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Statistics and Economic Projections Division

Calculating MDG indicators in Latin America and Caribbean countries: Missing information and statistical discrepancies in national and international sources

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Introduction

The Millennium Development Goals (MDGs) pose a valuable opportunity to generate significant improvement in the quality of life for the inhabitants of Latin America and the Caribbean, as well as an enormous challenge in terms of the need of statistic information required to monitor the status and achievement of the goals thereof.

Seven (7) years after the Millennium Declaration, the region still presents challenges both in terms of statistics and institutional aspects for monitoring MDG's. In particular, inconvenient divergences are observed for the values of MDGs indicators presented in national MDG reports and those reported by international organizations, making it necessary to work towards progressively decreasing them. The need to strengthen both the statistical capacities and the inter-institutional co-ordination dynamic within the different countries becomes evident.

Thus, ECLAC undertook the analysis of the situation in Latin America to identify the magnitude and causes of these problems, and to envision possible solutions in a near future. The first step consisted in the development of a project at strength hentening the statistic capacities for monitoring MDGs in collaboration with the countries of the region.

To construct a diagnosis of the situation in the countries in the region, ECLAC developed a first study (Cecchini and Azócar, 2007), which analyses data from 32 national MDG reports covering the status of achievement of MDGs, which were available in Latin America as of September 2006 (including the joint report for the Caribbean). This analysis showed that the lack of information –for series of data for the period 1986-2006- amounted to 53%. On the other hand, discrepancies among data from national reports and data reported from the official United Nation's Millennium database for MDGs indicators reached 37%. A rough 10% of the observations were matching values for both sources.

Moving a step forward, the present study updates the previous study, includes two additional national reports and all up to date indicators in the Millennium database, and focuses on establishing the causing factors that explain missing data and discrepancies in information with regards to MDG indicators. It also proposes an agenda of action conceived to make possible that both countries and agencies make progress altogether in terms of statistical convergence.

In this document, the main findings are stressed through specific cases which allow observing them in a concrete way. Nevertheless, its purpose is not to show cases, countries,

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indicators, data sources for each issue in an exhaustive way, which will be part of the project's next document.

As it will be shown, the lack of information, statistical discrepancies and heterogeneity of this phenomenon persist when considering different countries, sources, and indicators. By the same token, factors explaining these phenomena are multiple and vary accordingly with respect to area, source, and the method of computation of the respective indicator. Nevertheless, it has been possible to observe that many of these factors are crosscutting and that there is room and opportunities to build convergence in the medium term. Therefore, a regional working agenda is proposed to address these aspects.

Section 1. Lack of data and discrepancies in the values of MDGs indicators. Overview.

The diagnosis with respect to data availability (per year) from the period 1986-2006, both for national reports for MDGs as from the Millennium database from the United Nations was updated for the report herein as of November 2007. Below is the description of the main findings from a rather general perspective, detailing explanatory factors of the phenomena.

1.1 General Lack of Statistical Information

1.1.1   Findings

Confirming previous findings, a very significant lack in terms of data is observed in MDGs national reports. Data series reported from the countries only cover a 42% of potential observations for MDGs indicators, while only 21% of the total reports 3 or more data points for the period from 1986 to 2006.

On the other hand, the Millennium database shows a greater amount of data, covering 63% of potential series for the countries in the Latin America and Caribbean region.

Chart 1: Average Data availability from Countries
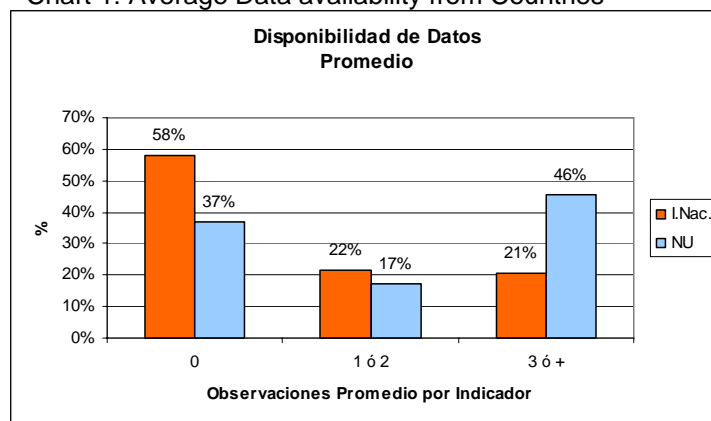
Source: Prepared by the authors for this document.

When analyzing data availability in each 8 Millennium Goals, it is possible to observe that situations are very heterogeneous. In general terms, and with the exception of Goal 7 referring to environmental sustainability, availability of Millennium data is greater than data presented in national reports for all goals; that is, the former present a greater amount of missing information (no observations in the series).

Also, all Goals presenting series with three (3) or more data points are more prominent in the information from the Millennium database of the United Nations.

Chart 2: Distribution in the number of observations in MDGs indicators grouped by issues. Contrast between national –MDG National Report (INac)- and international sources –Base Milenio de NU (NU)-
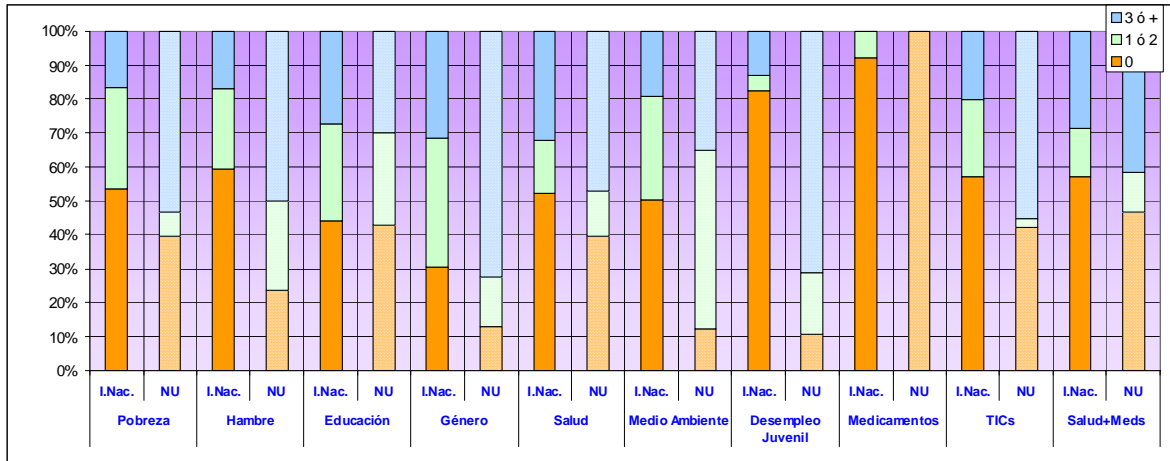
Source: Prepared by the authors for this document.

If we were to evaluate the group of indicators presenting large amount of missing information (zero observations for each indicator), it is possible to observe that the greater differences among data from national reports and from Millennium mainly correspond the Goals related to Hunger, Environment, and youth unemployment, where missing data in national reports more than double Millennium statistics.

On the other hand, in the group of indicators presenting the larger amount of information (3 or more observations for each indicator) the greater difference between national and international sources is observed in the areas of Poverty, Hunger, Gender, Unemployment rate of young people, and ITCs, where data from the Millennium database more than double data reported in national reports.

1.1.2 Principal Explanatory Elements

Hypotheses explaining the preoccupying lack of information in national reports are mainly related to an early development of statistical systems and the insufficient national coordination (i.e. national reports and statistical offices) in several countries in the region.

The status of the different goals in this regard is rather heterogeneous. In most cases, indicators for Poverty, for instance, already have a relatively longer history of development, and they are constructed from household surveys, which are periodically conducted in many countries of the region. On the other hand, emerging areas such as environment and ITC's issues presents less progress in developing official statistics so, despite of its relevance, the lack of official statistical series prevails for several indicators and countries.

In summary, while there are certain exceptions, i.e. the case of Mexico and Brazil, most of Latin American countries still face difficulties related with collection, analysis, and

dissemination of official statistics, which are the foundation to calculate all MDGs indicators. Albeit the above, it is important to emphasize the important developments observed in recent years.

A second hypothesis to take into account refers to the structure of the national report, which only requires reporting of data for one base year near 1990 and another point near the report in order to assess the status with regards to MDGs goals. Complete data series comprising all years in between were not requested, thus many countries did not report further even though they had a larger amount of data available.

A third situation explaining the difference in availability of national and international data is that when facing lack of information at country level, international agencies undertake an estimation or modeling of data, hence observations included in the Millennium database often constitute approximations to values and are not derived directly from instruments of collection (i.e., surveys, monitoring facilities, administrative registers) in each country.

Lastly, and in close connection with the previous paragraph, due to this lack of statistic information, many countries reproduce the information from the international agencies in order to publish them in the national reports. This might in occasions create the false notion of a larger availability of national data than the actual situation.

