STATISTICAL AND GEOGRAPHICAL INFORMATION QUALITY ASSURANCE NORM

GENERAL DIRECTORATE FOR INTEGRATION, ANALYSIS AND RESEARCH

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1 This document is an unofficial translation in English of the Norma para el aseguramiento de la calidad de la información estadística y geográfica del Instituto Nacional de Estadística y Geografía available at http://sc.inegi.org.mx/repositorioNormateca/NCA09Feb15.pdf
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Considering

That Section B of Article 26 of the Political Constitution of the United Mexican States establishes that the State shall have a National Statistical and Geographical Information System (System), whose data shall be considered official and shall be of mandatory use for the Federation, states, Distrito Federal and municipalities, and that the System shall be governed by the principles of information accessibility, transparency, objectivity and independence;

That the National Statistical and Geographical Information System Law (LSNIEG) establishes that the National Institute of Statistics and Geography, as a public body with technical and management autonomy, legal personality and its own assets, has the responsibility to regulate and coordinate the National Statistical and Geographical Information System, considering national and international standards, as well as best practices in this area;

That the National Statistical and Geographical Information System Law, in Article 3, establishes that the System has the purpose of providing society and the State with quality, relevant, accurate and reliable and timely information, under the principles of accessibility, transparency, objectivity and independence, in order to contribute to national development;

That the Institute shall analyze and adapt to the national needs, the recommendations issued by International Organizations for the generation, production, integration and dissemination of statistical and geographical information;

That Mexico, at the request of the Institute, co-sponsored the adoption of the Fundamental Principles of Official Statistics by the United Nations General Assembly;

That the Institute shall invite International Organizations to review and comment on the methodology used to generate the information, including those that it applies, when there is a request of the Executive Committees;

That an Integrated System of Quality Assurance of the processes of production, integration and dissemination of Statistical and Geographical Information shall consider the best international practices developed and implemented by International Organizations of recognized prestige, such as: United Nations Statistical Commission, Organization for Economic Cooperation and Development, International Monetary Fund, Eurostat, the United Nations Economic Commission for Europe, the Economic Commission for Latin America and the Caribbean and the International Organization for Standardization (ISO);

That these International Organizations have developed norms, guidelines, systems, procedures and tools that have proved their effectiveness for quality assurance in the production, integration and dissemination of statistical and geographical information, showing important advances in this area;

That the Matrix for a Generic National Quality Assurance Framework, developed by the United Nations Expert Group on national quality assurance frameworks, represents the main tool for standardizing the wide range of current concepts, policies and practices in terms of quality;
That the quality assurance of Statistical and Geographical Information represents a fundamental element to provide information with greater value and reliability;

That the Institute, in the permanent search for excellence for continuous improvement purposes and consistent with the mandates established in the SNIEG Law, has developed its activities within the framework of the attributes of information quality with the support of a wide and diverse normative collection that needs to be consolidated, systematized and standardized in an inclusive norm of global scope;

That the Governing Board of the Institute approved the SNIEG Code of Practice so that the Unidades del Estado, including INEGI, take into account the best national and international practices associated with the processes for production of statistical and geographical information, which complement the standards of conduct established in the SNIEG Code of Ethics;

In view of the foregoing, the INEGI Governing Board has issued the following:

**STATISTICAL AND GEOGRAPHICAL INFORMATION QUALITY ASSURANCE NORM.**

**Legal and Institutional Framework**

a) Political Constitution of the United Mexican States (section B of Article 26 of the Constitution).

b) National Statistical and Geographical Information System Law

c) INEGI Internal Regulations.

d) Fundamental Principles of Official Statistics

e) Code of Ethics for the members of the National Statistical and Geographical Information System.

f) Technical standard for access and publishing of Open Data of Statistical and Geographical Information of National Interest.

