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**CENSUS PLANNING AND MANAGEMENT**

**Quality management in the French census**

Submitted by France\*

This meeting is organised jointly with Eurostat.

**Summary**

The Bureau of the Conference of European Statisticians (CES), at its meeting held in Washington, D.C. (United States) on 19-20 October 2006, approved the renewed terms of reference for the Steering Group on Population and Housing Censuses and the plan for future CES activities on population and housing censuses. The CES Bureau also agreed that the Steering Group would coordinate the work on the diverse types of meetings. The present paper was prepared on request by the Steering Group on Population and Housing Censuses, for presentation and discussion at the Joint UNECE/Eurostat Meeting on Population and Housing Censuses in Astana (Kazakhstan), 4-6 June 2007. The paper provides substantive basis for the discussion in the session of the meeting dedicated to "Census planning and management".

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\* This document has been prepared by National Institute for Statistics and Economic Studies (INSEE).

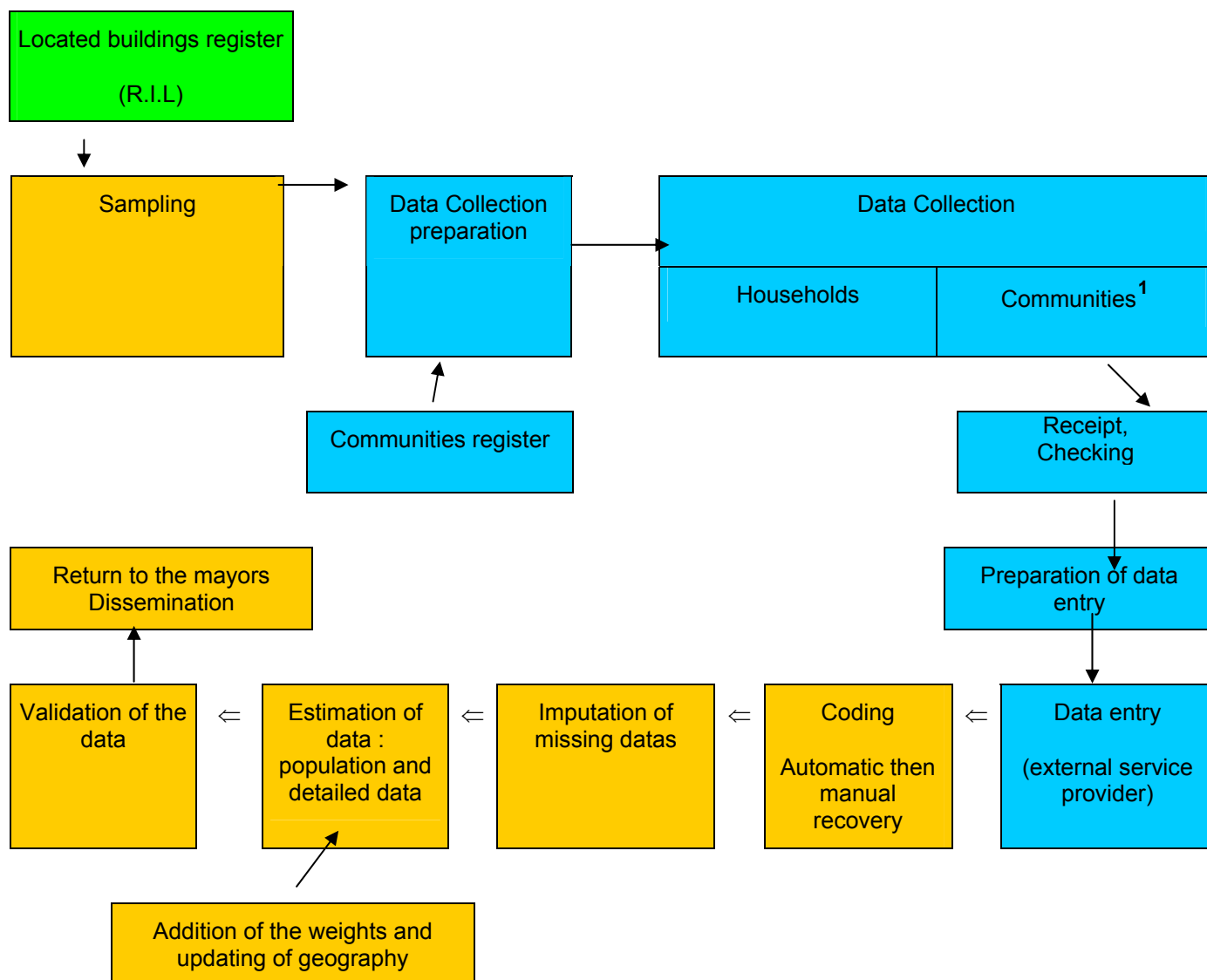
## **INTRODUCTION**

1. The French census has been built since 2004 on a new method, combining two principles: a five-year cycle rolling data collection and the recourse to sample surveys in municipalities with 10000 inhabitants or more. Thus redesigned, the census will allow providing each year detailed results at all geographical levels of interest, from the whole country to the municipality and the district. This reform of the census answers the need, more and more marked, for recent demographic data, in particular at fine geographical levels. It also allows to smooth the costs of the census, be they human or budgetary, and to better monitor the operations.
2. The success of such a method requires several prerequisites, technical ones (to have infra-communal geographical information systems and administrative data to update them and actualize the data), methodological ones (sampling techniques notably) and political ones (a deepened dialogue with the municipalities, census partners and the whole census users).
3. The census such as it is practiced in France meets the five essential criteria defined by UN, as well as five general quality criteria of statistical operations. (See Background paper ECE/CES/2006/24).
4. Quality is managed with the progress of the operations of preparation, collection, processing, and dissemination of the census results. It rests on protocols for checking and measurement of quality and on the assessments involving the different actors of the census: municipalities, collection actors, INSEE teams, sub-contractors.
5. Ongoing or planned investigations should provide by the end of the first cycle a quantitative and qualitative analysis of the coverage of the census.
6. Halfway to its first five-year cycle, the French census presents positive results, but important work remains to be achieved.

