



Annual Activity Report
July 1, 2005-June 30, 2006

The center's mission is to maximize the effective and efficient use of occupational information by providing specialized occupational tools (files, reports, software) and technical assistance to users and producers of occupational information.

<http://www.xwalkcenter.org>



Introduction

The federal government has funded operation of a national service center for occupation, industry and training classifications and their relationships to each other since the early 1980s. Federal officials realized that collectively they used a variety of classification systems for their programs, and people outside their agencies frequently need assistance in obtaining and using those resources

The National Crosswalk Service Center (NCSC) was established with the State of Iowa in 1983. The National Occupational Information Coordinating Committee (NOICC) provided funding. The center's primary customers were the federal agencies that constituted NOICC (Departments of Labor, Education, Defense, Commerce, Agriculture) and NOICC's network of state committees (SOICCs). A variety of other customer types also made use of the center; NCSC products developed for a particular customer were shared with all.

The NCSC's delivery of products and services has changed along with technology, and the center faces a worldwide market, delivering its products over the Internet. During much of the 1980s, the NCSC distributed a few standard files on nine-track magnetic tape for use with mainframe computers. The center also produced printed resources extracted from its databases. Increasing availability of personal computers changed the market for NCSC products and services in the latter half of the 1980s, with a wider variety of products distributed on diskettes. In 1989, the NCSC began operation of a dial-up bulletin board system that allowed customers to download files as they were needed. During this time period, an increasing share of NCSC resources was devoted to developing customized products to meet specific needs.

The Employment and Training Administration of the U.S. Department of Labor assumed funding for the NCSC in 1997 in anticipation of the end of the NOICC program. (NOICC stopped operation on June 30, 2000.) To a large degree, the work and the customers of the NCSC were unchanged - state Labor Market Information units have always been significant customers, and their need for classification resources grew as their programs included a wider variety of information.

This is the latest in a series of activity reports that document the activities of the NCSC. Previous reports can be found on the center's web site at <http://www.xwalkcenter.org/xwrepo.html>.



Objectives

The Employment and Training Administration provides funding for the National Crosswalk Service Center in order to meet four objectives:

- 1) Work with consortium members to establish a single point of contact for technical support to assist the states in their development of the Workforce Information Database.
- 2) Provide a conduit for information and data into and out of the Workforce Information System.
- 3) Provide a one-stop resource for classification and crosswalk resources.
- 4) More fully exploit Internet communication to share files, ideas, feedback, etc. among producers and users of occupational, training and economic information.

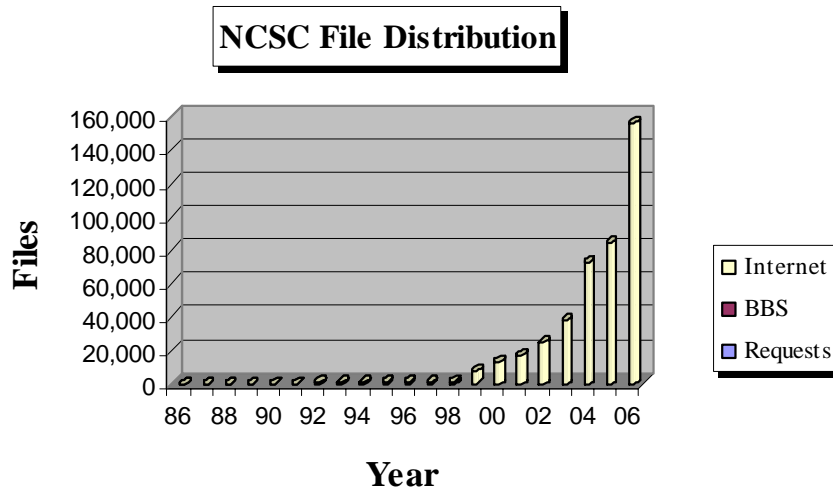
The contents of this report are divided into two major sections. The first section analyzes use of NCSC resources and distribution of files and other occupational tools. The second section relates the center's activities to the work statements found in its contract with the Analyst Resource Center.

