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Water and Basic Sanitation in Latin America and the Caribbean

Juan Emilio Hernández Mazariegos

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WATER
AND
INEQUALITY
HEALTH
OR
ILLNESS

WATER AND BASIC SANITATION IN LATIN AMERICA AND THE CARIBBEAN

FINAL REPORT

Juan Emilio Hernández Mazariegos

Descriptive Research of the Access to Water and Sanitation Services in Latin America, and the Impact it has over the Quality of Life in some of the Latin American Countries.

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I. INTRODUCTION

The subject of the Human Development Report 2006 is Water for Development. Without water and development, the human being stays without its main center. Water and sanitation allow sustaining a healthy life, therefore not only growth, but human development for life, to sustain the future. The Water and Development Global Committee in the report "Our Common Future" have promoted the concept of sustained development since 1987. Two years latter there were more than 60 definitions. Well furthermore and beyond, the diversity of concept, there is necessary idea: Sustained development starts with life itself, with its conservation to the longest time possible.
One of the most important foundations for the f life condition improvements is analyzed, the access to water, now considered a basic right and fundamental for the continuations of a better quality of life, understood as a multi-factor process, but for first instance due to most crossed conditions of the people. Within the same topic, there have been changes in the Latin American and the Caribbean region. Even to consider that part of the road has been driven, obtaining more coverage scores in the urban zone. While the challenges are to increase the coverage in the rural zone and extent the access to potable water and sanity systems. Starting from a brief review of the access evaluation to potable water in the region, the urban-rural gap is remarked and native population conditions are remarked within illiterate, poverty and mortality,

A brief review is made describing the advance and changes in most of the countries from the region, analyzing the access to water and social sanitation conditions of their inhabitants.

Social-demographic characteristics from the selected countries are described, persistent access differences, even at a macro level, but enough to identify most of the needs of groups who already have lack of access to education, health services and poverty, the key common element which is present in all these countries.

No type of development can be qualified as sustained, as far as the society itself causes indirect damages to health and the people's well being. The selected studied countries document the tendency of their governments to support even less their deficits to the access to water and sanity systems from specific groups which our know the target markets. Unfortunately are the poverty conditions, in which these countries are immersed, therefore their inhabitants can not play a social role.
Aborigines and Afro-Americans have even less coverage and access to potable water and sewage systems, mainly within the rural areas, but the situation does not change in the rural areas. Rural aborigine women who are selected as symbols of illiteracy and maternity death rate, which within some geographic zones quadruplicates the national scores.

Relations are established between weather sanitation services deficiencies and transmission of hydra disease. Infant's death rates have specific substrates: aborigine population. Conditions described are presented in maps and graphics that show the uneven determined geographic and ethnic, and a useful tool.
Access to the information data limitations were faced, but the follow-up perspective and evaluation of the conditions of the studied groups will depend on their future specifics.
The classic and ethereal concept of health as physical and mental equilibrium has allowed the concept of ecosystem and integrated health, in this sense the uneven and poverty must be principal topics of the human development and sustained growth.

II. ANTECEDENTS

It is hard to identify the water as the most important daily used element for life, and without this element; life would change tremendously or would not be. The instrumental rationality of our social ambiance has derived in appropriate and big transformations of the natural resources and the cohabitation spaces.
As a social historical result, these relations have established limitations of access to potable water, which is one of the basic needs, and as a consequence, the adequate sanitation of the family surroundings next to it, their houses. Since considering water knows as a human right, it is in the window case of the International Conference of Water and

Environment Development[1] where "water is considered a finite and vulnerable resource, essential to sustain life, human development and environment". Between 1996 and 1999, the Water Worldwide Association is created, and incorporates "the will and intention of helping people, specially poor people and other vulnerable group, to benefit them with a better handling of the hydra resources, protecting the environment at the same time".

It is the San Jose Declaration[2] where it is recommended to the governments from the region to "formulate and improve the national politics of water, to make them recognize their social, ecological, economical and environmental value of the hydride resources", and in the Central American Declaration of Water it gets stated that "water is a common patrimony of the present and future generations, its conservation and sustained usage is an shared obligation of the States, the groups and citizens"[3]

In the year 2003, takes place the International Year of Sweet Water of the United Nations, where the right to water is explicit, as well as the right to food and health. The first one was not explicit in the original version of the ONU Human Rights Declaration; however, it was remarked that "water is a limited natural resource and a public merchandise fundamental for life and health."[45]
Due to all these an obligation to all signatory governments to the Convention of Economical, Social and Cultural Rights, so the access to enough water sources is progressively extended, at reasonable costs and secure, as well as to a secure sanitation. It is clarified that where there are barriers to access to water, the governments will have the responsibility of eliminating them and assure the access by other means for all citizens, without discrimination.

Within this context, the countries are legally obligated to assure that all could face the cost of water to drink and for sanitation purposes, and applying a cost to it, would not affect other basic needs.

The right to water suggests that any group or person, who an adequate water provision is denied, they could be able to go through legal ways and get compensated. These regional and global actions represent the contributions of the environment development that creates synergy with the rights to the access to water and sanitation.

III. RESEARCH PROBLEM AND OBJECTIVES

Reverses and advances

Modernization itself presents reverses, advances and dilemmas. Reflexivity is necessary mean while it is demonstrated "the capability to make a record of the actions of spaces and scenarios, and allow that the action could get feedback"[6] towards the problem, which in the topic of water and sanitation, contrast with contemplation because it is rudely and real. The lack of access to water and an adequate sanitation, most of the people not only do not live it, but not suffer it as well, therefore, not all of us are able to imagine the magnitude of the seriousness of this basic human right denial.

It is necessary to focus our efforts in the layout of sanitary problems starting from environment health[7] including in this concept water and sanitation. What is the problem we can state then? We can propose the problem in two parts.

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[1]International Conference of Water and Environment and Dublin Development, Ireland. 1992 http://www.wmo.ch/web/homs/documents/espanol/icwedecs.html

[2]Conference of "Evaluation and Strategies Negotiation of Hydric Resources in Latin America and the Caribbean" San Jose, Costa Rica, May 1996. In http://www.wmo.ch/web/homs/documents/espanol/sjdeclsp.html

[3]Central American Water Declaration. San Jose, Costa Rica. 1998. http://www.cepis.ops-oms.org/bvsarg/e/fulltext/centroa/centroa.pdf

[4]Freshwater News. Net of Action Bulletin for the Sweet Water No. 2 Dec. 2002. p.3. Available in http://www.freshwateraction.net/library/2002spanish.pdf

[5]KHOR, Martin. La Forja de una Asociación Mundial para el Desarrollo: Algunos problemas críticos. http://www.socialwatch.org/es/informesTematicos/70.html

[6] Gomez de Benito, Justino and Sandoval Manriquez, Mario. Más Allá del Oficio de Sociólogo. Ediciones Universidad Católica Silva Henriquez, Nov 2004 p.76

[7]"Environmental Health consists those aspects of human health including the quality of life which are determined by physical factors, chemical, biological, social, and psychological in the environment. It also refers to the theory and practice of appraising, correcting, controlling and avoiding those factors in the environment that can potentially can damage actual and further generation's health." In OPS/OMS. Indicadores Básicos de la Salud Ambiental. Concept Document. 1993, Estudio de Factibilidad sobre la Elaboración de

First: Starting century XXI, there are population groups with less access to their states resources, as a consequence there are disparities within their health and environment. These disparities, already remarked, get more stressed according if belonging to social economic groups, social extract, ethnic/race groups, and place of residence a/o sex. Such situations represent the uneven relations within men and women, or groups of power. However, the study, exploration and outcropping of these disparities become essential for the change, to not systematically harm human groups in terms of opportunities.

