Demilitarization for Deep Decarbonization:

The Problems of Military Emissions & Expenditures

Scientists for Global Responsibility Conference

"Messages for the Paris conference:
The forgotten dimensions of climate change"

October 2015

Tamara Lorincz
CANADA
Email: tlorincz@dal.ca

IPB
INTERNATIONAL PEACE BUREAU

Presentation Outline

- Latest Key IPCC findings
- Problem of military emissions
- Accounting for military emissions

  To what should the carbon budget be allocated?

- Problem of military expenditures

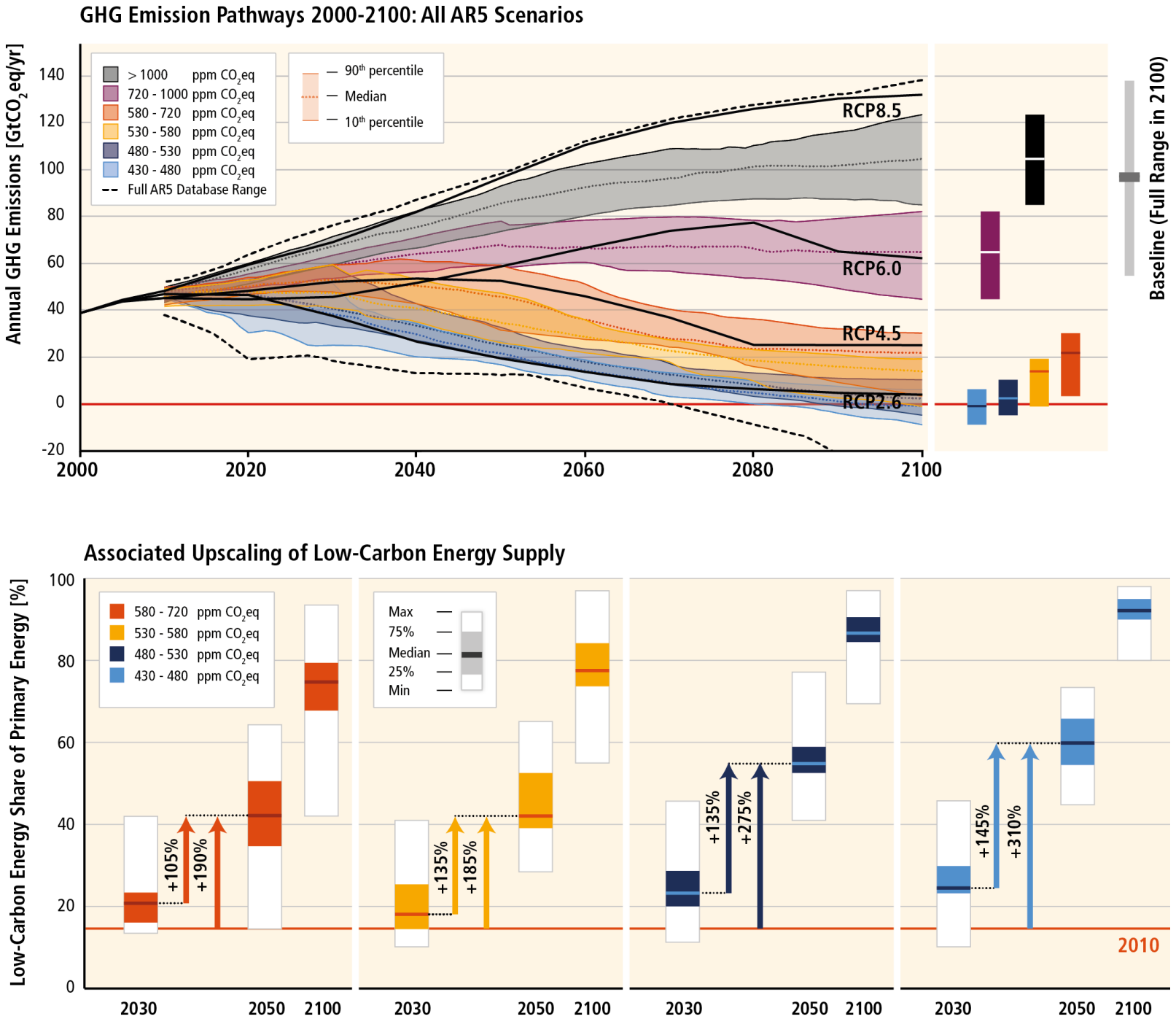
  How to finance the Green Climate Funds & the SDGs?

