

# CRISIS OF THE URBAN DEVELOPMENT PROCESS AND THE ECOLOGICAL, ECONOMIC AND SOCIAL SUSTAINABILITY

*Recibido: 17/12/2014*  
*Aceptado: 11/02/2016*

Raúl Eduardo López Estrada<sup>1</sup>

---

## Resumen

Muchos esfuerzos teóricos se han realizado para comprender la problemática urbana vinculada con la sustentabilidad. Entre ellos hay análisis que destacan la insuficiencia de la definición del concepto sustentabilidad cuando éste es reducido únicamente al aspecto de la ecología sin considerar que el problema más importante es político y social. Esto ha explicado el fracaso de muchas reuniones internacionales sobre el tema, cuando no se ha considerado la contradicción en el sistema capitalista donde se contraponen el interés económico y el interés por la sustentabilidad. Es entonces en el terreno político y social donde muchos esfuerzos deben canalizarse como prioridades de investigación urbano regional para la próxima década. En este sentido una gran parte del análisis académico se ha concentrado en dos vertientes principales: por una parte, aquellos que consideran que la solución al problema de la sustentabilidad radica en el cambio de las relaciones de producción, sin especificar claramente que se entiende por esto; y por otra parte, los análisis que estiman la pertinencia de realizar cambios al interior del sistema capitalista en donde el Estado jugaría un papel importante. En los dos casos se requiere un cambio de mentalidad para abordar el problema de la sustentabilidad y nuevas formas de participación de la población para realizarla.

## Palabras clave:

Desarrollo urbano, sustentabilidad ecológica, sustentabilidad económica y sustentabilidad social.

## Abstract

Diverse theoretical efforts have been made in order to understand the urban problematic related to sustainability. Among them is an analysis that highlight an inadequacy about the sustainability concept which is only limited to an ecological matter and it not considers that the most important issue is political and social. This has explained the failure of several international meetings about the matter, when the contradiction has not been considered in the capitalist system where the economic interest and interest in sustainability contrasts. Then, in the political and social field is where many efforts should be channeled as urban regional research priorities for the next decade. In this regard, most of the academic analysis have been focused on two main aspects: on the one hand, those who consider that the solution to the sustainability problem lies in the change of the relations of production, without clearly specifying what this means; and on the other hand, the analyses that estimate the relevance of making changes inside of the capitalist system where the State would play an important role. In both cases a mental change is required to dealing with the problem of sustainability and new forms of population participation to perform it.

## Key words:

Urban development, environmental sustainability, economic sustainability and social sustainability.

---

<sup>1</sup> Facultad de Trabajo Social y Desarrollo Humano. Universidad Autónoma de Nuevo León, raul.lopezes@uanl.edu.mx

## 1. Introduction

The current approach of the urban-regional problems in Latin America is not dissociated from the international context in which it is located. This is most obvious when the implications and the impact of the global crisis related to the environment are discussed (IPCC, 2014). Even though this difficulty is not new, international measures taken have not really influenced in the structural causes that have motivated it. In such circumstances, it is important to insist on tests that allow a clearer understanding of the situation that look for decreasing an outcome that would be adverse.

In the case of urban problems is a priority and probably in the next few years will lead to analysis and research that allow understanding the challenges that we face. This is important, in the sustainability field the global economic dynamic puts a strong pressure on, with unpredictable consequences up to now in the social conglomerate and the nature, besides of new forms of political interaction.

Which elements are in the process of urban development related to the ecological, economic and social sustainability? What are its implications? These questions lead this work which aims to highlight a social problem that goes beyond of the partial approaches around the environment. It seeks to contribute identifying the priorities that the urban-regional research should address considering the implications for an uncertain future.

This subject matter is wide and complex. It is wide because there are multiple factors taking place in the environment quality, among them: biological reproductive process, political issues, economic aspects and social reproduction. The concerns around these factors are not recent and they have lead experts to produce a huge number of works that highlight the sustainable development problem in current society<sup>2</sup>. Therefore, it has been seen how these concerns resulted in international meetings where the impacts of productive systems on the environment have been examined.