**Chapter I, General Provisions.**
Article 1.- The purpose of this Norm is to establish the provisions that the Administrative Units of the Institute which are responsible for carrying out statistical and geographical activities shall observe in order to guarantee the quality, relevance, coherence, comparability, accuracy and reliability, timeliness and punctuality, as well as the principles of accessibility, transparency, objectivity and independence, of the information they provide to the society and the State, in accordance with the provisions of the National Statistical and Geographical Information System Law and the SNIEG Code of Practice.

Article 2.- The provisions of this Norm shall be of general and mandatory observance for the Administrative Units that carry out statistical and geographical activities, in their respective areas of competence, in accordance with the provisions of the Internal Regulations.

Article 3.- The Administrative Units shall implement in all their processes of generation, integration and dissemination of information, as well as in their control mechanisms, the provisions of this Norm and the guidelines and manuals approved by the INEGI Quality Assurance Committee.

Article 4.- For the purposes of this Norm shall be understood as:

I. **Accessibility**: set of conditions under which users can obtain Statistical and Geographical Information.

II. **Statistical and Geographical Activities or Activities**: those related to the design, collection, production, updating, organization, processing, integration, compilation, publication and conservation of the *Información de Interés Nacional*;

III. **Quality**: degree to which a set of inherent characteristics of the processes and products meets certain attributes;

IV. **Coherence**: conceptual consistency among results from a same source or from different sources;

V. **Comparability**: degree to which the definitions and classifications of common concepts of data referring to different sources, moments or geographical units are equivalent;

VI. **Completeness**: characteristic of containing all elements;

VII. **Confidentiality**: condition that guarantees the privacy of respondents, since individual data obtained to be processed, integrated, analyzed and disseminated, of natural or moral persons, should only be used for statistical purposes;

VIII. **Institutional Environment**: institutional and organizational factors, which have an impact on the effectiveness and credibility of the coordinator of the Statistical and Geographical Activities;
IX. **Geographic Accuracy**: degree of closeness of an estimated quantity, such as a horizontal coordinate or a height, with respect to its true value;

X. **Independence**: characteristics of Administrative Units to produce and disseminate information free of pressures from interest groups.

XI. **Quality Indicator**: qualitative or quantitative measure that provides information about the quality of a product or process;

XII. **Información de Interés Nacional** (*Information of National Interest or Information*): Statistical and Geographical Information to be determined as such by the Governing Board in terms of the provisions of Articles 77, section II and 78 of the National Statistical and Geographical Information System Law;

XIII. **Statistical Information**: set of quantitative results or data obtained from Statistical and Geographical Activities in statistical matters, based on the primary data obtained from the System respondents on facts that are relevant to the knowledge of economic, demographic and social phenomena, as well as their relationships with the environment and the territorial space;

XIV. **Geographical Information**: organized set of georeferenced spatial data, which generates knowledge about physical environmental conditions, natural resources and works of anthropic nature of the national territory through symbols and codes;

XV. **Respondents**: natural and moral persons, who are asked for statistical and geographical data in terms of the Law;

XVI. **Quality Report**: document that integrates information about the quality of a product or process;

XVII. **Institute or INEGI**: National Institute of Statistics and Geography;

XVIII. **SNIEG Law or Law**: National Statistical and Geographical Information System Law;

XIX. **Sound methodology**: application of the scientific method to explain a phenomenon, resulting in a definition consistent with the observation data.

This category also includes best practices and international recommendations in this area

XX. **Objectivity**: attribute that guarantees that the Administrative Units generate and disseminate information that reflects reality, as accurately as possible;
XXI. **Timeliness**: elapsed time between the Information is available to the users and the fact or phenomenon it describes;

XXII. **Relevance**: degree to which the Statistical and Geographical Information satisfice user requirements;

XXIII. **Punctuality**: lapse between the delivery of the information and the date on which it should have been delivered;

XXIV. **Adequate Resources**: those necessary for the Administrative Units to have sufficient human, financial and technological resources to carry out the Statistical and Geographical Activities established in the INEGI Annual Work Program and in the SNIEG programs;

