INTEGRATING AGRICULTURE INTO NATIONAL INFORMATION SYSTEMS: THE CASE OF MEXICO

October, 2010
1. Background.


3. National System of Statistical and Geographical Information.

4. Subsystems of Information.


6. Final Statement.
Decentralized system:

- **INEGI**: government agency responsible for conducting population, economic and agricultural census.

- The Ministry of Agriculture through its agency SIAP is in charge of statistics such as areas planted and harvested, yields and production of the main crops, and meat and dairy products, in both cases on a monthly basis and at state level.
Background

- SIAP relied on technicians working in Rural Development Districts (RDD) to collect and submit information about agriculture production.

- Technicians reached their age for retirement in recent years and they were not replaced.

- Lack of resources: INEGI could not conduct an agricultural census during a long period (1991 to 2007).
Background

- Mexico’s institutional capacity to support and develop its agricultural statistic system had weakened.

- Modifications in legal framework break this trend:
  
  a) New law (2001) mandates to create an information system not only related to agriculture production but to sustainable rural development;

  b) National System of Statistical and Geographical Information (SNIEG) is set up (2008): an entity with technical, managerial and operational autonomy (INEGI) regulate and coordinate this system.
Background

- Sustainable rural development law:
  a) Increasing resources;
  b) Strengthened institutional capacity to generate statistics;
  c) Upgrading human resources skills through technical assistance and information technology tools;

- SNIEG integrated by four subsystems:
  a) Governance and public security;
  b) Geography and environment;
  c) Demography and society;
  d) Economy.

- SNIEG regulations are mandatory.
Institutional Framework

- Governance: key concept in the Global Strategy to Improve Agricultural Statistics.

- Countries need to build institutional framework to develop their statistics systems.

- Mexico: modify the way ministries interact in order to share a common vision of a National Statistical System (NSS).
Institutional Framework

- Institution responsible for coordinating NSS (INEGI) should be an autonomous entity (mandatory regulations).

- An organism with management and technical autonomy, with the necessary powers to regulate the capture, processing and publication of the generated information and to provide observance
The System is composed of:

- The National Advisory Council;
- The National Subsystems of Information;
- The Institute (INEGI).
Figure 1: National System of Statistical and Geographical Information
Subsystems of Information

- Subsystems main objective: to produce, integrate and disseminate information of national interest.

- The subsystems are:
  
  a) Subsystem of economic information;
  b) Subsystem of geographic and environmental information;
  c) Subsystem of demographic and social information;
  d) Subsystem of governmental and public security information.
Specialized technical committees objectives:

a) Propose and evaluate information of national interest;

b) Coordinate institutional efforts to generate and integrate national interest information;

c) Elaborate and assess technical standards, guidelines, methodologies and promote its knowledge and application;

d) Select the set of indicators on the topics of its responsibility.
Subsystems of Information

- Agricultural information: integrated on Subsystem of economic information;
- Executive Committee: led by a Vice-president of INEGI.
- Representatives of the Ministries of Treasury, Economy, and Central Bank are included;
- Ministry of Agriculture (SAGARPA) presides through SIAP the Technical Committee Specialized on Agricultural Economic Information.
Economic Subsystem of Information

- Economic information subsystem: supported by a National Directory of Economic Units and by a survey framework, as information infrastructure.

- Mandate: build a set of key indicators related to national accounts, science and technology, financial activities, labor and prices.
Economic Subsystem of Information

Figure 2: Subject matters on which construct key indicators

- National Accounts
- Science and Technology
- Financial Activities

+ Prices
+ Labor

→ Economy
Economic Subsystem of Information

Indicators coming from information provided by economic and agriculture census, an integrated survey framework and administrative registers.

Figure 3: Sources of information to construct key indicators
Specialized Committee

- Ministry of Agriculture (SIAP): head of the Technical Committee Specialized on Agricultural Economic Information.

- Integrated by the agencies of SAGARPA related to agriculture, livestock, fisheries and aquaculture production and Ministries of Treasury, Economy, and the Central Bank.
The main objectives of the Committee are:

- Identify economic information of national interest.
- Generate continuous information about the structure and activities of agricultural sector.
- Elaborate and assess the technical standards, guidelines, methodologies and process and promote its knowledge and application.
- Select the set of indicators on economic information of the agricultural sector.
Specialized Committee

Technical Committee Specialized on Agricultural Economic Information (October 2009):

First actions:

a) Inventory of public institutions that generate agricultural data and the characteristics of this information;

b) Data user’s needs questioner applied to the members of the Committee;

c) Comprehensive assessment of the system and methods that are used to collect, integrate and disseminate agricultural information.
Specialized Committee

- Assessment of systems and methods: diagnosis of the Rural Development Districts (RDD) technicians;

- Abilities: university degree, number of years working with statistics, formats used to collect information.
Global Strategy: “Identify the national set of crop and livestock items…to provide annual data that combined account for over three fourths of the country’s value of production and coverage of land, have a production output that can vary significantly from year to year, impact the majority of the households, and have short term affects on land use and the environment”.

Mexico: On a monthly basis, SIAP gathers data of area planted, area harvested, and yields of the main 50 crops and production of 10 livestock products.

Task to be done: to complete and measure the set of indicators that is recommended in the strategy.
“The strategic plan stands on three pillars, the selection of an agreed upon set of indicators, their integration into the national statistical system, and the methodology to measure them”.

SNIEG purpose: to identified, select and construct a key set of indicators through the specialized technical committees.

To achieve the objective that “data collections across sectors” are done in a coordinate way, using common “sampling frames and surveys”, establishing “opportunities to measure the impact of an action in one sector on another”, Mexican government institutions has to adapt the model proposed by SNIEG and adopt common methods to generate information.

More economic and human resources are needed.
A Comparative Evaluation

- FAO recommendation: use the population census to identify rural and agricultural households in order to provide a linkage between population and agricultural data and build a Master Sample Frame for Agriculture.


- Linkage between population and agricultural censuses eases construction of the Integrated Survey Framework and the Integrated Data Base.

- Additional institutional efforts has to be made to ensure a proper alignment of SNIEG to the Global Strategy.
Conclusions

- Mexico has taken the first step toward the major goal of the Global Strategy, integrating agriculture into National Statistics System.

- SNIEG operation means that Mexico government begun “at the national level” and dealt “with how to organize a national statistical system around the ministries involved in data collections for the different sectors included in the agriculture domain”, a priority action in terms of governance needs.

- Global Strategy recommendation accomplished by Mexico: “Each country should establish a Statistical Council including the Ministry of Agriculture, the National Statistical Office, and other organizations providing statistics or administrative data about the overall scope of agriculture…”;

- Second part of the recommendation is still ahead “…to jointly organize and coordinate the development and use of the master sample frame, the integrated survey framework, and data base”
Conclusions

- Key concept to fulfill Global Strategy recommendation “The basic concepts in the vision statements will need to be honored…”

- To honor those basic concepts a primary condition is a fully commitment of the Mexican organizations with the Global Strategy.
In order to achieve that commitment, three actions seem to be critical in the short term:

a) A wider and deeper promotion of the Global Strategy objectives by INEGI and SAGARPA within SNIEG committees.

b) A stronger leadership of FAO in encouragement the implementation of the strategy.

c) Alliance among FAO, Mexican Government and other institutions involved in the Global Strategy.
Thank you!

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