- What should be done to address these problems?

A Boeing Stratotanker refuels an F-15 Eagle

Key Findings from the 5th IPCC Assessment Report (AR5)

- Business As Usual (BAU) = worst case scenario (RCP 8.5)
- The BAU will "increase the likelihood of severe, pervasive, and irreversible impacts"
- Carbon budget of 825 GtCO2 over the next 35 years – net zero emissions by 2050
- 80-90% of the proven fossil fuel reserves must be left in the ground
- "A rapid and radical decarbonizing the economy"


GHG Emission Pathways 2000-2100: All AR5 Scenarios
Annual GHG Emissions [GtCO2eq/yr]
> 1000 ppm CO2eq
720 - 1000 ppm CO2eq
580 - 720 ppm CO2eq
530 - 580 ppm CO2eq
480 - 530 ppm CO2eq
430 - 480 ppm CO2eq
Full AR5 Database Range
90th percentile
Median
10th percentile
RCP8.5
RCP6.0
RCP4.5
RCP2.6
Baseline (Full Range in 2100)
Associated Upscaling of Low-Carbon Energy Supply
Low-Carbon Energy Share of Primary Energy [%]
580 - 720 ppm CO2eq
530 - 580 ppm CO2eq
480 - 530 ppm CO2eq
430 - 480 ppm CO2eq
Max
75%
Median
25%
Min
+105%
+190%
+135%
+185%
+135%
+275%
+145%
+310%
2010
2030
2050
2100

DDPP DEEP DECARBONIZATION PATHWAYS PROJECT

Problem of Military Emissions

- US Dept. of Defense (DOD) largest institutional consumer of oil ($17B/year) & largest landholder
- DOD fuel consumption 25% stationary & 75% operational energy
- UK Ministry of Defence annually spends £550 million on fuel
- Military vehicles inefficient, long life-cycles and locked-in
- Military concerned about costs and “threat multiplier”
- Accounting for military emissions not transparent – clauses for exemptions and confidentiality
- Military emissions *may* be reported in “Energy” Sector under “Other” 1.A.5a & 1.A.5b

Home IPCC
IPCC-TFI Home
Organization
Publications
Wetlands Supplement
KP Supplement
2006 IPCC Guidelines
GPG-LULUCF
Degradation of Forest
GPG2000
Revised 1996 IPCC Guidelines
Technical Bulletins
Presentations
Support to Inventory Compilers
Inventory Software
Meetings
FAQs
Links
Emission Factor Database (EFDB)
Electronic Discussion Group (EDG)

Publications

2006 IPCC Guidelines for National Greenhouse Gas Inventories

- 2006 IPCC Guidelines Top
  - Vol.1 GGR
  - Vol.2 Energy
  - Vol.3 IPPU
  - Vol.4 AFOLU
  - Vol.5 Waste
- Other Language Versions:
  - Arabic
  - Chinese
  - French
  - Russian
  - Spanish

Order Form
If you would like to obtain CD-ROM copies, please fill in the order form
and contact the Technical Support Unit. The order form can be downloaded here.

Get Adobe Reader

2006 IPCC Guidelines for National Greenhouse Gas Inventories

Cover, Foreword and Preface PDF
Overview PDF
Glossary PDF
List of Contributors PDF *1

*1: Corrected chapter(s) as of April 2007.

The series consists of five volumes:

Volume 1 General Guidance and Reporting

UNFCCC Reporting Guidelines 2006 on Annual Inventories

Chapter 3: Mobile Combustion, 3.6.1.4.
Due to confidentiality issues (see completeness and reporting), many inventory compilers may have difficulty obtaining data for the quantity of fuel used by the military.

Updated Guidelines, F. Reporting, Clause 27:

Emissions and removals should be reported at the most disaggregated level of each source/sink category, taking into account that a minimum level of aggregation may be required to protect confidential business and military information.

Re: Guidelines - From the U.S. Energy Information Administration's report *Emissions of Greenhouse Gases* (2009, 2.9, p.31):

UNFCCC definition of energy consumption excludes international bunker fuels, emissions from international bunker fuels are subtracted from the U.S. total. Similarly, emissions from military bunker fuels are also subtracted from the U.S. total.

U.S. Under Secretary and former Kyoto lead negotiator, Stuart Eizenstat, stated before the U.S. Senate in 1998:

We took special pains, working with the Defense Department and with our uniformed military, both before and in Kyoto, to fully protect the unique position of the United States as the world's only super power with global military responsibilities. We achieved everything they outlined as necessary to protect military operations and our national security. At Kyoto, the parties, for example, took a decision to exempt key overseas military activities from any emissions targets, including exemptions for bunker fuels used in international aviation and maritime transport and from emissions resulting from multilateral operations.