Second: Social environment conditions determine the quality of life in the field or in the city. As a result of interaction of those factors in different intensities population groups with determined cultural characteristics, but with similar common needs, and within periods of time when decease and population death. These events are natural but preventive and can be postponed.

How much longer shall it take for the States to guarantee human life, starting from facilitating access to potable water and a deserve sanitation, for all their inhabitants. From our perspective, this is the main problem, added to scenarios where the context of uneven is increased and remarks the gaps even more, disfavoring the "participation" of the citizens with voice …yes, but even more limited by a quality of life that at first instance, is determined without looking any more to the space life conditions less remote: their houses.

The magnitude of the problem of the health of countries is not rooted in the advance of the indicator improvement, but in the deadlock of the dynamic advance. For the Latin American and Caribbean group, the situation seems to have changed within the last decade, but has it changed for everybody? On this same matter the effort of this document will be directed to show the relations between a determined quality of life, as a result of the environmental history of the countries, of the access of their citizens to basic services: the right to have access to potable water and to an adequate sanitation. This right –maybe-if ensured will be the best contribution of the new millennium and will have a direct impact in real life of the social subjects, meanwhile is a pending balance.

3.1 Historical Approach

Even though it is not necessary to slow down and portrait what is already known, past facts not always impact present decisions. In this sense, the uneven situation in Latin America and the Caribbean seems to be cyclic, but also persistent and extreme.

The fact that third part of the population in the Latin American region and the Caribbean ALC still lack of access to basic health services, could be an absolute and cold number, but it is estimated that it could be 150 millions of people. [8] However, during the time frame of the decade 1990-2000 there were 3milllions more of persons that did not have access to potable water (from 26 to 29 million) and 51 millions the ones who did not have access to and adequate sanitation, (from 46 to 51 millions) during those year periods[9], as a result of demographic growth. (Graphic No.1) But it shall allow imagine the weight of death rate that this could have generated and the preventive deaths for such situation. Such deaths deserve to stay remarked within this consequence historical approach.

If the coverage figures of potable water and sanitation are converted into percentages (Graphic No.2) maybe the lack of access in ALC would not be seen within its own dimensions, and even they could be similar to other region percentages with better sanitation developed politics and that has reached coverage close to 100% of their population. It is necessary to review which have been the advances and reverses in some of the countries from the region, and try to portrait the coverage differences and the facts that caused them, and the limited population of these services.

3.2 The advances and reverses in the recent history

In 1960, only a 33% of the total population had access to tube water in Latin America and the Caribbean[10] and hardly could be proved that it was potable, and there is no sanitation data available until 1980. Within the period of 1988 and 1995, access to potable water advances and reverses are evidenced [11] (Graphic No.3) if compared the rural areas with the

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indicadores de salud infantil y medio ambiente en América del Norte Abril 2003. http:www.cec.org/files/pdf/POLLUTANTS/CHE-Feasibility-Studyes.pdf.

[9] Programa de Monitoreo de OMS/UNICEF para el Abastecimiento de Agua y Saneamiento, 2001

[10] Tube Water: Percentage of the population that lives in particular homes that have tube water service, into the same housing, respect to the total population.

[11] The access to potable water: It is measured by the percentage of the population that uses improved water fountains. Improved water fountains include: Houses connections to the network, public water fountain, ditch, excavated covered ditch protected fountain, rain

urban areas. Some countries improved, as Argentina, Bolivia, Chile, Costa Rica, Dominican Republic, El Salvador, Mexico, Nicaragua, Peru, Suriname, Uruguay and Panama. Other countries are not getting better such as Trinidad and Tobago, Paraguay, Guatemala, and lose coverage Brazil, Colombia, Ecuador, Haiti and Venezuela. (Graphic No.4). However, it does not seem that the limitations could be explained due to short water availability. The region of ALC is one of the richest of the world when it comes to deal with this resource. (Map No.1). Only Haiti is under the limit of shortage according to expert organizations.[12] But with limitations regarding handling quality of water. (Map No.2).
Regarding the aspect of Sanitation, [13](Chart No.1) the comparison between those same years shows the difficulty in being able to improve the coverage, due to various countries evolves very little, and others do not reach to improve their coverage. (Graphic No.5).
Such difficulties represented strong challenges for the improvement of the quality of life of the inhabitants and opposite to the objectives of the international decade of the potable water and the sanitation. [14]
Evidently there are changes in the approach of sanitation problem and also the improvement in its methodology for its follow-up[15] with the statement of the Development Objectives of the Millennium ODM-. No matter how the proportion of the population is outlined defined or measured; the impact over the quality of life of the inhabitants is the same.

From 1990 to 2002 is a period through which clearer advances are identified in the majority of the countries. For such instance on this outline, the changes within countries is classified within the following categories, where the indicator is population with "sustained access to better potable water procurement fountains", by urban area and rural[16], The ones that increased coverage percentages in 20% or more, the ones who increased between 10 and 20%, the ones that were between 5 and 10%, the ones that increased up to 5%, and the ones who decreased the percentage.
By this analysis we observe that the historical differences en ALC persist in the modernity. States approach in different ways the urban characteristics and rural, or represent their genuine action according to social interests. In the topic we are dealing now, the urban is tremendously ahead from the rural. (Graphics 6-7)
Most of the country (9) privileged the increase of coverage in the rural area, and only Paraguay and Honduras (from countries with available data) focus on the investment to solve the problem in the urban area. This has a direct relation with infantile death rate within these countries, the Native America and Afro descendants were privileged from such social politics, did their quality of life improved?
In the rural area only two countries decreased their coverage in the analyzed period, Colombia (7%) and Trinidad Tobago, which also reduced the indicator in 1% for the urban area. (Chart No.2 and Graphic No.8). While Peru reduces it but has a strong variation within the rural indicator.
These population percentage coverage changes improving the access to better water fountain procurement, in the urban and rural area, has a very weak relation with the economical investment performed by the countries analyzed. A clear

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water harvest. Not improved fountains: Not covered ditch, not covered fountain, rivers and ponds, bottled water provided by sellers, water from the water truck.

[12]ORGANIZACION DE LAS NACIONES UNIDAS PARA LA AGRICULTURA Y LA ALIMENTACION FAO. Planificación del uso de la tierra enfocada al suelo y el agua: La experiencia de la FAO en América Latina y El Caribe. XIV Reunión Brasileña de Manejo y Conservación de Suelos y Agua. Marcos J. Vieira y Jan Van Wambeke. Cuicaba, 21 al 26 de Julio2002. disposable in: http://www.rlc.fao.org

[13] Sanitation: It is defined as the services or harvest system, transportation, treatment and sanitary disposition of residual water, excrete and other waste or residues. OPS-OMS Regional Report of Evaluation 2000 in the Americas Region. Sep 2001.p.17. Improved Sanitation Installations: Connection to sewage system, to a septic system, latrine, ditch latrine, improve and ventilated latrine. Not improved installations: public and shared latrine, open ditch latrine, cube latrine. The monitoring program of the OMS/UNICEF for the Water Supply and Sanitation defines "improved sources"as those that are better than the past fountains, however not necessarily the most healthy for the domestic usage, see http:www.infoforhealth.org/pr/prs/sm16/

[14] The Special Conference of Water of the United Nations, took place in Mar del Plata, Argentina in 1977, and recommended that the period 1981-1990 would be designated as the International Decade of Potable Water and Sanitation ("The Decade"). The objective was to reach to provide in 1990to all the habitants of earth, secure water and an adequate quantity; and at the same time provide basic sanitation facilities, with priority to the poor people and less privileged groups.

