

**ASSESSMENT OF THE FINAL PREPARATION AND  
IMPLEMENTATION OF THE 2011 CENSUS OF  
MONTENEGRO**

**Report to the Steering Committee of the Third  
Mission**

**1-15 April 2011**

*Jean-Michel Durr, Roberto Bianchini  
Experts*

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## **II. Introduction and background**

1. Montenegro implemented a population and housing census in April 2011, from 1<sup>st</sup> to 15<sup>th</sup>, as planned, at the same time as in other European countries. Among neighbouring countries, Kosovo implemented a census in the same period. In order to ensure transparency and strengthen the trust in the census results Montenegrin authorities requested a peer assessment of the population census. The European Commission, which already supported Montenegro with technical assistance on the preparatory activities, agreed to organise the peer assessment of the 2011 Montenegro census.
2. The first mission took place in July 2010 and the second in November 2010. The present document aims at reporting the outcomes of the third mission, from 1 to 15 April 2011.
3. The main objective of the peer assessment of the population census in Montenegro is to assess whether the census is conducted in line with the international recommendations published by UNECE/Eurostat and as adopted by the Conference of European Statisticians as Principles and Recommendations for the 2010 Census of Populating and Housing.
4. As mentioned in the terms of reference, the assessment is carried out by one senior census expert, Mr. Jean-Michel Durr, assisted by Mr. Roberto Bianchini. Mr. Bianchini participated to the first and third missions.
5. After the first mission in July 2010, a report was prepared for the Steering Committee to assess the preparation of the census of Montenegro, to identify factors of success but also risks and special needs for technical assistance as well as to draw some recommendations to Monstat.
6. The main objective of the second mission, conducted three months after the first one, was to assess the progress achieved in the preparation of the census and the implementation of the recommendations. In addition, the second mission provided opportunity to meet with external stakeholders such as political parties and municipalities to assess the political and organizational context of the census preparation.
7. The third mission aimed at assessing the implementation phase of the census operation and at verifying if the recommendations provided during and after the two previous missions were implemented. Each of the 21 Municipalities of Montenegro was visited during census operations. At the beginning of each visit in municipalities, a meeting was organised with the Municipal Commission. Census municipal premises were visited, state instructors and municipal instructors met, and a number of interviews made by enumerators to the households were observed.

### III. Executive Summary

8. The mission could conduct the assessment and observation tasks with the very cooperative participation of Monstat. In particular, Ms. Snezana Remiković, Head of the Demography Department in charge of the preparation of the census, and Mr. Božidar Popović, Deputy Director, took part to the visits in the field and provided full support to the members of the mission. Ms Gordana Radojević, General Director of MONSTAT, supported the mission in the name of the Institute.

9. It should be noted that while the assessment of the previous two missions was mainly based on the information reported by Monstat, the assessment made during the third mission was mainly derived from the direct observation of the organisation of fieldwork activities and from the direct participation to the collection of census data (face-to-face interviews, supervision of municipal instructors and state instructors, logistics support from the Municipal Commissions).

10. The experts concluded the mission with the conviction that the data collection for the 2011 Population and Housing Census of Montenegro was conducted in general following the international recommendations and in particular the CES Recommendations. A number of minor technical difficulties were observed in the first days of data collection operations, and reported by the experts to Monstat. Monstat was ready and effective to mitigate those difficulties, when possible. Other points requiring attention were observed in the following days and reported to Monstat as well.

11. As output of the first and second missions, some recommendations were made to Monstat to address as soon as possible the most problematic issues to ensure a successful achievement of the census. This mission assessed the implementation of these recommendations as follows. The majority of the recommendations were considered and appropriated actions were implemented. However, the direct observation of census data collection in the municipalities showed that Monstat did not pay enough attention to some issues. Some others just came up during the enumeration. The recommendations were:

- a. Appoint as soon as possible a full-time manager for the preparation of the census;
  - > Changes at the top level management of Monstat occurred recently. The former Director General was appointed as Director of the Census.
- b. Analyses the relations with the municipalities and identifies any risk of interference in the data collected, especially in municipalities where specific ethnic groups are represented;
  - > Considering that census results are used at local level for attribution of funds related to special situations or projects, municipalities have a particular interest in having the highest population size possible. This has a positive impact on the quality of the enumeration to avoid omissions, but may represent a risk of over-enumeration, for example by including in the population persons living abroad and coming to the city only for vacation. Therefore, it was recommended to plan a strict control of the enumeration process in order to mitigate any risk of this kind.

It was observed that over-enumeration was sufficiently avoided by listing in separate columns household members residing abroad or living in other parts of the country. Those persons were not enumerated with the individual questionnaire and not considered as usual resident population. In some cases, household members living in other parts of the country may have been counted twice. Those situations are expected to be detected during the data cleaning procedures in the data processing phase.

> Regarding representativeness of ethnic groups, it was observed that representatives of political parties were represented in the municipal commissions.

- c. Lists as soon as possible all procurement needs and start evaluate the time needed for drafting the specifications and completing the process;

It was recommended to Monstat to develop early in 2011, a document to plan public procurement for the census, and to finalise as soon as possible the planned tenders procedures: printing materials, office materials, and communication campaign. It was also recommended to rent premises for data capture, if needed. It was observed that census materials were available in local census premises at the beginning of the operations, 1<sup>st</sup> of April. A minor issue was related to the printing of census questionnaires in Albanian language. This was a “last minute” decision of Monstat, to print and use about 40,000 copies of the Albanian version of census forms in areas inhabited by Albanians. An error was detected on this version of questionnaires a day before the commencement of census operations. The 40,000 copies were reprinted the day after and delivered to the local census premises concerned. Monstat reported that the premise for the data entry was rented and ready to be used at the end of field activities.

- d. Starts as soon as possible the planning of the communication campaign;

> A public communication campaign was developed and successfully contributed to the information and participation of the public to the census.

