

## Chapter 3 Land and Buildings (Real Estate)

### 3.1 Introduction

"In the beginning God created the heaven and the earth... And God said, Let the waters under the heaven be gathered together to one place, and let the dry land appear: and it was so. And God called the dry land Earth; and the gathering together of the waters he called seas:"<sup>1</sup>

In Genesis, God called the dry land "Earth". Man called earth "land". Land accounts for approximately 30% of the area of the globe, and approximately 70% are oceans and seas. The term *real estate* or *fixed assets* include land and everything that is attached to it permanently, such as buildings, installations and trees. This distinction between "land" and "real estate" is needed for the legal objectives of transaction and registration and of real estate tax laws.

Man refers to land, and anything that is attached permanently to it, "fixed assets" in order to distinguish them from liquid assets such as consumables, goods, metals, precious stones, money, etc. This distinction illustrates the essence of fixed assets, which is immovability. The special value that fixed assets can be understood from the moniker Real Estate, while other assets are simply called "assets". When man evolved from hunter/gatherer to farmer, he tied his fate to territory upon which he built his home and grew his food. Therefore, the land became his dearest and most

---

<sup>1</sup> Genesis, chapter 1, par. 1, 9, 10.

important asset.

"Land holds a unique place in the distributional ethic because it is (by definition) of natural origin. Man did not create Earth with its resources but rather fights over it. Land is also (with exceptions) more nearly permanent than man or his works."<sup>2</sup>

Charles Darwin<sup>3</sup> wrote: "But we often take I think, an erroneous view of the probability of closely allied species invading each other's territory when put into free intercommunication."

### 3.2 The Nature of Land

Since the beginning of the industrial revolution, we live in an industrial world that is capable of creating consumables and agricultural products in a supply that meets the demand. However, one product is *almost* incapable of being produced, and therefore does not come under the definition "product", and that is land. I mentioned "almost", because it is possible to turn a sea, a lake or a river into land, and it is possible to turn land into waters. However, the technological difficulties and the high cost of "creating" land limit its size significantly. The result is that the quantity of land in the world is a finite amount, and it is necessary to treat this resource with a special value.

The constant growth of the world's population decreases the amount of land available per person. Modern technology and the invention of the elevator have enabled us to build high buildings in the 20th century. In cities with large populations there exist buildings with tens of floors and thousands of sq. meters on land of only one thousand sq. meters. The result is that an apartment of 100 m<sup>2</sup>, which is used as a dwelling place for one family, uses many times the land of only

---

<sup>2</sup> "land tax", Etwell, John (ed). The New Palgrave a Dictionary of Economics, volume 3, pp. 122, the Macmillan Press Limited, London, 1987.

<sup>3</sup> Darwin, Charles. On the Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life, chapter xii, geographical distribution - continued, p. 333. (First edition, London, 1859), 1997, Electric Book, London, <http://www.elecbook.com/origspec.zip>

10 m<sup>2</sup>.<sup>4</sup>

Throughout history, the area needed for an agricultural farm had on average 30,000-m<sup>2</sup> as this was the amount of land needed to provide for one family. Then came the land reform<sup>5</sup> in various countries and the industrial revolution. People discovered that with the aid of machinery they need only 200 m<sup>2</sup> in order to provide for his family and 100 m<sup>2</sup> for his lodgings.

Nowadays, with the advent of the computer age, the area of land necessary to provide for one's family is approximately 20 m<sup>2</sup>, with 10 m<sup>2</sup> of land sufficient for lodging. Modern agriculture assisted by fertilizers, machines, irrigation and artificial strains of fruit and vegetables, enables a family to make its living on a much smaller piece of land than 30,000-m<sup>2</sup>.

### 3.3 The Role of Land for Mankind

Land is the most basic crucial condition on which mankind depends for its existence. Man lives on the land, builds his home, grows produce for his own nutrition, raises livestock for his own use, and builds industry that produces his consumer goods. Land is also used for many types of transportation such as highways, railroad tracks and airports, which enable mankind to travel quickly from place to place.

In addition to the existential needs that these real estate assets fulfil, there are many other varied roles that these assets occupy in the life of man. Land is used for commercial centers where man exchanges goods he has produced for those he needs. Today man exchanges consumer goods for money; i.e. in entertainment places such as hotels, restaurants, theaters, sports centers, beaches, etc., and for religious purposes such as places of worship, holy sites and cemeteries.

---

<sup>4</sup> i.e. a 1,000 m<sup>2</sup> plot of land with a built up area of 20% per floor (and 80% yard) and 50 floors has a total of 10,000 m<sup>2</sup> of built up area. In this type of building a 100 m<sup>2</sup> of an apartment uses 10 m<sup>2</sup> of land.

<sup>5</sup> The term, "land reform", has been subject to different interpretations. Some have defined it narrowly as a means to provide land to the landless, while others have conceived it broadly as a comprehensive program for the transformation of the entire agriculture economy. Tay, Hung-Chao, Land Reform and Politics: A Comparative Analysis, 1974, p. 11.

Real estate assets of different kinds are also used as the most important channel through which man invests his earnings. An average family "invests" its earnings in a residence, which then serves that family as an additional source of economic security. A merchant invests in the purchase of a store, the industrialist in the purchase of a factory, and those with the financial means might purchase an asset for rental purposes. Companies with large resources, pension funds, and religious organizations which receive donations, might purchase land for long-term investments in the hope that they will enjoy an increase in the value of the asset as well as the cash flow which the asset provides.

Man meets his needs and desires in the scope of real estate through "products" which suit his purposes; i.e. an apartment, a store, a factory or a field. The importance of a real estate product is actually the ownership of the immovable asset<sup>6</sup> as well as the services it can provide. We buy an apartment in order to live in it; we buy a store, factory or field in order to make a living.

### **3.3.1 Real Estate and Real Property**

"Real estate" is the physical land and appurtenances affixed to the land, i.e. trees minerals, buildings, and site improvements. Real estate is immobile and tangible. All permanent building attachments (i.e., plumbing, electrical wiring, heating systems cabinets, and elevators) are usually considered part of the real estate. Real estate includes all attachments, both above and below the ground.

"Real property" includes all interests, benefits, and rights inherent in the ownership of physical real estate. Real property is said to include the "bundle of rights" inherent in the ownership of real estate. Ownership rights include the right to use real estate, to sell it, to lease it, to enter it, to give it away, or to choose to exercise all or none of these rights. The bundle of rights may be compared to a pie, in which each slice representing a separate right or interest. It is possible to own all or only some of the rights in real estate. A person who owns all the property rights is said to have *fee simple title*.

