

Assessment of Experts' Workshop Hosted by the Stockholm International Peace Research Institute

Binyam Solomon
DRDC – Centre for Operational Research and Analysis

Defence Research and Development Canada

Reference Document

DRDC-RDDC-2016-D015

April 2016

IMPORTANT INFORMATIVE STATEMENTS

This S&T document is provided for convenience of reference only. Her Majesty the Queen in right of Canada, as represented by the Minister of National Defence ("Canada"), makes no representations or warranties, express or implied, of any kind whatsoever, and assumes no liability for the accuracy, reliability, completeness, currency or usefulness of any information, product, process or material included in this document. Nothing in this document should be interpreted as an endorsement for the specific use of any tool, technique or process examined in it. Any reliance on, or use of, any information, product, process or material included in this document is at the sole risk of the person so using it or relying on it. Canada does not assume any liability in respect of any damages or losses arising out of or in connection with the use of, or reliance on, any information, product, process or material included in this document.

This publication is published by the Editorial Office of Defence Research and Development Canada, an agency of the Department of National Defence of Canada. Inquiries can be sent to: Publications.DRDC-RDDC@drdc-rddc.gc.ca.

- © Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence, 2016
- © Sa Majesté la Reine (en droit du Canada), telle que représentée par le ministre de la Défense nationale, 2016

Abstract

The Stockholm International Peace Research Institute (SIPRI) organized an Expert Workshop at their headquarters in Stockholm, Sweden in late January 2016. The purpose of the workshop included the testing of an Alpha version of an extended dataset on military expenditures and to discuss any data problems and improvements before the release of the final version in late 2016. In addition to discussing some preliminary results using the extended dataset, this note provides an assessment of the utility of the dataset for DRDC's research projects in support of the CFO and policy organizations of the Canadian Armed Forces and the Department of National Defence (CAF/DND).

Résumé

À la fin de janvier 2016, l'Institut international de recherche sur la paix de Stockholm a organisé un atelier d'experts à son siège de Stockholm, en Suède. Cet atelier avait notamment pour but de mettre à l'épreuve la version Alpha d'un ensemble étendu de données sur les dépenses militaires et de discuter de problèmes et d'améliorations de données avant la sortie de la version finale à la fin de 2016. En plus de discuter de certains résultats préliminaires en utilisant l'ensemble étendu de données, cette note contient une évaluation de l'utilité de l'ensemble de données pour les projets de recherche de RDDC en soutien au Dirigeant principal des finances et aux organisations responsables de la politique des Forces armées canadiennes et du ministère de la Défense nationale (FAC/MDN).

Table of Contents

Abstract	i
Résumé	ii
Table of Contents	iii
List of Figures	iv
List of Tables	v
1 Introduction	1
2 The Extended Dataset	2
3 What to Do: Some Institutional Recommendations	5
4 Next Steps (for SIPRI) and the Way Forward (CFO/DRDC)	7
References	9
Annex A Canadian Military Expenditures Data	11
A.1 Canadian Military Expenditures Data Reconciliation	12
Annex B Statistical Comparisons of Public Accounts and Finance Figures for Defence Expenditures	13
Annex C Common NATO and SIPRI Definitions for Military Expenditures	15
Annex D The SIPRI Questionnaire	17
List of Symbols/Abbreviations/Acronyms/Initialisms	19

List of Figures

Figure B.1:	Defence Expenditures in \$Millions (Logarithmic Scale LDOF = Dept. of Finance LPA = Public Accounts).	13
Figure B.2:	First Differences in Defence Expenditures (in Logarithmic Scale).	13

List of Tables

Table 1:	Middle Powers' Demand for Military Expenditures using new SIPRI Dataset..	3
Table A.1:	Table Defence Expenditures for Canada by Source in Millions CDN\$.. . . .	11
Table A.2:	Crosswalk between Public Accounts and Fiscal Reference Table (FY 2012–13 to 2014–15).	12
Table C.1:	NATO and SIPRI Definitions for Military Expenditures.	15

This page intentionally left blank.

