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Operational aspects of censuses**Communication, dissemination and documentation: Key results of the UNECE Survey on National Census Practices, and first proposals about the CES Recommendations for the 2020 census round****Note by the UNECE Steering Group on Population and Housing Censuses***Summary*

In early 2013, UNECE conducted an online survey among its member countries on national practices in the 2010 round of population and housing censuses. This document presents an overview of the main results of the survey with regard to communication and publicity (part I), dissemination (part III), documentation, metadata and archiving (part IV). Some first proposals about the preparation of new Conference of European Statisticians (CES) Recommendations for the 2020 Round of Population and Housing Censuses are also presented, with regard to communication and publicity (part II), dissemination, documentation, metadata and archiving (part V).

I. Communication and publicity — main results of the survey

1. An effective communication strategy together with far reaching publicity and information campaigns play an essential important role in ensuring the success of the census. This is especially so for those countries adopting a field enumeration methodology either wholly or in part where the general public is expected to actively participate in the census activities as respondents and, possibly, as temporary employees as part of either the field staff or the data processing operation. But even among countries adopting an entirely register-based approach where direct contact with the public may be minimal, communication with key stakeholders is nevertheless important to ensure that acceptable levels of quality for such components as relevance and accessibility can be achieved.

2. In the planning phases of the census, consultation with a wide range of stakeholders is necessary to ensure that user requirements are met, questionnaire design is effective, the methodology is accepted, working partnerships are forged, and that technical specifications are well understood.

3. During the operational phase, publicity and information campaigns are usually necessary to inform the public that a census is taking place and also to provide the necessary information to allow and encourage them to participate. Special attention is often given to identifying and targeting hard-to-reach population groups in order to ensure consistent levels of response across the country. In essence, the aim of these is to engage, educate, explain, and encourage, and (if absolutely necessary) enforce participation.

4. The questionnaire aimed to collect information on the key stakeholders involved in such communications, the scope and content of the campaigns, in and means and media of delivery. But the main focus was on those countries adopting traditional or combined methodologies where effective public information and publicity would be expected to be relatively more important. Attention here is, therefore, given only to such countries

A. Communications

5. Of the 39 responding countries that conducted censuses with a traditional or combined methodology, only five (13 per cent) reported that they did not carry out a strategic communications programme (see Table 1). All five (Bosnia and Herzegovina, Croatia, Cyprus, Georgia and Serbia) carried out traditional censuses, and it is difficult, therefore, to understand how the planning of these censuses may have been carried out effectively without the benefit of dialogue with users and other key stakeholders. Only one of these countries was in the European Economic Area (EEA).

6. More countries reported consulting with users on their requirements for information (88 per cent) and on the design of questionnaires (82 per cent) than on any other aspect of the census (Table 2). Two thirds of countries (68 per cent) consulted on the census methodology to be adopted, and a little under two thirds (65 per cent) on the enumeration of hard-to-reach populations. Half, or more than half, of the responding countries consulted on the design, content and dissemination of outputs (59 per cent) and on community liaison, outreach campaigns and language issues (50 per cent). Similar patterns were seen among the EEA countries expect that proportionately more consulted on outputs (82 per cent), and proportionately fewer on user requirements (76 per cent) and questionnaire design (72 per cent). It should be noted, however that there are likely to be many common elements in the consultation on “user requirements” and on the “design”, content and dissemination of outputs.

7. Surprisingly, perhaps, barely more than a quarter of countries (27 per cent) consulted on data quality issues (even fewer, proportionately among EEA countries, with just 14 per cent), although engagement on field operations and on confidentiality and/or statistical disclosure issues was a little more extensive (38 per cent in both cases). Almost a third of countries (29 per cent) have carried out a user satisfaction review or public opinion survey (or intend to do so), while barely one in ten (12 per cent) consulted with users on their post-census evaluation programme. Other *ad hoc* issues on which a number of countries consulted with stakeholders included, publicity, media monitoring, internet access, modernizing census system and harmonizing registers.

8. In an extensive communications programme, the Russian Federation, the United Kingdom and the United States consulted users and other stakeholders on as many of 10 of the issues specifically identified in Table 2, while four others (Estonia, France, Italy and Kazakhstan) consulted on eight. On the other hand countries such as Germany and Malta consulted on just two of the issues, and another six countries on just three.

Table 1
Communications and publicity campaigns

	Total	EEA countries	Traditional census	Register based census	Combined census
Communication strategy adopted					
Yes	34	19	25	0	9
No	5	1	5	0	0
No response	10	10	1	9	1
Publicity campaign adopted					
Yes	38	20	30	0	8
No	2	0	1	0	1
No response	10	10	0	9	1

Table 2
Aspects of the census on which countries consulted

Aspect	Countries responding*		EEA countries	
	Number	Per cent	Number	Per cent
User requirements	30	88	16	76
Questionnaire design	28	82	15	72
Census methodology	23	68	11	52
Enumerating hard-to-count and special populations	22	65	17	82
Design, content and dissemination of outputs	20	59	11	52
Language, community liaison and outreach	17	50	11	52
Field operations	13	38	8	39
Confidentiality and/or statistical disclosure	13	38	7	33
User satisfaction/public opinion survey	10	29	3	14
Data quality	9	27	4	19
Post census evaluation	4	12	2	10
Other issues	4	12	0	0

* Not including register-based countries

9. Table 3 shows those stakeholder groups with which the responding countries reported consultations. Not surprisingly — given the importance of the results of the census in shaping central government policy — all responding countries reported government departments and organizations as being among their key stakeholders. But not so with local government authorities or organisations, with whom two countries (Estonia and Turkey) reported no such consultation. For Estonia this is perhaps a little surprising given the wide scope of the content of its consultation programme as noted above.

10. Academic and education service providers are also generally regarded as an important user/stakeholder group with whom, again, all but two countries consulted (this time Germany and Malta did not do so). Other groups seen as key to the census process include those representing the ethnic/faith communities and the press and the media (both 63 per cent of countries consulted), and other public service providers (57 per cent). Surprisingly perhaps only 14 countries (40 per cent) reported engaging with health service providers, and only 15 countries (43 per cent) with disability groups.

Table 3

Key user groups and stakeholders consulted

<i>User group/stakeholder</i>	<i>Countries responding*</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Central government	35	100	19	90
Local government	33	94	18	86
Academics and education service providers	33	94	17	81
Ethnic/racial/faith communities	22	63	11	52
Press and the media	22	63	11	52
Other public service providers	20	57	8	38
Disability groups	15	43	10	48
Health service providers	14	40	4	19
Market researchers	13	37	6	29
Business, retailers and other commercial sectors	13	37	7	33
Housing groups/associations and the homeless	7	20	2	10
Other stakeholders	5	14	1	5

* Not including register-based countries

11. Some 13 countries (37 per cent) reported consultations both with businesses and the commercial sector and with market researchers; these two groups of users (though they are commonly regarded as single stakeholder group) are now increasingly seen as providing a potentially valuable market for census outputs, particularly in the lucrative field of geo-demographics and business insight. Consultations with bodies concerned with housing and the homeless were reported by only 7 countries (20 per cent).

12. A generally similar pattern emerged among EEA countries (as shown in Table 3).

13. Again, reflecting the extensiveness of their consultation programme, the Russian Federation, the United Kingdom and the United States, together with Bulgaria and Ukraine, consulted with all the groups identified in Table 3. And, again, Germany reflected its minimalist approach in reporting consultations with only central and local government organisations. Other key stakeholders not identified in the table included labour market

institutions (reported by Switzerland) and the general public (the Russian Federation). But with respect to this latter group, many countries will, of course, have engaged with the public indirectly through information regularly provided via their own national statistical websites.