---

<sup>6</sup> A different view is presented by Prop. Kotler, *ibid.*: "The importance of physical products lies not so much in owning them as in obtaining the services they render. We buy a car because it supplies transportation service". (My underline H.R.) This difference is a result of the "product's" nature, which in this case is Real Estate and not just movable goods.

**"Fee Simple Estate"** - A fee simple estate implies absolute ownership unencumbered by any other interest or estate. Selling, leasing, or otherwise limiting the bundle of rights in a fee simple estate creates partial interests in real estate. Partial estate includes leased fee and lease holds estates.

**"Leased Fee Estate"** - A leased fee estate is an ownership interest held by a landlord with the right of use and occupancy conveyed by a lease to others. The rights of the lessor (the leased fee owner) and the lessee (leaseholder) are specified by contract terms contained within the lease.

### **3.4 The Relationship between Mankind and Land**

The human race exists 100,000 years. Most of this time the human race was hunting animals and gathering fruit and vegetables. During this period of time, people did not attach themselves to the land, even though they occasionally used caves for their dwelling.

The human race evolved from hunter/gatherer to farmer only as merely as 6,000 years ago, and it set its first agriculture farms in Sumer.<sup>7</sup> At the settlement in Sumer man tied his fate to territory upon which he built his homes and grew his food.<sup>8</sup>

---

<sup>7</sup> "The Sumerians moved into Mesopotamia around 4000 BC, perhaps from the vicinity of the Caspian Sea. They found a people archaeologists call Ubaidians, who were living in villages, farming and using canals for irrigation, near where the Tigris and Euphrates rivers emptied into the Persian Gulf -- an area that came to be known as Sumer. And they found in Sumer a people who spoke a Semitic language who had moved in among the Ubaidians. By 3800 BC the Sumerians supplanted the Ubaidians and Semites, and the Sumerians were working toward their civilization. Sumerians cooperated with each other in building better canals for irrigating crops and for transporting crops by boat to village centers. They improved their roads, over which their donkeys trod, some of their donkeys pulling wheeled carts. The Sumerians grew in number, the increase in population the key element in creating what we call civilization -- a word derived from an ancient word for city." Smitha, Frank, E. The Sumerians, <http://www.fsmitha.com/h1/ch01.htm>. See: Kramer, Samuel, Noah. History Begins at Sumer: Thirty-Nine 'Firsts' in Recorded History; See: Crystal, Ellie. Crystalinks, Sumerian, <http://www.crystalinks.com/sumer.html>.

<sup>8</sup> A different point of view is presented by Keyfitz, Nathan in his essay: The Growing Human Population, Managing Planet Earth: readings from Scientific American magazine, W. H. Freeman and Company, New York, 1990, p. 61. See chapter 1.

The relationship between mankind and land has its legal and social aspects. The meaning of ownership over land and private property in democratic regimes was an important issue for many philosophers.

"The rights of property, as such, have not been venerated by those master minds who have built up economic science; but the authority of the science has been wrongly assumed: by some who have pushed the claims of vested rights to extreme and antisocial uses. It may be well therefore to note that the tendency of careful economic study is to base the rights of private property not on any abstract principle, but on the observation that in the past they have been inseparable from solid progress; and that therefore it is the part of responsible men to proceed cautiously and tentatively in abrogating or modifying even such rights as may seem to be inappropriate to the ideal conditions of social life."<sup>9</sup>

Owning land is a fundamental right to a free man. The absence of such right or even an absence of economical possibility of a vast population can be considered as a direct or indirect slavery.<sup>10</sup>

### 3.5 Land Reform

"Land reform"<sup>11</sup> may be defined as any kind of changing the legal, political, and

---

<sup>9</sup> Marshall, Alfred. Principles of Economics. An introductory volume, 1890, Book One: Preliminary Survey. Universite Paris 1, CHPE Centre d'Histoire de la Pens'e Economique, <http://panoramix.univ-paris1.fr/CHPE/Textes/Marshall/Principles/>

<sup>10</sup> "The lord of the soil could not separate the serf from the land, nor sell him apart from it, and since almost all the land was fief and there was no capital, practically could not sell him at all. The modern bourgeois forces the working-man to sell himself. The serf was the slave of the piece of land on which he was born, the working-man is the slave of his own necessities of life and of the money with which he has to buy them - both are *slaves of a thing*." Engels, Frederick. The Condition of the Working Class in England, Single Branches of Industry. Factory-Hands, 1998, p. 278. Electric Book Company, London, (First edition 1845). <http://www.elecbook.com/workclas.zip>

<sup>11</sup> "The term, *land reform*, has been subject to different interpretations. Some have defined it narrowly as a means to provide land to the landless, while others have conceived it broadly as a comprehensive program for the transformation of the entire agriculture economy." Tay, Hung-Chao, Land Reform and Politics: A Comparative Analysis, University of California Press, 1974, p. 11.

social system of ownership of the real estate in general, or land or housing in particular.<sup>12</sup>

Agrarian reform may transfer the ownership of rural land from the feudal landlords to the peasants and vice versa or from the people to the state. The modern land reforms liberate the peasantry and abolished the peasant economy. "Agrarian reform, which encompasses the transformation of rural administrative institutions, labour use and markets as well, is the modern form of this concept."<sup>13</sup>

"The most common type of reform involves the redistribution of land titles from one individual to another, from individuals to a group or community at large, or from a group to individuals. The land of one landlord may be redistributed to many individuals, as in Egypt, Iran, or Ireland. Or the land of individuals may be reallocated in favor of the community at large by abolishing private ownership, as in Cuba and China. Or, again, public land may be distributed to individuals, as in various parts of Latin America."<sup>14</sup>

We can find the first land reform in ancient Egypt when Joseph exchanged grain with the land of all the Egyptian people, and Pharaoh became the owner of the land and the people. This land reform changed the social structure of ancient Egypt from a "self owned" rural land system into a feudal one.<sup>15</sup>

---

<sup>12</sup> "The concept of land reform has varied over time according to the range of functions which land itself has performed: as a factor of production, a store of value and wealth, a status symbol, or a source of social and political influence." Land reform, Introduction, Encyclopaedia Britannica, Britannica.com editors, <http://www.britannica.com/eb/article?eu=109594>

<sup>13</sup> "The redistribution of land property titles by the state is a key issue in poor agrarian countries where land is both the main productive asset and the basis of survival and accumulation for the majority of population, and thus land tenure is the foundation of social structure and political power." Etwell, John (ed). The New Palgrave a Dictionary of Economics, "Land reform", volume 3, p. 117, the Macmillan Press Limited, London, 1987.