1.2 General Discrepancies in values of Indicators between National and International sources.

1.2.1 Findings

Also confirming previous findings, it is observed that only in approximately 10% of the data series (1986-2006), information reported by MDGs national reports matches the information reported in the Millennium database.

When facing such a troublesome situation, the main task of this study consisted in analyzing possible causes of the discrepancies, particularly in those indicators with enough volume of data to make the contrast of discrepancy possible. This task was carried out within the existing restrictions in terms of time, with the intention to address them with appropriate proposal of actions to correct them in the future.

In order to report the results of such a task as an overview, following there is a typification of the different situations, which might entail the creation of the statistical discrepancies among national and Millennium sources.

1.2.2 Main Explanatory Elements

There are several different causes explaining the divergence in data values from national and international source. Though heterogeneous and complex, in many cases these are due to very particular situations, referred to the indicator *per se,* but in other cases it relates to the degree of statistical development of each country and the estimation and adjustment methods by the international sources.

Notwithstanding the above, there are several common practices in management of statistical series which can produce the divergence between information reported from countries and the information reported from international agencies.

The following depicts some of those likely causes.

a) Conceptual differences

Another factor useful in the explanation of the divergences refers to what is considered, or included in variables composing an indicator. What is a slum? What is considered a secure tenure of households? How is poverty understood and measured? What is sustainable access to improved sources of water? What is it we want to express with energy use or consumption? How is mortality defined by HIV? How young are unemployed people?

Each MDG has specific indicators for its monitoring. However, concepts, which define the determining variable of an indicator, might be understood differently depending on the country, its traditions, its institutions, its culture and its statistical practices. Thus, when we are referring to any particular variable, such as basic health services, it may be interpreted, measured and reported in different, and even contrasting, ways.

If countries and international agencies produce statistics for elements with like names, but include elements that are different, from slightly to entirely different, coincidence in values at any point in time and space might be ascribed to simple chance. In order to ensure that both countries and agencies are undertaking the same computation, it would be necessary to examine both the definitions of variables as well as methods of computation in a rather comprehensive manner.

For instance, when the topic considered is forests, most of the countries have their own definition, which derives from their legal and institutional framework, from which also derives an *ad hoc* approach to monitoring the development within the country along time. Forest resources are very different, as there are different species, population, densities and heights, depending on the characteristics of the biomes and on the dynamic ecosystems of the countries. Additionally, heterogeneity of forest resources increases as a result of the intervention level and of the pressure exerted by activities conducted both by human beings and the economy upon the forest.

Therefore, while there is a definition of forest provided by FAO, which is considered the international standard, countries do not have always a registry of the forest surface which is consistent with these definitions. As a general practice, the countries of the region conduct registries every 5 to 8 years of the different types of forests using the method of remote sensors, and then images are interpreted and validated on the field based on the knowledge of different forest resources. From that moment, it is possible to compute indicator #25 by comparison with the total national territory. But if countries define their forest resources according to national rules and conduct the monitoring activities based on that notion, it is very difficult to have coincidence with estimations reported by International agencies that meet FAO's definition.

b) Differences in coverage or spatial scale of the indicator

Spatial coverage or scale differences from which indicators reported by different countries and agencies are computed produce divergences in terms of the values of the indicators.

An indicator for poverty or sanitation computed for the urban area and population cannot be, by definition, compared to the same indicator computed for the entirety of the territory or for the national population.

Even if statistical rules or specialized agencies provide a standard or best practice regarding which coverage or scale should be used to compute the indicators, countries are not always able to meet these prescriptions due to limitations of resources, technical capacities or needs for monitoring specific public policies.

This would not matter much provided that countries always use the same scale or spatial reference for computation of their indicators. For such an ideal case it would be necessary to conduct an operation of equivalence as to be able to undertake the comparison with the indicator reported by the International agency. Nevertheless, in many occasions historical series correspond to the use of different scales due to the application of different instruments (survey, census), which are necessarily revised over time as adjustments are required.

The situation worsens with the lack or insufficiency of rigorous metadata. Thus in many occasions there is no accurate information about what is the scale or coverage used in the computation of the indicators, nor is there the opportunity to adjust the values as to make them comparable.

c) Heterogeneity of statistical development in each issue

The course of the evolution of the statistical production for each of the Millennium areas conditions the production of indicators as well as their quality and comparability among countries. It is not the same to compare countries' GDPs than comparing the results of poverty measurements or statistics on air pollution or indicators of slum-dwellers.

For instance, economic indicators have been developed for over 50 years. Their progressive arrangement within the Systems of National Accounts and the foreign trade of each country has led to an internationally adopted standard, referred to as SNA 93[2], currently undergoing a revision process. All this development explains the current level of comparability of the National Accounts and of the main economic indicators in the region, even though there are still heterogeneous developments and methodological challenges in the production of economic statistics.

Demographic statistics, with their inherent complexity, also present a long history in the region, as shown by the 50th anniversary of CELADE in 2007. Population dynamics in the region have become more complex as their determining parameters change with the history of the development of the Latin American and Caribbean region, thus posing important challenges in conducting population censuses and surveys, albeit in general it is possible to

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[2] Historical data show that the countries in the region already measured their economic activity before the year 45. However the standardization efforts were peaked with the development of two milestones in the National Accounts, those of SNA 53 and SNA 68, which coexisted until 93 (one for market economies and the other for centrally-planned economies).

consider that there has been a significant progress in harmonization processes of the regional demographic production.

On the other hand, social indicators, developed from the concern on social development in the last four decades, while having less resources allocated in the countries in the region (compared to those allocated in a stable manner in the economic area), have been progressively becoming part of the statistical programs of countries and agencies. Progress has been achieved in coordinated work processes in the countries, and certain advances have been achieved in terms of standardization and harmonization upon measurement of the main variables for poverty, distribution, education, health services and gender. Notwithstanding, heterogeneity in the social statistical development of the countries and challenges posed by harmonization are still sizeable.

New and emerging issues are those posing greater challenges in terms of statistical production. For instance, environment and development sustainability has been finding a space for consideration in the discourse and in countries' and agencies' work programs at a steady pace, a process with spans approximately ten years in the most advanced countries in the region. Nevertheless, there are countries that have not officially started with the systematic and official production of statistical series and indicators for the Environment. The area is new worldwide; in fact, developed countries pioneering in this area barely have a history of slightly over fifteen years. The challenge is enormous as this is an emerging area, cross-cutting by nature, with high complexity and territorial scattering, which requires special efforts in terms of measuring and collecting information different to economic, demographic, and social areas, and which accordingly is amidst the process of conceptual and statistical development. Work carried out by the countries in the region, along with the regional agencies, has made heterogeneous progress in the methodological aspects and production of environmental and sustainable development indicators and statistics, thus building regional networks for collaboration, technical capacities and incentives to inter-institutional processes for an official statistical production in the countries. As in any other area, strong heterogeneity in the relative development of statistics among different countries persists.

d) Heterogeneity of data sources

One of the main reasons explaining the discrepancies -among national and international sources- is the use of a range of information sources when calculating the same indicator.

The most commonly used source of data for calculating social MDGs indicators are census and surveys conducted at the household level. In both type of instruments, the method calls for regular collection and measurement, which favor studying the development of social phenomena. However, in household surveys the unit of analysis is the household and it involves a sample of the total population; on the other hand, in census the analyzed unit is each individual, and it is applied to the entire population.

When both sources are employed to calculate the same individual indicator, either in a differentiated manner or even combined, it is highly improbable to have coincidence in values.

The situation becomes more problematic when other types of surveys are conducted, whereas the sample can hold less and/or limited or local representativeness, i.e. only certain cities, or only rural areas, and whereas the application of the instrument could have been

conducted in only one occasion, or during a short period of time, to mention only certain cases.

This situation also creates problems in terms of the level of comparability of data from one country to another, and also with international data.

For the scope of this study, the data source is particularly important, since many of the mentioned divergences in data from national reports and data reported by Millennium can be explained by the usage of different sources of information.

To illustrate with one example, consider that data for the literacy rate in many opportunities require the crossing of surveys. It is common to find that for a given period this indicator is calculated as an integral part of health surveys or as part of census or life conditions' surveys irrespectively.

e) Difference in population denominators

Many of the MDGs indicators are to be reported in as per habitant format. Upon conducting the computation of the MDGs indicators, it is of uttermost importance to use internationally validated data; otherwise it is unlikely that the estimations will match. Frequently, population estimations for intercensal periods vary from country to country and to international agency. Should there be any differences in the denominators among international agencies, regional commissions, and countries, as it is usually the case, it is conclusive that the final values will not be equivalent.