B. Publicity

14. All of the countries that reported that they carried out a programme of stakeholder engagement also carried out a publicity campaign. In addition, so did Bosnia and Herzegovina, Cyprus and Serbia (Table 3 above). Of the responding countries, only Croatia and Switzerland did not do so. As noted above it may be hard to appreciate how these two countries were able to promote the data collection elements of their censuses without any publicity at all.

15. Countries that did reported on the methods and media that they used during their campaign included any type of announcement or information provided to the public. The results are shown in Table 4.

Table 4
Methods and media used in the publicity campaign

<i>Methods/media</i>	<i>Countries responding*</i>		<i>EEA countries*</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
National press and magazines	38	100	20	100
National radio	37	97	19	95
National TV	36	95	20	100
Regional or local press	36	95	18	90
Regional or local radio	35	92	17	85
Press conferences	35	92	20	100
Regional or local TV	34	89	17	85
Leaflets	33	87	19	95
Internet and social media	33	87	18	90
Posters	32	84	17	85
Paid advertising	31	82	16	80
Free advertising	28	74	17	85
Public meetings and events	27	71	11	55
Billboards	26	68	16	80
Call centre (telephone helpline)	26	68	11	55
School promotions	19	50	11	55
Community-based media	15	39	9	45
Audi tapes, CDs DVDs	15	39	9	45
SMS texting	9	23	3	15
Other promotions/activities	8	21	6	30

* Not including register-based countries

16. All of the 38 responding countries used the national press in their publicity campaigns, and all but Germany also used national radio. Neither Canada nor Turkey used any national TV.

17. Regional and local media were adopted only slightly less frequently in the publicity campaigns. Some 36 countries (95 per cent) used their regional or local press (only Cyprus, Spain did not), 35 countries utilised both regional and radio stations (only Cyprus, Germany and Spain did not) and all but four countries (Canada, Cyprus, Ireland, and Luxembourg) used local TV networks.

18. Some 31 countries (82 per cent) included a paid advertising element in their publicity campaign, and 28 countries (74 per cent) took advantage of free advertising opportunities; only Georgia, Kyrgyzstan, Romania and Turkey used neither methods.

19. Table 4 shows also the extent to which a range of other methods and media were adopted. It is particularly interesting to note the extensive usage made of the internet and social media for raising awareness of the census — all but five countries took advantage of these developing media, reflecting the increasing parallel use made of the internet to collect the census data. SMS texting, in contrast, was only used by nine countries.

20. Publicly distributed or displayed leaflets and posters, while they might represent old fashioned technology, still continue to provide effective means of publicising the census — more than four in five countries used them; and billboards, too, were widely used (by more than two thirds).

21. Of the 19 separately identified elements of the publicity campaigns listed in Table 4, all were used only by one country — Ukraine. This reflects the extensive communications strategy adopted generally in this country (and noted above). The campaigns in Malta and Montenegro (surprisingly perhaps) and in the United Kingdom and the United States (not so surprisingly) adopted 18 of the elements. On average 14 of the elements were used both across the UNECE region generally and among the 20 responding EEA countries. Turkey reported using the fewest — just seven.

22. Other events or promotional activities that were reported by countries, but not included in the specific elements listed in Table 4 included the setting up of mobile census help points (Italy and the United Kingdom), a public opinion survey (the Russian Federation), and an online video game (Census Man) and rap song (the United Kingdom). Indeed the United Kingdom's 2011 publicity campaign was its most extensive ever. There could have been few people who were not aware of the famous purple census bus that travelled the length of the country (see Figure 1).

Figure 1

The United Kingdom's big purple double decker bus



23. Information on the locations and sites where the publicity campaign was implemented is shown in Table 5. The most frequently used locations were: local government offices (reported by 31 of the 36 responding countries); colleges and universities (24 countries), reflecting the fact that older students tend to among the hardest-to-reach groups; and schools (23 countries). But the table shows that a variety of other locations — likely to attract different types of public presence — were used to promote and publicise the census. The pattern shown by EEA countries was broadly similar but with proportionately more use made of local information help points. In addition to those listed, several countries cited other types of locations, such as: shopping centres, markets and other commercial premises (Belarus, Malta, Poland and the United States); on public transport (Hungary and the Russian Federation); sports arenas (the Russian Federation); and on internet and Facebook sites (Hungary).

Table 5
Locations used in the publicity campaigns

<i>Location</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Regional and local government offices	31	86	19	90
Colleges and universities	23	67	11	52
Schools	23	64	11	52
Banks, post offices, police stations and other public use facilities	20	56	11	52
Stations, airports and seaport	15	42	5	24
Libraries	14	42	7	33
Local information help points	14	42	11	52
Places of religious worship	11	31	6	29
Factories and other workplaces	6	17	2	10
Bars, pubs, theatres and other places of entertainment	4	11	2	10
Other locations	9	25	6	29

24. Choice of location and the content of the publicity material often reflected the need to attract the attention of particular hard-to-reach groups. Table 6 shows particular target populations at which countries specifically aimed different elements of their publicity campaigns. As noted above, schoolchildren and students (particularly older students living away from home) are notoriously difficult to reach in a census with a traditional field enumeration. It is not surprising then that more countries identified this group than any other as a key target in their publicity campaign. But young men (particularly those in urban areas), the elderly, the infirm or disabled and recent immigrants also represented population groups that are generally hard to enumerate. Furthermore, many parents often forget to include recently born babies in their census returns, and consequently 47 per cent of countries reported targeting these particular families. Other groups targeting in this way included the homeless, people with literacy and language difficulties and inner city populations

25. A number of countries (10) reported that their publicity campaign had not targeted specific groups but had been aimed at the whole population. In contrast, seven countries reported that elements of their campaign had addressed each one of those groups listed in Table 6.

26. Furthermore nine countries reported that they had targeted other particular populations not specifically identified in the table. These covered such as groups as: workers (Estonia); the homeless (France); the press and data protection lobbyists (Germany — though the aim of such publicity was slightly different in that it was aimed at mitigating against specific objections to the census); immigrants in general (Greece and Italy); the internet users (Hungary); young mobile people, those providing care for the elderly and disabled, and people with literacy and language problems (Ireland); and inner city populations (the United Kingdom).

Table 6
Population groups specifically targeted in the publicity campaigns

<i>Target groups</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Schoolchildren and students	23	64	13	62
Particular ethnic/racial/religious minority communities	20	56	11	52
The elderly	17	47	9	43
Recent immigrants	15	42	8	38
Parents of very young babies	14	39	7	33
Young adult males	14	39	7	33
Visually impaired, deaf and other disabled	12	33	7	33
Other population groups	9	25	8	19

27. Countries were also asked to report what were, in general, the main aims of their publicity campaign, and in particular to identify the sequential elements of:

- (a) Engagement: to make people aware of the census;
- (b) Education: to tell people about the benefits (to them and to the country) of the census;
- (c) Explanation: to tell people what to do and when;
- (d) Encouragement: to persuade people who had not yet responded to do so;
- (e) Enforcement: to remind people about their legal obligation and duty to take part if they persistently refused to do so;
- (f) Expression of thanks for taking part; and
- (g) Extolment of the value of the data and to encourage people to use the published results

28. Table 7 shows to what extent these various aims were attempted. It can be clearly seen from this that countries put more emphasis into meeting those aims that helped manage the field operation part of the enumeration process — to engage the public, to educate them, to explain what they had to do, and to encourage response. More than four fifths of responding countries reported all these aims. Other aims were seen as less important perhaps. Fewer countries, for example, attempted to publicise the enforcement element of participation, either because there were no penalties for refusal to do so (as in the case of Slovakia for example, or because initial response was sufficiently high for such a campaign to be unnecessary. Additionally countries such as Bulgaria, Canada and

Portugal put much emphasis in their publicity on encouraging response online, and Germany was particularly concerned to send messages that would ensure public confidence in data protection.