<sup>14</sup> Land reform, Types of reform, Encyclopaedia Britannica, Britannica.com editors, <http://www.britannica.com/eb/article?eu=109594&tocid=13983#13983.toc>

<sup>15</sup> "And Joseph bought all the land of Mizrayim (Egypt) for Pharaoh; for Mizrayim sold every man his field, because the famine prevailed over them: so the land became Pharaoh's." Genesis, chap. 47, par. 20.

The recorded history of reform<sup>16</sup> begins with the Greeks and Romans of the 6<sup>th</sup> and 2<sup>nd</sup> centuries BC. Land in ancient Athens was held in perpetuity by the tribe or clan, with individual holdings periodically reallocated according to family size and soil fertility. Population increase, expansion of trade, growth of a money economy, and the opening up of business opportunities eventually made financial transactions in land an economic necessity.

Land itself continued to be not transferable, but the right to use the land could be mortgaged. Thus, peasants could secure loans by surrendering their rights to the product of the land, as "sale with the option of redemption."

Lacking other employment, the debtor continued to cultivate the land as sixth partner, delivering five-sixths of the product to the creditor and retaining the rest for himself. When Solon was elected chief magistrate in 594 BC his reform law, known as the "shaking-off the burdens," cancelled all debts, freed the "sixth partner", and restored land to its constitutional holders. Solon also prohibited the mortgaging of land or of personal freedom on account of debt.

The Roman reform by Tiberius and Gaius came between 133 and 121 BC. The land reform law, or *lex agraria*, of Tiberius was passed by popular support against serious resistance by the nobility. It applied only to former public land, which had been usurped and concentrated in the hands of large landholders. Land concentration was accompanied by a shift from cultivation to grazing, which reduced employment and increased the poverty of the peasants, producing a crisis. The *lex agraria* specified minimum and maximum individual landholdings, with an allowance for male children of the family. Surplus land would be expropriated and compensation paid for improvements.

When Gaius was elected tribune about a decade later, he revived the reform and went even further. He colonized new land and abolished rent on small-holdings since rent on large holdings had been suspended as compensation for expropriation. Gaius was killed in 121 BC, and within a decade the reform was reversed: private acquisition of public land was legalized, the land commission was dissolved, rent on public land was abolished, all holdings were declared

---

<sup>16</sup> History of land reform, Ancient reforms, *Encyclopaedia Britannica*, Britannica.com editors, <http://www.britannica.com/eb/article?eu=109595&tocid=61983#61983.toc>



private property, and squatting on public land was prohibited. Even colonization was ended, and colonies established by Gaius were broken up. Another period of land concentration was inaugurated.

The French Revolution<sup>17</sup> brought a new era in the history of land reform. On the eve of the Revolution, French society was polarized, with the nobility and clergy on one side and the rising business class on the other. The middle class was relatively small, especially in the rural areas. The majority of the peasants were hereditary tenants, either *censiers*, who paid a fixed money rent, or *mainmortables*, or serfs, who paid rent in the form of labour services of about three days a week. The peasants paid various other feudal dues and taxes, from which the nobility and clergy were exempted. The Revolution overthrew the ancient regime and the feudal order and introduced land reform.

The reform cancelled the law of feudal tenures, freed all persons from slavery, abolished feudal courts, and cancelled all payments not based on real property, including tithes.<sup>18</sup> Rents based on real property were redeemable. Once the law had been passed, the peasants seized the land and refused to pay any rents or redemption fees. In 1792 all payments were finally cancelled. Land of the clergy and political emigrants was confiscated and sold at auction, together with common land. The terms of sale often favored the wealthy, which may explain the rise of a new class of large landowners among the supporters of Napoleon.

There were other reforms in most European countries. England resolved its land problems by the enclosure movement, which drove the small peasants into the towns, consolidated landholdings, and promoted large-scale operation and private ownership. Sweden and Denmark pioneered between 1827 and 1830 by peacefully abolishing village compulsion, or imposed labour service, and the strip system of cultivation, by consolidating the land, and by dividing the commons among the peasants. Though influenced by the French Revolution, only after the 1848 revolutions did Germany, Italy, and Spain free the peasants and redistribute the land. Reform in Ireland took a whole century before substantive results were

---

<sup>17</sup> History of land reform, Modern European reforms, [Encyclopaedia Britannica](http://www.britannica.com/eb/article?eu=109595&tocid=61985#61985.toc), Britannica.com editors, <http://www.britannica.com/eb/article?eu=109595&tocid=61985#61985.toc>

<sup>18</sup> Tithes means 10% of the product of the rural land that was paid as a rent (or tax) to the feudal landlord.

achieved in the mid-1930s, after Ireland was divided into Northern Ireland and the Irish Free State. The tenants were converted into owners by subsidized purchase of the land.

The first major Russian reform was the emancipation of the serfs in 1861. At the time of emancipation about 45 percent of the land was private property and the remainder was held as allotment land, cultivated in units averaging 9.5 acres by the peasant serfs. In contrast, fewer than 1,000 noble families owned about 175,000,000 acres and received rent therefrom.

Conflict between such extremes of poverty and wealth caused restlessness among the peasants and rendered reform inevitable. As Tsar Alexander II put it: "It is better to abolish serfdom from above than to await the day when it will begin to abolish itself from below." The Emancipation Act of 1861 abolished serfdom and distributed allotment land among the peasants. The peasant paid redemption through the village authority, while the landlord received state bonds as compensation equal to 75 to 80 percent of the land market value. Though legally freed, the private serf had to ransom his freedom by surrendering a part of the allotment land.

By decree in 1918, the Soviets abolished private ownership of land, made farming the sole basis of landholding, and declared collectivization a major objective of policy. Marketing of agricultural products became a state monopoly. In 1929, Stalin embarked on a full course of collectivization, and by 1938, collective farms occupied 85.6% of the land and state farms 9.1%.

Reform in Eastern Europe was complicated by the fact that most of the eastern European countries remained under foreign rule until the middle of the 19th century or later. In Hungary, the Decree of 1853 abolished the forced labour and feudal dues, freed the serfs, liberalized land transaction, and encouraged consolidation.

The Romanian reform of 1864 freed the serfs and distributed both the land and the redemption payments in proportion to the number of cows or oxen each peasant had. The Turkish government in the 1850s introduced formal emancipation in Bulgaria, but actual reform came in 1880, after independence. Each peasant, including sharecroppers and wage-workers, who had worked the land for 10 years

without interruption, was entitled to the land he had cultivated. With the exception of Bulgaria, the distribution of ownership throughout most of Eastern Europe remained highly uneven. Political instability reached a dangerous point between the two world wars. Following World War II, the Eastern European countries established Communist governments with a strong tendency toward collective, cooperative, and mechanized agriculture.