NEGOTIATIONS

Meetings
Documents & Decisions
Bodies

FOCUS

INDC Portal

Overview
Adaptation
Climate Finance
Mitigation
Technology

PROCESS

National Inventory Submissions 2015

At its eighth session, the Conference of the Parties requested the secretariat to publish on its web site the annual inventory submissions consisting of the national inventory report (NIR) and common reporting format (CRF) of all Parties included in Annex I to the Convention. The NIRs contain detailed descriptive and numerical information and the CRF tables contain all greenhouse gas (GHG) emissions and removals, implied emission factors and activity data.

The NIRs and CRF tables can be downloaded from the table below. The NIRs and CRF tables provided here are the most recent versions of the 2015 submissions provided by Annex I Parties. The dates of the original submissions are indicated in the table. For information on the completeness of a Party's 2015 submission please refer to the individual Status Report available, once published by the secretariat, in the last column of the table below. The secretariat also has further information on GHG emissions and removals data from Parties at the GHG data interface.

Submission of supplementary information in accordance with the Guidelines for the preparation of information required under Article 7, paragraph 1, of the Kyoto Protocol by Annex I Kyoto Protocol Parties, as available, is reflected in the last column of the table below.

In accordance with the Guidelines for the preparation of information required under Article 7 of the Kyoto Protocol, the secretariat compiles information on minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol, that is reported by Annex I Parties in their NIRs.

2015 Annex I Parties GHG Inventory Submissions

This webpage contains the 2015 submissions of GHG inventories from Annex I Parties. The common reporting format (CRF) tables of the submission should be prepared using the CRF Reporter software

Inventory Submissions

- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2004
- 2003

978-0-9573549-4-4

UK Greenhouse Gas Inventory, 1990 to 2012

Annual Report for Submission under the Framework Convention on Climate Change

Main authors Webb N, Broomfield M, Brown P, Buys G, Cardenas L, Murrells T, Pang Y, Passant N, Thistlethwaite G, Watterson J

With contributions from Abbott J, Champion H, Choudrie S, Coleman C, Gilhespy S, Gluckman R, Goodwin J, Henshall P, Hobson M, Levy P, MacCarthy J, Malcolm H, Manning A, Matthews R, Miles S, Misselbrook T, Moxley J, Pearson B, Salisbury E, Wartmann S, Walker C

TABLE 1 SECTORAL REPORT FOR ENERGY
(Sheet 2 of 2)

Inventory 2012
Submission 2014 v1.3
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2	CH_4	N_2O	NO_X	CO	NMVOC	SO_2
	(Gg)						
4. Other Sectors	97,742.72	27.26	2.04	87.37	443.18	35.39	43.61
a. Commercial/Institutional	20,147.76	1.96	0.06	21.26	5.18	0.87	4.01
b. Residential	73,401.31	22.84	0.40	39.46	380.47	25.45	39.26
c. Agriculture/Forestry/Fisheries	4,193.65	2.46	1.57	26.64	57.52	9.08	0.35
5. Other *(as specified in table 1.A(a) sheet 4)*	2,522.21	0.07	0.08	20.71	6.36	1.25	5.30
a. Stationary	IE,NO	IE,NO	IE,NO	IE	IE	IE	IE
Military stationary	IE,NO	IE,NO	IE,NO	IE	IE	IE	IE
b. Mobile	2,522.21	0.07	0.08	20.71	6.36	1.25	5.30
Military use	2,522.21	0.07	0.08	20.71	6.36	1.25	5.30
B. Fugitive Emissions from Fuels	3,777.43	342.92	0.13	1.95	18.24	152.19	7.19
1. Solid Fuels	226.98	94.57	0.00	0.15	9.88	0.39	6.28
a. Coal Mining and Handling	NO	75.96	NO	NO	NO	NO	
b. Solid Fuel Transformation	226.98	0.48	0.00	0.15	9.88	0.39	6.28
c. Other *(as specified in table 1.B.1)*	NO	18.13	NO	NO	NO	NO	NO
Closed Coal Mines	NO	18.13	NO	NO	NO	NO	NO

IE = Included Elsewhere NO = Not occurring

For UK mobile military fuel use for 2012, the CO2 is estimated at 2,522 GgC (Gigagrams = 1,000 metric tonnes of carbon) about a tenth of commercial/institutional use.