29. And finally, the survey asked countries to report the slogans they used to accompany their publicity campaigns. These are presented (in their nearest English language translations) in Table 8. References to themes such as “the future” and “counting” remain as popular as ever. A number of countries whose censuses had not yet taken place had not decided on their slogan at the time of the survey.

Table 7
Aims of the publicity campaigns

<i>Aims</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Engage	34	92	17	81
Educate	35	95	20	95
Explain	33	89	19	90
Encourage	31	84	16	76
Enforce	21	57	13	62
Express thanks	24	65	13	62
Extol	14	38	5	23
Other aims	3	8	3	19

Table 8
Publicity slogans

<i>Country</i>	<i>Publicity slogan</i>
Albania	I am living in Albania
Armenia	Let's be counted for Armenia
Azerbaijan	Population census is the nationwide activity which serves every citizen of our country
Belarus	Census 2009: it is necessary for me, my family, my country!
Bosnia and Herzegovina	[Not yet decided]
Bulgaria	I am part of the census
Canada	Complete the census. It's the law.
Croatia	For the country is made of people
Cyprus	To know how many we are, what we are, and how we can better organise the future
Czech Republic	The future counts
Estonia	Everyone counts!
France	Population census: each one of us counts

<i>Country</i>	<i>Publicity slogan</i>
Georgia	[Not yet decided]
Germany	Census 2011 — Germany needs the modern census
Greece	The census begins! We all participate because we all count
Hungary	Respond for the future
Ireland	Make your mark with Census 2011
Israel	You were selected to influence.
Italy	The Italy of the future starts here
Kazakhstan	Everyone is important
Latvia	Answer for a common future
Liechtenstein	-
Lithuania	Where are you?
Luxembourg	We count on you!
Malta	Census 2011 — Your contribution counts
Montenegro	-
Poland	Enumerate yourself for the future of Poland
Portugal	Portugal counts with us. We count upon you
Republic of Moldova	[Not yet decided]
Romania	Because everyone counts!
Russian Federation	Everyone is important to Russia!
Serbia	Census is important for the future
Slovakia	Answers to our future
Spain	Your answer is the most important
Switzerland	-
Tajikistan	-
Turkey	We are surveying Turkey
Ukraine	Ukraine consists of everyone!
United Kingdom	2011 Census: help tomorrow take shape
United States	(1) It's in our hands (2) Ten questions, ten minutes

II. Communications and publicity — Proposals for the 2020 CES Recommendations

30. An effective communications strategy together with far reaching publicity and information campaigns play an essential important role in ensuring the success of the census. This is especially so for those countries adopting a field enumeration methodology, either wholly or in part, where the general public is expected to actively participate in the census activities as respondents and, possibly, as temporary employees as part of either the field staff or in the data processing operation. But even among countries adopting an entirely register-based approach, where direct engagement with the public may be minimal, communication with key stakeholders is nevertheless important to ensure that acceptable levels of quality for such components as the relevance and accessibility of outputs can be achieved.

31. In the planning phases of the census, consultation with a wide range of stakeholders is necessary to ensure that user requirements are met, questionnaire design is effective, the methodology is accepted, working partnerships are forged, and that technical specifications are well understood.

32. During the operational phase, publicity and information campaigns are usually necessary to inform the public that a census is taking place and also to provide the necessary information to allow and encourage them to participate. Special attention is often given to identifying and targeting hard-to-reach population groups in order to ensure consistent levels of response across the country. In essence, the aim of these is to engage, educate, explain, and encourage, and (if absolutely necessary) enforce participation.

33. This paper sets out the recommendations on this topic, previously covered in Chapter 1, Appendix VI and Appendix VII of the 2010 CES Recommendations. New text and significant revisions to the previous text are indicated in italics.

A. Section on publicity and the information campaign (previously in paragraphs 100–103 in the CES Recommendations)

34. Paragraph 100: In recent years, due to the complexities of collecting information from the population, the issue of effectively informing the population of the forthcoming census and explaining its purposes and tasks *have become increasingly necessary for the purposes of ensuring a good coverage and census and the collection of reliable information, particular in those countries adopting a field enumeration methodology either fully (as in traditional census) or in part (as a component of combined approach).*

35. Paragraph 101: The main task in any such publicity campaign, is the explanation of the importance of the census for the purposes of the depiction of society, the socio-economic development of the country, and the analysis of social, regional and national demographic change. The census has a large cultural and historical context, not only to the country itself, but also on a global scale. The campaign should highlight the fact that the census is an integral part of the country's official statistics program.

36. Paragraph 102: The main *(and perhaps most important)* practical goal is to encourage a positive attitude of the society to the census, prompting the inhabitants of the country to participate and give reliable information about themselves. *But a good communications and publicity campaign should encompass a wider set of messages, whose components might conveniently be summarised as the 7 Es:*

- (a) *Engagement: to make people aware of the census;*

- (b) *Education: to tell people about the benefits (to them and to the country) of the census;*
- (c) *Explanation: to tell people what to do and when;*
- (d) *Encouragement: to persuade people who had not yet responded to do so;*
- (e) *Enforcement: to remind people about their legal obligation and duty to take part if they persistently refused to do so;*

- (f) *Expression of thanks for taking part; and*
- (g) *Extolment of the value of the data in order to encourage people to use the published results.*

37. Paragraph 103: Important messages about when and how the census is going to be held, what is expected from the public, and how the public can find out more about the census need to be communicated. Public understanding of these aspects of the census will contribute to the smooth conduct of the data collection operation. The implementation of a communications and publicity campaign — before, during, and after data collection — is described in detail in Appendix VII.

B. The scope and design of consultation programs (previously Appendix VI of the CES Recommendations)

38. Consultation on a range of subject areas is an indispensable step in the preparations for the census and should be instigated early in the planning cycle. *In order to ensure that the census is fit for purpose, consultations should cover (where appropriate):*

- (a) Enumeration methodology;
- (b) *Identifying hard-to-count populations*
- (c) *Language, community liaison and outreach programs*
- (d) User requirements for census topics and questions;
- (e) Definitions;
- (f) Classifications;
- (g) Sampling;
- (h) Planned tabulations;
- (i) Geographic boundaries;
- (j) Processing;
- (k) Edit and imputation;
- (l) Confidentiality and disclosure control;
- (m) Coverage and data quality;
- (n) Design, content and dissemination of output and conditions of use of the data; and
- (o) *Evaluations.*

39. Such consultations will assist the census authorities in planning for a census that is as responsive as possible to the needs of users, and can also serve to foster a wider and more informed understanding of, and support for, census plans and activities. The ultimate goal will be a greater participation in the census enumeration.

40. The key user communities to be encompassed by such a program of consultation should include (either individually or collectively):

- (a) Central government departments and ministries;
- (b) Local government authorities;
- (c) Health service providers;
- (d) Public and utility services, such as energy suppliers, water authorities, fire departments, the police, etc;
- (e) Academics and education service providers;
- (f) Market researchers and other professional and/or private sector bodies; and
- (g) Other organisations or individuals representing the economic, social, and cultural life of the country.