In terms of the complexity, it is a consequence of the configuration of these factors and actors involved in the above-mentioned processes; the existence of an unfinished debate about the persistence of a predatory and contradictory capitalism with the environment and the concomitant interests searching for a sustainability of the system based on new ways to think about the future of the human being.

Both breadth and complexity implications have been addressed from the 80s (Brundtland Commission, 1987)

and in the reflections of current theorists (Gay y Rueda, 2014) who have made pertinent observations about this problem. In this regard, it is important to mention the seminal works of Middleton and O'Keefe (2001) and O'Connor (1994) who have outlined the conflicts facing by sustainability. It is not unnecessary to mention that probably scientific approaches in the coming years would be related to the dilemma that many cities and countries will face around the breadth and complexity of sustainability. But not only states will address the issue, but also the current capitalist system in transition (Wallerstein, 2003).

In the case of Latin America, the economic processes followed from the 1940s produced a political stability in many countries which was not reflected in an equitable distribution of benefits (Ward, 1989). Changes in the growth process had a significant impact which was reflected in the increase in poverty. In this situation the continent, in addition to receiving the impact of the unequal economic growth, absorbed large population clusters across the rural-urban migration. This displacement, in conjunction with increased needs and consumption processes, has contributed with a greater pressure on the resources of urban areas which has resulted in increasing the economic production and a greater demand for services, energy and of new spaces at the expense of the environment. Thus, we are witnessing a process of metropolization which had different manifestations depending on the specificity of each geographical area (Murguía, 2005). Given this migration, it must be added the natural growth of the population. Even though birth and mortality rates have gradually decreased since 1940's, the second has had a more significant decrease, resulting in a significant increase in the population.

This framework of unplanned growth and environmental pressure, it has been affected the development of cities and their geographical environment. No doubt this situation reflects a problem of urban and suburban planning that according to Mendoza (2007) will result in a change of ecosystems and climate.

The economic dynamics characterized by the consumption of non-renewable energy used in transportation, the large volumes of waste and the growing demand for services has affected the quality of the environment, particularly the air quality (INEGI, 2002). In addition, the infrastructure for vehicle traffic is not enough and it has had an effect on the quality of life of the population.

The approach of the effects of the quality of the environment on human beings is complex. There is the

<sup>2</sup> Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (UN/WCED, 1987).

problem of attributing them to a single cause, since the harmful effects of the air, water, soil or waste pollution and the hazardous and radioactive substances are associated with the period of exposure, intensity, magnitude and dangerousness of the harmful element. Also socio-economic conditions influence, such as age, income level, educational level, cultural tradition and place where the deterioration of human health is produced, among others (INEGI, 2002).

There are efforts in Latin America where in each country there are institutional policies for sustainable development, as well as structures for decision making based on the national policy and legislation on environmental impact assessment. Notwithstanding these efforts of the public administrations, there are problems to switch from a well-structured discourse to concrete actions.

This work will address two points which illustrate the problem of the environmental deterioration. The first part, deals with the sustainability problem. In the second, it is intended to reflect about sustainability when it is attempting to make it inside the capitalist system. This last part is influenced by an unfinished debate and also divided in contradictory positions. In one of them, the impossibility of sustainability in the market system is affirmed; while on the other, it is advocated for alternative routes without denying the intrinsic nature of capitalism.

## 2.- The problem of sustainability

Sustainability issues much depend on the way how this term is conceptualized. The disclosure of the report *Our Common Future* (UN/WCED, 1987) aroused much interest to remove the few doubts existed about whether the concern for nature must or must not consider the human being. In this report a broader vision was incorporated by including to the preservation of external nature (ecological sustainability), the social sustainability, and the economic sustainability too. Despite this conceptualization, it has been continued favoring only the first. However, there are multiple definitions of sustainable development; in many cases the social, economic and political aspects only complement the ecological sustainability (Foladori, 2002).

