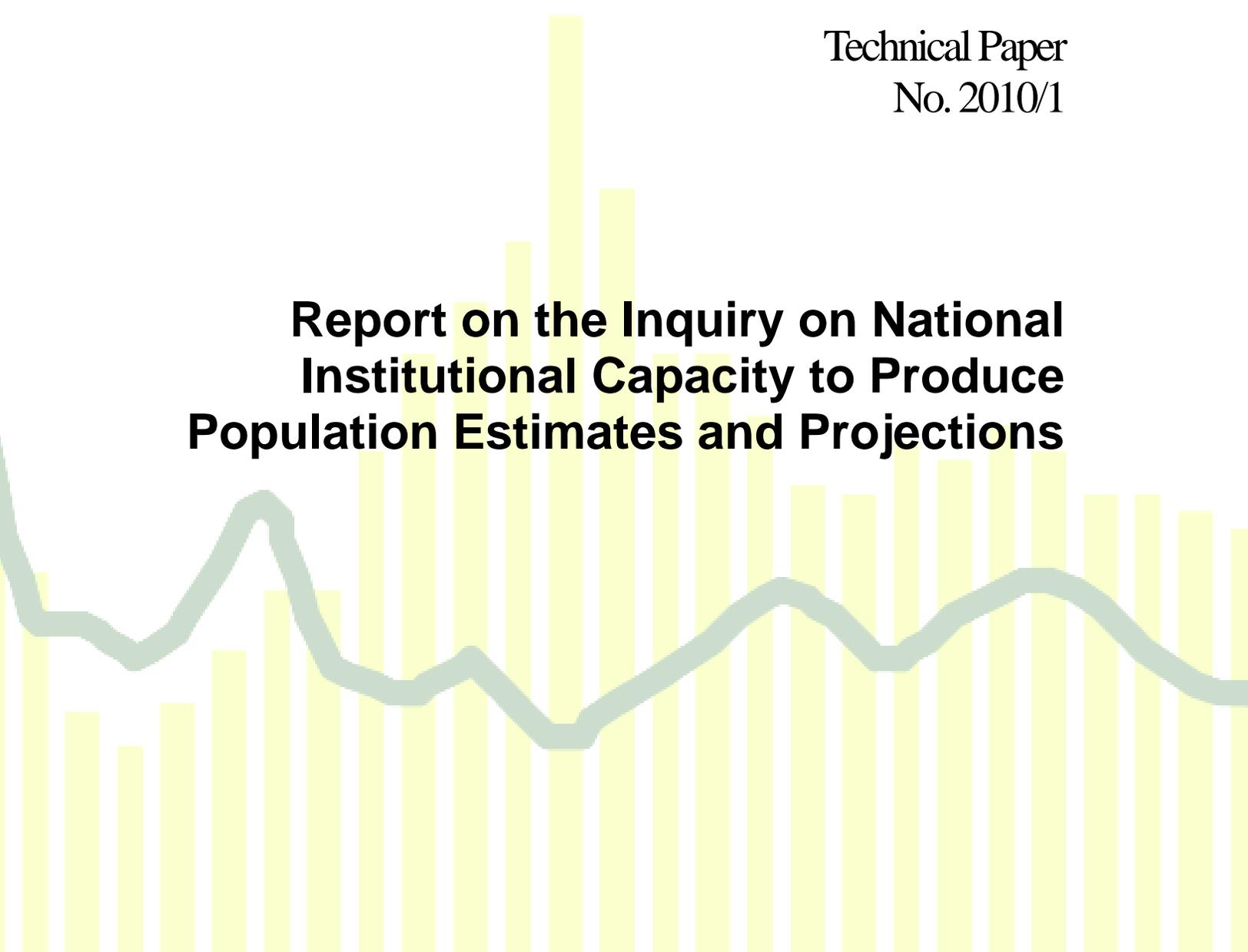


United Nations
Department of Economic and Social Affairs



Population Division

Technical Paper
No. 2010/1

A decorative background graphic consisting of a series of vertical yellow bars of varying heights, with a thick, wavy green line overlaid on top, resembling a bar and line chart.

**Report on the Inquiry on National
Institutional Capacity to Produce
Population Estimates and Projections**

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Report on the Inquiry on National Institutional Capacity to Produce Population Estimates and Projections



NOTE

The views expressed in the paper do not imply the expression of any opinion on the part of the United Nations Secretariat.

The designations employed and the presentation of material in this paper do not imply the expression of any opinion whatsoever on the part of the United Nations Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The term “country” as used in this paper also refers, as appropriate, to territories or areas.

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PREFACE

The Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat has conducted, under its programme of technical cooperation, an inquiry to assess national institutional capacity to produce population estimates and projections. The inquiry was carried out among National Statistical Offices because in most countries they are the government unit in charge not only of collecting and disseminating population statistics but also of carrying out population analysis and producing population estimates and projections.

The inquiry was carried out over the course of 2008. It was sent to the directors of 192 National Statistical Offices in April 2008 and by January 2009 responses had been received from 79 National Statistical Offices. This report presents an analysis of the responses received, focusing on four issues: (a) the quantity and quality of the human resources available in National Statistical Offices to carry out population analysis; (b) the interest of National Statistical Offices in participating in capacity-building activities at the regional or international levels; (c) the capacity of National Statistical Offices to produce population projections, and (d) the capacity of National Statistical Offices to produce reliable estimates of key demographic indicators.

The analysis reveals that National Statistical Offices in developing countries are not yet universally able to produce reliable demographic indicators or detailed population projections, mainly because many of them have very few professional staff with specialized training in demography. Deficits in trained personnel also affect several countries with economies in transition and reduce their capacity to produce timely population estimates and projections.

The inquiry also shows that virtually all National Statistical Offices are interested in participating in capacity-building activities, either to acquire skills that cannot be acquired locally or to upgrade skills by learning about new methodologies. Interest in such activities is high in both developed and developing countries.

This report is available only as a downloadable PDF file accessible on the website of the Population Division (www.unpopulation.org). For more information about this report, please contact Ms. Hania Zlotnik, Director, Population Division, Department of Economic and Social Affairs, United Nations Secretariat, New York, N.Y. 10017, fax number (212) 963-2147.

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Explanatory notes

Symbols of United Nations documents are composed of capital letters combined with figures.

Various symbols have been used in the tables throughout this report, as follows:

Two dots (..) indicate that data are not available or are not separately reported.

An em dash (—) indicates that the population is less than 500 persons.

A hyphen (-) indicates that the item is not applicable.

A minus sign (-) before a figure indicates a decrease.

A full stop (.) is used to indicate decimals.

Years given begin with 1 July.

Use of a hyphen (-) between years, for example, 2000-2005, signifies the full period involved, from 1 July of the beginning year to 1 July of the end year.

Percentages in tables and figures do not necessarily add to 100 per cent because of rounding.

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REPORT ON THE INQUIRY ON NATIONAL INSTITUTIONAL CAPACITY TO PRODUCE POPULATION ESTIMATES AND PROJECTIONS

The Programme of Action adopted by the United Nations International Conference on Population and Development (ICPD) held in Cairo, Egypt, in 1994 recommended that Governments strengthen their national capacity to carry out sustained and comprehensive programmes on the collection, analysis, dissemination and utilization of population data. The Programme of Action also stressed that macroeconomic and sectoral policies give due attention to population considerations. To achieve those objectives, interaction between data users and data producers was to be promoted. Although some progress has been made in this regard, it has been uneven. In 2004, the *Review and Appraisal of the Progress Made in Achieving the Goals and Objectives of the Programme of Action* pointed out that national capacities to collect, analyse, disseminate and utilize population data were still in need of development in most world regions.

In order to obtain current information on the capacity of National Statistical Offices to analyse demographic trends and prepare population projections, the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat carried out an Inquiry on Demographic Estimates and Projections as part of its programme of technical cooperation activities. The information yielded by the Inquiry provides the basis for identifying the advances made and the areas in need of reinforcement. This information is important because, in order to integrate population considerations in development planning, the availability of reliable and timely population estimates and projections is a must. By documenting the types of needs that the national institutions in charge of producing population statistics and population estimates and projections report, the results of the Inquiry provide a useful guide for planning capacity building activities in the area of population.

The questionnaire used to conduct the Inquiry is presented in the Annex to this report. It consisted of 14 open-ended questions divided into two parts, the first devoted to gathering information on the production of population estimates and projections and the second exploring the institutional capacity and the human resources available for demographic analysis.

In April 2008, the Inquiry was sent to the directors of 192 National Statistical Offices. In June 2008, a preliminary report on the first set of responses to the Inquiry was circulated among National Statistical Offices accompanied by a letter to elicit responses from those National Statistical Offices that had not yet responded. The last response to the Inquiry included in the analysis contained in this report was received in January 2009.

Responses were received from 79 National Statistical Offices (table 1) implying that 41 per cent of the institutions receiving the questionnaire responded. The countries involved were classified into six groups, based on both geographical and economic considerations. They are: Africa, Asia, Latin America, the Small Island Developing States (SIDS), the developed market economies and the countries with economies in transition. The latter group comprises only countries in Europe, including the European members of the Commonwealth of Independent States.

Those six regional groups were further classified into two major development groups: developing countries and developed countries. The developing countries comprise all countries in Africa, Asia, Latin America and the Small Island Developing States. The developed countries include the developed market economies and the countries with economies in transition.

TABLE 1. COUNTRIES WHOSE NATIONAL STATISTICAL OFFICES RESPONDED TO THE INQUIRY

	<i>Africa</i>	<i>Asia</i>	<i>Latin America</i>	<i>Small Island Developing States (SIDS)</i>	<i>Countries with economies in transition</i>	<i>Developed market economies</i>
1	Cameroon	Armenia	Argentina	Aruba	Belarus	Canada
2	Gambia	Azerbaijan	Bolivia (Plurinational State of)	Bahamas	Bosnia and Herzegovina	Denmark
3	Kenya	Hong Kong, SAR China	Brazil	Bermuda	Bulgaria	Finland
4	Mozambique	Macao, SAR China	Chile	Cape Verde	Croatia	Germany
5	Namibia	Cyprus	Colombia	Cayman Islands	Czech Republic	Greece
6	Sierra Leone	Iran (Islamic Rep. of)	Costa Rica	Cuba	Estonia	Italy
7	Uganda	Kazakhstan	Guatemala	Fiji	Hungary	New Zealand
8	Zimbabwe	Kuwait	Honduras	Jamaica	Latvia	Portugal
9		Kyrgyzstan	Mexico	Mauritius	Lithuania	Sweden
10		Lao People's Democratic Republic	Uruguay	Papua New Guinea	Poland	United Kingdom
11		Mongolia	Venezuela (Bolivarian Rep. of)	Saint Lucia	Romania	
12		Occupied Palestinian Territory		Tonga	Russian Federation	
13		Oman		Tuvalu	Serbia	
14		Pakistan			Slovakia	
15		Philippines			Slovenia	
16		Republic of Korea			Ukraine	
17		Saudi Arabia				
18		Sri Lanka				
19		Thailand				
20		Turkey				
21		United Arab Emirates				

The level of response varied considerably by regional group (table 2). Thus, whereas 80 per cent of the countries with economies in transition responded, only 17 per cent of those in Africa did so and those responding in that region are all located in sub-Saharan Africa. In Asia, about half of the countries responded and so did 58 per cent of those in Latin America. The percentage responding was a low 36 per cent among the developed market economies and just 39 per cent among the Small Island Developing States.

There was also considerable variation in the quality of the responses submitted. The National Statistical Offices of the developed market economies were more likely to provide very detailed responses to the questions posed than those in other regional groups. The differences in the detail provided did not necessarily reflect differences in the capacity of National Statistical Offices in generating population estimates or in preparing population projections. To ensure that those capacities were assessed properly, the responses to the Inquiry were complemented with information obtained from official websites maintained by the National Statistical Offices or by referring to the data reported by National Statistical Offices to the Statistics Division of the Department of Economic and Social Affairs of the United Nations Secretariat (also known as the United Nations Statistics Division).