41. *Many countries will want to include in the latter group organisations or bodies representing in particular, ethnic minority communities, religious/faith groups, the disabled, housing associations and those responsible for the homeless.*

42. *Other key stakeholders may include partners, with whom the Census Office collaborates for the provision of specialist services, and donors who may help fund elements of the census operation. It is also important not to overlook the role that the press and other media can play in the success (or otherwise) of the census. These, too, should therefore, be engaged wherever practicable.*

43. Consultation may be conducted through a variety of means and media. It can, for example, be carried out through formal and regular meetings of Advisory Groups or Working Groups comprising invited representatives of the user communities and census authorities, or more directly, by means of public consultation papers and questionnaires. *The increasing accessibility and use of census authorities' websites and social media such as Facebook, YouTube and Twitter enables such direct consultation and feedback to be carried out among a wide audience including individual organisations and members of the public alike. In addition, census authorities may wish to consider ad hoc public meetings or bilateral meetings as means of discussing either particular census issues or more general plans and developments.*

44. It is often more useful to conduct consultation separately with different types of user or stakeholder with common interests and perspectives, such as administrators, planners, policy makers, finance controllers, demographers or market researchers etc., rather than adopting a strategy of holding simultaneous meetings for all data users. Such combined meetings often prove frustrating because there are substantial differences among users and stakeholders in their technical background and expertise and in the level of their interest in the detail of the census content and operation.

45. A particularly key area for consultation with users will be in establishing the requirements for statistical data on each census topic. Though there will likely be a set of core topics by means of which National Statistical Institutes will want to collect information to fulfil international obligations (such as the European Union (EU) Census Regulations), many questions will be included to meet purely national and local requirements. To justify the inclusion of particular census topics, therefore, consultation

with the user community should aim to ascertain the business cases for a range of topics to be considered. The criteria for accepting these topics should be that:

- (a) There is a clearly demonstrated need;
- (b) Users' requirements cannot adequately be met by information from other sources;
- (c) Relevant questions should be shown, in tests, to have no significantly adverse effect on the census as a whole, particularly the level of public response; and that
- (d) Practicable questions can be devised to collect data that is sufficiently accurate to meet users' requirements.

46. In order to complete the preparatory work for the census and to carry out the enumeration, the Census Office will often have to expand its staff substantially and may require the co-operation of numerous government and non-governmental bodies to assist in providing personnel, equipment, supplies, accommodation, transportation or communication facilities to help in the census work. As a result, large numbers of temporary personnel may have to be trained *and/or specialist consultants recruited*, and the contribution of a diverse group of national and local organisations may have to be effectively mobilised.

47. Because of the particular importance of the role that local government authorities can play in planning and assisting in carrying out the census, National Statistical Institutes (NSI) may wish to establish special working relationships with such bodies through separate liaison mechanisms. Areas in which such partnerships can be beneficial to both the national Census Office and local authorities themselves are in:

- (a) Establishing mutually agreed address lists for enumeration (since local authorities and other stakeholders may often have access to alternative address lists than those generally available to census takers, particularly if there is no standard national address register established);
- (b) Local authorities appointing their own census liaison officer to act as a focus for ensuring that local needs and conditions are well understood by the census authority and that good communication with local census field staff is established;
- (c) Advising on the characteristics of local populations, particularly the location of hard-to-count groups (such as the elderly or infirm) in order to determine the most effective means of carrying out the enumeration at the local area level; and
- (d) Assisting with local recruitment of field staff, publicity and helpfulness

C. Implementation of a publicity and information campaign (previously Appendix VII of the CES Recommendations)

48. Public acceptance and cooperation is essential to ensure the success of the census. A large-scale publicity and information campaign is recommended to inform the population of the census and to explain its purpose. Implementation of the publicity program is best undertaken by experts in the field of public relations, advertising and sociology. Such expertise is frequently not found within the national statistical office itself, and it may therefore be appropriate to outsource some or all of this work. The publicity program may include:

- (a) a public relations campaign;
- (b) an advertising campaign;
- (c) monitoring of public opinion; and

- (d) monitoring of the mass media.

49. *Following the data collection phase of the census*, a second information campaign is necessary to inform the public about the census results, to demonstrate how the statistical data collected are being used, and to thank the general public for participating in the census. Reassurances can also be given that privacy and confidentiality continue to be respected. This will have the effect of strengthening the image of the national statistical service.

Defining issues and target audiences

50. The pre-enumeration census campaign is the main part of the program, and will have the strongest influence on the success of the population and housing censuses and on the quality of data produced.

51. An important first step is the identification of the specific census collection issues and the target audiences for the publicity.

52. The issues for the population and housing censuses should be defined on the basis of the existing situation of the country, taking into account the demographic, economic, ethnic, language and religious structure of the population. It is necessary to identify citizens' concerns to define the particular target audiences, as well as to select appropriate implementation methods to effectively reach these groups, inform them about the census, and foster a more positive attitude toward the census.

53. Some basic issues common to most countries relate to those individuals who:

- (a) refuse to participate in the census;
- (b) provide unreliable information about themselves; and
- (c) are difficult to locate, especially the more mobile youth.

54. Specific issues can include the following:

(a) Presence within the country of territories with unstable political and social conditions, where relations between the people and state authorities may be volatile;

(b) Presence of socially uncooperative population groups, their unwillingness to participate in public activities; and

(c) *Desire from lobby groups or individuals to express a protest against the census on the grounds of cost, perceived intrusiveness, confidentiality and/or for reasons of ethical considerations.*

55. In particular the public's concerns may include one or more of the following: that the census is/will be used:

- (a) for fiscal (taxation) purposes;
- (b) to build a government database;
- (c) for the oppression of minority national and religious groups;
- (d) to reveal illegal migrants; and

(e) identify and to control "anti-social elements", and persons on the outside of established society;

and that criminal elements will impersonate census-takers in order to gain access to property or personal information for the purposes, for example, of identity theft.

56. Target audiences can be both broad as well as specific. Some examples are given in the following paragraphs.

57. Social-demographic groups:
- (a) Population in particular age groups (young babies, children of school age and teenagers, youth under 30 years, elderly people);
 - (b) Social groups by employment type (school children, students, the employed and unemployed population);
 - (c) Professional groups (workers, businessmen, housewives); and
 - (d) Inhabitants of inner cities or other densely urban areas, large, and (in contrast) people living in remote rural areas.
58. Groups with concerns:
- (a) Persons with high incomes;
 - (b) Illegal migrants;
 - (c) Persons without a fixed or legal residence;
 - (d) *Unscrupulous landlords*;
 - (e) Persons working far from their residence and family, or who may find it difficult to participate in the census procedures due to long periods of stay at work; and
 - (f) Inhabitants of areas where there are ethnic or religious tensions or conflicts.

Main messages

59. There are a wide variety of potential issues that can affect a census publicity campaign, and identifying them is an important part of the before-census campaign, for example:
- (a) Privacy and confidentiality of information given;
 - (b) Whether the information provided is actually put to good use;
 - (c) Cost of the census
 - (d) Potential use of census information for non-statistical purposes;
 - (e) Requirement that name and address be included on the census form; and
 - (f) Concerns about potential government intrusion into private affairs.
60. There are several main messages that census agencies will need to communicate to the public in order maximize outcomes for the census, for example:
- (a) Privacy and confidentiality will be protected (there are penalties for enumerators and other staff who misuse information, the information will not be used for administrative purposes, individuals will not be identified in any published information);
 - (b) The census serves the public good as an important source of information to plan for the future;
 - (c) Filling in the form is a duty of the citizen, which will benefit the person's country and community;
 - (d) Cooperation is mandatory.
61. Care is necessary in finding the correct balance between these different messages. For example, an over-emphasis on the obligatory nature of the census may serve to reinforce negative perceptions that the census is an imposition by the state on the population, rather than an activity for the common good.

62. Many countries successfully develop a census logo and slogan. A simple but effective slogan and distinct logo can be used in all national and local advertising campaign and in all types of media, booklets, posters, brochures and souvenirs. The slogan and logo should be memorable and positively perceived. A logo and/or slogan that are well recognised from initial stages of the publicity campaign may serve to improve “brand recognition” for the census. The aim should be to encourage the respondent to may feel more reassured that the census is an inclusive and beneficial activity.