1 Introduction

The Stockholm International Peace Research Institute (SIPRI) organized an Expert Workshop at their headquarters in Stockholm, Sweden in late January 2016.¹ A few months before the workshop, the participants were provided with an early “alpha” test version of a new extended dataset on military expenditure, covering over 170 countries for the period 1961 to 2014. The purpose of the workshop included:

1. The presentation and discussion of preliminary research using the extended dataset.
2. The assessment of the data; specifically, identifying problems and errors, suggesting improvements and solutions, and future directions for developing and publication of the data.

The current plan is to release the final and public version in late 2016. The purpose of this note is to discuss the preliminary assessment of the new extended dataset as it relates to DRDC’s research projects in support of the Chief Finance Officer (CFO) and policy organizations of the Canadian Armed Forces and the Department of National Defence (CAF/DND). The rest of this note is structured as follows: the next section presents key findings from the preliminary investigation on the new dataset with emphasis on the Canadian and NATO datasets. Section 3 highlights some of the institutional changes and restructuring required to improve the dissemination of Canadian data for accurate comparisons with our NATO and non-NATO peers. Section 4 maps some of the future work expected at SIPRI and how we (DRDC and our partners in CAF/DND) can position our resources to exploit the benefits of the international collaborative efforts.

¹ The workshop was funded by Riksbankens Jubileumsfond (RJ) an independent foundation with the goal of promoting and supporting research in the Humanities and Social Sciences. This Swedish fund was initially funded by the Swedish Central Bank.

2 The Extended Dataset

The current SIPRI dataset that is publicly available on their website includes data for all NATO and non-NATO countries. The time series coverage for the non-NATO countries (about 140 countries) is from 1988 to 2014. The NATO time series coverage is from 1949 or from the date of joining the alliance.² The publicly available military expenditure data (ME from here on) is presented in various formats to accommodate various research questions and empirical strategies. For example: ME in local currency or US dollars, ME in calendar or financial year. For empirical investigation and cross country comparisons, SIPRI also provides ME in US dollars and constant year dollars (adjusted for inflation using each country's price deflator).

The new dataset for non-NATO nations covers an extended time series starting from 1961 to 2014 vice 1988 to 2014. The number of nations covered remains at 172 countries. The NATO data covers the same time period as discussed in the previous paragraph. However, the price deflator for the new extended dataset is different in order to provide consistent comparisons among both NATO and non-NATO member states.

The conversion from financial to calendar year is done under the assumption that spending will have an even distribution in a year. The ME are also presented as a share of Gross Domestic Product (GDP) to measure defence burden, as a share of population to assess per capita defence and as a share of government expenditures to measure fiscal burden. All data are from publicly available sources and a SIPRI annual questionnaire to countries included in the database. A sample of this questionnaire is included in the annex.

As part of the invitation, Mohamed Douch (RMC) and I presented our analysis of the extended military expenditures dataset (MEx from here on), which included:

1. An update of our earlier published work on Middle Powers' demand for military expenditures using MEx.
2. Comparisons of Canadian data from NATO annual year books and official statistics.
3. Assessment of the data normalization methods employed by SIPRI.

The earlier published work (Douch and Solomon, 2014) proposed a scheme to classify nations as middle powers using GDP figures (under the general assumptions that military capabilities and economic size are highly correlated) and the modification of existing theories on the demand for military expenditures. This earlier work, using data mainly from NATO official statistics and SIPRI, showed that:

1. Middle Power nations' military expenditures tend to have a high income elasticity indicating military power as a status good;

² The official SIPRI website with military expenditures data
http://www.sipri.org/research/armaments/milex/milex_database.

2. They (Middle Powers) react to threat variables that proxy global instability, such as nuclear power proliferation;
3. They use foreign aid as a complementary policy tool along with military expenditures; and
4. They face significant trade-offs between military and non-military government spending.

