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**DEVELOPMENT OF NATIONAL STATISTICAL SYSTEMS AND THE  
RESPONSIBILITIES OF NATIONAL STATISTICAL OFFICES**

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## INTRODUCTION

To carry out its mandate following the second meeting of the Statistical Conference of the Americas of ECLAC, the Executive Committee of the Conference held two meetings in 2004: one in Santiago, Chile, on 24 and 25 May, and the other in Dallas, United States, on 30 November and 1 December. The meetings reviewed the Programme of International Statistical Work for Latin America and the Caribbean, July 2003-June 2005, and agreed to lay the foundations for a more long-term plan of action, with the aim of building up the institutional and operational capacity of national statistical offices (NSOs) and national statistical systems, in addition to strengthening the guiding role of the Statistical Conference of the Americas.

The Chairperson of the Executive Committee of the Statistical Conference of the Americas presented a document (LC/L.2215) entitled Reflections on the Meeting of the Statistical Conference of the Americas of the Economic Commission for Latin America and the Caribbean. There ensued a round-table discussion during which participants adopted the proposal to produce a guideline document to respond to countries' needs. For that purpose, they agreed to set up working groups composed of representatives of the countries and of multilateral agencies to work on the following topics: (i) legal and institutional aspects, including questions of financing and budgeting, as well as coordination of national statistical systems; (ii) development of statistical capacity with long-run targets in terms of production, quality and dissemination of statistics, using a step-by-step approach to achieve those targets; (iii) training and human resources management policies; (iv) modernization of the management processes of national institutes of statistics, in order to make the best possible use of resources; (v) relationships between producers and users of statistics in general; and (vi) strengthening international cooperation.

To support such efforts, participants also agreed that, during the third meeting of the Conference (at the beginning of June 2005), member countries would be presented with three documents on substantive issues. The National Institute of Statistics, Geography and Information (INEGI) of Mexico was tasked with preparing one such document, namely the present report on the development of national statistical systems and the responsibilities of national statistical offices.

With a view to producing this document, INEGI designed and sent out the survey on statistical matters in member countries of the Statistical Conference of the Americas, which was approved and enhanced by the members of the Executive Committee. The Chairperson of the Committee and ECLAC were directly involved in promoting the project, the results of which are outlined below:

### 1. Field of study

A medium- and long-term statistics development programme for countries in the Americas should be based on a complete and exhaustive evaluation of the technical characteristics; organizational, human and material infrastructure; and budget resources of the institutes responsible for carrying out censuses and national surveys. This should be accompanied by an analysis how these and other offices that generate information work together to produce the statistics required by society in an organized way, and an examination of how the system formed by such offices fits in with wider schemes such as the legal system, socioeconomic planning or international recommendations in the field of statistics.

By way of contribution to this analysis, the survey on statistical matters in member countries of the Statistical Conference of the Americas was carried out between January and March 2005. ECLAC

sent out the questionnaires and manuals by e-mail to the region's 36 member countries, of which only 13 replied. The survey respondents were executive staff members designated by the chiefs of national statistical institutes and offices, who subsequently validated the information provided.<sup>1</sup>

The subjects of the questions were:

- *Planning and statistical information.* Countries were asked whether they carry out a systematic development planning process and whether the generation of statistical information plays a decisive role in such a process (could be reflected in a master plan for such matters).
- *Legal framework.* The aim was to find out the extent to which the generation of statistical information and the relationships among the information units, and between units and users/respondents, are regulated and supported by legal provisions.
- *National statistical system.* Outline of a national statistical system, within which all units that generate information play their part and complement each other's work through exchanges of information, standards and infrastructure that are determined by the prevailing legal system, the socioeconomic planning process and international recommendations.
- *National statistical office.* Description of the administrative units responsible for generating the main national statistics or, where applicable, running the statistical system; their main products; adherence to international recommendations; and available resources.
- *International cooperation.* In this final section, countries were asked about their participation (either requesting or providing assistance) in cooperation programmes set up by the international community; their needs for support; and their recommendations on how these needs could be included in the Programme of Work of the Conference.

The table in the annex lists the 36 countries that received the questionnaire and indicates which 13 have replied.<sup>2</sup> The countries that replied are home to 79.9% of the region's population (443 million people out of a total 560 million). Seven of the ten most highly populated countries in the region sent in replies to the survey.