63. Examples of slogans used in the 2010 round of censuses in the UNECE region included:

- “The future starts here” (Italy)
- “Everyone counts” (Estonia)
- “We count on you” (Luxembourg and Portugal)
- “Help tomorrow take shape” (the United Kingdom).

Publicity campaign activities

64. The public relations campaign may represent interactions with: national and regional mass-medias; regional statistical institutes; municipal bodies, the general public and other organizations. *The following methods and media may readily be utilised in any part of the publicity campaign to reach one or more sectors of the community:*

- *National and local press and magazines;*
- *National, regional and local TV and radio;*
- *Community-based media*
- *Press conferences;*
- *Ad hoc statistical or scientific conferences/events*
- *Internet websites and social media;*
- *Leaflets, posters, billboards*
- *Call centres (telephone helplines) and local drop-in help centres*
- *Paid/free advertising*
- *SMS texting*
- *Audio tapes, CDs, DVDs*
- *School promotions.*

65. *Locations used to promote the census during the publicity campaign may include:*

- *Regional or local government offices*
- *Schools, colleges and universities*
- *Banks, post offices, police stations and other public user facilities*
- *Stations, airports and seaports*
- *Public libraries*
- *Local information help points*
- *Places of religious worship*

- *Factories and other workplaces*
- *Bars, pubs theatres and other places of entertainment*
- *Sports facilities.*

66. *Choice of location, the content of the publicity material and the mode of dissemination will often reflect the need to attract the attention of particular hard-to-reach groups. As noted above, schoolchildren and students (particularly older students living away from home) are notoriously difficult to reach in a census with a traditional field enumeration. But young men (particularly those in urban areas), the elderly, the infirm or disabled and recent immigrants also represented population groups that are generally hard to enumerate. Furthermore, many parents often forget to include recently born babies in their census returns. Other groups that may need to be specially targeted included the homeless, people with literacy and language difficulties and inner city populations.*

67. Paragraphs 17 and 18: Any advertising campaign should seek to ensure the greatest possible coverage of its audience. It should be based on specially developed creative concepts through rigorous use of expert testing including focus groups, keeping in mind the needs and concerns of various target groups and regional features. The census is not a “conventional” product or service, and innovative forms of advertising may need to be considered, particularly to target certain “problem” groups in the population.

68. Paragraph 19: As noted at paragraph 102 in Chapter 1 the publicity campaign can consist of a number of phased stages to time with different elements of the census operation. Initial engagement in the run-in to the census (but not too soon) should make people aware of the census, and to explain the benefits not only to the country as a whole but to the individuals themselves. As the enumeration phase come into operation the publicity messages should focus on explaining what people have to do and when and to encourage them to take part. Some (but not too much) emphasis should be given to mandatory nature of the obligation to take part, but far more attention should be given to public assurances about confidentiality and data security at this stage — though, of course, the importance of confidentiality should always be emphasised throughout their entire census operation. More emphasis can then be given to enforcement at the stage when the follow-up of non-response and refusal takes place after census day.

69. Census offices may then want to extend their communications program to include messages of thanks and appreciation to the general public for taking part in the census, and then in due course to go on to promote the availability of the census results and to encourage their use.

70. Paragraph 20: Introduction of central and regional television and radio channels at different stages depends on the publicity strategy developed. It is not essential to film professional actors in advertising clips or promotional films, although commercial advertising agencies, if employed, will tend to do so. It may sometimes, however, be more persuasive to use non-actors.

71. The languages used for advertising and other publicity media should reflect the variety of languages that may be spoken in the country or in specific regions. This will help to ensure inclusivity across a wide of minority groups in the population.

72. At the last stage, directly before the census, placement of direct publicity is possible — outdoor advertisement boards, posters, distribution of leaflets and souvenirs.

73. *Monitoring public* opinion can be carried out through social surveys, with increasing intensity. These surveys can provide information on:

- (a) Monitoring of dynamics of public opinion attitude to the census;

(b) Testing of advertising production; and

(c) Support the on-going publicity campaign with materials for press conferences, press releases, and direct advertising campaigns in response to emerging public attitudes.

74. *Monitoring of mass media* envisages an analysis of mass-media publications concerning the issues of the census. It is an on-going accumulation of information, detection and prevention of the development of negative published comments on the census, and preparation of adequate answers to negative reports and information.

III. Dissemination — main results of the survey

75. A census is not complete until the information collected is made available to users in a form and to a timetable that is suited to their needs. In short, it must be fit for purpose. The UNECE survey therefore investigated the form and other characteristics of the dissemination programme adopted by countries in the 2010 round.

76. Table 9 shows the various method of dissemination adopted. The questionnaire asked countries to select one main or primary method and to report on any other methods used in addition. The move from paper copy to web-based access is clearly in evidence. Over a third of the responding countries (19) use websites as the prime medium for static outputs either in html, pdf or Excel formats, but 30 other countries (60 per cent) use this medium as an additional means of dissemination. Interactive online databases provide the main means of dissemination in 15 countries. Use of the latter was more prevalent among the register-based countries over half of whom reported this as the primary method of dissemination. Only nine countries (eight of whom undertook traditional censuses) reported the continued use of paper copy publications as their main dissemination method, although it will be noted that 33 other countries (two thirds) continue to use these as a supporting medium. The results showed that of the nine countries that no longer publish outputs in paper format at all, six are register-based in which there is now less focus on the “census” as a specific and readily identifiable data source.

77. Within the EEA the pattern is a little different, with interactive online databases providing the prime means of dissemination for the greatest proportion of countries (43 per cent), and the EU Census Hub (not surprisingly) being used by over three quarters of countries as supporting media. Indeed, the proposed EU Census Hub (though not yet in operation) was reported by five countries as the prime method of dissemination; four are register-based countries, Belgium, Denmark, the Netherlands and Sweden, plus Romania. Interestingly, four non-EU/EEA member states also reported their intention to use the Hub to disseminate census data; these were the Balkan or former Yugoslav states of Albania, Bosnia and Herzegovina, Croatia and Montenegro — all with possible long-term ambitions to be part of the EU. More intriguing, however, is the seemingly anomalous fact that two EU member states (France and Luxembourg) reported that they do not intend using the Hub at all. But evidence from EU sources suggests that this is a reporting error. We hope so.

78. Results from the survey clearly indicate that different media suit different output products. Large amounts of detailed, small area data may only be suitable for dissemination in Excel files via the web (as reported by Ireland), whereas the United States’ online American FactFinder was reported as being the only data dissemination tool for both 2010 Census and American Community survey; it includes data downloads for datasets and the interactive requests for tables and geography. At the other end of the scale, access to anonymised, but still potentially disclosive, microdata files might be made available, for example, only to approved researchers in secure, controlled “laboratory” conditions.

Table 9
Dissemination methods used in the 2010 round

Dissemination method	Main method		Other methods	
	Number	Per cent	Number	Per cent
<i>All responding countries</i>				
Paper/hard copy publications	9	18	33	66
CD-ROM/DVD	0	0	26	52
Static web pages	19	38	30	60
Interactive online databases	15	30	21	42
The EU Census Hub	5	10	28	56
GIS web-based mapping tools	1	2	19	38
Other method(s)	1	2	6	12
<i>EEA countries</i>				
Paper/hard copy publications	3	10	20	67
CD-ROM/DVD	0	0	0	0
Static web pages	8	27	19	63
Interactive online databases	13	43	10	33
The EU Census Hub	5	17	23	76
GIS web-based mapping tools	1	3	12	40
Other method(s)	0	0	0	0

79. Indeed, microdata is becoming an increasingly valuable vehicle for the dissemination and manipulation of data not otherwise accessible from aggregated census tabulations. Some 20 countries (40 per cent) reported that microdata samples are, or would be, available to selected *bone fide* users. And almost a quarter of countries (11) reported that such samples — though perhaps less detailed in content — would be available to all users. Similar patterns of microdata usage were reported (a) among EEA countries, and (b) by countries regardless of census methodology.