The MEx dataset in general replicated this earlier study results and aided the research by extending the middle power nations count from 9 to 11 (see Table 1). Threat variables that proxy global instability and foreign aid (ODA) remain significant. The latter underscores earlier finding that foreign aid is a policy complement (as foreign aid increases so does military expenditures).

In general, the longer-time series availability enabled us to include Ireland and Spain, which were identified as a Middle Powers in the earlier study but were omitted from the empirical study due to data limitations. It should be noted that the threat and the other explanatory variables in the modified demand model were unaffected by the new dataset and associated revisions.

Table 1: Middle Powers' Demand for Military Expenditures using new SIPRI Dataset.

Variable	Coefficient	T-Statistic
β_0 (Constant)	15.1	14.02
Income	0.20	17.38
Ally (USMEx) (L1)	0.07	1.70
Non Defence (L1)	-0.09	-4.19
ODA (L1)	0.05	3.61
Threat (Nuclear Arsenal) (L1)	0.13	9.28

Note: 1961–2014 Fixed Effects Panel Estimation for 11 Nations L1 (lagged one period) Overseas Development Assistance (ODA).

We also looked specifically at the Canadian data for military expenditures to assess any major deviation from the official information provided by DND. SIPRI and NATO use similar definitions on what constitute military expenditures. In addition, SIPRI uses the official and public NATO data as a source. Despite these similarities, however, we were surprised to find discrepancies in the Canadian data, especially in the last five years (see Annex A for details).

One of the key reasons for the discrepancy was the change in NATO's definition of military expenditures in 2004. While SIPRI maintained the earlier definition which included paramilitary forces that are trained and equipped for military operations, NATO's 2004 definition excludes this figure for the time series starting 2004. More importantly, the NATO data do not adjust previous data to keep the entire time series consistent with the new definition.

NATO data are often provided as estimates for the latest reported period but these are not updated as often when actual data become available. This further exacerbates the consistency of the data for longer time series analysis. While these inconsistencies are not significant when making cross-country comparisons for the current or most recent years, any trend analysis or rigorous

empirical analysis tends to be severely flawed rendering any predictions or policy recommendations based on time series (or panel) analyses suspect.

Finally, SIPRI sends out separate questionnaires to supplement and verify the publicly available military expenditures data. Here there are some concerns about the institutional response at DND for statistical data from research outfits, think tanks and even Statistics Canada. Specifically, the response to these data inquiries tend to be haphazard and given lower priority compared to day-to-day departmental activities. Some requests for data are not provided on time or not all. In addition, the departmental points of contact lack an understanding of how the data are used in (and for) empirical research.

3 What to Do: Some Institutional Recommendations

Given our assessment of both NATO and SIPRI data (additional analyses are relegated to Annex B) the following institutional recommendations are proposed. The recommendations are primarily for CFO, Policy, Intelligence and Joint Staff organizations that provide departmental data or are primary consumers of studies based on data from these international sources.

1. For detailed empirical assessment of military expenditures, especially for long-term trend analysis, the SIPRI database should be consulted. *The NATO official statistics should only be used for assessing current or recent military expenditures among member countries. The following limitations apply:*
 - a. If the NATO data are to be used, the study or report should include complete discussions on the definitions and whether the most recent data are estimates or actual data.
 - b. If one needs to conduct thorough assessment of the burden sharing debate within NATO and specifically wants to have a more robust assessment of Central European NATO members, the official NATO dataset tends to be sparse. SIPRI dataset tends to provide a longer time series by using other sources and common definitions.
 - c. For Canada the omission or inclusion of paramilitary figures may not be as crucial as for nations such as France (Gendarmerie), Italy, Bulgaria, Greece and Portugal. However, the Canadian data as related to the Royal Canadian Mounted Police (RCMP) and the Coast Guard needs to be verified.
 - d. Both SIPRI and NATO define pension from the perspective of “Net Cash Requirement”. Thus, for nations with fully funded pension schemes, pension payments need not be included.³
2. SIPRI had no visibility on the Other Government Departments’ contributions to the NATO figures so they had to keep the new NATO figures at “face value” and did not make any changes.
 - a. The SIPRI questionnaire has not been systematically responded to so whenever discrepancies occurred, the NATO figures were taken.⁴
 - b. More recently Annual Reference Level Updates were used to provide overall figures which are estimates and not final expenditures.
3. SIPRI provides details on its data normalization. Specifically, SIPRI provides information on type of exchange rate used for currency conversion as well as price indices for constant (inflation-adjusted) dollars military expenditures. The NATO official data are normalized but the method and procedures are not consistent over time.

