Chain Periurban (In-migration from a single place)

Some areas proximate to the city undergo settlement vis-à-vis a process of chain migration (i.e., the geographic translocation of a village population to a specific locale in the urban periphery). These migrants tend to be the most opportunistic (i.e., risk-taking oriented) members of their original village population, hence most open to change. These areas have a high degree of ethnic homogeneity and numbers sufficient for a critical mass. Consequently, traditional/customary beliefs and institutions tend to be transferred and reconstructed in the new environment, integrating elements of the new surrounding urban institutions.[72] This integration of

urban institutions happens to a greater extent for *chain periurban* than for *in-place periurban* areas.

This type of "community" formation is similar to the creation of "urban villages"[73]. Indeed, chain migration is the master trend underlying much international migration. Importantly, early migrants or "pioneers" serve as auspices of migration for later "settlers" from the homeland. By providing temporary housing and information on the ways of the new culture, the pioneers reinforce their status as *landsmann*. This process also reinforces both the tendency to form enclaves and to reproduce adapted "traditional" institutions—sometimes along the lines of kinship and sometimes along the lines of *landsmannschaften* or coethnicity. This type of periurban community is highly stable. Areas identified as "squatter settlements" or favelas around and within the cities of developing countries are mostly this type or *diffuse periurban*.

IPU: In-place Periurban

These areas lie close to the city and result from in-place (in-situ) urbanization. That is, they are in the process of being absorbed *whole*, whether by annexation (actual expansion of the city fringe) or simple reclassification (reflecting de facto urban expansion). In some instances they become more *urban-like* under their own power through natural increase and/or rural in-migration. More commonly, they are formed from periurban villages by a combination of those processes combined with in-migration from the nearby urban area. Whichever is the case, because they are being absorbed "whole", such places tend to perpetuate and reinforce the existing power structure and bases of inequality. To the degree that sufficiently large numbers of migrants into the area arrive from the city, oldtimer-newcomer conflict is likely to emerge. Exclusive of any new urban in-migrants, the residents of these areas tend to reflect the extremes of the local power spectrum:

- those least likely to be opportunistic (e.g., the poor) since they have chosen not to migrate earlier;
- those most likely to benefit from customary or traditional arrangements (e.g., the affluent and/or powerful), who would have had a vested interest in remaining;
- those most embedded and subordinated in customary or traditional arrangements who would likely not have had a real opportunity to migrate earlier (e.g., women).

Because of their lack of geographic displacement and the potential for increasing oldtimer-newcomer polarization, these environments have the most intact and quite conservatively held customary and traditional institutions.

APU: Absorbed Periurban

The final category of periurban refers to areas attached to or within the urban context that have been so for a considerable period of time. The defining characteristic of these locations is the maintenance of customary or traditional institutional arrangements which are derived from the culture of original settlers/residents who have long since ceased to be the numeric majority in the area. These areas derive from either *in-place periurban* areas or from *chain periurban* areas. Over time either

of these periurban types can undergo the compositional processes of succession and displacement while on the macro level being evermore absorbed into the urban environment—administratively, politically and social-psychologically.

The original settler culture group is replaced through either residential succession or through diffusion due to differential migration along ethnic/cultural lines. Yet, some important customary arrangements (i.e., institutions) of the original group remain in place now supported by "newcomers". These vestigial arrangements are supported through a combination of ritualism, power/dominance relations and reification by arrangements in the formal/modern sector. They have a strong conservative effect in the form of adherence to "tradition" for tradition's sake rather than an adherence to traditional principles because they are functional for the community.

Thus, each of the five periurban types represents a qualitatively distinct byproduct of the differential forces of urbanization. They allow a conceptual parsing of the entire rural-urban continuum while maintaining both a connection to the prevailing linkages at the macro level and to the motivations of actors at the micro level. A further contribution of this approach is the link to the institutional characteristics that typify each periurban (PU) type. These institutional characteristics are summarized in Table 7.

The importance of identifying the varying periurban types and their attendant institutional arrangements is that they help identify useful *meso*-policy interventions. This is important in urban and periurban environments where there is an intensification of conflict and a necessity for negotiating and resolving competing claims (e.g., land for residential or agricultural use or between customary institutional forms and values) and for implementing development plans. These conflicts occur at all levels, including family, neighborhood, community, local, regional, and national.

Furthermore, this elaboration of the periurban underscores the need to articulate different approaches to urban and periurban agriculture, as well as, overall development strategies across the rural-urban continuum even within the same municipal region.

INSTITUTIONAL-CONTEXT CHARACTERISTIC	PERIURBAN TYPE				
	LINKED ACROSS SPACE		LINKED ACROSS SPACE AND/OR OVER TIME*	LINKED OVER TIME	
	Village PU	**Diffuse PU**	**Chain PU**	**In-Place PU**	**Absorbed PU**
Name of Institutional-Context "Type"	***Network Induced*** (tradition oriented)	***Amalgamated***	***Reconstituted***	***Traditional***	***Residual (Traditionalism)***
Creation Process	Out-migration with networking; Circulation	Diffuse migration	Chain (point source) migration	Annexation; In-migration	Succession-displacement
Proximity to Urban Center	Non-proximate	Proximate	Proximate	Proximate	Absorbed**
Organizing Principle	Integrative maintenance of traditional links	Survival and collective formation	Defensive reconstruction of cultural identity	Defensive maintenance of tradition	Maladaptive adherence to tradition
Primary stimulus for change	Emigrant influences (remittances, circulation, participation)	Compositional heterogeneity; Interface with urban formal structures;	Interface with urban formal institutions	Urban in-migrants; Interface with urban formal institutions	Interface with urban formal institutions; Loss of traditionalist legitimacy
Primary mechanism limiting or effecting change	Traditional (i.e., existing) structures	Negotiation among residents; Emergent/novel structures	Reconstituted structures organized along traditional lines	Traditional (i.e., existing) structures	Ritualized structures
Need for Change	Low	High	High	Moderate	High
Resistance to Change	High	Low	Moderate	High	High
Pace of Adaptation	Slow	Fast	Moderate	Slow	Very slow
Likelihood for Disruptive Conflict	Low	Moderate	Moderate	High	High
Characteristics of Change	Existential and tradition oriented (maintenance of ideal culture via redefinition of adaptation)	Experimental; democratic or consensus based; function oriented	Tradition oriented incorporating some urban components	Polarized between traditional and modern sectors	At best external compliance only
Most Likely Types of Adaptations	Novel solutions which maintain the appearance of tradition and meet modern sector needs	Novel solutions which meet modern sector needs and create a new basis for legitimacy	Solutions which make inefficient use of the formal sector	Solutions which make inefficient use of the formal sector due to slow pace of change in high need situation	Solutions imposed from the outside formal sector
Impact on Stratification Systems	Greater individual access with formal maintenance of system	More opportunity for egalitarianism; Erosion of system	Maintenance of system, possibly in new forms	Heightened conflict over system; Increased oppression	Strong support for maintenance of system

* *Chain periurban* is linked across space as a receiving area for migrants coming from rural and *Village periurban* areas. It is linked through time to *Absorbed periurban* areas insofar as succession/displacement produces ritualism in institutional maintenance.

** Formally speaking, an *Absorbed periurban* area lies within the city while its roots lie in the periurban zone with *In-place periurban* and *Chain periurban.* Thus, it underscores the temporal linkage.

Table 7: Characteristics of Institutional Contexts by Periurban Type

The consequences of urbanization

> *"No developing country can afford to ignore the phenomenon of urbanisation. Within the next 20 years, more poor and undernourished people in developing countries will live in cities than in the countryside. High rates of urbanisation mean that urban food insecurity and malnutrition are concerns even for regions like Africa and Asia, which currently have relatively low levels of urbanisation. Malnutrition in the poorest areas of cities often rivals that found in rural areas"* (IFPRI 1998).[74]

Urbanization has many outcomes, some positive and some negative. The positive outcomes typically focus on the economies of scale and concentration, which emerge from the increased size of the population and human density. These are figured primarily–though not exclusively–in economic terms. Here cities are seen as the engines of economic growth in society. High concentrations of population lead to increased social complexity and allow for greater specialization in the production of goods and services. Increased size and density are seen to create efficiencies for specialized markets and institutional delivery of public goods such as education and transportation. Theoretically, this concentration should also make it possible to deliver social welfare services more efficiently, thus reducing poverty, but this is rarely experienced in practice.

Increasingly, we are witnessing the social problems, which emerge with urbanization, particularly in the developing world. Poverty, health concerns, pollution, environmental degradation, food insecurity, unemployment, crime and social instability are only some of the problems linked to rapid urbanization.

A number of inter-governmental meetings related to reviewing progress on commitments made at major UN conferences, including the preparatory process of Istanbul+5, have identified a range of concerns about the present urban context. Some of these are:[75]

- The worsening of access to shelter and security of tenure, resulting in severe over-crowding, homelessness and environmental health problems;
- Large and growing backlogs in delivery of basic services to urban residents as demand outstrips institutional capacity, financial resources and environmental carrying capacity;
- Increasing inequality in cities, manifested in stark residential segregation, increasing violence impacting disproportionately on women, and the poor, and more generally intensifying poverty;
- Lopsided economic growth displayed in the simultaneous evolution of high-end investments to attract foreign investment and an expanding informal economy with poor labour conditions;
- Increasing atmospheric pollution afflicting more than 1.1 billion people, mostly in cities,[76] and high levels of indoor air pollution[77] affecting 2.5 billion (Together,

indoor and outdoor air pollution kill nearly 3 million people every year—about 6% of all deaths annually—90% of which occur in developing countries.[78]);

- Inadequate access to proper sanitation facilities—a flush toilet, sanitary latrine, or a pit that can be covered over (the reality for the majority of urban dwellers in developing countries)[79]; and
- Nonexistent or irregular supply of potable water for half of the urban population in developing countries.

Cities have a huge impact on the natural environment--commonly labelled the ecological footprint. As cities grow ever larger, they consume more and more natural resources to meet the rising demand for food, water, energy, and goods and services, both from people and industry.[80] Cities even compete with themselves in terms of land use for built up areas versus agriculture. The loss of prime agricultural land due to urbanization is well established[6.] Cities generate close to 80% of all carbon dioxide emissions and account for three-quarters of industrial wood use. Some 60% of all freshwater withdrawn for human use ends up in urban areas—either directly for use in factories and for drinking and sanitation, or indirectly through the consumption of irrigated crops.[81]

Rapid industrialization, and high population growth—increasingly concentrated in urban areas—has meant that traditional problems of localized pollution are growing even more quickly than they did in the West. Concentration of the industrialization process into a much shorter time span, combined with the introduction of toxic and hazardous waste-producing industries, means that the developing countries are encountering many of the same health impacts that have occurred in the industrialized countries. However, these impacts are occurring at an earlier stage in the development process and at a much lower level of per capita income.[82]

The economic, social, and environmental reach of the city goes far beyond the city limits. Modern high-density settlements now appropriate the ecological output and life-support functions of distant regions through trade and commerce, the generation and disposal of wastes, and the alteration of nature's cycles. As cities continue to attract more people and produce and consume more, they soak up the ecological output of entire regions.[83]

Clearly a key outcome of urbanization is its transformational impact upon geography. The emergence of periurban forms and the rural-urban continuum evidences this. However, the human dimensions of urbanization go well beyond land transformation and population distribution. They include a wide range of social, economic, cultural and political consequences. While all impacts of urbanization deserve attention poverty stands out because it is tied closely to all of the others. And, urban poverty is perhaps the most dramatic because it so clearly delineates deprivation amidst plenty and because it is increasing so rapidly.

- People without resources are among the most vulnerable to food insecurity and disease.
- People without jobs are typically forced to adopt livelihood strategies in the informal sector which are marginal at best, usually insecure, sometimes self-destructive or socially corrosive, and often technically illegal or worse predatory.

- People without access contribute to environmental problems—often through poor agricultural practices—and social instability.

BOX 10: **City figures**[84]

- Between 30 and 60 percent of urban populations in developing countries currently live in slums and informal settlements. Such settlements are likely to account for between 75 and 90 percent of future urban growth.[85]
- In Cairo, 84 percent of the population were living in slums in 1990, including thousands who live in a vast cemetery, the "City of the Dead."
- 19 percent of the population of São Paulo, Brazil, lived in *favelas* (slums) in 1993, up from 9 percent in 1987.
- 18 percent of urban households worldwide did not have access to safe water in 1994, and 37 percent lacked sanitation facilities.
- Typically, people in cities of developed countries use 272 litres per day while the average in Africa is 53 litres per day.[86]
- Between one-third and one-half of the solid wastes generated within most cities in low and middle income countries are not collected. They usually end up as illegal dumps on streets, open spaces and wasteland, blocking drains and contributing to flooding and the spread of disease.[87]
- Contaminated drinking water and an inadequate supply of water account for 10 percent of the total burden of disease in developing countries.[88]
- Almost 83 percent of the passenger trips in peak hours in Mumbai are by public transport (train & bus), 8 percent by "intermediate public transport" (taxis & three-wheelers) and only 9 percent by private transport (cars & two-wheelers). Yet the city authorities have invested in a plethora of roadways and flyovers, almost totally neglecting public transport.[89]
- In Delhi, 10 to 12 percent of children aged 5 to16 suffer from bronchial asthma, and air pollution (largely due to traffic) is one of the major causes.
- Of the 10 cities in the world with the highest counts of total suspended particulates (a major air pollutant), nine are in China. Industrial cities such as Jiaozou, Lanzhou, Taiyuan, and Yichang all have mean annual concentrations five times higher than the World Health Organisation's acceptable levels.[90]

The inadequate provision of services in urban areas has many consequences. The **BOX 11** entitled *why the poor pay more* illustrates two such consequences for the urban poor. On the positive side the failure of local governments to provide needed services opens up urban livelihood niches which can be filled by entrepreneurs in the informal sector. This provides a partial livelihood for some. On the negative side the poor are the most likely to have to pay inflated costs charged by informal vendors since they are most likely to lack house connections to city water. Thus, the costs of this governmental failure are borne directly by poor individual households who are the least able to afford it.

BOX 11: **THE POOR PAY MORE**

COMPARISON OF THE COST OF WATER BOUGHT FROM INFORMAL VENDORS WITH THE COST OF WATER SUPPLIED THROUGH HOUSE CONNECTIONS

City	A Cost of Water for Domestic Use (House Connections - 10 m^3/month) US$/$m^3$	B Price charged by informal vendors (US$/$m^3$)	Ratio B/A
Vientiane	0.11	14.68	135.92
Male*	5.70	14.44	2.53
Mandalay	0.81	11.33	14.00
Faisalabad	0.11	7.38	68.33
Bandung	0.12	6.05	50.00
Delhi*	0.01	4.89	489.00
Manila	0.11	4.74	42.32
Cebu	0.33	4.17	12.75
Davao*	0.19	3.79	19.95
Chonburi*	0.25	2.43	9.57
Phnom Penh	0.09	1.64	18.02
Bangkok*	0.16	1.62	10.00
Ulaanbaatar	0.04	1.51	35.12
Hanoi	0.11	1.44	13.33
Mumbai*	0.03	1.12	40.00
Ho Chi Minh	0.12	1.08	9.23
Chiangmai*	0.15	1.01	6.64
Karachi	0.14	0.81	5.74
Lae*	0.29	0.54	1.85
Chittagong*	0.09	0.50	5.68
Dhaka	0.08	0.42	5.12
Jakarta	0.16	0.31	1.97
Colombo*	0.02	0.10	4.35

* Some water vending but not common.

Source: ESCAP (2001)[91].

Poverty

There are many ways to classify poverty, but no matter what the definition poverty has proven a persistent feature across the entire rural-urban continuum. Most work emphasizes the distinction between absolute and relative poverty. On the one hand there is some basic level of need below which a person cannot be expected to survive (absolute poverty, e.g., food insecurity). On the other hand, poverty involves more than just the inability to survive physically. It involves the systematic exclusion from what is needed to compete on just terms in a society (relative poverty). It involves the spiritual emaciation brought on by persistent failure to achieve legitimate goals in the face of hard work.

BOX 12: **World Bank Definition of the Dimensions of Poverty**[92]

Poverty is multi-dimensional, extending beyond low levels of income, as the World Development Report 2000/1 emphasises. The Poverty Reduction Strategies Sourcebook considers the following dimensions of poverty:

- *Lack of opportunity*: Low levels of consumption and income, usually relative to a national poverty line. This is generally associated with the level and distribution of human capital, social assets and physical assets, such as land, and market opportunities which determine the returns to these assets. The variance in the returns to different assets is also important.
- *Low capabilities (opportunities):* Little or no improvements in health and education indicators among a particular socio-economic group;
- *Low level of security:* Exposure to risk and income shocks, which may arise at the national, local, household or individual level.
- *Empowerment:* Empowerment is the capability of poor people and other excluded groups to participate, negotiate, change and hold accountable institutions that affect their well-being.

Using multiple dimensions to analyze poverty highlights the fact that the poor suffer from multiple deprivations.

Still, there is more to well-being than simply relative and absolute poverty. General well-being is also tied to vulnerability—the probability or risk today of being in poverty, or falling deeper into poverty, in the future. This is a key dimension of well-being since it affects an individual's behavior in terms of investment, production patterns, coping behaviors, and livelihood strategies. It also affects their perception of their own situation.[93] It involves the inability to hope for a better life for oneself and one's family. Yet, the individual life stories of those trapped in poverty reside largely outside the ears of the affluent.

BOX 13: **The Voices of the Poor**

The experiences of poor people, describe in their own words, the main themes of poverty alleviation[94]:

- **Opportunity**: *"At first I was afraid of everyone and everything: my husband, the village sarpanch, the police. Today I fear no one. I have my own bank account, I am the leader of my village's savings group . . . I tell my sisters about our movement. And we have a 40,000-strong union in the district*. - From a discussion group of poor men and women, India, 1997
- **Empowerment**: *"Poverty is humiliation, the sense of being dependent on them, and of being forced to accept rudeness, insults and indifference when we seek help."* - A woman in Latvia, 1998

- **Security**: *"We face a calamity when my husband falls ill. Our life comes to a halt until he recovers and goes back to work."* - A woman in Egypt, 1999

Elsewhere[95] the voices of the poor define the realities of poverty:

- **Eroded Self-confidence**: *"Poverty means we don't believe in self, we hardly travel out of the community—so frustrated, just locked up in a house all day."* **-** A group of young men in Jamaica
- **Lack of Material Necessities**: *"Don't ask me what poverty is because you have met it outside my house. Look at the house and count the number of holes. Look at my utensils and the clothes I am wearing. Look at everything and write what you see. What you see is poverty."***-** A Kenyan man
- **Urgency of Livelihood**: *"You have work, and you are fine. If not, you starve. That's how it is."* **-** An Argentine man
- **Powerlessness**: Poverty is *"like living in jail, living in bondage, waiting to be free."* **-** A young woman in Jamaica
- **Lost hope for the future**: *"To be well means to see your grandchildren happy and well dressed and to know that your children have settled down; to be able to give them food and money whenever they come to see you, and not to ask them for help and money."* **-** An old woman in Bulgaria
- **Stigmatization***: "Prolonged sickness and persistent poverty cause people to hate you."* - A Somali proverb

Sources: World Bank (2000)[94]

No matter how poverty is defined technically, it theoretically involves some combination of four fundamental deficiencies:

- Poverty of Money
- Poverty of Access
- Poverty of Power
- Poverty of Hope

Each of these dimensions reflects a means of improving one's life chances and quality of life. Thus, definitions of poverty can be seen as some combination of these factors. Key to the poverty of money is exposure to exploitation and the inability to accumulate an asset base rather than the absolute lack of money *per se*. Key to the poverty of access is tenure insecurity in housing and impediments to schooling for children. Key to the poverty of power is exclusion from decision making and lack of access to information (institutionally structured ignorance). Finally, poverty of hope involves fatalism and the loss of motivation to believe in the possibility of a better way of life for oneself and one's family. In combination these deficiencies undermine food security and expose the poor to environmental and social exploitation.

Urbanization of poverty

When the modifier ''urban" is added to poverty, it is usually used simply to define the geographic locus within which the individual experiences the deprivations of poverty. Thus, *urban poverty* refers simply to people living in the urban area who experience some combined lack of money, access, power and hope. Similarly *rural poverty* refers to rural dwellers who lack some combination of the same four factors. In consequence, much of the discussion of poverty is centers on how the combinations differ systematically in the rural and urban contexts.

Instructive as this breakdown is, it misses an essential point about the overall trend. *Poverty creation* is a process and increasingly it is an urban experience. Indeed, the term *urbanization of poverty* is preferred exactly because it shifts thinking away from the individualized view of poverty and onto the structurally conditioned realities of poverty creation. Rural and urban poverty are in fact linked to one another through processes that transcend the usual conceptual rural-urban distinctions like migration and economic displacement, structures of subordination and privilege, and strategies like transpatial household networks. Nonetheless, there are important distinctions that appertain to urban versus rural poverty.

BOX 14: **The Urbanisation and Feminization of Poverty**

More poor people are now in urban areas than ever before. The process of urbanization, though stimulated by economic development, has also led to sharp divisions in growth between cities and among social groups. Nearly one billion urban residents in the cities of the developing world are poor, and the next decade will witness increased urbanization of poverty if current trends continue[96].

Poverty can be found in cities everywhere. But in cities in the developing world, it is deeper and more widespread. A child born in a city in a least-developed country is 22 times more likely to die by the age of five than his counterpart born in a city in a developed country. In richer countries, less than 16 percent of all urban households live in poverty. But in urban areas in developing countries, 36 percent of all households and 41 percent of all female-headed households live with incomes below the locally defined poverty line. The urbanization and feminization of poverty have resulted in over one billion poor people living in urban areas without adequate shelter or access to basic services[98].