NCSC Utilization

Early in the center's operation, staff used the number of requests fulfilled as a major indicator of use of the center's services. All contact with customers was direct, whether through the mail or by telephone, so tracking requests was very straightforward. The addition of the dial-up bulletin board service in 1989 did not complicate tracking significantly, since the system generated log files that were easy to analyze.

The introduction of an Internet server that allowed customers to download files in late 1997 complicated the tracking of individual requests. Center staff attempted to define customer requests through analysis of the Internet server logs, but were largely unsuccessful. The center opted instead to adopt the count of files downloaded as an alternative indicator of utilization. The analysis is somewhat complicated by two log formats produced by the server: one for each protocol used for downloads - File Transfer Protocol (FTP, at <ftp://ftp.xwalkcenter.org>) and Hyper Text Transfer Protocol (HTTP at <http://webdata.xwalkcenter.org/ftp/>). Center staff import the individual log files into a database, standardize variable names and formats, and produce file download estimates that cross both protocols. (For more information about the NCSC's analysis of server logs, see Appendix A.)

The impact of file availability on the Internet on service delivery is readily apparent in the graphic below. A listing of the files with the greatest number of downloads is included as an appendix to this document.




Other measures of server activity also reflect the growth in use of this service delivery type:

NCSC Server Statistics
1999-2006

Year Ending	Hits	% Change	Views	% Change	Bandwidth	% Change
1999	109,541	N/A	35,809	N/A	5.2	N/A
2000	207,929	89.8	50,782	42	13.1	150.9
2001	138,115	-33.6	26,957	-47	24.8	88.9
2002	256,330	85.6	50,658	88	74.0	198.3
2003	298,939	16.6	50,881	0	43.9	-40.7
2004	359,651	20.3	50,094	-2	71.3	62.4
2005	369,241	2.7	52,692	5	107.7	51.1
2006	669,507	81.3	130,441	148	135.2	25.6

Note that server logs were missing for three months of 2001. Analysis of the remaining months' logs indicates that the year's activity was probably roughly on a par with 2000. Note that there are a variety of events that can have an impact on server activity. The release of a new version of the Workforce Information Database, major revisions to classifications such as the SOC or CIP, release of a new set of occupational employment estimates by the Bureau of Labor Statistics, and the release of new career videos can all have an effect on server usage.



A primary group of customers for the NCSC is the group of state database administrators who populate their versions of the Workforce Information Database. The center develops standardized prototype content for many of the database's lookup and crosswalk tables as well as providing a variety of national and state data tables. The state-level data tables usually include data for some substate areas, such as counties, metropolitan areas or cities. The NCSC has analyzed file downloads to determine the extent to which its customers are utilizing Workforce Information Database tables and other information. This analysis includes looks at what portions of total downloads are made up of Workforce Information Database files; downloads of data files by geography; and downloads of standardized files for different versions of the database:

Analysis of Workforce Information Database Downloads, 2005-06

Overall	Downloads	Percent
Total Downloads	155,776	100.0
Workforce Information Database	96,783	62.1
By Version		
Ver. 1.1	6,168	23.2
Ver. 2.0	3,777	14.2
Ver. 2.1	2,616	9.9
Ver. 2.2	4,833	18.2
Ver. 2.3	8,191	30.9
Nonstandard	955	3.6
Total	26,540	100.0
By Geography		
National	8,102	12.6
State	56,224	87.4
Total	64,326	100.0

The portion of total downloads made up of Workforce Information Database files has increased (up from 47% in 2002-03). The number of files downloaded for version 2.3 of the database reflects states' shift to the latest version. Customers downloaded a large number of files for version 1.1 of the database. For a count of the number of state-specific files downloaded by state, see Appendix C.