³ The portion that has to be paid annually if you do not have pension liabilities accrued.

⁴ SIPRI questionnaire is sent to Director Budget 4.

4. A review ought to be conducted on the quality and consistency of the NATO data provided for at least the last 30 years. The review should be based on the NATO official statistics either including (consistent with SIPRI and the old NATO definition) or excluding (new NATO definition) paramilitary forces from military expenditures.
5. Given the analytical utility of consistently measured military expenditures data and its politically sensitive measure of burden sharing, the collection and dissemination of such data should reside in organizations within DND that are familiar with research methods and techniques. The primary recommendation is for the economics team within the CFO organization to assume this responsibility of collecting, analysing and disseminating military expenditures data.
 - a. Other research organizations within DND can also be approached to assist or collaborate in the analysis and verification of the data.
6. A steering committee can be established to evaluate, provide oversight and liaise with external bodies to maintain consistency and influence international data management policies.
 - a. The existing NATO and SIPRI definitions are replicated in Annex C. This provides some illustration on the main differences between the databases.

4 Next Steps (for SIPRI) and the Way Forward (CFO/DRDC)

The Experts' Workshop in Stockholm concluded by asking participants what new data initiatives they would like SIPRI to undertake. Most of the discussion dealt with the need to provide some disaggregation on the military expenditures data. Specifically, the proportion dedicated to personnel and equipment. This will allow cross-country comparisons on labour and capital intensities.

The participants also indicated their interest in having an official peer-reviewed assessment and documentation of the SIPRI data, quality and interpretation. There was also some general agreement on the desirability of having access to count data on personnel (number of military, reserve and civilian personnel) and equipment count by broad military capabilities (infantry, direct fire, etc.).

The most contentious discussion centred on the development of monetized military capabilities. Almost all participants agreed that military expenditures or defence burden (military expenditures as a share of total economy or GDP) do not provide sufficient information about a country's military capabilities and might. While monetizing defence capabilities will be helpful in conducting meaningful cross country comparisons and cost benefit analyses of defence resources allocation, the benefit of developing such data may not exceed the cost at the margin. This aspect of the discussion was the most contentious. SIPRI alone cannot undertake such a task and multi-national involvement both in time and resources are required.

While national defence ministries may not be willing to fund or devote resources to such an endeavour, research organizations both in government and outside may find such undertakings strategically important. From DRDC's perspective, there are opportunities to using existing multi-national arrangements (such as the NATO Science and Technology Organization) to partially fund such initiatives or to provide the venue and existing policy vehicles to facilitate collaboration among allies. The forthcoming Grants and Contribution financial arrangement for DRDC may also serve as another tool for funding such an initiative. If such data existed during the previous Strategic Review or for the upcoming policy review, the trade-offs among various military capabilities and core outcomes would have been smoother with real qualitative assessment of savings and long-term costs.

This page intentionally left blank.

References

Department of Finance (2015). Fiscal Reference Tables <http://www.fin.gc.ca/pub/frt-trf/index-eng.asp> (Accessed March 3, 2016).