Attempts to reform the agrarian structure have been made in most other countries, with varying degrees of seriousness. Land reform and agrarian reforms have become synonymous, indicating that reform programs have become more comprehensive and encompass much more than the reform of land tenure or land distribution. Reformers have often faced hard choices:

- To promote and sustain private ownership with inequality or to institute public or collective ownership with equality but with restrictions on the individuals' private interests.
- To spread employment by supporting labour-intensive, low-productivity techniques or to promote high productivity through capital-intensive, efficient methods.
- To pursue gradual "repair and maintenance" reform that is basically ineffective or to promote revolutionary, comprehensive, effective but disruptive reform.

In capitalist reforms, these contradictions have usually been resolved in favor of the first set of options; in socialist reforms, in favor of the second. Land tenure reform seems to have been of little significance in creating substantive economic change, although it has been important for improving the status of peasants and maintaining social and political stability.

Land redistribution programs have had limited success for several reasons. They often have deprived the farm of the former landlord's contributions without providing a substitute. They have inhibited mobility of labour by giving the peasant a stake in the land, though only in the form of an inefficient mini-farm. They frequently have threatened large, efficiently run farms and therefore have had to be compromised. They have provided compensation for the expropriated

land and hence left wealth and income distribution largely unaffected. They have been conditional upon peasant participation in social and political activity and cooperative organization, even though the peasant was unprepared for these activities. Moreover, the redistribution of land has rarely been fortified by protective measures that could prevent re-concentration of ownership and the recurrence of crises. Nevertheless, major efforts have been expended by the Food and Agriculture Organization of the United Nations and other international bodies and by governments to devise viable frameworks for solving agricultural and rural problems emanating from defective agrarian structures.

### **3.6 The Affect of the Growing Population on the Value of Land**

Land could not be created or produced and its quantity is finite.<sup>19</sup> The perpetual growth in the world's population<sup>20</sup> decreases the amount of land per person.<sup>21</sup> This phenomenon increases the value of the existing land. The process of increasing the value of land is destined to continue as long as there is an increase in the number

---

<sup>19</sup> "The superior degree of civil liberty which prevailed in America contributed, without doubt, its share to promote the industry, happiness, and population of these states, but even civil liberty, all powerful as it is, will not create fresh land." Malthus, Thomas, Robert. An Essay on the Principle of Population, chapter 17, Western Washington University, <http://www.ac.wvu.edu/~stephan/malthus/malthus.17.html>

<sup>20</sup> According to the U.S. Census Bureau, United States Department of Commerce, the official statistics, data of historical population in the world, In 1999 the population was 6,000,000,000 while only 300 years ago the population was about 600,000,000, that is 10 times less. See Table "A" - Historical Estimates of World Population <http://www.census.gov/ipc/www/worldhis.html> World population: 1950-2050 graph, See Table "B" <http://www.census.gov/ipc/www/img/worldpop.gif>

<sup>21</sup> "Having developed technologies that transformed the earth, humankind now wonders about whether the planet and its resources can continue to sustain life. But the author sees that several modern technological trends are leading us toward a better, not worse, environmental future. He notes that we are using energy and land with increasing efficiency, and suggests that these trends may make human existence, even with population growth, less of a burden to the planet in the next century--if rapid growth in personal consumption and waste can be contained." Jesse, Ausubel H. Can Technology Spare the Earth?, American Scientist, The magazine of Sigma Xi, The Scientific Research Society, March-April 1996, Volume 84, No. 2. <http://www.amsci.org/amsci/Articles/96Articles/Ausubel.html>

of consumers interested in purchasing a "product" which is impossible to create - Land.

Growing population affects the rural land and the agriculture farms. Land ownership and tenure patterns are variable and complex. There are owners of large holdings who hire labour by wage or by shares. The majority is family-owners and workers of small plots, but large numbers of agricultural workers are land-less, working only for others. Many families own some land and at the same time work other plots by shares or for wages. The usual peasant holding is worked jointly by a father and his sons. When the father dies, the land, stock, and implements are distributed equally among the sons. This practice is the major cause of the small size of the individual peasant holdings.<sup>22</sup>

In order to prevent this phenomenon of shrinking agriculture farms, the Jewish ancient law forbids the distribution of rural land among the children of the deceased, and only the elder son could inherit the farm. This idea exists in the Israeli modern law, and only one child of the deceased can inherit an agriculture farm, and has to pay the others the value of their shares in the inheritance. In the ancient world (Mesopotamia, Egypt) brother married his sister to avoid distribution of rural land.

The phenomenon of continuous growth in the value of land in cities increased since the industrial revolution, when a large population emigrated from the agriculture farms to the new industrial areas.<sup>23</sup> The increasing demand for a land in those cities raised its' prices and the outcome was small dwelling areas for the

---

<sup>22</sup> Primitive Culture, the village with internal specialization and exchange, Encyclopaedia Britannica, Britannica.com editors, <http://www.britannica.com/eb/article?eu=118249&tocid=68791#68791.toc>

<sup>23</sup> "The 'over-population' came to light all at once, and could not, as in the manufacturing districts, be absorbed by the needs of an increasing production. New factories could always be built, if there were consumers for their products, but new land could not be created. The cultivation of waste common land was too daring a speculation for the bad times following the conclusion of peace." Engels, Frederick. The Condition of the Working Class in England, The Agricultural Proletariat, p. 372. Electric Book, London, 1998, (First edition 1845), <http://www.elecbook.com/workclas.zip>

workers.<sup>24</sup> Immigration influenced the value of rural land and farms.<sup>25</sup>

The linkage between the size of population and "size" of land is inevitable. Scholars often wonder what is the natural limit to the population growth.<sup>26</sup> The continuous growth of population leaves less land per person. Since one needs his space for dwelling and work, we witness a massive usage of land in the mega-cities, where new buildings become skyscrapers of 80, 100 and more stories, that are enabled by the modern technology and the invention of the elevator.

A plot of 5,000 m<sup>2</sup> in the center of mega-city may contain 50,000 m<sup>2</sup> of built up area and even more and it may provide dwelling or working zone for a few thousand people. Such land may cost as much as 50,000,000 m<sup>2</sup> of rural land -- 1,000 times more, because it provides 1,000 times more population.

One human generation may be considered as 25 years. The population in the year 2025 will become as large as 8,470,000,000<sup>27</sup> that mean increase of about 40% to the year 2000.<sup>28</sup> The result is that the average price of a tract of land may increase

---

<sup>24</sup> "Leeds lies as the *Artisan* describes it, and as I found confirmed upon examination: ...An ordinary cottage in Leeds occupies not more than five yards square of land, and usually consists of a cellar, a living-room, and one sleeping-room." Engels, *Ibid.*, pp. 99-101.