- e. Takes the ownership of the GIS application developed in collaboration with the Real Estate Administration and establishes a formal agreement with the mapping agency;

> As already reported by Monstat during the previous mission, Monstat has not currently internal resources able to manage the GIS census application. It is expected this will be examined in the post-enumeration phase and that adequate trained staff will be available to use GIS capabilities for the dissemination of spatial census data.

- f. Considers the possibility that the state instructor conduct the training of the enumerators, alone or with the municipal instructor;

> State Instructors were systematically present during the training of the enumerators, to control and to provide additional inputs when needed.

- g. Develops a strict protocol for the supervision and monitoring of enumeration;

> As already observed in the previous missions, control procedures were developed in the instruction manual for enumerator and supervisor. During field operations, it was observed that reports, to be filled in by enumerators and supervisors, were developed and used. A methodology document was also prepared to gather all the instructions. However, it was also noted that no form was prepared to help enumerators to record buildings and housing units visited in their assigned areas. Indeed, it was observed that enumerators did not have procedures to record visited housing units, or housing units not visited because the household was absent at the time of the visit of the enumerator in that building. In such cases, as reported in the instruction manual, the enumerator had to make subsequent visits. It was observed that enumerators drafted on a notebook a plan of the buildings to record visited and not visited dwelling units. The fact that enumerators were usually from the same areas of their residence helped them to remind in which housing units they have to come back. However, the absence of such procedures for classifying visited and not visited housing units, may pose an issue of under-enumeration.

- h. Seeks assistance from experts in Post Enumeration Surveys to design a PES suitable to meet the objectives of coverage and content error estimation;

> Methodology of the PES has been discussed and a sample frame developed. The methodology of the PES was discussed during the mission and recommendations made.

- i. Develops a process to control the quality of the data capture;

> A quality control process for data processing was developed and discussed during the mission.

- j. Improves the security of the databases and develops a plan for archiving the census data as well as other statistical sources;

Security measures were developed and discussed during the mission. In particular, the mission recommended a daily physical backup during the data capture.

- k. Develops a plan for dissemination and analysis of the census results and seeks collaboration in this domain with national and international institutions.

The strategy for dissemination was drawn up and adopted by the bureau. A detailed plan will be developed later on the basis of this strategy. Methods for disclosure control will be developed later.

#### **IV. Assessment of the preparation and enumeration of the census**

12. In order to follow the assessment made on the preparation of the census, the mission decided to use the same framework as for the first and second reports, but to mention only the

updates and new elements. Therefore, this part should be read having in mind the previous reports.

13. The list of activities is organized as following: (a) preparatory work; (b) mapping; (c) enumeration; (d) data processing; (e) dissemination; (f) evaluation; and (g) analysis.

14. This assessment is mainly based on the direct observation of field activities in all municipalities of Montenegro, and also on the information reported by Monstat. As a consequence, the comments and recommendations presented below are based on the observed cases by the experts, and may not reflect the whole situation.

## **PREPARATORY WORK**

### **Legal basis for the census**

15. The field observation could confirm some flaws in the census law already mentioned in the previous reports. For example, the obligation made to the population to respond to the census was not explicitly defined, only by the amount of fines in case of refusal. In addition, there was no provision to allow non-response for the questions on ethnicity, religion and disabilities. Monstat considered that for these questions, a non-response would be considered as a valid answer, which has no legal basis. This vagueness of the law was noted by some organizations and a constitutional appeal was initiated by Human Right Action. The appeal by the Human Right Action was rejected by the Constitutional Court before the census fieldwork started.

16. In addition, some inconsistencies between the census law and the methodology document were pointed out by municipal commissions. For example: article 11 of the Law includes the following tasks for municipal commissions:

- a. Take over the census material and shall control its completeness and quality;
- b. In cooperation with the state instructor, draft preliminary results for settlements and local government units, and they shall submit them to Statistical Office not later than 20 April 2011;

17. However, the methodology, reaffirmed by a letter of the Director of Monstat to the municipalities during the enumeration, asserts firmly that the municipal commission cannot have access to the census questionnaire. This situation could be avoided by a clear definition of what is "census material", "preliminary results" in the Law. In particular, the term "first results" is used in the methodology instead of preliminary results. This gave opportunity to some political parties to request that the municipal commissions could process and publish the municipal structure in terms of ethnicity, religion and mother tongue.

### ***Recommendations***

18. A complete debriefing of the Law should be made after the census and recorded. This is necessary to prepare the next census. Special attention should be given to the words used and

their definition. For example, it should be made clear that the release of census results is the responsibility of the Statistical Office alone. The word "counting" should be used for the municipal commissions.

### **Budget and cost control**

19. No specific problem was mentioned regarding the budget and the allocation of the funds to Monstat.

### **Census calendar**

20. Since July, following the recommendations of the first mission, the existing time table has been expanded and is now regularly updated. However, the mission noticed that if the planning of the enumeration phase was correctly prepared, the data processing phase was not enough planned. For example, the data capture staff should have been hired and trained before the end of the enumeration in order to be ready to capture the questionnaires as soon as they are back to Monstat. One of the characteristics of a census is the succession of steps that need to be developed in parallel, which makes planning difficult.

### ***Recommendations***

21. It is highly recommended to plan all the phases of the census, including data processing and dissemination.

22. The management of Monstat should undertake jointly a training in project management to master the principles and methods of planning. This would help to acquire a common culture of planning in the office.

### **Management structure / Administrative organization**

23. Since the last mission, a new Director General was appointed and the former one took the responsibility of the census project. This helped to give a better structure to the preparation of the census.

24. The sharing of responsibility between Monstat and the municipal commissions shown its limits in the field. On the one hand, the municipal commissions have a role of overall control of the census, as representative of the citizens. On the other hand, they have a technical role to facilitate the census by offering premises, vehicles or help to convince non-respondents. They also bring their knowledge of the territory, which is invaluable. But these two roles are mixed and unclearly defined. For example, the members of the municipal commissions have no access to the questionnaires and some of them complained that they could not really control the enumeration. In most cases, members of the municipal commissions did not provide tangible input apart the selection of enumerators. This created some tensions in comparison with the hard work provided by enumerators, municipal instructors and state instructors.