Government of Canada (2015). Public Accounts of Canada Volume II <http://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html> (Accessed March 1, 2016).

Mohamed Douch and Binyam Solomon (2014). Middle Powers and the Demand for Military Expenditures *Defence and Peace Economics* Volume 25(6) 605–618.

SIPRI (Various Years). SIPRI Year Book, Stockholm International Peace Research Institute, New York: Oxford University Press.

This page intentionally left blank.

Annex A Canadian Military Expenditures Data

Table A.1: Table Defence Expenditures for Canada by Source in Millions CDN\$.

FY	Dept of Finance	Public Accounts	NATO	SIPRI
1991-92	10,759	11,707	12,830	12,830
1992-93	10,780	11,888	13,111	13,111
1993-94	11,087	12,003	13,293	13,293
1994-95	10,580	11,774	13,008	13,008
1995-96	9,817	11,374	12,457	12,457
1996-97	8,807	10,573	11,511	11,511
1997-98	9,087	10,187	10,831	10,831
1998-99	9,308	10,257	11,716	11,716
1999-00	10,113	11,522	12,360	12,360
2000-01	9,744	11,470	12,314	12,314
2001-02	10,443	12,244	13,191	13,191
2002-03	11,803	12,415	13,379	13,379
2003-04	12,869	13,186	14,143	14,143
2004-05	14,318	13,923	14,951	14,951
2005-06	15,034	14,682	16,001	16,001
2006-07	15,732	15,683	17,066	17,066
2007-08	17,331	17,524	19,255	19,255
2008-09	18,770	19,185	21,100	21,100
2009-10	20,863	19,856	21,808	21,828
2010-11	21,273	20,298	24,660	19,255
2011-12	22,783	20,219	19,978	20,607
2012-13	22,978	19,978	18,764	20,276
2013-14	21,511	18,764	20,076	18,953
2014-15	23,669	18,454	20,011	

Note: Data for most recent years not consistent due to the use of estimates and omitted paramilitary activities.

A.1 Canadian Military Expenditures Data Reconciliation

Table A.2 provides Canadian military expenditures data for the period 1991 to 2015 using official publicly available sources from Public Accounts (Public Works and Treasury Board), Fiscal Reference Tables (Department of Finance), NATO official statistics and SIPRI. The major differences between NATO and SIPRI data, especially in the last few years have to do with the use of estimates as opposed to actuals in NATO figures and lack of historical link to account for the change in NATO definition in 2004.

The difference between the national statistics are purely accounting (accrual and internal revenue reporting) differences which are replicated in the table below for the last three fiscal years.

Table A.2: *Crosswalk between Public Accounts and Fiscal Reference Table (FY 2012–13 to 2014–15).*

Public Accounts (Ministry) less Vote 10	Consolidated specified purpose accounts	Accrual and other adjustments	Internal expenses	Department of Finance
\$ Millions				
20224.417	-108.46	2950.699	-88.502	22978.154
19053.217	-113.944	2645.858	-74.33	21510.801
19185.614	-110.889	4693.599	-99.57	23668.754

NATO data does not exclude revenues as these internal ministerial accounts do. The Department of Finance figure does include pension payments consistent with the NATO definition.

Annex B Statistical Comparisons of Public Accounts and Finance Figures for Defence Expenditures