80. Several countries reported that use of microdata samples is restricted to scientific and social research purposes only and may not be used commercially. A number of countries specifically reported that they plan to make microdata available for academic research through the University of Minnesota's IPUMS project.

81. Only 10 countries reported no plans to produce microdata. Though the United Kingdom's response to the survey was that it had not yet made any decisions, it has more recently announced plans for three levels of microdata ranging from: a 1 per cent "public use" sample, to be made available via the internet; a 5 per cent "safeguarded" sample accessible to registered users through a secure portal; and a 10 per cent "secure" sample, accessible only in a controlled isolated environment on site, from which no data can be removed without vetting for statistical disclosure.

82. The three quarter of countries (39), reported that they provide dedicated in-house services to supply *ad hoc* or commissioned census data or other relevant information that is not otherwise available to customers, either through the media identified in Table 10 or as microdata. Only eight countries (including two register-based countries — Denmark and the Netherlands) reported that they do not provide such services).

83. Measures are generally taken in the provision of commissioned output to ensure that the data complies with the countries' particular confidentiality rules. Where such data has to be specially created to fulfil a customised request there is often a charge levied to provide the service; more than half the countries (27) reported that they demand a fee to provide such information — but not where the request is for a standard product. Three countries (Iceland, Kyrgyzstan and Sweden) reported that they charged a fee regardless of the product. But a quarter of the countries (12) provide their customer services free of any charge whatsoever.

84. To investigate more specific characteristics of the census dissemination programmes, countries were asked what is the lowest geographic level at which any census data is disseminated. The results are shown in Table 10. More countries (22, 43 per cent) adopted the LAU2 (equivalent to communes) as their lowest level geography than any other spatial unit. This is also the minimum level of output geography that is demanded by EU Census Regulation, and a third of the 30 EEA members recorded this as their lowest level. Romania, however, reported that its smallest geography was at a higher level than this, suggesting perhaps a potential difficulty in conforming to the Regulation.

85. Lowest levels of output geography do not seem to be dependent on the type of census methodology.

86. Areas created specifically for the census operation, particularly among the traditional census taking countries are often the basis for the smallest output geography. Thus 10 countries reported that enumeration districts or specifically designed statistical areas are their lowest level of geography. In the United Kingdom, for example, the Output Area (OA) (containing as few as 150 households in some cases) was introduced in the 2001 Census to rationalise the ever-changing boundaries of the country's several layers of administrative geographies, and thus to provide some comparability between censuses. These OAs then build up to larger Super Output Areas which, in turn, nest into higher administrative and other geographies on a best-fit basis. Interestingly, two register-based countries (Belgium and Norway) also reported this level of geography as the lowest that is recognised in the dissemination of data — even though such areas are not specifically created for the collection of the information. The census block, long-time used in the United States, is also the smallest geography for dissemination for four other countries.

Table 10

Lowest level of geography for which any census data is disseminated

<i>Lowest level of geography</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Census block (area bounded on all sides by streets)	5	10	3	10
Smallest geographical unit used in census	11	22	10	33
1 km square grid	2	4	2	7
Local Administrative Unit Level 2	22	44	10	33
Administrative unit larger than LAU2	3	6	1	3
Other geographic level	7	14	4	13

87. Though only two countries (Estonia and Iceland) reported using the 1 km grid square as the lowest level of geography, several other countries noted in their responses the use of other levels of grid square geographies, such as 250 m squares (Finland), 100 m squares (Slovenia and Switzerland) and even as low as 10 m squares in Austria. In other countries the settlement, canton or quarter was reported to be the lowest geographic level.

88. But a restraining factor in deciding practicality of the lowest level of such geography is the issue of disclosure — the smaller the area, the higher the risk. Many countries

therefore apply minimum population thresholds for the release of census data for their smallest geographic areas — a third did so — but for some countries the level of such thresholds often depends on the sensitivity of variable being measured. So, for example, Canada does not release demographic information, generally for areas with a population less than 40, but raises this threshold to 200 in the case of income-related tables. Ireland on the other hand imposes a lower limit of 25 households or 75 persons regardless of the variable. The United Kingdom adopts a similar policy but has a more stringent threshold of 100 persons *and* 40 households. France, somewhat enigmatically reported that great majority of its census data are available for zones of at least 2,000 inhabitants, but that certain significant variables that would increase the risk of disclosure are available only for zones of more than 500,000 inhabitants. But this does not entirely square with its earlier response that the lowest level of dissemination geography is one that was specially designed for census outputs.

89. Rather surprisingly perhaps, five countries reported a threshold so low (3–5 counting units) as to present virtually no protection at all against disclosure. The south eastern European states of Greece, Montenegro, Romania and Serbia, together with Norway, all fall into this category.

90. But even more of a concern perhaps is that over half of the countries in the UNECE region (31), and over a half of those countries adopting a register based census, reported that they impose no such thresholds at all — though Iceland rather cautiously added that it might do so when its disclosure rules had been decided. It might be supposed, therefore, that those countries with no thresholds would generally have higher levels of lowest output geography (and therefore less risk of disclosure) than the countries that did impose thresholds. But the results of the survey suggest that that is not necessarily the case. The lowest level of geography for almost a half of these countries (13) were at levels below LAU2 level, where the risk of disclosure, particularly in tables where more than simple univariate counts are given, starts to become real.

91. In conclusion the survey asked countries to report whether or not their dissemination programme would include official reports specifically on the general evaluation of the census operation as a whole, and on the quality of the data. Some 29 countries (58 per cent) reported that they have published, or intend to publish an evaluation report, and 30 countries (59 per cent) similarly reported with respect to a quality report (Table 11). Perhaps surprisingly, only 17 countries — (a third) reported both — but it may that in some of these cases a country's general evaluation report also includes relevant data quality aspects. Seven countries however (14 per cent) reported publishing neither. Interestingly of these, three (Denmark, Finland and Sweden are register-based countries within the EEA and a fourth, Malta, is also in the EEA. These countries have an obligation under EC Regulations to report to Eurostat on data quality issues, so it is surprising perhaps that they do not intend to publish such reports for their own domestic purposes. Croatia, Georgia and the Former Yugoslav Republic of Macedonia have not yet finalised their plans.

Table 11

Plans to publish general evaluation and data quality reports from the 2010 round

<i>Plans to publish reports</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Publish general evaluation report	29	58	15	50
Publish data quality report	30	60	22	73
Publish both	17	34	11	37
Publish neither	7	14	4	13

IV. Documentation, Metadata and Archiving — main results of the survey

92. An important component of any country's programme of disseminating the results of its census is a comprehensive portfolio of supporting documentation and metadata to help explain, clarify, and enhance the value of the statistical outputs, particularly with regards to making comparisons with previous censuses and other data sources.

93. The UNECE survey accordingly asked countries to report on the range of documentation and metadata that had been, or will be, produced to support the dissemination of outputs. The results are shown in Table 12. Not surprisingly most of the 50 responding countries (44) produced, or will produce, explanatory notes to accompany the statistical tables from the census. What is surprising perhaps is why there are any countries at all (such as Denmark, France, Israel, Kazakhstan, the Netherlands and Tajikistan) that reported that they do not, or do not intend to, do so. Similarly, seven countries reported that they had not prepared definitions of terms and concepts used. Four countries produced neither. But just less than half the countries (46 per cent) reported that they had produced data dictionaries or glossaries of terms used in the outputs. Lack of such metadata is particularly prevalent among register-based countries, of which only a third (Austria, Finland and Iceland) did so.