It has been a common practice from several years now that projections for population in Latin America and the Caribbean had been standardized as to make international estimations, in particular those carried out by CELADE (Latin America and Caribbean Demographic Centre), to coincide with estimations undertaken at the national level. Unfortunately, there are still certain divergences for certain cases which are currently addressed as to provide remedy.

One case is the 2004 census round where problems raised from the estimation conducted by CELADE with regard to the number of deaths by AIDS. This model created effects upon life expectancy. The mentioned model is only used in 4 or 5 countries in the region, and the number decreased significantly at the time of the 2006 round. It is important to highlight the case of Brazil, where distortion in life expectancy was of utmost importance in the year 2004.

Other situation, which also generates certain inconveniences, is the creation of the age group of 80 years old and older carried out by CELADE. Countries still use this age group as a closed age group. In this case, it would have been of great assistance to have coordination between the international agency for population and the countries.

Another problem, which presents less impact, is created by the assumption that migration should add up to zero worldwide. Such an assumption at regional level is rather difficult to control, which on its part generates a number of inconveniences that cannot be addressed from CELADE, as it refers to global conventions.

It is also possible to observe difficulties arising from the methodology employed by CELADE where projections for population are based on five-year age groups. Certain indicators, e.g. schooling at different educational levels, require projections in individual age numbering and

opening the five year groups became more complicated since the distribution of the population doesn't follow a pyramidal shape any more.

All of the above becomes even more complicated as different software are used both in the agencies and at country level. In an ideal situation, the same software should be used in order to compute one single tested methodology. Additionally, the joint work of international agencies, regions, and countries is of great importance in order to reach consensus and adapt methodologies.

This latter aspect is already being addressed at the international level, hence building up on international efforts to reach homogeneous methodologies as is the case of the Inter-agency Group headed by UNICEF, created several years ago and which carries out projections for childhood.

f) Insufficient institutional coordination

MDGs indicators present a great heterogeneity in terms of the issues they encompass and the institutions that are implied in the thematic areas. The countries and the agencies require to achieve certain sectorial and institutional coordination in order to produce consistent and quality statistics that allow evaluation of the status in achieving these goals.

Unfortunately, it has been frequently observed that there is a lack of fluent communication, nor there are procedures in place, and neither a history of inter-institutional coordination is established among main stakeholders. So it is very difficult to collect information that is necessary for national report for each specific country, let alone to collect and make comparable the data from different regions and the planet as a whole.

Usually, computation of statistics is conducted several times, by several entities in each individual country, usually using different methodologies and also using different sources for data. Ultimately, such approach implies reporting several different values for one single indicator, rendering impossible to identify the official national values, since all of them are reported by official organizations or entities of the country.

This practice can be misleading upon conducting a national diagnosis, but it also prevents the agencies from carrying out comparisons on a country-by-country basis. In addition to that, statistical production from countries will be questioned at the international level.

Thus, it is of the utmost importance that the countries count on a organization in place and, ultimately, an inter-institutional platform or table, which can coordinate sectorial actions around statistical production and use, reach consensus in regards to methodologies, makes available manuals for good practices, and validates data reported by each institution. It is critical that each country counts with such an organization, where the National Statistical Office participates and ideally coordinates, so that the statistical regulations, expertise and best practices can be put to use in the MDG indicators field.

g) Diverse statistical strength of NSOs

In connection with the previous section, the capacity and strength of the National Statistical Offices in each country is a very significant factor, with regard to the production of official statistical series necessary to compute MDGs indicators. Should this entity count on a solid position both in political and technical terms, the likelihood of achieving coordination, and

effectively provide regulation and leadership in the statistical production at the national level would be very high. On the contrary, should the case be of an entity with a background or even periods of institutional weakness, with lack of resources, and thus limited capacities for the production and dissemination of official series, then the likelihood is to have situations like those already mentioned, where each institution produces on its own different values for one individual or sets of indicators.

Technical and institutional strengthening of NSOs in the region is a task that has been addressed by the countries in the region, and in which ECLAC has devoted capacity building and technical assistance in order to support the statistical development of Latin American and Caribbean countries.

h) Diverse level of political leadership of the organizations in charge of the MDG National Report

Another significant factor, which has a direct impact on the production of statistical series for MDGs indicators, is the political leadership that the organization responsible for information collection has in order to produce the National Report on the status of MDGs.

In several countries, such information collection task is essential for the design and implementation of public policies. That is the situation of countries presenting a lower degree of development, for which organization and prioritization is required for attaining sustainable human development as well as improving the quality of life of the population. In many of these cases United Nations' teams, especially UNDP, provide a strong support to the production of said reports, thus addressing the lack of statistical data of the countries. It should be mentioned that in certain cases financial aid provided by international organizations is made conditional on the monitoring of MDGs, thus creating incentives for the development of local statistics.

For instance, in El Salvador, MDGs figure as national targets and priorities within the context of the Government Plan as part of the Fiscal budget[3].

As it was already mentioned, in less developed countries the Millennium Development Goals are widely disseminated, attaining a positive evaluation in the public opinion. On the other hand, countries with a higher degree of relative development have created their strategic development strategies tangentially to MDGs. Thus, the production of special reports for monitoring MDGs lacks strategic sense and corresponds more to a political commitment with the United Nations and to the acknowledgement of the significant effort carried out by International organizations in the development of the region and particularly of the countries.

In the latter case, it might be likely that there is less dissemination of monitoring of MDGs and this work is detached from its importance within the different organizations responsible for the creation of the report, thus entailing lower quality reports.

Notwithstanding the above, there are developed countries provided with strong statistical systems in the region which have used the MDGs report as an instrument for both National and International dissemination of achievements made with regards to the MDGs and even reporting additional information.

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[3] "Message for the Bill of Budget 2008", National Office of Budgeting, Ministry of Treasury, El Salvador (September, 2007).

i) Self-report of limited statistical capacity in MDG National Reports

In order to have information with respect to the statistical situation of the countries, the countries were suggested to undertake a self-evaluation of their own statistical capacity for monitoring MDG indicators. Thus, nearly one third of the national reports followed the recommendation from the Global Partnership for Develoment[4], by reporting on their own capacity for follow-up the MDGs.

The following evaluated areas were assessed using three categories, that is, excellent statistical capacity (High, Very good, or Sound); an intermediate category (Good, Average or Fair); and a category that reflects none or scarce statistical capacity (Weak or Low).

- Amount and frequency of information derived from surveys
- Capacity for data collection
- Quality of information from recent surveys
- Capacity for statistical follow-up
- Capacity for statistical analysis
  Capacity for incorporation of statistical analysis into policies, plans, and mechanisms for allocation of resources
- Mechanisms for monitoring and evaluation
- Capacity for reporting and disseminating information

A summary of the findings of this self-evaluation was published in the document from Cecchini and Azócar (2007), which was then updated with information from the new national reports issued. As there is not much new information, the findings have not changed substantially.

Accordingly, the situation it is not very auspicious in this area as most of the countries acknowledge a low statistical capacity in their national reports. While the countries have a greater capacity for data collection and dissemination of information, once data are produced most countries show prominent deficiencies upon production of production of data with quality, to conduct an appropriate analysis, and to include such data in designs for public policies.

This situation might explain the reasons why International organizations do not adopt values reported by those countries, instead preferring to produce their own statistics, and even modeling or estimating data when sources are not reliable.

When facing this situation of lack of internal statistics in the countries of the Latin America and Caribbean region, it has become frequent that data included in national reports are sourced from International agencies. Thus, both National and International data match. However, this is not an ideal situation, as it does not foster the technical development at country level as to independently produce, important information as to create the relevant public policies and development strategies.

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[4] "Note for Guide for MDGs Report" (October 2001)

j) Lack and insufficiency of metadata

The problem posed by the absence or insufficiency of metadata that should complement the statistical information produced officially is one of the most important challenges in the statistical development of the countries and agencies in the region.

Information that lacks complete metadata cannot be properly analyzed and placed in context. Also it is not possible to establish their degree of compatibility in spatial or temporal terms.

This problem is particularly serious in MDG national reports, where information usually lacks good description. With few exceptions, it is common that national reports actually do not include the sources of statistical information reported, nor include information about the definitions of variables or about the methods used for computation or collection purposes. Production of national reports usually lacks the involvement of National Statistical Offices and of the specialized statistical examination of charts, graphics, and statistical annexes (when included).

k) Insufficiency of a standards or best practices

In those areas of statistical production that have a specific set of best practices or even a statistical standard internationally agreed upon, it is not always possible for the countries to meet such standards.

Obstacles preventing compliance with statistical standards and best practices vary according to the situation, but they generally fall within the following listing:

- Insufficient allocation of financial, human and/or technological resources

- Existence of national priorities that create a demand for ad hoc or country-specific official statistics, thus preference is given to the relevance of variables over their regional or international comparability.