XXV. **Internal Regulations**: INEGI Internal Regulations;

XXVI. **Data protection**: process of eliminating or modifying the identification variables contained in the Information; or the aggregation of the Information to guarantee the confidentiality of the data provided by the respondents;

XXVII. **National Statistical and Geographical Information System or System or SNIEG**: set of Government Agencies *Unidades del Estado*, organized through the Subsystems, coordinated by the Institute and articulated through the National Information Network, with the purpose of producing and disseminating Information of National Interest;

XXVIII. **Administrative Units**: those provided for in Article 3 of the Internal Regulations, which have within their faculties to carry out Statistical and Geographical Activities;

XXIX. **Transparency**: condition in which all the policies and practices that involve a Statistical or Geographical Activity are made known to the users; and

XXX. **Accuracy and Reliability**: degree of approximation of the calculations or estimates to the exact values that the Statistical or Geographical Information that is intended to represent.

Chapter II,
Quality assurance guidelines.

**Article 5.** In order to guarantee the quality of the Statistical and Geographical Information, the Administrative Units, in their respective areas of competence and in accordance with the applicable norm, shall comply with the following guidelines regarding:

I. Management of the Institutional Environment;
II. Management of statistical and geographical processes, and
III. Management of statistical and geographical products.

Section 1
About the management of the Institutional Environment

Article 6.- The Administrative Units shall comply with the provisions established in the SNIEG Law and in the regulations approved by the INEGI Governing Board.

Article 7.- To guarantee professional and technical independence, the Administrative Units shall decide on the statistical and geographical methods, norms and procedures, as well as on the content and dissemination dates of the Information they generate, according to the best national and international practices and the regulations approved by the Governing Board.

Article 8.- The Administrative Units shall be transparent about the processes used for carrying out Statistical and Geographical Activities through the following actions:

I. Make the methodology applied in statistical and geographical projects available to the users;
II. Correct errors detected in published information as soon as possible and informing users in a timely manner;
III. Make the metadata of the Information available to the users according to the regulations approved by the Governing Board, and
IV. Make the Statistical and Geographical Information available to society in compliance with the Technical Standard for access and publishing of Open Data of statistical and geographical Information of National Interest.

Article 9.- The Administrative Units shall guarantee the confidentiality and protection of the data provided by the respondents, taking into account the following recommendations:

I. Use individual data only for statistical and geographical purposes;
II. Have procedures and control protocols to avoid the publication of confidential information, and
III. Establish control processes for internal and external users who have access to individualized information.

Article 10.- The Administrative Units shall:

I. Have a formal system of quality assurance and the necessary tools for its operation;
II. Develop procedures to plan and supervise the quality of the production and dissemination processes of Statistical and Geographical Information;
III. Periodically assess the quality of statistical and geographical products; and
IV. Promote a culture of quality by complying with this Norm.
Article 11.- The Administrative Units shall plan the human, financial and technological resources, necessary to carry out the Statistical and Geographical Activities and deploy them according to the work schedule.

Article 12.- The Administrative Units that generate, integrate and disseminate statistical and geographical information shall apply the methods, norms and procedures established in an objective and transparent manner, with the purpose of providing an equal treatment to the Information users.

Article 13.- The Administrative Units shall guarantee the Information quality, by complying with the attributes of relevance, objectivity, accuracy and reliability, timeliness, punctuality, accessibility, transparency, independence, coherence and others, such as positional accuracy and completeness, when they are applicable.

Article 14.- The Administrative Units shall generate the information using definitions, classifications, nomenclatures, abbreviations, identifiers, directories, symbols, target populations, geographical delimitations and other statistical and geographical standards approved by the Governing Board that are indispensable to harmonize the information at national and international level.

Section 2
About the management of statistical and geographical processes

Article 15.- The Administrative Units shall carry out public consultations with the Information users, in order to know the Information needs.