TABLE 2. LEVEL OF RESPONSE TO THE INQUIRY BY REGIONAL GROUP

<i>Regional group</i>	<i>Total</i>	<i>Countries that responded</i>	
		<i>Number</i>	<i>Percentage</i>
Overall total	192	79	41
Developed countries	48	26	54
Developing countries	144	53	37
Africa	48	8	17
Asia	44	21	48
Latin America	19	11	58
Small Island Developing States (SIDS)	33	13	39
Countries with economies in transition.....	20	16	80
Developed market economies	28	10	36

A. INSTITUTIONAL CAPACITY AND HUMAN RESOURCES

Virtually all the National Statistical Offices that responded to the Inquiry reported that they were in charge of demographic analysis, the only exception being the Office for Statistics of Bosnia and Herzegovina, which reported that it did not have the capacity to produce official demographic estimates and projections.

In 69 of the 79 responding National Statistical Offices, a unit whose title made specific reference to population statistics, population, demographic statistics, demographic analysis or population censuses had the task of producing demographic estimates or population projections (table 3). In most of those National Statistical Offices, the relevant unit was located in the third organizational tier. The responses of 9 National Statistical Offices—Aruba, Bahamas, Bermuda, Bosnia and Herzegovina, the Cayman Islands, Guatemala, the Plurinational State of Bolivia, Oman, Tuvalu and Uruguay—indicated that they did not have a unit devoted to population analysis but, with the exception of the National Statistical Office of Bosnia and Herzegovina that did not carry out any work on population analysis, the work on population analysis done in the other eight National Statistical Offices was usually the responsibility of the unit in charge of social statistics. In the case of Uruguay, a unit focusing on population was in the process of being established.

Most National Statistical Offices that responded to the Inquiry indicated that they were in charge of preparing population projections. The main exception was the Instituto Nacional de Estadística, Geografía e Informática of Mexico that does not have responsibility for the preparation of population projections because that task is carried out by the Consejo Nacional de Población, an independent government entity. In Hungary, population projections are produced by the Demographic Research Institute, a semi-independent entity attached to the Hungarian Central Statistical Office. In Slovenia, the preparation of population projections is guided by a special Working Group for Population Projections whose 17 members represent several governmental and scientific entities, including the Statistical Office of the Republic of Slovenia.

1. The number of professional staff working on population estimates and projections

The capacity of National Statistical Offices to carry out demographic analysis and population projections depends not only on their organizational structure but also on the number and skills of their human resources. The Inquiry gathered information on both the number of professionals working on pop-

TABLE 3. NAMES OF THE NATIONAL STATISTICAL OFFICES OF THE COUNTRIES RESPONDING TO THE INQUIRY AND OF THE UNITS IN CHARGE OF DEMOGRAPHIC ANALYSIS

<i>Country</i>	<i>Agency</i>	<i>Department</i>	<i>Unit</i>
1 Argentina	Instituto Nacional de Estadística y Censos	Dirección Nacional de Estadísticas Sociales y de Población	Unidad de Análisis Demográfico
2 Armenia	National Statistical Service		Population Census and Demography Unit
3 Aruba	Central Bureau of Statistics		[No unit available]
4 Azerbaijan	State Statistics Committee of Azerbaijan	Demography and Social Statistics Division	Demographic Statistics Sector
5 Bahamas	Department of Statistics		[No unit available]
6 Belarus	Ministry of Statistics and Analysis		Demographic Statistics Section
7 Bermuda	Bermuda Government Department of Statistics	Social Division	[No unit available]
8 Bolivia (Plurinational State of)	Instituto Nacional de Estadística		[No unit available]
9 Bosnia and Herzegovina	Agency for Statistics of Bosnia and Herzegovina		[No unit available]
10 Brazil	Instituto Brasileiro de Geografia e Estatística	Diretoria de Pesquisas	Coordenação de População e Indicadores Sociais
11 Bulgaria	National Statistical Institute	Department of Demographic and Social Statistics	Population Statistics Division
12 Cameroon	Institut national de la statistique		Sous-direction des statistiques démographiques et sociales
13 Canada	Statistics Canada	Demography Division	Population Estimates Program
14 Cape Verde	Instituto Nacional de Estatística	Demographic and Social Statistics Department	
15 Cayman Islands	Economic and Statistics Office		[No unit available]
16 Chile	Instituto Nacional de Estadísticas		Subdepartamento de Estadísticas Demográficas
17 China, Hong Kong SAR	Census and Statistics Department	Census and Demographic Statistics Branch	Demographic Statistics Section
18 China, Macao SAR	Direção dos Serviços de Estatística e Censos	Department of Demographic, Social and Labour Statistics	
19 Colombia	Departamento Administrativo Nacional de Estadística	Dirección de Censos y Demografía	Coordinación de Demografía
20 Costa Rica	Instituto Nacional de Estadísticas y Censos	Area de Estadísticas Continuas	Unidad de Estadísticas Demográficas
21 Croatia	Central Bureau of Statistics	Social Statistics Sector	Population Statistics Unit
22 Cuba	Oficina Nacional de Estadísticas de Cuba	Centro de Estudios de Población y Desarrollo	Departamento de Población
23 Cyprus	Statistical Service of Cyprus	Division of Demography, Social Statistics and Tourism	Demography Unit
24 Czech Republic	Czech Statistical Office	Demography and Social Statistics Branch Population Statistics Department	Demographic Statistics Section
25 Denmark	Statistics Denmark	Division of Persons Statistics	Population Office
26 Estonia	Statistics Estonia	Population Statistics Service	
27 Fiji	Fiji Island Bureau of Statistics	Social Statistics Division	Demographic Statistics
28 Finland	Statistics Finland	Population Statistics	Demographic Unit

TABLE 3. (continued)

	<i>Country</i>	<i>Agency</i>	<i>Department</i>	<i>Unit</i>
29	Gambia	Ministry of Finance Central Statistics Department	Social Statistics Directorate	Demographic Unit
30	Germany	Federal Statistical Office	Division of Population Development and Census	Demographic Indicators and Projections Section
31	Greece	National Statistical Service	Population and Labour Market Statistics Division	Censuses and Population Status Section Vital and Migration Statistics Section
32	Guatemala	Instituto Nacional de Estadística		[No unit available]
33	Honduras	Instituto Nacional de Estadística	Gerencia de Estadísticas Sociales y Demográficas	
34	Hungary	Hungarian Central Statistical Office	Population and Census Department Demographic Research Institute (semi- independent)	
35	Iran (Islamic Republic of).....	Statistical Centre of Iran		Office of Population and Labour Force Studies and Census
36	Italy	National Institute of Statistics	Demographic Statistics Service	Population Estimates and Projections Unit
37	Jamaica	Statistical Institute of Jamaica	Censuses and Demographic and Social Statistics	Division for Censuses and Demographic Statistics
38	Kazakhstan	Statistics Agency of the Republic of Kazakhstan	Department of Social and Demographic Statistics	Division of Demographic Statistics and Population Census
39	Kenya	Kenya National Bureau of Statistics		Demographic Unit
5	40 Kuwait	Central Statistical Office	Department of Census and Population Statistics	Population Studies Unit
41	Kyrgyzstan	National Statistical Committee of the Kyrgyz Republic	Department of Demographic Statistics	
42	Lao People's Democratic Republic	Department of Statistics Ministry of Planning and Investment	Social Statistics Division	Demographic Task Team
43	Latvia	Central Statistical Bureau of Latvia	Social Statistics Department	Population Statistics Section
44	Lithuania	Statistics Lithuania	Social and Demographic Statistics	Demographic Statistics Division
45	Mauritius	Central Statistics Office	Demographic and Social Statistics Division	Demographic Unit
46	Mexico	Instituto Nacional de Estadística, Geografía e Informática	Dirección General de Estadística	Dirección de Análisis y Estudios Demográficos
47	Mongolia	National Statistical Office	Population and Social Statistics Department	Population Census Bureau
48	Mozambique	Instituto Nacional de Estadística	Directorate of Demographic, Vital and Social Statistics	Department of Population Studies
49	Namibia	Central Bureau of Statistics	Demographic and Social Statistics Division	Demographic Statistics Subdivision
50	New Zealand	Statistics New Zealand	Social and Population Statistics Group	Population Statistics Business Unit
51	Occupied Palestinian Territory	Palestinian Central Bureau of Statistics	Population and Social Statistics Directorate	Demographic and Population Statistics Department
52	Oman	Ministry of National Economy	Directorate General of Social Statistics	[No unit available]
53	Pakistan	Government of Pakistan, Statistics Division	Federal Bureau of Statistics	Demographic Research Section
54	Papua New Guinea	National Statistical Office	Population and Social Statistics Division	Research and Development Branch
55	Philippines	National Statistical Coordination Board	Demographic and Social Statistics Division	Demographic Unit

TABLE 3. (continued)

	<i>Country</i>	<i>Agency</i>	<i>Department</i>	<i>Unit</i>
56	Poland	Central Statistical Office	Demographic Survey Division	
57	Portugal	Instituto Nacional de Estatística	Demographic and Social Statistics Department	Demographic Unit
58	Republic of Korea	Korea National Statistical Office	Population Census and Social Statistics Bureau	Vital Statistics Division
59	Romania	National Institute of Statistics	General Department of Social Statistics and Demography	Demographic Analysis and Projection Unit
60	Russian Federation	Department of Population Statistics and Public Health		
61	Saint Lucia	Government Statistics Department		Demographic Unit
62	Saudi Arabia	Central Department of Statistics and Information Ministry of Planning	Population and Vital Statistics Department	Population Projections Unit
63	Serbia	Statistical Office of the Republic of Serbia	Sector for Social Statistics Department of Vital Statistics	Unit for Estimation, Population Projections and Other Demographic Indicators
64	Sierra Leone	Statistics Sierra Leone	Demographic Social and Statistics Division	Demographic Unit
65	Slovakia	Statistical Office of the Slovak Republic	Population Statistics Department	Demographic Unit
66	Slovenia	Statistical Office of the Republic of Slovenia	Demographic Statistics Department	
67	Sri Lanka	Department of Census and Statistics	Registrar General Department	Statistics Branch
68	Sweden	Statistics Sweden	Population and Welfare Department	Forecasting Institute Population Unit
69	Thailand	National Economic and Development Board	Office of Social Strategy and Planning	Demographic Unit
70	Tonga	Government of Tonga, Statistics Department	Population and Social Statistics Group	
71	Turkey	Office of the Prime Minister, State Institute of Statistics	Social Statistics Department	Population and Demography Group Population and Migration Unit
72	Tuvalu	Ministry of Foreign Affairs and Economic Planning		[No unit available]
73	Uganda	Uganda Bureau of Statistics	Directorate of Population and Social Statistics Population Section	Population and Demographic Statistics Unit
74	Ukraine	State Statistics Committee of Ukraine	Department of Social and Demographic Statistics	Administration of Demographic Statistics and Population Census
75	United Arab Emirates	Central Statistical Department Ministry of Economy and Planning	Department of Social Statistics	Demographic Unit
76	United Kingdom	Office for National Statistics	Social and Vital Statistics Division	Centre for Demography
77	Uruguay	Instituto Nacional de Estadística	División de Estadísticas Sociodemográficas	[In the process of being established]
78	Venezuela (Bolivarian Republic of).....	Instituto Nacional de Estadística	Gerencia General de Estadísticas Demográficas	Gerencia de Análisis Demográfico
79	Zimbabwe	Central Statistical Office	Census Department	

ulation estimates and projections in National Statistical Offices and on the number of professionals who had specialized training in demography. Table 4 shows a summary of the numbers reported by countries in each regional group. In total, the 78 countries¹ reporting on the overall number of professionals working on population estimates and projections had 555 such professionals, with 226 or 41 per cent working in developing countries. On average, the number of professional staff working on population estimates and projections was highest among the developed market economies, at 19, a number that is highly influenced by the large number reported by the United Kingdom, where 100 professional and technical support staff work on population estimates and projections. Excluding the United Kingdom, the average number of professionals in the rest of the developed market economies that responded to the Inquiry is 10.