- Lack of institutionalization of statistical production in the area, thus making efforts unsteady in terms of funding and external support or in terms of political decisions that change from one administration to the other

- Lack or insufficiency of basic official information, instruments for collection or measurement of central variables of the area of interest

1.3 Use of official statistical series of the country in MDGs national reports.

In order to supplement the present work, in October 2007 the National Statistical Offices were requested to undertake the revision and validation of data obtained from MDGs National reports. The purpose of this exercise is to determine the amount of data reported that correspond to data that countries deemed as official with the assumption that official statistics from each country are validated by NSOs.

Unfortunately, at the time of preparation of this document, only two countries have provided information, Cuba and Panama.

Responses obtained correspond to very different situations, showing the heterogeneity of scenarios that one is likely to encounter.

On one hand, national reports from Cuba (2 as of now) contain 62.5% of the potential of observations for MDGs indicators, which is a high figure compared to the average of the countries previously shown. The entirety of this information was confirmed as official by the NSO.

On the other hand, national reports from Panama (2 as of now) represent 91.1% of the potential of observations for MDGs indicators, which is an even higher figure considering the rest of the countries. However, out of this proportion only 52.9% was validated by the NSO.

It is expected to have more information available from NSOs in a near future as to undertake a thorough analysis of this issue.

Section 2. Lack and Discrepancies in Indicators with respect to MDGs issues

From a more specific perspective, it is possible to undertake an analysis of the discrepancies previously described for each area covered by the Millennium Development Goals. The present study undertakes a revision of the indicators by grouping them in six areas: Poverty, Hunger, Education and Youth Unemployment, Gender, Environment, and ICTs.

It is important to mention that this analysis does not include certain indicators for which few or no information was available[5]. Such indicators correspond to MDG 8 "Develop a global partnership for development," targets 12 to 15. Additionally, indicator 29 referring to the proportion of the population with secure tenure of land was not included, as there still are certain discrepancies about its definition and missing data amounts to nearly 100%.

2.1 Poverty[6]

Poverty	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 1: Proportion of population below $1 (ppp) per day	29%	55%
Indicator 1a: Percentage of population below the national poverty line	37%	32%
Indicator 2: Coefficient of gap in poverty at $1 ppp per day	5%	55%
Indicator 2a: Coefficient of gap in poverty below the national poverty line	8%	42%
Indicator 3: Share of poorest quintile in national consumption	16%	50%

The above MDG indicators referred to Poverty (Goal 1) are computed based on surveys conducted at household level through direct work with micro data. This is the source of information for both International organizations (in particular, the World Bank) and the countries.

The comparative series almost always report less national data than international data. This lack of information in the countries is due to the fact that all observations computed by the countries are not incorporated in the MDGs National reports. In general, the countries undertake these estimates in the same years that surveys are conducted, albeit the report includes only the base year, near 1990, and the level of progress, with respect to the latter, as of the date of the report.

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[5] Those indicators were also not considered in the work of Cecchini and Azócar (2007)
[6] This analysis is an extract from the analysis of Xavier Mancero, from the Statistics and Economic Projections Division from ECLAC.

With respect to indicators 1 and 2, discrepancies in data might be caused by two different elements in estimation of data: first, in the measurement of households' economic resources and secondly, in the computation of the poverty line.

On one hand, it is known that measurement of household resources is undertaken based on household surveys. Nevertheless, certain countries have both living conditions surveys and employment surveys, which do not generate the same estimations for income.

Also, coverage of surveys could be of different type, in general, urban or national. In addition, in certain cases different sub-samples of the same survey could have been used to produce the corresponding estimations.

Other common practices in the estimation of household income refer to statistical work undertaken once data from the survey are available in order to validate the self-report of income of respondents. It might be that imputations for non-response are applied and that the method differs among the various agencies producing data.

In other countries income data measured by surveys are adjusted with data from National Accounts.

Both income imputations and adjustments are subject to different treatment by international organizations. For example, the World Bank does not undertake such adjustments, albeit in many occasions the institution receives databases that already contain imputations or adjustments. On the other hand ECLAC applies its own non-response imputation and also makes income adjustments to National Accounts, thus is likely that this variable differs from the variable used at country level. Chile is the sole clear exception to this situation as it follows ECLAC methodology to calculate poverty and other social indicators.

Lastly, another factor of divergence with respect to income is that in many occasions the variable expenditure is used instead of income. Such a situation is less frequent in the Latin America and Caribbean region as there are a handful of regular surveys measuring expenditure. Accordingly, most countries in the region follow the original definition for the indicator.

The World Bank opts to use the variable of expenditure to compute the international indicator.

With regard to divergences that might be explained by the computation of the poverty line value, it should be noted that there are two co-existent criteria, i.e. the international criterion which sets poverty on $1 PPP per day and the national criterion where each country determines extreme poverty and poverty line.

The MDG official definition for this indicator is the former, $1 PPP per day and such definition is used by the World Bank for computation purposes. This is the value adopted as official and comparable by International agencies.

Based on the above, nearly 50% of Latin America and Caribbean countries have chosen to report indicators considering the national line defined by each of the countries as benchmark.

All in all, certain inconveniences arise when undertaking the computation for those data. Concerning the international criterion, while the standard of $1 PPP per day seems to be

clear, it is not the case for its implementation. The value actually corresponds to $1.08 as per Purchasing Power Parities (PPP) for 1993. PPP factors for consumption are available for 1993, but these data are missing for other years, thus computation of a number of PPP is required based on different assumptions, which can vary from one country to another.

On the other hand, in the case of national lines, while countries and international organizations use the same methodological framework, computation of extreme poverty line might pose large differences. It would be actually peculiar that values used for lines from both sources match as there are many criteria, factors, and assumptions involved in the computation.

All the reasons provided may play certain role in the discrepancies recorded. Nevertheless it is possible to expect a greater impact from income imputations and the poverty line value.

In particular, there are countries where such differences are confirmed, albeit the sources for information tend to match in most of the cases. Such is the case of Mexico, where there is a high likelihood that the national report uses the National survey for Household Income and Expenditures (ENIGH as per the Spanish acronyms) for the whole series, while the United Nations uses the ENIGH in some years and the National Survey for Urban Employment (ENEU) in others.

International data are always based on income, as is the case in most of Latin America countries. Nevertheless, there are cases where the country has information available on expenditure, but it is not reported whether such information was used or not.

Neither national sources nor international sources report whether imputations for non-response or adjustments were made to income. However it is almost certain that imputations for non-response have been applied and such might have a material impact on the results.

The greatest reason for discrepancy could be values for the line, as there are many reasons why these might be different. For the case of the $1 PPP per day poverty line, PPP exchange rate to local currency is an important source for discrepancies. In the case of national lines, there are many methodological elements involved that might affect the final result.

With respect to indicator 3, which corresponds to share of poorest quintile in national consumption, the explanations provided for measurement of resources (income) hold true. In this case the poverty line is not used as benchmark.

In order to correct or at least reduce discrepancies observed it is important to take into account that is not possible to judge whether the national sources or the international sources are calculating their figures "better" and, therefore it is not possible to know in which direction should the data be moving. In fact, it is possible that reported figures in both cases are actually correct and that differences are due, exclusively, to the usage of different but equally valid methodological options.

Consequently, it is desirable that both the National reports and the United Nations database provide more information about published statistics. In particular, it is desirable that values for poverty lines used to produce measurements are published and that it is noted whether these are based on per capita income, per capita expenditure or any other variant of these two. Having metadata available will make possible to conduct evaluation on whether these

divergences represent a cause of concern as well as to be able to determine methodologies to compute these indicators for future usage.

2.2 Hunger[7]

Hunger	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 4: Prevalence of underweight children under 5 years of age (malnutrition)	21%	13%
Indicator 5: Proportion of population below minimum level of dietary energy consumption (undernourishment)	13%	87%

Indicators for Goal 2, which refers to diminishing the proportion of people suffering hunger, are computed from different methodologies and sources of information. However they match in the fact that there is greater availability of data reported by international agencies than data reported by the countries.

Also, there is more information for the indicator for undernourishment than for the indicator of malnutrition, which is very scarce. The latter situation could be due to periodicity of malnutrition studies, which are not conducted annually, and even several years can pass between studies in certain countries. For example, in Uruguay this kind of study has not been undertaken since 1995, and there is not any single study for Brazil, Costa Rica, Dominica and Saint Vicent and the Grenadines since 1996.

The situation is different in the case of the indicator Undernourishment for which FAO conducts annual studies.

2.3 Education and Youth Unemployment[8]

Education	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 6: Net enrolment ratio in primary education	39%	82%
Indicator 7: Proportion of pupils starting grade 1 who reach grade 5	18%	0%
Indicator 8: Literacy rate of 15-24 years old	24%	8%

Indicators 6, 7, and 8 have been established for an appropriate monitoring of the Goal.