### ***Recommendations***



25. For future censuses, Monstat should come up with an administrative structure more operational. The municipalities are indispensable in the census enumeration: they know their territory, they have some authority on the population and they can provide technical support such as premises. They should be more involved in the delineation of the enumeration areas to ensure that their size is homogeneous. Municipalities could also provide to the State Instructors administrative sources, for example list of address for waste collection, to ensure a complete coverage of the dwellings.

26. The role of overall control of the operation, as representative of the population, could be played by a small commission of members of the local parliament, as they are elected, chaired by the mayor. The role of this commission would be to make sure that the operation is going smoothly in the municipality according to the Law, to make sure that the municipality devotes the necessary resources to the census, and to sign the final counting documents. The municipality could appoint one or several "Municipal Coordinators" according to the size of the municipality to play the technical role: provide premises and technical equipment, to check the delineation of EAs, prepare the selection of enumerators and municipal instructors...

### **Contracting out**

27. Monstat could finally conduct on time three procurement procedures: for printing, for stationery and for public campaign.

### ***Recommendations***

28. Procurement has long been a subject of concern regarding the preparation of the census. To avoid similar stress for future operations, it is reaffirmed that all the possibilities of launching the procurement procedure even before the formal adoption of the budget should be explored, especially some provisions of the article 27 of the law on procurement (see report of the 2<sup>nd</sup> mission).

### **Quality assurance programme**

29. An overall strategy for census quality assurance was developed with the help of an expert. Field work quality assurance programme included a list of controls to perform by the municipal instructor as well as the state instructor (see below).

### **Administrative report**

30. An outline for the administrative report was developed but the actual report was not yet started. It is strongly recommended to report after each phase when the memory is still fresh and not wait the end of the operation.

### **Census communication activities: user consultations, census publicity and promotion of census products**

31. Monstat didn't consider outsourcing the elaboration of the strategy and its implementation, but developed a comprehensive communication strategy on its own. The plan included the organisation of press conferences and the use of a slogan, leaflet, posters, billboard, TV and radio spots.

32. Monstat developed internally a logo and could design all documents without waiting for the communication campaign:



#### ***Comments***

33. Even though the communication campaign was poor in terms of number of distributed leaflets and number of posters, it was observed an almost full knowledge of the census operation from the population. The logo brought a very dynamic image of the census, and the mission could notice in the field that respondents were well informed about the census, thanks also to the discussion promoted by media and political parties on the topics related to ethnicity, religion and language. However, due also to this factor, the population was not always aware about the main objectives of a population census, which is not to obtain data on sensitive topics such as ethnicity, religion and languages used by individuals.

#### ***Recommendations***

34. It is strongly recommended to make an evaluation of the various media used and identify their impact. In particular, the sending of messages via SMS is a new promising media.

#### **Questionnaire design**

35. The questionnaires were prepared in all languages recognized in the constitution (Serbian in Cyrillic, Croatian, Bosnian, Albanian, Montenegrin) plus languages spoken in the country English, Russian. Only the Montenegrin version was used to collect data, and the Albanian version in areas inhabited by the Albanian population.

36. Only the individual form had a carbon copy given to the interviewed persons after the signature of the form. The head of households (or the person interviewed for the compilation of the questionnaire for the dwelling and households), was asked to sign also the form dwelling and households. This procedure was reported on the leaflet prepared in the framework of the communication campaign.

### *Comments*

37. The questionnaires were in general easy to use and well designed. However, the following observations were made in the field:

- a. The carbon copy is cumbersome to make and generate a waste of paper. Most of the persons enumerated did not understand the use of it. In addition, some cases were reported that a member of a family looked at the answers given of another member. There was also a risk that carbon copies would be collected to produce unofficial "results". Despite the fanciful character of such assertion, it nourished some rumours during the enumeration.
- b. Dwelling form (P2), question 3: use of the dwelling. In the case of empty dwellings, the enumerators were frequently confused to find the correct item among the very detailed possibilities: "Use for housing only" or "temporarily vacant", or "Abandoned", or "For seasonal use, in summer house" or "In family house", or "In other type of building". This classification mixes the use of the dwelling with the category and should be revised. In addition, no item is provided for dwelling occupied during the week by person working in a place but enumerated with their family in another place.
- c. Dwelling form (P2), question 14: Year of construction: Period of construction (for example by decade) would be better because dwellers usually don't know exactly the exact year of construction.
- d. Individual form (P1), question 21: "*Has the person performed any regular or usual work for salary / profit (in cash, goods or services) during the period from 25-31 March 2011, at least one hour or has the person performed any kind of non-paid work (in enterprise, professional practice or on agricultural farm owned by any member of his/her family)?*", even in line with the ILO recommendations, is too complex and should be rephrased. Instructions should be given to enumerators to follow a step by step protocol for this question.
- e. Individual form (P1), question 28: Industry. Industry is a notion difficult to understand by laymen, and examples should be given in the questionnaire;
- f. Individual form (P1), question 32: Disability. The question is written as follows: "Does person have any difficulties or disability in performing every day's activities because of long term illness, invalidity or old age? (Y/N) and if the answer is Yes the type of disability is asked in the following question. This way will probably lead to underestimation of disability as persons spontaneously don't declare that they have light disabilities, such as difficulties to seeing. The formulation proposed by the Washington Group is more appropriate: for each kind of disability, for example seeing, the person is asked if she has no difficulty, some difficulty, or great difficulty to seeing, even using glasses.
- g. The structure of the individual questionnaire is not logical and includes many skips. For example, persons less than 15 years old are not asked questions 9 to 11,

but have to answer to questions 12 to 20, then skip questions 21 to 29 on employment, and then answer to questions 30 to 35. The observation of interviews as well as the control of questionnaires showed that this entailed mistakes and corrections, especially during the first days of the enumeration. The structure should be organised in a way that persons living abroad stop first, then persons less than 15 years old, then persons not economically active, and finally persons economically active.