Distinctions between urban and rural poverty?

The accompanying Table 8 shows selected cross-national trends in the prevalence of urban poverty. The share of urban poverty is increasing in seven of the eight countries included in a study by the International Food Policy Research Institute (IFPRI)[97].

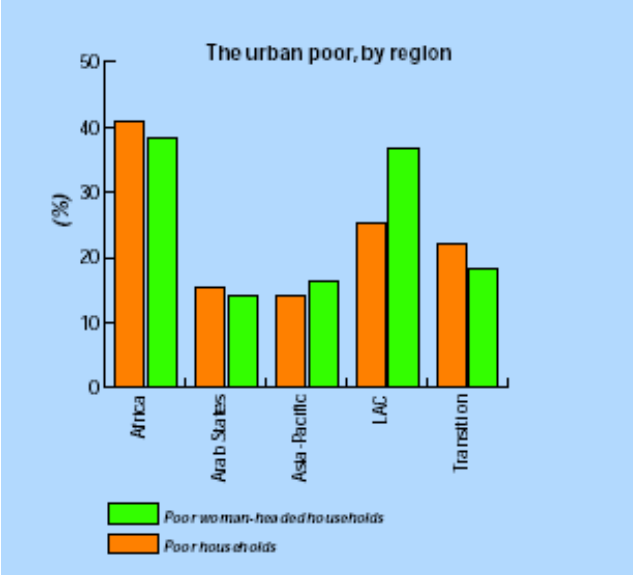
Country	Survey year	Rural poverty incidence (percent)	Population year	Rural population (000s)	Number of rural (000s)	Urban poverty incidence (percent)	Urban population (000s)	Number of urban (000s)	Share of poor in urban areas (percent)
Bangladesh	1983*	60.63	1985	86,043	51,936	50.78	13,267	6,737	11.48
Bangladesh	1991*	62.96	1990	92,565	58,279	45.24	17,200	7,781	11.78
China	1988	32.7	1990	852,600	278,800	6.7	302,705	20,281	6.78
China	1995	28.6	1995	851,501	243,529	8	368,723	29,498	10.80
Colombia	1978	38.4	1980	9,568	3,674	12.1	16,957	2,052	35.83
Colombia	1992	31.2	1990	9,785	3,053	8.0	22,811	1,825	37.48
Ghana	1987*	41.85	1985	8,691	3,637	27.3	4,146	1,132	23.73
Ghana	1992*	33.9	1990	9,932	3,367	26.5	5,087	1,348	28.59
India	1977*	50.6	1980	530,005	268,183	40.5	158,851	64,335	19.35
India	1993*	36.66	1995	680,129	249,335	30.51	248,875	75,932	23.34
Indonesia	1990	23.1	1990	126,889	29,311	10.3	55,923	5,760	16.42
Indonesia	1993	16.5	1995	127,513	21,040	5.2	69,947	3,637	14.74
Nigeria	1985	49.5	1985	57,541	28,483	31.7	25,527	8,092	22.12
Nigeria	1992*	36.4	1990	62,489	22,746	30.4	33,664	10,234	31.03
Pakistan	1984*	49.3	1985	71,034	35,020	38.2	30,162	11,522	24.76
Pakistan	1991	36.9	1990	81,159	29,948	28.0	37,982	10,639	26.21
Pakistan	1991	36.9	1990	82,905	30,592	28.0	39,029	10,928	26.32

* Mid year estimates

Source: IFPRI, 1998 [97]

Table 8: Rural and Urban Poverty Rates - selected Cities

The regional variation in urban poverty can also be seen in Figure 9. Regionally, urban poverty is highest in Africa and Latin America.



Source: UNCHS (2001)[98]

Figure 9: The Urban Poor by Region

Distinctions between urban and rural poverty occur not only by region, they also manifest within countries. For example, in Ghana rural poverty, particularly in the north, tends to affect whole communities while urban poverty tends to be more

individually focused.[99] Nonetheless, broad distinctions between rural poverty and urban poverty have been documented and need to be incorporated into the global development discussion. A major difference is that a person, who is poor in a city, if not involved in subsistence food production, is totally dependent on cash for survival. Food, fuel, water and housing cost money and are generally more expensive in cities than in rural areas.

It is estimated[100] that between 1/4 and 1/3 of all urban households in the world live in absolute poverty. Vulnerable to a number of hazards, the urban poor are always at risk. They live densely packed, subject to heavy rains or sudden fires that can wipe out their homes. They have precarious employment, in the formal or informal sector. They are exposed to higher incidence of disease, arbitrary arrest and forced eviction. Neglected by formal institutions, they are often left unprotected against violence, drug dealers, corrupt officials, unscrupulous slumlords and organized crime. Lack of resources, hence lack of political power, is a main cause of their vulnerability.

In some regions, the urban poor live on the outskirts of the cities, which means long and expensive journeys to purchase food and goods. In other regions urban poor people are concentrated in or near the city center, often on steep slopes, along rivers, and near railway lines. These sites expose them to environmental threats, pollution and noise. The risk of assault and robbery are also common features of a life of poverty in cities.[101]

The accompanying Table 9 summarizes the significant distinctions between the rural and urban poor in terms of their differing characteristics and the challenges they face.

The poor quality of the urban environment in many developing countries (air, water, soil pollution, inundation, noise, waste, blocked drainage systems, etc.) has adverse effects on the urban poor. Low-income, high-density housing areas are often located in areas unsuitable for housing, causing health problems for urban dwellers. Urban environmental degradation contributes to further poverty through its effects on people's health, limiting their capacity to earn income. This is one of the reasons why *'poverty reserves'* in urban areas tend to be persistent.[102]

The urban poor spend a disproportionate amount of money on food making them vulnerable to changing macro-economic conditions. Poor residents of Kampala and Accra spend up to 75 percent of their incomes on food, and still they universally endure decreasing food supply and quality. No formal safety nets address poverty and hunger, and thus the poor have adapted numerous survival strategies[103].

On the whole, the expenditures are higher for urban households than rural. Therefore, poverty lines for cities are often under-estimated and do not account for the trade-offs faced by households. For example, men and women may choose to live in the city center (location of their jobs) to reduce transportation costs. Nevertheless, the trade-off comes with the rents paid on land or housing, which are higher the closer one gets to the center of the city[104].

Topic of challenge	Rural Areas	Urban Areas
Livelihood opportunities	• To reduce income risk and diversify income sources, non-farm income often sought elsewhere, through periodic migration. • Significant dependence on self-provisioning.	• Labor market often dualistic. • Incomes mainly from semi-permanent wage labor, informal sector and petty trading. • Ability of urban informal sector to absorb unemployed is limited. • High dependence on social & physical access to jobs. • More vulnerable to changes in market conditions. • Greater dependence on cash. • Currency basis of exchange makes assets and credit availability more important.
Food security	• Adverse climatic conditions may cause local food shortages and hunger.	• Adequacy of food depends on cash availability. • Preference for higher quality or more convenient foods increases food costs
Agriculture	• Involves few inherent conflicts with traditional institutions.	• Often conflicts with existing formal institutions and hostile authorities. • Linked to increased potential for health and environmental risks.
Physical and social infrastructure	• Facilities often remote and disconnected. • Services, operations and management often of poor quality.	• Formal and high quality services expensive and restricted. • Regulation makes low cost alternatives scarce.
Housing and land	• Few problems with shelter *per se,* but land tenure may be insecure .	• Choice often limited and environmental risks high. • May be forced onto illegal sites. • Higher incidence of female-headed households increases vulnerability.
Institutions/ Governance	• Largely removed from formal structures of power • Traditional structures have local role. • Traditional structures often influential even after migration.	• Often limited access to political power; vulnerable to corruption. • Community and social networks important. • Fewer communal assets to aid with adverse circumstances (e.g., health, unemployment).
Environmental vulnerability.	• Adverse climatic conditions impact on livelihoods.	• Greater exposure to environmental pathogens and toxins. • Poor urban management and density worsen effects of environmental disasters/risks.

Sources[105]

Table 9: Challenges for the Poor in Rural and Urban Areas

Declining local currencies and rising commodity prices for food, rent and other items create poverty in cities. This has its greatest effect on the most vulnerable urban dwellers (female-headed households, children, elderly and disabled). Their vulnerability stems from a lack of assets, chronic unemployment, discrimination and social exclusion (see **BOX 15** on food insecurity in Jakarta). Women are often excluded from the formal labour market and, therefore, more vulnerable to exploitation, poverty and food insecurity in the urban environment.

BOX 15: **Food Insecurity in Jakarta - a consequence of economic crisis**

The economic crisis in Indonesia has greatly increased the vulnerability of large sections of the population to food insecurity. Jakarta is one such example which has emerged from the economic turmoil that first hit Indonesia in 1997. Lacking enough money to buy sufficient food, millions of people have become vulnerable to food insecurity. Food prices have risen sharply, whilst purchasing power has fallen due to rising unemployment and falling real wages. This crisis has mainly affected food security in urban areas through job losses and the consequent decline in household incomes and access to food. Alarming food related problems were reported.

As a reaction to this, people have started to produce food on small plots and open spaces all over the city—-even transforming former public parks into gardens. Government bodies even encouraged the people of Jakarta to grow their own food. Problems arising in urban areas later spread to rural areas as a consequence of migration. In some rural communities the population has increased up to 30%, putting severe pressure on those areas[106].

Despite the rise in rural poverty, the nutritional deficiencies of the unemployed urban poor give the most cause for concern. In spite of a modest recovery in 2000, in the urban areas large segments of the population continued to be food insecure, as their ability to cope was heavily eroded[107].

In rural areas poverty is largely due to the depletion of assets upon which men and women rely as sources of their livelihoods. In addition to income-poverty, residents in rural areas are more vulnerable to natural disasters such as drought or flooding. Coupled with natural shocks is the issue of geographic isolation from clinics, schools, extension services and markets. These factors act as catalysts that promote gradual exclusion from society and the broader economy, hence poverty.

Thus, while there are important links connecting urban and rural poverty, there are also important distinctions that must be considered when addressing them. Not withstanding these distinctions shifting the focus to rural-urban linkages helps better explain both the interwoven passageways of poverty creation and the complex strategies by which households adapt to it.

Socio-economic analysis of rural-urban linkages: poverty and rural-urban linkages

In the same way that rural areas have been a source of food, raw materials and labour for cities, cities have historically been places of opportunity for rural dwellers. Cities provide markets for agricultural products, specialised services (health, higher education, wholesale, government and finance), and even sources of temporary employment and shelter for some rural household members. The nature and intensity of rural-urban linkages vary between regions of the world and even within countries. They also vary in response to economic, political and environmental factors. Thus, for example, many dwellers of large African cities retain strong links with their rural

birthplaces and even return there to retire and die; in Latin America, by contrast, few migrants to large cities would choose to retire away from their offspring and friends in the city. Similarly, villagers in many parts of the world often retain close ties with their urban relatives as this facilitates access to secondary education and jobs for their children and specialised health care for the elderly. Cities are also the source of cash remittances (including capital for machinery or land acquisition) for rural relatives, who often respond by sending produce from the land and hand-crafted gifts.

An understanding of how rural-urban linkages operate in different contexts and how they are shaped by factors such as economic policies, administrative measures and planning regulations is important, as this has an effect on the livelihoods of many people, but particularly the poorer and more vulnerable groups within society. Governments, the private sector, aid agencies and civil society can help shape the nature of such linkages and therefore indirectly affect the quality of life of households for whom these linkages represent sources of food, jobs, raw materials, and even solidarity and comfort in difficult times.

Poverty is dynamic. People tend to move in and out of poverty in response both to external shocks and stresses and their capacity to recover from these.[108] They adopt one or more strategies to cope, such as income-earning, expenditure-reducing, collective support (where social ties and kinship play an important role), and external representation (where external institutions help bring additional resources to the community). Poverty cannot be measured solely on the basis of monetary income, as this only shows one, fairly narrow, dimension of people's livelihoods and capacity to survive and even thrive. Instead, the extent to which various strategies are used is determined by a range of assets to which the poor have access, their own labour skills (human capital), natural resources including land (natural capital), solidarity ties (sociocultural capital), and savings (financial capital). The poor are a heterogeneous group, some more vulnerable than others to environmental changes, even within the same household. Thus, for example, as cities expand, older women in many periurban areas in Africa tend to be affected more negatively than young men by the loss of farming land to property developers.

Rural-urban ties are important because access to these assets is in part determined by location, not only of the household as a whole, but of individuals within the household. Natural resources such as land, water and forests are more likely to be within reach of rural households than of urban-based ones. On the other hand, urbanites will find it easier to enter a job market where their labour will command a price (usually in cash, although sometimes in kind, as often happens in small family firms), and to use non-monetary assets such as housing to generate additional income (from, for example, renting rooms or setting up a business). Other factors which help determine access to assets are gender, migrant status and, in some cases, ethnicity, and religious and political affiliation.[109]

At certain times rural households may resort to having members simultaneously in the countryside and the city as a way of maximising income and mitigating risk. For example, one or two members may temporarily be employed in the city out of

harvesting season (e.g., in construction work, or street hawking), while others look after livestock and tend the fields.

The wider context of rural-urban linkages

It is difficult to generalise across countries about the nature of rural-urban linkages as these are shaped by a number of factors, including the country's urbanisation pattern, the history and geography of the city and its region, and the city's role in the world economy. Most cities retain strong ties with their surrounding regions ('hinterlands') in the form of flows of people, money, commodities and waste, while being sources of non-tradable services. Linkages often extend well beyond the immediate area of influence of the city. Examples include: migrants remitting part of their wage to remote villages, the consumption of exotic crops, the export of polluting substances to dumping sites and the consumption of fuelwood from increasingly distant sources. In some cases, such linkages may be comparatively weak, as is the case of cities built around seaports, city-states and new administrative capitals.

Although not affecting all localities in the same way, globalisation tends to reinforce cities' ties with the international economy. Global forces and policies to increase economic openness (e.g., increased cash exports, or competition from imports) also affect many rural areas. However, these forces tend to be felt more strongly in cities. This is especially true for larger cities and those at the top of the administrative and economic hierarchy, for it is there that changes associated with globalisation are more evident through shifts in the employment structure, budding international demand for prime-location properties, growing social exclusion, and increased consumerism.[110] While globalisation and the shifts in employment patterns that it usually entails may widen the income-earning opportunities of some of the poor[111], many continue to live in regions marked by slow or negative economic growth, unsustainable land uses and resource depletion. In these places strengthening the rural-urban links which accelerate the negative effects of globalisation can undermine local cultural, economic and social integrity.[112] Examples of such links include pressure to produce cash crops for export at the expense of food and supporting the introduction of a consumer culture of imported manufactured goods. In this regard, cities might be acting as transmission points for global forces.

Urban Poverty and Globalization[113]

Urban poverty and the management of metropolitan areas are among the major challenges of the coming century, for developing and developed countries alike. The ongoing processes of global economic restructuring strongly affect national economies, especially though not exclusively the people who are living in large cities. Far from producing equitable growth, these processes foster uneven development and polarization. The major problems of city life are increasingly the manifestations of stratification and the growing fragmentation of the urban social fabric. The loss or degradation of public spaces in towns and cities is widespread.

Some of the impacts of globalization are positive: above all, growing opportunities for communications, mobility and exchange, that foster the emergence of new social actors, including community organisations and active citizens who, on the whole, are able to articulate their needs and to organize themselves in an autonomous way.

Globalization opens up new opportunities, but also carries serious risks for the poor. Economic restructuring, the globalization of financial markets, and structural adjustment have tended to further impoverish the underemployed and under-represented lower classes, and to pose serious concerns for the middle classes as well. The technological and organisational revolution is leading to the informalization of production processes and to highly precarious labour conditions. Government strategies in this context have often exacerbated the unbalanced distribution of resources, knowledge, and land among the population, and reduced the availability of public services, free goods and public spaces.

Transnational financial markets impinge on national economic structures and impair the capacity of public decision-making to control national economic policy. The resulting patterns of development give priority to economic growth and render science and technology ends in themselves. This leads to the obsolescence of previous regulation of human activities and to the disintegration of much traditional solidarity. Hence, the causes of urban poverty are multiple, and the solutions cannot be found only at one level, be it national, local or community. Given the fact that the aggravation or reduction of urban poverty is primarily determined by the predominant macro-economic, urban and agricultural policies, solutions must go beyond conventionally defined social policies. More importantly it is impossible to address urban poverty without addressing its links to rural poverty, hence rural poverty itself.

Urban populations have been more affected by structural adjustment because in general, they are more integrated into cash and wage economies and more dependent on food and other social sector subsidies which were lifted. Retrenchment packages, specifically, were largely directed to urban workers who had lost jobs (sometimes defined as the *"new poor*"). On the other hand, rural populations were meant to benefit from the lifting of producer price controls in agriculture and by trade liberalisation. However, research in countries with structural adjustment programs shows that the situation is variable. [114]

Regional examples of urban poverty

Urban Poverty in Asia

Thailand has about 2000 slum communities, approximately 2 million people regarded as urban poor are living in these communities in the country. The number of urban poor might even be higher, since many poor may live scattered outside of slum communities. 70% or urban poor have their jobs and income from informal sector with majority in daily wage earners and small trading business. Major problems are land and housing insecurity, poverty, rights in the city, basic infrastructure, health, and education.[115] In Pakistan the number of urban poor is estimated between 8 and 15 million people. It is difficult to establish, how poor the urban poor are, both in absolute terms and relatively.[116]

In India, the proportion of the country's people living below the poverty line estimated on the basis of consumer expenditure distribution, has been steadily declining to its 1990 level of approximately 26 percent, over 60 million of whom live in urban areas. In the four largest cities of Delhi, Bombay, Calcutta and Madras, over half of the population is estimated to be below the poverty line. Most of the households have some kind of job, though poverty is largely the result of low productivity and underemployment. Also, a majority of poor households work in the informal sector, which accounts for 45 percent of the total labour force in urban areas[117].

In Cambodia the incidence of poverty, as measured by the national poverty line, declined modestly between 1993/94 and 1997 (from 39 percent to 36 percent), and rural poverty declined less than urban poverty[118].

For Mongolia, 1996 government figures put the poverty rate at 19.2 per cent - 19.8 per cent for rural areas, 18.7 for urban areas. But State Statistical Office figures for October 1997 indicate 36.8 per cent of urban residents and 27.5 per cent of rural Mongolians live below the poverty line[119].

Poverty in Latin America and the Caribbean

Very little information is available on the Latin American situation. According to the World Bank, poverty rates are highest in Haiti 80%, Bolivia 73%, Guatemala 75% and Nicaragua 48%.[120] In Ecuador, rural poverty increased from 56% in 1995 to 69% in 1998, while urban poverty increased from 19% to 30% in the same period. Of the six million poor, roughly two million live in extreme poverty, i.e. they could not meet their basic nutritional requirements even if their entire incomes were spent on food[121]. Until the mid-1970s, in Latin America, poverty was generally more common in rural areas than in urban ones. In the 1990s, however, regional statistics show that 65% of poor households are in urban areas.[122]

There is overwhelming evidence to suggest that urban poverty and informal employment are closely related[123]. In Latin America, the proportion of urban poor (i.e., bottom 20% ranked by per capita income) working in the informal sector was estimated to be as follows: Bolivia 66.2%; Brazil, 66.4%; Costa Rica 63.5%; Guatemala 93.3%; Honduras 84.9%; Panama 87.1%; Paraguay 64.7%; Uruguay 18.3%; and Venezuela 57.4%.

According to another source [124] 46.7% of the "extremely poor" in urban areas in 1987 were in the informal sector; in contrast 37% of the "poor" and 28.9% of the "non-poor" were in this category. In urban Costa Rica in 1982 it was found that 75.8% of the poorest among the poor were in the informal sector compared with 53.5% for the "not-so-poor" and 31.7% for the "non-poor".

Poverty in Sub-Saharan African

In **Nigeria**, extreme poverty rose steeply following the reversal of the 1985–92 reforms, reaching an estimated 70 million people (66% of the population) based on the national definition (rather than the international, $1 a day definition). Nigeria now accounts for nearly a fourth of Sub-Saharan Africa's poor. Urban poverty has grown faster than rural poverty, owing to massive migration from rural areas to the cities, with the incidence of urban poverty now matching that of rural poverty. By contrast, the rural poverty rate fell in **Ethiopia**, Sub-Saharan Africa's second most populous country and one of the poorest. The reforms after the end of the civil war in the early 1990s spurred a strong recovery, ending a two-decade slump. The benefits of agricultural price

liberalization have spread quickly, boosting growth of rural incomes. Urban poverty, on the other hand, has been stagnant. Urban inequality has risen, in part due to large population movements resulting from the civil war, and in part as a result of economic reform, as agricultural price liberalization raised consumer prices in urban areas and civil service rationalization reduced urban employment. Unfortunately, progress has likely slowed due to the border conflict[125].

Poverty in South Africa

Although the core of South Africa's poverty occurs in rural areas, poverty is also a significant feature in towns and cities. As a result of urbanisation, natural increase and migration following the removal of discriminatory controls on access to the cities, more than half of South Africa's population now lives in urban areas. This growth is likely to escalate. In relative terms, poverty is most severe in small towns and secondary cities, although extreme socio-economic segregation means that there are major clusters of poverty in metropolitan areas. Urban poor live in unplanned informal settlements on the periphery of urban centres. Problems of social exclusion are more acute in large urban areas, further reducing opportunities for the urban poor. Urban and rural areas are interdependent in economic, social and environmental terms. Planning and management of human settlements should place emphasis on rural-urban linkages, treating rural and urban areas as the two ends of the continuum of human settlement[126].