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[7] This analysis is an extract from the analysis of Rodrigo Martínez, from the Social Development Division from ECLAC.
[8] This analysis is an extract from the analysis of Ernesto Espíndola, from the Social Development Division from ECLAC.

Different debates have developed around the usefulness and relevance of these indicators, thus both their validity and their availability, and to a lesser extent, their reliability have been evaluated.

Thus, it is possible to foresee that indicators 6 and 8 allow monitoring, with sufficient validity, access to primary education level with the results that in the long term this access would have as with the development of basic skills for reading and writing. However these are not valid as to specifically monitor the intended target, function mainly covered by indicator 7. Consequentially, discussions had been around the definition of the most possibly valid indicator -and available for a significant number of countries. This has meant usage of several versions of indicators of progress and completion of the level indicated.

Alternatively, the completion rate for primary schooling has been used, as per ICSED 1997 rating).

In terms of relevance of these indicators to measure MDG 3 (or its validity), the latter would be more beneficial as it would measure effective completion of the primary schooling cycle; following the International Standard Classification of Education (ICSED) from 1997, would ensure a greater degree of comparability in terms of the contents taught during the primary schooling. Additionally, and different to indicators for progress described above, the indicator of completion has the entire population for the age group monitored as denominator, and not only the school population which entered grade 1.

Notwithstanding, both blocks of indicators have different alternatives and pose problems in their construction which originate figures which are called to measure the same phenomenon and, in occasions, a questionable level of reliability of the indicators when examined through time. A significant part of the said variability is associated with the type of sources available for construction of the indicators and the different problems to meet the requirements of their definitions.

The following are the usual <u>sources</u> for the group of indicators already mentioned:

1. Administrative or institutional registries.
2. Surveys for housing.
3. Population and Housing Censuses.

<u>Main problems in terms of availability, construction, and comparability per indicator</u>

i) Net enrolment ratio in primary education

- Time during the school year where information is compiled and which varies from the beginning of the school year (initial period of classes post-enrollment), midterm of school year and upon the end of school year.
- Educational systems where education subsidy is available based on the number of children attending school, there might be an over-reporting of the number of children actually enrolled, as non-effective enrollment is considered (students enrolled who do not attend afterwards).
- Also, there are certain reporting difficulties due to the fact that sometimes it is not possible to make all education units to report, at least on a timely manner.

- The problems above are due to the fact that in occasions estimation has to be undertaken for different zones, number of enrolled pupils, which might not be consistent with reality.

In order to compute the indicator it is necessary to build a denominator corresponding to the age group that ought to be enrolled in primary education (usually 6-11 years old.) This denominator also poses certain difficulties mainly derived from the fact that the most reliable information comes from censuses for population and housing. As in general, periodicity of this kind of census is every ten years; population projections need to be undertaken for simple years in periods between censuses. These projections (extrapolation from the last available census) might take into account several hypothesis for fertility, mortality and migratory movement; the further this information is from the census information, greater biases are produced, and these can be both by overestimation and underestimation depending on the status of the different countries.

Difficulties and problems in measuring enrolment and the determination of the denominator for this indicator render strict comparability in different moments in time for each country (reliability) difficult and, in consequence, among countries. Notwithstanding, the greater differences usually take place in the computation reported by each country when compared to reports from UNESCO. The latter are relative to:

- Use of different denominators to build the net enrolment rate as well as for the use of different assumptions (birth, mortality, migration) from National Statistical Offices and from UN Statistical Division (or from the UN Population Fund)
- Asynchronicity in adjustment and report of population projections
- Use of the concept of net enrolment rate, not necessarily adopted by the countries
- Report of enrolment rate following the official cycle of duration of primary schooling in the countries vs. duration of the cycle as per ICSED classification 1997, from UNESCO
- As the Unesco Institution of Statistics (UIS) produces estimations on the enrolment rate for absence, non-completion, or apparent lack of reliability of information reported by the countries

ii) Pupils entering grade 1 and reaching the last grade of primary schooling, and rate of completion of primary education

The most important weakness the indicator of *Completion of primary education* has (along with its validation problems to monitor the Goal, which includes pupils reaching the last grade of primary education albeit do not necessarily complete it) is the need of vast amounts of detailed information as per grade and age of pupils, and also the use of a number of assumptions which imply undertaking treatment of information on a case by case basis.

With regards to *rate of completion of primary education*, this indicator is considered as the most relevant for monitoring Goal 3. It is constructed from surveys of housing, thus it has certain advantages that had already been described. Notwithstanding, and due to the nature of the sources, there are certain difficulties both in terms of its comparability in between periods and its stability, as well as with national and international sources:

- These are survey-based sampling, thus each estimation has an associated level of error
- Countries can prefer to use sources different to those used by international organizations, or to use different periods for one individual year.

- Use of continuous surveys covering different school years adds bias in the probability of subjects upon completion of a specific number of years
- Monitoring considers one age group that has been able to complete the cycle considering lag due to late enrolment, repetition, drop-out, and re-enrolment; this means that performance of the education system is monitored during a period of time of approximately 10 years prior to the survey.
- For long-term following up, it is possible to use different alternatives such as the use of different cohorts within the same survey (e.g., comparison between 15-19 year olds and 25-29 year olds), or using cohort 15-19 year olds with surveys for different periods.
- Surveys do not include measuring of the exact age.
- Purging and imputation procedures of information from surveys and selection of cases might differ.
- Population framework of surveys can be adjusted from new information from censuses which, as there is lack of simultaneity in update of such among the different agencies and National statistical offices, might engender different estimations

iii) Literacy rate of 15-24 year-olds

Most difficulties present for the use of this indicator, beyond those already mentioned in the case of surveys, are associated with the concept of literacy used by each instrument, which might render comparability among countries difficult.

Also, and as the most prominent instrument of use is the census, availability of information for periods between censuses is low.

Unemployment for young people	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 45a: Unemployment rate of young people aged 15-24 years, (total)	24%	71%
Indicator 45b: Unemployment rate of young people aged 15-24 years, (men)	8%	71%
Indicator 45c: Unemployment rate of young people aged 15-24 years, (women)	8%	71%

iv) Unemployment rate for young people

Very similar to the case of indicators for education, indicators for unemployment rate for young people generally come from surveys for employment and surveys for housing, thus the nature of their problems is given by the particularities of these sources and their specific usage (periods for measurement, definitions of the indicator, etc.).

As this indicator is constructed from surveys for employment or other similar surveys, in general it has high availability both in terms of the number of countries which have the information, as well as with the analysis in between periods, with the exception of certain countries and territories in the Caribbean.

Main problems around this indicator are associated with the characteristics of the sources, i.e., the surveys. This generates a lack of comparability among countries, which sometimes produce comparison difficulties between periods due to methodological changes in measuring or design of samples, as well as divergence in national data available with international organizations. The main problems are:

- Alternative use by countries and agencies of surveys for employment or of any other type of surveys
- Use of different periods of the surveys
- Geographical limitation of the indicator
- In certain occasions, censuses for population are used which force the use of surveys during periods between censuses and, in certain occasions, undertaking projection
- In occasions, national reports refer to the rate of unemployment in individuals under 25 years old; this means that the lower limit is defined by the definition set by the country in terms of working age population
- Lastly, included among the most important difficulties is the definition of employed and unemployed used to build this and other related indicators. While measurement procedures for employment and unemployment are highly standardized, there are still certain different definitions at the moment of building the specific indicator

Conclusions and recommendations

The main difficulties of availability, comparability, and convergence of data resulting from the indicators already described (6, 7, 8, and 45) are related with the characteristics of the sources used. In general terms, problems can be summed up in:

a) Weakness of administrative registries,
b) Use of census projections for computation of some of the indicators
c) Diversity of sampling-based surveys and periods considered
d) Lack of unification for certain definitions (in particular, unemployment)
e) Combined use of sources for construction of time series
f) Lack of unification in procedures, sources, and correction among national statistical offices and international organizations

Recommendations:

1. Improvement of information collection procedures, which produce the administrative registries.
2. The problem of lack of information for periods in between censuses is virtually insurmountable. In that respect, it is recommended to agree that the projections are undertaken by one single organization (either from the country or from United Nations system.)
3. Unity of definitions and collection of procedures (duration of primary cycle, literacy, and unemployment.)
4. Unity in the use and treatment of surveys for employment, conditions of life, and income and expenditure at household level.
5. Increase in simultaneity or opportunity to report corrections applied to population projection, change of population framework of surveys, and other modifications applied to previously reported indicators
6. Finally, upon preparation of MDG reports, or any other report of similar nature, information modeled based on common metadata ought to be already available for those

responsible for the reports. This implies that the effort undertaken by national statistical offices to produce, in addition to the traditional indicators currently in use in the country, sets of indicators of unified and standardized character for international comparison purposes.