[15] There are differences between databases. Example: In the reports of CEPIS, OPS/OMS, Potable Water Decade Evaluation in Paraguay, the population % served by potable water is of 39% for year 1995. http://www.cepis.ops-oms.ort/eswww/caliagua/evaldeca,.html.. The CEPAL database for the year 1990, the population percentage with access to better fountains of potable water was of 62%. It is possible that the methodology caused such variations within the coverage data.

[16] OPS. Potable Water Half Decade Evaluation and sanitation in Latin America and the Caribbean. http://www.cepis.ops-oms.org

relation can not be determined in the sense of a higher investment means there is greater coverage. This demonstrates that health is a multiple factors social construction. Regarding the infantile death rate evolution analysis could conclude more about the impact that has had on the boys and girls life.
Therefore the State-Society is expressed by the integrator nature of the actions of the first towards population, through public politics, and within this relation it is clear that speeding up with improving the indicators took place after 1995, it is fear to remark the objective contribution to the millennium development.
Finally the most recent report of the "The state of the worlds Children" 2006 published in December 2005[17], informs that for the Latin American and the Caribbean Region, the population percentage with access to better potable water sources is 89%, even higher of the worldwide score. In the urban area the coverage reached was 95%, which equal the same urban worldwide score. However the differences are found in the rural area and worldwide. (Graphic No.9 and Map No.3) Advances have not been the same with the access of population eliminating excretes. (Map No.9) The impacts and changes must have contributed to improve the quality of all inhabitants. With limited data we try to portrait this.

3.3 The Native America

"Poverty is that not all homes have access to potable water." Aldeano Mam[18]
The inhabitants of the continent, with "common ancestors" natives represent approximately 10% of the Latin American population and in some other countries up to more than 50% of the population. Such is the case of Bolivia. (Graphic No. 10 and Map No.4) and they live together with a minority afro-descendant (Map No.5) which represents more than the 25% of the total population from the Region.[19] However, they show various illiterate rates (Map No.6) and poverty. (Map No.7).
The "great transform" also reached the aborigine population. Per microanalysis from census round 2000[20] Guatemala and Bolivia maintain the highest proportions of aborigine population compared to the rest of the country. But the aborigine population that resides in the urban zone represents more than 50% of the urban population and the aborigines from Guatemala represent 31.6%.
The natives from the rest of the countries (Panama, Mexico, Honduras, Ecuador, Chile, Costa Rica, Paraguay, and Brazil) represent the 10% or less from their total country population.
The process of transforming rural to urban embraces native population, (Map No.8) is becoming to have a diversity representation in the urban population. This process of has been present more stronger in South America and Mexico and in less proportion in Central America,[21] which exposes an increase in the needs of water services and sanitation. (Map No. 9) In other words, the native has been moving into the cities. Would this migration have a relation with his life quality and access to the minimum basic services?
It is important to clarify that there in not elaborated data to make the analysis in all of the countries, what has been used as sources in the following research represents the job of the same native groups to view themselves, probably since the Worldwide Conference against Racism, Discrimination, Xenophobia and the different ways of intolerance mentioned by the Untied Nations in August 2001, and academic work about native population and afro descendants.
We do not pretend to make a deep analysis, but to identify the uneven development indicators of Latin America. One of our objectives is graphic to identify, in order to see in detail, or in other case, to promote focusing in it.

3.4 Bolivia

As we described in the first part, the development of the water sector and sanitation in Bolivia was an example of what would have been a politic oriented to change some environmental health factors, in the urban zone and the rural. (Graphic No.1.B) However, infrastructure advances has not been enough to reduce poverty, neither the uneven because it is

[17]CEPAL/CELADE. División de Población, Del POPOLO, Fabiana y OYARCE Ana Maria. Situación Sociodemográfica de los pueblos Indígenas en América Latina a partir de los censos. http://www.eclac.cl/celade
[18]Banco Mundial, La Pobreza en Guatemala. Capitulo 9: Servicios Públicos Básicos y pobreza Departamento de Desarrollo Humano. Departamento de Reducción de Pobreza y Gestión Económica Oficina Regional para América Latina y el Caribe. Marzo 2003.
[19]ORGANIZACION PANAMERICANA DE LA SALUD GRUPO ETNICO Y SALUD. Propuesta Ante la 132a Sesión del Comité Ejecutivo de las Naciones Unidas 2003.
[20] Workshop documents from the Interaction Seminar of Native Population and Afro Descendant in Latin American and the Caribbean. CEPAL-CELADE
[21]MINISTROS DE SALUD Y DE MEDIO AMBIENTE DE LAS AMERICAS (MSMMAA) Salud y Medio Ambiente en Las Américas: Temas de Preocupación Compartida y Posibles metas Comunes. Ponencia sesión 2.

persistent and extreme, and because it has been a consequence of development of all, but less for those who really need the positive benefits of this development.

In this sense the actual uneven situation is presented in the following graphics and data and is part of the health-sickness process under the ecosystem focus.[22] When comparing urban poverty and rural, measured from the "unsatisfied basic needs "by department, the population situation in some departments becomes with extremely uneven results:

In the urban area Beni, La Paz and Oruro present 66.8, 50.9 and 50.1% of its population in a poverty situation. In the rural area with higher percentages Beni, Oruro and Pando with 963.1, 94.3 and 91.5% (Map No.1.B).

The illiterate rate seems to be stronger in women, with rates way over the national score, and from the native population itself. (Map No.2.B) There are four departments with higher illiterate rates in women: (15 years and more): Beni, Tarija, Potosi and Chuquisaca, this last one is even twice from the rate in men.

These same departments contained percentages of more than 50% of the native population: Cochabamba, Potosi, Oruro and Chuquisaca. (Map.No.3.B)

In regard to sanitary services availability[23] in the homes from Bolivia, the lack of coverage has extremely remarked differences: La Paz, Chuquisaca, Potosi and Oruro with the higher percentages in both zones: rural and urban, (Map No. 4.B.) and only Santa Cruz present the lowest lack with 5.45% of homes in the urban area that do not have sanitary services. A relation is established between diarrhea and the lack of sanitary services.

Regarding the access to potable water through pipeline, the census from 2001 evidences the lack of the service coverage in the rural area. The figures drive to review the source and to go deep into the data from INE.[24] The lack of potable water in Beni through pipe line, rural area that gets to 93.71%, Pando, Oruro and Potosi, Chuquisaca, in decreasing order, presents the highest percentages of potable water through this source. In the urban area are the same departments without water through pipeline, but with less percentages, but La Paz is added, Cochamba with higher percentages of homes without service through this method. Tarija has a lower percentage of homes without potable water by pipeline in the urban area: 9.22%, but it has 54.6% of homes in the rural area without connectivity to the water public network. The country has 70% of homes without water through pipeline in the rural area, 17.07% in the urban area, with a national score of 37.73%[25] (Map No.5.B). According to comparisons from the Ministry of Health, from 1992-2001, the coverage of potable water connection through pipeline in the rural area increased only five percentage points. [26]

The disease:

"The prevalence of acute diarrhea disease in the kids less than 3 years decreased from 36% in 1989 to 30% in 1994[27]. There is estimation there are five diarrhea cases per kid per year, and it is estimated that 7,900 would be the number of deaths per year caused by this disease in kids less than 5 years. The death rate in hospitals within this age group was 5% in 1992 and 4, 8% in 1995."[28] According to information from INE the percentage of kids under 5 years that become sick

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[22] The ecosystem focus of the human health looks to identify the complex range of factors based in the ecology that affects health, and proposes solutions with wide basis, that should be economical, social and environmentally appropriate.