Ministry
of Defence

Ministry of Defence

Annual Report and Accounts

2014-2015

Report of the
Defense Science Board Task Force
on
DoD Energy Strategy

"More Fight – Less Fuel"

Department of Defense

Energy for the Warfighter:

OPERATIONAL ENERGY STRATEGY


SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

Green Climate Fund & Sustainable Development Goals

- UN estimates $3-5 trillion/year to achieve the 17 Sustainable Development Goals
- International Energy Agency (IEA) est. $1 trillion/year for 40 years to create a low-carbon economy
- Green Climate Fund $100 billion/year to developing countries
- Norway Forum on Development and Environment made submission to re-allocate military spending but ignored
- Financing for Development outcome did not include military spending = see the *Addis Ababa Action Agenda*

Countries reach historic agreement to generate financing for new sustainable development agenda

Delegates celebrate agreement on the Addis Agenda with Conference Secretary-General Mr. Wu. Photo: UN DESA/Shari Nijman

Countries today agreed on a series of bold measures to overhaul global finance practices and generate investments for tackling a range of economic, social and environmental challenges at the United Nations Third International Conference on Financing for Development, being held in Addis Ababa.

The groundbreaking agreement, the *Addis Ababa Action Agenda*, provides a foundation for implementing the global sustainable development agenda that world leaders are expected to adopt this September. The agreement was reached by the 193 UN Member States attending the Conference, following negotiations under the leadership of Ethiopian Foreign Minister Tedros Adhanom Ghebreyesus.

The agreement, adopted after months of negotiations between countries, marks a milestone in forging an

Search...

More News

Consensus Reached on New Sustainable Development Agenda to be adopted by World Leaders in September

FFD3 outcome sets positive tone for global change

Voices from the Conference: What investments are most needed to improve people's lives?

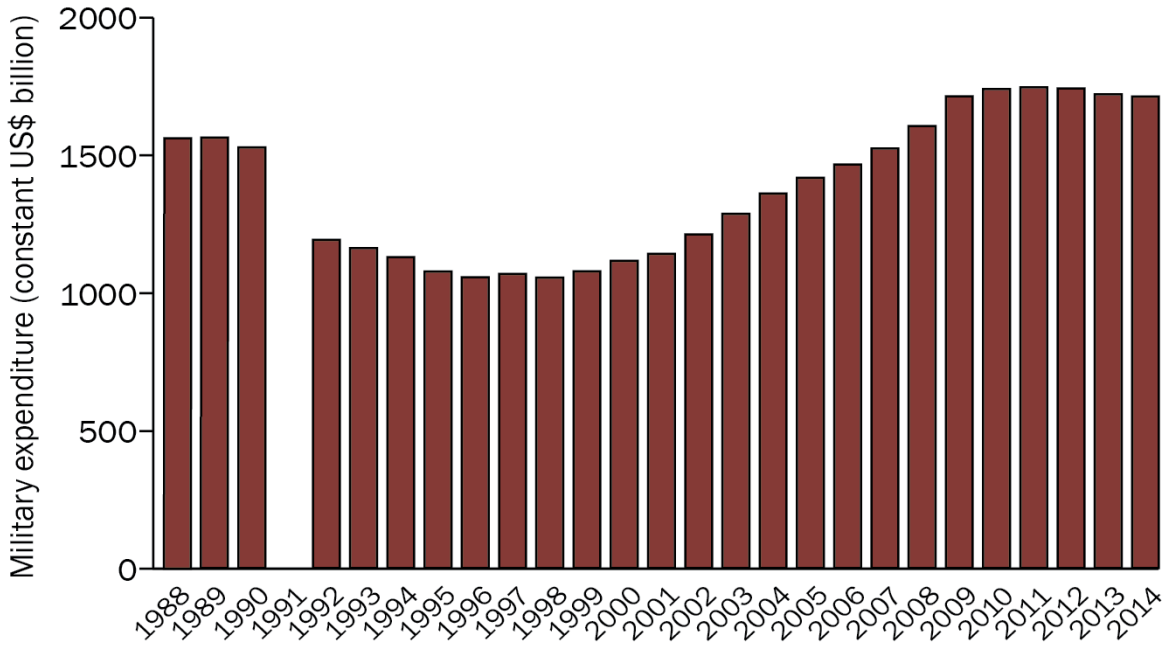
UN General Assembly endorses the Addis Ababa Action Agenda

Highlights from the Conference

Problem of Military Expenditures

- SIPRI estimates that global military spending is $1.7 trillion
- NATO pressure to spend 2% of GDP on defence budget
- US pressure on countries to spend more on defence
- Most Western countries spend more on their national defences than on their departments of environment
- Developed countries tend to spend more on military science research than climate research

World military expenditure, 1988–2014



sipri

www.sipri.org

The 15 countries with the highest military expenditure in 2014

Spending figures are in US$, at current prices and exchange rates. Figures for changes are calculated from spending figures in constant (2011) prices.