TABLE 4. NUMBER OF PROFESSIONALS WORKING ON POPULATION ESTIMATES AND PROJECTIONS AND NUMBER OF PROFESSIONALS WITH SPECIALIZED TRAINING IN DEMOGRAPHY AS REPORTED BY ALL THE NATIONAL STATISTICAL OFFICES RESPONDING TO THE INQUIRY

<i>Regional group</i>	<i>Number of professionals working on population estimates and projections</i>				<i>Number of professionals with specialized training in demography</i>			
	<i>Number of countries reporting</i>	<i>Total number</i>	<i>Average</i>	<i>Median</i>	<i>Number of countries reporting</i>	<i>Total number</i>	<i>Average</i>	<i>Median</i>
Overall total	78	555	7	4	74	301	4	3
Developed countries	26	329	13	12	23	110	5	4
Developing countries	52	226	4	3	51	191	4	3
Africa	8	44	6	5	8	36	5	4
Asia	20	85	4	3	20	78	4	3
Latin America	11	56	5	4	10	39	4	4
Small Island Developing States (SIDS)	13	41	3	3	13	38	3	2
Countries with economies in transition	16	139	9	9	15	61	4	4
Developed market economies	10	190	19	8	8	49	6	4

NOTE: The National Statistical Office of the Republic of Korea did not report the number of professionals working on population estimates and projections, and those of another five countries did not report the number of professionals with specialized training in demography.

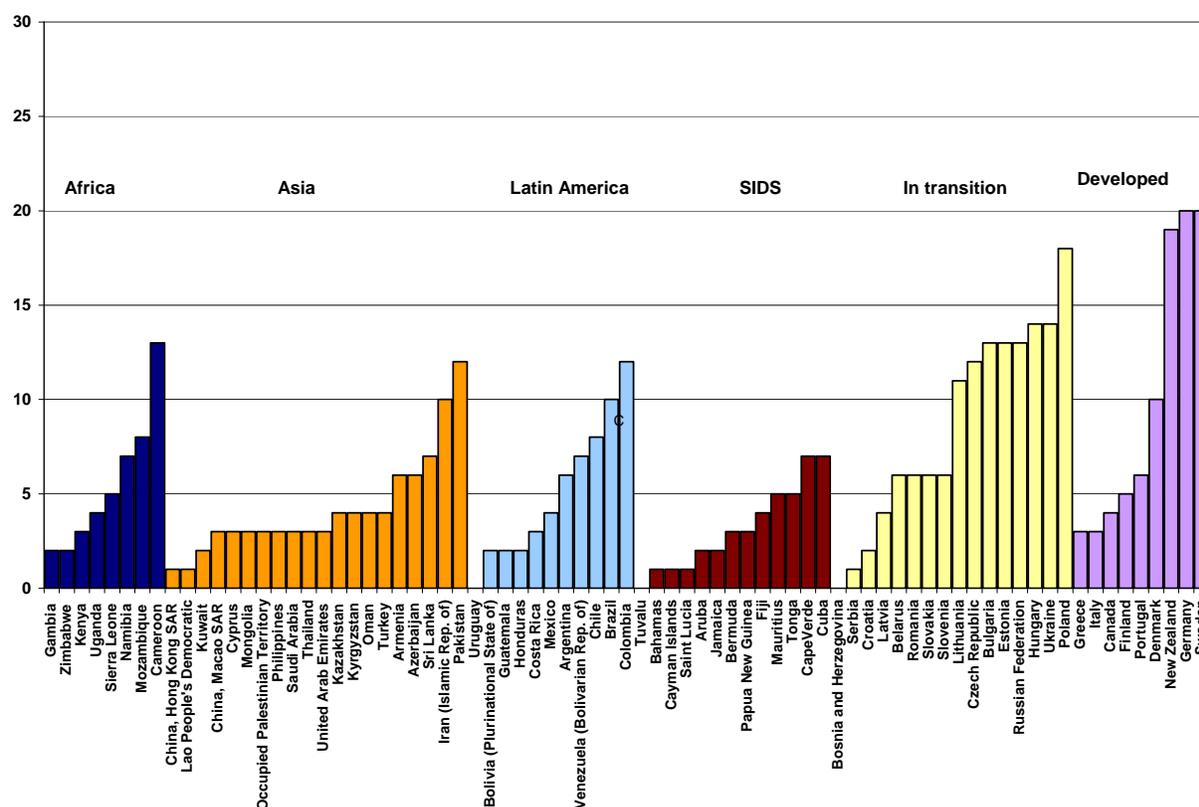
The second highest average number of professional staff working on population analysis was found among the countries with economies in transition responding to the Inquiry and amounted to 9. Among the countries in Africa, Asia and Latin America responding to the Inquiry, the average numbers of professional staff working on population estimates and projections was 6, 4 and 5, respectively. Although these averages are low compared to those in the developed countries that responded to the Inquiry, they are higher than the average of 3 professional staff among the Small Island Developed States that responded to the Inquiry.

Table 4 also shows the median number of professionals working on demographic analysis and projections for each region. Except for the Small Island Developing States, the median is lower than the average in each region, indicating that the distribution of the number of professionals among the countries in each region has a small number of high values. Figure I depicts graphically the distributions of the

¹ The National Statistical Office of the Republic of Korea provided no information on this item.

professionals working on population estimates and projections by region, showing that in the majority of developing countries there are at most 5 professionals working on demographic analysis. Three countries report having no professionals carrying out such tasks: Bosnia and Herzegovina, Tuvalu and Uruguay. Bosnia and Herzegovina, as noted earlier, has no unit working on population analysis. Uruguay is in the process of setting up such a unit and its National Statistical Office reports that it relies on contractors to carry out analytical work on population when necessary. Tuvalu relies on the support of the South Pacific Community for the preparation of population projections.

Figure I. Distribution of countries by region and number of professionals working on population estimates



Every region has a few countries with relatively high numbers of professional staff working on population estimates and projections. In Africa, the National Statistical Office of Cameroon has the highest number (13). In Asia, the National Statistical Office of the Islamic Republic of Iran has 10 professionals working on population estimates and projections and that of Pakistan has between 10 and 12. In Latin America, the National Statistical Offices of Brazil and Colombia have 10 and 12 professionals working on demographic analysis, respectively. Among the Small Island Developing States responding to the Inquiry, Cape Verde and Cuba have the highest number of professionals working on population estimates and projections, with 7 each. In comparison, half of the National Statistical Offices of the countries with economies in transition that responded to the Inquiry have at least 11 professionals working on demographic analysis and half of those of the 10 developed market economies responding have at least 10 such professionals. Particularly high numbers of professionals working on demographic analysis are reported by the National Statistical Offices of Poland (18), New Zealand (19), Germany (20) and Sweden (20). In addition, as noted earlier, the National Statistical Office of the United Kingdom reported having 100 professional and technical support staff working on population analysis (this number is not displayed in figure I). Note that the United Kingdom reports both professional and technical support

staff jointly. To the extent possible, the number of technical support staff has been excluded from the data presented for other countries.

Table 5 shows the distribution of National Statistical Offices according to the number of professional staff working on population estimates and projections. As already noted, three National Statistical Offices report that they have no professional staff working on demographic analysis, namely, those of Bosnia and Herzegovina, Tuvalu and Uruguay. In a further 15 National Statistical Offices, 13 of which belong to developing countries, the number of professionals working on population estimates and projections is 1 or 2. That is the case of 5 of the 13 National Statistical Offices in Small Island Developing States. In Africa, 2 of the 8 National Statistical Offices responding to the Inquiry (25 per cent) reported also a low number of professionals working on demographic analysis: those of the Gambia and Zimbabwe. In Asia, the National Statistical Offices of Hong Kong Special Administrative Region of China and the Lao People's Democratic Republic each have only one professional devoted to demographic analysis. Kuwait has two, as do Guatemala, Honduras and the Plurinational State of Bolivia in Latin America. Among the countries with economies in transition, Serbia has one and Croatia has two professional staff working on population analysis.

TABLE 5. DISTRIBUTION OF NATIONAL STATISTICAL OFFICES BY NUMBER OF PROFESSIONALS WORKING ON POPULATION ANALYSIS

<i>Regional group</i>	<i>0</i>	<i>1 or 2</i>	<i>3 or 4</i>	<i>5 or 6</i>	<i>7 to 10</i>	<i>More than 10</i>	<i>Total</i>
Overall total.....	3	15	23	12	10	15	78
Developed countries	1	2	4	6	1	12	26
Developing countries.....	2	13	19	6	9	3	52
Africa	0	2	2	1	2	1	8
Asia	0	3	12	2	2	1	20
Latin America	1	3	2	1	3	1	11
Small Island Developing States (SIDS)	1	5	3	2	2	0	13
Countries with economies in transition.....	1	2	1	4	0	8	16
Developed market economies.....	0	0	3	2	1	4	10

NOTE: The National Statistical Office of the Republic of Korea did not report the number of professionals working on population estimates and projections.

Table 5 indicates that about 30 per cent of the National Statistical Offices reporting (23 out of 78) have between 3 and 4 professionals working on population estimates and projections. Among those in developing countries, 37 per cent are in that category (19 out of 52), which is the modal category in the distribution (that is, the highest number of National Statistical Offices in developing countries belong to that category). In contrast, the modal category among the National Statistical Offices of developed countries is that with more than 10 professionals working on demographic analysis (12 of the 26 developed countries or 46 per cent belong to that category). Among the National Statistical Offices of developing countries responding to the Inquiry, only 9 have between 7 and 10 professionals working on demographic analysis and a further 3 have 10 or more professionals working on that area. These differences in the level of staffing devoted to demographic analysis are indicative of the human resource deficits that exist in the National Statistical Offices of most developing countries.

In order to fill those deficits, a number of National Statistical Offices—those of Aruba, Colombia, Croatia, Fiji, Honduras, Kuwait, Papua New Guinea, the Plurinational State of Bolivia, Saudi Arabia and Thailand—reported that they also relied on external experts or consultants, some working part-time, or that they hired additional expert staff at peak times to complement the existing professional workforce. In some cases, the external experts were reported as part of the professional staff working on population

estimates and projections. In Canada, the National Statistical Office reported that levels of staffing varied with need and a number of other National Statistical Offices indicated that demand for population analysts increased following the completion of a population census. However, most of them did not provide information about how that demand had been met in the past or would be met in future.

2. The number of professional staff with specialized training in demography

The number of professionals working on demographic analysis is not the only indicator of the capacity of National Statistical Offices to meet the demand for timely and reliable information on population trends and their implications. Another crucial characteristic of the human resources available is their mastery of the subject matter. To ascertain deficits in this regard, the Inquiry asked how many professionals among a National Statistical Office's staff had received specialized training in demography. The responses received varied in the degree of detail provided. A few of them did not provide a quantitative answer to the question and in five cases no inferences could be made regarding the number of trained professionals. The five countries lacking such information are: Greece, Macao Special Administrative Region of China, Poland, the United Kingdom and Uruguay. That left 74 countries having the necessary information.