### **I. QUALITY MANAGEMENT, PROCESS BY PROCESS**

7. Census quality is checked for each of the processes: quality check of the sampling frame (the Located Building Register in municipalities with more than 10 000 inhabitants); quality check of data collection; data entry and coding check; quality check of the data before their dissemination.
8. For checking operations, INSEE decided to check its registers through field surveys, and the field data collection through matching it with registers. As for the operations of data entry and coding, they are the subject to a double data entry and a double coding on a sample of the forms, followed in both cases with an analysis of the discrepancies.
9. The flowchart below shows the sequence of the different steps of the census.

Chart. CENSUS STEPS



<sup>1</sup> What we call « communities » are the institutional households. Their survey is exhaustive and checked by the “communities register” updated every year with external sources (lists of schools, hospitals... given by ministries).

## A. Quality of the sampling frame of great municipalities

10. Quality measurement of the Located buildings register (in French: Répertoire d'Immeubles Localisés - RIL) is performed with an annual survey.

### 1. Objectives and outcomes of the quality survey of RIL

11. Its objective is to measure the exhaustiveness of RIL in terms of deficit and surplus of addresses of *dwelling* category, and of associated dwellings. It aims at making sure that all the addresses found in the field are well registered in the RIL and conversely that all the addresses of the register exist in the field. If the sampling frame included too much deficit, it would not be really representative. If it had too much surplus, it would make unnecessarily heavier the data collection (numerous wastes). Lastly, a good balance surplus-deficit is necessary to calculate estimates without bias at the time of data processing.

12. During the last two years, the deficit rate of the dwellings has been improved in a significant manner. It has gone from 2.3 per cent in 2003 to 1.1 per cent in 2005 and 0.9 per cent in 2006. The work of setting to level in 2004 and 2005 has targeted in priority the municipalities with a strong risk of deficit. These municipalities have therefore known the sharpest improvement. Thus, 12 per cent of the municipalities remain still above the threshold of 2.5 per cent deficit, against 22 per cent in 2004 and 28 per cent in 2003. For the sake of a comparison, in a general census, the share of the municipalities whose rate of omission was more than 3 per cent, was estimated to one out of six.

13. The surplus rate has also been reduced, but in a lesser measure, which has led in 2005 to a deterioration of the balance. So this year, in 2006 (and still in 2007), the operations of quality improvement are going to emphasize surplus reduction, in order to reach a stable balance within two years. The first results for 2006 are promising: the balance has decreased by 0.2 points, owing to a reduction of surplus higher than the reduction of deficit.