Article 16.- The Administrative Units shall define whether the statistical and geographical information that is already being generated meets the identified needs.

Article 17.- In the case of unmet Information needs, the Administrative Units shall carry out a diagnosis to determine if these requirements can be met, considering existing regulations, as well as the available human, material, methodological, technological and budget resources.

Article 18.- The Administrative Units shall establish mechanisms to assess the relevance of the Statistical and Geographical Information generated, considering at least: users’ needs, available data, collection methods, technological capacity and resource availability.

Article 19.- The Administrative Units shall only request data providers Statistical and Geographical Information according to society and the State needs, taking care of the burden on respondents by avoiding duplicating requests as well as producing the information in an efficient way, for this:
I. They shall ensure coordination to avoid duplication in the application of surveys, data requests and production of Information, promoting the shared use of the infrastructure of Statistical and Geographical Information.

II. They shall seek that the System respondents bear the lowest burden possible in providing data, by using the most advanced technological means available, and

III. They shall carry out actions to strengthen administrative records as a source of statistical and geographical data.

Article 20.- The information generated by the Administrative Units shall be based on a scientifically sound methodology.

Article 21.- The Administrative Units shall identify the most relevant errors in the variables of interest, assess the identified problems and promote the corresponding corrective measures.

Article 22.- The information shall be comparable across time and space to the extent possible; otherwise, the Administrative Units shall document the (methodological or conceptual) reasons why this does not occur.

Article 23.- The Administrative Units shall document the procedure for the design of Statistical and Geographical Activities, including, among other aspects:

I. General and specific objectives, if applicable;
II. Methodological modalities and strategies;
III. Information and communication technologies;
IV. Activity scheduling;
V. Organizational structure for carrying out the activities;
VI. Budget allocation;
VII. Risk prevention measures in each of the project phases, and
VIII. Control and safeguard measures for data collected and applied technical documentation.

Article 24.- The Administrative Units shall document the procedure for the conceptual design of Statistical and Geographical Activities, including, among other aspects, the following:

I. The conceptual framework that identifies the categories, variables and classifications to which the data subject to collection shall be referred to, as well as the relationship structure between them;
II. The national and international standards that ensure data comparability for common concepts;
III. The plan for the presentation of project results, in which the products, their respective contents, as well as the forms and means of presentation of the information shall be foreseen, considering those corresponding to the metadata;
IV. The instruments for data collection, questionnaires, formats and support manuals, which shall be submitted for feasibility tests in the context where they are to be applied, and
V. The validation criteria through which the data analysis of the captured data shall be carried out to ensure their congruence.

Article 25.- The Administrative Units shall document, when applicable, the sampling design, including among other aspects, the following:
I. In the case of probabilistic sampling, it shall be specified how it complies with the following:

1. Use of a complete and updated sampling frame and the preparation for the sample random selection;

2. Obtaining the best balance between the budget of the survey and the levels of accuracy and reliability of the estimators of the main variables of interest, and

3. Specification of the confidence levels, the estimation error and the expected non-response rate used for the calculation of the sample size.

II. In the case of non-probabilistic sampling, the coverage of the variables of interest shall be specified, according to the criteria used for the selection, and the use of the sampling mode as well as the validity of its results shall be justified technically.

Article 26.- The Administrative Units shall document the procedure for data collection, including, among other aspects, the following:

I. Personnel training at the different levels of the organizational structure;
II. Supervision of the data collection process;
III. Data validation;
IV. Follow-up and control in the use of financial, human, material and technological resources, and
V. Attention to contingencies and eventualities that affect the collection process.

Article 27.- The Administrative Units shall document the procedure for data processing, including, among other aspects, the following:

I. Data entry activities;
II. Data coding and validation activities;
III. Result integration and production activities, and
IV. Data safeguard and storage activities.