Institutional Responses to Poverty: **A Development Issue?**

The World Bank[127] identifies several key points to keep in mind when considering policies to address urban poverty and urban food security.

- Urban poverty is not necessarily an indication of economic failure.
- Internal migration is not a major variable explaining urban poverty.
- Urban conditions cannot be generalised across types of urban areas.
- The concept of "city" itself is heterogeneous.
- The "urban poor" is a very diverse group.
- Urban poverty can be transitional and temporary, or persistent.
- Poor urban governance and inappropriate policy frameworks contribute to the vulnerability of the urban poor.
- Poor people are very capable of helping themselves.

Nonetheless, poverty in any form presents a paradox for assessment and policy. There is in general a mismatch between the unity of personal experience and the diversity of institutional responses. For the poor, poverty is an indivisible whole, an ongoing, day-to-day reality often linking poor urban and rural households. Yet for institutions established to eradicate it, poverty is a condition to be responded to with a diverse array of programs, often compartmentalised, usually insensitive to rural-urban linkages, mostly contradictory, and at best only partially effective.

Additionally, since institutions define poverty in terms of its negative qualities, they tend to ignore the positive role of social solidarity. And when institutions do recognise

human potential, they often assume in poor communities a degree of solidarity that negates the realities of conflict. Thus, institutions adopt either an unrealistic or an overly optimistic vision of the lives of poor people.

On the one hand, the poor experience not only a lack of income and access to assets and basic services, but also:

- a devalued social status;
- marginalization in urban space and a degraded living environment;
- limited access to justice, information, education, decision-making power, and citizenship; and
- a vulnerability to violence and loss of security.

On the other hand, urban poverty also means mobilising and sharing aspirations, solutions, capacities, and solidarity, particularly among women and youth whose primary and often only source of social support derives from the collective human potential of their community. Yet, the poor themselves recognise their heterogeneity, divisions, and susceptibility to conflict.

Institutional responses also tend to focus on income generation, without considering the social, political and psychological factors that constitute the indivisible character of poverty. Public sector responses to poverty are based usually on a simplified view of the poor as a homogeneous group. In reality, since the poor are very diverse in their difficulties, needs and capacities. They require a differentiated—but co-ordinated—assessment and response.[128] Thus, poverty comprises opportunities as well as threats, and is experienced differently because of that diversity. Successful interventions must acknowledge this reality.

BOX 16: **Voices at the Top**

Poverty creates many problems, not just for the poor themselves but also for the better-off. *"People are astonished at the kind of violence we are having in a big city like São Paulo, (but) I'm not astonished. If you have half of the population in these poor sections who are less than 18 years old, and they have no access to an education, no perspective and they cannot see a light in the tunnel, their prospects are nothing – how do you think they are not going to be violent or delinquent?"*[129] says Marta Suplicy, Mayor of São Paulo[130]. In a world in which half of humanity now lives in cities and towns, the urbanization of poverty is one of the biggest global challenges of the new millennium. Slums and spontaneous settlements are wellsprings of entrepreneurial energy that can and must be mobilized. Together, we must offer the inhabitants of our cities and other human settlements the prospect of security, prosperity and a sustainable future[131].

The challenge for urban local governments is to enable the development of sustainable livelihoods, safe and secure living environments and a better quality of life for the urban poor. The challenge for national governments is to foster the same results for poor in all environments: urban, rural and periurban. Failure to address these challenges across the entire rural-periurban-urban continuum will lead simply to more failed policies and a lack of real development in all sectors.

There is an emerging international consensus that good governance is a crucial prerequisite for poverty eradication.[132] The Commission on Human Settlements, at its seventeenth session, identified increased urban poverty as a key challenge for sustainable urban development and stressed the importance of good urban governance. The 1999 Commonwealth "Durban Communiqué" stressed the importance of good governance. UNDP's 2000 Poverty Report calls good national governance the "missing link" between anti-poverty efforts and poverty reduction. The report goes on to declare that programmes to reduce poverty often "by-pass and ignore" local government, hampering their effectiveness.[133] The report also cites an important lesson learned by the UN Capital Development Fund: "institutional strengthening of local government would take longer than conventional targeted schemes to benefit the poor—but the eventual benefits would outweigh the costs."[134]

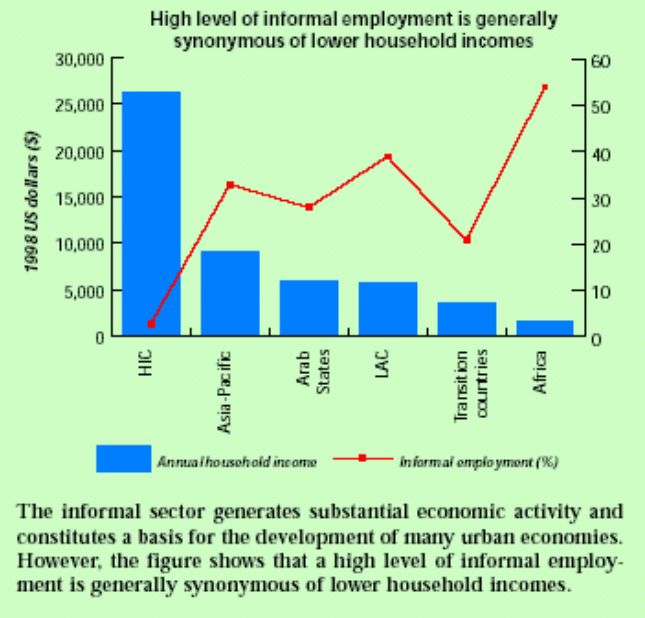
Improved urban governance implies that city governments need to become responsive and accountable to the poor, and adopt an inclusive and participatory approach in which the poor have adequate representation and voice. Empowering the poor implies:

- recognizing the rights of the poor to live in the city,
- ensuring secure tenure and access to basic services,
- supporting urban and periurban agriculture as a means to food security,
- strengthening the participation of the poor in local decision making, and
- removing social barriers that result from discrimination due to gender, race, religion and social status.

Urban local governments also need to ensure that the vulnerability of the poor to ill health, economic shocks, natural disasters, and violence is reduced and to support the coping mechanisms that the poor have evolved to minimize such risks.[135] But improved urban governance needs also to be recast as improved regional governance aimed at extending the same benefits to those living in rural and periurban environments. **The unaddressed problems of the rural poor become urban problems in a variety of ways, migration being but one such outcome which itself is linked to many other problems.**

Urban Poverty, the Informal Sector, and Livelihood Strategies

Under-employment and the informal sector are among the most significant features of the contemporary urban economy. Self employment in the informal economy is generally seen as a survival strategy for the urban poor[136].



Source: UNCHS[41]

Figure 10: Income Levels and informal Sector employment by Regions

In many poor areas of cities of the South, the informal private sector fills the gap left by public authorities, and makes a profit in doing so[137]. Informal activities are found in nearly all urban sectors: manufacturing/production, transport, construction, industry, services, and commerce. In many countries the informal sector increased during the 1990s; the largest increases were observed in Bolivia, Kenya and Venezuela. For Latin American economies, the typical pattern has been an increase in informal sector employment during the first half of the 1990s, followed by a stagnation or decrease during the latter years. Economies in sub-Saharan Africa tend to have the highest share of informal sector employment to total employment[138].

In many economies, especially those in Latin America and Africa, statistical information on the informal sector is available for urban areas only.

"In Latin America, the urban informal sector was the primary job generator in the 1990s. An average of 6 out of every 10 new jobs were created by micro-enterprises, own-account workers and domestic services. Informal sector employment grew by 3.9 per cent per annum while formal sector employment grew by only 2.1 per cent in that region. In Africa, urban informal employment is estimated to absorb 61 per cent of the urban labour force. This sector was expected to generate more than 93 percent of all additional jobs in the region in the 1990s. In Asia, before the 1997 financial crisis, it was estimated that the informal sector typically absorbed between 40 and 50 per cent of the urban labour force, with differences between the newly industrialising countries (with less than 10 per cent) and countries such as Bangladesh (with estimated 65 percent of employment in the informal sector)"[139].

Available data give some evidence of the important role played by the informal sector in generating employment for women in Asia and Africa[138]. Informality arises where individuals wish to work legally, but are denied access to formal sector jobs for a variety of reasons both structural (e.g., low labor absorption capacity) and individual (e.g., low levels of formal education and skills). In consequence they are relegated to work that is typically low paid, unsecure, irregular and often technically illegal. Further, their low incomes make it difficult to pay taxes or to afford formally-built housing.

Sectors of great importance in the informal economy are marketing and recycling of raw materials. Marketing is basically carried out by street vendors that exist in all cities. Street vendors are people who, given the financial situation they face, have to become entrepreneurs so that they can earn a living[140]. Collection and re-use of waste is done by the street and waste scavengers, often marginalized members of society stigmatised by their informal work.

Of greatest consequence to the present discussion is the recognition that informal occupations and labor force participation represent the tangible link between aggregate urban poverty and micro-level household livelihood strategies. From the aggregate perspective the damaging consequences of poverty are mitigated by providing the poor with otherwise unavailable access to needed resources. At the micro level individuals see themselves not in terms of a labor force, but rather as actors juggling a shifting combination of entreprenuerial activities, wage-labor and subsistence (notably, urban agriculture) activities.

Municipal governments have too seldom acknowledged this link between poverty alleviation and household livelihood strategies, and even less frequently incorporated it into their development interventions. The case of Belo Horizonte, Brazil demonstrates the effectiveness of interventions which combine the determination and resources of the municipality and the realities of entrepreneurial livelihood strategies. The program dramatically improved the social status of street scavengers by involving them in the planning and implementation of a comprehensive recycling and waste management program for the town. Benefits of the program included job creation, improved municipal recycling, improved social and economic status for the street scavengers, and enhanced self-esteem.[141]

The livelihood framework in the urban context

Urban livelihoods are at risk for many reasons. But why should the focus be on the urban context specifically? There are two reasons:

- Development policies and measures aimed at mitigating vulnerability have typically been set up for households in rural areas, where livelihoods are commonly based on activities in arable and livestock farming. Urban settings have tended to be neglected (at least until the early 1990s), although a rapidly increasing proportion of vulnerable people is living in cities.

- In cities, given the accelerating urban growth, the high influx of people, ideas, and technology, and their closer connection to the global economic exchange system, livelihoods are set in a much more complicated social, economic, political and cultural context than in rural areas. The patterns and layers of urban livelihood security are often contradictory and quickly shifting.

There are a number of prominent features that determine how secure – and sustainable – a livelihood might be in an urban setting. One of the most dominant aspects is that, in the urban sphere, a household economy is very much involved in a market, i.e. cash-orientated, environment. Monetisation and commodification are among the most significant characteristics of the rural-urban transition of livelihoods. Although urban and periurban agricultural activities are a common feature in many cities [142], the overall options to produce food crops on a subsistence basis are limited. This means that food has to be bought, and cash is needed. The same applies to housing: In rural villages houses can be constructed using natural materials which can be collected in the vicinity, and households can make use of their own traditional expertise—they simply know how to build a house. Time, manpower, individual skills and indigenous knowledge are the most important resources. In the cities, materials often are not readily available but have to be purchased, and skilled workmen have to be hired.[143] The most important resource here is money. Also, dwellings in the city are frequently rented out and become a commodity for which money has to be paid and cash income be provided. Very often, even temporary shelters and backyard shacks become part of the urban monetary economy, and the rent sometimes absorbs so much of the tenants´ income that these households are left with practically no money for food or clothing. On the other hand, some landlords who have only one or two rooms or shacks to offer have no other income than the little rent they receive from their tenants. In short, access to income-generating opportunities, to savings and to credit is one of the key elements to sustain the livelihoods of the urban poor.

Based on these findings it becomes clear that the building of sufficient financial assets (i.e., accumulation strategies); and having them readily available, are the central elements for urban livelihood security. To activate these vital financial resources, vulnerable urban households have to engage in numerous activities, very often in the informal sector. Here, individual skills, ideas, flexibility, a sound physical condition and good health are essential to be successful. Apart from cash-earning activities, many households take part in informal savings or credit schemes (e.g., rotating credit associations). For this, integration into a functioning social network is a precondition. In addition, income generation and of course subsistence production require access to transport facilities. For transport, in turn, cash is needed. The smallest disruption in this intricate network of activities and daily survival—of which only a tiny extract has just been described—may result in a severe shock for livelihood security which many urban poor may not be able to withstand. In the urban environment, characterised by rapidly changing, unreliable and often unruly conditions, there are multiple risks of a breakdown of coping strategies.

The example of income generation shows how complex the urban livelihood framework is. There have been various attempts to model this framework. Most of these livelihood models are asset-orientated, and most approaches identify a set of fundamental asset and capability bases that comprise a livelihood including: [144]

- *Human capital*, including skills, knowledge, creativity, good health, ability to labour;
- *Social (or socio-cultural) capital,* comprised of social networks, family relationships;
- *Economic capital*, or, less broadly, financial resources, including income earning opportunities, jobs, credit schemes;
- *Physical capital*, basically meaning infrastructure, energy, communications, and shelter;
- *Political or institutional capital*, i.e. participation, and empowerment;
- *Natural or biological capital*, consisting of natural resource stocks such as land, water, fertile soils, flora, fauna, and minerals.

Livelihood security is directly related to the ability of an individual or household to maintain or enhance these asset portfolios. In order to make use of these assets, one must have access to basic resources, one must engage in certain activities, and one must be able to adapt to or cope with risks, stresses and shocks. Access, activities, adaptation and coping, in turn, are highly dependent on the spatial and institutional setting, and on people's individual needs and wants.

Comparatively little attention has hitherto been given to the specific contents of the asset bundles in urban surroundings and to the apparent difficulties city dwellers have to face when they attempt to vitalise the necessary resources for a means of living.[145] Because monetisation is the predominant feature of an urban livelihood framework and because access to financial resources has utmost priority for urban vulnerable groups, development policies have tended to address only the economic side of well-being in urban settlements. These same policies have tended to overlook the strengthening of other asset bundles required for a satisfactory and fulfilled life. The other asset and capability bases also show distinct urban patterns which are depicted in Table 10.

Assets and capabilities	Significant features in urban environment	Significant features in rural environment
General setting	• Complicated, expanding, rapidly shifting, creative, sometimes unruly; • Accustomed to many innovations, which therefore have relatively low sudden impact on livelihoods	• Less complicated, slowly changing; • Fewer innovations, but with relatively large impact
Human capital	• School education, vocational training etc. offer wider access to income earning opportunities; • Higher health risks due to poor sanitation, contaminated water and extreme population density	• Indigenous knowledge, traditional skills etc. more important in the pursuit of livelihood strategies than in urban areas; • Health risks not so much a matter of sanitation or over-population problems
Social capital	• Social networking less along family ties since extended family structures often broken up; • Status in urban society heavily influences access to and integration into social networks	• Integration in social network dominantly determined by family, village community, tribe etc.
Economic capital	• Financial assets dominate, resource access results mostly from cash; • Market economy; • Established labour market with high competition	• Cash important, but in-kind assets play a larger role than in urban areas; • Subsistence-orientated economy; • Less competition
Physical capital	• Basic infrastructure usually better established than in rural areas, but access limited and costly; • Shelter often fragile and unsafe, tenure insecure	• Often scarce provision of infrastructure, but shelter and tenure safer
Political (Institutional) capital	• City governance highly influential; • Often little opportunity for negotiation and participation; • Crime and violence play major role	• Rules of village community significant; • Negotiations possible, participation often better established than in urban settlements
Natural capital	• Land scarce, competition high; • Limited access to natural resources; • Fast-impact disasters (e.g. earthquakes, landslides) often devastating; • High exposure to pathogens and toxins	• Natural resources often at the core of livelihood security; • Long-term, “silent” disasters (e.g. desertification) more important than in urban areas

Table 10: The urban and rural specifics of a livelihood framework

Given these distinct patterns of asset bundles under urban conditions, livelihood activities (in a narrower sense: strategies) are sometimes quite different from those in rural areas. Often, however, the differences are more subtle—but nonetheless extremely important—when it comes to design and implement policy measures to tackle urban poverty. For instance, an important strategy for vulnerable households in both rural and urban areas is to engage in not only one, but a large number of different activities for a means of living. If one activity fails, there might be another, which compensates for the deficit. Both types of households employ the same

strategy, i.e. they try to fall back on many diverse subsistence and income sources, but the nature of these sources will most likely be very different. Much consideration should therefore be given to the most appropriate entry point for external support program or development measures.

It may be added that well-being is not only a matter of essential needs being met. **Not only the better-off, but also the poor and the poorest have individual preferences, wishes and wants which they hope to get satisfied.** These preferences and wishes also depend on the urban or rural livelihood setting, and influence adaptation or coping strategies. Livelihood-orientated development policies must take this into account.

Such policies have also paid little attention to the fact that there is often no distinct borderline between rural and urban spheres of living. As shown earlier rural-urban linkages form an essential part of urban livelihoods, especially in sub-Saharan Africa.[146] Even though we can identify certain specific livelihood characteristics in the urban setting, there are many cases where the activation of *rural* assets is a central coping strategy for urban households.[147] Similarly, the activation of *urban* assets can be a coping strategy for rural households. These potential inter-relations need to be explored and, if found to be active, included in development policies and practices.

Secure yes, but sustainable?

At closer look, it has to be admitted that most supportive development measures aim at strengthening the livelihood system of the most vulnerable without paying much attention to the aspect of sustainability. But how can they? Often, addressing the immediate needs absorbs so much time and so many resources that sustainability can be considered only theoretically, but never really achieved. Therefore, it is preferable at present to speak of secure and not of sustainable urban livelihoods. Nonetheless, the advantage of livelihood approaches—however much they stress the aspect of sustainability or not—is that they are clearly actor-orientated and at the same time consider the institutional and spatial settings. Policies based upon such macro-micro linked perspectives have an improved likelihood of achieving their goals.

The reduction of poverty, or, in a broader sense, the mitigation of vulnerability, must also include the provision of opportunities for the city dwellers to shape their urban environments. It is important to keep struggling against the unruly urban condition described earlier in the discussion on megacities because it is a fight against the erosion of livelihood security. **If we want to capture the city we must capture the ability to shape it.** This is, in the end, a precondition to make urban livelihoods not only secure, but also sustainable.

BOX 17: **Urbanisation, AIDS and Food Security – Botswana's Silent Tragedy**

The disaster weighs heavily on Botswana. Like a shadowy threat, like a silent menace that strikes almost without leaving a trace, it is still hard to notice in the streets of the country's capital, Gaborone. And it is even less visible in Botswana's vast rural spaces. And yet, it seems, there is no escape: One in five of the people of Botswana is HIV-positive. AIDS is leading Botswana into catastrophe.

The Botswana government has launched widespread campaigns to make people aware of the problem and to motivate to take AIDS tests. Huge roadside billboards claim that 'avoiding AIDS is as easy as ABC (**A**bstain, **B**e faithful, **C**ondomize)'. Several companies invest tremendous sums of money to propagate HIV-awareness. Projects run in schools and hospitals aim to to break old taboos surrounding AIDS and to provide information on the risks and routes of infection.

But AIDS is almost invisible. Although the pandemic has reached Botswana over ten years ago, people are only just now starting to talk about it more openly. The ABC of government talk doesn't come from the same alphabet that people use to form everyday words. There still is a strong resistance among people to talk about HIV-infections in public. The reasons for that may be multifold[148], but the fact that the AIDS-disaster has not really stepped out of the silent shadow makes it extremely difficult for the government, NGOs and private enterprises to tackle the deadly threat.

In Botswana, assuming unchanged risk of becoming infected with HIV, the lifetime risk for a 15 year old boy to die of AIDS is almost 90 percent[149]. Even if the risk of infection could be halved, the risk to die of AIDS for that boy would still be over 60 percent!

The HIV/AIDS-pandemic seems to be strongly related to urbanisation. In Botswana, HIV prevalence is significantly higher in urban than in rural areas (Figure 11). The infection rate among pregnant women in 1998 was approx. 40 percent in major urban areas, as opposed to ca. 30 percent in rural districts[150]. When the disease came to Botswana sometime in the 1980s, it is believed that it first reached the major cities before it spread across the country. Thus, AIDS had more time to develop in urban areas, leading to higher prevalence rates there. But another reason may be found in the urbane, mobile and more casual lifestyles in the cities. The HIV-prevalence among students at the University of Botswana in Gaborone, for example, is estimated to be over 40 percent – which is considerably higher than national average. With the ongoing rapid growth of urban centres (latest census data show that Gaborone and its neighbouring periurban settlements had, for the last 10 years, average growth rates of 3.5 to 10.5 percent p.a.[151]) there is a severe risk that AIDS will continue to spread quickly.