2.4 Gender[9]

Gender	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 9.1: Ratio of girls to boys in primary education	39%	92%
Indicator 9.2: Ratio of girls to boys in secondary education	39%	92%
Indicator 9.3: Ratio of girls to boys in tertiary education	21%	79%
Indicator 10: Ratio of literacy women to men, 15-24 years old	21%	8%
Indicator 11: Share of women in wage employment in the non-agricultural sector	26%	76%
Indicator 12: Proportion of seats held by women in a national parliament	42%	87%

Indicators corresponding to MDG 3, about promoting gender equality and empower women are generally computed and disseminated by international agencies to the countries for their usage and dissemination. Also, there is a growing trend concerning the amount of information reported by agencies through time.

Only certain countries produce and disseminate these data through MDG national reports, but when they do, they cover more periods (years) than the agencies, which are focused on the base year around 1990 and the years after 2000.

The evolution of the amount of observations reported in National reports is rather erratic for most countries, that is, there is no recorded trend to report more information in recent periods, as is the case with international agencies.

When data are reported by agencies and by countries for one individual indicator and during the same year, it is observed that such data frequently do not match.

In order to explain these discrepancies it is possible to address them from several standpoints considering general and specific aspects. General aspects include quality of data and/or method of computation, quality and coordination of respondents and quality of information sources, among others. From a more specific standpoint it is possible to observe the particularities each indicator has.

Below are certain general aspects, which are deemed important to undertake the analysis of discrepancies between national and international data:

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[9] This analysis is an extract from the analysis of Vivian Milosavljevic, from the Women Unit from ECLAC.

A frequent problem is that metadata is not standardized among organizations producing information and it is incomplete or poor. There is no manual of definitions available to be queried by users (which should be ideally available through the Internet), thus confirming the need of having a joint work among agencies as to provide this material and to have common criteria for definitions, methods of computation, and other relevant methodological and technical aspects.

In the case of people reporting data, the countries usually do not know who the producer of a specific indicator is. While the international agency might be using data reported by a given institution or even by an individual, those who prepare the National reports might not even be aware of the existence of that information or of the people responsible for the generation of that information.

On the other hand, a common practice is the use of different sources of information for the computation of indicators. For instance, most data regarding unemployment are sourced by household surveys from countries while figures for employment used by several countries come from specific employment surveys, which are periodically conducted during the year (e.g., every quarter), and thus both indicators do not match. It is estimated that a similar situation might take place in the case of censuses and surveys and administrative records.

Also, it is not infrequent that certain countries make the decision to undertake corrections to their databases –for instance, adjustments in sampling weights due to new information from censuses–, which are not always reported and/or updated by the agencies, thus causing discrepancies that otherwise would be easy to resolve.

Lastly and based on all the above, it becomes obvious that data reported by countries and provided to the agencies should be known subject of the National Statistical Offices (NSOs). Also, it is advisable that said agencies keep a record of the information reported as well as of relevant methodological and technical documents. Thus, NSOs should play a monitoring role with specific powers with respect to the coordination in data provision with the agencies, despite the fact that they are not the responsible entity for the generation of this information.

2.5 Ensure Environmental Sustainability [10]

Environment	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 25: Proportion of land area covered by forest	16%	100%
Indicator 26: Ratio of area protected to maintain biological diversity to surface area	18%	87%
Indicator 27: Energy use (Kg oil equivalent) per $1000 GDP (PPP)	18%	55%
Indicator 28a: Carbon dioxide emissions (CO2) per capita	16%	95%
Indicator 28b: Consumption of Ozone depleting (CFCs)	11%	87%
Indicator 30: Proportion of population with sustainable access to an improved water source	34%	0%
Indicator 30i: Proportion of population with sustainable access to an improved water source, urban	18%	0%
Indicator 30ii: Proportion of population with sustainable access to an improved water source, rural	18%	0%
Indicator 31: Proportion of population with sustainable access to improved sanitation	32%	0%
Indicator 31i: Proportion of population with sustainable access to improved sanitation, urban	21%	0%
Indicator 31ii: Proportion of population with sustainable access to improved sanitation, rural	21%	0%
Indicator 32: Slum-dwellers as ratio of urban population (access to secure tenure index)	8%	0%

A detailed diagnostic analysis was undertaken for missing data and discrepancies in this area, as well as to determine explanatory factors and lines of action, which were pending from the previous study.

In general, in the environmental component of the Millennium Goals, the central problem is not discrepancy in terms of values, but the prominent lack of information, that is, values missing for the indicators of MDG 7 in most national reports. Out of all indicators for MDG 7, those with the less amount of information are indicators 32, 29, 30, and 31, in order of magnitude.

While great heterogeneity can be observed among different countries, there is also certain advance achieved in the last decade based on the degree of progress of the environmental and statistical institutionalism, where the countries have developed greater or less capacity

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[10] Extracted from the analysis undertaken by Matías Holloway, Rayén Quiroga, and Kristina Taboulchanas from the Statistics and Economic Projections Division of ECLAC.

to produce and disseminate environmental and sustainable development indicators and statistics.

The second element that can be identified is the occasional character of observations included in the national reports. Values for different indicators are offered for one, two and, at best, three years. As in general these points of observations do not match those reported by the Millennium database, it is rather difficult to establish discrepancies for most indicators of MDG 7 in the great majority of the countries. In order to undertake a rather comprehensive analysis of the discrepancies, points of observation were used under criteria of proximity (approximately one to two years prior to or after the Millennium points which, i.e. 1990, 2000, and 2005).

The difference between observations reported by the Millennium database with those reported by national reports is remarkable. When considering all of indicators for MDG-7, the first source has many times more observations than the second.

Another key element associated with the statistical weakness of most national reports is revealed by the fact that the countries usually do not report neither the unit of measurement nor the source, nor the metadata for MDG-7 indicatos. Additionally, given the scarcity of national statistics, countries report MDG-7 indicators using (apparently inadvertently) names, definitions and units of measurement not consistent with international definitions (Millennium metadata), and in rare occasions report proxies for official indicators.

It should be noted as a fourth element that the countries in the region have usually not properly captured in their national reports the availability of official environmental indicators and statistics produced in the country, possibly due to the way in which the national reports were prepared and/or to lack of knowledge and coordination among institutions. ECLAC is aware of this availability for most indicators of MDG-7 through an effort of building environmental statistical capacities along with the countries of the region (via their relevant environmental and sectoral agencies and statistical offices), which has been the building block for the construction and update of the Database of Environmental Statistics and Indicators for Latin America and the Caribbean (BADEIMA), supplemented with information available in national official reports such as statistical compendiums and national sets of environmental and sustainable development indicators from recent years.

A fifth element is that the greatest gaps and discrepancies are observed in Caribbean countries and, in some cases, in Central American and Andean countries. As an illustration, 15 out of 34 countries (44%) report at least one indicator with values produced by specialized international agencies as part of their national reports. It should be mentioned that most countries in the Caribbean have not prepared MDG National reports, so this work considered indicators reported and included in the MDG Subregional Report for the Caribbean.

In terms of explanatory factors of missing information, the following reasoning is valid for most of the countries:

1. The relative novelty of the environmental issue prevents generation of the indicators and their constitutive variables with the appropriate periodicity and coverage. In general the countries prioritize the production of indicators that are relevant to their national policies and problems, which generally do not coincide with the official indicators for MDG 7.

2. Lack of experience of the personnel preparing national reports in the area of environmental and sustainable development indicators hinders the collection and analysis of information in the countries.
3. Lack of knowledge and inter-institutional coordination which is translated in the inability of national reports to capture the supply of environmental official data in the countries, nor has their preparation been strengthened by incorporating the ministries of environment and the NSOs.

The following are the factors that might explain the discrepancies

1. In most of the cases it is not possible to determine the discrepancies, as national reports lack complete metadata and rarely provide definitions or sources. Thus it is not possible to strictly establish that values reported are actually comparable, with few exceptions.
2. Lack of comparability, as there are also country reports that explicitly convey different indicators and *proxies.*
3. Differences in the definition of the indicators, which render variables forming indicators to differ in concept, possibly in the method of computation, and very often, in items compounding datasets, resulting in a difference of values for the indicators.
4. The lack of update in the values of indicators or different update timing for the series might generate different values for the indicators.

2.6 ICTs[11]

ICTs	Availability of data (3 or more observations)	
	In MDGs National reports	In Millennium database (UN)
Indicator 47: Telephone lines and cellular subscribers per 100 population	32%	0%
Indicator 48: Personal computers in use per 100 population	16%	74%
Indicator 48a: Internet users per 100 population	13%	92%

In the case of indicators referring to Information and Communication Technologies, the United Nations agency responsible for the preparation of these indicators is the International Telecommunication Union (ITU), which calculates them through the collection of administrative data from countries or based on estimates when these data are not available.