Table 12

Documentation and metadata produced to support the census outputs in the 2010 round

<i>Documentation/metadata</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Explanatory notes to tables	44	88	27	90
Definitions of terms and concepts used	43	86	27	90
Methodological papers/reports	40	80	26	87
Data visualisation (maps, graphs, charts etc.)	38	76	22	73
The census questions	37	74	19	63
Changes to definitions etc. since previous census	27	54	14	47
Levels of response	27	54	15	50
Levels of imputation	27	54	20	67
Overall	26	52	18	60
For each topic	22	45	16	53
For each area	5	10	3	10
For each level of geography	4	8	4	13
Data dictionary/glossary of terms	23	46	15	50
User guides	18	36	10	33
Comparisons with other data sources	15	30	13	43
Commentary	14	28	10	33
Coverage adjustments	13	26	9	30
Confidence intervals	9	18	8	27
Other documentation/metadata	4	8	1	3
None of the above	1	2	0	0

94. However, four fifths of the 51 responding countries reported the production of papers or reports covering the methodological aspects of the census. Such reports encompassed a wide range of specific issues such as: basic methodology, coverage, response, data sources, pilots and tests, derived variables, internet responses, imputation, and post-enumeration surveys, as well as reports covering more general descriptions of the census operation as a whole and the quality of the data. (The extent of documentation and metadata dealing specifically with coverage and quality issues is covered in a separate paper.)

95. Such documentation is particularly important where (as in the case of Poland and Sweden, for example) the underlying methodology has changed since the previous census. Such changes are likely to affect the definitions and concepts used; this will also be the case for those countries that did not conduct a census in the 2000 round and where the definitions used in the previous census carried out are likely to have changed significantly. It is therefore perhaps surprising to note that of the 23 countries not reporting such documentation, six were countries where either the methodology had indeed changed (Austria and Belgium, for example) or where there had been no census in the 2000 round (such as Germany and Iceland).

96. A small number of countries (4) rather disconcertingly reported a dearth of documentation or metadata (identifying less than three of the separate items listed in Table 12) to support the statistical outputs. Generally it was the case that the EEA countries tended to have higher proportions reporting the availability of the various metadata products; this was particularly evident where such metadata referred to imputation. But the proportion of EEA countries that had prepared metadata on the census questions was smaller than for all countries (less than two thirds compared with three quarters) reflecting, no doubt, a high proportion of register-based censuses in the EEA.

97. In preparing explanatory documentation and metadata it is important to consult those users of census data for whom the information is designed to help. Surprisingly then perhaps, only half (25 of the 50 responding countries) reported that they did so. This proportion was even lower (just over a third) for EEA countries, reflecting the fact that only 2 out of the 9 register-based countries reported such consultation. However, not surprisingly perhaps, among the traditional census countries, where metadata tends to be more extensive, more than half (61 per cent), consulted with users.

98. In planning their output from the census, almost all responding countries (47 out of 49) adopted national and or international standards and guidelines on the preparation of metadata. Only France (whose rolling census methodology is unique to that country) reported that it did not follow any such international guidelines, but did adopt national standards. Two countries (Israel and the United States) adopted neither.

99. The use of international guidelines in this way was reflected also by countries' reference to international recommendations in the planning and preparation of their censuses. It was gratifying to note that 44 out of the 50 countries that responded used the Conference of European Statisticians 2010 *Recommendations* in this way (see Table 13). Only Belgium and Denmark (of the register-based countries), Liechtenstein (of the combined methodology countries), and Kyrgyzstan, France and the United States (traditional) chose not to, but note that the latter two countries adopt census methodologies that no longer fit neatly into the "traditional" model. But of the six countries that did not refer to the CES Recommendations, three were EEA member states that referred to other UNECE or Eurostat documentation, which would have included the explanatory notes that accompanied the EU Census Regulations that prescribe the topics and classifications for which outputs are required to be provided to Eurostat.

Table 13
Recommendations and other documentation referred to in the 2010 round

<i>Recommendations/documentation</i>	<i>All</i>	<i>EEA</i>	<i>Traditional</i>	<i>Register</i>	<i>Combined</i>
Total responding	50	30	31	9	10
CES Recommendations 2010 round	44	26	28	7	9
Other UNECE/Eurostat documentation	30	21	18	6	6
United Nations Principles and Recommendations	32	14	22	3	7
United Nations Handbook on census management	22	7	17	0	5
Other United Nations documentation	3	1	3	0	0
None of the above	3	2	2	0	1

100. Some 32 countries reported that they had referred to the second revision of the United Nations' *Principles and Recommendations for Population and Housing Censuses*, but only Iceland and Slovenia of the register-based countries had done so. But fewer countries (just 22) had referred to the United Nations companion *Handbook on Census Management for Population and Housing Censuses* — not surprisingly perhaps, none of the nine register-based countries had felt a need to do so).

101. Finally, the survey enquired about the archiving policy and how long countries kept either the individual census records (or any images of them), or, in the case of register-based censuses, any linked data based on unit records. The responses are shown in Table 14.

Table 14
Length of time completed census returns or lined data bases are kept after the census

<i>Length of time</i>	<i>Countries responding</i>		<i>EEA countries</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Kept only for as long as they are required for data				
Processing, then destroyed	11	22	6	20
Destroyed 1-5 years after census	12	24	5	17
Destroyed 6-10 years after census	6	12	2	7
Destroyed after 20 years	4	8	3	10
Made open to the public after 30-50 years	1	2	0	0
Made open to the public after 51-75 years	1	2	0	0
Made open to the public after 76-100 years	5	10	4	13
Made open to the public after more than 100 years	3	6	3	10
No decision yet on length of time	6	12	5	17

102. Some countries gave more than one response to the survey where the retention period of paper and electronic images or data files are different. But the figures here refer to the longer period of retention in such cases. Some 23 countries either retained the returns/unit record files either only for as long as they are required for data processing or up to five years after the census. And in a further 6 countries the records are destroyed within

6-10 years, usually before the next census is taken. Only four countries keep the census returns for a longer period before destroying them. It was noticeable from the responses that countries that adopted a register based methodology tended not to retain the individual unit records for any significant length of time after the census.

103. Of those 10 countries that adopt a policy of making the individual census returns publicly available for either socio-historical or genealogical research, most did so only after 75 years — with 100 years being the most commonly adopted closure period. Iceland and Norway are the only register-based countries that do so. This policy ensures that in the clear majority of cases the number of publicly accessible records that would refer to living individuals is minimised.

V. Dissemination, documentation and metadata, and archiving — Proposals for the 2020 CES Recommendations

104. The Conference of European Statisticians *Recommendations for the 2000 Census of Population and Housing* (CES Recommendations) included a short section on Dissemination as part of the chapter on Methodology. This provided some very general guidance on the range of output products and the way that census information should be made available to the user. However, no specific recommendations were made.

105. The recent UNECE survey of practices from the 2010 round of censuses included a number of questions on the way that member states carried out the dissemination of their census data (or how they plan to) with a view to identifying any emerging issues that should be reflected in the revised Recommendations. As a result, the following text to the section on Dissemination is proposed. The text in italics reflects new or substantially revised material, including new sections on documentation, metadata and data archiving

A. Dissemination

106. A census is not complete until the information collected is made available to users in a form, and to a timetable, suited to their ever changing needs. Thus in disseminating the results of the Census much emphasis should be put on responsiveness to users and on high standards of quality in the production of statistics. Census results should be disseminated simultaneously to all users, and the greatest care should be exercised to avoid the inadvertent disclosure of information about identifiable individuals. To protect confidentiality, various statistical measures should be applied.