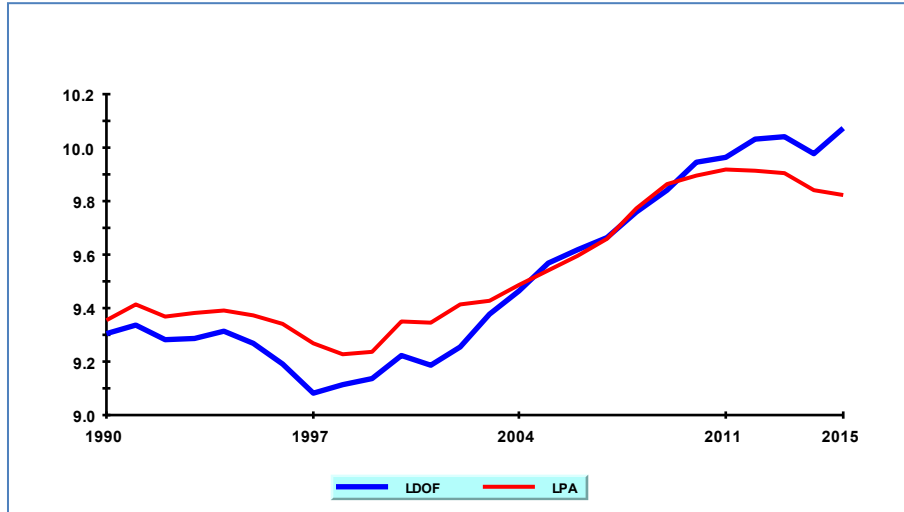
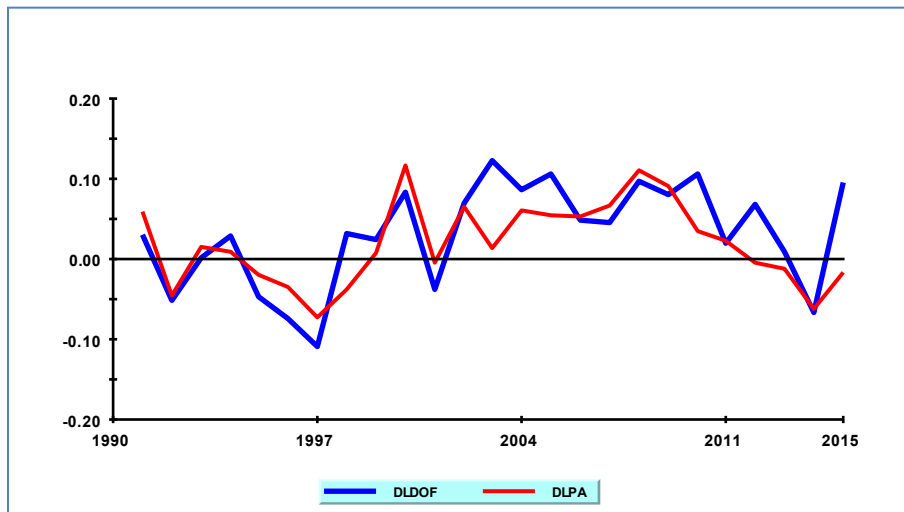


Figure B.1: Defence Expenditures in \$Millions (Logarithmic Scale LDOF = Dept. of Finance
LPA = Public Accounts).



	DLDOF	DLPA
DLDOF	1	0.72
DLPA	0.72	1

Correlation Coefficient for First Differenced Military Expenditures (Finance versus Public Accounts).

Figure B.2: First Differences in Defence Expenditures (in Logarithmic Scale).

This page intentionally left blank.

Annex C Common NATO and SIPRI Definitions for Military Expenditures

Table C.1: NATO and SIPRI Definitions for Military Expenditures.

	INCLUDED	
Personnel		
	all expenditures on current personnel, military and civil	
	retirement pensions of military personnel	
	social services for personnel and their families	
Procurement		
	Equipment	SIPRI Cash* NATO (country specific cash and/or accrual*)
	military research and development	
	Infrastructure	SIPRI Cash NATO (country specific cash and/or accrual)
Grants and Contributions	Military Aid (Donor Country)	
	EXCLUDED+	
Civil Defence		
Current Expenditures for Previous Military Activities		
	veterans benefits	
	demobilization	
	conversion of arms production facilities	
	destruction of weapons	

* While Canada uses a modified cash system, a number of nations have adopted an accrual accounting system for reporting (costs are accounted when they are incurred) primarily capital expenses.