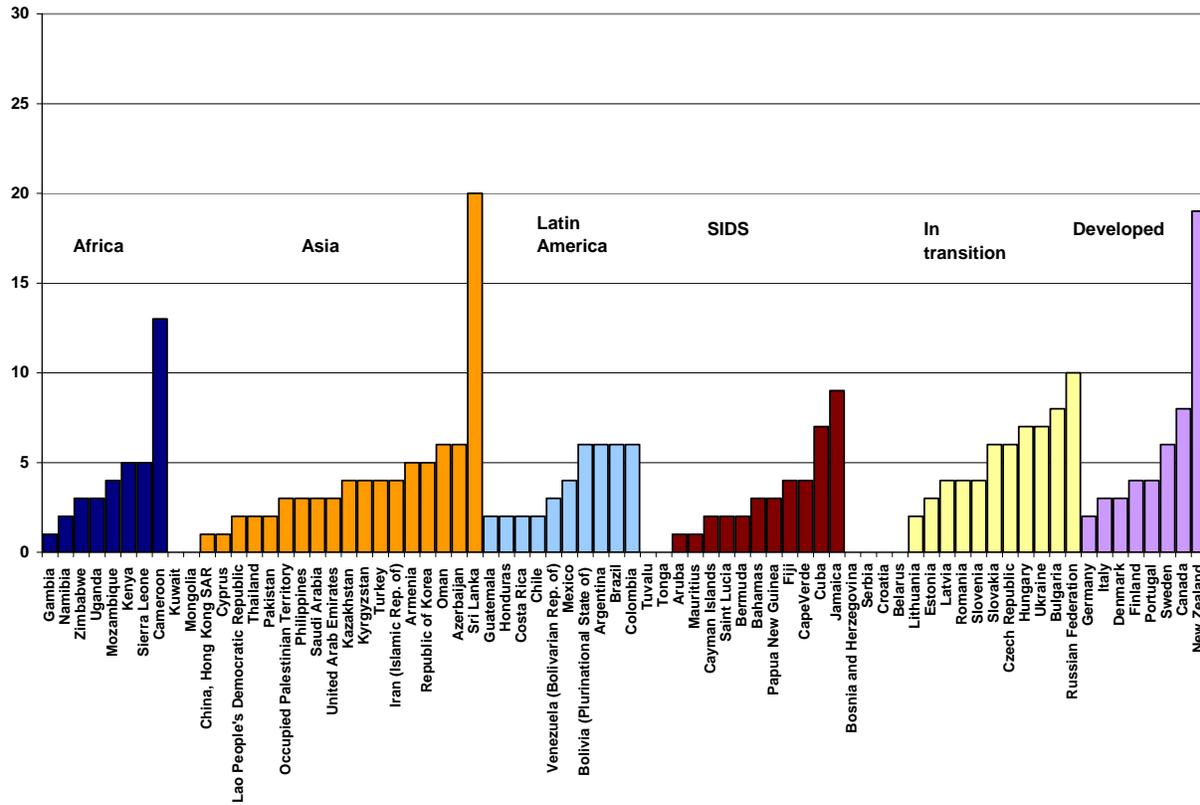
Table 4 shows that the National Statistical Offices of those 74 countries had a total of 301 professional staff who had received specialized training in demography, yielding an average of 4 trained professional staff per country. Once more the average number of trained professionals in the National Statistical Offices of developed countries surpasses that in the National Statistical Offices of developing countries (5 vs. 4), but the difference between those two averages is considerably smaller than that between the average number of professionals working on population estimates and projections in the National Statistical Offices of developed and developing countries, partly because the United Kingdom did not report the number of professionals who had specialized training in demography among the 100 professional and technical staff reported to be working on population estimates and projections.

The National Statistical Offices of the developed market economies responding to the Inquiry have the highest average number of professionals with specialized training in demography (6), whereas the average in the countries with economies in transition is just 4, similar to the averages among the National Statistical Offices in Africa (5), Asia (4) and Latin America (4). The average number of professionals with specialized training in demography is lowest in the National Statistical Offices of the Small Island Developing States (3).

As in the case of the number of professionals working on demographic analysis, the average number of professionals with demographic training is higher than the median number in most regional groups—Africa, Asia, the Small Island Developing States and the developed market economies—indicating the existence in each of them of a few National Statistical Offices with high values relative to the rest, as illustrated in figure II. In Africa, the National Statistical Office of Cameroon reported having 13 professionals with specialized training in demography. In Asia, that of Sri Lanka reported having 20 trained professionals and among the Small Island Developing States, the National Statistical Offices of Cuba and Jamaica reported having 7 and 9 trained professionals, respectively. Among the developed market economies, New Zealand reported having the highest number of professionals with demographic training (19).

Table 6 shows the distribution of National Statistical Offices by number of professionals with specialized training in demography. Eight National Statistical Offices reported having no trained professional demographers, namely, those of Belarus, Bosnia and Herzegovina, Croatia, Kuwait, Mongol-

Figure II. Distribution of countries by region and number of professionals with specialized training in demography



ia, Serbia, Tonga and Tuvalu. A further 43 National Statistical Offices, constituting 58 per cent of the total, reported having between 1 and 4 professionals with demographic training. In developed countries, 43 per cent of all the National Statistical Offices reporting had between 1 and 4 professionals with demographic training whereas in developing countries, 65 per cent of the National Statistical Offices responding to the Inquiry had between 1 and 4 professionals with demographic training.

The proportion of National Statistical Offices that reported having high numbers of professionals with demographic training was low. Among all respondents, only 14 per cent reported having 7 or more professionals with specialized training in demography. That proportion is higher among the National Statistical Offices of developed countries, 26 per cent of which reported having 7 or more professionals with demographic training. In developing countries, just 8 per cent of the National Statistical Offices responding to the Inquiry had at least 7 professionals with demographic training.

In each of the regional groups of the developing world, between 60 per cent and 69 per cent of the National Statistical Offices reported that they had between 1 and 4 professionals with specialized training in demography. In Latin America, none of the National Statistical Offices reported having more than 6 trained professionals and only two countries in Africa and Asia (Cameroon and Sri Lanka) had more than 10 professionals with specialized training in demography in their respective National Statistical Offices. Among the developed countries, only the National Statistical Office of New Zealand had more than 10 professionals with specialized training in demography.

TABLE 6. DISTRIBUTION OF NATIONAL STATISTICAL OFFICES BY NUMBER OF STAFF WITH DEMOGRAPHIC TRAINING

<i>Regional group</i>	<i>0</i>	<i>1 or 2</i>	<i>3 or 4</i>	<i>5 or 6</i>	<i>7 to 10</i>	<i>More than 10</i>	<i>Total</i>
Overall total	8	18	25	13	7	3	74
Developed countries	4	2	8	3	5	1	23
Developing countries	4	16	17	10	2	2	51
Africa.....	0	2	3	2	0	1	8
Asia.....	2	5	8	4	0	1	20
Latin America.....	0	4	2	4	0	0	10
Small Island Developing States (SIDS).....	2	5	4	0	2	0	13
Countries with economies in transition.....	4	1	4	2	4	0	15
Developed market economies.....	0	1	4	1	1	1	8

NOTE: The National Statistical Offices of five countries did not report the number of professionals with specialized training in demography.

Among the countries with economies in transition, four National Statistical Offices had no professionals with specialized training in demography and another four had at least 7 professionals trained in demography. This group of countries is therefore quite heterogeneous in terms of the availability of trained human resources. The same observation applies to the Small Island Developing States, two of which have no trained professional demographers (Tonga and Tuvalu) while two others (Cuba and Jamaica) have 7 or more. Wide variation in the number of professionals with specialized training in demography is also observed among the National Statistical Offices of the countries in Asia that responded to the Inquiry.

This analysis indicates that most of the National Statistical Offices responding to the Inquiry have relatively few professionals with specialized training in demography and are likely, therefore, to face human resource constraints in carrying out tasks related to the preparation of population estimates and projections. By comparing the number of professionals with demographic training to that of all professionals working on population estimates and projections the next section sheds more light on the potential needs for additional staff with demographic training.

3. Comparison of the number of professional staff with specialized training in demography with the number of professionals working on population estimates and projections

The data presented in table 4 on the number of professional staff working on population estimates and projections and the number of professionals with specialized training in demography are not strictly comparable because six National Statistical Offices provided data on only one of those numbers. As already noted, the National Statistical Office of the United Kingdom did not report the number of professionals having specialized training in demography and, given its very high number of staff working on demographic analysis, its inclusion in one category but not in the other biases comparisons between the two. In addition, the Republic of Korea did not report the number of professionals working on population estimates and projections, while Greece, Macao Special Administrative Region of China, Poland and Uruguay did not report the number of professionals with training in demography. In order to avoid biases because of missing data, the top panel of table 7 shows the data relative to the 73 National Statistical Offices that reported both the number of professionals working on population estimates and projections and the number having specialized training in demography. On average, those National Statistical Offices had 6 professionals working on population estimates and projections but just 4 with

training in demography. The difference between average numbers is especially marked among the National Statistical Offices of developed market economies, which reported an average of 11 professionals working on population estimates and projections but just 6 having demographic training. The gap between the two indicators is also large for the National Statistical Offices of the countries with economies in transition, which have on average 8 professionals working on demographic analysis but just 4 with training in demography.

Among the National Statistical Offices of developing countries there is no difference in the overall average of professionals working on demographic analysis and that of professionals with demographic training but, at the regional level, both Africa and Latin America are represented by National Statistical Offices whose average number of professionals working on demographic analysis exceeds that of professionals with training in demography: by 25 per cent in the case of Africa and by 50 per cent in the case of Latin America. Among the National Statistical Offices in Asian countries and those in the Small Island Developing States that responded to the Inquiry the two averages are the same.

Although the data presented in the top panel of table 7 are comparable in terms of coverage, the number of professionals with demographic training cannot be considered to represent a subset of the number working on population estimates and projections because, according to the reports of 11 National Statistical Offices (those of the Bahamas, Canada, the Cayman Islands, Jamaica, Kenya, the Lao People's Democratic Republic, Oman, the Plurinational State of Bolivia, Saint Lucia, Sri Lanka and Zimbabwe), the number of professionals having specialized demographic training exceeds, sometimes by wide margins, the number working on population estimates and projections (see annex table 1).

Such reports suggest that professionals trained in demography are carrying out tasks other than demographic analysis. In some cases this outcome results from the organizational structure of the particular National Statistical Office. Thus, when the unit or units carrying out major data collection operations, such as censuses or household surveys, are distinct from the unit carrying out population analysis, professionals with demographic training working on census or survey operations would not have been reported among the professionals working on demographic analysis. It is also the case that some professionals having demographic training occupy administrative posts and do not work directly on demographic analysis.

For those reasons, it is useful to consider separately the data reported by the National Statistical Offices where the number of professionals working on population estimates and projections exceeds the number with training in demography. The lower panel of table 7 presents that information. Note that the number of National Statistical Offices involved drops to 38 because it excludes the 11 National Statistical Offices where the number of professionals with training in demography exceeds the number working on demographic analysis plus another 24 where both numbers coincide. The latter group includes the National Statistical Offices of Bosnia and Herzegovina and Tuvalu, both of which have no professionals in either category.

The 38 National Statistical Offices with more professionals working on population estimates and projections than professionals with specialized training in demography include 17 in developed countries and 21 in developing countries, representing 74 per cent and 42 per cent, respectively, of the overall number of National Statistical Offices that provided the necessary data within each group. That is, a very high proportion of the National Statistical Offices of developed countries appear to have a deficit of professional staff with specialized training in demography. The deficit is especially marked among the National Statistical Offices of the countries with economies in transition, 80 per cent of which have more professionals working on demographic analysis than professionals with demographic training.