[23] Without sanitary services shall be understood as those homes that do not have a system where to pour used water from their bathrooms or latrines. Measured in the 2001 census as availability: codified by answers Yes have and NO does not have. What is expressed in the Maps is the lack of availability, which means those who DO NOT have.

[24] Chart NO. 3.303.01.04 from the INE BOLIVIA. Provides the necessary information like to compare and prove that the evolution of the percentage of homes with access to potable water through pipe line went from 60.36% in 1996 to 65.11% of homes in the year 2003. It is important to clarify that at Bolivia, 4.99% of the homes get water from a public water tank, 3.10% from a ditch, and 9.66% of homes obtain water from ditch without bomb, 12.17% from the river, 0.29 from lake, 1,86% from the delivery car and 2,73% from other non specified sources. All these are elements that would justify the infantile death rate. Chart No. 3.03.01.04 available in http://www.ine.gov.bo

[25]Evidently the indicator percentage of homes and their ways to water access is not part of the goal millennium indicators, however, several technical documents use this percentage, and it was not easy to access to it through the INE Web in Bolivia. Two examples where percentages are used, as part of the situation analysis is health: 1."ESTUDIO DE CASOS: SEGUIMIENTO A LA ESTRATEGIA BOLIVIANA DE REDUCCION DE LA POBREZA (EBRP), A LA INICIATIVA HIPC Y SU IMPACTO EN EL SECTOR SALUD" http://www.ops.org.bo/textocompleto 2. REPUBLICA DE BOLIVIA. Ministerio de Salud y Deportes.

[26] REPUBLIC OF BOLIVIA. Health and Sports Ministry. Dirección de Planificación y Cooperación Externa. Sistema Nacional de Información y Vigilancia Epidemiológica Bolivia, 2006. SITUACION DE SALUD BOLIVIA 2004. Serie: Documentos de Divulgación Científica. Pág. 30.

[27] According to National Health Surveys, ENDSA 1989 and 1994 quoted in the Situación de Salud Bolivia 2004.

[28] MECANISMO SNACIONAL DE CONTROL SOCIAL (MNCS Bolivia)COMITE DE DEFENSA DE LOS DERECHOS DEL CONSUMIDOR EN BOLIVIA (CODEDCO Bolivia) ACCION INTERNACIONAL PARA LA SALUD BOLIVIA (AIS Bolivia) WEMOS (Holanda-Los Países Bajos)OPS Bolivia Pág. 18 :http://www.ops.org.bo

with diarrhea decreased within year 1999 and 2003, however, there are higher percentages from this one in the rural area. (Graphic No.2.B)
In the year 2004, the diarrhea percentage within both zones by department, being Potosi, La Paz, Chuquisaca and Cochabamba the ones that present the highest percentage of homes without sanitary services observing a relation with the highest percentages of diarrhea diseases for that year. Information by municipality evidences that Potosi, Santa Cruz, Chuquisaca y Pando present the highest rates of diarrhea in the year 2004[29]. (Graphic No.3.B)

In the year 2004 a lineal relation is established within the departments with higher percentages of homes without sanitary services (both zones 2001) and the percentage of diarrhea (both zones 2004) (Graphic No.4.B) Evidently there are different moments, however the census 2001 is the most recent related to sanitation information.
The mortality:
It is not hard to understand that the life conditions that the department's populations, which names are repeated with worst environmental health indicators, are the ones with higher infantile mortality rates, and they are higher in the native population, compared with the ones that are not natives and the national score of the country.
Reminding the names of the departments Potosi, Oruro, Cachabamba, Chuquisaca y La Paz, are the departments with higher infantile death rates within the native population. It is confirmed that some of them duplicate the rate of non-native population, which are lower than the national score. (Map No.6.B)

Recent data inform of the decrease of infantile mortality in most of the departments, after the census information, which is going to be analyzed comparative with the native population further, more. However, it is seen that great efforts are to be continued specially in Oruro, Potosi, Chuquisaca, Cochabamba (Graphic No.5B), as well as the promotion to health services under a cultural approach. In this last sense, the Aymaras, Quechua and Guaranies groups are the ones with higher infantile mortality rate 74.9 and 93.4 by 1,000 l. b. (Graphic No.6B)
This was the description of some social environmental conditions in Bolivia. Evidently the changes have been positive but not enough, and the resources per capital oriented to sanitary system are still the lowest within the Andean, the Latin American and the Caribbean region. (Graphic No.7) These portrait challenges in the achievement of many goals in the millennium, specially regarding environmental sustain.

3.5 Ecuador
There is lack of information related to the inhabitant's situation in Ecuador. However, it has been improving for the development planning, and probably it is perceived that social statistics have had very little presence in the public debate and within the design of politics.
The last census established that practically there is native and Afro descendant population within the whole country. Although the space concentration of native population is obvious within the provinces of La Sierra and there are also some movements towards the Costa and Capital Region.[30] (Map No.1E)

In that sense, the Human Poverty Indicator IPH has the objective of measuring the quality life limitation characteristics that affect the human development reports. IDH. It refers to enlarging opportunities for people, in the sense that "poverty is the limitation of the most fundamental opportunities and options of the human development: to live a long life, healthy and creative is to enjoy of a decent level of life, freedom, dignity, self respect and respect to others" [31] To portrait the negative face of human development, the PNUD introduced the Human Poverty Indicator IPH in 1997.
This IPH value indicates the population proportion affected by the three limitations that composes it. Limitation to a long life or vulnerability to an early death, limitations to knowledge expressed in the illiterate rate in adults, and the percentage of people without access to potable water, the percentage of people with no access to health services, and the percentage

[29] REPUBLICA DE BOLIVIA. Ministerio de Salud y Deportes. Dirección de Planificación y Cooperación externa. Sistema Nacional de Información y Vigilancia Epidemiológica Bolivia, 2006. SITUACION DE SALUD BOLIVIA 2004. Serie Documentos de Divulgación Científica. Pág. 83.
[30] GUERRERO, Fernando. Población Indígena y Afroecuatoriana en el Ecuador a partir de la información censal de 2001. Seminario Internacional Pueblos Indígenas y afro descendientes de América Latina y El Caribe. CEPAL abril 2005.
[31] ECUADOR. PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO. Informe sobre Desarrollo Humano IDH 2001. Pág. 229-230.

of kids less than five years old, with moderate to insufficient weights. Therefore, the higher the indicator, the higher the poverty and vice versa.
In the last report from IDH from Ecuador, the IPH-A was calculated with the index of limitation to a dignified life (A). Building this index, the number of births without professional assistance was used. In this sense, the less poor provinces in relative terms are Guayas and Pichincha; with IPH lower than 10% and are under the country index score. El Oro, Carchi, Tungurahua and Azuay with IPH greater than 10% up to 14.9%. (Map No.2.E)
The index surpasses the 20% in thirteen provinces. From these the major human poverty incidence is found in Bolivar (28.3%), Cotopaxi (24.4%) and Chimborazo (27.6%) all with high percentage of natives. Even though the IPH for the Amazon region were built all together, the human poverty affects to close of the fourth part of the population. In the region Costa, Esmeraldas, Manabi and Los Rios the indexes are even higher.
A relation is established between the native population percentage and the total population per province with poverty. (Graphic inserted in Map No.1.E)
The illiterate has symbolic populations: the Afro descendant's population in provinces such as Cañar, Cotopaxi, Manabi and Bolivar. As a constant for social exclusion, women have a differential between 0.41 and 9.18 percentage points higher in this rate. As a score 3.8 percentage points higher than men (Map No.3.E) the provinces with higher rates for men and women from Ecuador are in general the same.
The uneven expression regarding education and knowledge acquisition is against native women in Ecuador, but even less than the uneven conditions in Guatemala, as it would be seen further. Again Cajar, Cotopaxi, Imbabura, Chimborazo, Bolivar and Carchi with illiterate rates between 42.78 and 42.62% as extreme values of the mentioned provinces.
The differentials men and women, has a score in the native population of 12 percentage points. The major difference is presented in Cotopaxi with 20.62 percentage points. (Map No. 4.E)
The Access to Potable Water:
Ecuador shows a deficit of 18.8% of population without access to potable water through pipeline inside the houses.[32] In the different provinces, this unsatisfied need has very uneven data. In the Map No. 5 regarding population without access to water through pipeline, the provinces with higher population percentages without potable water are shown in the map in light blue. In Los Rios Province, Esmeraldas and Manabi the higher population percentages without access to potable water are shown, 66.5%, 46.7% and 46.5%. It is important to clarify the researched report[33] does not clarify if the percentage includes both urban and rural zones.
The amazon zone with a percentage of 40.1% and the La Sierra region with percentages between 28.2% Bolivar and 13.2 El Oro.