+ The 2004 NATO definition which SIPRI did not adopt excluded paramilitary forces which are not **realistically deployable**.

This page intentionally left blank.

Annex D The SIPRI Questionnaire

A copy of the questionnaire can be downloaded from the following site:
http://www.sipri.org/research/armaments/milex/milex_questionnaire_folder/milex_questionnaire.

Please fill in the appropriate figures for the years for which data are available

MILITARY EXPENDITURE

Country: Currency: Financial year starts:

Figures should be reported in local currency and at current prices

Financial/ calendar year	Budget status *	Expenditure on personnel (a)	Expenditure on operation and maintenanc e (b)	Expenditure on procuremen t (b)	Expenditure on military construction (4)	Expenditure on military research and developmen t (5)	Expenditure on paramilitary forces (c)	Military aid given (d)	Total military expenditure (e)	Military aid received (d)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) = (1+2+3+4+ 5+6+7)	
2012										
2013										
2014										
2015										
2016										

* As far as possible, reported data should be for actual expenditure. Please indicate, for each year, with the relevant letter, whether the figures are; actual expenditure (a), budget (b), or (p) projected.

(a) PERSONNEL: **Military pensions** should be included in military expenditure according to the SIPRI definition.

Are military pensions included in the personnel expenditure figures for your country?

Yes [] No []

If not, please provide an estimate of your country's expenditure on military pensions, if possible.

(b) PROCUREMENT: **Arms imports** should be included in procurement expenditure according to the SIPRI definition.

- Are arms imports included in the procurement expenditure figures for your country? Yes [] No []
 If not, please provide an estimate of your country's expenditure on arms imports, if possible.
- (c) PARAMILITARY FORCES should be included in military expenditure according to the SIPRI definition. Yes [] No []
 Are paramilitary forces (border guards, gendarmerie, etc.) included in the military expenditure figures for your country?
 If not, please provide an estimate of your country's expenditure on paramilitary forces, if possible.
- (d) MILITARY AID should be included in the military expenditure of the *donor country* according to the SIPRI definition.
 Military aid should not be included in the military expenditure of the recipient country but should be provided as background information.
- (e) Military expenditure should *not* include spending on **civil defence** according to the SIPRI definition. Yes [] No []
 Is spending on civil defence included in the military expenditure figures for your country?
 If yes, please provide separate data on your country's civil defence expenditure, if possible.

Please provide any additional information on the coverage of your country's military expenditure below

List of Symbols/Abbreviations/Acronyms/Initialisms

CAF	Canadian Armed Forces
CFO	Chief Finance Officer
DND	Department of National Defence
DRDC	Defence Research and Development Canada
NATO	North Atlantic Treaty Organization
SIPRI	Stockholm International Peace Research Institute

This page intentionally left blank.

