Background Quality Report for TSP10
July 2010

1 Introduction

1.1 TSP10

The Tri-Service Publication 10 (TSP10)[1] was first produced in July 1994 as a publication to show the strength of the UK Regular Armed Forces by stationed locations in the UK. From April 2007, this was merged with TSP6[2] to show *global* strengths of the UK Regular Armed Forces by stationed locations.

Due to concerns over the quality of location data taken from the Joint Personnel Administration (JPA) system, all location data post April 2007 is currently provisional, out of the scope of National Statistics, until ongoing data validation is complete. As such, TSP10 is an Official Statistic, although DASA are working toward it attaining National Statistic status as part of the UK Statistics Authority assessment of Defence statistics in late 2011.

1.2 Brief History

TSP10[1] was suspended in 2002 due to issues relating to the quality of the raw data but was reinstated in 2003. From July 2005 it was designated as a National Statistic, until publication was suspended again from April 2007 due to the introduction of the JPA system. In April 2008, following the successful implementation of JPA for all three Services, TSP10 was reintroduced as an Official Statistic and backdated versions were produced for the preceding year. It was merged with TSP6[2] (which showed strengths of the UK Regular Armed Forces by stationed locations overseas) to improve efficacy and standardise location to stationed location, as opposed to a mixture of stationed and deployed location. The implementation of JPA also led to changes in the way in which the data were gathered and presented.

1.3 Documentation

This Basic quality report is the only supporting document for TSP 10 that is available to users.

1.4 Summary Production Process

TSP10[1] shows the strength of the UK Regular Armed Forces by stationed locations as at the first day of the quarter (1st January, 1st April, 1st July and 1st October). Full time reserve service personnel, gurkhas & mobilised reservists are excluded from the data.

A monthly extract, as at the first of each month, from the Joint Personnel Administration (JPA) system is stored on a MySQL database maintained by DASA. SQL code is used to extract location units for every member of the Regular Armed Forces for the situation date being published. These location units are then mapped to a country and, if inside the UK, assigned a postcode.

Postcodes are mapped to Government Office Regions (GORs) and Local Authorities (LAs) as identified by a postcode reference file provided by the Office for National Statistics (ONS). TSP10 tables provide a count of the number of serving UK Regular service personnel in each country, GOR and LA broken down by Officers and Other Ranks for each separate service.

Maps showing the distribution of UK Regular Forces by GOR and LA are produced using the specialist mapping software ArcGIS.

Validation and editing principally focuses on identifying and amending instances of individuals' location unit reflect their deployed – rather than stationed – location. In these instances, the unit is taken to be the individual's last stationed location before deployment. It is assumed that individuals are not relocated whilst on deployment.

TSP10 is an Official Statistic and is produced and published in line with the Official Statistics Code of Practice[3]. The publication date is pre-announced on the UK Statistics Authority official statistics calendar[4]. No pre-release access is given. TSP10 is published on DASA's external webpage (www.dasa.mod.uk[5]).

2 Relevance

2.1 Coverage

	TSP10
What it measures	Global strengths of the UK Regular Armed Forces by stationed location.
Frequency	Quarterly.
Periods available	From January 2007 onwards. TSP10 for UK locations only is also available for July 2004 to October 2006.

2.2 User Needs and Key Outputs
TSP10[1] reports strengths against the locations that personnel are stationed at. This meets the requirements of Local Authorities, whose funding for armed forces personnel is currently made on this basis. (see Assessment of User Needs and Perceptions quality dimension for further details).

3 Accuracy

3.1 Data Sources
The main data source used for compiling the TSP10[1] output is the database of monthly DASA extracts from the Joint Personnel Administration (JPA) system. The extracts capture all personnel in the Armed Forces although the quality of the information held on each person is variable. DASA cleanse each monthly extract to ensure the quality of the key fields is sufficient for DASA's main National and Official Statistics. The location field is processed separately by the TSP10 production team. Due to ongoing validation of these data, all location statistics post April 2007 are currently provisional, out of the scope of National Statistics

Upon identifying the stationed location of every individual in the UK Regular Armed Forces, each location is assigned to a postcode. Out of approximately 190,000 individuals, only 2-3 have a location with no known postcode. All postcodes are then matched to a GOR and LA based on information from a postcode-reference file, provided each quarter by the ONS.