Some portion of those downloading files for earlier versions of the database may be made up of those outside the Workforce Information system - customers whose applications or other needs are satisfied by the earlier versions' structures. NCSC files are available through anonymous downloads to everyone, and customers outside the center's primary audience (formerly the

NOICC/SOICC network and now the Workforce Information System) have historically made up about half of the center's customers. That's more difficult to track when files are downloaded from the Internet, but examinations of visitors' top-level domains and types of files downloaded indicate that the center's customers are as diverse as the types of files they download. The most common top-level domains are listed below:

Top-Level Domains

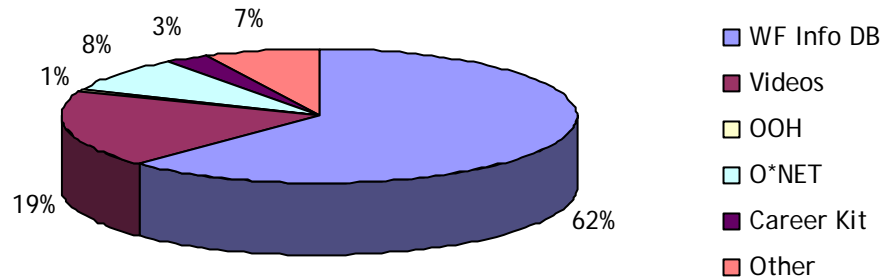
Rank	Domain	Description	Hits	Visitors	% of Total Visitors
1	.com	Commercial	86,843	20,491	59.45
2		Unknown	84,800	8,881	25.77
3	.net	Network	23,238	2,538	7.36
4	.us	United States	8,268	682	1.98
5	.mil	Military	751	262	0.76
6	.edu	Educational	4,308	218	0.63
7	.gov	Government	1,044	155	0.45
8	.org	Non-profit Organization	970	97	0.28
9	.jp	Japan	297	88	0.26
10	.fr	France	235	87	0.25
11	.de	Germany	189	72	0.21
12	.ca	Canada	1,020	63	0.18
13	.dk	Denmark	94	63	0.18
14	.uk	United Kingdom	136	58	0.17
15	.sa	Saudi Arabia	65	46	0.13
16	.nl	Netherlands	93	42	0.12
17	.ru	Russian Federation	394	36	0.10
18	.it	Italy	132	33	0.10
19	.tr	Turkey	97	31	0.09
20	.in	India	64	29	0.08

One would expect that most customers within the Workforce Information System would visit from .us, .gov or .org domains. These domain types, when combined with unknown visitors account for only 28 percent of total visitors. The number of visitors from commercial domains, as well as the number of foreign countries from which others visit reflects the diversity of the center's customers. For a complete listing of the countries of the server's visitors, see Appendix D.

Another reflection of the center's customers' varied interests in occupational resources is the type of files downloaded. Visitors can choose from over 6,000 files for downloading. Of those, slightly over 57 percent are formatted for use in the Workforce Information Database. Those files accounted for over 60% of

the files downloaded. Career videos and O*NET files also had significant numbers of downloads. The NCSC has distributed O*NET files since the classification was established in the late 1990s. They have among the center's most popular products year after year.

File Download Types (05-06)



The anonymous nature of Internet file transfers makes identification of individual customers quite imprecise. However, the NCSC tracks e-mail contact with customers. Customers who contact the center using e-mail. These customers frequently have questions about the contents and uses of NCSC files and other resources or are searching for resources that might not be readily identifiable. The list of e-mail contacts also reflects the diversity of the center's customers:

- School of Education, Colorado State University
- Economics Department, University of Western Australia
- South Florida Water Management District
- ICF Consulting
- Department of Economics, University of Western Ontario
- The Maxwell School of Citizenship and Public Affairs, Syracuse University
- IntoCareers
- Total Force Integration Branch
Civilian Workforce Analysis Division
Dept of the Navy
- Institutional Research & Assessment, Auburn University
- Chmura Economic & Analytics
- Georgia Career Information Center, Georgia State University
- Division of Applied Research and Technology, National Institute for Occupational Safety and Health
- Owen Software Development Corp.
- Business & Leadership Skills Development, Eastman Chemical Company
- IRIM, Eastern Michigan University
- Information and Logistics Technology, University of Houston