## **Printing**

### *Maps*

38. Maps were printed in Monstat. It was observed that enumerators were equipped with a map showing their assigned area.

### *Questionnaires and instructions manuals*

39. A Local printing company was in charge to print census materials and delivering to municipalities. The CMC prepared the packages for field activities locally, for enumerators and for training. Maps were provided directly by Monstat to Municipalities together with the Real estate Agency.

40. The number of printed questionnaires in Albanian is about 10,000 for households (P2) and about 40,000 for individuals (P1).

41. The printing of the census questionnaires and instructions manuals was properly carried out. A reprint of the questionnaires in Albanian could be done in only one day.

## **Training preparation**

42. The preparation of the training was completed in January and the training materials were ready on time.

## **MAPPING**

43. As described in the first report of the mission, MONSTAT used for the population census the same maps prepared for the 2010 agriculture census. EA maps were re-sized when the estimated number of households was largely above (or largely below) 100 households for EA. Buildings were not identified or coded. Maps were not updated prior to the enumeration.

44. The resize of EA boundaries was carried out by MONSTAT for about 400 EAs. The work was implemented by municipalities and the Real State Administration, under supervision of MONSTAT.

45. Even though the census law prevented municipalities from deciding changes of settlement boundaries until the enumeration period, this happened in few cases, as already reported after the second mission. As recommended, MONSTAT cooperated with municipalities to limit as much as possible such cases, and to adapt EA boundaries to the changed boundaries of Settlements when deemed necessary.

46. All the enumerators observed were equipped with an EA map. The majority of the maps observed did not allow the identification of buildings to be visited, especially in rural areas, where the scale of the maps was at a smaller scale than needed. The absence of building boundaries and building codes limited the use of maps for the monitoring of the coverage during census operations, as reported in the previous mission reports.

47. In some cases, a confusion was observed made by enumerators to report on the forms the code of their assigned EA. This was due to the use of the same map layout used for the agriculture census, with an EA code reported on the map. The EA code to be used for the population and housing census was added by Monstat on the right side of map layout. This eventuality was mentioned in the first mission report. However, it is expected supervisors have corrected those errors.

### ***Recommendations***

48. As already recommended in the previous mission report, Monstat should develop inside the Institute specific competencies for the use of the GIS census database implemented by the Real Estate Administration. This would include the establishment of a small GIS and Cartography Unit composed of at least two staff, the implementation of a training programme for the appointed staff, and the development of specific activities on the spatial analysis of census data and its dissemination (thematic mapping, census atlas, web applications).

## **ENUMERATION**

### **Staff selection and training**

49. The mission expressed concerns in the previous reports on the fact that the training would be conducted exclusively by the Municipal Instructors, less skilled than the State Instructors. Monstat managed in order that the State Instructors were systematically present during the training of the enumerators, to control and to provide additional inputs when needed.

### **Organisation, and observation of field operations**

50. The mission observed the enumeration during the whole period of 15 days. The mission visited each of the 21 Municipalities of Montenegro during census operations. At the beginning of each visit in municipalities, a meeting was organised with the Municipal Commission. The objective of the meeting was to assess a number of points as reported in the table in Annex 1: composition of the commission, selection process, preparation and cartographic issues, premises, public attitude, and others comments the Commission would like to report. In each municipality, census premises were visited, state instructors and municipal instructors met, and

a number of interviews made by enumerators to the households were observed. At least the documents of 2 enumeration areas were systematically controlled by the members of the mission in each municipality.

51. In total, 52 dwelling interviews were observed by the mission, representing 173 persons. The mission paid special attention to observe a large variety of situations, such as family households, old persons, refugees camps, hospitals, religious institutions, as well as various ethnic groups population: Montenegrin, but also Albanians, Bosniaks, Croatians, Muslims, Romas, Serbs... The detailed tables are reported in Annex 2. The following points were controlled:

- a. Did the household accept to be enumerated?
- b. Did the enumerator introduced him/herself properly?
- c. Were the persons interviewed aware about the census?
- d. Did the enumerator copied from the map the correct EA code on census forms?
- e. Did the enumerator established coverage of usual residents?
- f. Did the enumerator informed that it is possible not declare ethnicity, religion and language?
- g. Did the enumerator asked the questions as written in the questionnaires?
- h. Was the questionnaire filled in with a ball-point pen?
- i. Was the questionnaire signed and a copy given to the person interviewed?
- j. Number of persons in the household
- k. Total number of listed persons in P2 columns 10 and 13 (temporary absent)
- l. Interview duration

52. The overall impression is that municipalities prepared very carefully the census and offered good premises to the census staff. Usually, the municipal parliament room was provided, and several other premises in order that enumerators and instructors could work close to their area. The mission controlled systematically that a special room was dedicated to the storage of filled questionnaires and that only the State Instructor had the keys.

53. The good cooperation and spirit, within the Municipal Commissions and with the State Instructors was noted in each municipality.

54. The selection process was conducted following the recommendations of Monstat, with usually priority given to unemployed persons. The selection procedure included also a test to be passed after the delivered training.

55. Regarding the situation of employment in the country and the payment proposed, many candidates applied which allowed select the best ones. The mission could witness the overall good level of the municipal instructors and enumerators, mostly students.

56. Some problems were reported regarding the cartographic preparation, especially regarding the small size of some EAs in terms of dwellings/population which led some enumerators to resign as they would receive very few.

57. The municipalities reported some additional expenses to provide vehicles to enumerators in charge of remote areas. Monstat gave assurance that all additional cost will be covered.

58. The observation of interviews showed a good application of the instructions given to enumerators. The interview protocol was carefully followed. Only the information that the

answer to the three questions (Ethnicity, Religion and Mother tongue) was optional was not systematically given, some enumerators preferring to tell it only if the person had some reluctance to answer. The average duration of interviews was between 30 to 45 minutes per dwelling.