Article 28.- The Administrative Units shall document the procedure for data dissemination, including, among other aspects, the following:

I. Updating information systems and communication channels;
II. Developing dissemination products and promotion;
III. Integration of metadata in the National Metadata Network;
IV. Data release;
V. Data use promotion, and
VI. Mechanisms for users’ service.

Section 3
About management of statistical and geographical products

Article 29.- The Administrative Unit shall implement feedback mechanisms with different data users to ensure that dissemination means satisfy users’ needs and identify the areas of
opportunity.

**Article 30.** The Administrative Unit shall inform users about the dates on which changes in methodology, base year and periodicity of the Information will be carried out.

**Article 31.** The Administrative Units shall implement the necessary mechanisms and processes so that the period between the reference period of the Information and its publication complies with the standards and best international practices.

**Article 32.** The Information shall be made available to users on the dates approved by the INEGI Governing Board; in case these dates are not met, the Unit or Administrative Units responsible for the Information shall document the reason or reasons for the non-compliance.

**Article 33.** The Administrative Units responsible for data production shall record the statistical and geographical projects in the Statistical and Geographical Information Registry and their metadata in the National Metadata Network.

**Article 34.** The Administrative Unit responsible for the Servicio Público de Información shall publish the different data access channels available.

**Article 35.** The Administrative Unit responsible for the Servicio Público de Información shall implement the necessary communication policies to inform about the availability of such Information.

**Chapter III, Quality Assessment and quality reports.**

**Article 36.** To assess the quality of Statistical and Geographical Information, the Administrative Units shall have indicators that measure the compliance in this Norm and the provisions issued by the INEGI Quality Assurance Committee.
Section 1,
About the Quality Indicators

Article 37.- The Quality Indicators shall:

I. Be representative of the component or attribute to be measured.
II. Have a clearly defined methodology
III. Be easy to interpret.
IV. Be comparable through time and space.
V. Be comparable among Administrative Units, when applicable.

Section 2,
About the Quality Reports.

Article 38.- The Administrative Units shall generate Quality Reports for the Information, within their scope of competence with the frequency that is determined by the INEGI Quality Assurance Committee.

Article 39.- The Quality Reports shall describe the degree of compliance with information quality attributes as established in this Norm and the provisions issued by the INEGI Quality Assurance Committee.

Article 40.- The Administrative Units based on what is referred to in Article 39 shall identify areas for improvement and the elaboration of an action plan, in accordance with the provisions issued by the INEGI Quality Assurance Committee.

Article 41.- The Committee shall integrate the Quality Reports of the Administrative Units and submit them to the Governing Board for their consideration.

Chapter IV,
About quality assessment.

Article 42.- The Administrative Units shall carry out quality assessments in order to determine that the Information complies with its objectives. These assessments can be:

I. Self-assessment;
II. Peer review;
III. Audit, and
IV. Certification.

Section 1,
About self-assessment
Article 43.- The Administrative Units responsible for carrying out the Statistical and Geographical Activities shall conduct self-assessments to determine their quality and possible improvements; these self-assessments shall be carried out at least once by project, and when there is any major change in the methodology used.

Article 44.- The self-assessments shall contain all the principles and good practices applicable to the Information, in accordance with what is established herein, as well as in any other provisions issued by the INEGI Quality Assurance Committee.

Section 2, About the peer review.

Article 45.- The Administrative Units may request a peer review to examine the processes and procedures of the Statistical and Geographical Activities, in order to identify possible areas of opportunity in their policies, implementation of best practices and compliance with principles and standards.

Article 46.- The peer reviews shall:

I. Have a clearly defined objective.
II. Be carried out by another Administrative Unit or external body that has the necessary technical knowledge and resources to carry it out.
III. Disclose the recommendations made to the Administrative Unit and the general public.

Section 3, About audits.

Article 47.- The processes and procedures carried out by the Administrative Units as part of the Statistical and Geographical Activities may be audited for the purpose of reviewing the compliance with policies, standards, procedures and methodology used for quality assurance. They may be:

I. Internal: they will be practiced by personnel of the Internal Comptroller of the Institute.
II. External: they will be practiced by some agency or external auditor.