107. There are several conventional ways of making the results of a census available to the user:

(a) As published reports (*either in hard copy or, more commonly, in digital media*) containing standard and pre-agreed tabulations, usually at the national, regional or local district area level, that may be obtained from government agencies or directly from booksellers;

(b) As unpublished reports (often referred to as abstracts) comprising standard tables but produced for either smaller geographies or population sub-groups not otherwise included in the published reports — these may often be requested by users who may have to contribute towards a proportion of the marginal costs of their production;

(c) *As datasets available online through NSI websites, with or without dynamic or interactive data visualisation tools to enhance the value of the statistics;*

(d) As commissioned output produced from a database, comprising customised cross-tabulations of variables not otherwise available from standard reports or abstracts *but which should confirm to the same statistical disclosure controls applied to standard outputs*; and

(e) As microdata, usually available in a restricted format only and often supplied or accessed under strictly controlled conditions.

108. Due to their ever increasing production costs, printed hard copy publications are becoming less the preferred choice for the main dissemination method of census results, though paper still provides a medium that does not readily deteriorate and does not require the user to have any particular hardware, software or technical skills. *The role of traditional publication, though they may still often be in printed form, is changing. Such publications can provide coherent and consistent commentary on individual topics and therefore may suit particular users or markets, but users will generally expect outputs to move from their previous static hard copy or PDF format to more interactive, dynamic, digital forms of dissemination.*

109. Moreover, concurrent release of large data sets may, however, be made possible only by distribution through the use of high capacity electronic media. However, when data are provided in electronic form, special attention should be given to providing users with easy means of data retrieval. The options for obtaining the outputs and relevant metadata should be accessible in standard formats as well as in common database and spread sheet format for easy retrieval and manipulation. *Dissemination strategies should also be harmonised with any national government policies on open data.*

110. *With the increasing importance of, and the users' familiarity with, the use of the Internet, on-line facilities for ordering, specifying, and receiving census tabulations and public use samples should be developed wherever possible, ensuring that appropriate measures are in place to protect statistical confidentiality of the data and the security of transmission. Social media such as Facebook, Twitter and You Tube, are likely to become an increasingly popular and effective means of disseminating small amounts of output, particularly to the non-specialist user. Moreover, use of such media will often demonstrate an NSI's commitment to engage and establish a dialogue with users in order to more readily respond to their questions and concerns.*

111. A range of products should be available to meet the changing requirements of users. There is likely to be a need for:

- (a) National, regional and local area summaries;
- (b) Reports on key findings on particular topics, supplemented detailed results and analyses either in a standard form for areas down to the more local geographic levels, or more detailed statistics on particular topics;
- (c) Population profiles or key summary statistics for small areas and small population groups;
- (d) Spatial and graphical analyses;
- (e) *Value added products such as area and/or household classifications*; and
- (f) Supplementary metadata covering definitions, classifications, and coverage and quality assessments.

112. The main national and local results should be released, to a pre-announced timetable, as speedily and over a short period of time as is possible once processing and quality assurance are completed and the total population of the country has been determined.

113. Data should in principle be free at the point of access or delivery, but charges, where they are necessary, should be set to make access to the results affordable to all types of users. There may, for example, be a requirement for NSIs to provide a paid print-on-demand service to supply census material to users who prefer paper copies. Such users should be disadvantaged by the lack of paper-based output.

114. Products should be developed which will allow statistical and geographical information to be delivered together with Geographical Information Systems (GIS) and/or the use of other application programme interfaces (APIs) to meet as widespread an interest, and with as much flexibility and inter-connectivity, as possible. Users should be able to find information quickly and simply and in a mobile format. By having associated graphing and mapping capabilities, NSIs will greatly increase the usefulness of their census data. Ideally users should, themselves, be able to generate graphs and/or maps easily, and then to print or plot them or make the images available for other uses. *The mashing-up of census information with other databases will offer even further opportunity for the data to be more widely utilised.*

115. *Data visualisation will become an increasingly important element of dissemination of outputs and is likely to appeal to NSIs because of its ability to engage with users and increase the outreach of census data. But data visualisation is a broad field, with content and structures ranging from simple infographics through to sophisticated tools for exploring multi-dimensional data analysis. Moreover, data visualisation may present difficulties for some census agencies. It may be the case that the skills required for effective visualisation are in short supply, and there are problems with dedicating sufficient resources to its development, especially given the budgetary constraints that are being faced by many agencies during the decennial period. However, users are increasingly expecting web content to be visual, engaging and personal, so developing a data visualisation capability should be a high priority on many NSIs wish list.*

B. Documentation and metadata

116. *An important component of any country's programme of disseminating the results of its census is a comprehensive portfolio of supporting documentation and metadata to help explain, clarify, and enhance the value of the statistical outputs, particularly with regards to making comparisons with previous censuses and other data sources.*

117. A metadata system provides supplementary information on characteristics of surveyed and published data. Each NSI will use its own metadata system based on international standards while corresponding, at the same time, to the specifics of national requirements. Since a population census and its results are connected with other areas of statistical activities, it is recommended that the metadata system of a population census in each country should use the same elements as the entire metadata system of the particular NSI. What is also needed, however, is that the metadata system of a population census contain some elements that are used only for that census. The metadata system of a population census should also ensure the widest possible data comparability internationally.

118. *The population census for the 2020 round should ensure comparability with data from the previous population censuses while at the same time including new elements relevant for any development that has taken place during the time since the previous census. The metadata systems of individual NSIs should also reflect the extent to which they use traditional and/or administrative data sources.*

119. *A metadata system should at least encompass:*

- *definitions of terms and concepts used;*

- *data dictionary or glossary of terms;*
- *explanatory notes to the tables;*
- *classifications and nomenclatures;*
- *the census questions (in the case where the information is collected through a conventional field enumeration process; and*
- *the purposes for which the information is collected, particularly in the case of administrative data*

120. For indicators for which international standard classifications have been created, the international classifications should be used. For indicators that cannot be classified by international standards, new nomenclatures may need to be created. *Supporting documentation might cover a wide range of specific issues such as: basic methodology, coverage, response, data sources, pilots and tests, derived variables, internet responses, imputation, and post-enumeration surveys, as well as reports covering more general descriptions of the census operation as a whole and the quality of the data. The extent of documentation and dealing specifically with coverage and quality issues is covered in Chapter X paper but it is recommended here that, as a minimum, countries should include specific quality and coverage measurements such as levels of response (nationally and locally) and levels of data imputation for the data source as a whole and for individual topics) as part of the census metadata. Methodological reports are particularly important where the underlying methodology has changed since the previous census (such as moving from a traditional field enumeration to a wholly or partially register-based approach). Such changes are likely to affect the definitions and concepts used and hence the comparability between censuses.*

C. Archiving

121. *Many countries retain the census information relating to individual persons and households only for as long it is required for data processing and the production of the statistical results, or until the census is conducted. However, the scientific, socio-historical and genealogical value of the individual records should not be underestimated when considering the overall cost benefits of the census. If countries do intend to retain the records for such research, they should ensure that there is a robust legal and physical framework in place to protect the security and confidentiality of the records until they become open to the public.*

122. *Closure of census records should extend to cover a period that is sufficient to protect the confidentiality of the information, particularly any sensitive information, about living people, or at least minimise the risk of breaching such confidentiality. A period of 100 years is therefore recommended, although with life expectancy ever increasing, countries may wish to consider extending that, depending on national circumstances.*