3.2 Assumptions and Validation Routines
The principal source of potential error in the data occurs when an individual is deployed to operations and their location field updates to reflect their deployed – rather than stationed – location. Validation and editing focuses on identifying and amending these occurrences by replacing them with the individuals' last registered stationed location. This assumes that individuals are not stationed to new locations whilst on deployment. At 1 April 2010. the UK's force levels deployed to operations were 9,500 on Op Herrick and around 1,700 in support of Op TELIC.

The location field is always populated, so no imputation is required. However, there is evidence of the location field not being updated when personnel are stationed at new locations. There are no measures currently produced on the quality of stationed location information on JPA, though an exercise to obtain this information is being considered.

The total number of serving Regular personnel, by service and officers/other ranks are validated against other TSPs. Any differences are investigated and rectified.

3.3 Data Revisions
There have been revisions to some TSP10[1] publications although reasons and explanations for the revisions have always been provided within the executive summary of the relevant publication. The table below identifies those TSP10 publications which have had revisions and summarises the average impact of the revisions and the reason for revisions:

TSP10 publication	Reason for revision	Average impact of revision
July 2009	Since the introduction of JPA, figures for Naval personnel in Gosport, and SE England totals, had to be taken from Legacy Systems. This issue was resolved in October 2009, and we were	SE England total increased to 11,610 from 9,800
April 2009		SE England total increased to 11,650 from 9,780
January 2009		SE England total increased to

	able to publish an historic series back to October 2008.	11,600 from 9,750
October 2008		SE England total increased to 11,980 from 10,020

4 Timeliness and Punctuality

4.1 Timeliness
The time lapse between the reference date of TSP10[1] and the date of publication is approximately 6-8 weeks. It takes at least two weeks for the data to become available and then a further month to produce TSP10. A project is underway to automate some of the work; this will reduce the production time spent on TSP10 from 50 days to 25 days per year.

The table below summarises the key timeliness quality measures for the last four quarters of the TSP10 publication:

Timeliness Metric				
Situation Date	1st July 2009	1st October 2009	1st January 2010	1st April 2010
Date of Data Availability	14-21st Jul 2009	14-21st Oct 2009	14-21st Jan 2010	14-21st April 2010
Date of Publication	2nd Oct 2009*	26th Nov 2009	4th Mar 2010	27th May 2010

Date of publication of revised edition..

4.2 Punctuality
All publication deadlines have been met since the implementation of JPA (i.e. for all TSP10 publications from April 2007 onwards). However, one publication (situation date 1st April 2010) was published with a missing map. It was published to meet the deadline and a note to bring this to user's attention was added in the executive summary. The publication was updated with the map within five weeks.

Data validation routines have meant that the date of data availability has previously been delayed, though this has never affected the punctuality of publication.

5 Accessibility and Clarity

5.1 Access to publications
All TSP10[1] publications dating back to July 2004 are available from DASA's website[5], and are simply found.
  a) A search of "TSP10" on the DASAweb will bring up links to all publications from July 2004 onwards.
  b) For users that search for "TSP10" through a regular search engine like Google, a link to the correct page on the DASAweb can be found relatively near to the top of the search list.
  c) For users that are not aware that the statistic is named TSP10, a search of "stationed locations" on the DASAweb will reveal the publications, though the required webpage is very low on the list.
  d) A search of "armed forces stationed locations" via a regular search engine such as Google will also direct the user to TSP10 statistics.
  e) For users of the UK National Statistics Publication Hub[6] an appropriate search of Defence will bring up a link to all TSP10s dating back to 1st January 2008.

TSP10 is published in the Official Statistics section of the DASAweb. Other TSPs are held in a separate area due to their designation as National Statistics. Some tables from TSP10 are reproduced in chapter 2 of UK Defence Statistics. The House of Commons library also holds copies of the TSP10 statistic, as does the British library.

The average number of web hits rounded to the nearest 10, for accessing the TSP10 output (based on the access figures for 1 October 2009 and 1 January 2010 publications) during the first quarter since publication is given in the table below. The high number of web hits indicates that the publications are accessible both internally and externally. It also indicates that there are many users of the TSP10 statistic.

	Average[1] number of Web hits within one quarter of publication	Average[1] number of unique (IP address[2]) hits within one quarter of publication
TSP10		
Internal to MoD	230	60

External to MoD	600	230
Total	820	290

[1] The average number of hits includes those to both the pdf and to any webpage of the TSP10 edition.
[2] The number of unique (IP address) hits external to the MoD may understate the number of unique individuals accessing the publication. For instance, business offices often share an IP address and so multiple individuals accessing the statistic within the same business will count as just one unique hit.