59. As recommended, Monstat developed a strict protocol for the supervision and monitoring of field operations, with a set of indicators to be filled by the municipal instructor and the state instructor. A manual in Montenegrin and English languages “Methodology for preparation, organisation, and conducting the census” was prepared by Monstat. It includes a) the census law; b) a general section on objectives, method and period of enumeration, duties for respondents; c) a section on the organisation of field activities; d) guidelines for the enumeration; e) census forms with an example on how to fill in the forms.

60. Tables for the management of census logistics (number of enumerators, census materials such as number of questionnaires delivered, etc.) were prepared for each Municipality. Municipal Census Commissions according to the law should have included minimum 5 components. The Municipal Commission were composed of at least 7 members (9 for Podgorica). Monstat representatives were not member of the Municipal Commissions. The role and tasks of the Commissions were defined in the above mentioned manual. Municipal Commissions reported to Monstat.

61. There were in total 70 State Instructors (in Podgorica 15) plus a total of 4 reserve instructors, and 461 Municipal Instructors, an average of 6.5 Municipal Instructors for each State Instructor. State Instructors were considered by Monstat divided into two sub-groups, Senior and Junior (new recruited Monstat staff). Monstat kept regular meetings mainly with senior State Instructors who are in charge to coordinate junior Instructors. There was one Senior State Instructor for each Municipality. The total number of EAs in the country was 3,884. One Enumerator was appointed in each EA.

62. In no cases, double enumerators were appointed in one EA (the Montenegrin language is well understandable by all population, with the exception of aged Albanian people in some remote areas). Therefore, the questionnaire was printed also in Albanian language (about 40,000 copies of the enumeration form and about 10,000 copies of the questionnaire for dwelling and households). The decision to print and use the Albanian version of the questionnaire was taken by Monstat just few weeks before the commencement of data collection operations. This decision will most probably improve the overall quality of census data in areas where the Albanian forms will be used, but at the same time will create potentially additional burden for processing such forms.

63. Each enumerator was equipped with a set of census materials (questionnaires, the booklet “Kontrolnik” P3 with a total of 225 rows, one for each household, map, etc.). Enumerators were mostly selected from the area they will work, which made easier the acceptance by the population, including language issues, as well as a good coverage of the EA.

64. The monitoring of the collection of census data started on 2nd April. Census Commissions, State Instructors, Municipal Instructors and Enumerators were instructed by Monstat to visit maximum 5 households, in order to ensure more time for the supervision of the compilation of questionnaires and provide more training to enumerators if needed.

65. At the end of the enumeration, the aggregated numbers of dwellings, households, persons..., are reported in a special form (P9) by the Municipal Commission and the State Instructor. The State Instructor reports the data in an Excel sheet and transmit it to Monstat where they are integrated in a database.

66. Each enumerator received 0.5 Euro for each empty dwelling form, 1 Euro for each occupied dwelling form, and 0.7 Euro for each individual form. Municipal Instructors received 0.07 Euro per questionnaire.

### *Comments*

67. It was noted that a specific procedure for enumerators to monitor the coverage of the EA was missing. No forms were provided to enumerators for tracking the dwelling units in which was not possible to access, and the number and dates of the second and third visits. It was observed that enumerators drafted on a notebook a plan of the buildings to record visited and not visited dwelling units. The fact that enumerators were usually from the same areas of their residence helped them to remind in which housing units they have to come back. However, the absence of such procedures for classifying visited and not visited housing units, may pose an issue of under-enumeration.

68. It was observed that over-enumeration was sufficiently avoided by listing in separate columns household members residing abroad or living in other parts of the country. Those persons were not enumerated with the individual questionnaire and not considered as usual resident population.

69. The possibility to report for other members of the household, if making easier the enumeration, poses some problems:

- a. It allows a representative of the household to answer for another person even in the presence of this person. To ensure accuracy, but also as a matter of respect, the answers should be obtained exclusively from the person and from another member only in case of absence (or for children). The mission assisted to some interviews where the husband was reporting for his wife whereas she was present in the room. Monstat should consider this point in a gender perspective;
- b. Reporting for absent household members is not strongly controlled. Linked to the Montenegrin culture, it may happen, that parents still consider their children as members of the household, even if they are adults and live in another place. In addition, the place of residence of the child is not asked. The only situation where the name of the municipality can be known is if they works or study elsewhere, but in any case the address is asked. Therefore, the only way to control that the child is not enumerated in another place is by the ID number, which is not systematically reported by the parents, or by the name, which is difficult to control as subject to misreporting.

70. The numbering of the dwellings is weird: dwellings are not numbered within the building but following a sequence. A more logical order should be adopted: EA – Building – Housing Unit – Person.

71. The remuneration given to enumerators is generally good in regard to the workload and the average wage in the country. However, some enumerators received very few as their EA was



small, even if in some cases it was very large and required a long time to interview the few spread houses.

### ***Recommendations***

72. It is recommended for further censuses to draw a list of dwellings to be enumerated the day before the enumeration starts. For that, the enumerator goes through their enumeration area in a logical order (for example going left from a starting point, in building starting from the ground floor and going left from the entrance...), and records the address and information on the location of each and every dwelling to visit. There is no need to contact the population for this task. This list will be used by the enumerator and supervisors to follow up the enumeration, to note the visits and appointments in order not to miss any dwelling. In addition, this list will give the number of dwellings to be enumerated, and then make the monitoring of enumeration easier.

73. It is also recommended to review the procedure for enumerating absent members of households. Firstly, to ask for the address where they stay elsewhere in the country during the week, and second to request a written authorisation from the person if she is older than a certain age (18?).

## **DATA PROCESSING**

74. When questionnaires are received from the field, they are processed by municipality. A first set of controls is performed to ensure completeness of the documents before data entry.

### **Data capture**

75. The application for key entry was developed and tested by a group of 20 persons, but not using real questionnaires. The application includes modules for entry, viewing and modifying.