<sup>25</sup> "When the industrial workers withdrew from agriculture, a great number of small holdings fell idle, and upon these the new class of large tenants established themselves, tenants-at-will, holding fifty, one hundred, two hundred or more acres, liable to be turned out at the end of the year, but able by improved tillage and larger farming to increase the yield of the land." Engels, *ibid.*, p. 59.

<sup>26</sup> "Assuming then, my postulata as granted, I say that the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will shew the immensity of the first power in comparison of the second. By that law of our nature which makes food necessary to the life of man, the effects of these two unequal powers must be kept equal. This implies a strong and constantly operating check on population from the difficulty of subsistence. This difficulty must fall some where and must necessarily be severely felt by a large portion of mankind." Malthus, Thomas, Robert. *An Essay on the Principle of Population*, chapter 1, p. 11, *ibid.*.

<sup>27</sup> Population Information Network (POPIN) Gopher of the United Nations Population Division, Department for Economic and Social Information and Policy Analysis. [World population growth from year 0 to stabilization, gopher://gopher.undp.org:70/00/ungophers/popin/wdtrends/histor](http://gopher.undp.org:70/00/ungophers/popin/wdtrends/histor)

<sup>28</sup> According to projection by the United Nation Population Division, in the year 2025 will see further increase to 8.5 billion people. Keyfitz, Natan. *The Growing Human Population*, in *Managing*

during this period in 40% as well.

The first question is whether the land can support life to 8.5 billion people,<sup>29</sup> and the second one is -- what is the limit of growth? It is predicted, that the growth of population will cease in the year 2150 with 11.6 billion people,<sup>30</sup> whilst on the year 2050 the population will be 10.2 billion people. That means that the next 25 years we will face the fastest growth in the population of human history, and it might be the fastest growth in the value of land in the human history.<sup>31</sup>

"It will be observed, that I have said in a progressive country; that is, in a country which requires yearly the employment of a greater capital on the land, to support an increasing population. If there were no question about fresh capital, or an increase of people, and all the land were good, it would not then be true that corn must be sold at its necessary price. The actual price might be diminished; and if the rents of land were diminished in proportion. The cultivation might go on as before, and the same quantity be produced it very rarely happens, however, that all the lands of a country actually occupied are good, and yield a good net rent. And in all cases, a fall of prices must destroy agricultural capital during the currency of

---

Planet Earth: readings from Scientific American magazine, W. H. Freeman and Company, New York, 1990, p. 61.

<sup>29</sup> "Famine seems to be the last, the most dreadful resource of nature. The power of population is so superior to the power in the earth to produce subsistence for man, that premature death must in some shape or other visit the human race. The vices of mankind are active and able ministers of depopulation. They are the precursors in the great army of destruction, and often finish the dreadful work themselves. But should they fail in this war of extermination, sickly seasons, epidemics, pestilence, and plague, advance in terrific array and sweep off their thousands and ten thousands. Should success be still incomplete, gigantic inevitable famine stalks in the rear, and with one mighty blow, levels the population with the food of the world. Must it not then be acknowledged by an attentive examiner of the histories of mankind, that in every age and in every State in which man has existed, or does now exist, That the increase of population is necessarily limited by the means of subsistence." Malthus, Thomas, Robert. An Essay on the Principle of Population, chapter 7, p. 54, *ibid.*

<sup>30</sup> See Table "B".

<sup>31</sup> "Profits might even increase, because the population increasing, at a more rapid rate than capital, wages might fall; and instead of the value of one hundred quarters of wheat being necessary for the circulating capital, ninety only might be required: in which case, the profits of stock would rise from fifty to fifty-seven per cent." Ricardo, David. An Essay on Profits, 1815. London: Printed for John Murray, Albemarle St., McMaster University, Faculty of Social Sciences, <http://socserv2.socsci.mcmaster.ca/~econ/ugcm/3ll3/ricardo/profits.txt>

leases; and on their renewal there would not be the same power of production."<sup>32</sup>

The intensive increasing value of land phenomenon creates a substantial capital gain should the owner of the real estate sell his property. That capital gain is the target to impose taxes on and increasing the government's income.

### 3.7 Sumer - the First City<sup>33</sup>

"World history is city history. Ante-dating Babylon, city history begins in Ur, the Babylonian port at the juncture of the Euphrates and Tigris rivers."<sup>34</sup>

In the 18<sup>th</sup> Century 10% of the world population lived in cities. In 1980, 25% lived in cities, and in 2000, 50% of the world population are living in cities according to various estimates. This phenomenon of emigration from the country to the cities began in Sumer.

Sumer was found in Mesopotamia. The meaning of Mesopotamia is a land between the rivers. Sumer developed a civilization in ancient times - perhaps the first civilization.<sup>35</sup>

**History** - Sumer may very well be the first civilization in the world. From its beginnings as a collection of farming villages around 5000 BC, through its conquest by Sargon of Agade around 2370 BC and its final collapse under the Amorites around 2000 BC, the Sumerians developed a religion and a society which influenced both their neighbors and their conquerors. Sumerian cuneiform, the earliest written language, was borrowed by the Babylonians, who also took many of their religious beliefs. Traces and parallels of Sumerian myth can be found in Genesis.

Sumer was a collection of city-states around the Lower Tigris and Euphrates rivers

---

<sup>32</sup> Malthus, T. R. An Inquiry into the Nature and Progress of Rent, and the Principles by which it is regulated, 1815, p. 34, footnote 14, Printed for John Murray, Albemarle Street 1815, Electric Book Company, London, <http://www.elecbook.com/malrent.zip>

<sup>33</sup> Kramer, Samuel, Noah. History Begins at Sumer: Thirty-Nine Firsts in Recorded History. University of Pennsylvania Press, also, <http://www.crystalinks.com/sumer.html>

<sup>34</sup> Schneider, Wolf. Babylon is everywhere, English edition, 1963, Hodder & Stoughton Ltd. p. 18.

<sup>35</sup> See "the map of Sumer" in the appendix of pictures, picture 1.



in what is now southern Iraq. Each of these cities had individual rulers, although as early as the mid-fourth millennium BC the leader of the dominant city could have been considered the king of the region.

The earliest known writing comes from Uruk and has been dated to about 3,300 BC. It took the form of 'word-pictures' drawn with a stylus on tablets of damp clay. Each word-picture represented an object. Much later, the complete system had more than 700 signs. Writing developed as a convenient way to keep records of produce and accounts of trade. It much later became used to record literature and history. The word-pictures from Uruk developed into the script now called cuneiform. The pictures gradually became 'ideographs', an object also meaning an 'idea'. Then came 'phonograms' representing sounds as well as the meaning of a picture.