Work Statement Activities

The major activities of the NCSC are defined in the work statement document that is part of the contract for operation of the center. The contents of the work statements are, to a degree, shaped by the Employment and Training Administration's goals for the center. One of those goals is the movement of information into and out of the Workforce Information System. The diversity of the subject matter downloaded and the customer information described in the previous section indicate a broad interest in the classification, crosswalk and data resources offered by the NCSC indicate that this goal is being met. Specific activity related to individual work statement items is described in this section.

Support the Analyst Resource Center


- Attended consortium meetings in San Diego (August) and Charleston, SC (February-March). Presented updates on the center's activities and worked with the Education and Communications Committee, and the Database Structure Committee.
- Maintained ARC Database Administrators communication list. (Ongoing)
- Distributed the ARC newsletter (July, October, January)

Support state staff in their efforts to populate and manage the Workforce Information Database

- Downloaded, formatted and provided monthly updates of national data for the CES and LABFORCE tables. (July-June)
- Downloaded and provided monthly comprehensive CES table developed by BLS. (July-June)
- Downloaded, formatted and provided monthly updates of national CPI table content. (July-June)
- Downloaded, formatted and provided national OES wage and employment estimates for May 2005. Provided state-specific files upon request. (June)
- Downloaded, formatted and provided national employment projections files. (January)
- Updated prototype geography files to reflect changes in area concepts and definitions. (November, January)
- Updated a variety of state-specific data files:
 - BEA Income (September)
 - Census Population (January, April)
 - Census Income (January)

Provide support America's Career InfoNet, other ETA electronic tools and other users

- Licensing database update to ACINet (October, February)

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- IPEDS school and program directory update for CareerVoyages (December)
 - IPEDS school directory for ACINet (March, June)
 - IPEDS extracts for ETA for WIRED, hurricane recovery, other projects. (January, April)
 - Participated in Career OneStop conference calls (weekly)

Develop and maintain the Internet resources necessary to carry out the other tasks

- New server online with 500% increase in storage (December)
- Web page with explanation of OMB geography updates and prototype files (January)
- Updated the ARC Database calendar pages (Ongoing)
- Revised the home page to include a "featured site" area that includes a randomly selected state site that is utilizing the ARC Database.
- Surveyed ARC website users regarding usage of the website, and solicited feedback on how to make the website more user friendly. Utilizing user feedback developed a revised look for the website to make it more user friendly.
- Participated in monthly conference calls regarding new content and format for the ARC web site.

Maintain and expand the center's collection of classification resources

- O*NET Lay Title database update (July, February)
- O*NET 8.0 Database release (September)
- O*NET Tools and Technology database (December)
- O*NET 9.0 Database release (December)
- Added International Standard Classification of Occupations (ISCO-88) crosswalk to server (April)
- Military crosswalk update (May)
- O*NET 10.0 Database release (June)

Continue the center's outreach by attending conferences and, where appropriate, presenting information about NCSC products and services

- Workforce Innovations in Philadelphia (July)
- ALMIS Database Seminar in San Diego (August, two presentations)
- Labor Market Information Forum in Norfolk, VA (October)
- Association of Computer-Based Systems for Career Information (ACSCI) conference in Kansas City (December)



Appendix A

Analysis of NCSC Internet Server Log Files

The examination of the delivery of products and services by the National Crosswalk Service Center in this report relies heavily on the analysis of log files from the center's Internet server. That server's main function is the distribution of files through the Internet File Transfer Protocol (FTP). Files are also downloaded through the World Wide Web Protocol, HTTP. The NCSC's home page is located on a separate server, operated by the State of Iowa, and use of that web site is not included in the analysis.