TABLE 7. COMPARISON OF NUMBER OF PROFESSIONALS WORKING IN POPULATION ESTIMATES AND PROJECTIONS AND NUMBER WITH SPECIALIZED TRAINING IN DEMOGRAPHY FOR DIFFERENT SETS OF NATIONAL STATISTICAL OFFICES RESPONDING TO THE INQUIRY

Regional group	Number of countries	Professionals working on population estimates and projections		Professionals with specialized training in demography		Estimated number of professionals working in demographic analysis who lack specialized training in demography ^a
		Number	Average	Number	Average	
<i>National Statistical Offices reporting on both types of professionals</i>						
Overall total.....	73	431	6	296	4	-
Developed countries.....	23	208	9	110	5	-
Developing countries.....	50	223	4	186	4	-
Africa	8	44	6	36	5	-
Asia	19	82	4	73	4	-
Latin America	10	56	6	39	4	-
Small Island Developing States (SIDS).....	13	41	3	38	3	-
Countries with economies in transition	15	121	8	61	4	-
Developed market economies.....	8	87	11	49	6	-
<i>National Statistical Offices with more professionals working on demographic analysis than those with demographic training</i>						
Overall total.....	38	294	8	121	3	173
Developed countries.....	17	172	10	70	4	102
Developing countries.....	21	122	6	51	2	71
Africa	4	21	5	10	3	11
Asia	7	39	6	14	2	25
Latin America	5	40	8	19	4	21
Small Island Developing States (SIDS).....	5	22	4	8	2	14
Countries with economies in transition	12	111	9	51	4	60
Developed market economies.....	5	61	12	19	4	42

NOTE: The National Statistical Office of the Republic of Korea did not report the number of professionals working on population estimates and projections, and those of another five countries did not report the number of professionals with specialized training in demography. Therefore, only 73 National Statistical Offices have data on both items.

^aThe numbers presented are lower bounds for the actual numbers because the professionals having specialized training in demography are not necessarily a subset of those working in population estimates and projections.

Furthermore, their average number of professionals working on demographic analysis (9) is more than double their average number of professionals with training in demography (4). A high deficit of professionals with specialized demographic training is also apparent among 63 per cent of the National Statistical Offices in the developed market economies, where the five National Statistical Offices considered have, on average, 15 professionals working on population estimates and projections but just 4 with training in demography.

The deficits of professionals with training in demography are smaller in absolute terms among developing countries, partly because, as documented earlier, they tend to have a lower number of professionals working on demographic analysis to start with. Nevertheless, among the National Statistical Offices with higher numbers of professionals working on population estimates and projections than those having training in demography, the average of the former is three times higher than the average of the latter in Asia and twice as high in Africa, Latin America and the Small Island Developing States.

Overall, the 38 National Statistical Offices with a likely deficit of trained professionals in demography have 121 professional staff having specialized training on the subject and at least an additional 173 professionals working on population estimates and projections who do not have specialized training in demography. Among those 173 professionals, 102 work for National Statistical Offices in developed countries and 71 work for those in developing countries. Among the regional groups, the National Statistical Offices of countries with economies in transition that responded to the Inquiry have the highest number of professionals working on population estimates and projections who lack specialized training in demography (60 professionals).

The evidence presented so far suggests that strategies to build up or improve the demographic skills of professional staff working on population estimates and projections would be welcome by a significant number of National Statistical Offices. Furthermore, it is likely that National Statistical Offices other than the 38 respondents covered by the bottom panel of table 7 may also have training needs, especially in view of the increased demand for professionals with specialized training in demography to carry out the analysis of the 2010 round of censuses.

A further indication of latent demand is provided by responses to the Inquiry on the capacity of National Statistical Offices to respond to demands for population estimates and projections given the available human resources. Among the National Statistical Offices of developing countries and countries with economies in transition, 58 per cent responded that limitations in the human resources available or their skill range limited their capacity to respond to requests. In addition, many respondents reported that in-house or on-the-job training were means to ensure that professionals working on demographic analysis acquired the skills needed to perform their work. The responses to the question on the types of activities desired under technical cooperation further validates the conclusion that there is a strong demand for training in population analysis and population projections among National Statistical Offices.

B. DEMAND FOR TECHNICAL COOPERATION

Virtually all the National Statistical Offices responding to the Inquiry (96 per cent) indicated that they would welcome technical cooperation to improve the technical skills of their staff (table 8). The vast majority (78 per cent) said that they would welcome the organization of technical workshops as the means of improving skills. The possibility of participating in training workshops organized by international organizations was thought useful by large numbers of National Statistical Offices even though 57 per cent reported that they already had access to training opportunities either within the National Statistical Offices themselves or in other national institutions. The expressed desire for technical training was associated with a wide spectrum of objectives, ranging from improving the technical capacity of professionals who

lack specialized training in demography to providing training on cutting-edge developments in demographic analysis and population projections. The high interest in technical cooperation expressed by the National Statistical Offices corroborates that the need to improve the demographic skills of existing professional staff is widespread.

TABLE 8. NUMBER OF NATIONAL STATISTICAL OFFICES EXPRESSING INTEREST IN TECHNICAL COOPERATION IN THE FORM OF TRAINING, THOSE EXPLICITLY MENTIONING TRAINING WORKSHOPS, AND THOSE REPORTING THE EXISTENCE OF LOCAL TRAINING OPPORTUNITIES

<i>Regional group</i>	<i>Total</i>	<i>Number of countries</i>			<i>Percentage</i>		
		<i>Welcome some form of training</i>	<i>Prefer training workshops</i>	<i>Local training opportunities available</i>	<i>Welcome some form of training</i>	<i>Prefer training workshops</i>	<i>Local training opportunities available</i>
Overall total	79	76	62	45	96	78	57
Developed countries	26	23	19	19	88	73	73
Developing countries	53	53	43	26	100	81	49
Africa	8	8	6	4	100	75	50
Asia	21	21	17	11	100	81	52
Latin America	11	11	10	6	100	91	55
Small Island Developing States (SIDS)	13	13	10	5	100	77	38
Countries with economies in transition	16	14	10	11	88	63	69
Developed market economies	10	9	9	8	90	90	80

Although the majority of National Statistical Offices in both developed and developing countries expressed interest in technical cooperation, those of the Czech Republic, Denmark and Slovenia did not express a need for any type of technical cooperation. In contrast, all the National Statistical Offices of developing countries were interested in engaging in some type of technical cooperation. Workshops were favoured by 81 per cent of the National Statistical Offices of developing countries and by 73 per cent of those of developed countries (table 8). Among the regional groups, the highest interest in workshops was expressed by the National Statistical Offices of Latin America (91 per cent favoured such activity) and by those of developed countries (90 per cent reported the usefulness of engaging in international workshops that permitted the exchange of technical information among experts). The lowest interest in workshops prevailed among the National Statistical Offices of countries with economies in transition, only 63 per cent of which mentioned workshops as a preferred means of technical cooperation. In Africa, Asia and the Small Island Development States, about 8 of every 10 of the National Statistical Offices responding to the Inquiry mentioned workshops as a useful mode of technical cooperation.

Interest in workshops organized under technical cooperation did not depend on the availability of local training opportunities. Thus, although local training opportunities were reported to be available by 80 per cent of the National Statistical Offices of developed countries, interest in technical cooperation was expressed by 90 per cent of those offices. Among the National Statistical Offices of countries with economies in transition, just over two-thirds reported access to local training opportunities but, as already noted, not all expressed interest in technical cooperation and the percentage wishing to participate in technical workshops was lower than that expressed by National Statistical Offices in developing countries.

The availability of local training opportunities was low in Africa, Asia and Latin America (just about half of the National Statistical Offices in those regional groups reported having access to local training opportunities) and it was lower still among the Small Island Development States. Yet, regardless of the local training opportunities available, interest in technical cooperation at the international or regional levels was universal among the National Statistical Offices in the developing regions and they expressed a strong preference for workshops.

In addition to technical workshops, the National Statistical Offices responding to the Inquiry suggested other forms of technical cooperation that would be useful (table 9). The highest number (33 National Statistical Offices or 42 per cent of those responding) favoured fellowships. High proportions of the National Statistical Offices in Africa (63 per cent) and Latin America (73 per cent) listed fellowships to study abroad as a welcome type of cooperation. Interest in fellowships was somewhat lower among the National Statistical Offices in Asia (43 per cent mentioned fellowships in their responses) and among those of the Small Island Developing States (46 per cent did). Among the National Statistical Offices of developed countries, only one in five mentioned fellowships.

Thirty per cent of the National Statistical Offices that responded to the Inquiry mentioned “training programmes” among the activities they would welcome as technical cooperation. Some distinguished between short, focused technical workshops and longer, more comprehensive training programmes that would be more suitable to build the capacity of professionals having no or limited background in demography. The demand for training programmes was particularly strong among the National Statistical Offices of countries with economies in transition (44 per cent mentioned that type of technical cooperation activity) and among those of countries in Asia (38 per cent expressed interest in technical programmes). In all other developing regions, about a quarter of all National Statistical Offices mentioned training programmes.

Another type of technical cooperation mentioned by a significant number of National Statistical Offices involved “secondments” or “temporary assignments in the National Statistical Offices of other countries” for on-the-job retooling or training. Interest in such types of arrangements was especially high among the National Statistical Offices of the Small Island Developing States, 54 per cent of which mentioned such secondments. Furthermore, some of them reported that temporary assignments abroad had already proven useful in improving the technical skills of their staff. In Latin America, 36 per cent of the National Statistical Offices responding to the Inquiry expressed interest in secondments as a means of retooling.

One in six of the National Statistical Offices responding to the Inquiry indicated that hosting international experts who could assist in preparing population estimates or projections and in training local staff on how to do so was a useful form of technical cooperation. The National Statistical Offices of Latin American countries were the most interested in that type of cooperation (36 per cent mentioned it), followed by those in Small Island Developing States, 23 per cent of which considered experts useful in expanding on-the-job training locally, and by those of countries with economies in transition, 19 per cent of which were interested in having resident experts.

There was relatively low expressed interest in the use of modern information and communication technologies for training purposes. Only 11 per cent of the National Statistical Offices responding to the Inquiry expressed a need for demographic software, particularly population-projection software. Although not always expressed explicitly, the request for demographic software implied also a request for hands-on training on how to use it either via workshops or a resident international expert. Demand for demographic software was highest among the National Statistical Offices of the countries with economies in transition

TABLE 9. OTHER TYPES OF TECHNICAL COOPERATION LISTED BY NATIONAL STATISTICAL OFFICES

<i>Regional group</i>	<i>Fellowships</i>	<i>Training programmes</i>	<i>Secondments</i>	<i>Experts</i>	<i>Software</i>	<i>E-learning</i>
	<i>Number</i>					
Overall total	33	24	14	12	9	3
Developed countries	5	8	2	3	3	2
Developing countries	28	16	12	9	6	1
Africa	5	2	0	1	1	0
Asia	9	8	1	1	2	0
Latin America	8	3	4	4	1	1
Small Island Developing States (SIDS)	6	3	7	3	2	0
Countries with economies in transition	3	7	0	3	3	1
Developed market economies	2	1	2	0	0	1
	<i>Percentage</i>					
Overall total	42	30	18	15	11	4
Developed countries	19	31	8	12	12	8
Developing countries	53	30	23	17	11	2
Africa	63	25	0	13	13	0
Asia	43	38	5	5	10	0
Latin America	73	27	36	36	9	9
Small Island Developing States (SIDS)	46	23	54	23	15	0
Countries with economies in transition	19	44	0	19	19	6
Developed market economies	20	10	20	0	0	10

(19 per cent expressed such a need) and among those of the Small Island Developing States (15 per cent expressed an interest in obtaining projection software). Remarkably, only three National Statistical Offices (those of Mexico, Poland and Portugal) mentioned e-learning as a type of technical cooperation that they would be interested in. This low level of interest in the use of modern information technology to update and improve skills implies that, if appropriate e-learning tools are developed, there will be a need to organize workshops and other types of hands-on training to promote their use.

C. THE PREPARATION OF POPULATION PROJECTIONS

The Inquiry gathered information on whether National Statistical Offices produce population projections and, if so, about the periodicity, time horizon and lowest administrative level for which the projections are prepared. Because the production of population projections demands the preparation of demographic estimates for past periods and the analysis of past trends to guide assumptions about future trends, the capacity of a National Statistical Office to prepare population projections is a good indicator of its overall capacity to carry out demographic analysis.