14. Remark: at the time of the estimation of the population of municipalities, the process of extrapolation of the results of the sample to the whole municipality takes into account the returns of data collection (adjustment of the difference between the number of dwellings of RIL and the one actually enumerated). The lack of coverage of RIL is therefore neutralized at the time of this step.

**Table. The results in 2006: deficits and surpluses of house and dwelling addresses of the RIL**

		2003	2004	2005	2006
<b>Addresses</b>	In deficit	2,3%	1,9%	1,3%	1,3%
	In surplus	2,0%	1,9%	1,8%	1,7%
	Balance surplus/deficit	-0,3%	0%	0,5%	0,4%
<b>Dwellings</b>	In deficit	2,3%	1,9%	1,1%	0,9%
	Surplus	2,1%	2,3%	1,8%	1,4%
	Balance surplus/deficit	-0,2%	0,4%	0,7%	0,5%

15. The main conclusion is that the quality of RIL is globally satisfactory but there are strong disparities between municipalities.

16. The work performed by municipalities on address lists to be confirmed appears as a determining element of the final good quality of the RIL. This survey has also allowed to validate the updating process: the contribution of two great updating files, the file of building permits and the file of the Post Office (very useful to identify disappeared addresses), cannot be denied when it could be paired up with the answers of the municipalities.

#### Quality survey of RIL: modus operandi

The sample is quite large: 190,000 addresses and 520,000 dwellings (more than 3 per cent of the dwellings).

The interviewers have the list of all the addresses of the block appearing in the RIL: the houses and the other categories (establishments, equipments, "other"). They verify the existence of all these addresses, with instruction of giving priority to the dwellings. An address of a dwelling appearing on the list and absent in the field makes up a surplus. It is also the case for an address, which proves in the field to be only a secondary access. A dwelling address which exists in the field and which is absent from the list makes up a deficit. The interviewers also check the addressing, the number of dwellings, the confusions of categories and the addresses with several accesses.

## **2. The improvement of the quality of RIL: decentralized action plans, steered by regional offices**

17. The quality survey of RIL allows establishing targets to improve the register, and these targets are decentralized; each regional office sets up, in dialogue with the Census Unit of the Head Office an action plan with objectives according to the weak spots of its region. Its implementation involves INSEE's regional offices, but also the municipalities, because the quality of the register affects the quality of the census on their territory. We have thus an operational management of quality. The corresponding actions may be: a strengthening of the training of the actors of the municipalities; a targeting of field work (INSEE or municipalities) on some districts or certain types of settlement (for instance non standardized addresses such as hamlets); a deepened expertise of some files.

### **B. Data collection**

18. Collection is often the most delicate link of the statistical process. Its quality rests on precise and rigorous procedures, but also on the support of the respondents (which determines the sincerity of their responses) and the commitment of those who gather information, that is the enumerators. A rigorous preparation (spotting, trainings) and checks allow making sure of the quality. Checks are performed by municipalities and INSEE during data collection. After data collection, the checking is the responsibility of INSEE; it allows to check the data collected and if the case arises to correct them.

## **1. Organization of census surveys**

19. Census surveys are conducted in France according to a partnership between INSEE and the municipalities. This partnership is defined in the law that founds the census, and specified in different enforcement texts, the drawing up of which has rested on a deepened dialogue with municipalities.

20. INSEE monitors and organizes the surveys, the municipalities prepare and carry out them. The municipalities are notably in charge of the hiring and remuneration of enumerators, their supervision (by a person in charge appointed by the municipality and called “local coordinator”), the operations of collection (location of the dwellings, handing in and collection of the questionnaires by the enumerators) and a first quality check (notably the exhaustiveness of the collection).

21. To supervise and monitor the operations in the field, INSEE relies on supervisors, INSEE officers in charge of a given geographical sector and of a set of municipalities. These supervisors must notably oversee to the setting up in the municipalities of the means necessary to census surveys, train local coordinators and enumerators (the municipality also taking part in the training of enumerators), follow-up with the local coordinator the progress of collection work, help him (or her) in solving the problems which occur and lastly conduct with the municipality the operation of closure of the collection. All in all there are 550 supervisors, among whom 50 are hired by INSEE specifically for this operation, for the duration of the survey.