Very few Health Ministries show the information available to their population. With data from the Health Ministry document[34] diarrhea incidence rates are established, salmonelosis, typhoid fever or food intoxication. [35] There is a lineal relation between the diarrhea incidence rates and the food intoxication rates, within the provinces with higher percentages of population with no access to potable water. (Map No.5.E) The lack of potable water through pipeline inside the house does not seem to have epidemiological importance for the transmission of typhoid fever and salmonelosis. However, it is important to mention that since a graphical identification that health geography allows their environmental health conditional relations are being made. In a fast sequence of maps, it is remarked that to a less coverage of potable water via public network or pipeline, higher diarrhea rates and higher food intoxication rates are shown. (Maps No. 6.E, 7.E and 8.E)
Identifying other factors would deserve a more integrated analysis that makes the Costa region the more affected by and related to water. Not affected as bad are the La Sierra provinces. The Amazon region, even though there is lack of

[32] ECUADOR. PNUD. Human Development Report 2001. Pág. 235
[33] Idem. PNUD
[34] MINISTERIO DE SALUD PUBLICA ECUADOR. BASIC ECUADOR INDICATORS 2005. HEALTH MINISTRY ECUADOR http://www.msp.gov.ec/
[35] The MSP clarifies that the decease with a mandatory notification, (the ones analyzed in this revision are the ones related with water, diarrhea, salmonelosis, typhoid fever, food intoxication and cholera, are not expressed in rates due to having different sources and denominators, the system is not universal due to it only oversees the MSP unit information. Such limitations are also shown in several health systems in Latin America.

specific information, shows higher mortality rates for the year 2004 due to gastroenteritis with seemly infectious origin.[36] The Loja province with a rate of 0.6 by x 10,000 inhabitants and Napo with a rate of 1.6 by 10,000 are the terminal values. 54.9% of the Napo province population is native, it shows a poverty index of 25.6% which equals to say that more than the fourth part of the population is poor, and has a female illiterate rate of 18.66 and 10.42% for men, which are not the highest rates of the country. (Map No.4.E) Morona Santiago, Zamora Chinchipe and Orellana are the rest of the provinces with high mortality rates due to gastroenteritis with infectious origin. (Map No.9.E) the score rate of the country is 0.30x 10,000. This situation will help evaluate the response and access to basic health services, faster and effective.

3.6 Guatemala

Jorge Solares started the chapter Guatemala Etnicidad y Democracia en Tierra Atrasada, as follows: "Who investigates the social structure from Guatemala will be obligated to deal with a country of short dimensions and with a complex reality that belongs to two historical different processes but linked together: Mesoamerica and Central America"[37] An ethnic Maya situation without major opportunities, and a class structure deep into the more uneven, still or even worst during peace moments. Let us see how they are expressed within the map of poverty in Guatemala.

The National Survey of Life Conditions ENCOVI 2000[38], informs that from 18% of poverty on the urban area, and 82% in the rural. 6.4% millions of poor people that represent 56.19% of the population. From the native population, 77.32% is poor. The 2001 census, identified that 19 of the 22 departments have more than 50% of their population in poverty, being five of them, where the percentages surpass the 80%, Baja Verapaz, Jalapa, Quiche, Totonicapán and San Marcos. All the north and northwest region are in extreme poverty (departments identified with the numbers 16, 17 20, 21 and 22. (Map No.1.G)

The Secretary of Planning SEGEPLAN[39] updated the map of poverty in April 2005. According to this data, 16 to 22departments maintain poverty percentages higher than 50%; it is a model that becomes sick starting with poverty. Regarding the extreme poverty, it is able to decrease it from 10 in 2002, to 8 in 2005. The departments that have more than 25% of their population in extreme poverty. It seems that the less poor population is the one that is found in the influence area of the commercial dry canal and the cattle zone, (Map No.2.G) although it could be explained due to most opportunities for the lading population, as a result of concentrated and excluding society.

In the illiterate combat during the period of 1989 to 1998, two departments maintain the lowest female illiterate rate High and Low Verapaz.[40] During that same period, the literate rate in the south occident region was able to improve 10 percentage points. It also got improved within the central and south oriental region. (Map No.3.G)

By the year 2001, seven departments showed female illiterate rates higher than 45%. (Map No.4.G)

The last report from PNUD in Guatemala 2003 illustrates about the Human Development Index with data from 1999. Eleven departments presented indexes lower than 0.60(Map No.5.G) having a slow and complex evolution. The departments from the North and North Occidental were not able to improve and data is compared from 1999-2000.

If it has to do with identifying the poor people of each region and the total distribution of each region (Map No.6) Guatemala is a small dimension country, but divided by the regional distribution of the total poverty.

This situation is complex as long as those departments are also the ones that have the most amount of native population and true relation exists with poverty and extreme poverty, which is by generation. (Map No.7.G)

Regarding to potable water, there are different figures. Census 2002 reported that at national level, 66.3% of the houses had pipe line water inside their homes, the native population had in 61% of their homes, and the no native population 69.5%; however ENVONVI 2000 reported 69%, 61.9 and 73% respectively.

The disparities in genus: The ENCONVI 2000 illustrates about the disparities of genus. In the urban area, when women are house chiefs, they have higher percentages for the connection to the potable water network, compared with men. When analyzing the access to potable water within female chiefs, in the urban area: the north and central regions have

[36] In Most Causes of death in Ecuador 2004. Total death and rates per province (condensed list of 103 groups tenth revision of the international classification of diseases

[37] AGUILERA PERALTA Gabriel, et al. Guatemala. FLACSO 1992. Pag. 47

[38] GUATEMALA INE. NATIONAL SURVEY OF LIFE CONDITIONS ENCONVI 2000. POVERTY PROFILE IN GUATEMALA, May 2002.