Under an optimum scenario, the ITU should be able to collect data from the same national sources feeding data for the preparation of the national reports for the follow up of MDGs. However certain divergences exist, either by the use of different sources or as a result from updating data in different periods of time, thus leading to time series composed by different data due to adjustments.

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[11] This analysis is extracted from the analysis of Valeria Jordán and Doris Olaya, ECLAC.

Section 3. Recommendations for the progressive construction of statistical convergence.

3.1 Statistical Convergence

Statistical convergence can be seen as a process where both statistical methodologies and works employed by different national institutions and international agencies result in the production of series and indicators whose values tend to be increasingly consistent.

Accordingly with the diagnostic of the main causes for the divergences in the values of MDGs indicators between national and international sources, there is no doubt that building statistical convergence is a middle- and long term process, progressive in nature. It implies a commitment of inter-institutional work and coordination, which gradually becomes routine, receives sufficient resources both in the national and international agencies domains, and is aimed to a common objective to which all parties involved contribute and from which they also benefit.

The statistical convergence process involves important institutional and technical challenges within a context of statistical development heterogeneity and diversity of thematic and statistical expertise in the many instances that are part thereof.

However, to have statistical convergence is mandatory given the need to monitor national policies and regional and international development initiatives and agreements, processes to which the countries of Latin America and the Caribbean are committed, not only in terms of a systematic monitoring, but also as to ultimately achieve specific goals and targets. Simultaneously, the international agencies of the system, which generally join in and provide technical support to these processes, also need to undertake analyses and create reports on the status of goals and targets, usually employing supranational scales.

3.2 Guidelines

The convergence process can leverage from being built considering a number of guidelines, which derive from statistical principles, from the creation of information systems within the context of the countries in the region, and also from good practices and similar regional experiences undertaken previously for specific areas such as poverty, distribution, education, health services, and environment.

These guidelines can be organized according to different criteria, albeit they can be stated in a first instance as follows:

i. Different and complementary expertise and competencies. Statistical works require a focus on articulation and coordination within an atmosphere of pre-existing processes and institutions, which entails creation of a collective approach based on cross-disciplinary and inter-institutional teams able to capitalize the best from each team member for the benefit of a common objective.

ii. Organization. The work performed by everyone cannot be converted into the work of no one, thus it is necessary to give a structure to and make viable a well organized inter-institutional approach, possibly by area units, yet using feedback procedures, an acknowledged decision-making process, established leadership and an appropriate work plan.

iii. Progressive approach for a middle- and long-term process. As this is a working process, which requires a large amount of time, consideration should be given to a strategic horizon aiming to more immediate tasks and goals. The process can be implemented in such a way that it generates intermediate results as to achieve sustained support to the initiative.

iv. Exerting influence on three areas of articulation simultaneously. Statistical convergence should involve both countries and agencies in a concurrent manner by focusing on a statistical articulation within the countries, within the UN system, and between countries and agencies.

v. Taking into account the interest of users and the needs of statistical producers. The work shall have greater support and sustainability once it takes into account contexts, timing, resources, potential aspects, and needs from both users and producers simultaneously.

Institutional elements that might contribute to the construction of statistical convergences in national and regional arenas are the creation of joint and organized work and coordination processes where different national and international institutions should take part, as they have resources, expertise (statistical or by area) and different yet complementary and equally valuable competencies.

3.3 Inter-institutional Coordination and Articulation Areas

From a different standpoint, it is possible to identify three major areas to build the statistical convergence. First, the development of Inter-institutional coordination as to strengthen statistical processes among different official institutions, both sectorial and by area; as well as the ones in charge of statistical control within the countries. Simultaneously, articulation between statistical processes among agencies and countries is required as it usually operates in separated spaces per area and with scarce coordination with the National Statistical Office. As a supplement to that, Inter-agency coordination and regional and global areas within the United Nations System (an element that can be a constitutional part of the guideline "one UN") should be worked upon as to statistically strengthen the organizations which work in the production and use of indicators for development, in particular, for MDGs along with the entities of statistical control organizations at regional and global scale.

These areas are explored in greater detail below.

3.3.1 Inter-institutional Coordination within the countries of Latin America and the Caribbean

Coordination among institutions that generate, compile, and use statistical information in the countries is a key element that might contribute to synergy in the usage of financial and

technical resources, which are scarce, in particular in areas covered by MDGs indicators. Institutional dispersion for the diverse issues covered by the Goals and indicators of the 9 Millennium goals render the construction process of inter-institutional cooperation a critical need and an unavoidable challenge.

As it has been observed, processes to create MDGs national reports have not in general been sufficiently bound to guidelines nor to official organizations producing statistics in the countries, with a prominent absence of NSOs participating in national reports and their the consequential loss of strength.

The manner in which policies and programs associated with the Millennium Goals are organized relies on the institutional and political context of each of the countries in the region. Equally, the role of statistical control is in general designated to NSOs, nevertheless the distribution of responsibilities for the production of official statistical in different areas pose great heterogeneity in the region. In the same manner, while the monitoring of social, gender, and environmental policies, to name some central aspects for the development, is declared as a priority in the countries in the region, national dynamics set a hierarchy on its relative importance and also explain the allocation of resources as to make possible the monitoring through time. There are elements in the Millennium Goals, which have gained certain legitimacy and fine-tuning along the decades, while others are rather emerging issues with clearly insufficient financial and technical resources.

However, beyond resources allocated to the statistical development and monitoring capacity of social and environmental aspects of development, the countries of Latin America and the Caribbean in general do not capitalize sufficiently on opportunities of inter-institutional coordination, which might be of assistance in capacity-building for monitoring of cross-cutting areas in a balanced and integral manner.

The practice of inter-institutional lack of coordination, which is one of the main contributing elements in the occurrence of statistical discrepancies in MDG indicators, can also be explained through a number of factors addressed below:

Obstacles to Statistical Inter-institutional coordination

a. Cultural dynamics based on lack of trust favor safeguarding of information as a value per se for corporate motives, for interest groups, and even for particular interests.

b. Insufficient political will and high-level agreements, which transform the inertia and favor the constant flow of statistical information in different areas, in particular in areas with greater political sensitivity

c. Insufficiency in human networks involving different areas to sustain political will in terms of exchange and shared use of data and metadata,

d. Insufficient statistical capacities and thematic expertise of the statistical organizations of the countries, or reciprocal attitudes reflecting lack of trust or contempt between both groups

e. Lack of legitimacy and explicit validation of both the interests of statistical information users and the needs of statistical information producers

Good practices for Statistical Coordination

It is also possible to find in the region, due to necessity or wit, good teachings on how to make progress in overcoming such type of obstacles to cooperation among institutions and organizational levels. In the regional experience regarding the construction of inter-institutional platforms for collaboration to achieve statistical development in cross-cutting areas, the role of the National Statistical Office is prominent, along with the functional political areas where essential statistical series are produced and used, and where also MDGs national reports and other periodic reports for conventions and regional or international agencies are produced. Thus, NSOs, ministries, offices and sectorial secretariats (i.e. Planning, Social Agenda or Affaires, Gender or Women studies, Energy and Environment, Agriculture, Telecommunications, Infrastructure, Children, Health) can work together towards a common objective, which is the joint production of selected statistical series and indicators to which all contributing parties and other users have unlimited access. Construction of this type of arrangements might entail certain investment in terms of time and resources, but as in any given investment, it starts rendering benefits and generating shared future savings with respect to time, allocation of tasks and risk of errors, among others.

In this regard, the MDGs pose both a challenge and a valuable opportunity to strive in the development of inter-institutional cooperation, particularly in the area of statistics and indicators. Such coordination ought to involve at an early stage both policymakers and technical parties, whose actions supplement each other.

As in any initiative of capacity building for monitoring in crosscutting areas, the institutions called to be part of these coordination efforts among institutions would be determined by the areas where constitutive variables of indicators and targets are captured to monitor a specific national policy. Nevertheless, these processes are naturally strengthened with the participation, expertise, and statistical skills contributed by NSOs as to produce statistical data bases and MDG indicators with better quality and with appropriate description (metadata), which are the essential inputs to analyze advances and adjust interventions.

As per regional experience, it would be advisable to organize inter-institutional coordination processes by explaining each issue area, functions, contribution, and common responsibilities, albeit differentiated and led by a specific institution, thus to generate a statistical convergence table for issues such as Poverty, another one for Health, Gender, Environment, etc.

As a positive externality, it can be stated that this joint construction process of statistical information among different entities can perfectly transcend the need of monitoring MDGs in a given country, as this information can become a set of pilot experiences allowing progress in the process to encompass other needs in terms of inter-institutional coordination to ensure the opportunity and quality in the flow of statistical series among information producers, compilers, and users both within an individual country and outside thereof.

3.3.2 Coordination between Countries and Agencies

An unavoidable priority is to establish coordination mechanisms that are more appropriate among the institutions that are responsible for the production and use of statistics in the different thematic areas addressed by MDGs in every individual country as well as with international agencies that follow-up and produce or compile indicators corresponding to those issues.