Most of the National Statistical Offices responding to the Inquiry reported that they were responsible for preparing population projections. One exception was the National Statistical Office of Mexico, whose

response indicated that population projections were the responsibility of the Consejo Nacional de Población, a different government unit.

Although responsibility for the preparation of population projections is common among National Statistical Offices, not all of them provided complete responses regarding the periodicity and time horizon of the projections prepared. The responses received were therefore complemented with information obtained from publications or websites showing projection results. Nevertheless, the relevant information could not be found in a number of cases and, in some of them, the responses received indicated that the National Statistical Offices involved did not produce population projections. That is the case of the National Statistical Offices of Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan and Ukraine, all successor States of the former USSR, and of Bosnia and Herzegovina, a successor State of the former Yugoslavia. In all these cases, the central statistical office of the former unified State was in charge of producing population projections and the successor States have not yet been able to build the capacity to produce them on their own. In addition, some of the National Statistical Offices of the Small Island Developing States located in the Pacific Ocean reported that they rely on the assistance of the South Pacific Commission for the preparation of population projections and the National Statistical Offices of the Cayman Islands and Kuwait reported that they do not produce population projections.

Table 10 displays the distribution of National Statistical Offices by the periodicity with which they produce population projections. Such information was available for 84 per cent of the National Statistical Offices that responded to the Inquiry. Information was lacking for 13 National Statistical Offices, 11 of which reported that they do not produce population projections. Among the 13 National Statistical Offices without information, six are in Asia, one in Africa and three each in the Small Island Developing States and the countries with economies in transition.

The majority of the National Statistical Offices—57 per cent—produced population projections at 10-year intervals or after a census was completed or at ad hoc times (table 10). In developing countries, 68 per cent of the National Statistical Offices responding to the Inquiry produce population projections at such intervals but in developed countries just 35 per cent do so. The National Statistical Offices of developed countries, particularly of those with developed market economies, reported preparing population projections at much shorter intervals: 35 per cent produce projections at intervals shorter than 4 years and a further 19 per cent produce them at intervals ranging from 4 to 9 years. In developing countries, only 2 National Statistical Offices (those of Cuba and Mauritius) reported preparing population projections at intervals lower than 4 years and only 5 reported following intervals that fell within the 4-year to 9-year range. Taken together, those 7 National Statistical Offices constitute 13 per cent of all the National Statistical Offices of developing countries that responded to the Inquiry.

Among the developing regions, Latin America stands out because all the National Statistical Offices² of countries in the region that responded to the Inquiry reported that they produce population projections at 10-year intervals, after a census or, in the case of Honduras, at ad hoc intervals. In Africa, 75 per cent of the National Statistical Offices responding to the Inquiry also produced population projections at those intervals, whereas in Asia, 52 per cent did. Asia has a high proportion of National Statistical Offices that do not produce population projections (29 per cent) and an important proportion producing population projections at intervals shorter than 10 years (19 per cent).

² For Mexico, the practices followed by the Consejo Nacional de Población are reported here.

TABLE 10. NATIONAL STATISTICAL OFFICES CLASSIFIED BY PERIODICITY OF THE POPULATION PROJECTIONS THEY PRODUCE

<i>Regional group</i>	<i>Total number of NSOs reporting</i>	<i>Periodicity of production of population projections</i>			
		<i>At intervals shorter than 4 years</i>	<i>At intervals ranging from 4 to 9 years</i>	<i>At 10-year intervals or after a census or ad hoc</i>	<i>No information on projection periodicity</i>
		<i>Number</i>			
Overall total	79	11	10	45	13
Developed countries	26	9	5	9	3
Developing countries	53	2	5	36	10
Africa	8	0	1	6	1
Asia	21	0	4	11	6
Latin America	11	0	0	11	0
Small Island Developing States (SIDS)	13	2	0	8	3
Countries with economies in transition	16	2	4	7	3
Developed market economies	10	7	1	2	0
		<i>Percentage</i>			
Overall total	100	14	13	57	16
Developed countries	100	35	19	35	12
Developing countries	100	4	9	68	19
Africa	100	0	13	75	13
Asia	100	0	19	52	29
Latin America	100	0	0	100	0
Small Island Developing States (SIDS)	100	15	0	62	23
Countries with economies in transition	100	13	25	44	19
Developed market economies	100	70	10	20	0

In the countries with economies in transition that responded to the Inquiry, 19 per cent of the National Statistical Offices do not produce population projections and a high proportion (44 per cent) produce projections at ad hoc intervals or, in the case of Serbia, after a census. As noted earlier, countries in this group have still some way to go in building the capacity of their National Statistical Offices to produce population projections.

Among the National Statistical Offices that responded to the Inquiry, 32 per cent produced population projections over periods spanning at most three decades (their projection horizon stopped before 2033), whereas 44 per cent produce longer-range projections, usually going at least up to 2050 and covering even longer periods in several cases (table 11). All National Statistical Offices in countries with developed market economies produce long-term projections (i.e., with projections whose horizon goes beyond 2033) and 82 per cent of those in Latin America also do so. In sharp contrast, no National Statistical Office in Africa produces long-range projections and a low 15 per cent of those in the Small Island Developing States and 24 per cent of those in Asia produce population projections beyond 2033. In the countries with economies in transition, just 56 per cent of the National Statistical Offices responding to the Inquiry produce long-range projections.

TABLE 11. NATIONAL STATISTICAL OFFICES CLASSIFIED ACCORDING TO THE TIME HORIZON OF THE POPULATION PROJECTIONS THEY PRODUCE

<i>Regional group</i>	<i>Total number of NSOs reporting</i>	<i>No information on projections available</i>	<i>Horizon < 2033</i>	<i>Horizon beyond 2033</i>
<i>Number of National Statistical Offices</i>				
Overall number	79	19	25	35
Developed countries	26	3	4	19
Developing countries	53	16	21	16
Africa	8	2	6	0
Asia	21	9	7	5
Latin America	11	0	2	9
Small Island Developing States (SIDS)	13	5	6	2
Countries with economies in transition	16	3	4	9
Developed market economies	10	0	0	10
<i>Percentage</i>				
Overall number	100	24	32	44
Developed countries	100	12	15	73
Developing countries	100	30	40	30
Africa	100	25	75	0
Asia	100	43	33	24
Latin America	100	0	18	82
Small Island Developing States (SIDS)	100	38	46	15
Countries with economies in transition	100	19	25	56
Developed market economies	100	0	0	100

Slightly over half (52 per cent) of the National Statistical Offices considered, reported producing population projections for administrative areas below the national level (table 12). The National Statistical Offices of developed countries were more likely to produce population projections at some sub-national level than those in developing countries: 62 per cent vs. 47 per cent. Among both the National Statistical Offices of countries with economies in transition and those of developed market economies, at least 60 per cent produce population projections at the sub-national level. In the developing regions, Latin America has the highest proportion of National Statistical Offices that produce population projections at the sub-national level (73 per cent). It is followed by Africa, where 63 per cent of the National Statistical Offices responding said that population projections were produced at the sub-national level. The Small Island Developing Countries had the lowest proportion of National Statistical Offices producing population projections at the sub-national level (23 per cent). In Asia, the equivalent proportion stands at 43 per cent, indicating that that region, in particular, would benefit from improving the capacity of National Statistical Offices to produce sub-national population projections.

In sum, at least 9 of the National Statistical Offices responding to the Inquiry do not produce population projections. Most of them belong to successor States of the former USSR or the former Yugoslavia and seem not to have developed as yet the capacity to carry out in-depth population analysis. Among the National Statistical Offices that produce population projections, the majority (57 per cent) produce them at intervals of ten years or after a population census has been completed and high propor-

TABLE 12. NATIONAL STATISTICAL OFFICES REPORTING THAT PROJECTIONS
ARE PREPARED AT THE SUB-NATIONAL LEVEL

<i>Regional group</i>	<i>Number</i>	<i>Percentage</i>
Overall number	41	52
Developed countries	16	62
Developing countries	25	47
Africa	5	63
Asia	9	43
Latin America	8	73
Small Island Developing States (SIDS)	3	23
Countries with economies in transition	10	63
Developed market economies	6	60

proportions, particularly in Africa, Asia and the Small Island Developing States, produce projections covering a relatively short time horizon. Lastly, only about half produce projections at the sub-national level. Given the importance of population projections as an input for planning, the limitations reported by the respondents to the Inquiry indicate that there is a clear need for capacity development in this area of work.

D. THE AVAILABILITY AND QUALITY OF DEMOGRAPHIC ESTIMATES

Another way of assessing the potential need for technical support on the part of National Statistical Offices is to consider their capacity to produce and report key demographic indicators. The Statistics Division of the Department of Economic and Social Affairs of the United Nations Secretariat, also known as the United Nations Statistics Division, compiles and disseminates official demographic statistics obtained from periodic reports submitted by the National Statistical Offices of all countries in the world. In disseminating those data, the Statistics Division in consultation with the National Statistical Offices generating the relevant statistics also publishes an indicator of reliability for each of the demographic indicators it compiles. On the basis of the information published by the United Nations Statistics Division, an assessment can be made of the performance of National Statistical Offices in relation to the preparation of reliable estimates of key demographic indicators.

Table 13 shows, for a selected set of demographic indicators, the number of National Statistical Offices that responded to the Inquiry and either have not provided the United Nations Statistics Division with a recent estimate of a given indicator or have provided an estimate that is judged to be unreliable. The list of indicators considered is the following: (a) population (that is, the overall number of people living in the country); (b) number of births or the crude birth rate in a recent year; (c) age-specific fertility rates in a recent year; (d) number of deaths or the crude death rate in a recent year; (e) infant mortality, and (f) life expectancy at birth. These indicators are the most commonly used to analyse population dynamics.

TABLE 13. NUMBER OF NATIONAL STATISTICAL OFFICES THAT DO NOT REPORT KEY DEMOGRAPHIC INDICATORS OR THAT REPORT INDICATORS THAT ARE NOT RELIABLE

<i>Regional group</i>	<i>Total number of NSOs responding to the Inquiry</i>	<i>Population</i>	<i>Births or crude birth rate</i>	<i>Age-specific fertility rates</i>	<i>Deaths or crude death rate</i>	<i>Infant mortality</i>	<i>Life expectancy at birth</i>
<i>Number</i>							
Overall total	79	15	23	15	23	32	40
Developed countries	26	1	0	0	0	1	2
Developing countries	53	14	23	15	23	31	38
Africa	8	6	8	5	8	8	8
Asia	21	6	8	4	8	11	12
Latin America	11	1	5	4	4	5	7
Small Island Developing States (SIDS)	13	1	2	2	3	7	11
Countries with economies in transition	16	1	0	0	0	1	2
Developed market economies	10	0	0	0	0	0	0
<i>Percentage</i>							
Overall total	100	19	29	19	29	41	51
Developed countries	100	4	0	0	0	4	8
Developing countries	100	26	43	28	43	58	72
Africa	100	75	100	63	100	100	100
Asia	100	29	38	19	38	52	57
Latin America	100	9	45	36	36	45	64
Small Island Developing States (SIDS)	100	8	15	15	23	54	85
Countries with economies in transition	100	6	0	0	0	6	13
Developed market economies	100	0	0	0	0	0	0

As the data shown in table 13 imply, virtually all the National Statistical Offices of developed countries produce reliable estimates of the indicators considered. The rare exceptions are the National Statistical Offices of a few countries with economies in transition.

Among developing countries, however, there are considerable numbers of National Statistical Offices that are unable to produce reliable demographic indicators. The National Statistical Offices of countries in Africa, in particular, have difficulty reporting demographic indicators with acceptable reliability. Their best performance is with respect to reporting age-specific fertility rates, which in Africa are most commonly obtained from specialized demographic surveys. Even with respect to that indicator, 63 per cent of the eight National Statistical Offices in Africa responding to the Inquiry either did not report age-specific fertility rates or reported estimates judged to be unreliable.