[39] GUATEMALA, PLANNING SECRETARY AND PRESIDENTIAL PROGRAMMING. Poverty and uneven Maps in Guatemala, April 2005

[40] In 1989 it was included in the literate population from 7 years old and more.

higher percentages without connection. (Map. No.8.a.G) it is necessary to mention that 36.3%of homes with native female chiefs, in the urban area within the central region, do not have connection to the potable water network. (Departments 19, 20, 21 and 22) where percentages reach to 37% of homes without connection.
When analyzing the access through exclusive stream inside the house by departments, the ones who have less coverage in the rural area are: Alta Verapaz and Petén in the north region of the country, in the south occidental region: Quetzaltenango, Retalhuleu, and Suchitepéquez. In the central region Escuintla and Guatemala. In the south oriental region: Jutiapa. Heterogeneity exists regarding the rural zones and urban zones. For example in Escuintla, Retalhuleu, Alta Verapaz, Suchitepéquez and Petén, the differences between the urban and rural surpass 42% of the homes. The less uneven in this aspect are Sololá Izabal and Zacapa with differences of 1.4, 6.5 and 9.9% respectively. (Map No.9.G)
In regard to basic sanitation at national level, the reported coverage by census 2002 is 85.5%for the native population 81.6% and not native 87.9%. The percentages vary in the ENCONVI 2000 to 86.82%, 84.25 and 88.07 respectively.
The second source offers more specific information by genus by region, where the women assume the lead of their homes. A tendency is presented with the limitation of women to have access to a sewage network. In the urban area: (Map No.10.b.G) The chief women situation and natives and the homes without access to this service are higher in the North region, northeast, central, southwest. (Chart No.3 and map No.10.b.G)
In the rural area: When women are home chiefs and native the access limitation to a water network is higher than homes with male chiefs in the southeast region, southwest and northwest. (Chart and map No.10.a.G.)
When the women chiefs of homes are not natives, the higher percentages take place in the north east, southwest and southeast. To look into details explaining such phenomenon surpasses the objectives of this review, but would present interesting facts to estimate, the important know is present the uneven situation regarding the access to a sewage network by the women that assume their homes leadership.
Health and environmental quality are also affected by the lack of other services that the population might not have access to. In this sense, it is important to approach the negotiation of residual solids and the capacity of the municipalities to provide the collection service.
The census 2005 information provides statement of the poor coverage and service quality and the gaps between urban and rural.
In Quetzaltenango while in the urban area the highest percentage of homes that uses the municipal collection service is 40.1%, within the same department in the rural area is of 1,6% of homes. But there area some departments where the residual collection service is almost null: Baja Verapaz, Alta Verapaz, Jutiapa, Petén, Retalhuleu, San Marcos, etc. where coverage does not surpasses 1% of the houses. (See map No.11.G)
With this situation, collection service providers have emerged. These private services started to provide coverage that from the residual negotiating point must have been beneficial for environmental health. The coverage provided within the urban area is very important, such as Alta Verapaz and Baja Verapaz. In the first one the 28.1% of the houses are covered, while in the second one 4.8% of homes is covered. There is no doubt with the relation with the economical situation of its inhabitants, and the commercial zone of the agriculture products with such uneven coverage situation. But this situation is not reflected in the rural zone of Las Verapaces, due to the rural area only 0.8% of the homes from both departments use the private garbage collection service. (Map No.12.G)
By the year 1999 there is tight relation between the human development index and the municipal fiscal capacity. (See graphic in Map No.5.G) Within the environmental negotiation aspect, most is an important aspect for the environmental health improvement and the sanitation services or in such case, the aspect of leader of services in combination with the Public Health Ministry.
How this service deficit does impacts the quality of life of Guatemala: It is true that the infantile mortality evolution has been decreasing;[41] the speed of such decreasing has decreased within the last two quinquenniums. (Graphic No.1.G) The infantile mortality indicator and due to it is related to social economical conditions, provides us an idea of such impact. (Map No.13.G) The Central Region (Chimaltenango, Sacatepéquez y Escuintla) even they are in better access conditions to health services, presents an infantile death rate of 55 by thousand born alive, but it is even higher in the South Oriental region (Jutiapa Jalapa and San Rosa) with a rate of 66 by thousand born alive. The departments of the North region: Baja and Alta Verapaz; of the Northwest region: Huehuetenango, Quiche; and the Northeast region: Izabal Zacapa, Chiquimula and El Progreso represent departments of difficult situation for the infants with a rate of 47 and 53 by thousand live born.

[41] GUATEMALA, INE. ENCUESTA NACIONAL DE CONDICIONES DE VIDA ENVONVI 2000. PERFIL DE LA POBREZA EN GUATEMALA, Mayo 2002. Pág.13

It is good to remind that these last departments since hurricane Match, has restarted their productive and commercial relations. The post Match situation took them to suffer situation of hunger by start of 2000. (Map No.13.G)
The mortality within the infants (1 to 5 years) present rates even higher: Southeast region (Santa Rosa, Jalapa and Jutiapa) with a rate of 83 by thousand live borns, added to Northeast region (El Progreso, Izabal, Zacapa and Chiquimula with a rate of 73 by thousand l. b. Some of these last departments where the ones described as population in less poverty and extreme poverty in the most recent map of poverty 2005, (See Map No.2.G.) Departments in green color. , However, their less poverty does not have relation with the life conditions of the kids. It does have relation with sickness. The National Survey of Infantile Maternity Health 98/99 reported in the same regions higher rates of presence of diarrhea and diarrhea with blooding minors less than 5 years. [42](See inserted graphic in Map No.8.b. G) There is also a relation in the same regions identifications with higher percentages of unsatisfied basic needs which are subject of the present revision: According to data from ENCONVI2000 there are 28.3% of homes without access to potable water. The Northeast regions, Southeast, Northwest and Petén present important percentages of homes with unsatisfied basic needs such as potable water. (Graphic No.2.G)[43]
The binomial mother son is affected by the same life conditions. It is necessary to remark the women condition since the maternity mortality rate: "The death of a woman while is pregnant or within 42 days after terminating her pregnancy, independent to the place and duration of her gestation, due to any cause related with or aggravated by pregnancy or its treatment, but not due to accidental or incidental causes."[44]
If in the South and South Oriental zone of the country there were the highest mortality rates within the infants, maternity mortality has a specific geographical area. The north zone: Baja and Alta Verapaz, the northoriental and northwest: Huehuetenango and Quiche; the northeast zone: Izabal and Petén has the highest number of maternal deaths, being Alta Verapaz the highest with 266 by 100,000 live born. (See Map No.14.G) A relation with illiterate and maternity mortality was found with a determination coefficient of 0.425 that would explain the behavior of maternity mortality in a simple model, which is already very suggestive of the relations. These situation portraits the complexity of the situation of women in Guatemala, result of a social model that infects and maintains the uneven and faces the integral attention system SIAS, health improvement model, implemented after the agreements from 1996.
The chieftainship from the Huehuetenango health area in the north region informed in February 2006 of the difficulty lowering maternity mortality, and identifies the municipalities of Barillas, San Sebastian Coatan, Santa Eulalia, San Miguel Acatán, Soloma, Cuilco and La Democracia with the highest rates.[45]In the Southwest region in San Marcos in the year 2003 there are rates around 857.14 by 100,000 live borns in San Jose Ojetenam,[46](See graphic No.4.G) very far from the score rate of the department which is 147 by 100,000n.v. And extremely away from the national score rate 153,000 by 100,000 l. b.[47]This situation allows us to rephrase Marshall when would say that "to limit the social politics to provide assistance, under a sense of beneficence, would become a negation of citizenship", "Women and kids would be protected because they were not citizens"[48] It is obvious that for some human beings the social system limits their citizenship condition and this one does not go through the rights to health. The described situation reflects an alarming situation regarding collective health of native communities, and a strong challenge to the sanitary authorities to improve the coverage of services and life conditions of the Maya population.
The heterogeneity of the Latin American society, added to the traumas produced by repression and limitations of their native population, reproduces with the same logic in different countries.