In academic circles, the concept of social sustainability is one that has provoked more debates and changed its content in the last thirty years. Lele, one of the authors who has been interested in the evolution of its content, indicates the difference between the social and ecologi-

cal sustainability as a major conceptual problem: "Differentiating between ecological and social sustainability could be a first step toward clarifying some of the discussion" (Lele, 1991: 615).

Until the 1990's, discussions were focused on two themes about social sustainability: poverty and population growth. In this context, it was not easy to distinguish between the social and the ecological. Foladori and Tomasino (2000) argued that until that time the concept of social sustainability was used in order to cover up the interest in ecological sustainability. For institutions such as the UN or the World Bank, poverty and/or population growth were not considered as a problem of unsustainability by itself, but in so far as they cause ecological unsustainability (Foladori and Tomasino, 2000).

In this sense, the problems of sustainability only could be interpreted as an environmental problem excluding the essential what in this case has to do with the kind of economic growth that gives it origin. However, the problem is broader and would be assumed that the fundamental focuses on social sustainability and therefore in the political decisions that define the behavior of the production system. "The real question however is not an ecological question but a political question" (Wallerstein, 2003). The error about the approach has been to understand the social sustainability as a "bridge, in so far as the interest for the social sustainability was simply achieving the ecological goal, for which social sustainability was constituted an instrument or mode" (Foladori and Tomasino, 2000).

The preceding shows that the way in how the term has been conceptualized has important implications for the solution of the problem. The purpose here is to demonstrate that social sustainability is underlying the problem, while this has been seen as complementary to the ecological. The analysis of this concept should insist on the political and social origin rather than on factors related to ecological sustainability.

Addressing the sustainability problem necessarily remit to the effects of the human action on the environment. Rod Burgess<sup>3</sup> says that in spite of an ambiguity in the discourses about economy and environment and how the term sustainability can be used to mean almost whatever, this term refers not only to a control of how it should be produced, but they have greater range, where the social and political weight appear as priority. The current problem of sustainability supposed to take into account the pursuit of economic growth linked to social development, the promotion of the ability to satisfy the society needs; a way of producing without compromis-

3 Quoted by Murguía (2005).

ing the ability of future generations to solve their problems, to have as one of its priorities the real social distribution of wealth, or in the same way, the imperative to eliminate structural poverty (Hernanz, 2004). The strong correlation between economic progress and quality of the environment has been demonstrated in rigorous works (Varas, 1999:20).

This definition greatly exceeds those focused only on the problem of non-reproduction of natural systems. The central core of sustainability is inscribed in how raises the development and economic growth. Many current speeches focused on the importance of economic growth, assuming its benefits to produce social welfare. Thus, it continues insisting on a predatory economic growth in which economic power has overtaken to political power.

This last statement has implications. The speech of the representatives of the hegemonic corporations insisted on the importance of this growth, assuming that automatically it will be reflected in an improvement in the quality of life of the populations. This is well explained in an extensive body of economic literature that distinguishes between economic growth and development<sup>4</sup>.

The current controversy surrounding the economic growth and development is focused on the first that has not been able to guarantee the improvement of the living conditions of the population. It certainly makes reference to two different logics. One that has to do with the rationality of the capital to be reproduced and the other with the satisfaction of the population needs. Both are opposite and its nature is different. Two features are in the process, while there are others that will not be addressed here: on the one hand, the capitalist economic growth has not been able to create harmonious societies, with less inequality and poverty reduction; and on the other hand, economic growth has had a negative impact on the environment and does not guarantee sustainability.

It is claimed that economic growth generates employment and at the same time it has an impact on the quality of life through income. Therefore, governments insist on promote the economic growth, searching for the satisfaction of needs. Here, in this linearity, it is one of the biggest contradictions of the system. Every time, more forcefully, it is insisted that economic growth

generates well-being and that its priority is indisputable.