As it has been already presented, there is insufficient statistical coordination among different sectorial institutions of the country and specialized agencies within the system. Agencies usually need to adjust and estimate data, or lack of data, from countries with a relatively lower degree of statistical development as to be able to conduct supranational analysis of specific objectives, among other objectives, as to extend the coverage and data comparability within a specific sub region, within an entire region, or even globally. As a counterpart, countries with higher relative development in the field of statistics are affected by the inconsistency between this processed data and the information officially reported by the countries. Countries with less statistical development usually question the methodology and production approach used in their own estimation of indicators, and sometimes need to use these regional or international sources.

Increasingly, agencies in the system, in particular its regional offices and economic commissions, build up a close and productive relationship with their national institutional counterparts. Nevertheless, methodologies and data series are exchanged with different national official entities, thus generating duplication of efforts, and usually without the participation of the national or international statistical entity, and even without properly reporting to the NSO, hence producing information which is not described nor validated, and which is usually inconsistent.

The following examples might illustrate the above mentioned.   Data collection undertaken by international and regional organizations: certain UN system agencies undertake periodic statistical surveys on their core area (DENU, FAO, UNICEF, PAHO, Agency for Energy, etc.) being the national counterpart the National Statistical Office and/or the relevant sectorial ministry. As it is known, agencies ultimately validate, adjust, and report these statistical series, albeit generally this is done in a partial, differed manner and with insufficient description (metadata). Such an enormous effort which implies a considerable amount of technical and human resources, needs to be capitalized to capture the feedback effort from national official statistical data bases on the issue, and naturally, to use this data for international reports and, in particular, in MDGs national reports. One way to make this process operational is that files or matrices where statistical series are stored and shared with the specialized regional or international organization, are reported along with the corresponding metadata and that they are made available, or even published for other interested users in a timely manner.

Integrating the NSOs in a statistical focal point or coordinating role between international agencies, producers of statistical information of the individual country, and the agencies in charge of the preparation of the MDG national reports, can only improve the statistical quality of this and other reports. In this process of institutional strengthening, the National Statistical Offices can provide statistical expertise, standards and technical capacities, which are the core of their mission within each individual country. Thus, they can play a key role coordinating producers and compilers of national statistics, statistical and specialized international organizations, particularly during collection processes of specialized themes, and in the strengthening the United Nations Millennium data base.

3.3.3 Statistical Coordination among International agencies

It is also necessary to make progress in the coordination among the international agencies of the system, for which the current initiative "one UN" is timely and appropriate. As concluded form the previous analysis, the lack of coordination among the different agencies of the

system, each of which operates with a thematic rationale within one individual territory, has generated a wide consensus about combined effectiveness as well as achieving a more efficient use of resources.

The same situation found at the country level, also holds true for agencies in the system, where agencies as users of statistics and databases collect data and exchange statistical information without establishing mechanisms for sharing the information with all relevant national agencies, particulary with the NSO, loosing capitalization opportunities for the statistical interests of the countries.

Such situation implies a number of challenges, particularly coordination based on specific issues and also with respect to territories served by these different agencies. For instance, FAO worldwide routinely develops a statistical production in the areas of land, forest, water, fisheries (among others), thus producing conceptualization, metadata, and databases, which are deemed the international reference for those areas.

One idea is that entities working in central substantial and statistical functions globally can o focus their efforts on those countries where closer regional references are not available as well as in regions with good technical capacities installed, and that these international agencies can perform their work in part through other regional bodies such as regional commissions. Such is the case for Latin America with its tradition and statistical capacities installed at ECLAC.

The discussion on how to make progress on this matter ought to be part of a conversation with agencies and countries as to make progress in an agenda for action in future years.

Meanwhile, a number of initiatives and good practices for coordination among agencies and countries are currently taking place in the region (and globally) for specific themes, which are worth considering as part of a regional statistical convergence program for the Millennium indicators. To mention a few, CELADE (Latin American and Caribbean Demographic Centre) is currently undertaking a program towards harmonization of inter-census demographic estimation methodologies; on the other hand the Rio Group is organized to work jointly on methodologies for poverty which is a good example of good practices among the countries along with ECLAC. Also, an appropriate methodology of working together towards improving statistical capacities, building a network of institutions and experts in social and environmental issues were developed in the region (ECLAC and countries´ project and network REDESA, as per the Spanish acronym) which counted with collaboration of international agencies and still continues unfolding. Likewise, there is a joint work agreement between ECLAC and the regional office of UNEP in the development of environmental indicators and statistics along with the countries in the region. As a whole, the Statistical Division of ECLAC has developed an ongoing coordination with the UN Statistical Division in NY. Furthermore, the Millennium group of ECA should also be mentioned in MDGs with a secretary office in the Statistical Division of ECLAC, which is also another good example of coordination works among agencies and countries for statistics for the Millennium indicators, as well as the inter-agency group and experts of Millennium indicators working globally.

3.4 Tools

From the previous analysis it is possible to extract the main instruments that can be constructed as to develop a regional process for statistical convergence viable.

i.   Spaces for dialogue and interchange
ii.   Catalogue of best practices (including developing statistical annex to each MDG National Report)
iii.   Common methodologies for the different issues
iv.   Common Metadata
v.   Technical capacity building
vi.   Organization (common, albeit differentiated tasks)
vii. National inter-institutional committees with clear leadership
viii. Focal points in countries and agencies
ix.   MDG regional plan for statistical convergence, articulated with pre-existing entities coordinating countries and agencies as well as inter-agency work.
x.   Publication of data bases at ECLAC's Millennium site containing the information of MDG National Reports.

3.5 Pre-Requisites

1. Political will

A clear requisite to make progress in the tasks of statistical convergence, developing commitment of the plurality of stakeholders at the national, regional, and international level and within a region which presents strong statistical heterogeneities, is the essential political will. This is crucial also as an initial boost, as it would be necessary to undertake an important initial effort to break inertia and direct statistical components of programs, projects, and national, regional and international initiatives toward the proposed objective of statistical progressive convergence.

2. Financial and Technical resources

In order to carry out these functions in an appropriate manner, additional resources for NSOs ought to be available in terms of training and staffing, as MDGs issues are cross-cutting and complex, and naturally require an ongoing effort to continue building and strengthening inter-institutional and statistical capacities in the countries of the region, as it has been the case in recent years by the means of regional projects of this nature.

Also, it is necessary to have resources available at regional level as to be able to fund a statistical convergence programs for MDGs, which can be undertaken with stakeholders, in the magnitude required in the region.

3. Acknowledgement of statistical competencies and contribution potential represented by specialized statistical entities

Most relevant:

a) Acknowledgement and capitalization of the contribution potential of NSO in regard to statistical expertise, best practices and quality assurance, which can be useful for national reporting on MDGs as well as for other reports related to national or international agreements and commitments .

b) Acknowledgment and capitalization of the statistical normative and methodological contribution of the statistical divisions of the UN and of the regional commissions, as well as

of their potential contribution to statistical quality of the production of the UN specialized bodies and for the NSOs.

Statistical organizations of the countries, regions, and the UNSD should not aim to monopolize direct data collection and dissemination nation or worldwide, and for all themes. The fact of the matter is that other agencies and entities work in the production of statistics for specialized and emerging issues, usually in coordination with the UNSD. Nevertheless, statistical divisions and organizations can and should contribute producing and disseminating internationally validated methodologies and standards, strengthening methodological development and capacity building for other agencies in the system, for other statistical producing entities as well as for the countries.

In this regard, the UN Statistical Division and its two homologous Statistical and Economics Projections Division (DEYPE) and CELADE of ECLAC, are in the position to sustainable delivering capacity building and technical assistance to the countries NSOs, as well as collecting and producing statistical series and indicators from a regional perspective. They could also play a critical role in coordinating the efforts among the national and global level.

3.6 Short term Actions

The following are some concrete actions to advance in the inter-institutional coordination process, which imply a different level of institutional commitment and which usually can be undertaken simultaneously, considering the context and statistical development of the country:

a) Report of official databases created and used in the monitoring process and preparation of National reports by organizations preparing the National Report.

b) Partnership participation of NSOs in the preparation process of MDG National reports, ideally by playing a statistical regulatory role

c) Submitting copies or report to NSOs every time collection of data or calculation of indicators is conducted for regional or international organizations by sectorial ministries or entities.

d) Creation of round tables, platforms or inter-institutional permanent committees of official statistics for specific thematic areas, which might first meet MDG needs, albeit can be more comprehensive and cross-cutting to be used in the agenda for environmental and social policies of the countries.

e) Creation of a Regional Plan for Statistical Convergence as to work in a progressive and articulated manner, considering different MDG themes, and the heterogeneity of scales and institutional arrays.

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