Two types of analysis are included: measures of overall server activity, and the characteristics and number of files downloaded by customers. The procedures in producing both types of data are described briefly below:

- **Measures of overall server activity:** Aggregate measures of server use (hits, bandwidth, characteristics of visitors) are developed through the use of WebLog Expert software (www.weblogexpert.com). This software analyzes the content of the 123 MB of server log files and develops a variety of measures. A number of these measures, type of top-level domain, most active organizations and country of visitors reflect the wide variety of users who visit the center's server.
- **Characteristics and number of files downloaded:** This analysis includes a variety of dimensions including counts of files downloaded, geography and versions of Workforce Information Database files downloaded, and others. During this analysis, log files are imported into a database, files read by Internet search engines are excluded, activity by NCSC staff is excluded, and counts of files viewed/downloaded are generated. In order to generate those counts, information about the locations of files downloaded must be standardized. Files downloaded via the FTP and HTTP protocols display different file locations, despite being the same files. After those differences are removed, download counts for individual files can be generated.

Appendix B

Files With Significant Downloads, 2005-2006

Rank	File Name	# Downloads/ Views	Description
1	/download/career.kit/dotxonet.dbf	1,930	DOT-O*NET crosswalk
2	/almis/ver11/txt/lookup/moscode.txt	1,401	Military Occupation Code lookup
3	/almis/national/readme.txt	1,376	File information for national files
4	/download/onet90/onet90ac.zip	990	O*NET 9.0 Access database
5	/almis/ver11/txt/lookup/siccode.txt	933	SIC Code lookup table
6	/download/xwalks/readme.txt	734	General crosswalk file information
7	/almis/ver23/txt/lookup/moccode.txt	714	Workforce Information military lookup
8	/download/soc2000/soc00ac.zip	714	2000 SOC Access database
9	/download/soccip00/soccip00.zip	711	SOC-CIP crosswalk
10	/almis/ver23/almis2-3_release.zip	705	Structure documents for version 2.3
11	/almis/ver20/txt/data/analysis.txt	693	ANALYSIS table contents
12	/download/career.kit/dotsoc00.dbf	576	DOT-SOC crosswalk
13	/download/onet80/onet80ac.zip	564	O*NET 8.0 Access database
14	/download/video/filelist.txt	520	List of available career video files
15	/download/onetsupp/supfiles.pdf	504	O*NET supplemental files
16	/download/xwalks/xwalk01.mdb	500	Military crosswalk
17	/almis/national/ces23.dbf	486	National CES table
18	/almis/national/lab2123.dbf	468	National LABFORCE table
19	/almis/national/cpi23.dbf	459	National CPI table
20	/download/career.kit/netsoc00.dbf	453	O*NET-SOC crosswalk
21	/almis/ver23/fox26/lookup/laytitle.dbf	446	O*NET lay titles lookup
22	/download/military/milx0205.zip	441	Military Crosswalk
23	/download/onetsupp/supfiles.zip	384	O*NET supplemental files
24	/download/career.kit/dotsoc98.dbf	372	DOT-SOC crosswalk
25	/almis/national/cpi23.txt	351	National CPI table
26	/download/career.kit/oudot.dbf	344	O*NET 98-DOT crosswalk
27	/almis/miscellaneous/almissource.doc	342	Database sources document
28	/download/soc2000/socoes00.xls	329	SOC-OES crosswalk
29	/download/onet31/raisonet.zip	321	Apprenticeship-O*NET crosswalk
30	/almis/ver22/txt/admin/occcodes.txt	318	Occupation codes administrative table
31	/almis/ver22/txt/admin/indcodes.txt	312	Industry codes administrative table
32	/download/laytitle/laytitle.zip	312	O*NET lay titles file
33	/almis/ver22/fox26/admin/occcodes.db	291	Occupation codes administrative table
34	/download/onet40/onet40ac.zip	288	O*NET 4.0 Access database
35	/almis/national/lab2123.txt	285	National LABFORCE table
36	/almis/national/cpi2122.dbf	258	National CPI table
37	/download/military/mocsoc04.pdf	246	Military-SOC crosswalk
38	/almis/ver23/laytitle.doc	244	O*NET lay titles lookup table
39	/download/onet90/data_vfp.pdf	238	O*NET 9.0 database document
40	/almis/national/cescode.txt	237	CES lookup table