76. Data are entered by municipality and by EA. The first operation is to capture the P3 form, containing the aggregated data for the EA (number of dwellings, of households, of persons...). The data are compared with the aggregated data from the P9 (see above). Then, the questionnaires (P1 and P2) are captured. There is no control in the application except control of the field values for each question. For open questions such as ethnicity, religion and mother tongue, the operator chooses in a list of possible answers already encountered. If the answer in the questionnaire is not found in the list, the supervisor will add this value in the list and the operator will be able to choose it. Missing data are captured with a special code (00 or 77).

77. The estimated data capture rate is 200 forms a day by operator. Therefore, around 5000 man-days should be necessary to complete the capture. Considering that Monstat intends to hire 112 operators working in 2 shifts, the data capture phase is expected to last around 45 days, that is to say 9 weeks. At the time of the mission, Monstat had not yet hired the operators. As Monstat decided to increase the number of operators in order to expedite the release of first results, special premises were rented for data capture, around 300 square meters, in a commercial mall. 25 computers were still to be procured before starting the operation, expected for the first days of May.

### ***Comments***

78. The navigation in the application, using only the cursor and not the mouse, is not very easy.

79. The choice to not include controls in the data capture application apart field values prevents from identifying keying errors.

80. Monstat should have anticipated the recruitment and training of data in order to start the data capture operation as soon as questionnaire were received from the municipalities. This was even more important in the context of high pressure on Monstat about the timeliness of release of first results.

81. The premises rented for data capture offer very good working conditions as well as the necessary security measures.

### **Coding**

82. The application for coding is now finalized. Coding concerns the following variables: level of education, occupation and industry. The steps are first try to find an exact matching, then approximate matching and then manual. 3 groups of coders are being set up for the 3 variables.

### ***Comments***

83. If the application is simple and functions well, Monstat did not estimate the workload in terms of man-days and had not a clear view of the timetable of the coding phase.

### **Data editing**

84. Monstat decided to conduct manual editing and imputation. The most obvious discrepancies and missing values (such as sex) will be identified and corrected during the data capture phase. After the capture and coding phases, automatic controls will be carried out in batch mode on the data base to list discrepancies among variables, within a record and among records within same households. An application will display the problematic records and specialized staff will be requested to correct manually the discrepancies, following a process as well as their own expertise based on the values of each variable. No imputation will be carried out for missing values, Monstat preferring release tables with non responses. After each phase of manual correction, the batch program is run again to detect new problems, and results proposed a new time for manual correction. Up to sixteen runs are expected.

85. This phase is expected to last two months with 20 staff working in two shifts.

### ***Comments***

86. Monstat took the decision of conducting manual editing instead of automatic edits based on the experience of former censuses, which results contain discrepancies that automatic editing did not correct. Nevertheless, and despite the small size of the country, manual editing represent two type of issues. The first is the delay in processing the data: 16 runs, two months. The second is more problematic, as manual edits may be biased as conducted manually. For example, there is a risk that staff correct data as they think data should be and erase real particularities of individuals. In addition, if the process is clearly defined, there it could easily be included in a computer application.

### ***Recommendations***

87. Monstat should monitor closely the likelihood of manual edits undertaken to avoid biases.

### **Processing control**

88. As recommended, Monstat set up a control process for data capture. After an EA is captured by an operator, it will be controlled randomly by a supervisor. Each operator has an identification number in the system and will be controlled individually. No control process was reported for coding.

89. In order to assess the quality of the data processing, the mission proposed to conduct in June a random control by selecting randomly questionnaires and comparing with the data in the final database.

90. A backup was planned every day on the servers and a physical backup every week.

### ***Comments & recommendations***

91. The control by a supervisor is not as effective as capturing by another operator and then comparing the two captures by a supervisor. In addition, coding should be controlled too, as the variables are complex to code.

92. The expert recommended a daily physical backup, stored in another location.

## **DISSEMINATION OF THE RESULTS**

93. Monstat, under the pressure of some political parties, eager to know the census results in terms of ethnicity, religion and mother tongue, accepted to release a first set of results by July 15. However, Monstat did not develop a complete timetable of the dissemination of census results, including dates and the description of the data to be released.

### ***Recommendations***

94. The mission strongly recommended to Monstat to master the timetable of the dissemination to lower the external pressure. Firstly, it was recommended to disseminate the first estimates of the population of the country and the 21 municipalities, from the data received from the field. These data have been carefully verified by the State Instructors, and could be presented rounded at one hundred to avoid confusion with the final results. It is important to remind that the first result of a census is the population.

95. Secondly, it was recommended that the release of July 15 present the first results in terms of age and sex, and not only on terms of the three sensitive questions. Here too, it is important to educate the population and the media that the first main results of a census are demographic. In particular, the comparison of the demographic growth of the municipalities should lead to deeper analysis of internal migrations and movement of population from the municipalities of the North of the country to the capital city or the South.

96. In addition, the cooperation with the municipalities for the enumeration is an asset that Monstat should develop. The mission could notice that there are few expectations regarding the

results of the census from the municipalities. It shows the need for educating the municipalities about the use of census results for their policy management. Monstat should develop a programme of dissemination specifically targeting municipalities. A short document, presenting in a user friendly way the main results for the municipality (small tables, graphs and maps) is a good introduction to the wealth of information a census can provide. Then, Monstat could organise systematic meetings with the municipalities to present the results and to better understand the needs in order to propose appropriate products and services, such as on-request tables, maps...

## **EVALUATION OF THE RESULTS**

97. A Post Enumeration Survey (PES) will be conducted immediately after the census enumeration to estimate the coverage of the census and some content errors. Around 50 EAs will be sampled (1.5%), and every household listed with the number of members. In one on ten households, each member will be enumerated and a subset of census questions asked. The PES will be conducted with the same reference date of the census.

98. The methodology was revised during the mission and recommendations reiterated. For example, it was advised to sample the 10% households directly and not from the census control list. This would violate the necessary independence between the census and the PES. For that, it was proposed that the PES interviewer draw a list of the dwellings of the EA before starting the interviews.