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<sup>1</sup> This analysis should be supplemented by the information provided by other regional studies, such as: ECLAC, "*El avance en la implementación del sistema de cuentas nacionales 1993 en América Latina y el Caribe, 2002-2003*", Santiago, Chile, 11 June 2003 [Spanish only]; "*Termómetro de las estadísticas de medio ambiente en América Latina y el Caribe*" (DDR/2), Santiago, Chile, INEGI/National Statistics Institute of Chile, 22 May 2002 [Spanish only]; "*Tenth Anniversary of Fundamental Principles of Official Statistics: Global review of the implementation of the Fundamental Principles of Official Statistics*" (DDR/6), Santiago, Chile, United Nations Statistical Commission, June 2002; and the following two documents on substantive issues to be presented to the meeting of the Conference: "*Survey on statistical education and training in the member States of ECLAC*" (LC/L.2317(CEA.2005/7)); and "*Follow-up to the Millennium Development Goals: opportunities and challenges for national statistical systems*" (LC/L.2319(CEA.2005/9)).

<sup>2</sup> Thirteen replies had been received by 1 June 2005. Updated information on replies received after that date will be presented at the third meeting of the Conference.

## **2. Planning and statistical information**

Planning as a means of organizing public affairs is not common practice. Only nine of the thirteen national offices that replied to the questionnaire reported a systematic planning process that resulted in a National Development Plan. Four of these nine countries (Bolivarian Republic of Venezuela, Brazil, El Salvador and Uruguay) explicitly assign a crucial role to statistical information in the design, implementation and/or assessment of sectoral or regional programmes. A general mention is made in two of the nine countries (Guatemala and Mexico) and there is no specific reference to such a role in the remaining three.

Formulating specific statistics programmes linked with development plans and programmes seems to be an uncommon or relatively new practice, given that only five countries (Bolivarian Republic of Venezuela, Chile, Guatemala, Mexico and Uruguay) report having such a programme to organize the work of the units that generate information. The vast majority of such programmes are new, and Chile is the only country that reports using this practice for some time (over 10 years).

Most of these medium-term statistics programmes identify the strategic projects to be implemented and the units responsible for their implementation. In Guatemala, the statistics programme identified only the projects.

## **3. Legal framework**

All of the region's countries that replied to the questionnaire reported that their statistical work has a legal framework, although these differ in terms of scope and content.

Each of the 13 countries that provided information has a legal system (political constitution or law) that governs statistical activity. In nine countries, this legal system covers the entire national statistical system, in three countries its scope is limited to the national statistical institute and one country did not specify. In most cases, any relevant legislation is national in scope, and only Mexico reported specific provisions for particular sectors and geographical areas.

In terms of content, the legal frameworks of the 13 countries all make specific reference to the rights and obligations of reporting agencies or individuals, 12 refer to a national statistical system, 11 list the responsibilities of units that generate information, 10 make mention of how units that generate information should be organized, 8 identify the various elements involved in generating statistical information, 7 specify the terms in which information should be disseminated, (only) 5 directly refer to methodologies for producing statistics and 3 mention thematic priorities.

## **4. National statistical system**

All countries have various administrative units that generate information; their scope is mostly limited to the programme or institutional/geographical area to which they belong. However, such units are not always linked by a legal, programmatic or functional system that organizes and supplements them to ensure that they meet users' needs, i.e. that they act as a statistical system.

Out of the 13 national statistical offices that replied to the questionnaire, only 6 reported a statistical system operating in their country: Argentina, Bolivarian Republic of Venezuela, Chile,

Guatemala, Peru and Uruguay. Four countries (Brazil, Costa Rica, Mexico and Panama) have only a partially operational system, while the remaining three report no statistical system as such, which implies that all administrative units (including national statistical offices) are responsible for generating their own information, in the absence of any significant links between individual entities.

In the 10 countries that have one, statistical systems operate in a decentralized way, with the national statistical offices acting as coordination units. Brazil is the only country to have a centralized system.

Only five countries (Bolivarian Republic of Venezuela, Chile, Mexico, Peru and Uruguay) have a national consultative body for statistical matters to assist national offices in their work in general or in operating the statistical system. The national consultative bodies of all five countries include government representatives. Chile and Peru are the only countries whose consultative bodies include representatives from the academic, private and social sectors. These countries plus Panama also have consultative mechanisms at the sectoral level, and only the Bolivarian Republic of Venezuela, Mexico and Peru have set up such a mechanism at the provincial level.