## **2. Preparation of collection and the checks as collection progresses**

22. The modus operandi of the collection rests on a precise protocol, of which the enumerators are responsible, under the control of the person in charge at the municipality and of the supervisor. The enumerator handbook describes explicitly the tasks to carry out. Detailed documents are provided to the persons in charge at the municipality and to the supervisors. During the collection and at the end of it, the municipality checks that the enumerator has called in each dwelling to enumerate. No address, no dwelling must have been forgotten.

23. The supervisors also carry out checks at the time of their visits in the municipalities. They verify the respect of the procedures (confidentiality, respect of the agenda) and the filling of the questionnaires already collected, to spot the most frequent collection errors. At the end of the collection, when they transmit the questionnaires to INSEE, they provide an assessment of the quality of the collection in the municipality and describe the possible difficulties met.

24. On top of this basic scheme, the municipalities, which are in charge of the collection, set up a more precise monitoring one.

25. Upstream of the collection, the checks of the addresses of the sample to enumerate is carried out in two steps: validation of the addresses and of the number of dwellings by the central team of the municipality, then location in the field by the enumerator, who must authenticate the addresses and enumerate the dwelling (this phase also allows the municipality to test the enumerator). A second location in the field is carried out in case of disagreement between the enumerator and the central team (a threshold of discrepancy may be accepted, according to the means of the central team). Thus when collection starts, there is an agreement between INSEE /

Local coordinator / Enumerator on the existence of the address, its classification in inhabited address and the number of dwelling to enumerate. The rigor of this upstream check assures a more “comfortable” collection to the enumerator.

26. The follow-up of collection, as the operations progress and for each enumerator, allows verifying the progress of the distribution and of the return of the forms and to spot possible difficulties found by the enumerators, or shortcomings. For that purpose, INSEE provides the municipalities with a tool for monitoring the collection, but the municipalities may also develop or have developed their own tool, if they wish to include additional features. The examination of the first documents returned by the enumerator allows, through the analysis of the quality of their filling, to assess the understanding of the instructions by the enumerator and his (or her) involvement in the collection.

27. Some municipalities proceed to a weekly assessment with each enumerator, during roughly two hours. Its objective is to verify that all addresses, all dwellings of the address, all the persons of the dwelling are properly enumerated. Each week, the enumerator must respect the figures of his (or her) objectives (forms distributed, collected documents in return). At the end of management, the last collection difficulties are analyzed. Several indicators are followed-up: the number and percentage of Non surveyed dwelling forms, - in French Fiche de Logement Non Enquêté, or FLNE - (they must be established at the latest, in the closure phase of the operations), the rate of vacancy of the dwellings, the quality of the round notebook.

### **3. After the collection: the checks conducted by INSEE**

28. After the receipt at INSEE of the documents transmitted by the municipalities, checks are conducted in the office, then in the field. Check protocol is adapted to the new configuration of the census surveys. In comparison with general censuses, more deepened checks are made possible for each municipality because of the lesser volume of collected data each year and the lower number of municipalities. The file of the Council tax plays an important role in the checks in the office and allows verifying the exhaustiveness of the collection on given municipalities or collection areas. These checks in the office or in the field, are conducted “at the nearest of the collection”. The errors they allow to detect are corrected.

29. They are selective because they result from successive «screenings »:

- (a) A first check at the time of the receipt and registration of the questionnaires allows assessing the quality for each of the municipalities.

This step concerns the documents of all municipalities concerned by the survey of the year. It is the phase so-called “receipt-registration of the questionnaires”. INSEE officers in the office count the questionnaires through registration of bar codes. They check the addresses, blank forms... They establish indicators by municipalities on the evolution of the number of dwellings and of persons, the structure of dwelling stock (main residences, second homes, occasional dwellings, vacant dwellings), the proportion of FLNE. After this step, they carry out an expertise of each municipality taking into account these quantitative indicators, qualitative indicators on the progress of the collection provided by the supervisors and their appreciation on the receipt of the documents. They establish, for each municipality, through a scoring technique, a “quality” mark and set into

in-depth check those the scores of which are the least good (roughly 10 per cent of the municipalities).