Rank			Spending,	Change,	Spending as a share of GDP (%)[b]	
2014	2013[a]	Country	2014 ($ b.)	2005–14 (%)	2014	2005
1	1	USA	610	*–0.4*	*3.5*	*3.8*
2	2	China	[216]	*167*	*[2.1]*	*[2.0]*
3	3	Russia	[84.5]	*97*	*[4.5]*	*[3.6]*
4	4	Saudi Arabia	80.8	*112*	*10.4*	*7.7*
5	5	France	62.3	*–3.2*	*2.2*	*2.5*
6	6	UK	60.5	*–5.5*	*2.2*	*2.4*
7	9	India	50.0	*39*	*2.4*	*2.8*
8	8	Germany	[46.5]	*–0.8*	*[1.2]*	*1.4*
9	7	Japan	45.8	*–3.7*	*1.0*	*1.0*
10	10	South Korea	36.7	*34*	*2.6*	*2.5*
11	12	Brazil	31.7	*41*	*1.4*	*1.5*
12	11	Italy	30.9	*–27*	*1.5*	*1.9*
13	13	Australia	25.4	*27*	*1.8*	*1.8*
14	14	UAE	[22.8]	*135*	*[5.1]*	*[3.7]*
15	15	Turkey	22.6	*15*	*2.2*	*2.5*
Total top 15			**1 427**			
World total			**1 776**	*21*	*2.3*	*2.4*

[ ] = SIPRI estimate.

DOD Financial Management

This information appears as published in the 2015 High Risk Report.

View the 2015 Report

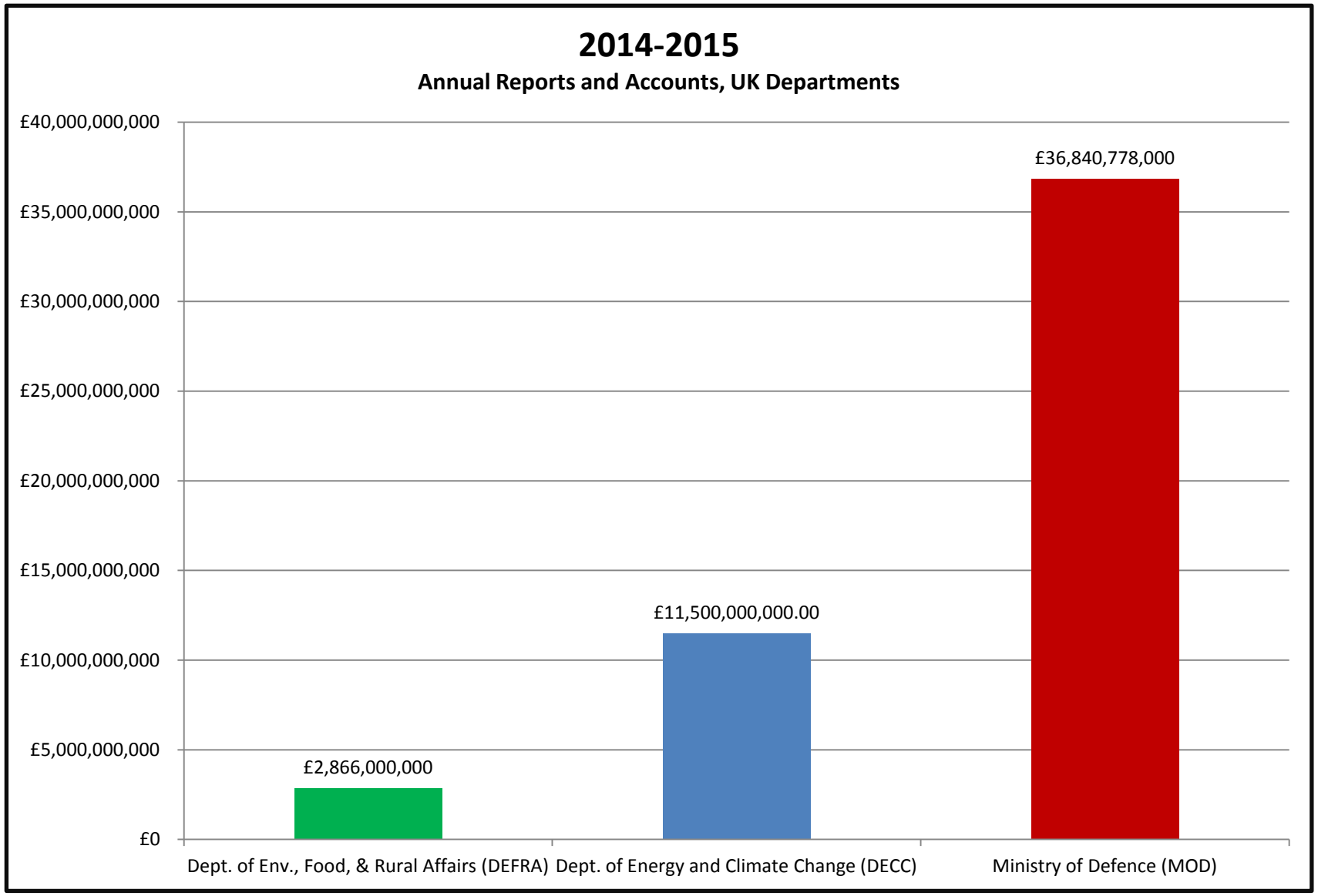
WHY IT'S HIGH RISK | WHAT WE FOUND | WHAT REMAINS TO BE DONE | KEY REPORTS | RELATED GAO LINKS | GAO CONTACT