In addition to the national statistical offices, other entities most commonly recognized as generators of statistical information are: central banks (mentioned by 11 countries); education and health ministries (each mentioned by 8 countries); agriculture finance or planning ministries (mentioned by 4 countries). Special mention should be made of Peru, where the entities that generate the most information include four private institutions.

Central banks are mainly responsible for producing financial and monetary statistics: balance of payments, consumer price index, foreign trade and national accounts. These particular statistics are produced by national statistical offices in only three of the countries that replied to the questionnaire: Bolivia, Mexico and Panama.

Education and health statistics are mainly based on administrative records of the relevant ministries and refer to the people who use their services and to the resources they have available, with some inclusion of survey results.

Out of the 13 countries that provided information, nine reported having a statistics production calendar, while there was no such schedule in the other four (Bolivarian Republic of Venezuela, Bolivia, Dominica and El Salvador).

## **5. National statistical offices**

With the exception of the Bolivarian Republic of Venezuela (whose National Statistical Institute does not consider itself the main repository of statistics) the national statistical offices of all respondent countries is the main statistical repository. Seven national statistical offices come under a finance or economics ministry or equivalent, two are directly answerable to the Executive Branch (Brazil and Uruguay), two are independent Chile and Costa Rica) and one (Guatemala) is a semi-independent agency.

The organizational structure of most national statistical offices includes provincial or state offices to assist with data compilation. The countries with the highest number of provincial/state offices are Mexico (with 32), Brazil (27), Bolivarian Republic of Venezuela (24), Peru (23) and El Salvador (22). Four countries also have regional offices: Chile (12), Mexico (10), and Bolivia and El Salvador (8).

In terms of the functions of the national statistical offices, the common denominators are producing basic statistics and indicators and representing the country in international statistics forums. Second, 12 of the 13 offices act as coordinator between the units that generate information (except Costa Rica), provide technical assistance (except Guatemala) and monitor statistical programmes (except in El Salvador); 11 offices integrate information generated by other entities; 9 issue guidelines on the production, integration and dissemination of integration; and only 4 are involved in allocating financial resources to other agencies that generate information (Bolivia, Chile, Dominica and Panama).

Generally speaking, all of the region's national statistical offices state that they apply the Fundamental Principles of Official Statistics established by the United Nations, although the extent of such observance varies. The most consistently applied principle (on a scale of 1 to 5) was confidentiality, with an average of 4.9 points, followed by the correct application of statistical sources (4.7); accountability and transparency (4.6); and prevention of misuse (4.5). At the other extreme, the least well observed principles were use of international standards (3.8) and national coordination (4.3).

National statistical offices are responsible for a wide range of statistical activities. In general terms, all agencies carry out population and housing censuses, although not always as regularly as advised in international recommendations. National offices carry out fewer economic and agricultural censuses, either because they do not always come under NSOs' area of responsibility (as is the case for economic censuses in Dominica and Guatemala, and agricultural surveys in Uruguay) or because such surveys are often not carried with any specified frequency.

All national offices carry out household surveys, with the main subjects being employment, standard of living and income, and demographic dynamics. Four countries did not specify the headings used, and two countries (Costa Rica and El Salvador) described their surveys as multipurpose.

Generating statistics from sectoral administrative records is not a widespread practice among national statistical offices, which implies that statistics are generated within the units that compile the records.

Eight of the thirteen NSOs generate vital statistics: four use health records, three consult educational records, three refer to legal records and several offices also cover subjects such as social security, wages, vehicle numbers, etc. The national offices in the Bolivarian Republic of Venezuela, Peru and Uruguay do not make use of any demographic or social records.

The situation is similar for administrative records on economic issues, in which the most commonly used information refers to fiscal matters, foreign trade, tourism, transport and agricultural transactions. Five NSOs did not report any link with this type of statistics.

The region's NSOs generate relatively few statistics on natural resources and the environment; science and technology; and information and communication technologies (ICTs). Only Bolivia, Brazil, Dominica, Guatemala and Mexico report regularly producing information on natural resources and the environment either through the interpretation of geographical information or administrative records, while the national offices in Chile and Peru incorporate relevant information from other departments into a yearbook.