Cuneiform was a syllabic script with hundreds of wedge-shaped signs that developed from these pictures. The Sumerians were the earliest to write in cuneiform, closely followed by the Assyrians, Babylonians, Elamites, Hittites, Hurrians and the Urartu from Anatolia. Cuneiform was the language of politics until the fifth century BC. It died out and was replaced by the 22 letter Aramaic in about 900 BC.<sup>36</sup>

The Sumerians were probably the first people to make a calendar. They used the phases of the moon, counting 12 lunar months as a year. To make up for the difference between this year and the year of the seasons, they inserted an extra month in the calendar about every four years. The early Egyptians, Greeks, and Semitic peoples copied this calendar. Later the Egyptians worked out a calendar that corresponded almost exactly to the seasons by inserting 7 extra months in the calendar about every 19 years.<sup>37</sup>

**Society** - The people of Sumer worked as pottery makers, stonecutters, bricklayers, metal-smiths, farmers, fishers, shepherds, weavers, leather-workers, and sailors. Sumerians ploughed with stone and cut with clay sickles, and went on

---

<sup>36</sup> The Hebrew alphabet is based on the Aramaic one, and it contains 22 letters and 5 suffix letters.

<sup>37</sup> This sort of calendar exists today in the Jewish society and is used in Israel side by side with the Christian calendar.

to using metal ploughs with the development of metalworking skills. A significant invention was the wheel, which at first was made of solid wood. The wheel was invented for carts, chariots, and pottery making.

Below the king or governor of Sumer, society had three distinct classes: aristocratic nobles, a middle class, and slaves. The aristocratic nobles were administrators, priests, and officers in the army rewarded with large estates. The middle class contained business people, schoolteachers, artisans, and farmers. The slaves, who had been captured in war or were dispossessed farmers or those sold by their families. Slavery was not stigmatized by race but was considered a misfortune out of which one could free oneself through service, usually in three years.

As the pastoral people traded with the farmers and villagers, complex social organizations could function more productively. The manufacturing of pottery and other products led to specialization and trading by barter, as the Sumerians had no money system except for the weighing of precious metals. As irrigation systems became more complex, planners and managers of labour were needed.

Seals had been used to stamp a carved insignia on clay before cylindrical seals became widespread for labeling commodities and legal documents.

Pictographic writing was first used by the Sumerians about 3400, and by 3000 BC this had evolved into cuneiform words and syllables. The Sumerian economy was based on agriculture, which was influenced by major technological advances in Mesopotamian history. Early Sumerian homes were huts built from bundles of reeds, which went on to be built from sun-baked mud bricks because of the shortage of stone.

**Law** - Laws made clear distinctions between the three classes. Though women had some rights, they were not equal to men. The Sumerians were quite bureaucratic, documenting major transactions and legal agreements of all kinds, being the first to develop a system of laws, which influenced the law codes of Hammurabi.<sup>38</sup>

---

<sup>38</sup> Hammurabi was the sixth king of the first Babylonian dynasty. The "Letters and Inscriptions of Hammurabi" describes the reign of the Babylonian ruler of 4000 years ago. Souvay, Charles L. Transcribed by Kofron, W. G. [Hammurabi](http://www.newadvent.org/cathen/07125a.htm), The Catholic Encyclopedia, <http://www.newadvent.org/cathen/07125a.htm>.

Hammurabi's Law Code was the earliest known law code in existence. The Code has 282 provisions, which dealt with many aspects of life, including family rights, trade, slavery, tariffs, taxes, prices and wages. The Code is inscribed on a stone slab over 2 meters high. At the top, the King is shown receiving laws from the Babylonian sun god, Shamash. The laws are not the same for rich and poor, but the weak were given some protection against the tyranny of the strong. The code was based on retribution, not justice and varied unfairly between social classes.<sup>39</sup>

**Religion** - The religion of the ancient Sumerians has left its mark on the entire Middle East. Not only are its temples and ziggurats scattered about the region, but the literature, cosmogony and rituals influenced their neighbors to such an extent that we can see echoes of Sumer in the Judeo-Christian-Islamic tradition today. They built the temple Ziggurat.<sup>40</sup>

The head of the family of Gods of heaven and Earth was Anu. He was the Great Father of the Gods, the king of the Gods. His realm was the expanse of the heavens. His symbol was a star. He lived in Heaven and according to Sumerian texts came to earth either at times of great crisis accompanied by his spouse Antu.

The second and most powerful god of the Sumerian pantheon was Enlil. He was God of Heaven and Earth, firstborn of Anu (Heaven) in union with Ki (Earth), dispenser of kingship, chief of the assembly of the gods, father of gods and men, granter of agriculture, and lord of airspace.

Among other Sumerian gods, there is Ninhursag the queen of the mountain-head and the daughter of Anu but her mother was not Antu. Ishter, the second daughter of Anu and Antum is the goddess of love, procreation, and war. She is armed with a quiver and bow. Nanna is another name for the moon god Sin. He is the product of Enlil's rape of Ninlil. Nanna was the tutelary god of Ur, appointed as king of that city by Anu and Enlil. The goddess Inanna was the patron and special god of the ancient Sumerian city of Erech, the City of Gilgamesh. As Queen of heaven, she was associated with the Evening Star (the planet Venus), and sometimes with the Moon.

---

<sup>39</sup> The Code of Hammurabi Translated by L. W. King, Exploration Ancient World Culture, Readings from the Ancient Near East, <http://eawc.evansville.edu/anthology/hammurabi.htm>

<sup>40</sup> See the Ziggurat in the appendix of pictures, picture 2.

**Science** - Sumerian scientific achievements were important to the modern world. Sumerians invented the wheel 3700 BC. Sumerians developed a math system based on the numeral 60, which was the basis of time in modern world. Earliest concepts in algebra and geometry were formulated. A system of weights and measures were developed which served the ancient world until the Roman period. Many of the constellations were mapped by the Sumerians. Sumerians developed a complex system of sewers and flush toilets to rid cities of waste and unhealthy affects of swamps. Sumerian invented the bronze metal.

### **3.8 The City in the 19th and 20th century**

The greatest city of antiquity was Rome. This general model of city structure continued until the advent of the Industrial Revolution, although medieval towns were rarely as large as Rome.

In the course of time, commerce became an increasingly important part of city life and one of the magnets that drew people from the countryside. Cities became places where all classes and types of humanity mingled, creating a heterogeneity that became one of the most celebrated features of urban life.