Share This:

The Department of Defense (DOD) is responsible for more than half of the federal government's discretionary spending. Significant financial and related business management systems and control weaknesses have adversely affected DOD's ability to control costs; ensure basic accountability; anticipate future costs and claims on the budget; measure performance; maintain funds control; prevent and detect fraud, waste, and abuse; address pressing management issues; and prepare auditable financial statements.

Without accurate, timely, and useful financial information, DOD is severely hampered in making sound decisions affecting the department's operations. Further, to the extent that current budget constraints and fiscal pressures continue, the reliability of DOD's financial information and ability to maintain effective accountability for its resources will be increasingly important to the federal government's ability to make sound resource allocation decisions. Effective financial management is also fundamental to achieving DOD's broader business transformation goals.

Successful transformation of DOD's financial management processes and operations will allow DOD to routinely generate timely, complete, and reliable financial and other information for day-to-day decision making, including the information needed to effectively (1) manage assets, (2) assess program performance and make budget decisions, (3) make cost-effective operational choices, and (4) provide accountability over the use of public funds.


2014-2015
Annual Reports and Accounts, UK Departments
£40,000,000,000
£35,000,000,000
£30,000,000,000
£25,000,000,000
£20,000,000,000
£15,000,000,000
£10,000,000,000
£5,000,000,000
£0
£2,866,000,000
£11,500,000,000.00
£36,840,778,000
Dept. of Env., Food, & Rural Affairs (DEFRA)
Dept. of Energy and Climate Change (DECC)
Ministry of Defence (MOD)

The government plans to spend £2.5 BILLION on fighter jets to tackle future "threats"

What should be done?

- How much of the carbon budget will be allocated to the military?
- How much of the remaining fossil fuels are we going to allow the military to use? And for what purposes - warfighting?
- Why are military emissions not on the COP agenda and why are military expenditures not considered for climate financing?
- Why is there limited, independent research on the military's climate and environmental impacts?
- And finally what are we going to do about this?


CAMPAIGN AGAINST ARMS TRADE
ARMS TO RENEWABLES
Shift priorities to create better jobs and a safer world
www.a2r.org.uk


WINDMILLS NOT WEAPONS

Disarm! For a Climate of Peace – Creating an Action Agenda

IPB World Congress 2016 on Military and Social Spending

IPB World Congress
30 Sept – 03 Oct 2016

Technical University
Berlin Germany

IPB International Peace Bureau

GCOMS

Home Congress Program Partners Participation Press corner IPB GCOMS Contact

http://www.ipb2016.berlin/

Report:

Demilitarization for Deep Decarbonization:
Reducing Militarism and Military Expenditures to Invest in the UN Green Climate Fund and to Create Low-Carbon Economies and Resilient Communities
www.ipb.org (under “Resources” and “Books”)