In one of his latest works, Celso Furtado, in assessing the Brazilian experience in the second half of the 20th century when high rates of economic growth were achieved, noted: "Nowadays Brazil has one income ten times greater, in comparison when I began to study these problems, but also has greater inequalities and the poor continue being just as poor. Then fit the question: was there a development? No: Brazil did not develop, but it was modernized. The true development only occurs when the population is benefited as a whole"(Furtado, 2002: 31)<sup>5</sup>.

Sustainability, as a social project, is one process rather than a set of goals and involves the modification of the appropriation of nature. This concept has become fashionable when "it is discovered that the growth of the production does not guarantee a better quality of life, but quite opposite, since the system has been responsible by itself to demonstrate that economic growth only has brought poverty for most people and wealth for a few" (Gino, s/d).

Going back to the conceptual problem of sustainability, the relative conclusion to the economic growth with preservation of resources is circumscribed to a more political, social and economic problem than its technical aspect, which is related to biological aspects. Despite this conclusion, some authors, institutions, and practices of environmental policy continue favoring the latter; in these cases, the political, social and economic part are relegated or as a complement.

### 3.- The debate in relation to sustainability

The academic work around the issue of sustainability from the second half of the last century generated great interest in many countries, and brought about international meetings (Eschenhagen, 2007). With these, the urbanization processes were examined and the results were included in the general framework of sustainability. Taking into account the theoretical acquisitions which reinforce the idea that there is a submission of the economic growth from the urban to the logic regulated by market relations, it can be explained why agreements resulting from international meetings have not had the success expected with the adoption of agenda 21.

4 Development is a comprehensive, qualitative, complex, multidimensional and intangible concept. He linked with social and economic issues regarding the conditions necessary to ensure the realization of human potential (Becerra and Pino, 2005). "Development is a process of global structural change (economic, political, social, cultural and environmental), aimed at enhancing the quality of life of all members in society, in order to achieve a more complete satisfaction of the basic collective needs "(Gago, 1993), quoted by: F. Casanova (2004).

5 Quoted by Gillén (2006)

The failure of Johannesburg was due to many reasons, but certainly there is a root cause that it is not said or is not wanted to admit, and is the primacy of the private benefits, especially those great transnational monopolies which are above the social needs of the present and future world population. The engine of the capital is to obtain the maximum profit, no matter the current and future social and environmental cost.<sup>6</sup> Also it should be considered that the political failure can be attributed to the "lack of consensus of the main representative governments of the world powers and the interests of large multinational corporations. That explains why the US Government, so far, has not signed the Kyoto Protocol"(Murguía, 2005).

Thus, the finding of the failure of environmental policies because of the primacy of capital in economic systems has raised the question if it is possible to have sustainability in current societies. In this sense, when we think in this problem, two aspects have been addressed by literature. The first, supported by contributions related to environmentalism leftist, has conducted to arguments that sustain a change in the relations of production; While the second, calls for changes in the production systems inside the capitalist system. So the debate has focused on two ways.

### *2.1.- The change in the relations of production*

The current image projected by many urban conglomerates is view as disorder, lack of planning, chaotic economic growth; however, ultimately, there is order and logic determined by capital and the economy of market (Murguía, 2005). In this sense, it is assumed that the case of the metropolis is disassociated from a general economic context which gives it a sense and determines its nature. The urbanization processes are subject to the capital logic and many analyses that do not take into account this situation; they cannot explain the failure of international meetings about the topic of sustainability .

According to Burgess (2003)<sup>7</sup>, the analysts who argue this position said that by the neo-liberal thinking it is difficult to accept the thesis that connect sustainability with the reduction of social imbalances, because this

would stop the economic growth and as a result a deterioration of environmental conditions due to poverty. Thus, many public policies are argued the inescapable need to fight against unemployment and poverty via economic growth; but also in these policies, there is difficulty to accept forms of regulation of the market, the integrated planning and access to goods and services as a right by the population.