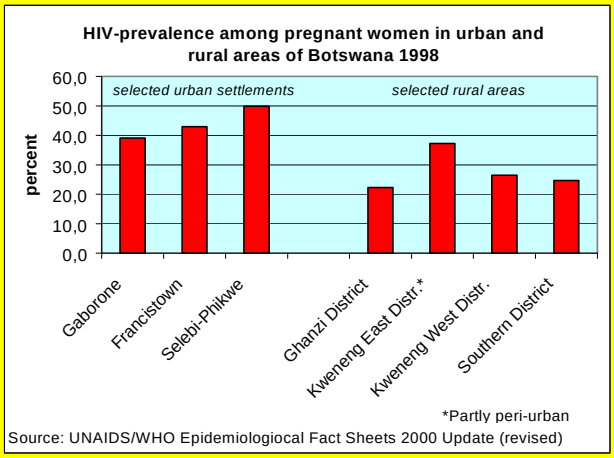


Figure 11: HIV-prevalence among pregnant women in urban and rural areas of Botswana 1998

The problem is aggravated by the fact that the overall effects of AIDS are more severe on urban than on rural livelihoods. Of course, HIV-induced diseases can impose huge stress on rural households. For example, there is a reduction of the household labour force because of members falling ill or having to care for the sick. In addition, due to increased mortality food crop production is seriously impaired, and looking after cattle herds can become an unbearable burden. Up to now, no detailed data on this issue have been collected in Botswana, but case studies carried out in Zimbabwe show that the reduction in the output of crops may be as high as 60 percent[152]. For the individual household this may seriously endanger food security. Until now there is, however, little evidence that AIDS might have induced a general food crisis. In the cities where most livelihoods are based on activities in a cash-based economy, the effects of AIDS are particularly problematic. Employers have difficulties in compensating the sick-leaves, and generally do not tolerate employees with AIDS who, due to their poor physical condition, can only turn up to work for a couple of hours. Many who had found formal-sector employment lose their jobs. AIDS also narrows activities in the informal sector. Moreover, urban households can rarely fall back on subsistence food production. Some will try to mobilise rural assets and to get help from family members who live in rural areas, but this safety valve is also becoming more and more unreliable because of the strain of AIDS on agricultural productivity. Thus, AIDS-affected urban households are gradually losing their access to monetary resources, which are so important to sustain a livelihood in the city[153].

The situation is even worse for orphaned children. The death of a parent, an event which in any case places a tremendous emotional burden on them, often demands a great physical and mental effort as the children struggle to cope with household tasks. In rural areas, children who have lost their parents often find a new home in the extended family. In the cities, many AIDS orphans have no intact family network, and relatives are rarely able to care for the children. So far Botswana's society has, with difficulties, managed to care for the orphans, but it is not prepared for the huge increase to come. Already, the number of street children in Gaborone and Francistown has risen dramatically[154].

There is little indication that AIDS directly hampers food security in urban areas, but its impact on the monetised city economy must not be underestimated. When income-generating activities fail, urban households have little alternatives. Although urban horticultural activities have been increasing in recent years, their output is still limited due to poor soils and unreliable rainfall. The decline of entitlements which urban vulnerable households have to experience should be monitored closely. To streamline external support measures, and in view of the shadowy, silent nature if the pandemic, in-depth case studies on the effects of HIV/AIDS on the coping opportunities of the urban poor will have to be carried out immediately. Programmes specifically designed for urban vulnerable households should include home care for those who have fallen ill, and foster care for orphaned children.

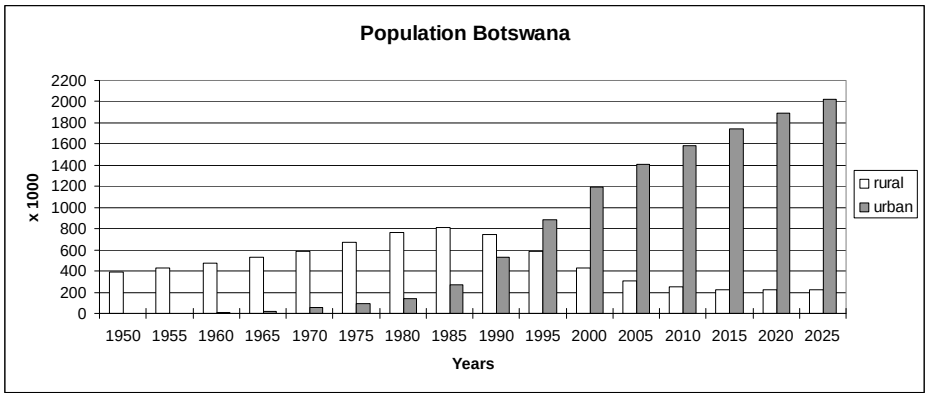


Figure 12: Rural and urban population change[155] in Botswana, 1950 - 2025

Rural-urban linkages and shifts in livelihood strategies

Depending on the nature and intensity of the relationship between urban and rural areas, the livelihoods of the poor will be negatively or positively affected by a number of processes. The meeting of urban and rural activities entails both problems and opportunities for the poor, depending on their sources of livelihood and their location relative to the city. In the periurban areas (DPU, CPU and APU) of a rapidly industrialising city, for example, the pace of change will be felt more strongly than in more isolated villages (including VPU and some IPU), and so will be the flow of people, information, money, commodities and waste between it and the city. As the examples presented below show, some periurban residents may find it hard to adapt to rapid change and will face a greater number of problems, whilst others even within the same household may be quicker to take advantage of opportunities that arise.

A number of processes of change are currently taking place around cities in many countries of the developing world. Some may be specifically linked to globalisation, but others are simply the result of demographic and economic change (be this growth or, not uncommonly, stagnation or contraction) or economic restructuring and their attendant changes. Some of these changes will impact negatively (problems) and others positively (opportunities) on the rural and periurban areas linked to the city, and more specifically on the people who either live there or derive a livelihood from these places.

Problems for poor women and men

Land use changes are foremost among changes occurring around cities, it is from this resource that many periurban poor derive an important part of their livelihood. However, land is not the only resource affected by change. For example, water bodies (essential for irrigation, drinking water, fishing) may also suffer from pollution and import policies favouring cheap pesticides and fertilisers. Additionally, greater proximity to the city may help reduce the cost of chemical fertilisers thus increasing the health risks associated with their use.

a. *Land*: Urban growth has an important and visible effect on land in areas surrounding cities and in more distant locations as well. Perhaps because changes in land use arising from urban change are so visible and usually involve large financial transactions, as well as greater pressure from interest groups such as developers, middle class residents or even local government institutions, they are also the best documented. The processes involved comprise conversion from traditionally rural to urban uses (or at least increased pressure to convert), and increased commercialisation of land and abandonment of customary practices of land allocation and land tenure more broadly. These have different effects on the livelihoods of rural and periurban dwellers, as shown by a number of studies.

In the case of Kumasi, Ghana's second largest city, changes in periurban land use have been particularly detrimental to older women who find it harder to adapt to them (see **BOX 18**). In the country's capital city, Accra, where the rate of conversion of periurban land from agriculture to urban use reached 2,600 hectares per year in the late 1990s, land is primarily acquired by relatively well-to-do, middle-aged men for

residential use, while the indigenous communities selling the land are dominated by elderly household heads with lower educational and wealth status, a third of whom are women.[156] As in Kumasi, land users who had been allocated plots for cultivation by local chiefs following customary practices are neither compensated for the loss of usufruct rights nor for the loss of livelihoods in farming. This exemplifies the tensions between customary systems of land ownership regulating periurban areas and more modern legal frameworks governing urban land transactions found elsewhere in Sub-Saharan Africa.[157] Some displaced farmers move out to more distant locations to cultivate, while others work locally as casual labourers, informal traders, or construction workers, or they migrate to Accra. Unlike in Kumasi, women in periurban Accra do not appear to be more unfavorably affected by land sales and conversion processes. However, in some locations minority ethnic groups who have little recourse with traditional rulers are negatively affected.

Similar land conversion processes are documented in other parts of the world such as Manila, where vast areas of irrigated rice farmland have been converted to uses such as speculative residential developments, industrial estates, golf courses and theme parks. Conversion has been abetted by a combination of a national policy framework favouring industrialisation rather than agricultural modernisation, flexibility in local zoning by-laws, and imbalanced power relations between landlords in search of higher financial returns and tenant farmers who are rarely compensated for the loss of farmland and lack the education or experience to exploit opportunities in the urban-industrial economy.[158]

BOX 18: **Land conversion, agriculture and poverty in Kumasi, Ghana**

Kumasi is Ghana's second largest city and a major regional trade centre, with a population of over 700,000 growing at around 4 per cent per year. Lower land and rent prices and an increase in reliable and affordable transport in the areas within a radius of 35 km around the city are turning them into the destination of increasing numbers of people. As the demand for accommodation in many villages that once were predominantly rural has steadily risen, available farmland has declined. This has had a visible impact upon the livelihood strategies of the vast majority of the village population.

Under Ashanti customary law land belongs to the whole community and successive generations of families are only entitled to hold it in trust for the community. Local chiefs allocate farmland both to natives and outsiders on the basis of need in exchange for token money. However, as pressure rises for residential use and commercialisation, the traditional system has begun to break down. Only a minority of farmers, usually the larger ones, have the resources to compete with developers or speculators in the acquisition of land. Most often land is taken from farmers without consultation by traditional rulers and sold for the construction of new housing. As land is lost, so is the potential of periurban agriculture for the production of food for subsistence and high value produce which can be sold in the city.

The prospect of land conversion plays against agricultural production in periurban areas in that it creates a disincentive to investment. The reduction in the size of plots associated with higher population pressure and new developments, implies that the same quantity of crops now has to be produced from a smaller area of land. This can be achieved through an increased use of agrochemicals, a reduction in fallow periods and the adoption of more intensive cropping patterns.

The result in the longer term is a reduction in soil fertility and hence productivity, as well as the creation of potential health hazards associated with the widespread use of fertilisers and pesticides. As the number of residents increases, so does the amount of waste produced, in turn rendering village level waste management services inadequate. Poorer groups with little access to water and sanitation infrastructure become more exposed to health risks not traditionally found in rural areas but associated to the expansion of the city and its activities, such as non-communicable diseases and heavy metal contamination.

Women (particularly older women), who constitute the majority of periurban farmers, are worst affected. Not only is their capacity for any form of investment limited, but also they are consulted less than men on matters such as land use changes and plot sales. Alternative livelihood opportunities within the village for women are restricted to trading, crop and food processing, dressmaking and hairdressing. Most young men are rarely interested in traditional crop farming and prefer to look for work in the city; those who remain in the villages work in craft-making, and vegetable and rice growing.[159]

Conversion of land from rural to urban use can also carry unwanted health risks. The development of new areas for residential use can lead initially to the multiplication of breeding sites of malaria mosquitoes (*An. gambiae*); however, later canalisation of surface water, domestic pollution and increased human densities can reduce

breeding sites and replace them with nuisance mosquitoes (*Cu. quinquefasciatus*). A case study in Brazzaville in the 1980s, for example, shows that the rate of prevalence of malaria among rural children was 75-90 per cent, 50-80 per cent in periurban areas and under 7 per cent in urban ones.[160]

b. *Natural resources*: the periurban poor are usually more heavily dependent for their livelihoods on access to natural resources than wealthier, more urban-based groups. Consequently, they are often worse affected when such resources are lost or degraded as a result of factors such as increased population density from an expanding urban population, larger volumes of solid waste disposed of in periurban locations, and untreated liquid waste from residential and industrial areas. Similarly, ecologically valuable periurban areas such as forests and river banks are sources of recreation for the urban poor in large cities like Mexico City. Therefore, their degradation or loss is likely to affect these groups more than wealthier and more mobile households who can seek out these environmental services further afield.[161]

There are important gender and age dimensions as well. In Hubli-Dharwad, in Karnataka State in India, for example, the selection, recycling and composting of municipal solid waste in periurban dump sites is mainly carried out by women and children. Women also collect recyclable waste from bins and dumps and sell it to itinerant traders. Within the household, women are involved in the composting of organic waste and its subsequent use in horticulture, as well as in a wide range of duties relating to the household energy needs. As firewood (a main source of energy for poorer households) becomes more scarce around the city, women have to walk further to collect it. This can adversely affect their health and leaves less time for other household chores.[162]

Access to, and use of, periurban natural resources varies between regions of the world and with a country's level of urbanisation, as well as with income level. For example, poor urban households in South Asia make greater use of forest and tree products than their Latin American counterparts, who tend to rely more on alternative materials for construction, energy and foodstuffs. [163] Poor periurban households in Asian and African cities use primarily fuelwood gathered by household members (usually women). Wealthier households in periurban Hubli-Dharwad, for example, use tractors or bullock carts to collect fuelwood only a few times a year, sometimes with the help of paid labourers. In contrast, landless labourers collect fuelwood daily or weekly, spending on average between four and ten hours a week.[164] Gathering of fuelwood and food from forests and trees (mostly relishes rather than staples) and wood for construction are rarely income-earning occupations even in poorer and less urbanised countries like Nepal and India.

c. *Shifts in agricultural practices*: With urban expansion, some of the periurban and rural land that is not lost to residential, industrial or leisure uses may still lose productive potential, as farming will tend to rely more on practices such as intensive use of pesticides and intensive irrigation which may in turn lead to soil degradation. Such uses are more in line with the greater intrinsic value of land and the proximity of urban demand for fresh fruit, vegetables and flowers. However, this may displace poorer households who rely mainly on farming and lack the resources to upgrade to

more capital-intensive methods. Such is the case in the region surrounding Asunción, Paraguay's capital, where smallholders lack sufficient land to use as collateral and therefore do not qualify for credit which they need for producing vegetables and fruit for the profitable urban market.[108] This can also increase the cost of hired labour in commercial farms due to competition from manufacturing industries, as has been documented in Hubli-Dharwad, where a growing number of households have shifted from subsistence to commercial crops.[165] However, in this particular case of slow urban growth, the shift is not associated with urban expansion but rather with changes in consumption habits and an expanding food processing industry both nearby and in more distant locations.

There are also health risks associated with more intensive farming and horticulture. Greater use of pesticides and fertilizers in periurban areas leads to groundwater sources being contaminated with carcinogenic organics and nitrogen.[166] Whilst there is no conclusive evidence on whether agro-chemicals are more heavily used by rural, periurban or urban farmers, a study in Lusaka, Zambia, suggests that household usage is greatest in periurban areas, followed by urban areas and then rural areas.[167] Lack of knowledge and improper practices appear to be the main causes of poisoning from pesticides.

Opportunities for poor women and men

Rural-urban linkages in the context of change also create many opportunities for poor women and men in different locations. Opportunities for poorer households arising from rural-urban linkages lie largely in the potential benefit from using the comparative advantages of rural and urban areas simultaneously, particularly in times of need. However, in a similar way that problems may affect some members of a household or some specific groups (e.g., an ethnic minority) more than others, opportunities will be greater for some depending on individual circumstances.

a. *Increased diversification of livelihoods*: As rural-urban linkages intensify through movements of people, commodities, information and money, their importance as sources of livelihood grows. In sub-Saharan Africa, for example, many urban-based households try to retain ownership or control over village land as a supplementary source of income. In Gaborone, Botswana's capital, migrants maintain these ties for many decades, travelling frequently between city and village. Consequently, rural assets are valued both in monetary and social terms and disruption of these important ties may pose a threat to the survival of urban households.[168]

Temporary or permanent migration to the city in search of jobs by some members of rural and periurban households is an age-old and well-known mechanism of increasing earnings and reducing vulnerability. Depending on the cultural context and individual circumstances, young sons or daughters will be encouraged to migrate, as might at times fathers or mothers, giving rise to a growing phenomenon of *multi-spatial households* and enterprises. In South Asia, the Middle East and most of Africa, men constitute the majority of rural-urban migrants. The opposite is true in Latin America and the Caribbean, especially in the decades of the 1960s and 1970s when migration reached its peak.[169] Yet broad regional variations may mask important national differences. For example, in Taiwan, the Philippines, Indonesia

and Thailand parents prefer daughters to migrate because they are more likely to send back a larger part of their earnings as remittances to cover the needs of their parents and siblings (including education). In some regions of Africa it is increasingly acceptable for young rural women to work (and study) in cities, though under close supervision from relatives. The presence of relatives is an important determinant in the choice of destination, but migrants who engage in menial occupations or prostitution often prefer more distant locations.[170]

Periurban men and women may benefit differently from the increased opportunities created by greater proximity to the city. In the village of Dialokorodji near Bamako, Mali, men's earnings have suffered as a result of drops in available farmland, increased competition between traders, and joblessness from industrial restructuring. At the same time women (for whom access to farmland cultivation is traditionally restricted) have benefited from the proximity to Bamako's markets and opportunities for small-scale trading of agricultural products from nearby villages. The short distance to Bamako's markets has also benefited women in the village of Baguinéda, where they also are engaged in trade and horticulture. Government retrenchment and forced early retirement following structural adjustment policies have led to the appearance of a new type of farmer, mainly guards and teachers in search of additional sources of revenue to supplement their state income.[157]

In other contexts, cheap and efficient transport infrastructure encourages periurban workers to commute daily to the nearest city. Examples are the cities of Aba and Port Harcourt in southeast Nigeria, where commuters travel as much as 100 km: women to work as cleaners and gardeners and men in the construction and oil industries. However improved transportation has also led to the decline of traditional non-farm activities such as cloth weaving by women because it increases competition from cheaper imports, while undercutting the need for technological innovation and improved infrastructure such as electricity supply.[170]

Proximity but relative isolation can also create (restricted) livelihood opportunities. A captive labour market has been developing in recent years in the low-density periurban Tuy Valley which is separated by hills from Caracas, Venezuela's capital, but increasingly linked to it by a growing transport network. Relative isolation from the city and the concentration of a growing population of low-income households re-located there from Caracas through subsidised housing programmes, has created a labour pool for Caracas-based firms., Attracted by low wages, these firms farm-out (out-source) components of manufacturing production (such as trouser sewing). This isolation has also generated a local market for street hawkers while the arrival of middle income inhabitants in search of cheaper housing has opened job opportunities in domestic help.[171]

b. *Access to services*: an added advantage of urban expansion and related improvements in basic infrastructure for rural and periurban dwellers is that access to services such as health and education can substantially improve. This will of course be determined by geography, national economic circumstances and individual strategies, as some households may decide for example that they cannot afford school fees and would rather have children work in the fields or as paid labour.

(Decisions such as these, although producing savings in the short term, may in the longer run increase household vulnerability). But in many documented cases, urban expansion has created improved opportunities for children to study and for members of the household to benefit from more specialised health care. Average infant and child mortality and malnutrition rates appear to be lower in urban than in rural areas. This is in part due to the greater availability of health facilities and basic utilities like piped water supply and sanitation, but also because of the fact that urban diets tend to be more diverse and rich in energy and micro-nutrients. Notwithstanding this, **malnutrition can be a more serious problem in poor urban and periurban neighbourhoods than in rural areas**, as higher urban averages are skewed by high indicators among wealthier groups.[167] Recent research on HIV/AIDS and other infectious diseases in Africa has also shown that intense rural-urban interactions in the form of frequent travel of family members contribute to shared patterns of disease and risk factors for disease among poor urban and rural populations.[110]

However paradoxical it might seem, opportunities of increased rural-urban linkages are to be found in the growing flows of liquid and solid waste out of the city into surrounding periurban and rural areas. Although this might also be associated with health problems, as illustrated earlier, it represents opportunities for reducing the use of commercial fertilisers in horticulture (or indeed urban agriculture), or for recycling solid waste for resale in the city. In Hubli-Dharwad, as in many Indian cities, there is a long tradition of auctioning solid waste to farmers at dump sites, with garbage from municipal disposal sites composted and sold as soil fertiliser. In recent years increased presence of plastic, glass and construction debris in urban solid waste has made composting more difficult. Similarly, agro-industrial waste (dung, poultry manure, sawdust, rice and oil waste) is widely used in agriculture as well as for fuel, while nightsoil from pit latrines and septic tank waste are used as fertilisers.[162]

c. *Greater access to information and decision-making structures*: A final overall set of opportunities created by increased rural-urban linkages arise from rural and periurban communities gaining greater access to information as well as to political decision-making structures, which tend to better represented in urban than in rural areas. Although more difficult to assess, increased flows of people and information are important ways of widening the knowledge horizons of relatively isolated village communities, thus improving their opportunities for realising a fair price for the product of their labour (e.g. agricultural products) as well as responding effectively to consumer preferences. Equally important are mechanisms for making effective representations to instances of local or regional power which might be some hours or even days away from remote villages.[172] In all this, **frequent rural-urban linkages, however informal, can make an important contribution to improving farmers' lives.**

Impact of Urbanisation on the Food System

Food security requires both access to, and availability of, sufficient food of an acceptable quality for all people to ensure the maintenance of a healthy life. The availability and satisfactory quality of food depend upon the development and integration of cost-effective systems and technologies for its production, processing, handling, storage, distribution and marketing. Access to food is improved through enhancement of livelihoods by identifying and developing opportunities to add value in crop processing and by improving food quality management for both domestic and export markets.

Source: NRI[173]

The *food system* comprises a variety of interactive subsystems, ranging from food production systems in rural, periurban and urban areas to processing and input distribution systems, marketing and distribution. It also includes food safety management systems (FSMS), and quality management systems (QMS), which are used to control the quality and safety of products. Access to a secure supply of safe food is a human right. National Food Control systems are designed to ensure the existence of a safe food supply, and promote the good health of local populations[173]. All participants in the food system share the responsibility for ensuring that the food that reaches our tables will not be a hazard to human health.

At the same time questions are arising concerning the sustainability of all aspects of the food system. Considering the use of fossil energy, pollution of the environment, nutrition and biodiversity, studies suggest that small scale organic production is more sustainable than large scale market oriented production systems[174]. Intensive urban and periurban agriculture provide opportunities for sustainable, small-scale, poverty-reducing and nutrition-improving systems as a complement to—but not as a substitute for—better linkages between urban food demand and rural food supply[175].