- (b) This assessment leads, for roughly 10 per cent of the municipalities, to an in-depth check in the office.

The in-depth check in the office may concern either the whole municipality or a part of a municipality. It rests mainly on the files of Council tax and is oriented according to the problems brought to the fore by the indicators

- (i) On the exhaustiveness of the number of dwellings:
  - a. Presence or absence of the address,
  - b. Comparison of the number of dwellings,
  - c. Comparison of the occupiers' names (municipalities +10,000);
- (ii) On the percentage of Non surveyed dwelling forms (FLNE):
  - a. Check of the FLNE resting on the information "category of dwelling" of the Council Tax,
  - b. Assumed number of the persons living in the dwelling;
- (iii) On the structure by category of dwelling (main residence, second home, vacant dwelling): Matching with the file of the Council Tax.

It may also be proceeded to check survey by telephone with the inhabitants.

These checks allow either to confirm the collection or to bring to the fore errors. These are then corrected.

- (c) Lastly, the cases not solved in the office are the subject of checks conducted in the field by INSEE (roughly 30,000 checks carried out in the field in 2006).

In case of numerous divergences and of impossibility to settle them in the office, the municipalities are the subjects of a decision of checking in the field. The municipality is then informed, but it does not receive the list of the addresses of dwellings concerned.

The checks in the field concern municipalities for which quality is deemed insufficient at the time of the check in the office. In the greatest majority of the cases, the checks confirm the result of the collection. They also allow to detect and correct some errors. These errors do not induce systematic biases, neither upward nor downward. They give rise, if the case arises, to corrections of questionnaires and the municipalities are informed of them. They also allow to adapt the adjustments and to modify for the following year the collection or verification protocols.

They concern either addresses or dwellings.

For the addresses, the checks concern the addresses, which do not seem to correspond to those requested in the sample (municipalities with 10,000 inhabitants or more), or which are at risk of being forgotten (municipalities with less than 10,000). Then the number of dwellings is verified.



About 7,500 checks of address have been conducted in the field in 2005. This represents 1.6 addresses for 1,000 for the municipalities with less than 10,000 inhabitants and 8.6 addresses for 1,000 for the municipalities with more than 10,000 inhabitants.

Checks also concern dwellings, when there is a doubt about their category (main residence, second home, vacant, occasional). A verification of the number of persons is also conducted.

About 14400 checks on the dwellings have been conducted in 2005 that is roughly one check for every 300 dwellings. A great majority concerns dwellings having been the subject of Non surveyed dwelling forms (FLNE).

In 2006, INSEE strengthened the effort on dwelling controls: 23,500 dwelling controls were made by regional directories (more than 1 for 200 dwellings). As in 2005, a great part was done on dwellings for which a FLNE was established.

After these controls, the final rate of FLNE was about 3 per cent. It has decreased regularly since 2004. Controls allow us to confirm the pertinence of the FLNE system to take in account, in statistical results (populations figures and detailed results) the households who couldn't be contacted directly: they confirm that FLNE were established for principal dwellings, not for secondary dwellings or vacant ones, and that the estimation of the number of persons living in these dwellings is robust.

30. As a conclusion of the review of the checks carried out on the collection, it must be highlighted that it is one of the great advantages of the new method: because of the smaller size of each census survey, and also thanks to the system of successive screenings, the checks are much more efficient than in a classical census. The municipalities are aware of this, and this has a dissuasive role regarding possible fraud attempts.

### C. Processing

31. **Data entry** is carried out by an external service provider. It is an optical data entry of the questionnaires which are scanned then submitted to a pattern recognition software. A data entry of the information provided in plain language completes the process. Precise specifications define what is expected from the service provider about quality. This concerns both data security, during the transports and at the service provider's premises (physical and IT security, commitment not to disclose information) and the quality of the data (number of documents entered by collection area, maximum rate of error by variable). At last documents are counted and a check of the discrepancies with the first count carried out at INSEE at the time the registration of bar codes (see above para.29 (a)) is performed.

32. The data entry errors are assessed through double data entry on a sample of forms, at another service provider which works from the scanned pictures and which uses the same data entry rules. Discrepancies are analyzed at INSEE, in order to establish error rates on the coding of each of the variables. Double data entry is carried out as data entry campaign progresses, which allows, possibly, to correct data entry protocols for the following batches.