Section 4, About certification.

Article 48.- The Administrative Units may propose the processes susceptible of certification to the INEGI Quality Assurance Committee.
Chapter V, About the INEGI Quality Assurance Committee

**Article 49.** The Institute shall have a Quality Assurance Committee that shall have the following objectives:

I. Issuing the Quality Assurance Policy, establishing the regulations and operational basis for the Institutional Quality Management System and taking the necessary actions to guaranteeing the compliance with this Norm.

II. Reviewing, analyzing and approving the Quality Assurance Annual Program developed by the Administrative Units, and reporting its results to the Governing Board annually;

III. Approving the guidelines and manuals referred to in Article 3 of this Norm.

IV. Coordinating the development of the indicators, reports and assessments referred to in Chapters III and IV of this Norm; and

V. Promoting the Culture of Quality in the Institute, giving advice and approving the training program.

**Article 50.** The INEGI Quality Assurance Committee shall be integrated as follows:

- **President** President of INEGI.
- **Substitute President** Vice-President of the INEGI Governing Board
- **Secretary** The Head of the General Directorate for Integration, Analysis and Investigation.
- **Committee Members** The Heads of the Administrative Units at central level of the Institute.
- **Invited Persons** Individuals required for the issues to be discussed.

The Committee President, Substitute President, Members and the Secretary shall have voice and vote. The Committee President or Substitute President, in the absence of the President, will have the casting vote in the event of a deadlock. Invited persons will have voice but no vote.
The Committee Members may appoint a substitute, who must have a hierarchical level of Deputy Director General; these appointments shall be only by one session, and shall be formalized through a document addressed to the Secretary.

The Committee Members substitutes shall submit to the Secretary the document, by which they were appointed, to be recorded in the Minutes and added to the Session folder. They shall have the same rights as the Committee Members. The Committee Members shall try to attend the meetings and, at least, guarantee the attendance of their substitutes.

Chapter VI, Enforcement and Interpretation.

Article 51.- The interpretation of this Norm for administrative purposes shall correspond to the Quality Assurance Committee of INEGI, who will resolve cases not provided for by the same.

Article 52.- It is the responsibility of the Internal Comptroller to monitor the compliance with this Norm.

Transitory Articles

FIRST.- This Norm shall enter into force on the working day after its publication in the Institutional Norms Repository.

SECOND.- The manuals and guidelines referred to in Article 3 of this Norm shall be approved by the Quality Assurance Committee no later than 100 days after the entry into force of this Norm.

THIRD.- The Committee referred to in Chapter V of this Norm, shall be integrated within a period of 30 working days from the entry into force of this Norm; at the Installation Session, the Committee President shall appoint the Vice-President of the Governing Board of the Institute who shall serve as a Substitute President.

FOURTH.- In accordance with the provisions established in Chapter V of this Norm, the Committee shall issue its operation manual within 90 days of its integration.

This document was approved in terms of Agreement No.118/XV/2014, approved at the 2014 Eleventh Session of the INEGI Governing Board, held on December 9th, two thousand and fourteen.- President, Eduardo Sojo Garza Aldape; Vice-Presidents, Enrique de Alba Guerra, Mario Palma Rojo, Félix Vélez Fernández Varela and Rolando Ocampo Alcántar.

Update approved at the First Governing Board Working Session 2015

Transitory Articles

SINGLE.- Modifications and additions to this Internal Norm shall be in effect on the next working day after its publication in the Institutional Norms Repository.
This document was approved in terms of Agreement No. 1º/VII/2015, approved in the First Session 2015 of the INEGI Governing Board, held on January 30th, two thousand and fifteen. - President, Eduardo Sojo Garza Aldape; Vice-presidents, Mario Palma Rojo, Félix Vélez Fernández Varela and Rolando Ocampo Alcántar.