High proportions of National Statistical Offices in both Asia and Latin America also belong to the group that did not report key demographic indicators or provided estimates of low reliability. Among the Small Island Developing States, National Statistical Offices have special difficulty in reporting reliable

mortality estimates, whether in the form of infant mortality or life expectancy at birth. These deficiencies are well known and have been difficult to reduce because the quality of the estimates reported depends crucially on the generation of reliable statistics in the first place and many developing countries either lack civil registration systems altogether or have systems that fail to cover all relevant events. Improving the functioning of civil registration where it exists is demanding and depends both on institutional and societal change. Although the use of specialized surveys has permitted to palliate the deficiencies in data availability or quality in many countries, data generated by surveys are also not free of problems. Given this state of affairs, it is all the more important for National Statistical Offices to have staff capable of analysing the data available, understanding their deficiencies and being able to reduce them by using technically sound methodology. As the responses to the Inquiry have shown, there is reason to believe that many National Statistical Offices in developing countries lack sufficient qualified personnel to carry out such work.

E. CONCLUSION

The Inquiry on National Institutional Capacity to Produce Population Estimates and Projections, which elicited responses from 79 National Statistical Offices in countries located in all world regions, has provided useful insights about the capacity development needs in regard to population analysis of the National Statistical Offices of countries in different regional groups. The Inquiry showed that in at least eight countries, the National Statistical Offices have no professional staff with training in demography and, in another 18, the National Statistical Offices have at most two professionals with demographic training. Most of those National Statistical Offices belong to developing countries but a significant number are located in countries with economies in transition. Therefore, both groups should be the focus of capacity development activities related to strengthening the capacity of National Statistical Office personnel to carry out population analysis.

The Inquiry also revealed that interest in technical cooperation at the international or regional levels was universal among the National Statistical Offices in the developing regions, partly because the availability of local training opportunities was low in all those regions. In comparison, local training opportunities were more common among countries with economies in transition and not all of them expressed interest in technical cooperation.

Among the different types of technical cooperation, workshops were favoured by 81 per cent of the National Statistical Offices of developing countries and by 73 per cent of those of developed countries. Even when training opportunities were available in a country, the opportunity that workshops offered for professional staff to become familiar with cutting edge advances in demographic methodology and to network with peers was valued.

Respondents to the Inquiry also expressed interest in a variety of other capacity development activities even if they were cited less frequently than workshops. Those activities included: fellowships, training programmes, secondments to other National Statistical Offices and the posting of international experts in a National Statistical Office both to supply the needed expertise and to train staff. There was also considerable interest in obtaining demographic software, especially that used in producing population projections.

An important finding is that very few National Statistical Offices expressed interest in e-learning opportunities, suggesting that e-learning as an educational and training tool is not yet well known. Consequently, the development of e-tools for demographic analysis will have to be accompanied by an outreach effort to ensure that they become part of the normal tool kit used by staff working in National Statistical Offices.

Lastly, the results of the Inquiry largely corroborated the limited capacity that many National Statistical Offices in developing countries have to produce reliable estimates of key demographic indicators and to generate timely and sufficiently detailed population projections for use in development planning. Given that demographic indicators are essential to not only to assess advances toward the attainment of key development goals but also as input for the derivation of other indicators, it is urgent to assist National Statistical Offices in developing the capacity to improve their work in this area.

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ANNEXES

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ANNEX I. INQUIRY ON DEMOGRAPHIC ESTIMATES AND PROJECTIONS

The Population Division of the Department of Economic and Social Affairs intends to collect, through this Inquiry, comparative information on national activities and capacities in the area of demographic analysis. The results of this exercise would assist the United Nations, through its programme of technical cooperation activities, in further developing such capacities.

The Questionnaire consists of a part on demographic estimates and projections produced by your Agency and another part on human resources for these activities. You may wish to use separate sheets to answer the questionnaire.

DEMOGRAPHIC ESTIMATES AND PROJECTIONS

Demographic indicators are often used for several purposes by the Government, municipalities, academia, NGOs, media and the public at large. While the demand of these stakeholders is framed by their particular objectives, consistency and timeliness of information are always important. By applying methods of direct or indirect estimation, demographic analysis is aimed at providing reliable retrospective time series of indicators of fertility, mortality, migration and population size and structure. Demographic projections provide estimates of a population for future dates illustrating plausible courses of future demographic change. The following questions are aimed at elucidating the scope of your Agency's work in estimating past demographic trends and projecting future population size and structure.

1. Who are the users of demographic estimates and projections produced by your Agency and what are their specific needs?
2. What demographic indicators and at which periodicity are produced by your Agency?
3. What sources of primary demographic data are used for this purpose?
4. For which administrative levels does your Agency analyze demographic data?
5. If your Agency produces demographic projections, what are their periodicity, time horizon and lowest administrative level?
6. How are projection assumptions formulated?
7. How does your Agency distribute demographic estimates and projections?

CAPACITY DEVELOPMENT

The preparation of demographic estimates and projections requires well trained specialists, such as demographers, statisticians or economists, as well as other aspects of the capacity of the relevant entity to perform its duties. The following questions are concerned with your Agency's capacity development in the area of demographic analysis. Most capacity is developed within and by countries themselves, but many international organizations, like the United Nations, provide assistance in capacity development as a part of its programmes of technical cooperation with their member countries.

8. What are your Agency's priorities in capacity development in the field of demographic estimates and projections?
9. Does your Agency have a specialized demographic unit and what is its place in the Agency's structure?
10. How many professional, technical support staff and contracted experts does your Agency rely on for work on demographic estimates and projections?
11. How many professionals among your staff have received specialized training in demography?
12. Are there training opportunities for the staff of your Agency in the field of demographic estimates and projections in your institution or in your country?
13. With the human resources at your disposal, is your Agency able to produce all demographic estimates and projections necessary for all branches of Government, academia and general public?
14. Among such forms of assistance as support of existing national training facilities, organization of new training programmes, workshops and fellowships, what would be the most appropriate format of technical cooperation projects with international organizations?

ANNEX TABLE 1. REPORTED NUMBER OF PROFESSIONALS WORKING ON POPULATION ANALYSIS AND NUMBER WITH SPECIALIZED TRAINING IN DEMOGRAPHY

<i>Country</i>	<i>Total number of professionals working on population analysis</i>	<i>Number with specialized training in demography</i>
Africa		
Cameroon	13	13
Gambia	2	1
Kenya	3	5
Mozambique	8	4
Namibia	7	2
Sierra Leone	5	5
Uganda	4	3
Zimbabwe	2	3
Asia		
Armenia	6	5
Azerbaijan	6	6
China, Hong Kong SAR	1	1
China, Macao SAR	3	..
Cyprus	3	1
Iran (Islamic Rep. of)	10	4
Kazakhstan	4	4
Kuwait	2	0
Kyrgyzstan	4	4
Lao People's Democratic Republic.....	1	2
Mongolia	3	0
Occupied Palestinian Territory.....	3	3
Oman	4	6
Pakistan	12	2
Philippines	3	3
Republic of Korea	5
Saudi Arabia	3	3
Sri Lanka	7	20
Thailand	3	2
Turkey	4	4
United Arab Emirates	3	3
Latin America		
Argentina	6	6
Bolivia (Plurinational State of).....	2	6
Brazil.....	10	6
Chile	8	2
Colombia	12	6
Costa Rica	3	2
Guatemala	2	2
Honduras	2	2
Mexico	4	4
Uruguay*.....	0	..
Venezuela (Bolivarian Rep. of)	7	3

ANNEX TABLE 1. (continued)

<i>Country</i>	<i>Total number of professionals working on population analysis</i>	<i>Number with specialized training in demography</i>
Small Island Developing States (SIDS)		
Aruba	2	1
Bahamas	1	3
Bermuda	3	2
Cape Verde	7	4
Cayman Islands	1	2
Cuba	7	7
Fiji	4	4
Jamaica	2	9
Mauritius	5	1
Papua New Guinea	3	3
Saint Lucia	1	2
Tonga	5	0
Tuvalu	0	0
Countries with economies in transition		
Belarus	6	0
Bosnia and Herzegovina	0	0
Bulgaria	13	8
Croatia	2	0
Czech Republic	12	6
Estonia	13	3
Hungary	14	7
Latvia	4	4
Lithuania	11	2
Poland	18	..
Romania	6	4
Russian Federation	13	10
Serbia	1	0
Slovakia	6	6
Slovenia	6	4
Ukraine	14	7
Developed market economies		
Canada	4	8
Denmark	10	3
Finland	5	4
Germany	20	2
Greece	3	..
Italy	3	3
New Zealand	19	19
Portugal	6	4
Sweden	20	6
United Kingdom	100	..

ANNEX TABLE 2. REPORTED INTEREST IN CAPACITY BUILDING ACTIVITIES (● INDICATES INTEREST; ○ INDICATES NO INTEREST)

Country	National opportunities for training available	Any form of training	Workshops	Fellowships	Training programmes	Secondments	International experts	Software	E-learning
Africa									
Cameroon	○	●	●	●	○	○	●	●	○
Gambia	○	●	○	●	○	○	○	○	○
Kenya	●	●	●	○	○	○	○	○	○
Mozambique	○	●	○	●	○	○	○	○	○
Namibia	●	●	●	●	●	○	○	○	○
Sierra Leone	○	●	●	●	●	○	○	○	○
Uganda	●	●	●	○	○	○	○	○	○
Zimbabwe	●	●	●	○	○	○	○	○	○
Asia									
Armenia	○	●	●	●	●	○	○	○	○
Azerbaijan	●	●	●	○	○	○	○	○	○
China, Hong Kong SAR	●	●	●	○	○	○	○	○	○
China, Macao SAR	○	●	●	○	●	○	○	○	○
Cyprus	○	●	●	○	●	○	○	○	○
Iran (Islamic Republic of)	●	●	●	●	●	○	○	●	○
Kazakhstan	●	●	○	○	○	○	○	○	○
Kuwait	○	●	●	●	○	●	○	○	○
Kyrgyzstan	○	●	●	●	○	○	○	○	○
Lao People's Democratic Republic	○	●	●	●	●	○	○	○	○
Mongolia	○	●	○	○	○	○	○	○	○
Occupied Palestinian Territory	○	●	●	○	○	○	○	○	○
Oman	○	●	●	○	○	○	○	●	○
Pakistan	●	●	●	●	○	○	○	○	○
Philippines	●	●	●	○	○	○	○	○	○
Republic of Korea	●	●	●	○	○	○	○	○	○
Saudi Arabia	○	●	●	●	●	○	○	○	○
Sri Lanka	●	●	●	●	○	○	●	○	○
Thailand	●	●	○	●	○	○	○	○	○
Turkey	●	●	●	○	●	○	○	○	○
United Arab Emirates	●	●	○	○	●	○	○	○	○
Latin America									
Argentina	●	●	●	●	○	●	○	●	○
Bolivia (Plurinational State of)	○	●	●	●	○	●	●	○	○
Brazil	●	●	●	○	○	○	●	○	○
Chile	○	●	●	●	●	●	●	○	○
Colombia	●	●	●	●	○	○	●	○	○
Costa Rica	○	●	●	●	●	○	○	○	○
Guatemala	○	●	●	●	○	○	○	○	○
Honduras	○	●	●	●	●	○	○	○	○
Mexico	●	●	○	●	○	●	○	○	●
Uruguay	●	●	●	○	○	○	○	○	○
Venezuela (Bolivarian Rep. of)	●	●	●	○	○	○	○	○	○

ANNEX TABLE 2. (continued)