The food system is by far the largest employer and most broad-based economic activity in many developing countries[176]. Urbanisation affects all sectors of the food system. As the urban population increases more food needs to be transported and distributed to cities. Changing food habits of urban dwellers modify the food production systems in urban, rural and periurban areas, inducing changes in the food industry. In South East Asia this is especially true for fruits and vegetables. The growing demand for vegetables has been accompanied by a rapid transformation of the traditional chain marketing system to a more diversified system of retailing through discount stores, supermarkets and convenience stores. These changes have been accompanied by adjustments in the whole distribution system, e.g., central markets and large-scale trading. Developments in the post-harvest sector over the past decade have been accompanied by consolidation and concentration of agroindustry on the urban fringe[177]. Urbanisation creates the need for modifications in national marketing, processing and distribution systems to ensure adequate supplies of food. Food for urban dwellers becomes more expensive as transportation and distribution costs increase and because a far greater proportion of processed products are required[178].

On the production side, rural and periurban agriculture become more market oriented, i.e., more input-oriented and less diverse in terms of variety of products[177]. In many countries market oriented urban agriculture fills this food-diversity gap that has been created, through its more demand-oriented production of fresh and perishable products.

Urban households purchase food from various sources: urban wholesale and large retail markets, supermarkets, secondary markets, small neighbourhood markets, local shops, street vendors, sometimes directly from rural markets (e.g. in Cotonou, the capital of Benin)[179]. The informal small-scale sector and especially women play an important role in the supply of food to the urban poor. Access to and availability of food markets are essential for urban food security. Examples from South Africa show that many of the urban poor in the Townships cannot afford to travel to the supermarkets to buy food and therefore have to buy what is available in the neighbourhood or brought in by street vendors. Often small quantities of fruits or vegetables are incomparably highly prized, as shown for the case of Zambia[174].

Food Supply and Distribution to Cities

With accelerating urbanisation, increasing quantities of food must be brought into cities and distributed within the expanding urban areas (Table 11). It means that an increasing number of food-loaded trucks will come into cities, thus contributing to traffic congestion and air pollution. It also means additional stress on existing food distribution infrastructure and facilities, most of which are already inefficient, unhygienic and environmentally unfriendly.

CITY	YEAR	
	2000	**2010**
Abidjan	1 761	2 718
Belem	769	986
Brazzaville	580	842
Conakry	774	1 249
Ciudad de Guatemala	297	462
Esfahan	1 417	2 247
Hanoi	507	742
Karachi	2 944	4 536
Kinshasa	2 405	3 886
Lima	3 015	3 760
Managua	309	453
Maracaibo	672	874
Nairobi	686	1 140
Port-au-Prince	441	685
Santiago de los Caballeros	366	463

Table 11: Estimated growth of Food Consumption in selected Cities (thousands of tonnes)[180]

Food supply and distribution systems (FSDSs) to cities are complex combinations of activities, functions and relations (production, handling, storage, transport, processing, packaging, wholesaling, retailing, etc.) enabling cities to meet their food requirements. These activities are performed by different economic agents: producers, assemblers, importers, transporters, wholesalers, retailers, processors, shopkeepers, street vendors, service providers (credit, storage, porterage, information and extension), packaging suppliers, public institutions (e.g. city and local governments, public food marketing boards, Ministries of Agriculture, and Transport) and private associations (e.g. traders, transporters, shopkeepers and consumers).

Key elements of food supply and distribution systems to cities

From a strictly marketing perspective, the various functions performed by an FSDS can be grouped in two subsystems:

1. The “food supply to cities” subsystem includes all activities required to produce food and bring it to cities. This includes production (including urban and periurban food production), importation and rural-urban linkages in the form of processing, storage, assembly, handling, packaging, transport, etc.);
2. The “urban food distribution” subsystem includes all the formal, informal, traditional and modern activities required to distribute food within the urban area (e.g., wholesale, intra-urban transport, retailing, street food, restaurants, etc.).

The development of wholesale and retail markets, storage and transport facilities, in line with the demographic, economic and spatial development of the urban areas is another factor. The introduction of more modern marketing techniques including packaging, information technology and management skills is important but requires significant changes in the traditional practices of all FSD agents. Public interventions such as the removal of subsidies, opening of external markets and deregulation can occasionally give rise to monopolistic and monopsonic situations, where either the seller or the buyer respectively, has an exclusive presence in the market. On the other hand, they can bring into play a multiplicity of informal food traders.

“Food supply and distribution to cities” subsystems

Effective food supply and distribution of food into cities, depends on several subsystems, which link production in rural, periurban and urban areas to consumption. These subsystems comprise food preparation and handling, packaging, storage, processing, transport and marketing. Each step in the supply and distribution chain affects the price of food. The total of all such handling costs can be significant. Of course regarding storage, food produced for subsistence faces an entirely different set of problems related to nutrition rather than price considerations.

Preparation includes cleaning, sorting and grading. At all stages in the marketing chain produce will have to be packed and unpacked, loaded and unloaded, put into store and taken out again.

Packaging serves three basic purposes. First, it provides a convenient way to handle and transport produce. Second, it provides protection for the produce. Finally, packaging can be used to divide the produce into convenient units for retail sale and to make the produce more attractive to the consumer, thus increasing the final sale price. Food products may be packed and repacked several times on their way between producers and consumers, depending on the length of the marketing chain. Sophisticated packaging will be used more when it significantly reduces losses; non-perishable produce will not require expensive packaging because the benefits of using it will be marginal. The possibility of using improved packaging made with local materials should always be considered.

The main purpose of storage is to extend the availability of produce over a longer period than if it were sold immediately after harvest. The assumption behind all commercial storage is that the price will rise sufficiently while the product is in store to cover the costs of storage. Such costs will vary, depending on the costs of building and operating the store but also on the cost of capital used to purchase the produce that is stored.

Processing means changing a product's form, presentation and substance. Processing may occur several times before a given foodstuff is consumed, in advance (i.e., after harvesting) or just before the product reaches the consumer (e.g., in a food-processing unit, a restaurant or as street food). Processing costs can vary according to the efficiency of the organization doing the processing, the processing facility's throughput and the frequency of its operation. It will also vary according to the organization's costs which can depend on factors such as fuel costs, depreciation costs, import duties, taxes and wages. Processing activities can be an important source of jobs and income, particularly for women.

In many countries the initial transportation may be the farmer or his labourer, carrying the produce themselves or using animal-drawn carts. Alternatively, traders may send agents around to farmers to collect produce for assembly in one central area. Transport costs will vary according to the distance between farmer and market. But they will also depend on the quality of the roads. A farmer living close to a main highway will probably face much lower transport costs than one living at the end of a rough road which causes much damage to trucks and is frequently impassable. Food transport from wholesale markets to retail markets and shops can be expensive and time consuming because of traffic congestion, lack of parking and the distance to be covered. Perishable products such as fish, meat and dairy products require appropriate transport facilities to prevent food deterioration and contamination.

Food marketing systems not only comprise market facilities (from wholesale to food shops, including formal and informal market channels and street food marketing), but also market information systems. Especially effective market information systems are missing in many developing countries. Many wholesale markets have not adapted to the increase in food quantities consumed by cities. Most of them were constructed twenty or thirty years ago and are now positioned in spots which urban expansion has transformed into central, high-density areas. This increases traffic congestion and there is no space for market expansion. On-market storage facilities, and

particularly cold storage, are insufficient and/or badly managed. Difficulties faced by traders operating in such markets are thus responsible for additional costs and losses as well as increased food contamination. Examples of these problems can be found in cities throughout the world: Accra, Abidjan, Lahore and Santo Domingo. The inadequacy of wholesale facilities is also an impediment to achieving an efficient FSDS.

Markets are often not properly managed and maintained. Funds generated by market fees are not reinvested into maintenance, expansion and better services. This leads to traders feeling that market taxes are not justified and to unrest when rates are increased. Lack of maintenance has been responsible for the burning down of a large number of markets, particularly in Africa.

The traditional food retail sector (public retail markets, spontaneous markets, formal and informal shops and street vendors) is dominant and central to improving food retailing in cities. Middle and high-income consumers shop at supermarkets while low-income consumers, who can spend as much as 80 percent of their income on food, go to local shops and market places near their homes or buy from street vendors.

Public retail markets have not expanded rapidly enough in newly urbanized areas and existing markets have been unable to accommodate the increasing number of retailers. Lack of space or new market opportunities in satellite city districts are thus the cause of spontaneous markets, which fill an important gap in the distribution chain. However, their unplanned nature may create traffic, health and environmental problems. In Dakar, Senegal, three-quarters of the retail markets began on a spontaneous basis. In Lima, Peru, 80 percent have arisen spontaneously, often near slums where there is little availability of public facilities.

Recently many cities have experienced a steep rise in informal sector retailing (spontaneous markets, sales from home and street vendors), which fill an important gap in the distribution chain. Informal retailers are very dynamic and are usually the only source of food distribution in low-income urban areas where planned markets are absent. Informal activities are a source of employment and income for the poor, particularly women and the youth.

Street sellers tend to be seen as a nuisance by authorities, because they cause traffic and hygiene problems and do not pay taxes. Street food and small restaurants are an important and convenient source of cheap processed food for low-income urban consumers. Street foods are defined by FAO as “ready-to-eat foods and beverages prepared and/or sold by vendors and hawkers especially in the street and other similar public places”[181]. They are a source of employment and income for the poor, particularly women (see Table 12). Low-income households increasingly turn to street food in times of economic hardship, but street food and small restaurants can be a source of health problems because of contamination risks.

City	Consumption	Value of trade
Calcutta (1995)	Approx 130 000 street food vending stalls. 33% of the customers purchase street foods each day.	Sales estimated at US$ 60 M per year.
Bangkok	Street foods were found to contribute up to 40% of total energy intake, 39% of total protein intake and 44% of total iron intake for the residents of Bangkok. 88% of total daily energy, protein, fat and iron intakes of children 4-6 years.	Sales of registered street food businesses exceed US$ 98 M per year.
Santiago Chile (1991)	Approx 14, 000 vendors.	Approx US$ 70 M per year.
Guatemala City (1994)	Approx 20 000 vendors.	
Abidjan (1995)	700 000 street food meals per day in 1993.	

Source: FAO[180].

Table 12: Importance of Street Food in selected Cities

Malnutrition and Urbanization - interconnected?

Since urban consumers, not involved in urban agricultural activities, primarily depend on their purchasing power to cover food needs, poverty is a key limiting factor for food consumption and nutritional well-being. As incomes rise, people have better access to food and consume greater amounts and a greater variety of food. Poor people in most societies do not have adequate access to the basic requirements for nutritional well-being. While urban markets offer a more secure, more stable and more varied food supply than do rural areas, not all urban dwellers have adequate access to that food.

In addition to the lack of opportunities for the urban poor to earn a steady income, social networks, which can act as a safety net for the rural poor by providing them with alternative means of access to food, are usually not available to new immigrants to cities. Moreover, while it is estimated that people living in cities earn considerably more than those in rural areas, the higher cost of basic commodities such as food, fuel, accommodation and water, which are often freely available to or produced by rural populations, can result in a lower overall standard of living. This, in turn, can affect health and nutritional well-being.

The cost of food for the urban poor is influenced by the efficiency of food marketing and distribution systems and related infrastructure, as well as by the efficiency of household purchasing patterns. For the urban poor, distribution channels from the markets to the urban fringes are specially important; bad roads and inadequate storage facilities can lead to high losses during transport, resulting in increased costs and, subsequently, increased prices for the urban population.

Alternatives to purchasing food, such as access to food subsidies, food aid, private transfers and urban agriculture also affect access to food by the poor. Access to a small plot of land on which to produce some of their own food can improve the food

security of poor urban families. Families engaged in urban agriculture can increase their consumption of a variety of fresh foods, increase their incomes through the sale of some of these foods, and decrease their dependency on gifts and food transfers. Such self-provisioning can reduce market expenditures, thus releasing some of the family budget for other expenditures central to the family's well-being.

What are the consequences of urbanization on urban food security? Does it lead to an increase in urban malnutrition? Available data are not abundant, but they indicate the same disquieting trend: increasing rates of malnutrition among urban populations in both developing and industrialized countries. Given that both the number and proportion of the poor living in cities is increasing, there is cause for concern that food insecurity and malnutrition in urban areas will become more of a problem.

Malnutrition has generally been considered a problem primarily of rural populations. It has been, and often still is, assumed that the nutritional status of urban populations is better than that of rural populations, and indeed, the majority of city dwellers do enjoy improved nutritional status. This improved nutritional status largely results from both increased availability and variety of foods and better access to health and other basic social services. However, not all urban populations are benefiting equally from this increased availability of goods and services. Poor households, including new migrants from rural areas and the homeless, are most likely to be or become food insecure. They face a variety of challenges that affect their health and nutritional well-being.

Procuring adequate amounts of good quality and safe food at affordable prices is the main problem that poor urban families face every day. In the areas of large cities where migrants tend to settle, difficult access to food prevails. Many of these areas spring up so rapidly that urban officials are unable to control their growth and provide adequate municipal services. Other problem areas are legalized parts of the cities that become so overcrowded that provision of adequate services is also very difficult. In both cases, poor nutrition is a logical outcome of a combination of food insecurity, poor health and care.

Nutritional status

Although data on the health and nutritional status of the lower income groups in urban populations is lacking, there is growing evidence that malnutrition among the urban poor is not necessarily more prevalent, but may be more severe than malnutrition among rural populations. Moreover, the problems of undernourishment, malnutrition and ill-health appear to be steadily increasing in the poorest urban areas and slums.

Generally, aggregate rural-urban comparisons indicate that childhood stunting and underweight status are lower in urban areas, whereas wasting and morbidity from infectious diseases are often, although not always, higher in urban areas. However, the most disadvantaged urban children have rates of stunting that are, on average, only slightly lower than the most disadvantaged rural children[182].

Table 13: Rural and urban underweight data, selected countries (WA = Weight to age ratio)

Country	Survey year	Population year	Percent urban population 0-4.99 years (1992 revision)	Urban population 1996 revision (millions)	Urban population 0-4.99 years ('000s)	Prevalence low WA urban (percent)	Low WA 0-4.99 years urban ('000s)	Percent rural population 0-4.99 years (1992 revision)	Rural population 1996 revision (millions)	Rural population 0-4.99 years ('000s)	Prevalence low WA rural (percent)	Low WA 0-4.99 years rural ('000s)	Share of low WA 0-0.499 in urban areas (percent)
Madagascar	1992	1990	15.5	2.968	460.04	34	156.4	19.1	9.614	1836.27	42	771.2	16.86
Madagascar	1995	1995	15.7	3.928	616.70	30.8	189.9	19.3	10.945	2112.39	35.1	741.4	20.39
Malawi	1992	1990	19.8	1.102	218.20	15.8	34.47	20.8	8.228	1711.42	29	496.3	6.50
Malawi	1995	1995	19.7	1.301	256.30	24.8	63.56	20.7	8.372	1733.00	30.3	525.1	10.80
Mauritania	1990.5	1990	18	0.871	156.78	44.3	69.45	18.3	1.132	207.16	49.8	103.1	40.24
Mauritania	1995.5	1995	18.2	1.1165	203.20	19.5	39.62	18.4	1.109	204.06	27.2	55.50	41.65
Nigeria	1990	1990	17.1	33.664	5756.54	26	1496.70	20.7	62.489	12935.22	38.1	4928.23	23.29
Nigeria	1993	1995	16.4	44.184	7246.18	35.3	2557.90	19.8	67.537	13372.33	41	5482.65	31.81
Peru	1991.5	1990	12.1	14.862	1798.30	6.4	115.09	15.9	6.708	1066.57	17.6	187.72	38.01
Peru	1996	1995	11.8	16.676	1967.77	3.9	76.74	15.3	6.855	1048.82	13.7	143.6	34.82
Philippines	1987	1990	13.3	29.657	3944.38	30.8	1214.87	15.5	31.122	4823.91	34.1	1644.95	42.48
Philippines	1993	1995	12.5	36.662	4582.75	28.3	1296.92	14.5	31.177	4520.67	30.9	1396.89	48.14
Tanzania	1991.5	1990	18	5.301	954.18	25.2	240.45	19.8	20.182	3996.04	29.9	1194.81	16.75
Tanzania	1996	1995	18.3	7.279	1332.06	19.6	261.08	20.1	22.747	4572.15	33	1508.81	14.75
Zambia	1992	1990	20.5	3.032	621.56	20.8	129.28	19.3	4.192	809.06	29	234.63	35.53
Zambia	1996.5	1995	19.7	3.477	684.97	16.5	113.02	18.6	4.604	856.34	28	239.78	32.04
Uganda	1988.5	1990	18.8	1.858	349.30	12.6	44.01	20.2	14.791	2987.78	24	717.0	5.78
Uganda	1995	1995	19	2.469	469.11	15.3	71.77	20.5	17.22	3530.10	26.8	946.07	7.05
Bangladesh	1985.5	1985	12.8	13.267	1698.18	62.3	1057.96	15.9	86.043	13680.84	72	9850.20	9.70
Bangladesh	1989.5	1990	12.8	17.2	2201.60	62.7	1380.40	15.9	92.565	14717.84	66.7	9816.80	12.33
Bangladesh	1996/7	1995	12.8	21.631	2768.77	43.6	1207.18	16	96.598	15455.68	57.9	8948.84	11.89
China	1992	1990	7.9	302.705	23913.70	6.5	1554.39	10.8	852.6	92080.80	20	18416	7.78
China	1995	1995	7.7	368.723	28391.67	10	2839.17	10.6	851.501	90259.11	18	16246.64	14.88
Brazil	1989	1990	11.1	110.57	12273.27	5.5	675.03	14.1	37.432	5277.91	10.3	543.62	55.39
Brazil	1996	1995	9.9	124.624	12337.78	4.6	567.54	12.7	34.39	4367.53	9.2	401.81	58.55
Egypt	1990	1990	12.7	24.743	3142.36	7	219.9	15.8	31.57	4988.06	12.1	603.56	26.71
Egypt	1992.5	1995	11.7	27.711	3242.19	7.1	230.2	14.6	34.386	5020.36	11.6	582.36	28.33
Egypt	1995.5	1995	11.7	27.711	3242.19	9.9	320.9	14.6	34.386	5020.36	14.1	707.87	31.20
Honduras	1987	1985	14.9	1.58	235.42	10.6	24.95	18.7	2.607	487.51	25.3	123.34	16.83
Honduras	1993.5	1995	14.1	2.474	348.83	10.8	37.67	17.9	3.179	569.04	23.4	133.16	22.05

Source: IFPRI (1999)[97]

The data in Table 13 shows that, in all countries included, the low weight to age ratio (WA) is higher in rural areas than in urban areas. Nevertheless the time series data for the urban share of low WA for children under five evidences dramatic increases for nearly all countries in the table. For example, while the percentage of children under five in cities changes only slightly, there is an increase of low WA cases of 8 % for example in Nigeria between 1990 and 1993. On the other hand Brazil, which shows only a modest increase from 1989 to 1996, is characterized by an extremely high urban share of low WA for children under five (58.55% in 1996). In another recent study, 12 out of 16 countries indicate that the number of underweight children is rising at a faster rate in urban than in rural areas[183].

For poor pregnant women in urban areas, the combination of inadequate energy intake, frequency of disease, inadequate access to safe water and sanitation and unhygienic practices, the risk of low birth weight babies is high, and this in turn puts their children at risk of malnutrition and disease.

A health and nutritional problem of increasing concern among urban populations is the growing rate of obesity among both adults and children. Obesity poses a major risk for such chronic diseases as diabetes mellitus, cardiovascular diseases and some cancers. Paradoxically, poor households appear to be the most vulnerable to obesity and related chronic diseases, and data indicate a high prevalence of overweight and obesity among women and children. This is of concern, as overweight and obese children are at greater risk of growing up to be overweight or obese adults and of suffering from related chronic diseases later in life[184]. These increasing rates of obesity are due to a number of factors, most notably, a more sedentary lifestyle and changing food habits in the urban environment. Among the urban poor, economic constraints likely affect food choices, with inexpensive, energy-dense foods of comparatively low nutritional value providing the bulk of the family diet.

Health implications in Urban Environments

Although urban areas are generally more privileged than rural areas in terms of resources, services and facilities, many municipal governments lack the revenues and human resources for planning and administering basic services for their growing populations. Statistics on urban living conditions indicate that in most major cities large sections of the population, generally the poor, do not benefit from the urban infrastructure and services; their basic needs of housing, water, sanitation and solid waste removal, education, transportation and marketing facilities are not met.

For the urban poor, the lack of adequate water and sanitation facilities remains a major problem which has severe consequences for environmental hygiene and public health. In informal settlements of Nairobi for example, 94 percent of the households have no sanitation and 60 percent have no direct access to toilets[185]. The prevalence of communicable, gastrointestinal, food-borne and other infectious diseases, such as diarrheal diseases, malaria and parasitic infections, is usually high under such conditions. Interactions between infectious diseases and nutrition are well-known, and environments that increase health risk exposure also increase the risk of undernutrition and malnutrition. In these instances, infants and children are the most vulnerable. These conditions are worsened if the urban poor have no financial or physical access to health facilities.

However, more information is needed on the particular problems and plight of the urban poor in order to better understand their key constraints to achieving food security and optimal nutritional status. This information will assist in the identification of the most acute and serious problems that the urban populations face, and will be useful for designing, implementing and monitoring interventions aimed at meeting the food and nutritional requirements of the urban poor in a sustainable manner.