3.7 Mexico:

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[42] GUATEMALA. Encuesta Nacional de Salud Materna Infantil 98/99 ENSMI. Capitulo VIII. Cuadro 8.6 pagina 112, http://wwww.mearedhs.com
[43] CHART NO. 10 Unsatisfied basic needs NBI, by region 1994,1998-2000 in Guatemala, 2001:IDH.Guatemala:El Financiamiento del Desarrollo Humano. Pag. A36 Anexo Estadistico. http://www.minex.gob.gt/pnud/libros/finanaciamiento 2001/02n ANEXO ESTADISTICO PDF.
[44] OPS GUATEMALA. Concept and definition of maternal mortality, available in http://www.ciesar.org.gt
[45] Information not found in the website of the Public Health in Guatemala. Publication in Diario Prensa Libre de Guatemala. February 18 2006. http:www.prensalibre.com
[46] BARRIOS DE LEON, Elisa. "Análisis de Mortalidad Materna para el año 2003. San Marcos, 2004."DAS San Marcos. http://desastres.cies.edu.ni
[47] GUATEMALA, MINSITERIO DE SALUD PUBLICA. Línea basal de Mortalidad Materna 2000. http://www.ciesar.org.gt.es
[48] VINOCUR, Pablo. SALUD REPRODUCTIVA EN LA PERSPECTIVA DE LOS DERECHOS HUMANOS Y EL DESARROLLO SOCIAL, en Mortalidad Materna. Un problema de Salud Publica y Derechos Humanos. UNICEF Buenos Aires 2003. Pág. 105

The situation of the native Mexican population who suffered the most brutal genocide from history between 1518 and 1605[49] continuous silently towards modernization. What elements support us: According to census 2000 the population proportion that lives in houses with no access to pipeline water is 28.3%, the national score is 15.8% according to census 2000. The lack of this service duplicates in the native municipalities which is 34.5% and are lack of potable pipeline water inside their houses a proportion of 17.8% in the municipalities with native presence, and it gets to 24% when there are municipalities with disperse native population.[50]

3.8 Honduras

The access to potable water is uneven and not favorable for the quality of life. The differences according to ethnic conditions are marked: while in the native population that lives in the urban area has coverage ranges of 88% and 98%, in the rural area this same group has minimal coverage up to 55% such as in Gracias a Dios, in this department the differences reach 40% between urban and rural. (See Map No.1.H.).
However the differences in the Afro descendent population go up to 44% like in Paraiso, where the coverage in the urban is 99% and in the rural is 55%. (See Map No.2.H)

3.9 Panama:

The instrumental rationality presented at the beginning of this document takes more expression in the Panama Canal Operation. The use of natural resources for objectives not more important than the quality of human life of the inhabitants of Panama gets prioritized towards the maritime worldwide commerce. More than 50 millions of water gallons in each boat pass and the legal and constitutional belonging for the administration, negotiation and use of water by the Authority of the Panama Canal, who at the same time, sells a national resource" the water" to the IDAAN- Water and Sewage Institute. IDAAN reports the least coverage of water access is given within the native population. These are the least favored with infrastructure and therefore its population is limited to the water access right. According to census 2000 there are 31 jurisdictions with coverage of less than 25% of its population. (Map. No.1.P)

According to the second report of development objectives of the millennium in Panama, the coverage of potable water: is of 69% and sanitary sewage and served water treatment is of 35% of the population. Clarifies that Panama Metropolitan area and Arraijan has the 100% of potable water coverage, and 75% of sanitary sewage coverage. When analyzing coverage within provinces, disparities are identified within these services.
Darien "7 and 3% and Bocas del Toro (9 and 7%) show the lowest coverage percentage of potable water, sewage services and residual water treatment. And the native districts situation is not reported. (See Map. No.2.P)
Statistic and census institutional systems have the capability of identifying the territorial units, as it can be observed in the Map (Map No. 1.P). Such situation remarks at least in this aspect the condemnation of the millennium objective, as they do not provide any indication about the way they are related to the native population, due to they are not mentioned and are totally invisible"[51] as they are in this aspect in the second objective's report of the millennium objectives in Panama.
Nevertheless this report when analyzing the goal 10: "To reduce to the half for the year 2015 the percentage of persons that lack to sustained access to potable water and basic environmental sanitary services", the low "advance in the rural area is recognized (from 75.5% in 1997 to 80.2% in 2003), the uneven regarding urban areas persists and are re relevant in the rural native area (44% to 57.2%), even though the relative improvement registered within the years mentioned (13.2% percentage points)"(See graphic No.1.P) According the ENV 2003 in general the access of the population to potable water has improved from 88.5% to 90.2% in the year 2003. In the urban area a relative decrease of the access has been registered of 2.2 percentage point.

IV. Infantile Mortality in the Native Population

During the last years, development activities traditionally centered in the income has passed to make emphasis in health improvement, education and sanitary conditions. Even countries with low income have reached substantial improvement in the life quality. If well it is true there are achievements providing the basic social services, such as education and access

[49] ALEM ROJO, Alfonso. La Niñez Indígena en México. México. Octubre 2002.p.11
[50] COMISION NACIONAL PARA EL DESARROLLO DE LOS PUEBLOS INDIGENAS
http://cdi.gob.mx/indica_genero/docsserviciosenvivienda,pdf
[51] CARIÑO, Joji. Pueblos Indígenas, Derechos Humanos y Pobreza, en Visiones Indígenas sobre Desarrollo y Cooperación. Agencia de Cooperación Española y Ministerio de Asuntos Exteriores y de Cooperación. Madrid Oct 2004. Pág.27.

to water adequate for consumption and sanitation, and these has contributed lowering infantile mortality and in childhood, the illiterate and school enrollment. But reached to this part we have documented that these benefits have not been for everybody, the rest of the revision is centered in the native infantile mortality.

In all countries with native population per last census round 2000,[52] there are higher infantile mortality rates in this population group. (See Graphic No.11) Most of the differences of the infantile mortality rate between ethnic conditions are shown in Panama, Paraguay and Ecuador, with a major difference higher than 630 x 1,000 born alive; Bolivia and Mexico with a difference between 20 and 30 x 1,000; Brazil and Guatemala with differences between 10 and 20 x 1,000 born alive. Honduras, Costa Rica and Chile are the countries with fewer differences. This last aspect deserves social politics considerations implemented by these countries at its moment. According to Guerrero[53]in the provinces of Chimborazo and Cotopaxi in La Sierra Ecuador, the TMI surpasses 80.0 and 81 by thousand live born, compared rates with the ones the country had thirty years ago. The explanation of these differences has been documented enough by the life conditions of the Ecuador population. The challenge will be that since the perspective of the states to enlarge the existence of the "other" not only passes by the statistic mark an official parameter, but in the change social negotiation.

Let's see the differences according to residence zone and ethnic. The native kids have more probabilities to dye in the country or in the fields. The mortality infantile rate is higher in the native population; either they reside in the rural or urban region. (See Graphic No.12) This situation is away from the reasons why natives migrate, therefore "the modern city is remote, specialized and predator of their own inhabitants"[54] Health is the result of politics and actions of the past and present, and of the efficiency of negotiating resources by the State for the action to change life conditions.
This can be demonstrated with the relation grade between native infantile mortality and the coverage percentage of population with potable water in the rural area. (See graphic No.13) Less infantile mortality rates, higher percentages of potable water coverage. In reference to the relation of total investments per country and the changes in the extension of potable water coverage in the period 1990-1995, (See graphic No.14) partially the cases of Honduras, Brazil, Trinidad Tobago, could be explained, but with more reasons the cases of Chile and Costa Rica, according to numbers from OPS[55], already in 1988 these last countries would show coverage percentages of 86 an d 99% of potable water respectively. Therefore it did not demand more investment in coverage extension of its population, which can be explained by economic model reasons which are not the objective of this report. However it is necessary to remark that in the sense the States prioritize the infrastructure expenses for the sanitary sector, in that same sense changes are achieved in the potable water coverage, probably not with the urgency that were required in the period 1990-1995. (See Graphic No.14)
With its specifics, finally most of the countries reach advances in their indicators. Still with some difficulties to documentation of data, let's see some indicator relation in this last group.