Country	National opportunities for training available	Any form of training	Workshops	Fellowships	Training programmes	Secondments	International experts	Software	E-learning
Small Island Developing States (SIDS)									
Aruba	○	●	●	○	○	○	○	○	○
Bahamas	●	●	●	○	○	○	●	○	○
Bermuda	●	●	●	●	○	●	○	○	○
Cape Verde	○	●	●	●	○	●	○	○	○
Cayman Islands	○	●	○	○	●	○	●	○	○
Cuba	●	●	○	○	●	○	○	●	○
Fiji	●	●	●	●	○	●	●	○	○
Jamaica	●	●	●	●	○	○	○	○	○
Mauritius	○	●	●	○	●	○	○	○	○
Papua New Guinea	○	●	●	●	○	●	○	○	○
Saint Lucia	○	●	●	○	○	●	○	●	○
Tonga	○	●	●	○	○	●	○	○	○
Tuvalu	○	●	○	●	○	●	○	○	○
Countries with economies in transition									
Belarus	●	●	●	○	○	○	○	○	○
Bosnia and Herzegovina	○	●	○	○	●	○	●	○	○
Bulgaria	●	●	●	○	●	○	○	○	○
Croatia	○	●	○	○	●	○	○	○	○
Czech Republic	●	●	●	○	○	○	○	●	○
Estonia	●	○	○	○	○	○	○	○	○
Hungary	○	●	●	○	○	○	○	○	○
Latvia	●	●	●	●	○	○	○	○	○
Lithuania	●	●	●	○	●	○	○	○	○
Poland	●	●	●	○	○	○	○	○	●
Romania	○	●	●	○	●	○	○	●	○
Russian Federation	●	●	○	●	○	○	●	○	○
Serbia	○	●	●	○	○	○	○	●	○
Slovakia	●	●	○	○	●	○	○	○	○
Slovenia	●	○	○	○	○	○	●	○	○
Ukraine	●	●	●	●	●	○	○	○	○
Developed market economies									
Canada	●	●	●	○	○	○	○	○	○
Denmark	●	○	○	○	○	○	○	○	○
Finland	○	●	●	●	○	○	○	○	○
Germany	●	●	●	○	○	○	○	○	○
Greece	○	●	●	○	○	○	○	○	○
Italy	●	●	●	●	○	○	○	○	○
New Zealand	●	●	●	○	○	●	○	○	○
Portugal	●	●	●	○	○	○	○	○	●
Sweden	●	●	●	○	○	○	○	○	○
United Kingdom	●	●	●	○	●	●	○	○	○

ANNEX TABLE 3. INFORMATION ON PREPARATION OF POPULATION PROJECTIONS (● INDICATES THE ENTRY APPLIES; ○ INDICATES IT DOES NOT APPLY)

Country	Frequency of preparation of population projections				Subnational projections are produced	Base year	Projection horizon
	Less than 4 years	Between 4 and less than 10 years	Every 10 years, after a census or ad hoc	No information on frequency of projections			
Africa							
Cameroon	○	○	○	●	○
Gambia	○	○	●	○	○
Kenya	○	○	●	○	●	2000	2025
Mozambique	○	○	●	○	○	1997	2020
Namibia	○	●	○	○	●	2005	2030
Sierra Leone	○	○	●	○	●	2004	2014
Uganda	○	○	●	○	●	2002	2030
Zimbabwe	○	○	●	○	●	1992	2010
Asia							
Armenia	○	○	○	●	○
Azerbaijan	○	○	○	●	○
China, Hong Kong SAR	○	●	○	○	●	2007	2037
China, Macao SAR	○	●	○	○	○	2001	2026
Cyprus	○	○	●	○	●	2002	2052
Iran (Islamic Republic of)	○	○	●	○	●
Kazakhstan	○	○	○	●	○
Kuwait	○	○	○	●	○
Kyrgyzstan	○	○	○	●	○
Lao People's Democratic Republic	○	○	●	○	●	2005	2020
Mongolia	○	○	●	○	○	2000	2025
Occupied Palestinian Territory	○	○	●	○	●	1997	2025
Oman	○	○	○	●	○
Pakistan	○	○	●	○	○
Philippines	○	○	●	○	●	2000	2040
Republic of Korea	○	●	○	○	●	2005	2050
Saudi Arabia	○	○	●	○	○
Sri Lanka	○	○	●	○	○	1991	2031
Thailand	○	●	○	○	●	2005	2025
Turkey	○	○	●	○	●	2000	2050
United Arab Emirates	○	○	●	○	○	2005	2015
Latin America							
Argentina	○	○	●	○	●	2000	2050
Bolivia (Plurinational State of)	○	○	●	○	●	2000	2050
Brazil	○	○	●	○	●	2000	2050
Chile	○	○	●	○	●	2002	2050
Colombia	○	○	●	○	●	2005	2020
Costa Rica	○	○	●	○	●	2005	2100
Guatemala	○	○	●	○	●	2005	2050
Honduras	○	○	●	○	●	2001	2050
Mexico	○	○	●	○	○	2005	2050
Uruguay	○	○	●	○	○	2004	2050
Venezuela (Bolivarian Rep. of)	○	○	●	○	○	2000	2015

ANNEX TABLE 3. (continued)

Country	Frequency of preparation of population projections				Subnational projections are produced	Base year	Projection horizon
	Less than 4 years	Between 4 and less than 10 years	Every 10 years, after a census or ad hoc	No information on frequency of projections			
Small Island Developing States (SIDS)							
Aruba	○	○	●	○	○	2003	2023
Bahamas	○	○	●	○	○	2000	2030
Bermuda	○	○	●	○	○	2000	2030
Cape Verde	○	○	●	○	●	2005	2025
Cayman Islands	○	○	○	●	○
Cuba	●	○	○	○	●	2006	2031
Fiji	○	○	●	○	○
Jamaica	○	○	●	○	○	2000	2050
Mauritius	●	○	○	○	●	2000	2040
Papua New Guinea	○	○	●	○	○	2000	2030
Saint Lucia	○	○	○	●	○
Tonga	○	○	○	●	○
Tuvalu	○	○	●	○	○
Countries with economies in transition							
Belarus	○	○	○	●	○
Bosnia and Herzegovina	○	○	○	●	○
Bulgaria	○	●	○	○	●	2005	2060
Croatia	○	○	●	○	○	2004	2051
Czech Republic	○	○	●	○	●	2002	2050
Estonia	○	○	●	○	●	2005	2050
Hungary	●	○	○	○	●	2007	2050
Latvia	○	●	○	○	●	2004	2050
Lithuania	○	○	●	○	○	2003	2030
Poland	○	●	○	○	●	2002	2030
Romania	○	○	●	○	●	2005	2050
Russian Federation	●	○	○	○	●	2008	2030
Serbia	○	○	●	○	●	2002	2032
Slovakia	○	●	○	○	●	2003	2050
Slovenia	○	○	●	○	○	2004	2050
Ukraine	○	○	○	●	○
Developed market economies							
Canada	○	●	○	○	●	2005	2056
Denmark	●	○	○	○	○	2007	2050
Finland	●	○	○	○	○	2007	2040
Germany	●	○	○	○	●	2005	2050
Greece	●	○	○	○	○	2005	2060
Italy	○	○	●	○	●	2007	2057
New Zealand	●	○	○	○	●	2006	2061
Portugal	○	○	●	○	●	2000	2050
Sweden	●	○	○	○	○	2007	2050
United Kingdom	●	○	○	○	●	2006	2081

ANNEX TABLE 4. RELIABILITY OF DEMOGRAPHIC ESTIMATES (● INDICATES THE ESTIMATE IS NOT RELIABLE OR IS NOT AVAILABLE; ○ INDICATES THE ESTIMATE IS RELIABLE)

<i>Country</i>	<i>Population</i>	<i>Births or crude birth rate</i>	<i>Age-specific fertility rates</i>	<i>Deaths and crude death rate</i>	<i>Infant mortality</i>	<i>Life expectancy at birth</i>
Africa						
Cameroon	●	●	○	●	●	●
Gambia	●	●	●	●	●	●
Kenya	●	●	○	●	●	●
Mozambique	●	●	●	●	●	●
Namibia	●	●	●	●	●	●
Sierra Leone	●	●	●	●	●	●
Uganda	○	●	●	●	●	●
Zimbabwe	○	●	○	●	●	●
Asia						
Armenia	○	○	○	○	○	○
Azerbaijan	○	○	○	○	○	○
China, Hong Kong SAR	○	○	○	○	○	○
China, Macao SAR	○	○	○	○	○	○
Cyprus	○	○	○	○	○	○
Iran	●	○	○	○	●	●
Kazakhstan	○	○	○	○	○	○
Kuwait	●	○	○	○	●	●
Kyrgyzstan	○	○	○	○	○	○
Lao People's Democratic Republic ..	○	●	●	●	●	●
Mongolia	○	○	○	○	○	○
Occupied Palestinian Territories	●	●	○	●	●	●
Oman	○	●	○	●	●	●
Pakistan	●	●	○	●	●	●
Philippines	○	○	○	○	○	●
Republic of Korea	○	○	○	○	○	○
Saudi Arabia	●	●	○	●	●	●
Sri Lanka	●	○	●	○	●	●
Thailand	○	●	●	●	●	●
Turkey	○	●	○	●	●	●
United Arab Emirates	○	●	●	●	●	●
Latin America						
Argentina	○	○	○	○	○	○
Bolivia (Plurinational State of)	○	●	●	●	●	●
Brazil	●	●	●	●	●	●
Chile	○	○	○	○	○	○
Colombia	○	●	●	●	●	●
Costa Rica	○	○	○	○	○	●
Guatemala	○	○	○	○	○	○
Honduras	○	●	●	●	●	●
Mexico	○	●	○	○	●	●
Uruguay	○	○	○	○	○	○
Venezuela (Bolivarian Rep. of)	○	○	○	○	○	●

ANNEX TABLE 4. (continued)

Country	Population	Births or crude birth rate	Age-specific fertility rates	Deaths and crude death rate	Infant mortality	Life expectancy at birth
Small Island Developing States (SIDS)						
Aruba	○	○	○	○	●	●
Bahamas	○	○	○	○	○	●
Bermuda	○	○	○	○	○	●
Cape Verde	○	○	●	○	●	●
Cayman Islands	○	○	●	○	○	●
Cuba	○	○	○	○	○	○
Fiji	○	○	○	○	○	●
Jamaica	○	○	○	●	●	●
Mauritius	○	○	○	○	○	○
Papua New Guinea	○	●	○	●	●	●
Saint Lucia	○	○	○	○	●	●
Tonga	●	○	○	○	●	●
Tuvalu	○	●	○	●	●	●
Countries with economies in transition						
Belarus	○	○	○	○	○	○
Bosnia and Herzegovina	●	○	○	○	○	●
Bulgaria	○	○	○	○	○	○
Croatia	○	○	○	○	○	●
Czech Republic	○	○	○	○	○	○
Estonia	○	○	○	○	○	○
Hungary	○	○	○	○	○	○
Latvia	○	○	○	○	○	○
Lithuania	○	○	○	○	○	○
Poland	○	○	○	○	○	○
Romania	○	○	○	○	○	○
Russian Federation	○	○	○	○	○	○
Serbia	○	○	○	○	○	○
Slovakia	○	○	○	○	○	○
Slovenia	○	○	○	○	●	○
Ukraine	○	○	○	○	○	○
Developed market economies						
Canada	○	○	○	○	○	○
Denmark	○	○	○	○	○	○
Finland	○	○	○	○	○	○
Germany	○	○	○	○	○	○
Greece	○	○	○	○	○	○
Italy	○	○	○	○	○	○
New Zealand	○	○	○	○	○	○
Portugal	○	○	○	○	○	○
Sweden	○	○	○	○	○	○
United Kingdom	○	○	○	○	○	○

NOTE: Data reliability assessments are derived from the database maintained by the United Nations Statistics Division, specifically, from the following tables: population by sex and urban-rural residence (B01); live births by sex and urban/rural residence (E01); deaths by sex and urban/rural residence (G01); infant mortality rate (H51); and expectation of life at specific age for each sex (L21).