BOX: Urban Food Insecurity in Developed Countries

Nutritional problems in cities of industrialized countries are usually assumed to relate to overnutrition, obesity and related health impacts and diseases. Most people are not aware that hunger and micronutrient malnutrition are an increasing problem in cities like New York, Paris or Moscow. Unfortunately, detailed and comprehensive government statistics are woefully inadequate concerning the nutritional deficiencies of impoverished urbanites in developed countries, some of which are illegal and therefore all the more difficult to identify and reach. Most available information comes from surveys conducted at soup kitchens, night shelters and other direct services sites operated by NGOs or local government institutions.

Although there is a general lack of information which is in turn related to the limited awareness and commitment of research and planning institutions, there is increased evidence:

- that the prevalence of food insecurity in cities is a significant problem,
- that it is likely rising as a result of socio-economic crisis and migration patterns, and
- that, compounded with unhealthy living conditions and breakdown of social networks, it is leading to significant albeit underestimated nutritional problems.

Job loss, the rising cost of living (rent and food), the breakdown of governmental support systems (particularly in transition countries) and social disorganization are pushing more and more households and individuals into poverty and destitution. Food insecure groups in wealthy cities include poor households, homeless people, immigrants (often illegal and therefore invisible) and elderly people living alone on fixed incomes. Each of these groups faces their own specific problems related to food insecurity.

The food choices of low-income groups are limited by the need to find inexpensive sources of energy. Therefore vulnerable families may buy or be given foods rich in fat or carbohydrates which supply cheap calories and are easy to store. As a result, diets lack the necessary vitamins and minerals which are usually provided by fresh foods such as vegetables, fruit and animal products. It is therefore not surprising to find a combination of obesity and micronutrient malnutrition.[186]

Homeless people and immigrants with limited income may not be able to afford to buy enough food. This is further compounded with the lack of shelter, which implies exposure to the elements, the inability to cook and store food adequately, and limited access to health care. Many develop an addiction to alcohol that consumes a substantial share of both their

energy intake and budget, while producing dietary inadequacies. Micronutrient malnutrition and undernutrition are therefore frequently be found among homeless people.

Elderly and disabled persons living on their own are confronted with an additional problem. Their personal immobility may reduce their physical access to food. Rapid expansion of supermarkets in outer city areas, as occurred in Europe, has led to the disappearance of local shops and street markets, often making it impossible for the elderly and disabled to meet their nutritional needs. To ensure their food security it is extremely important for them to have an easy physical access to nearby shops and home delivery services at affordable prices.[186] Also, in research in rural and urban areas of Central New York, Cornell nutrition researchers have found that about 60% of low income elderly have two or more health problems, many of which have dietary treatment as part of the therapy. Food insecurity often makes it impossible for these elders to follow their medically-prescribed diet and this can have major health consequences. [187]

Given the increasing gap between socio-economic groups in urban areas of industrialised countries and the proportion of vulnerable households, the prevalence of undernutrition and micronutrient malnutrition is an increasing concern. Therefore, it is important to include cities in developed countries in any discussion on urban food security. All too often the debate about assisting food insecure people in developed countries is limited to food aid interventions (dry rations and/or warm meals), which in isolation are not the most appropriate response, and cannot provide a sustainable solution to the problem.

For example, in Toronto food banks do not meet all a family's food needs. On average, a food hamper contains only a three-day supply of food. Many food banks cannot serve a family more than once a month, no matter what their requirements are. Food banks are very much needed right now, but they are not the best way to end hunger in the long term. Only sufficient income will truly end the problem.[188]

Urban and periurban agriculture – links rural to urban

At its fifteenth Session in January 1999, the Committee on recommended the development of Organization-wide, and coordinated cross-sectoral programme on Urban and Peri-Urban Agriculture (UPA).

This endorsement concerning UPA requires that FAO, together with its partners:

- Provide guidance and assistance to member countries, in active cooperation with existing international networks by focusing its UPA activities on areas of its comparative advantage and interacting in a complementary manner with other UN organizations, local grassroots organizations, NGOs, and other organizations. These activities should lead to an improved understanding of the benefits and risks inherent in urban food security and provide a knowledge base on the issues of Urban and Peri-Urban Agriculture.

Incorporation of UPA into existing FAO Programmes:

- Testing methodologies for UPA through new and existing programmes including crop intensification and diversification opportunities.

- Providing specialized guidance on food safety to urban and periurban farmers, food handlers and food processors.
- Offering technical back-stopping for existing and on-going local project development in urban and periurban agriculture.
- Identifying appropriate policy interventions for maximizing contributions of food supplies for at-risk groups and poor households.

Consequently, FAO has established the Interdepartmental Working Group on "Food for the Cities - FFC" as one of its 16 Priority Areas for Inter-disciplinary Action (PAIAs). FFC addresses a wide range of issues such as urban and periurban agriculture, assembling, handling, processing, transport, credit, information, marketing and distribution, as well as food security, nutrition and environmental sustainability.

Urban and periurban agriculture (UPA) is the manifestation of rural institutions and lifestyles in urban areas, and therefore the most direct linkage between both areas. This is a major reason why institutional conflicts arise surrounding agricultural activities in the urban context. Such conflicts are observed everywhere and affect all participants whether they are migrant newcomers in urban areas or long established urban farmers.

BOX 19: Voice of the Urban Farmer

Here, as I'm unemployed, we decided that we women had better come together and see what we can do. Because we cannot sit and fold our arms and look for the Government to give us jobs. We have to do something with our hands. So we have decided to do farming with vegetables, because we have realised that people of our locality travel a long distance to buy vegetables. So we have decided to make a market closer to our people. So now we supply many people around our locality. That's why we started this project."

Katibe Mabusela, urban farming group in Soshanguve, Pretoria, South Africa[189].

By and large, urban dwellers with urbane, cosmopolitan and modern lifestyles and self-concepts do not want to be associated with “backwards”, rural behaviors. Lifestyles and institutions differ and function differently in urban versus rural environments. This leads to problems with land tenure and land-use when people with rural lifestyles and attitudes act out their experience in urban areas. Consider Africa for example, where most rural land tenure systems are traditional. More complex tenure systems have been introduced due to the massive mobility of the population set in motion by colonialism and subsequently by globalization and the growth of a free market economy. This complexity is the product partly of the adaptive responses of African societies to the novelty of rapid urbanization, and partly of various devices of colonial administration to exclude the Africans from having a permanent stake in living in the city[190].

Urban agricultural activities are rural influences on urban environments, but ruralization is not the inverse of urbanisation. Rather they are complementary. Connections between rural migrants and their "homes" or places of origin, are often strongly maintained, together

with membership in rural based institutions and societies. Many cities have considerable populations of farmers. While often only part-timers, these urban farmers in many cases earn as much or more from their farming as from their "urban" occupations.[191]

Urban farming helps feed city residents. It also helps protect the environment by reducing the need to bring in food. The UN Development Program has estimated that about 800 million urban and periurban farmers produce over 15% of the world's food.[192] If city governments adopted explicit policies and incentives to encourage urban agriculture, the number of urban farmers would likely increase substantially, urban food supplies would increase and likely diversity, and overall food insecurity could be reduced.

Until the mid-1990s, when massive population growth and rising demand overwhelmed local food supplies, urban farmers in China's 18 largest cities were able to produce over 90% of locally consumed vegetables and half of all the meat and poultry. Hong Kong still produces two-thirds of the poultry, half the vegetables, and 40% of the fish it consumes. Singapore produces all of its meat and fish and one-quarter of its vegetables [81, 192].

Recycling—converting mountains of urban waste into new resources—also makes sense both economically and environmentally. Economically, for every 1 million tons of solid waste, about 1,600 recycling jobs could be created in developed and developing countries alike, according to industry surveys[193] [38]. Recycling, of course, benefits the environment by saving natural resources and reducing the amount of trash in landfills or dumped into rivers, lakes, and oceans.

Rural traditional systems manifest in many ways in the urban context. Occupation of vacant unused land, open spaces, river banks, land along railway lines, and under power lines is most common manifestation in many African countries. Small-scale animal husbandry in cities appears even more "rural", yet is a common practise in many countries. *"First come, first cultivate"* is an accepted tenet of land occupation for urban and periurban agriculture in Africa, for example. The establishment of informal market channels (street marketing, direct vending to neighbours, etc.) is another rural manifestation in the more formal urban environment.

BOX 20: **Urban forestry and sustainable urban development**

Urban forestry means "the management of urban vegetation to meet local needs"[197] or "planning, design and management of trees and forest stands with amenity values, situated in or near urban areas[194]. The term **urban greening** means the planning, and managing of trees, forests and related vegetation to create or add values to the local community in an urban area[195]. Trees have multiple functions as an integrated part of the urban food system (Table): they provide food (fruits, roots and leaves), medicines, shade for crops and animals, fodder for the animals, and they deliver organic material for composting. In the past these benefits of trees have often been overlooked, as conventional forestry concentrated on the environmental benefits and recreational value of urban vegetation. Urban forests also improve the quality of urban life in many ways, including tangible and less tangible benefits to meet local needs. urban forestry contributes to the well being of man in the urban environment by reducing stress factors and bringing relaxation[194].

Urban agriculture and forestry could play a major role in sustainable city development by creating open green spaces, increasing the urban habitat diversity and thereby biodiversity in cities, reducing noise and pollution, closing the energy loops and making cities more habitable. The intensive use of urban and periurban land for food production can contribute to the maintenance of nature reserves outside cities and thus contribute directly to natural resource conservation. The in situ maintenance of biodiversity is another characteristic that is related to the use of small plots in cities. Trees and local vegetables that have widely disappeared are still grown to a large extent in small family plots. The limited space available encourages dense planting and mixed cropping not common in purely market oriented types of agriculture. A different understanding of, motivation towards and knowledge about agriculture might be one of the characteristics of Urban Agriculture.

Household-based food production near the home encourages the use of household waste to regenerate soil fertility and the use of household wastewater for irrigation. However, this ideal is not practised everywhere. Nonetheless, as a goal it holds high potential for the protection of natural resources and sustainable city approaches.

Urban agriculture is not yet fully recognised as an important factor in sustainable city development. Therefore, there is a need to evaluate programmes and best practices in urban and regional planning and the latest concepts of sustainable city development. The UNCHS "Sustainable City Programme" is one ongoing programme that could serve as a focal point for future co-operation.

Many UPA initiatives include forestry in their overall definition of agriculture[196]. A broad understanding of urban forestry focuses on using trees to provide food, fodder, fuel and building material, but also considers recreational and environmental benefits.

Table 14: Conventional and Development Forestry[197]

Multi-purpose Urban Development Forestry = Urban Forests for Local Needs	
Conventional urban forestry focuses on amenity value in "developed countries"	Development Forestry focuses on economic benefits, employment and support of agriculture in "developing countries" It provides:
• reduce noise • reduces air pollution • reduces climatic extremes • cools cities and planet • conserves energy • provides beauty and shade • improves water quality • controls water run off • provides habitat for wildlife • increases recreation value • increase health/well-being • provides habitat for wildlife • increase health/well being	• food • fuel • fodder • fencing material • timber • medicine, oil • raw material, fibre • employment • increases cash/subsistence income • improves gardening conditions **+** all benefits from conventional forestry

BOX 21: Urban Horticulture[198]

Development of urban horticulture involves the production of vegetable and ornamental plant under irrigation, but also fruits, tubers and roots, and mushrooms. Horticulture production in urban and periurban areas is proposed as a means to partially meet the job and food requirements of the increasing urban population. In view of its potential high return rate and scope for intensification, horticulture can be an attractive opportunity in meeting food needs of urban dwellers. Horticultural species, as opposed to other food crops, have a tremendous yield potential and can provide up to 50 kg of fresh produce per square meter per year, depending on the technology applied. As compared to other agricultural activities horticulture makes efficient use of scarce land and water resources[199]. Locating their production close to the consumption centres it also helps to reduce the requirements for special packaging and storage facilities. It also reduces the post-harvest losses, which commonly reach 30%.

In urban and periurban areas three broad categories of horticultural producers can be distinguished. The division is mainly related to growers' access to land and water resources which largely determines the type of activities that can be developed. They include:

before   *after*

Photos 2: The establishment of Microgardens in inner cities can help poor families to improve the diet and to earn additional income

- Urban micro-gardens and mushroom production as well as high value exotic ornamentals, condiments and aromatics[200];
- Highly intensive cultivation systems under localised irrigation methods and small-scale nurseries;
- Small-scale allotment schemes.

In many areas in the world horticultural crop production relies on the use of irrigation to reduce the risks associated with rainfall variability and to optimise inputs. Though water is scarce in many urban centres and water systems are often not designed to handle increasing population, water supply for agricultural uses in cities is generally omitted from planning in most cities. Therefore alternative water sources of reliable quantity and quality need to be sought. For cultivation in urban centres these sources might include groundwater, collected rainwater, protected springs and wells, or sometimes extension of the municipal water supply network[201].

BOX 22: **Animal Production in Cities**

Livestock keeping in cities is common in many developing countries. Goats, sheep, cows, horses, camels, chickens, buffalo, pigeons and many other types of animals can be found in cities around the world. Each species poses specific advantages and disadvantages in the urban context. Small animals in particular are adaptable to backyard conditions: they require little start up capital, they are easily sold, and they reproduce fast. Aquaculture represents an interesting diversification of agriculture at the periphery of cities. In Abidjan (Côte d'Ivoire), fish are fed rice bran, and slaughterhouse residues and manure are used as fertilisers to produce animal feed. at present *tilapia* culture in Southeast Asia both spreading and intensifying. In Thailand, periurban enterprises use processing wastes and other inputs from cities[202].

Photo 3: "Urban" cows in Dar es Salaam

Integrated Livestock Systems in Mexico City

In the eastern part of Mexico City cows are kept in small scale stables which act as small dairy businesses. The milking is done by hand and milk and cheeses sold to the neighbourhoods. Over 70 % of the fodder originates from the fruit and vegetable waste that is generated in the large markets of the city[203]. The type of wastes used include maize husks, lettuce, cabbage and cauliflower trimmings and the foliage from other vegetables such as radishes and broccoli. In addition, fruit and other horticultural products deemed unsuitable for human consumption are also made available to supplement animal diets. Studies have found that 100 tons of waste per day is used in complementing the feeding system of approximately 2500 cows, producing an estimated 37,500 litres of milk per day[203].

Pigs, poultry and other animals are also kept within the city boundaries. The animal keeping sites are partly the result of former periurban village farms that have been absorbed by the growing city and partly the result of newly established urban farms.

The animals are mostly kept in family backyards, but modern, technically sophisticated stables are also found. The number of animals per site varies from the solitary pig often maintained by women on a small backyard farm up to 600 pigs in commercial urban farms. The pigs are fed a combination of food wastes available from the city (including kitchen wastes, stale bread and tortilla, left-over tortilla dough, and chicken guts) and fruit and vegetable wastes from city markets, amounting to 4000 tons per day[203]. Commercial farmers have established sophisticated recycling and fodder preservation systems, including the production of biogas.

The Central Food Depot of Mexico City (Central de Abastos), the largest market in the world, receives about 24,000 tons of food products daily[204]. It generates 800 tons of waste per day, mostly organic, of which 100 tons are used as forage for the 2500 dairy cattle maintained in the urban stables in the east of Mexico City. This constitutes a significant recycling of otherwise waste material. Animal manure re-enters the system and is used as organic fertiliser for the cultivation of Nopal (*Opuntia ficus indica*) in gardens and commercial horticulture.

Photo 4: Pig stable in Mexico City. Animal farming has long tradition in this part of the city. As the city continues to grow, space gets more and more limited. Therefore the farmer moved the pics up to the second floor of his house.

Photo 5: Organic waste collection on the Central de Abastos, the largest food market of the world, in Mexico City. The farmer and his wife collect fresh cabbage to feed their 20 "urban cows"

BOX 23: **Urban Aquaculture**

Despite their important role for food security, urban and periurban fisheries and aquaculture have been largely neglected in the past. Urban and especially periurban fish farming has reached industrial dimensions in some regions. Urban/periurban fish farms can form an integral part of an integrated urban/periurban food system. Fish culture in some cases complies with the multiple purpose of producing cheap protein, creating employment, contributing to wastewater treatment and using periurban areas where settlement or alternative land use is impeded or precluded[205].

Integration of Aquaculture with Livestock Rearing

Several forms of integration exist, going from association of pig or chicken sties on the sides of the ponds or on stilts in the pond, to selected duck strains which not being piscivorous can coexist with fish fry and fingerlings in the ponds. The synergistic approach is to utilize ponds which are built for water storage and for watering livestock to also produce fish. extraction), Fish production has attained annual levels ranging from three to seven tons of fish per hectare, when a combination of livestock manure and agricultural by-products or processing wastes (such as rice bran or cakes of various seeds used for oil) have been used as feed for the fish. One example comes from an FAO pilot project. Acting on the principle that sewage is not just wastewater but also a source of nutrients, an experimental plant in operation since 1994 treats sewage with aquatic weeds and fish. One million litres a day of primary treated sewage sits first in ponds containing duckweed then in ponds stocked with carp and prawns. After five days, water quality has improved to the point where it may be used for agriculture, although not for drinking. The sale of fish, fattened in the sewage ponds for 8 to 12 months, almost offsets the operating cost of the plant, leaving a net cost of 15,000 rupees a year (about US$385). The plant, which covers half a hectare, is run by two men[206]

Table 15: Selected Cities and location of main agricultural activities - farming systems information[207]

City	Urban Area	Peri-urban Area	Average Farm (Plot) Size	Gender Specifics
Africa				
Accra (Ghana)	Food crops, home gardens: vegetables, poultry Open spaces: crops, vegetables	Crop farming, mixed farming	No data	PU[e]: Men (vegetables) U[f]: Men (crops) Women (small livestock)
Nairobi (Kenya)	Home gardens, vegetables, poultry Open spaces	Market farms, crops, poultry, livestock	No data	U: Women PU:
Dakar (Senegal)	Home gardens: vegetables Small scale livestock (poultry, sheep)	Vegetables, battery chicken, laying hens	U: 10-30 m² PU: 0,1 - 1,0 ha (small-scale); 1 - 20 ha (market)	PU: Men U: Women (98% home gardens) and men
Dar es Salaam (Tanzania)	Home gardens, community gardens, small-scale livestock Open space: vegetables	Vegetables, mixed crop-livestock system fruit production	PU: 2 ha U: few m² to some 100 m² (Home gardens) U: 700-950 m² (open spaces)	PU: Men and Women U home gardens: Women U open spaces: Men and women
Kampala (Uganda)	Open spaces: crops, vegetables, poultry		PU: 1200 m² U: 100 - 400 m²	U: Women
Lusaka (Zambia)	Home gardens, small scale livestock Open space: crops and vegetables (rainy season)	Vegetables and crops, livestock	PU: 830 m² (small scale) U: 120 m² (gardens, high density); open space: 420 m²	PU and open spaces: Men U: home gardens: Women
Harare (Zimbabwe)	Home gardens, vegetables, small livestock Open space: crops (rainy season)	Market horticulture vegetables, crops, livestock	PU: 430 m² U: 30 m² - 300 m² (high density - low density)	PU: Men (large scale market) Women (small scale market) U: Women
Europe				
Sofia (Bulgaria)	Home gardens , vegetables Private commercial farms	Crops, livestock (private)	U: 1000 - 10 000 m²	U: Women
Latin America				
San Jose (Costa Rica)[a]	Home gardens: vegetables	Vegetables	U: 20 - 100 m² PU: 100 - 2700 m²	U: 90% women (home gardens)
Havana (Cuba)	Community orchards, organoponics: vegetables, spices, medicinal plants	Organoponics, poultry, fruits,	U: 1200 m²[22] PU:	U and PU: men and women

City	Urban Area	Peri-urban Area	Average Farm (Plot) Size	Gender Specifics
Latin America				
Santiago (Dominican Republic)[b]	Solares (plots): food crops, tobacco, small scale livestock, Home gardens: vegetables	Food crops, tobacco, livestock	U: 200-600 m² PU : ca. 2 ha	U: men (crops), women (small scale livestock, home gardens) PU: dito [2)]
Port-au-Prince (Haiti)[c]	Home gardens: Ornamentals, vegetables, medicinal plants crops, trees	Open spaces: crops, vegetables, trees, ornamentals,	U: 5 m² - 1 ha PU: 100 m² - 25 ha and more	U: Women and men PU: Men and women
Mexico City (Mexico)[d]	Home gardens, *parcelas familiares, solares*: vegetables, flowers, fruits Roof production Pigs	Grain, vegetables, forage, sheep. pig and poultry	Intensive use: 800-1000 m² Extensive use: 0,5-2 ha	U: Women Whole family
Lima (Peru)	Home gardens, community gardens	Vegetables, tubers, trees, hydroponics, herbs, medicinal plants, livestock (PU)	U: 60 - 200 m²	U: Women PU: Women and Men
Asia				
Hubli-Dharward (India)	Vegetables, small livestock	Livestock, vegetables, sewage based Farming System	PU: 6000 - 8000 m²	Vegetables: Women , livestock: men and women
Vientiane City (Laos)	No information	Vegetables,	PU: 5000 m²	PU: Women and men
Manila (Philippines)	Vegetables, fish, poultry	Rice	no information	U: Women (vegetables) PU. no information
Cagayan de Oro (Philippines)	40 % home gardens/ fish production	Crops and vegetables/ fish production	PU: 1,7 ha, 0,5 ha for vegetables	no information
Ho Chi Minh City (Vietnam)	No information	Crops, vegetables, sugarcane, rubber, gardens, orchards	no information	no information

a) Information on San Jose (Costa Rica) from C. H. Marulanda (personal communication), according to this source, the situation in other major cities of the area, like Managua (Nicaragua), Guatemala (Guatemala), San Salvador (El Salvador) and Bogotá (Colombia) is very similar with respect to sizes of the home gardens and the high involvement of women in vegetable production.
b) Information for Santiago (Dominican Republic) from J. P. del Rosario (personal communication)
c) Information for Port au Prince from M. Regis (personal communication)
d) Information for Mexico City from B. Canabal (personal communication)
e) PU: Peri-Urban
f) U: Urba

Urban agriculture is different from, and complementary to, rural agriculture in local food systems. One of its main characteristics is its integration into the local urban economic and ecological system[208]. Urban agriculture is found to complement rural agriculture in terms of self-provisioning, marketing flows and market-supply flows, as shown for instance by CIRAD studies on vegetable and livestock production in West and Central Africa[209]. Table 14 gives examples for the wide variety of urban agricultural activities in selected cities.