V. Ethnic Minorities, similar situation of limitations

Exclusion and discrimination gets value again in the numbers, which will still be missing to provide follow-up to the life quality improvement of the Afro descendants and highly important to evaluate if uneven situation is shortened.

When approaching the infantile mortality indicator in the afro descendants, (Graphic No.15) it is stated the recent analysis of micro data [56] of the last census round 2000 can be seen: Higher infantile mortality rates within the afro descendant population of Ecuador and Brazil. There are more similar to the rate of the rest of the population in Honduras and Costa Rica. However, the rural infantile mortality rate of the Afro descendant population is higher than the majority of the

[52] CEPAL-CELADE. DIVISION DE POBLACION. Población Indígena de América Latina: Perfil sociodemográfico en el marco de las metas del milenio. Del POPOLO Fabiana y OYARCE Ana Maria
http://www.eclac.cl/celade/noticias/paginas/7/21237/delpopolo.pdf

[53] GUERRERO, Fernando. Población Indígena y Afroecuatoriana en El Ecuador a partir de la información censal de 2001, en Seminario Internacional: Pueblos Indígenas y afro descendientes en América Latina y el Caribe CEPAL, Santiago de Chile 27-29 de abril de 2005. http://www.eclac.cl/cgibin/getprod.

[54] UHIA, Juan Carlos. La Sociedad revelada, anotaciones para un mundo post/moderno. Santa Fe de Botota. Convenio Andrés Bello. ICFES 2000 p.60

[55] ORGANIZACION PANAMERICANA DE LA SALUD. Reporte Sobre Evaluación de la Década del agua y el Saneamiento. 1990

[56] Guatemala, Honduras, Ecuador, Costa Rica and Brasil. CELADE División de Población de CEPAL, RANGEL, Martha. La Población afro descendiente en América Latina y los Objetivos de Desarrollo del Milenio. Un examen explorativo en países seleccionados utilizando información censal.

countries with exception of Honduras. In Honduras it was documented the uneven that exists between the access of Afro descendent population that lives in the urban and the rural zone. (Map No.2H)
The mortality rate in the infants (1-5 years) Urban in the Afro descendant population is higher than the rest of the population in Brazil and Honduras. It is not higher in Guatemala and Costa Rica, (See graphic No.16) the mortality rate in Guatemala, rural infants is 60.8 x 1,000 live born, the highest of the analyzed countries with afro descendant population. As it is already documented in Guatemala the department (Izabal) where mainly reside the Afro descendants; it is a zone of high mortality in minors of 5 years. (See map No.13.G) There is not data for infantile mortality in Ecuador.

VI. Access to more specific data

When it is possible to define and manage more specific data, the social demographic variables can be evidenced better.
The study of Rangel [57] documents the limitations of the Afro descendent population to the potable water access and sanitary services in the urban area in five countries. The data reflects in increasing order the case of Guatemala, (68.2%) Ecuador (74.9%) and Brazil (85.4%) with access to potable water.

In these three countries the Afro descendants have less coverage than the rest of the population. (See graphic No.17) Honduras and Costa Rica with coverage percentages more similar within the whole population. In Costa Rica the coverage percentages are higher than the rest of the countries, keeping in mind these data are from the urban area.
In Honduras it is true that the coverage percentage is higher; let's keep in mind that the constant is always of higher coverage in the urban area, as it was documented in all of the countries. The higher the percentage of population to access to basic sanitary urban services, less urban mortality. (See graphic No.18 and 19)
In that sense, Costa Rica which is a country where it was started to propose a variance of social state starting from the community health development and public health, presents indicators less limited and margined. The case of Honduras could be explained by the higher population percentage of Afro Descendant population distributed wit the rest of the population. However there were gaps found within the Afro descendent population residing in the urban and rural area reaching to show differences up to 44%. (See Map 2.H)

VII. FINAL CONSIDERATIONS

Starting from the data from which this report was worked, we can consider that the disparity is not modern, it is consolidated with relation practices between institutions and social subjects, in the case of native populations and Afro Descendant it gets a particular and marginal dimension:

The objectives of development demand that measures are taken against hunger, poverty, illiterate, and lack of education, genus disparities, maternity and infantile mortality, diseases and lack of environmental sanitation politics.

- The quality of life of the inhabitants of the countries is conditioned by the access to water and sanitation services and by the advances in the coverage extension, has not been enough to improve the sanitary conditions of the populations especially the rural and native, still in countries with important changes in the coverage extension.

- Differences persists with the access to basic water and sanitation services between the urban and rural and threaten exists of decreasing coverage within the urban areas.

As a result of the historic colonial and social relations of native population limitations these present:

- Higher rates of infantile mortality rates and these have a relation with the lack of access to basic services of environmental sanitation and a relation with the poverty situation and extreme poverty.

- The rate of infantile mortality is higher in the native population in all countries, being the highest in Bolivia, Paraguay, Ecuador and Panama.

[57] CELADE División de Población de CEPAL. RANGEL, Martha. La población afro descendiente en América Latina y los Objetivos de Desarrollo del Milenio. Un examen exploratorio en países seleccionados utilizando información censal http://sss.lpp-uerj.net

- The native population area still postponed. If the native boys and girls have higher infantile mortality rates and migrate with their families also, they separate from their territories. This does not mean they have better access to basic services of water and sanitation; they still have high mortality rates within their cities and their territories.

- In the case of the Afro descendants a close relation is documented between the infantile mortality rate and in less than five years, with access to potable water sources and an adequate sanitary service in the urban area.

- There is a relation between the lack of access to potable water and the gastrointestinal diseases.

- Women are still showing the highest illiterate rates, access limitations of the environmental basic service, when they assume the chief of their homes and the rate of maternity mortality is still high. In some zones, the maternity mortality rate is five times higher than the national score.

- There is a close relation between illiterate and maternity mortality.

- The dynamic is advancing and higher in the last decade. If Latin America improved the water access and sanitation coverage worldwide, such affirmation have not meant higher impact in the native and Afro descendent health.

Social advances and sanitary infrastructure do not reduce poverty neither disparity nor their effects.

- However the countries that developed social politics with lines of social state have less disparity grade in their populations conditions.
- There are limitations in the study of public health of the native groups and Afro descendants and epidemiological information of the health ministries is neither current nor accessible through Internet.
- Some country reports of millennium objective follow-up show information weaknesses.
- The Dev Info Software allows the graphic representation of the life conditions of the population in a fast and easy way, but it is not a substitute of the statistic data convenient and confident.

VIII. RECOMMENDATIONS

First the declaration of the "International Year of the native populations of the World, then the "International decenial of the worldwide native populations", initiated December 10,1994, both proclaimed by the Asamblea Nacional de Naciones Unidas, and the organized work of the native population have generated initiatives for the study of the situation of the native population and Afro descendent.

The Pan-American Organization of Health proposes the study of the native population health since the proposal "Ethnic group and Health", for the research and gathering of health information of ethnic groups and to incorporate the racial ethnic sensibility that contributes achieving with the Development Objectives of the Millennium with a perspective of the reduction of the disparities in health. All these efforts have generated and will generate the investigations of the conditions and access to collective native services.

However it is still not easy to access to the information that documents the disparities in health and access to sanitary services that guarantee the environment sustained. It is not even easy to manage the basic epidemiological information of the countries and some of the information has to be paid.

In that sense we propose to establish agreements for the gathering and managing of census data and national surveys that generate convenient data that allow identifying the disparity conditions, specially the environmental sanitation services.
In this direction the follow-up and convenient evaluation would be consolidated to reach the objective goal of sustained environment.

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X. ANEXOS

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