#### **3.8.1 The Industrial Revolution as the Accelerator of the City**

The technological explosion that was the Industrial Revolution led to a momentous increase in the process of urbanization. Larger populations in small areas meant that the new factories could draw on a big pool of workers and that the larger labour force could be ever more specialized. This they did in the 20th century, when most cities became surrounded by rings of suburbs. It is speculated that one result of the continuing population explosion will be the creation, in the next 100 years, of megalopolises, concentrations of urban centers that may extend for scores of miles.<sup>41</sup>

The rapidly increasing complexity and mass of tasks involved in managing the needs of millions of citizens, developed needs for efficient and very rapid

---

<sup>41</sup> "Urbanization", *Encyclopaedia Britannica*, Britannica.com editors, <http://www.britannica.com/eb/article?eu=76401>

communications and transport means, a uniformity and standardization of services available. The bigger the mega-city, the faster and more complex the means. The whole phenomenon brought about the advent of "fast food" information, culture, travels, TV zapping and so on a growing sense of information saturation.<sup>42</sup>

### **3.8.2 The Growth-Control Policies**

Dwelling in the suburbs is nowadays a popular lifestyle of many people. The critics of sub-urbanization allege that this type of development has been the cause of increased traffic congestion, loss of important farmland, subsidized growth, and the decline of central cities.

Although growth-control policies can be found in many communities, there is no national "movement" in the sense of a unifying philosophy or an agreed upon set of strategies.

Efforts to limit sub-urbanization can generally be divided into two categories: "no-growth" and "slow-growth" policies. In general these have taken the form of rigid growth boundaries around cities, or various types of moratoria on development, such as limitations on building permits. Advocates of these measures believe that if they can stop the physical expansion of their community, or limit new construction, the landscape as it currently exists will be protected forever.

However, to the extent that these tactics work at all, they can succeed only at a very small scale, because growth has to take place somewhere. People will eventually need their own homes and automobiles. So this approach works only if nearby jurisdictions have a more relaxed attitude and can accommodate new development at moderate cost.

Such a strategy would be impossible to apply at the state level, because the cure would be worse than the illness in terms of job loss, long-distance commuting, and high housing costs.

**Slow-Growth Policies** - Policies designed to slow down the process of

---

<sup>42</sup> Joye, P. Eight Themes Around Mega-Cities, chapter 3, Mega-cities, accelerators of Time and History, <http://www.pjoye.com/wef/page3.htm>

urbanization, or to "manage" it from a central political office, are much more common. Some of the slow-growth tactics include minimum lot-size zoning and maximum lot-size zoning.

**Minimum lot-size zoning** - A local authority may enact requirements that prohibit construction on lots smaller than a certain size-frequently, depending on the nature of the community. The reasons for minimum lot-size regulations vary, and there are often hidden agendas behind the public rationale. In rural communities, lot-size regulation is simply an attempt by people already living there to ensure that the number of newcomers is limited by restricting the housing potential of undeveloped land.

The unstated goal of many lot-size regulations is usually to keep low-income individuals out of a community. In many communities, those already living there consider renters and mobile home owners "undesirable". Mandating minimum lot sizes per dwelling is an effective way to maintain the social order.

Ironically, such government planning has been a leading cause of suburban sprawl, because it has forced many communities to develop at lower densities than would have been the case in a truly competitive real estate market.

**Maximum lot-size zoning** - This approach is popular with the "new urbanists", who believe that people should live in compact communities built to pedestrian scale, not automobile scale.

However, as with minimum lot-size regulation, it is impossible for central planners to know more than the market knows about consumer preference. In short, people will go to great lengths to get the kind of neighborhood they want, regardless of what government planners prefer.

Policies designed to slow down the process of urbanization, or to "manage" it from a central political office, are much more common. The tendency is for urban areas to develop at densities less than required by regulation, while in rural areas the tendency is to develop at higher densities than planned for.

A "no growth" policy would be worse than problems created by urban and suburban sprawl in terms of job loss, long-distance commuting, and high housing costs. Policies to slow down or "manage" urbanization are much more common

and effective.

### **3.8.3 Restoring Cities through Incentives**

Critics of sub-urbanization argue that controlling the physical expansion of existing towns and cities will make them more livable. Actually, what most people really care about are education, taxation, public safety, traffic, and environmental amenities such as open space. Most growth-control strategies are either silent on these issues or actually making them worse.

High property taxes have a tendency to push people out of cities and also generate large pots of money that urban politicians then use for self-serving pork-barrel projects like light-rail or professional sports arenas. User fees ensure that there is a strong connection between what consumers pay and what they get in return.

Any city without a property tax would have a powerful advantage over suburban jurisdictions in attracting both homeowners and employers. Converting urban highways to electronic toll-ways, with higher rates at the peak period to eliminate traffic congestion, is the theory of "congestion pricing". When people are offered differential rates, they change their behavior, bringing supply and demand into balance. As population grows, so do service demands. Keeping levy rate reasonable is the challenge.<sup>43</sup> The problem is that the state collects many land taxes while the local authorities have to carry the burden of the land development.

Local authorities have used many strategies to respond to this fiscal dilemma, including a growing use of development fees, ballot measures to override tax and spending caps, and competition for revenue-producing development. Cities have learned to pursue high-value tax-generating development projects such as office parks, and auto-malls that bring in more revenue than they cost to service, and that can cover their up-front infrastructure costs through development fees, assessment districts, and other creative financing mechanisms.<sup>44</sup>

---

<sup>43</sup> The Detroit News, May 24, 1999,  
<http://detnews.com/specialreports/1999/taxes/mondemands/mondemands.htm>

<sup>44</sup> FACT SHEET: Land Use and State/Local Financing, in California Futures Network,  
<http://www.calfutures.org/resource/FSstateloc.html>

### **3.8.4 Urban-Suburban Migrations**

Cities are traditionally thought of as the repositories of the nation's underclass, while suburbs are reserved for the more affluent. While some suburban communities have used zoning and other policy instruments to wall themselves off from the poor, in fact many lower-income people are moving to the suburbs while many upper-income suburbanites are moving back to the city. Why the role reversal?

For poor people, there are a number of reasons. First, jobs follow people, and since most people now live in the suburbs, that is where the major job expansion has been. This means that for lower-income individuals if they want more job opportunities they are better off moving away from the inner city.

Second, lower-income parents often place a high value on education, just as their richer counterparts do. When they know that their children will have better educational opportunities in the suburbs, they have a strong incentive to move there.