A second characteristic is that at any given time across cities of different size or complexity more of the agriculture found in the city will be of an urban nature in larger as opposed to smaller centres. Systematic evidence for this relationship however, remains more limited than for the first. A six-city Kenyan study further shows that intensity and productivity increases with city size; similarly, the use of organic inputs and of networks of exchange or trade increases with city size[210].

The comparative advantages of urban and periurban agriculture are highest for perishable, high value-added commodities such as vegetables, eggs and milk, while rural agricultural production areas supply the bulk of long-shelf staple food such as rice. Hence there is a strong complementarity between urban, periurban and rural areas in terms of urban food supply, and there is a strong need to coordinate actions designed to support the three food sources. Yet such coordination is made difficult by the heterogeneous nature of the public authorities supporting agriculture in the three areas: while municipalities play a crucial role in urban and periurban areas, ministries of agriculture and regional administrations are much more active in rural areas. Periurban areas may correspond to several administrative regions or even fall between the policy cracks of all jurisdictions. For instance, in Hanoi, vegetable production originates from inside Hanoi, but also from at least three surrounding provinces.

Often it is difficult for all these administrations to co-ordinate their policies and actions on behalf of the urban food supply[211]. Conflicts between customary and modern land tenure systems are inevitable. Most of the conflicts have to do with the transition from communal land to freehold land tenure. This leads to fundamental changes in land use. The role of Land Boards and traditional authorities in manipulating and interpreting local land rights is unclear[212].

People in marginalized settlements in most developing countries survive through activities aimed at subsistence (i.e., providing basic needs), including growing crops and keeping livestock. Richer investors find proximity to markets and specific inputs (e.g., agro-industrial by-products, veterinary services) desirable, a situation that fosters the emergence of specific kinds of medium and large-scale enterprises in urban and periurban areas, like industrial poultry production and dairy farms.[213]

Conversion of agricultural land to urban uses is a particular concern, as rapid growth and escalating land values threaten farming on prime soils. Existing farmland conversion patterns often discourage farmers from adopting sustainable practices and a long-term perspective on the value of land. At the same time, the close proximity of newly developed residential areas to farms increases public demand for environmentally safe farming practices. Comprehensive new policies to protect prime

soils and regulate development are needed. By helping farmers to adopt practices that reduce use of chemicals and conserve scarce resources, sustainable agriculture research and education can play a key role in building public support for agricultural land preservation[214].

Urban agriculture – a response to crisis?

Urban food production would by far have less importance if there would not be a shortage of adequate and accessible income opportunities and an unsatisfied demand for appropriate quantity and quality of agricultural products in cities. Under such circumstances, urban food production can be defined as a "crisis induced strategy", ensuring survival of the poorer segment of the population. Supporting the **"crisis model"** view, are examples of people's survival strategies during periods of economic decline and social unrest in densely populated cities[215].

Conditions of hunger and poverty were widespread in many European countries nearly 200 years ago when the first "gardens for the poor" emerged. Rapid industrialization, accompanied by urbanization and migration, forced large numbers of people into dismal living conditions. In contrast to what happens in many developing countries today, urban allotment gardens were one official response at that time[216].

Among the **global** reasons urban poor face worsening conditions are the effects of globally induced regional economic crisis (such as that recently experienced by Asia) and burdens on consumers imposed by Structural Adjustment Programmes (SAPs) as reported by many authors[217,218,219].

BOX 24: **Crisis prone Cities**

Jakarta is one example in recent history. The economic turmoil that first hit Indonesia in 1997 has left millions of people vulnerable to food insecurity, without enough money to buy sufficient food. First, urban areas were dramatically affected. Alarming food related problems were reported. As a reaction to this people started to produce food on small plots and open spaces all over the city—transforming even former public parks into gardens—and government bodies encouraged the people of Jakarta to grow their own food. Problems originating in urban areas spread to rural areas later by migration. In some rural communities the population has increased up to 30%, putting severe pressure on those areas[220].

Maidar (1996)[221] reports an example from Mongolia. The recent "shock therapy" measures taken by the Government have created great hardship as prices for consumer goods rise while salaries remain unchanged. The prices for food, coal, wood, electricity, transportation, etc. are skyrocketing. In 1990/1991, 850 families grew vegetables in the city. In 1996 this number has increased over 20 times reaching 21,000. More and more families have begun to realise that urban agriculture might be a way to improve their standard of living.

Urban agriculture is emerging strongly in Sub-Saharan Africa, where the fastest urban growth occurs in countries least equipped to feed their cities[222] **No matter if**

supported or prohibited urban agriculture persists. This reality necessitates that city authorities take precautions to safeguard the well-being of their residents and the environment. Market-oriented food production needs guidance, expansion and control to ensure food safety for consumers and healthy conditions for urban producers.

Additionally, the importance and the potential of urban food production for sustainable urban development is increasingly acknowledged. Urban agriculture does not occur in isolation but is closely related to the urban environment. Urban agriculture could play a major role in sustainable city development by creating open green spaces, increasing the urban habitat diversity and thereby biodiversity in cities, reducing noise and pollution, closing energy loops through solid and liquid waste recycling and making cities more habitable. In this sense urban agriculture offers great opportunities to be integrated into the vision of future sustainable cities. Contrary to other commercial or private activities in cities, urban food production has never been addressed appropriately by legal regulation and planning. Urban food production as a grassroots response to urban poverty and food insecurity can no longer be reasonably ignored. Thus, depending on the local situation, different types of stakeholders should be supported in their activity, from micro-farmers, to small scale or even commercial city farmers.

Two different aspects of UPA need to be considered: the intra-urban and the periurban land-market. They differ by setting, development perspective and regulatory need. While intra-urban land is often scarce due to extensive build up and other uses, in the periurban setting rapid structural changes take place[225, 223, 224]

The differences between urban and periurban agriculture require different planning approaches, e.g. with regard to size of plots, access to inputs, provision of water, etc. This situation calls for different strategies of land development, legislation, and planning. While in the urban environment, land allocation or land adjudication is required, periurban land needs protection through appropriate zoning measure and land acquisition.

"Planning needs pressure". This is a major outcome of the planning workshop of FAO/ETC Electronic Conference on "Urban and periurban Agriculture on the Policy Agenda"[225]. This can be understood in two ways:

Experience shows that a strong interest group should be involved in the protection *and* retrieval of open urban space. **Legal regulations are needed to achieve land-security for urban farmers.** In many European Countries and North America this was achieved through the formation of urban farmer associations. Nevertheless, the conservation of urban open space for cultivation and recreation involves a continuous battle with an expanding city and different interest groups.

Many cities are already under enormous pressure of population growth, declining environment, increasing waste problems. In order to contribute to sustainable city development **UPA needs to be more than just agriculture** that happens to be in or next to built-up areas. Embedding UPA in the greater context of sustainable urban development forces urban administrators to review their anti-UPA planning principles. UPA enables the recycling of all "green wastes" into compost. It is proposed that in

future a certain percentage of the tax that is collected by the Municipal Cleaning Office for collection of wastes will be re-invested in the municipal UA programme. Thus, e.g. in the Philippines solid waste has served as one entry point to UPA and over time it has created the chance "to modify efficiently the traditional hierarchical system of city management. " [225]

BOX 25: Urban agriculturalists

"Urban agriculturalists are a creative and ingenious group of people, with or without support of planners and other institutions, they will continue to garden, either out of necessity, or out of the sheer joy of it. It would be better to recognize, support, and direct their contributions to sustainable communities than to pretend they are not there, or worse, to deliberately undermine them"[226].

In this way urban agriculture can be understood as a good solution to many growing problems in the cities of the South.

BOX 26: United Nations Centre for Human Settlements (Habitat) Declaration on cities and other human settlements in the new millennium, June 2001

We, the representatives of Governments ...

A. Renewing the commitments made at the United Nations Conference on Human Settlements (Habitat II) ...

3. Re-emphasize that rural and urban areas are economically, socially and environmentally interdependent, and that cities and towns are engines of growth contributing to the development of both rural and urban human settlements. Half of the world's inhabitants live in rural settlements, and, in Africa and Asia, the population in the rural areas represents a majority. Integrated physical planning and balanced attention to rural and urban living conditions are of crucial importance for all nations. Full advantage must be taken of the complementary contributions and linkages between rural and urban areas, by giving appropriate attention to their different economic, social and environmental requirements. While addressing urban poverty, it is also essential to eradicate rural poverty and to improve living conditions, as well as to create employment and educational opportunities in rural settlements and small and medium-sized cities and towns in rural areas.[227]

Planned interventions seeking positive changes in rural-urban linkages that both enhance the use and state of natural resources and improve the livelihoods and living conditions of poor women, men and children are still rare. However, the last few years have seen the emergence in different parts of the developing world of a number of programs and projects pursuing these aims. These initiatives constitute a valuable ground to draw lessons about the potentials and limitations of different approaches. These programs and initiatives (summarized in Appendix C) are highly heterogeneous in the way they conceptualise rural-urban linkages, as well as in their underlying assumptions about the advantages and disadvantages of urbanisation, the themes they address, and above all the approaches adopted and methods deployed.

Figure 13 shows how the different models of intervention underpinning current programs and projects deployed over the last two decades or so tend to address different urban and periurban types. Broadly speaking, these intervention models are associated with one or more of three main planning perspectives: [228]

- rural, tends to focus on localised and discrete actions;
- regional, attempts to act upon rural-urban pressures and flows;
- urban planning, seeks the transformation of planning systems and their allied institutions.

Importantly, the boundaries between these three planning traditions are increasingly blurred as each intervention model draws from the others in terms of approaches, methods and themes. For example, localised actions aimed at improving land-based livelihoods in periurban villages are likely to address issues of rural-urban market flows, while planning interventions targeted at urban authorities are likely to promote

collaborative efforts with rural authorities. This can cut off small=scale periurban farmers from urban markets.

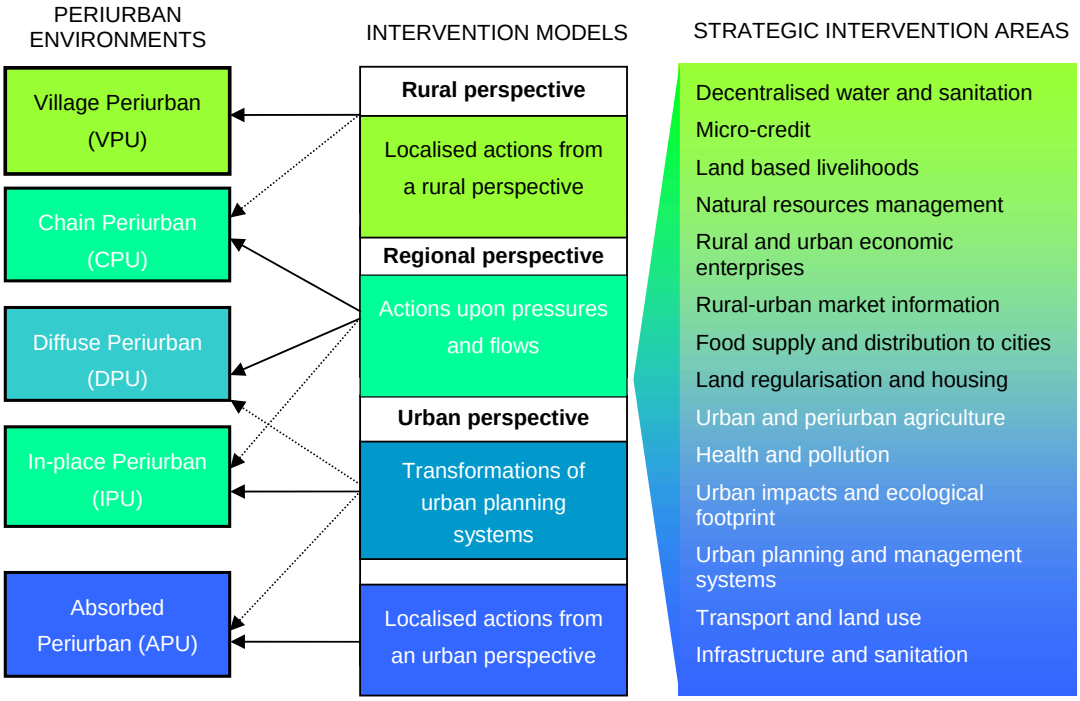


Figure 13: Intervention models, environments and strategic intervention areas

The rural perspective: localised and discrete actions

The first intervention model can be broadly identified with initiatives generated from a rural planning perspective. Traditionally, rural planning has been undertaken in two main ways:

- Official planning by rural district councils executed by trained planners focusing on the provision of services (e.g., roads, schools, health centres).
- Sectoral planning for the management of rural land and natural resources as the responsibility of departments of agriculture, forestry, fisheries and so on, using techniques of resource assessment and land use planning, with little co-ordination between them.

Rural planning has sought to promote balanced development between urban and rural areas by counteracting a perceived 'urban bias' in government programmes and policies, for instance by attempting to curb rural urban migration through strengthened rural production. Examples of this include rural industrialisation programmes and integrated rural development programmes.[133] (This type of initiative can also be framed within the regional perspective discussed below).

The intention of this intervention model is to focus on initiatives aimed at improving living conditions and the social infrastructure necessary to increase rural production through localised actions. These promote discrete pilot actions in rural areas and

peri-urban villages (VPU), whereby the latter often retain land-based livelihoods and fall under the jurisdiction of rural authorities whilst being increasingly influenced by urban areas regardless of their proximity. This model draws on a wealth of community planning techniques and methods, including rural rapid appraisal (RRA) and participatory rural appraisal (PRA) among others[229]. Many of these methods have been integrated under a common framework of *community-based natural resource management*. As such, these methods provide an important source of information to guide and implement action planning at the community level. However, they do not adequately address two challenges.

First, the methods need to be decomposed so as to account for those individuals already marginalised, including by local social structures. Second, these methods tend to focus on only the immediate and medium term concerns of specific localities and communities. They neglect the urban regional dimension and long-term perspective required for the sustainable management especially of peri-urban environmental resources and services. Consequently, they need to be augmented so as to bring into the process relevant actors from outside the community (notably government and private decision makers), This will facilitate incorporating the process within the regular procedures and long-term strategies of key stakeholders[228].

Examples of initiatives that adopt a community-based management approach include a series of projects developed in the urban regions of Hubli-Dharwad, India, and Kumasi Ghana, under the support of Great Britain's Department for International Development, DFID). [230] **BOX 27** describes the approach adopted in Hubli-Dharwad.

BOX 27: Participatory Action Planning in Nearby villages of Hubli-Dharwad, India

The project facilitates local stakeholder identification of natural resource management issues for villages close to Hubli-Dharwad in response to increasing urbanisation. It also seeks to formulate plans of action to be implemented as pilot projects in the next phase of the program. Evidence gathered so far indicates that urbanisation negatively affects poorer groups in peri-urban villages due to their lower resilience in the face of change. Livelihood strategies are adversely affected by natural resource degradation, pollution and shifts in the nature of agricultural enterprises associated with urbanisation.

Engaging people from target institutions, peri-urban dwellers and researchers in a carefully designed, extended, dialogue should empower poorer groups and improve their sense of ownership over the action plans developed. With respect to institutions that formulate policy and implement regulations, enhanced awareness of the problems faced by the periurban poor should increase sensitivity to the impact of their actions and decisions upon the poor and facilitate identification of action plans accounting for the aspirations and needs of the poor.

Future work calls for the testing, modification and implementation of action plans in pilot projects and the development of a set of methodological guidelines for collaborative development of action plans.[231].

The regional perspective: Actions upon rural-urban pressures and flows

The second intervention model characterises those programmes that purposely focus on the development of reciprocal links between rural and urban areas.[232] This model is based on a regional planning approach that acknowledges that current urbanization trends are leading to, and being shaped by, outward and inward migration flows. As a result megacities' are becoming sub-regions within countries, industrial dispersal is increasing, rural areas are losing agricultural functions, transport networks are improving and land markets are being restructured. According to this approach, a country's settlement pattern is the source of its planning problems, a reflection of deeper socio-economic difficulties and inequalities, which requires tackling critical socio-economic and political issues rather than localised urban or rural solutions. Whilst regional planning is by no means new, this approach moves away from the well established 'growth pole/core-periphery' model to focus instead on creating and strengthening networks. **BOX 28** shows, the main criticisms of the ability of the growth pole/core-periphery model to achieve its intended goals of 'trickle-down' regional development are based on a contested assumption that urbanization is the key to regional integration.

BOX 28: Examples of the shortcomings of the growth pole/core-periphery regional planning model

On the basis of a diagnosis that the vast metropolitan region of Jakarta* was giving rise to serious environmental problems in the region, the Indonesian government implemented a development planning strategy to drive urban and industrial growth away from the Central Jakarta district to a series of identified growth poles and corridors. The policy eventually failed due in part to lack of coordination among institutions, lack of incentives to industries and lack of political will; it also failed due to the fact that the concentration of industry and population in the Jakarta region only served to attract more economic growth and foreign investment, which in turn led to more population growth and investment in infrastructure, thus perpetuating the trends that the government was trying to counteract.

Since the late 1970s the Chinese government initiated a policy of economic liberalisation focused partly on the South-eastern Coast (Pearl River Delta region) due to the fact that these cities had previously served as ports and were close to Taiwan and Hong Kong. While economic growth was being concentrated in the cities, growth was also being dispersed towards new districts and towns. There were large in-flows of foreign capital to small-scale industries in small towns and villages, leading to a rapid transformation in the region from an agrarian to an export-oriented industrial economy, more closely tied to the global economy than the rest of the country. Government planning was partially decentralised to the local level, but was still heavily dominated by Central Government planners. Economic pressures and lack of local planning flexibility contributed to the creation of a black market of land in the periphery of these cities which in turn led to uncontrolled urban sprawl.[233]

* Known as Jabotabek, which comprises Jakarta, Bogor, Tangerang and Bekasi

By contrast, the *actions upon rural-urban pressures and flows* type of intervention conceives the territory in terms of a networked model, in which planning and policy initiatives are developed for multi-sectoral, interrelated and complementary activities[234]. Emphasis is placed on the connectivity of the system and in developing infrastructure in both rural and urban areas and between minor centres, rather than concentrating just on linkages with major cities.

The central assumption underlying this approach is that the breaking down of supportive reciprocal relations between cities and their hinterlands tends to aggravate unsustainable patterns of natural resources use and the transference of environmental problems to distant regions. The concept of the 'urban ecological footprint' helps characterize changes in the relationship between cities and their hinterlands over time and the environmental costs associated with these changes.[235] This shows that, through trade and natural flows of ecological goods and services, cities draw on the material resources and ecological productivity of vast, scattered and often distant, hinterlands.

The network model promotes reciprocal rural-urban interactions. One example of this approach are Nepal's Rural-Urban Partnership Programme (see **BOX 29**), jointly supported by the United Nations Development Programme (UNDP) and the United Nations Centre for Human Settlements (UNCHS). A second example is the Poverty Alleviation Programme through Rural Urban Linkages in Indonesia, also supported by UNDP and UNCHS.[236] Both programs seek to identify specific development potentials in the linkages between rural and urban markets within a region and beyond. This approach emphasises acting upon the vacuum generated by urban and rural institutions and by sectoral policies that reinforce the urban-rural divide. This approach is strategic rather than comprehensive, in that it focuses on key entry points with the potential to reinforce rural-urban links, for instance by improving the flow of information between rural production systems and urban market demands.

BOX 29: Description of Nepal's UNDP Rural-Urban Partnership Programme

Sectoral approaches to development tend to direct resources towards development in isolation with little impact on people's livelihoods. The Rural-Urban Partnership Programme (RUPP) came into operation in 1997 as a joint effort of His Majesty's Government of Nepal (National Planning Commission, Ministry of Housing and Physical Planning and Ministry of Local Development), UNDP and Habitat. The Programme focused on enhancing management capabilities at the municipality, village and community level in three market regions, institutionalising a strong network amongst the urban centre, rural market centres and villages.

The underlying premises of the Programme are:

- Rural and urban development should not be perceived in isolation.
- Urban economic and physical development is possible if human, economic, social and financial resources of the region are properly mobilised at the local level.