Only four countries (Brazil, Mexico, Panama and Uruguay) deal with science and technology statistics, and their coverage is limited to information on innovation and scientific research and, to a lesser extent, technological development.

As for ICTs, only five countries generate statistics on these technologies by surveying households (Costa Rica, Mexico, Panama and Peru) or businesses (Chile and Mexico). Mexico also collects information from universities and government departments.

Generally speaking, all of the region's national statistical offices claim to use the methodologies established by the United Nations for the generation of statistics, especially for population and housing censuses, household surveys and national accounts, where the average application score (on a scale of 1 to 5) was 4.75 points. The recommendations were the least adhered to in social and economic administrative records, which both had an average of 4.1 points.

Ten of the thirteen offices that replied to the questionnaire report the existence of regular communication mechanisms with the main users of statistical information, with the most common being direct consultation (eight NSOs), opinion polls (used in two countries) and questionnaires sent out with the statistical products themselves.

In terms of the number of people working in the national statistical offices, there is a huge variety among countries. The offices in the region's two most highly populated countries, Mexico and Brazil, have workforces of 17,000 and 7,000, respectively. It should, however, be borne in mind that both offices are also responsible for geographical work in addition to statistical activities.<sup>3</sup> The 10 other offices that provided information on staffing levels have fewer than 900 workers. The countries with the smallest populations (Dominica, Uruguay and Costa Rica) also had lowest numbers of posts, with 13, 140 and 166 workers respectively.

The offices that report the best professional profile (proportion of managers to total staff) are Brazil with 30.2%, Uruguay with 22.1% and Guatemala con 16.5%. At the other extreme are the Bolivarian Republic of Venezuela, Panama and Costa Rica, where managers only account for 5.9%, 10.0% and 10.2% of staff, respectively.

All of the region's national statistical offices finance their activities with governmental fiscal resources, most of which are used to pay the wages of permanent and temporary staff. There are, however, significant differences between countries: Guatemala and Peru allocate 56% and 61% of their budgets to pay wages, whereas Bolivia and Brazil allocate 89% and 91% respectively.

Eight national offices reported having additional resources for their budget: five obtained funds through the sale of products and services, three from external sources and four by other means.

## **6. International cooperation**

Cooperation and exchange in statistical matters is common among the region's national statistical offices. Such activities were reported by 11 national offices that were involved in either technical assistance or training. Seven offices reported receiving some form of financial support.

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<sup>3</sup> In Mexico, 9,914 (57.1%) of the 17,357 INEGI employees work on generating statistics.

The United Nations is often involved through its various agencies, particularly the United Nations Population Fund (UNFPA) (mentioned by seven countries); ECLAC (six countries); the United Nations Development Programme (UNDP) (four countries); the United Nations Statistics Division, the Food and Agriculture Organization (FAO) and the International Labour Organization (ILO) (each mentioned by two countries); and the United Nations Development Fund for Women (UNIFEM) and the World Food Programme (WFP), with one mention each.

Other international organizations with some level of involvement include the World Bank (in five of the eleven countries that provided information on this aspect); the International Monetary Fund (IMF) and the Inter-American Development Bank (IDB) (each mentioned by four countries); PARIS21 (in two countries); and the Organisation for Economic Co-operation and Development (OECD), the Organization of American States (OAS) and the European Union (EU), with one mention each.

Bilateral cooperation is carried out through institutions in countries such as Spain (mainly the National Institute of Statistics (INE), the Spanish Agency for International Cooperation (AECI) and the International and Ibero-American Foundation of Public Administration and Policies (FIIAPP)), the United States (Bureau of the Census and the United States Agency for International Development (USAID)), all mentioned by six national agencies; Canada (Statistics Canada (SC) and the Canadian International Development Agency (CIDA)), Sweden (International Swedish International Development Agency (SIDA)), all mentioned by three agencies; France (National Institute of Statistics and Economic Studies (INSEE)), Japan (Japan International Cooperation Agency (JICA)) and Mexico (INEGI), all mentioned by two agencies; and Brazil, Colombia, Germany, Italy, the Netherlands and the United Kingdom, all with one mention.