33. Contacts and regular meetings are organized with the service provider, in order to anticipate the problems or to solve them as quickly as possible. Adjustments or improvements are requested to the service provider, during the campaign or in inter-campaign period, if it is the case of heavier improvements, based on the results of the double data entry. For instance, the optimizing of the pattern recognition tools has allowed to decrease significantly the error rate of data entry of dates of birth. It must be noted on this subject that, even on very simple data as dates of birth, it is illusory to expect a zero error rate: as information is handwritten at the start, interpretation errors are unavoidable.

34. **Coding** includes first an automatic phase of coding according to activity and occupation classifications notably, then a phase of recovery by operators in regional office of the non coded cases. A scheme of quality check is being developed on this process. The principle is to proceed to a second coding on a sample of forms representative of the different modes of coding (automatic and manual recovery) then to analyze the discrepancies.

35. The objective is to measure the quality of automatic coding and the quality of the manual recovery (to get first a global percentage of well coded cases, then in the long run percentages by great modalities of variables, for instance percentage of well coded higher executives).

36. A second objective of the quality check of the coding is to measure a rate of individual forms which cannot be coded (for instance, a vague heading of civil servant type, with no other indication), which will allow to give oneself a realistic target as regards quality and to avoid "over-quality".

37. This measurement and check scheme will also allow to enrich the learning bases which are used for automatic coding, in order to improve their performance to better target the training of the persons who code in the recovery process and to ensure eventually a good quality management.

38. **Imputations.** The problem is to analyze the non-responses, total or partial, in order to impute them, but also the forms, which present inconsistencies (for instance a person of 95 years old who declares to be in the labor force). The procedure often used is the one of the hot-deck, which consists in completing the missing information through the help of the response of a "donor" who looks like him (or her). Even in this case, the imputations get finer from year to year from previous results, which constitutes an efficient system of quality improvement.

39. In particular, the imputation of the FLNE allows to impute, for the calculation of the population of municipalities, the population of main residences for which the contact with the enumerator did not take place (long duration absences, persons impossible to contact, refusal). For the main residences the number of persons is given (more than 8 out of 10), one "imputes" for the dwelling as many individuals as the FLNE indicates in the household. For the other FLNE, one also proceeds with an imputation, according to a method aiming at copying the structure, by household size, observed on national average for the FLNE with data. To take into account the fact that a small number of FLNE are filled wrongly for non main residences, this imputation is performed up to the share of main residences in the municipality. In 2005, the impact of imputation of the FLNE is 1.025 million persons in the municipalities with 10,000 inhabitants or more, and 441,000 in the municipalities with less than 10,000 inhabitants. The impact of the "reduction" described above is roughly 90,000 persons.

## D. Dissemination

40. The quality of this step owes much to the preparation, which has been done with the users, in the framework of CNIS (National Council for Statistic Information) groups. Two groups have worked, one on general dissemination, the other on the dissemination oriented toward the municipalities. The variety of the uses of the census according to the bodies and persons needing its information (municipalities, researchers, administrations, private companies) was brought to the fore, as well as the teaching skills necessary to present the data. In fact, it will be averages or smoothed data and not the gross data, and their accuracy will not allow all the cross-tabulations theoretically possible because of the recourse to sampling.

41. After the dissemination, surveys will be conducted to check the adequacy to the needs, in the groups of CNIS and through a satisfaction survey with the users.

42. The quality of the figures disseminated rests also on a systematic validation step before the dissemination, which allows to see whether there remains outliers.

43. From this validation step, conclusion may also be drawn for the dissemination of the results of the following years.

## II. PERSPECTIVES FOR THE ANALYSIS OF THE COVERAGE OF THE CENSUS

44. As INSEE has seen, an important work of checking *in itinere* is conducted at the time of the collection of the census and within the three months, which follow the receipt of the questionnaires. These checks give rise to immediate correction of the dwelling sheet and of the concerned individual form(s).