99. The matching will be carried out manually by the State Instructor with the participation of one member of the municipal commission, and the PES interviewer. The matching will take place in the municipality because the questionnaires from the census will be still in the municipality. The PES is expected to last only 5 days.

### ***Comments***

100. Since the last mission, the methodology has been developed but some problems remain in the conception.

101. To hire municipal instructors as PES enumerators poses two problems: even if they don't work in their own area, they may work in the same municipality. Will they be enough independent, especially if they are among the regular staff of the municipality?

### ***Recommendations***

102. Monstat should hire non-municipal staff as PES enumerators. For example, good census enumerators from another municipality, of professional Monstat interviewers, or Monstat staff.

## **ANALYSIS OF THE RESULTS**

103. As part of the dissemination strategy, a first programme for analysis was initiated. Since the last mission, no update was made on this step, priority being given to the enumeration phase.

## **V. Annex 1: Assessment of the Municipal Commissions**

Municipality	Population 2003	Composition of the Commission	Selection Process	Cartographic preparation (maps, EA delineation)	Public acceptance	Premises	Others	Comments
Podgorica	169132	leaders of political parties from the ruling local coalition and from the opposition, and administrators of the local government. 9 members as two special districts in the city (Golubovci and Tuzi)	86 Municipal instructors 719 enumerators. In addition to the criteria given by Monstat, priority was given to unemployed persons	Maps revised with municipal technical staff prior to the enumeration. No problems reported.	Reported as full.	Very good. 26 centres to offer proximity.	Mayor would have expected earlier preparation. Results: better view of illegal constructions and analysis of migrations.	Opposition representatives mention the possibility to process first results in 2003.
Cetinje	18482	leaders of political parties from the ruling local coalition and from the opposition, and administrators of the local government. Academic background, skills and experience was taken into consideration.	MI: 51, 21 recruited + 1 reserve Enumerators: 373 applicants, 178 recruited + 9 reserve. Priority to unemployed	No problems reported.	Reported as full.	1 main premise inside the Municipality building + 6 small premises distributed in the municipality	Additional expenses due to remote areas	
Bar	40037	In accordance with recommendations.	Municipal Instructors: 123 applicants for 32 selected + 2 reserve  Enumerators: 600 applicants for 274 hired + 14 reserve. Attention paid to ability to speak Albanian and Roma for some EAs	No problems reported.	Reported as full.	1 main premise inside the Municipality building		Opposition representatives expect fast release of results.
Ulcinj	20290	In accordance with recommendations.	Municipal Instructors: 12 selected + 1 reserve  Enumerators: 266 applicants for 100 hired + 5 reserve.	No problems reported.	Reported as full.	1 main premise	Problem of the translation in Albanian, but Monstat reacted fast.	

Municipality	Population 2003	Composition of the Commission	Selection Process	Cartographic preparation (maps, EA delineation)	Public acceptance	Premises	Others	Comments
Budva	15909	In accordance with recommendations. Include the Secretary of Finance.	Municipal Instructors: 63 applicants, 19 selected + 1 reserve Enumerators: 213 applicants for 159 hired.	Some enumerators resigned due to the small size of their EA	Reported as full. Members of the MC participated in TV/Radio shows	1 main premise inside the Municipality building	Some financial problems reported	
Tivat	13630	In accordance with recommendations.	Municipal Instructors: 37 applicants, 8 selected + 1 reserve Enumerators: 142 applicants for 72 hired + 4 reserve.	Some very small EAs	Reported as full. Members of the MC participated in TV/Radio shows	1 main premise inside the Municipality building (brand new)	Excellent cooperation with SI reported. Use for municipal planning	
Kotor	10066	In accordance with recommendations.	Municipal Instructors: 65 applicants, 20 selected + 1 reserve Enumerators: 235 applicants for 163 hired + 8 reserve. Priority to unemployed	No problems reported.	Reported as full.	1 main premise	Mayor welcomes that Monstat is in charge of publishing statistical results. Stresses the importance for municipal development	
Herceg Novi	33034	In accordance with recommendations.	Municipal Instructors: 24 selected + 1 reserve Enumerators: 198 selected + 10 reserve. Priority to unemployed	No problems reported.	Reported as full.	1 main premise in the Municipality building and 6 other premises.	President mentions the possibility to process first results in 2003 and request fast release from Monstat.	
Danilovgrad	16523	In accordance with recommendations. Members with experience of the previous census.	Municipal Instructors: 66 applicants, 16 selected + 1 reserve Enumerators: 333	No problems reported.	Reported as full.	1 main premise		

Municipality	Population 2003	Composition of the Commission	Selection Process	Cartographic preparation (maps, EA delineation)	Public acceptance	Premises	Others	Comments
			applicants for 137 hired . Priority to unemployed					
Nikšić	75282	In accordance with recommendations.	Municipal Instructors: 375 applicants, 46 selected + 2 reserve  Enumerators: 418 hired + 20 reserve.	Some enumerators refused to go to small remote EAs	Very good. Only 5 cases of refusal. Will be visited by members of the MC	1 main premise in the Municipality building and other premises.	Member of opposition declared that Monstat has influenced people to not declare their ethnicity. If Monstat take more than 1 month to release the results, would suspect manipulations	The majority of the members supported the organisation and praised the good collaboration with Monstat
Plužine	4272	In accordance with recommendations. Members with experience of the previous census. Head of Office for unemployment member.	Municipal Instructors: 19 applicants, 5 selected + 1 reserve  Enumerators: 115 applicants for 37 hired + 1 reserve. Priority to unemployed	No problems reported.	Reported as full.	1 main premise in the Municipality building	Some additional expenses for remote areas	
Šavnik	2947	In accordance with recommendations.	Municipal Instructors: 22 applicants, 8 selected + 1 reserve  Enumerators: 67 applicants for 48 hired + 3 reserve.	Some small remote EAs	Reported as full.	1 main premise in the Municipality building	Some financial issues: some enumerators will receive very few due to the small size of their EA	
Žabljak	4204	In accordance with recommendations.	Municipal Instructors: 18 applicants, 6 selected + 1 reserve  Enumerators: 140	Some small remote EAs	Reported as full.	1 main premise in the Municipality building	Some additional expenses for remote areas  One member	