The main forms of cooperation provided are training and technical assistance, followed by financing and equipment. The most commonly cited projects or activities are the Programme for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean (MECOVI), the carrying out or planning of population censuses, Millennium Development Goals, the International Comparison Programme, the Network of Institutions and Experts on Social and Environmental Statistics (REDESA), information on poverty and national accounts.

All of the 12 national statistical offices that replied to this section of the questionnaire said they required international cooperation in statistical matters; ten of the twelve requested financial aid, nine expressed an interest in training and nine in technical assistance.

Only four of the countries that replied to this section reported also providing international cooperation in statistical matters: Brazil, Chile, Mexico and Peru. In the case of Brazil, the Geographical and Statistical Institute provides technical cooperation and training to the statistics institutes of Angola, Guinea-Bissau, Mozambique, São Tome and Príncipe and Cape Verde. In Chile, the National Statistics Institute has provided assistance (in conjunction with IDB, the World Bank and UNFPA) to Costa Rica and Honduras (to strengthen their statistical systems) and to Ecuador and Colombia (in planning and carrying out population censuses). In Mexico, INEGI has organized internships at its headquarters and provided technical assistance to Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica and Nicaragua. Lastly, the National Institute of Statistics and Informatics (INEI) in Peru has provided technical assistance to its counterparts in Bolivia, Paraguay, Honduras and Panama.

Eleven national offices claim to be able to share their experience with other countries in the region (with the exception of Guatemala). Nine offices could provide assistance in the form of training, while none of the NSOs offered funding.

***Proposed items for discussion at the Statistical Conference of the Americas***

The final question put to national statistical offices was about issues for discussion at the meetings of the Statistical Conference of the Americas. The replies were varied and included aspects relating to how national statistics systems were organized, strengthening of national agencies and attempts to identify funding mechanisms for their programmes (Bolivarian Republic of Venezuela, Bolivia, Brazil, Chile, Costa Rica, Mexico and Peru); boosting specific programmes on sociodemographic surveys in households (Costa Rica, Guatemala and Peru), economic surveys in businesses (Costa Rica), surveys on vital statistics (Mexico and Panama), methods for statistical georeferencing (Mexico) and quantifying and characterizing emerging themes such as violence, poverty, values, governance, etc. In addition, there was a general consensus on the need to increase the technical skills of the staff working in national statistical offices.

## Annex

**TOTAL POPULATION OF MEMBER AND ASSOCIATE COUNTRIES OF THE STATISTICAL  
CONFERENCE OF THE AMERICAS OF ECLAC**

Country	Population 2005 <sup>a</sup> (Thousands)	Replied to questionnaire <sup>b</sup>
Brazil	186 405	x
Mexico	107 029	x
Colombia	45 600	
Argentina	38 747	x
Peru	27 968	x
Venezuela (Bolivarian Republic of)	26 749	x
Chile	16 295	x
Ecuador	13 228	
Guatemala	12 599	x
Cuba	11 269	
Bolivia	9 182	x
Dominican Republic	8 895	
Haiti	8 528	
Honduras	7 205	
El Salvador	6 881	x
Paraguay	6 158	
Nicaragua	5 487	
Costa Rica	4 327	x
Puerto Rico	3 955	
Uruguay	3 463	x
Panama	3 232	x
Jamaica	2 651	
Trinidad and Tobago	1 305	
Guyana	751	
Suriname	449	
Bahamas	323	
Barbados	270	
Belize	270	
Netherlands Antilles	183	
Saint Lucia	161	
Saint Vincent and the Grenadines	119	
Grenada	103	
Aruba	99	
Antigua and Barbuda	81	
Dominica	79	
Saint Kitts and Nevis	43	
Total	560 089	36 countries
Replied to questionnaire	442 956	13 countries
Participation	79.09%	36.11%

**Source:** United Nations, World Population Prospects: The 2004 Revision Population Data Base [online] <http://esa.un.org/unpp> and World Urbanization Prospects: The 2003 Revision Population Database [online] <http://esa.un.org/unup>.

<sup>a</sup> The data presented correspond to a world population projection carried out by the United Nations in the 2004 version of the population database, *World Population Prospects*.

<sup>b</sup> Replies were received from Cuba, the Dominican Republic and Nicaragua after the present summary had been produced. Updated results will be presented to the third meeting of the Statistical Conference of the Americas.