In this context, Burgess (2003) argues that the objectives of sustainability are opposite to the forms of capitalist production: market liberalization, the pursuit of profit, the extreme competition, the commercialization of the production factors, an increasingly widespread consumerism; in short, this type of economy is always generating new social imbalances. As a result, the rapid increase in population and urbanization, in conjunction with the globalization of production and a general consumption with a high exploitation of natural resources, cannot achieve the goal of sustainability. This position does not make concessions and is steady on the argument that sustainability policies will not work if redistribution systems of resources are not introduced

These arguments are also shared by O'Connor (2001)<sup>8</sup> who claims a similar thesis. Concerning the question: is sustainable capitalism possible? The answer is no, and a broader response would probably be no. In accordance with this author, the capital only perceives the world in terms of market and profit; everything else is dispensable. Undoubtedly in this situation, there is a fundamental contradiction between the partial economic rationality and global socio-economic irrationality embedded in the market economy (Murguía, 2005; Gadotti, s/d; Toledo, s/d). This thesis, although with a different treatment is shared by Wallerstein (2003)<sup>9</sup>. Also there are economists who argue that growth cannot be unlimited; then, in order to accept the capitalism, should become a 'zero growth' project (Daly, 1989)<sup>10</sup> which departs from the logic of this system.

Despite the consistency of these analyses where a capitalist dynamic focused on profitability and its contradiction with the sustainability are recognized, there are no concrete proposals on how to solve the problem, unless the affirmation that relations of production should

6 The basic cause of the second contradiction is capitalism's economically self-destructive appropriation and use of labor power, urban infrastructure and space, and external nature or environment - 'self-destructive' because the costs of health and education, urban transport, and home and commercial rents, as well as the costs of extracting the elements of capital from nature, will rise when private costs are turned into 'social costs.'" (O'Connor, 1988: 177). Quoted by Wallerstein (2003) .

7 The World Summit on Sustainable Development in Johannesburg on September, 2002, where it was found the failure from the list of principles that Governments should start with the adoption of Agenda 21.

8 Quoted by Murguía (2005)

9 Quoted by: Murguía (2005)

10 Since 1970's in an interview, Ernest Mandel supported the thesis of a predatory capitalist production mode (Murguía, 2005).

be changed or as well that the future is uncertain and we are at a moment of transition (Wallerstein 2003).<sup>11</sup> Now, let us review other theoretical positions.

## 2.2 *The Change inside the Capitalist System*

In parallel with the environmentalism leftist, other approaches have been developed in relation to sustainability. A widespread mainstream is the ecological capitalism: "to the softer aspects of ecological economics, and environmental economists, it will be enough correcting processes to obtain a sustainable capitalist development. Basically, it would be increasingly replaced by renewable non-renewable natural resources, and also a tendentious decrease of pollution" (Pearce and Turner, 1995).

Although the intervention of the State is not mentioned, its importance in these approaches is assumed. They accepted that the market economics, although the different nuances, generates wealth and at the same time produces social asymmetries. Due to this situation the public regulation, extra-market, cannot renounce its responsibility in areas such as environmental and biogenetic heritage and pass them on to the market. Thus, it does not contradict "the trend towards the economic liberalism expansion, which is also due to a historical evolution rather than an ideological whim, but means adapting the market economics to conditions and real possibilities of the developing world" (Guimarães, 1998).

Another way that recognizes the importance of the State is established in relation to planning. It is claimed that there is a contradiction between the need for sustainable planning and the absence of State interventionism. This leads that the market determines the process of urban development, resulting in difficulties for the territorial planning of the urban land use, the management of liquid, gaseous wastes and materials and the monitoring and control of energy resources. Although the recognition of the State is not directly mentioned as an important actor, it is assumed that it is who must redirect to the capital. "The true social subject of urban planning is the own capital and not the State or the society: capital in general, and their autonomous forms (industrial, commercial, banking-financial, real estate), who designs and configures the urban-metropolitan spaces and their regional environment" (Murguía, 2005).