45. At global level, the analysis of the coverage of the census will take several forms:

- (a) An analysis of over-enumeration, based on the detection of persons enumerated twice. During data collection, can be identified persons who have two places of residence, especially the students, and have a special treatment for them: To take these “double residents” into account, the French census introduced the concept of “double account”: students under 25 years old<sup>2</sup> are counted with the population of both communes, their parents’ commune and the commune where they study. When aggregating population of communes, or establishing structural statistics, students under 25 are taken into account only in one commune
  - (i) Their parents’ commune if they are under 18 years old;
  - (ii) The commune where they live for studies if they are between 18 and 25.
  - (iii) This system has existed in France since the census of 1962.

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<sup>2</sup> Above 25, they are only counted in the commune they live in for studies.

(iv) For other people that couldn't be identified as "double-residents" at the step of data collection, shall rely for that purpose on the permanent demographic sample (EDP), a 1/100 sample of the French population, fed by registry data and the census forms. The feeding procedure of this sample allows to detect whether several forms are established for a same person. Account been taken of the census method, it is advisable to have the five campaigns to draw from it reliable conclusions. These conclusions will concern an estimation of the global volume of over-enumeration and will allow to characterize the populations concerned notably in terms of residence (great municipality, small one, community) or of sex and age. Because of the sampling, of the census and above all of the EDP, the results will only have a national scope.

(b) An analysis of the omissions, which will rest on administrative files of universal coverage such as the files of the type "Health-Insurance". A first model will be proposed in 2007.

46. These investigations, focused on the collection, will complete those described in subsection A of section I (Quality of the sampling frame of great municipalities).

47. These checks are more promising than those offered by a post-census survey of the type of those which were conducted in France in 1962 and 1990. It appears in fact more relevant to check the quality of a survey through matching it with an administrative source rather than with another survey, which would present the same shortcomings (in particular the biases due to the difficulties to contact the households).

### **III. HALFWAY TO THE FIRST CYCLE OF COLLECTION, POSITIVE RESULTS**

48. After three collection campaigns, it is possible to draw up a first positive assessment of the setting up of the new census. The support of the municipalities and of the inhabitants to the new method is very wide. All the municipalities have taken part in 2005 and 2006, and the two municipalities which had refused to take part in 2004 have taken part in the census in the following years.

49. As for the inhabitants, one could fear that the recourse to sampling would entail a lesser mobilization than at the time of the general censuses. This did not occur, thanks to a very efficient communication, both at national and local level. This communication strongly emphasized the change of method and the usefulness of the census. It has been borne by the provision of the results of first annual surveys, which has allowed to show by example that the new method was working and which types of results it could provide. For the three years from 2007 to 2009, the change of method being assumed as assimilated by the public, the communication is henceforth focusing on the usefulness of the census, with also a message strengthened on the practical aspect: how does the census works concretely, where to get enumerated in case of double residence...

50. The quality of the sampling frames and the exhaustiveness of the collection have improved with the campaigns. The deficit rate of RIL has thus been brought back to 0.9 per cent of the dwellings. The share of the households which could not be directly enumerated, and therefore for which has been established a FLNE (Form of non-surveyed dwelling), is very low, about 3 per cent. In most of the cases, they are households impossible to contact (persons on leave or in hospital, or with shifted hours making a contact with the enumerator difficult...). The numbers corresponding to these households are taken into account for the establishment of statistics.

51. At last, as soon as the end of 2004, INSEE could return first estimates of population to all the municipalities with less than 10,000 inhabitants which had been surveyed, as well as to some one hundred of cities. These results have then been disseminated widely via Internet, two days before the beginning of the collection 2005.

52. At the end of 2005, INSEE has extended this scheme, to the municipalities of less than 10000 inhabitants surveyed in 2006 as well as to some one hundred further cities. These results have been made public on 17 January 2006. The dissemination process continued at the end of 2006 and the beginning of 2007, with the municipalities surveyed in 2006 and roughly 200 further great municipalities.

53. This dissemination of first results has very widely contributed to convincing the users as to creating interest in the new method.

54. At organizational level, the positive effects of making collection annual are beginning to be felt: improvement of organization, of IT applications, greater professionalism of the different actors, at INSEE as well as in the municipalities.

55. An important work of strengthening, allowed by the experience of the first collections, remains to be conducted before the end of the first cycle, to reach cruising speed. For the continuation, considerations on possible improvements will concern two directions: the opening of the collection through the internet and the evolution of the content of the questions, to adapt them to the new expectations of the users and to the availability of new administrative sources, notably as regards employment.

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