Appendix C

Downloads of State-Specific Files, by State

State	Downloads	State	Downloads
Alabama	1,238	Montana	988
Alaska	1,425	Nebraska	877
Arizona	1,004	Nevada	950
Arkansas	914	New Hampshire	920
California	1,017	New Jersey	856
Colorado	1,007	New Mexico	1,071
Connecticut	986	New York	1,109
Delaware	895	North Carolina	950
District of Columbia	1,025	North Dakota	1,001
Florida	1,102	Ohio	976
Georgia	1,111	Oklahoma	998
Hawaii	905	Oregon	1,033
Idaho	959	Pennsylvania	1,242
Illinois	1,043	Puerto Rico	858
Indiana	1,076	Rhode Island	981
Iowa	1,061	South Carolina	1,228
Kansas	1,010	South Dakota	830
Kentucky	1,262	Tennessee	1,193
Louisiana	1,013	Texas	975
Maine	920	Utah	989
Maryland	926	Vermont	841
Massachusetts	1,022	Virginia	1,120
Michigan	1,116	Washington	1,025
Minnesota	1,065	West Virginia	1,088
Mississippi	1,172	Wisconsin	1,057
Missouri	953	Wyoming	1,072

Appendix D

NCSC Internet Server Visitors by Country

Rank	Country	Hits	Visitors	% of Visitors	Bandwidth (KB)
1	United States	188,061	28,871	83.77%	36,281,343
2	France	12,100	3,154	9.15%	1,110,428
3	Canada	1,604	184	0.53%	359,931
4	United Kingdom	523	167	0.48%	372,590
5	Germany	617	151	0.44%	312,207
6	China	320	143	0.41%	44,408
7	Japan	432	141	0.41%	709,989
8	Unknown	4,101	100	0.29%	91,649
9	India	238	79	0.23%	120,969
10	Denmark	118	77	0.22%	25,435
11	Spain	249	76	0.22%	113,686
12	Iran	467	65	0.19%	300,007
13	Russian Federation	2,724	65	0.19%	7,949,144
14	South Africa	191	63	0.18%	55,471
15	Philippines	114	55	0.16%	31,335
16	Netherlands	127	55	0.16%	101,944
17	Saudi Arabia	467	50	0.15%	301,774
18	Italy	175	44	0.13%	155,524
19	Sweden	58	41	0.12%	16,791
20	Korea, Republic of	130	39	0.11%	38,673
21	Brazil	104	39	0.11%	89,438
22	Turkey	128	37	0.11%	83,326
23	Virgin Islands (US)	736	36	0.10%	107,381
24	Austria	63	36	0.10%	32,775
25	Mexico	347	34	0.10%	105,424
26	Poland	65	33	0.10%	10,092
27	Egypt	124	29	0.08%	62,732
28	Australia	93	29	0.08%	37,442
29	Taiwan	59	28	0.08%	11,580
30	Malaysia	49	23	0.07%	7,148
31	Argentina	629	22	0.06%	407,936
32	Belgium	118	22	0.06%	121,006
33	Romania	329	21	0.06%	49,744
34	United Arab Emirates	51	21	0.06%	19,924
35	Vietnam	80	19	0.06%	83,253
36	Norway	76	19	0.06%	41,463
37	Kazakhstan	38	19	0.06%	0
38	Indonesia	145	18	0.05%	12,656
39	Thailand	114	18	0.05%	31,497
40	Greece	36	16	0.05%	10,969
41	Czechia	47	15	0.04%	19,426
42	Israel	70	15	0.04%	42,200
43	Uzbekistan	214	13	0.04%	22,870
44	Pakistan	54	12	0.03%	5,723
45	Nigeria	17	11	0.03%	2,148
46	Hungary	22	11	0.03%	25,927
47	Singapore	18	11	0.03%	1,731
48	Portugal	18	10	0.03%	2,308
49	Hong Kong	16	10	0.03%	1,236
50	Chile	55	9	0.03%	48,505
51	New Zealand	92	9	0.03%	65,980
52	Morocco	37	9	0.03%	64,559
53	Peru	51	9	0.03%	37,630