Also, it has been argued in various circles, but especially in the approaches of the New Economic Geography (NEG), the requirement of a "new development

paradigm", where the human being is the center and the economic growth is a means and not an end. In this process which should protect the life opportunities of present and future generations and the integrity of natural systems, it is necessary to explicitly incorporate the territorial sustainability dimensions, since "regional development" and "sustainable development" are two sides of a same coin. Thus, it is affirmed that among the current challenges of public policy is territorializing environmental and social sustainability of the development - "think globally but act locally" (Guimarães, 1998).

A stream with many adherents is which seeks through technological change modify the impact environmental systems. In this, also the State plays an important role in promoting the research development and its application in private enterprise. Thus, it is ensured that the basic strategy for the achievement of sustainability consists of technological development, the strengthening of a responsible, democratic, social organization with an active and committed civil society, and the promotion of a culture of environmental management. For these authors, the technological development is the option most immediate, but it must be disposed the idea of the development linearity in which scientific progress means technological progress and this will be reflected in economic progress that will lead to social progress. Other implicit idea in this argument is that "the scientific and technological system is part of a problematic network where economic and social aspects are not results, but centering points in a same problem, which has to be understood as a network in which all factors are equally relevant and interactive" (Herranz, 2004). Another modern position is which seeks to grant price to the elements of nature that are not good; in this regard Middleton and O'Keefe (2001) "explain that this is not possible."

Figure No.1 presents a diagram that explains the above mentioned so far, as well as a proposal for change in the social subject of urban planning to achieve the new development paradigm.

Despite the opposite that these two approaches about the solution to the problem of sustainability may seem, there is an element that is common in them. This is related to a change in the 'social outlook', a new way of seeing the world, assuming responsibility and the costs of transformation. Although the easy identification of this common element, its implementation is very

11 Quoted by: (Foladori, 2002)

complex, and in addition, would have to be translated in social participation that can only provide a real democracy.

Social participation has been an interesting topic in the social sustainability approaches. Since the 1980's during the last century, this concept was raised as a necessary ingredient of development and sustainability programs. Thus the concept evolved from a simple informative participation up to what is today known as empowerment; no doubt this was a significant breakthrough. Nonetheless the ability of this form of organization and participation of the people and the empowerment, they involves an alteration of the relations of property and appropriation, that not leads directly, nor necessarily radical changes. In the words of Middleton and O'Keefe (2001)<sup>12</sup> "the democratic rights do not lead to social justice, while property relations are not altered". Nor does empowerment mean to participate in decisions of the capitalist companies that are the core of the system, without questioning the relations of property and capitalist appropriation that generate poverty, social differentiation, and injustice (Foladori, 2002).

In any case, the need for a new way of thinking, a greater social awareness and participation, appear to be necessary requirements for starting a conditioned economic growth to build sustainability. Obtaining these requirements is complex and depends on comprehensive approaches to be effective. Through them, a social pressure is expected to transform the political apparatus and generate a process of development.

In this path is not possible to expect that economic processes will be carried out as today, how the capital operates, should be another, in such a way "that the capital changes its face, that it becomes unrecognizable to bankers, financial managers, speculators capitalists and managers of the companies. This means that sustainability is an ideological and political, not an ecological and economic issue"(Rod Burgess, 2003)<sup>13</sup> Moreover, it has to be considered that in the present globalization conditions any minimally viable sustainable development scenario is supranational, which demands to exceed the parameters of political decision-making of the past centuries, anchored in the relationships between nation States. Any environmental disaster has global consequences (Hernanz, 2004).