5.2 Clarity
The only supporting documentation is this Basic Quality Report and the commentary within each publication. Maps are produced to show stationed locations in the UK by Government Office Region and Local Authority.

6 Coherence and Comparability

6.1 Coherence
TSP10 is always fully coherent in terms of total number of serving regular personnel (in each service and for officers/other ranks) with the other Tri-Service Publications produced by DASA, as any inconsistencies are identified and rectified before publication.

6.2 Comparability over Time
TSP10[1] is broadly comparable over time. However there was a step-change in April 2007 due to the introduction of JPA, although the impact was not particularly marked. The output by GORs, LAs and world-wide locations are collected and presented in exactly the same way and so are fully comparable.

7 Trade-offs between Output Quality Components

7.1 Costs versus Performance
There has been a trade-off in costs versus performance/clarity with respect to training staff to use the mapping software required for producing TSP10[1]. Due to the high costs of ArcGIS training it was decided not to send staff on external training but instead build on existing knowledge in DASA. The result is that the mapping of the output has not been fully developed.

8 Assessment of User Needs and Perceptions

8.1 Description and Classification of Users
Key users of TSP10[1] include the Office for National Statistics (ONS) who use the information for producing population estimates. Local Authorities also make use of the data, when making bids to HM Treasury for funding. TSP10 is also used to inform public debate.

8.2 Obtaining Information on User Needs
There have been a number of ad hoc enquires relating to TSP10[1]. These enquires have related to more detailed breakdowns of the statistics on stationed or deployment location. None of the enquiries have led to a change in the way in which TSP10 is produced and presented. An investigation into users and uses of the data is underway for clarifying whether TSP10 is fully meeting user requirements in its current form.

DASA attended the ONS population estimates user consultation meeting in March 2009, where ONS demonstrated how the TSP10 feeds into their population estimates and expressed their contentness with the way in which DASA produce and publish their output.

9 Performance, Cost and Respondent Burden

9.1 Performance and Cost Effectiveness
Cost effectiveness is currently being improved through adding the location and postcode information to the DASA extract from JPA. This will lead to the automation of the two main data processes of a) assigning each location to a postcode, and b) changing deployed locations back to the individual's previous stationed location. This would significantly improve the efficiency of the process.

9.2 Burdens

There is no extra burden on data providers by producing TSP10[1]. Extracts from JPA would be required by DASA irrespective of whether TSP10 was produced or not. The cleansing of the location field is done by the producers so does not impact on other branches. The ONS postcode reference file is maintained by ONS for its own use and provision of a copy to DASA is without any additional costs other than sending the extract each quarter.

10 Confidentiality, Transparency and Security

10.1 Security
All staff involved in the production process have signed the Data Protection Act, and all MoD, Civil Service and data protection regulations are adhered to. All data is stored, accessed and analysed using the MOD's restricted network and IT systems, and the access of raw data via JPA and SQL databases is password protected. Permission is required to gain a password and have access to the specific SQL codes.

10.2 Confidentiality
None of the data collected and stored for TSP10[1] is of high sensitivity. All published outputs provide rounded counts of individuals at locations aggregated up to GOR and LA level and breakdowns are only by officer/other ranks, ensuring that disclosure is not feasible. DASA's rounding policy has been used for all TSP10 outputs, ensuring consistency in harmonised statistical disclosure control. Access to un-rounded location data would only be provided upon the creation and approval of a data access agreement.

10.3 Transparency
The production process is considered to be transparent. This quality report informs users of the method, production process and quality of the output. Any significant errors identified after publication will result in revisions in the next publication along with explanations as to the cause of the revisions.

11 References

	Title of Reference	Website Location
1	TSP10 publications	http://www.dasa.mod.uk/applications/newWeb/www/index.php?page=67&pubType=0&thiscontent=100&date=2010-07-06
2	TSP6 publications	http://www.dasa.mod.uk/applications/newWeb/www/index.php?page=67&pubType=0&thiscontent=1900&date=2010-07-06
3	UK Code of Practice for Official Statistics	http://www.statisticsauthority.gov.uk/assessment/code-of-practice/code-of-practice-for-official-statistics.pdf
4	UK Statistics Authority Release Calendar	http://www.statistics.gov.uk/hub/release-calendar/index.html?newquery=*&lday=&lmonth=&lyear=&uday=&umonth=&uyear=&theme=&source-agency=Defence&pagetype=calendar-entry
5	DASA website	www.dasa.mod.uk
6	UK National Statistics Publication Hub	http://www.statistics.gov.uk/hub/index.html

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