Rank	Country	Hits	Visitors	% of Visitors	Bandwidth (KB)
54	Finland	11	8	0.02%	4,848
55	Venezuela	17	8	0.02%	8,487
56	Latvia	14	8	0.02%	14,923
57	Lithuania	11	8	0.02%	4,704
58	Puerto Rico	80	7	0.02%	18,402
59	Switzerland	23	7	0.02%	5,942
60	Ireland	27	7	0.02%	1,185
61	Ukraine	28	7	0.02%	887
62	Bulgaria	15	6	0.02%	503
63	Slovenia	10	6	0.02%	1,038
64	Algeria	22	6	0.02%	14,612
65	Northern Mariana Islands	115	5	0.01%	55,569
66	Yemen	6	4	0.01%	3,007
67	Ethiopia	22	4	0.01%	1,074
68	Kuwait	14	4	0.01%	1,422
69	Jordan	4	4	0.01%	1,604
70	Ecuador	69	4	0.01%	6,760
71	Colombia	15	4	0.01%	1,424
72	Slovakia	38	4	0.01%	8,286
73	Oman	20	3	0.01%	52,119
74	Guam	39	3	0.01%	30,949
75	Iraq	4	3	0.01%	134
76	Costa Rica	5	3	0.01%	1,925
77	Malta	5	3	0.01%	2,055
78	Tunisia	4	3	0.01%	637
79	Palestinian Territory	4	2	0.01%	898
80	Qatar	19	2	0.01%	17,929
81	Tanzania	22	2	0.01%	320
82	El Salvador	21	2	0.01%	18,762
83	Estonia	3	2	0.01%	29
84	Kenya	2	2	0.01%	573
85	Armenia	2	2	0.01%	3,683
86	Belarus	5	2	0.01%	257
87	Ghana	4	2	0.01%	67
88	Bhutan	5	2	0.01%	0
89	Croatia	47	2	0.01%	18,846
90	Macedonia	11	2	0.01%	700
91	Mauritius	5	2	0.01%	13
92	Afghanistan	11	2	0.01%	1,155
93	Lebanon	2	2	0.01%	192
94	Serbia and Montenegro	2	2	0.01%	0
95	Monaco	7	2	0.01%	712
96	Cuba	1	1	0.00%	320
97	Brunei Darussalam	4	1	0.00%	16
98	Albania	1	1	0.00%	271
99	Zimbabwe	1	1	0.00%	346
100	Bosnia and Herzegovina	1	1	0.00%	0
101	Bermuda	6	1	0.00%	524
102	Bangladesh	1	1	0.00%	192
103	Cambodia	1	1	0.00%	128
104	Sudan	1	1	0.00%	0
105	Jamaica	1	1	0.00%	131
106	Panama	1	1	0.00%	0
107	Nicaragua	1	1	0.00%	659
108	Lybia	1	1	0.00%	131
109	Syria	2	1	0.00%	256
110	Dominican Republic	4	1	0.00%	2,439
111	Cyprus	1	1	0.00%	0
112	Guatemala	8	1	0.00%	2,583
113	Suriname	1	1	0.00%	0
114	Georgia	10	1	0.00%	15,667
	Total	217,748	34,465	100.00%	50,489,671