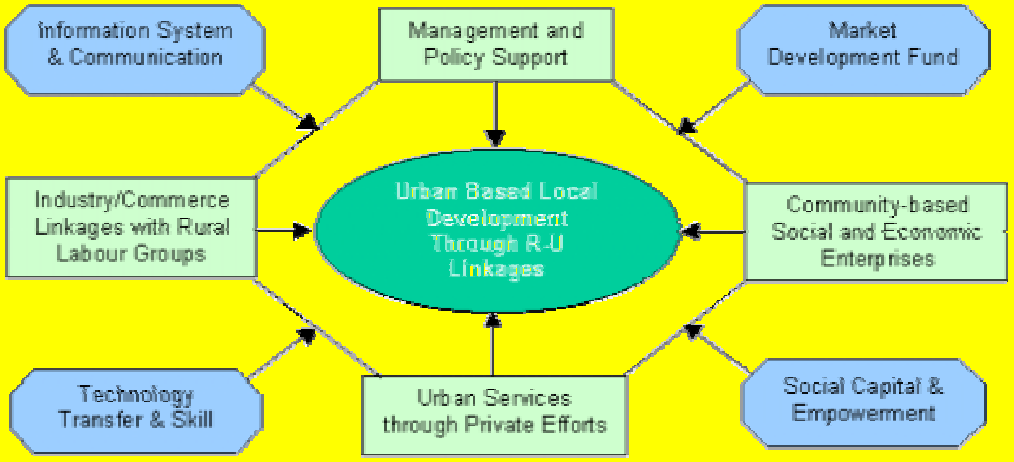
- Urban development should encompass the development of economic, social and technical infrastructures rather than being limited to development of physical infrastructure only.
- Sustainable local development is possible only with the participation of local agencies and community.
- Development programmes should be implemented according to the aspiration of local people and incorporate non-governmental actors.

The objectives of the Programme are:

- To improve livelihood of poor and disadvantaged people in three market regions, by creating an enabling environment for them to undertake social and economic initiatives, through local institutions, such as municipalities and NGOs, by mobilising the private sector and by enhancing rural-urban linkages.
- To help local institutions develop an urban information system and participatory development planning and monitoring procedures that will facilitate the formulation of decentralised development plans and programmes, based on optimum use of rural-urban linkage potentials.
- To support the National Planning Commission (NPC) to help formulate poverty-alleviation-oriented regional and local development policies through policy analysis and field testing of various rural-urban linkage initiatives.

RUPP's conceptual framework is outlined in the following diagram

CONCEPTUAL DIAGRAM OF THE PROGRAMME



Operational Strategies

1. Information System:

- To develop the institutional mechanisms for supporting rural and urban economic development initiative.
- To develop information systems at the market region, zone and national levels on rural-urban spatial and economic linkages
- To develop gender specific impact assessment and monitoring system
- To develop alliterative strategies for implementation based on analysis of available information.

2. Market Centre Initiatives

- To support Municipalities and Market Centres to enhance their management and programming capabilities and capacities.
- To initiate community based urban-oriented activities in the participating urban and market centers.

3. Rural and Urban Economic Enterprises

- Community based social economic enterprises are facilitated to strengthen the inter-linkages between the urban centres and rural settlements.
- The private and community based enterprises are promoted which can serve the market demand. Female entrepreneurs are 'especially encouraged to establish such enterprises.

4. Support Provision to Economic Enterprises

The Programme advocates a demand driver approach to the provision of support. Support from this Programme to efforts, in the secondary urban centres. market centres and rural markets, to develop social/economic enterprises are provided as follows:

- Credit Assistance to support initiatives that have characteristics of "privatisable benefit".
- Seed Grants for initiatives that are more communal in nature, are not commercial, and benefit to all members of the society.
- Training to members of the participating social/economic enterprises for undertaking managerial, business and professional activities.
- Technology required by participating social/economic enterprises

Source: UNDP, 1996[237]

Other initiatives within the same approach include the *Rural Villages Programme*, implemented by the State of Parana, Brazil,[238] South Korea's Policy on Rural-Urban Integrated Cities[133] and the Habitat urban management program (UMP). In all cases, the emphasis is on creating new institutional arrangements that foster inter-municipal and inter-regional cooperation addressing the political imbalances and unequal relations borne out of the primacy of certain urban systems.

Needing to be explored further in this approach is the identification of specific interventions to address increasing competition with cheap imports, (e.g., tariffs and political support to the local economy). Another area needing study is the introduction of resource management on a regional scale, since some resources may be seen as requiring effective planning and management, while others are assumed to be the responsibility of private sector. Additionally, there is a lack of information on the supply and flows of resources and their environmental/social impacts (e.g. water, energy, solid waste, food, building materials, consumer goods)[239]. Finally, the role of common property regimes needs to be reassessed as they become increasingly marginalised by the intervention and control of the private and public sectors.

Another set of issues to some extent addressed within this intervention model is found in sectors such as urban and peri-urban forestry and agriculture, where the focus is on removing the barriers of conventional urban planning systems to activities that support self-reliance. Interventions in urban and peri-urban agriculture include the Cities Feeding People Programme managed by the Canadian Government's International Development Research Centre and a range of initiatives of the UN's Food and Agriculture Organisation (FAO) now coordinated under *Food for the Cities*, the Priority Area for Interdisciplinary Action (PAIA). The PAIA was developed to address urban agriculture and more broadly food supply and distribution to cities, periurban horticulture, urban and periurban forestry, urban acquaculture and animal husbandry. To a degree these initiatives seek to improve rural-urban nutrient flows. By showing the potential that urban and periurban areas have in securing food for the urban poor, they also challenge urban planning systems and traditional views about what constitutes desirable urban activity.

The urban perspective: Transformation of planning systems

A third intervention model is found in a series of environmental planning and management initiatives at the city level. A number of programmes and projects characterized as *urban* seek to address two sets of issues:

- The management of the relationship between urban systems and their hinterlands.
- The quality of life of urban and periurban dwellers.

In the first case, the underlying assumption is that cities are highly dependent on resources extracted from their immediate hinterland and beyond. Thus, current urban planning systems and institutions need to work beyond the limits of built up areas to become more proactive in managing the inputs required and outputs produced by the city. An increasing number of programmes and projects aimed at promoting sustainable urban development adopt this approach. Examples include the Sustainable Cities and Localising Agenda 21 programmes of the United Nations Centre for Human Settlements (UNCHS). These initiatives seek to transform conventional urban planning by building on the principles advocated in Local Agenda 21 and the Habitat Agenda.[240] Common to these two agendas are the following issues:

- The reappraisal of the role of cities in development and of their potential contribution to sustainable development;
- The need to reformulate urban development articulating a balance between the reduction of urban poverty, improvement of environmental conditions (short and long term) and enhancement of urban economic productivity;
- The emphasis on local actors (both state and non-state) as key managers of the urban development process.

Both agendas call for a new approach to urban environmental planning and management and a shift of emphasis from a focus on local government and the environment to one on local governance and sustainability.[241] It is increasingly recognised that Local Agenda 21 involves more than environmental management and more than local authorities' initiatives. Still, this approach stresses the need to build changes upon existing urban environmental planning and management systems, identifying local authorities as a key entry point for the institutionalisation of the process.

A general evaluation of the experience of developing Local Agendas 21 worldwide suggests that typically, multi-stakeholder processes to define the content of these agendas focus initially on more immediate issues of concern traditionally associated with basic infrastructure and sanitary engineering projects like piped water supply and sanitation. It is only through an iteration of the process over a longer period that consensus can be built so as to move away from the direct interests or concerns of participating stakeholders to more strategic long-term issues affecting the development process as a whole. The experience of the Localising Agenda 21 Programme in Nakuru, Kenya (see **BOX 30**) illustrates this relationship. Consequently, short term actions and immediate problems are nourished by a long-term vision that promotes sustainable linkages between urban and rural areas.

BOX 30: UNCHS Localising Agenda 21 in Nakuru, Kenya

Nakuru (population approximately 480,000), the fast growing capital of the Rift Valley Province in Kenya, is an example of an African town which serves as an urban centre of a predominantly rural area. It demonstrates the linkages and interrelationships between urban and rural development coupled with the need for ecological protection of its own natural environment. The Localising Agenda 21 programme combines the use of Strategic Structure Plans with Urban Pacts, in an effort to create a process of vision, action and communication.

Strategic role of Nakuru	As center of agricultural production and rural development of its region	As guardian and protector of the ecology of Lake Nakuru
Broadening the technological base	• Technology prospects, • Constraints of food processing, • Input processing, • Biotechnology	• Technology to combat agricultural and urban pollution, • Technology of biosphere protection
Human actions and natural resources	• Challenges to meet goals of enough water for all • Adequate energy supply	• Management of ecosystem in proximity to urban and rural development
Institutional and political framework	• Strategic development planning, • Partnerships with civil society	• Strategies for collaboration between municipality and Kenya Wildlife
Urban-rural linkages	• Marketing of agricultural products, • Expansion of urban settlement into rural areas, • Transformation of agricultural into residential plots	• Land use conflicts between ecological protection, urban development and agricultural production

The second set of issues addressed in this intervention model is represented by initiatives related to the decentralised provision of infrastructure and services and more widely to the integration of periurban areas to the city. These include sanitation programs promoting low-cost sanitation technologies, participatory methodologies for project design, community labor and micro-financing schemes. An example of this type of intervention is the UNICEF project on peri-urban communities in Tegucigalpa (Honduras), which is based on low-cost sanitation facilities, cost sharing and use of revolving fund.[242] Similarly, the Canadian International Development Agency (CIDA) initiative in peri-urban water and sanitation emphasises the provision of drinking water supply through low-cost technologies including hand pumps, wells, boreholes, gravity-feed systems and low cost on-site sanitation. CIDA's interventions in water and sanitation projects in peri-urban areas fall within its program priorities on meeting basic human needs and the provision of infrastructure services. Although these initiatives can be seen as localised and bearing many elements in common with the first model of intervention discussed earlier, the main difference lies in their stress on integrating periurban areas (defined as in-place and absorbed periurban in the typology presented earlier) to the urban fabric.

The main constraint of urban environment planning and management initiatives is that all too often they remain outside mainstream government decision-making, so results remain marginal to the development process. Another concern relates to the fact that problems affecting the poor generally and the periurban poor specifically tend to be neglected because of the nature of power relations at the municipal level where more powerful and vocal urban-based interests are often favored.

Broad policy directions

BOX 31: Migration Is the Wrong Focus for Development Policy

Pro-rural and pro-urban arguments have had a strong influence on development strategies. Among international development agencies, for example, investments in rural and urban areas have sometimes been seen as mutually exclusive and competing. Investments in rural areas have often aimed at reducing rural-to-urban migration, while urban investments are often interpreted as urban bias. Some support policies aimed at reducing rates of rural-to-urban migration, while others regard such policies as futile, accepting rapid urbanization as inevitable, even if not desirable. Evidence supports the latter point of view.

There is no historical precedent of successful policies to inhibit rural to urban migration. Urbanization is inevitable, and national policy must learn to recognize its implications, cushion its impacts and harness its benefits. The paradox of rural development policies aimed at slowing migration is that they usually achieve the reverse. Increased productivity results in rural labour redundancy, as well as a better-educated rural work-force—which now has the means and ambition to seek employment in the city.

Source: UN Habitat (2001)[243]

Considering the shifting landscape in the area of development today, what directions are emerging for the future? Not surprisingly given the UNCHS declaration in New York, its approach to policy formulation recommends systemic thinking and the strengthening of rural-urban linkages in particular. Six policy lessons are identified[244].

1. *Rural-urban linkages.*

   In terms of development strategies, the rural-urban continuum should be seen as a whole and linkages between rural and urban should be strengthened. The most important rural-urban flows are economic and demographic. Policy responses which center on the provision of infrastructure have often been inadequate to solve the structural problems of either, while policy responses designed to facilitate these flows have focused upon the provision of infrastructure and hierarchical networks to small towns and rural service centers.

2. *Role of small and medium sized cities.*

   Economically, rural and urban areas are linked by the reciprocal exchange of unprocessed and processed products, with both areas acting as mutually reinforcing markets. Strengthening this linkage requires, in many countries, the decentralization of urbanization through the promotion of medium-sized cities. These can increase the accessibility of agricultural inputs for rural producers, while at the same time providing the necessary marketing infrastructure;

especially bulk collection points. Small towns also provide the basic infrastructure for increasing rural farm and off-farm production.

3. *Role of national policies related to poverty reduction.*

   Regional policies alone will neither succeed in transforming the lives of the poor nor eradicate rural-urban inequalities. Regional, economic and spatial policies need to be part of general national development programs to reduce poverty through different sectoral strategies, such as land redistribution, improved access to credit, health and education, amongst others. In order to reduce poverty and inequality, sectoral policies need to address the main reasons underlying poverty, including:
   - Urban and rural landlessness and insecurity of tenure;
   - Unfair terms of trade between urban and rural areas; and
   - Insecurity of income, largely a result of unemployment and underemployment in urban and rural areas and partly resulting from lack of diversification of income sources.

4. *Addressing urbanization's negative effects.*

   More emphasis should be placed on addressing urbanization-related problems such as high urban unemployment rates, pressure on urban infrastructure and services, and labour shortages within rural areas. However, rural-to-urban migration often has positive impacts, since towns and cities take on an important role in absorbing excess population from overpopulated and ecologically fragile regions. This is precisely the role that towns and cities played during the industrial revolution in Europe.

5. *Importance of urbanism.*

   Further, urbanization is not simply the growth of populations living within legal-administrative boundaries of towns and cities. It also transforms urban, periurban and rural lifestyles and consciousness (urbanism). Technological improvements, initially in transport but more recently in information and telecommunication, increasingly allow people in rural villages to become urbanized without necessarily migrating to towns and cities. As their access to modern infrastructure and services normally associated with urban areas increases, they become less dependent on living in towns and cities to meet their economic and social needs.

6. *Public-private participatory strategies.*

   Strengthening rural-urban linkages requires the coordinated efforts of both public and private sector, whilst enabling all actors to participate in the development process. This entails fundamental changes on the part of the state, including:
   - Broadening of the range of actors involved in infrastructure improvement, through the formation of partnerships with community-based organizations, NGOs and the private sector;
   - Increasing participation through the decentralization of government and the empowerment of local communities; and
   - More effective coordination of the actors involved.

Informal sector policy and the importance of the micro-macro link

Work by the International Labor Organization (ILO)[245] identifies the key initiatives that have been underway in various countries aimed at aiding the development of poor urban dwellers vis-à-vis the informal sector:

- Easing access to credit
- Easing access to training and technology
- Access to land and infrastructure
- Regulatory framework
- Policy framework Building capacity among self-help organizations

While the interventions cited by the ILO with respect to the informal sector are well documented, the identification of the missing link in many such interventions is important. Too many interventions ignore, or at least fail to emphasize, the link between micro level projects and macroeconomic policy, regulatory environment and institutional context. They fail to emphasize (or recognize) that the assets created at the micro enterprise level will yield higher incomes only if the macroeconomic environment in which it functions is appropriate. Thus, the ILO believes that three factors deserve the special attention of policy makers in the area of the informal sector:

- macro-policy, regulatory environment and institutional context;
- nature and extent of linkages between the formal and the informal sectors; and
- macroeconomic performance of the country in question.

Finally, in dealing with the informal sector the emphasis should shift away from simply accommodating it and towards integrating the sector into mainstream development. In consequence a number of possible policy directions are suggested for closer examination and testing:

- Making institutions and markets which interact with the sector more friendly;
- Reorienting and restructuring supply sources (e.g., credit training, technical know-how, information);
- Linking supply sources to their informal counterpart;
- Privatization of certain sources of supply;
- Increasing the availability of outlets which provide the requirements of the informal sector, hence stimulating competition;
- Improving access to infrastructure in cities;
- Encouraging governments to pass legislation providing legal status to grass-roots groups developed around the interests of the participants in the informal sector (e.g., vendor's groups, micro-producer groups, women's groups);
- Providing the necessary training and support to grass-roots groups enabling them to overcome their often inherent weaknesses;
- Increasing the number of intermediaries (i.e., NGOs) assisting the informal sector.

While none of these policy directions is strictly advocated, all should be reviewed for their potential to achieving the stated goals of better integrating the informal sector into the mainstream of development on the one hand and to improving the lives and livelihoods of the poor on the other.

Land tenure policies

Land tenure issues show up repeatedly in the various approaches to elaborating urban and periurban policy. Whether addressing issues of urban poverty, livelihoods strategies in the informal sector or urban agriculture, secure assess to land is a vital component of any policy formulation. Most policies call for land regulation—broadly defined—and tenure security programs of some sort. These apply in all situations, but have a special relevance in situations arising from informal occupation of land—often the only recourse of the landless poor. In general, there are two basic approaches to deal with informally occupied urban land:

- Provide property rights (ownership); or
- Provide use rights (usufruct), without changing the tenure status.

The objectives of the first policy approach include providing tenure security, and supporting the development of land and housing markets in order to increase the local revenue base. The objectives of the second approach include tenure security and mobilizing community resources for home improvements. The success of either approach is contingent upon local social circumstances, the structure of land ownership, and the priorities of residents[246].

Issues related to land speculation are particularly problematic in these situations since it heightens the likelihood of conflicts between landless occupants concerned with the use value of land (housing and subsistence production) and those viewing the land strictly for its exchange value. Policies should seek to provide guarantees that landless occupants will not simply be evicted from their homes and livelihoods at the whims of the market. Public provision of allotment gardens are one possible policy solution to the needs of the landless in this regard[247]. However, the success of such schemes rests with adequate access to housing apart from the allotment sites. This means an effective housing policy for the poor.

Increasingly opinion in the area of land tenure is shifting away from freeholder status as the goal of development and towards a more flexible view of the need for leaseholder status that guarantees some specific bundle of user rights for a specific period of time. The key to this shift is the recognition of the centrality of secured access rather than rights of alienation. Thus, policy in this area should center on providing mechanisms to secure use access to land for periods of time sufficient for the poor to recoup any investments or livelihood development costs. Further, this access should be gender neutral, seeking to eliminate barriers that have inhibited women's access to and control over land.

Finally, common property regimes need to be reassessed as intervention and control by both the private and public sectors increasingly marginalizes them. At a minimum tenure rights within these traditional regimes need to be regularized to facilitate individual returns on investment and access to formal sector credit.

Urban Agriculture Policies

Because of the historical mission of FAO, urban and periurban agriculture represent areas of particular relevance and challenge to the organization and to its broader development goals. However, the importance of urban agriculture stretches far beyond the agricultural sector. It should therefore be integrated in urban development planning as it affects other sectors such as land use policy, water policy, health and environmental policy and food security policy. At a recent e-mail conference, jointly sponsored by FAO and ETC, participants identified a range of key policy issues pertinent to urban agriculture.

Current policy approaches to urban agriculture tend to be restrictive. Future policy for UPA needs to be linked also with initiatives related to gender and new technologies. In particular the following recommendations have emerged at the FAO-ETC conference[248] and various other international conferences[249,250,**251**,252] on UPA.

1. *Development of guidelines for land use regulations that protect urban agriculture uses such as:*
    - Assuring land security for UPA practitioners; (Land for UA should be zoned and given community title to ensure that open space and public land remains in the public domain under community control.)
    - Assessment of land and water tenure systems and factors affecting access to resources;
    - Securing temporary tenure for land earmarked for future development; (Before any development occurs on such land, there should be appropriate notice given to practitioners.)
    - Facilitating farming on vacant land owned by private individuals or institutions on a contractual basis;
    - Preserving prime agricultural land and control conversion to non-agricultural uses. (Guidelines are needed to conserve and possibly reallocate prime land for UA. High rise construction can be promoted where appropriate to increase the land available for UA.)
2. *Gender specific policies need to be developed including:*
    - A gendered UA policy aimed at protecting women's rights to farm, to feed their families, and transform their role from subsistence work to economic empowerment;
    - Policies to address women as a specific target group—both as farmers and often as household heads—due to their general lack of land rights relative to men;
    - Support for women's key role in small scale urban and periurban farming due to their general exclusion from the formal labor market.
3. *Food security policy:*
    - Must focus on households, their entitlement to land and right to food, with equity—both within and between households—as a guiding principle;

- Must address the food security needs of all but especially of the landless urban poor residing in informal settlements.

4. *Support systems:*
   - Must include extension services, marketing facilities, water and other resource inputs, financing, training and education;
   - Must encourage investment in UPA;
   - Must include the establishment of micro-credit schemes;
   - Require participatory action research with urban farmers to monitor and evaluate the effectiveness of support systems and intervention strategies;
   - Must be aimed at capacity building and empowerment of urban and periurban farmers.
5. *Development of and support for new technologies for sustainable urban and periurban development including:*
   - Technologies that are ecologically sound and improve health and nutrition;
   - Urban livestock farming systems that promote nutrient cycling;
   - Solid and human waste management systems that conserve water and utilize nutrient cycles;
   - Solid waste composting and recycling of biodegradable household and other wastes;
   - Utilization of surface water run-off;
   - Human waste technologies based on low water use, local treatment and productive-use (e.g. neighborhood and household systems incorporating aquaculture);
   - Tree production for food, microclimate control, beautification, and hazard control.
6. *Regulatory systems:*
   - Should be designed to faciltate responsible and sustainable UPA;
   - Should assist local authorities in the promotion of UPA;
   - Should aim at minimizing problems of competing land use and land conflicts.
7. *Implementation:*
   - Must include local institutions and stakeholders in a participatory process;
   - Must recognize the importance of community-based organizations and support and involve their participation of in systems of urban and periurban governance.

Conclusion

Addressing the concerns raised by urbanization requires reappraisal of the old dichotomy between rural and urban and a new vision of development. Rapid changes emerging in both urban and periurban environments are occurring coincident with the reshaping of the rural environment. The increasing emergence of multi-spatial households, rural-urban exchange networks and production-

consumption trade linkages necessitates addressing the flow of people, goods, ideas, cultural values and habits and resources as a dynamic process of social exchange transcending simple geographic categorization. The future success of all organizations and individuals working to improve the conditions of life for poor people everywhere depend upon their ability to link development across this changing landscape of urbanization.

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