A relevant concept in the analysis of the sustainability is the development; this is currently avoided in many circles, although it had an analytical importance for many decades. Nowadays, the concept is fragmented in

different forms and in many cases it is still used to make reference to the economic growth. Despite this situation, the concept of development is broad and its characteristic is to be integral. This is relevant in the case of approaches on sustainability. The conservation of the environment has to do with many variables that are intertwined in a complex way and it is necessary at this point, in how societies are organized and their specificity that needs to be addressed towards the problem of development. Thus, it is from the multidimensionality and specificity of societies that should be found the necessary conditions to ensure the realization of human potential. In this context it is appropriate, when the problem of sustainability is addressed, returning to the principles outlined by the UN during the 1990s for the development achievement: the economy as the engine of growth; peace as a foundation for development; Justice as a pillar of society; the environment as a basis for sustainability; and democracy as the basis for governance (Becerra and pine, 2005).

### 3.- Conclusions

Many theoretical efforts have been made to understand urban problems related to sustainability. They include analysis that highlights the inadequacy of the definition of the sustainability concept when this is reduced only to the ecology aspect without considering that the most important problem is political and social. This has explained the failure of many international awareness meetings, when the contradiction has not been considered in the capitalist system which contrasts the economic interest and the sustainability interest. It is then, in the political and social field where many efforts should be channeled. In this sense a lot of academic analysis has focused on two main aspects: on the one hand, those who consider that the solution to the problem of sustainability lies in the change of the relations of production, without clearly specifying what it means; and on the other hand, the analyses that estimate the relevance of changes inside of the capitalist system where the State would play an important role. In both cases a change in mentality is required to address the problem of sustainability and new forms of participation of the population to make it. This work is not calling for one or another solution, the intention has been to present the debate status, leaving an open door for discussions that allow elaborating a precise orientation that undoubtedly exceed the analysis of isolated cases. Probably, what

<sup>12</sup>Quoted by: (Foladori, 2002)

<sup>13</sup>Quoted by Murguía (2005)

it has been lacking is a comprehensive approach to the problem that returns us to the concept of development which today has been relegated or assumed only in its economic sense.