Thirdly, for most of the past century, the suburban migration has been strongly correlated with rising personal income. As people accumulate more wealth, they tend to desire more private space, and their growing affluence allows them to act on that preference. Since personal income has been rising across virtually all income classes, more people can now afford to live away from the inner city.

However, because large cities are becoming primarily recreation and cultural centers rather than job or residential centers, they attract certain demographic groups. These demographic groups including single professionals, who may commute out to the suburbs for work but prefer the social opportunities of the city, young married couples who are childless and thus unaffected by mediocre urban schools, and empty-nesters who now value urban cultural amenities more than a large suburban yard.

## **3.9 The Mega City**

A Mega-City is a result of the process, by which large numbers of people become permanently concentrated in relatively small areas, forming cities. A mega-city is a



multi million resident city, and this phenomenon started in the 20<sup>th</sup> century.

### **3.9.1 The Urban Explosion**

The increasing number of mega-cities of more than eight million inhabitants illustrates in itself the major demographic and geographical trends of the past century. In 1950, only two cities, London and New York, were that size. In 1975, there were 11 mega-cities, including six in the industrialized countries. In 1995, there were 23, most of them (17) in the developing countries. In 2015, the projected number of mega-cities is 36, 30 of them in the developing world and most (22) in Asia.

Urbanization is taking place at different speeds on different continents. In North America, the number of city-dwellers overtook the rural population before the Second World War. In Europe, this happened after the war and in Latin America at the beginning of the 1960s. Today, these three continents are almost equally urbanized - 75% of Europeans and Latin Americans are city-dwellers and 77% of North Americans, according to UN estimates for the year 2000.<sup>45</sup>

A similar process is occurring in Africa and Asia, which are still mainly rural. Their proportion of city-dwellers rose from 25% in 1975, to 35% in 1995 and a little more than 37% today. The turning point, when the figure will top two-thirds of humanity, is predicted for around 2025.

In terms of numbers, the world's city-dwellers in 2025 should total 307 million in North America, 566 million in Latin America, 572 million in Europe, 752 million in Africa and 2,507 million (2.5 billion) in Asia. In 2015, the world's six biggest cities are expected to be Tokyo, Bombay, Lagos, Sao Paulo, Dhaka and Karachi.<sup>46</sup>

Experts say the rate of population growth will eventually decline everywhere, but once again at very different speeds. Between 2005 and 2010, annual population

---

<sup>45</sup> The Urban Explosion, in The Unesco Courier, The South's urban revolution, June 1999.

<sup>46</sup> The most populated cities nowadays are Amsterdam, Athens, Bangkok, Beijing, Berlin, Brussels, Budapest, Chicago, Hanoi, Helsinki, Hong Kong, Jakarta, Kuala Lumpur, London, Lisbon, Los Angeles, Madrid, Manila, Montreal, Moscow, New York, Osaka, Oslo, Paris, Prague, Rangoon, Rio de Janeiro, Rome, San Francisco, Sao Paulo, Seoul, Singapore, Stockholm, Sydney, Taipei, Tokyo, Vancouver, and Vienna.

growth rates are predicted to be 3.82% in Africa, 2.59% in Asia, 1.68% in Latin America, 1.06% in North America and 0.24% in Europe.

### **3.9.2 Are Mega-Cities an Aberration?**

Aristotle saw a definitive limit to the growth of cities. The Greeks should know. They invented the social concepts of the modern city, the citizenship, and voting. In order for these to work, the limit was put at 6,000 inhabitants. More inhabitants would bring severe social and communication problems. The city, "Polis", had actually been created by the Greeks to facilitate communication in a growing web of social intercourse.

In 1,500 BC., Babylon counted some 300,000 inhabitants. In 200 BC., Rome was a mega-city of 800,000 inhabitants. In the 18th Century, everyone was convinced that a city could not contain more than 700,000 inhabitants. In the 19th and 20th Centuries, it was common sense to admit that cities could, thanks to ceaseless technological and urban innovations, grow indefinitely.

Today cities seem to become entities of their own, detached from the countries in which they exist, suffering from physical, chemical, social and cultural entropy. The Mayor of Tokyo, Mr. Suzuki, said in 1992: "The 20th Century was that of urbanization, the 21st Century will be that of the mega-cities".

The exponential increase of all constituting parts of the mega-city (population, immigration, social decline, infrastructure maintenance, insecurity, violence, and so on) will inevitably lead to an explosion of the city, in the apocalyptic definition of the word. Mega-cities tend to actually develop a life of their own, influencing in unpredictable and sometimes unexplainable ways the individuals living in them.

## **3.10 Mega Cities in the 3<sup>rd</sup> Millenium**

In the year 2015, there will be 30 mega-cities with more than 8 million inhabitants, most of them in Asia. How will they cope?<sup>47</sup>

---

<sup>47</sup> Jacot, Martine. Living with Leviathan, in The Unesco the Courier, June 1999.  
[http://www.unesco.org/courier/1999\\_06/uk/dossier/txt11.htm](http://www.unesco.org/courier/1999_06/uk/dossier/txt11.htm)

Humanity is about to set a new record. Nearly two thirds of the planet's globalization gives shape to the "global village" predicted by the Canadian Marshall McLuhan. By 2025, two-thirds of humanity will be living in cities and towns, where the best opportunities in life tend to be.<sup>48</sup>

World population, according to the same projections, will top 8 billion in 25 years' time, including five billion in cities. The increase will be particularly spectacular in the cities of the developing world, whose total population will double to four billion. We are going to see an unprecedented exodus of people from rural areas. The flow of people into mega-cities in developing countries is well under way. However, the demographers' predictions are only tentative.

### **3.11 Conclusions**

Since the first city Sumer, most of the population (about 90%) were peasants and produced agriculture. The ruling classes, soldiers, clerks, and merchants populated the cities. The industrial revolution caused a massive immigration from the rural zones to the modern cities. During the 19<sup>th</sup> and 20<sup>th</sup> centuries the population of the rural zones declined, and today only 3-4% of the population in the Western countries are working in agriculture.

Mega-cities that are populated by more than 8,000,000 people started to develop in the 20<sup>th</sup> century. In the year 2000 there are 26 mega-cities and its numbers are continuing to increase.

The land in those mega-cities is exploited massively by skyscrapers of more than 100 stories. While an average farm of 30,000 square meters supported dwelling and work to one family, a parcel of 3,000 square meters in mega-city can supply dwelling and work to hundreds of people.

---

<sup>48</sup> Wilhelm, Jorge. Urbanization and Globalization, in The Unesco Courier June 1999.  
[http://www.unesco.org/courier/1999\\_06/uk/dossier/txt18.htm](http://www.unesco.org/courier/1999_06/uk/dossier/txt18.htm)