DOCUMENT CONTROL DATA		
(Security markings for the title, abstract and indexing annotation must be entered when the document is Classified or Designated)		
1. ORIGINATOR (The name and address of the organization preparing the document. Organizations for whom the document was prepared, e.g., Centre sponsoring a contractor's report, or tasking agency, are entered in Section 8.) DRDC – Centre for Operational Research and Analysis Defence Research and Development Canada 101 Colonel By Drive Ottawa, Ontario K1A 0K2 Canada	2a. SECURITY MARKING (Overall security marking of the document including special supplemental markings if applicable.) UNCLASSIFIED	
	2b. CONTROLLED GOODS (NON-CONTROLLED GOODS) DMC A REVIEW: GCEC DECEMBER 2013	
3. TITLE (The complete document title as indicated on the title page. Its classification should be indicated by the appropriate abbreviation (S, C or U) in parentheses after the title.) Assessment of Experts' Workshop Hosted by the Stockholm International Peace Research Institute		
4. AUTHORS (last name, followed by initials – ranks, titles, etc., not to be used) Solomon, B.		
5. DATE OF PUBLICATION (Month and year of publication of document.) April 2016	6a. NO. OF PAGES (Total containing information, including Annexes, Appendices, etc.) 30	6b. NO. OF REFS (Total cited in document.) 4
7. DESCRIPTIVE NOTES (The category of the document, e.g., technical report, technical note or memorandum. If appropriate, enter the type of report, e.g., interim, progress, summary, annual or final. Give the inclusive dates when a specific reporting period is covered.) Reference Document		
8. SPONSORING ACTIVITY (The name of the department project office or laboratory sponsoring the research and development – include address.) DRDC – Centre for Operational Research and Analysis Defence Research and Development Canada 101 Colonel By Drive Ottawa, Ontario K1A 0K2 Canada		
9a. PROJECT OR GRANT NO. (If appropriate, the applicable research and development project or grant number under which the document was written. Please specify whether project or grant.) 00bd Costing Method and Development	9b. CONTRACT NO. (If appropriate, the applicable number under which the document was written.)	
10a. ORIGINATOR'S DOCUMENT NUMBER (The official document number by which the document is identified by the originating activity. This number must be unique to this document.) DRDC-RDDC-2016-D015	10b. OTHER DOCUMENT NO(s). (Any other numbers which may be assigned this document either by the originator or by the sponsor.)	
11. DOCUMENT AVAILABILITY (Any limitations on further dissemination of the document, other than those imposed by security classification.) Unlimited		
12. DOCUMENT ANNOUNCEMENT (Any limitation to the bibliographic announcement of this document. This will normally correspond to the Document Availability (11). However, where further distribution (beyond the audience specified in (11) is possible, a wider announcement audience may be selected.) Unlimited		

13. **ABSTRACT** (A brief and factual summary of the document. It may also appear elsewhere in the body of the document itself. It is highly desirable that the abstract of classified documents be unclassified. Each paragraph of the abstract shall begin with an indication of the security classification of the information in the paragraph (unless the document itself is unclassified) represented as (S), (C), (R), or (U). It is not necessary to include here abstracts in both official languages unless the text is bilingual.)

The Stockholm International Peace Research Institute (SIPRI) organized an Expert Workshop at their headquarters in Stockholm, Sweden in late January 2016. The purpose of the workshop included the testing of an Alpha version of an extended dataset on military expenditures and to discuss any data problems and improvements before the release of the final version in late 2016. In addition to discussing some preliminary results using the extended dataset, this note provides an assessment of the utility of the dataset for DRDC's research projects in support of the CFO and policy organizations of the Canadian Armed Forces and the Department of National Defence (CAF/DND).

À la fin de janvier 2016, l'Institut international de recherche sur la paix de Stockholm a organisé un atelier d'experts à son siège de Stockholm, en Suède. Cet atelier avait notamment pour but de mettre à l'épreuve la version Alpha d'un ensemble étendu de données sur les dépenses militaires et de discuter de problèmes et d'améliorations de données avant la sortie de la version finale à la fin de 2016. En plus de discuter de certains résultats préliminaires en utilisant l'ensemble étendu de données, cette note contient une évaluation de l'utilité de l'ensemble de données pour les projets de recherche de RDDC en soutien au Dirigeant principal des finances et aux organisations responsables de la politique des Forces armées canadiennes et du ministère de la Défense nationale (FAC/MDN).

14. **KEYWORDS, DESCRIPTORS or IDENTIFIERS** (Technically meaningful terms or short phrases that characterize a document and could be helpful in cataloguing the document. They should be selected so that no security classification is required. Identifiers, such as equipment model designation, trade name, military project code name, geographic location may also be included. If possible keywords should be selected from a published thesaurus, e.g., Thesaurus of Engineering and Scientific Terms (TEST) and that thesaurus identified. If it is not possible to select indexing terms which are Unclassified, the classification of each should be indicated as with the title.)

SIPRI; Military Expenditures; Data quality and availability