#### 4. References

- Becerra F. Á.; Pino, J. R. (2005). "Evolución del concepto de desarrollo e implicaciones en el ámbito territorial: experiencia desde Cuba." *Economía, sociedad y territorio*. Enero-abril año/volumen V Num.017. El Colegio Mexiquense, A. C. Toluca México. Pp. 85-119.
- Brundtland Commission (1987). "Report of the World Commission on Environment and Development: Our Common Future". *Transmitted to the General Assembly as an Annex to document A/42/427 - Development and International Co-operation: Environment*. Oxford, Oxford University Press.
- Cabrero, E. (2014). Ciudades del conocimiento, ciudades sustentables. En: *Revista Ciencia de la Academia Mexicana de Ciencias. Número temático Ciudades sustentables*, octubre-diciembre 2014. pp. 35-39.
- Casanova, F. (2004). *Desarrollo Local, tejidos productivos y formación*. Montevideo. CINTERFOR, pp. 25-37.
- Eschenhagen, M. L. (2007). "Las cumbres ambientales Internacionales y la educación ambiental". *Revista OASIS Centro de investigaciones y proyectos especiales*. Bogotá, Colombia, Universidad Externado de Colombia. <http://www.pensamientoambiental.de/images/cumbres.pdf>
- Foladori, G. (2002). "Avances y límites de la sustentabilidad social". *Economía sociedad y territorio, Vol III, Num.12*. pp. 621-637. <http://www.cmq.edu.mx/documentos/Revista/revista12/est12cinco.pdf>.
- Foladori, G.; Tommasino, H. (2000). "El concepto de desarrollo sustentable treinta años después". *Desenvolvimento e Meio Ambiente*, No. 1, p. 41-56, jan./jun. 2000. Editora da UFPR.
- Gadotti, M. (s/d). *Pedagogía de la tierra y cultura de la sustentabilidad* [http://www.paulofreire.org/Moacir\\_Gadotti/Artigos/Espanhol/Pedagogia\\_la\\_Tierra\\_2003](http://www.paulofreire.org/Moacir_Gadotti/Artigos/Espanhol/Pedagogia_la_Tierra_2003).
- Gay, C. y Rueda, J.C. (2014). "Sustentabilidad ambiental y cambio climático". En: *Revista Ciencia de la Academia Mexicana de Ciencias. Número temático Ciudades sustentables*, octubre-diciembre 2014. pp. 28-33.
- Gillén, R. A. (2006). "Estrategia alternativa proyecto nacional de desarrollo en el pensamiento de Celso Furtado". en: *Trayectorias año VIII, Núm. 20-21* enero-agosto 2006.
- Gino, M. R. (s/d) *La sustentabilidad como alternativa social*. <http://www.uaemex.mx/plin/psus/rev6/e04.html>
- Guimarães, R. P. (1998). *La ética de la sustentabilidad y la formulación de políticas de desarrollo*. *Revista Ambiente & Sociedade*, N° 2, primer semestre, 1998 (Campinas, Brasil), pp.5-24.
- IPCC, Grupo Intergubernamental sobre el Cambio Climático (2014). *Comunicado de prensa del IPCC 2014/11/pr*. Yokohama, Japón. [http://www.ipcc.ch/pdf/ar5/pr\\_wg2/140331\\_pr\\_wgII\\_es.pdf](http://www.ipcc.ch/pdf/ar5/pr_wg2/140331_pr_wgII_es.pdf).
- Hernanz, J. A. (2004). *La sustentabilidad en el sistema científico-tecnológico*. Instituto de Filosofía de la Universidad Veracruzana.. Vol. XVII, Num.3. Sep-Dic. 2004.
- INEGI (2002). *Estadísticas del Medio Ambiente de la Zona Metropolitana de Monterrey 2001*. Aguascalientes. INEGI. [http://www.uv.mx/cienciahombre/revista\\_e/vol17num3/articulos/cientifico\\_tecnologico/index.htm](http://www.uv.mx/cienciahombre/revista_e/vol17num3/articulos/cientifico_tecnologico/index.htm).
- Lélé, S. (1991). "Sustainable Development: a critical review". *World Development*. Vol. 19. No.6, 607-621.
- Mendoza, G. (2007). "Sentirá la gente el cambio climático". En: *El Porvenir. 8 de Enero de 2007*. [http://www.elporvenir.com.mx/notas.asp?nota\\_id=105855](http://www.elporvenir.com.mx/notas.asp?nota_id=105855). Página consultada el 10 de febrero 2007.
- Middleton, N.; O'Keefe, P. (2001). *Redefining Sustainable Development*. Londres, UK Pluto Press.
- Murguía, R. (2005) "¿Es posible el desarrollo urbano sustentable?". *Ediciones simbióticas*. [http://www.edicionessimbioticas.info/article.php3?id\\_article=599](http://www.edicionessimbioticas.info/article.php3?id_article=599)



O'Connor, M. (Ed) (1994). *Is Capitalism Sustainable?* New York: Guilford Press.

Toledo, A. (s/d). *Hacia una economía política de la biodiversidad y de los movimientos ecológicos comunitarios*. <http://www.ezln.org/revistachiapas/TOLEDO6.html>

UN/(WCED (1987). *Nuestro Futuro Común: Informe de la Comisión Mundial sobre Medio Ambiente y Desarrollo*. Oxford. Oxford University Press.

Varas, J. I. (1999). *Economía del medio ambiente en América Latina. Santiago de Chile*. Ediciones Universidad Católica de Chile de la Pontificia Universidad Católica de Chile.

Wallerstein, I. (2003). "The Ecology and the Economy: What is Rational?". Paper delivered at Keynote Session of Conference, "World System History and Global Environmental change," Lund, Sweden, 19-22 September 2003. <http://www.binghamton.edu/fbc/iwecoratl.htm>.

Ward, P. (1989). *Políticas de bienestar Social en México, 1970-1989*. México, Nueva imagen.