Municipality	Population 2003	Composition of the Commission	Selection Process	Cartographic preparation (maps, EA delineation)	Public acceptance	Premises	Others	Comments
			applicants for 42 hired + 3 reserve.				deplores that Monstat seems to not trust the MC as refuse the right to look at the questionnaire	
Pljevlja	35806	In accordance with recommendations. 1 member staff of local municipality	Municipal Instructors: 160 applicants, 33 selected + 2 reserve  Enumerators: 914 applicants for 239 hired + 10 reserve.	No problem reported. Distribution of questionnaire was wrong due to incorrect estimates	Very good. Very few cases of refusal. MC will visit	1 main premise in the Municipality building	Slow fund transfer from Monstat noted	
Bijelo Polje	50284	In accordance with recommendations. Members with experience of the previous census. Vice Pdt was Pdt of the MC in 2003.	Municipal Instructors: 300 applicants, 29 selected + 1 reserve  Enumerators: 1056 applicants for 289 hired + 2 reserve. Priority to unemployed	No problems reported. The few problems were solved with the local cadastre	Very good.	1 main premise	Pdt outlined differences between law and instruction given by Monstat Director regarding access of the MC to the questionnaire.  Opposition members deplored that first results on ethnicity will not be processed by the MC, and the fact that citizen living abroad will not be counted in the population	Despite the long discussion about the access to questionnaires, the MC showed responsibility regarding the conduct of the census

Municipality	Population 2003	Composition of the Commission	Selection Process	Cartographic preparation (maps, EA delineation)	Public acceptance	Premises	Others	Comments
Berane	35068	In accordance with recommendations	Municipal Instructors: 103 applicants, 22 selected + 1 reserve Enumerators: 895 applicants for 190 hired + 10 reserve.	No problem reported	Reported as full.	1 main premise	A member outlined the impossibility to check the material without access to the questionnaire	
Andrijevica	5785	In accordance with recommendations	Municipal Instructors: 20 applicants, 6 selected + 1 reserve Enumerators: 156 applicants for 48 hired + 2 reserve.	No problem reported	Very good. Very few cases of refusal. MC will visit	1 main premise in the Municipality building	Discussion about the possibility for the MC to access to the questionnaire and to process the first results	Very positive discussion
Plav	13805	In accordance with recommendations	Municipal Instructors: 60 applicants, 9 selected + 1 reserve Enumerators: 330 applicants for 76 hired + 4 reserve.	Some problems at the beginning solved in the field with the SI. Some empty EAs	Reported as full.	1 main premise	Member representative of Albanians deplored that diaspora is not counted in the population	
Rožaje	22693	In accordance with recommendations	Municipal Instructors: 66 applicants, 11 selected + 1 reserve Enumerators: 524 applicants for 91 hired.	Some problems related to the size of EAs	Reported as full.	1 main premise		
Mojkovac	10066	In accordance with recommendations. President of the Local Parliament former staff of Monstat. Two members with experience of the previous census.	Municipal Instructors: 11 selected + 1 reserve Enumerators: 94 hired + 2 reserve	Some problems related to the size of EAs in mountainous areas	Reported as full.	1 main premise in the Municipality building	None	
Kolašin	9949	In accordance with	Municipal Instructors:	Some problems	Reported as	Ok. 1 main	Additional costs	

<b>Municipality</b>	<b>Population 2003</b>	<b>Composition of the Commission</b>	<b>Selection Process</b>	<b>Cartographic preparation (maps, EA delineation)</b>	<b>Public acceptance</b>	<b>Premises</b>	<b>Others</b>	<b>Comments</b>
		recommendations	39 applicants, 12 selected + 1 reserve  Enumerators: 208 applicants for 99 hired.	about the delineation of EAs	full.	premise	due to remote areas.	

## VI. Annex 2: Interviews observation

**Table 2: Number of interviews assessed, by municipality (in order of visit)<sup>1</sup>**

Name Municipality	Interviews assessed	Number of interviewed households members	Number of persons temporary absent	Interview duration (minutes, average if more than one interview)
Podgorica	6	18	3	33
Cetinje	2	6	0	32
Bar	1	5	0	45
Ulcinj	3	5	1	28
Budva	3	9	0	27
Tivat	2	4	0	27
Kotor	4	7	0	15
Herceg Novi	1	5	0	50
Danilovgrad	1	2	0	30
Nikšić	3	6	0	23
Plužine	1	4	0	35
Šavnik	2	6	0	40
Žabljak	2	9	0	37
Pljevlja	6	20	0	27
Bijelo Polje	9	43	2	38
Berane	2	7	0	32
Andrijevisa	-	-	-	-
Plav	1	4	0	30
Rožaje	1	6	0	35
Mojkovac	2	7	1	32
Kolašin	-	-	-	-
<b>Total observed</b>	<b>52</b>	<b>173</b>	<b>7</b>	

<sup>1</sup> No interviews were assessed in the Municipalities of Andrijevisa and Kolašin since the data collection operations were already concluded at the time of the visit from the mission.

## VII. Annex 3: Observed data during the interviews

**Table 3: Data observed during the 52 interviews assessed, in %**

The household accepted to be enumerated	The enumerator introduced him/herself properly	The persons interviewed were aware about the census	The enumerator copied from the map the correct EA code on census forms	The coverage of usual residents was well established by enumerators	The enumerator informed that it is possible not declare ethnicity, religion and language	The enumerator asked the questions as written in the questionnaires	Was the questionnaire	
							filled in with a ball-point pen	signed and a copy given to the person interviewed
Yes, 100%	Yes, 92%	Yes, 100%	Yes, 98%	Yes, 100%	Yes, 70%	Yes, 98%	Yes, 100%	Yes, 100%
No, 0	No, 8%	No, 0	No, 2%	No, 0	No, 30%	No, 2%	No, 0	No, 0