1.A.5.a - Other, Stationary (including Military)

Short description

In sub-category *1.A.5.a - Other, Stationary (including Military)* emissions from stationary fuel combustion in military facilities are reported.

Category Code	Method		AD	EF										
1.A.5.a	T2, T3		NS	CS										
Key Category	**SO$_2$**	**NO$_x$**	**NH$_3$**	**NMVOC**	**CO**	**BC**	**Pb**	**Hg**	**Cd**	**Diox**	**PAH**	**HCB**	**TSP**	**PM$_{10}$**	**PM$_{2\ 5}$**
1.A.5.a	-/-	-/-	-/-	L/T	-/-	-/-	-	-/-	-	-/-	-/-	-/-	-/-	-/-	-/-

Methodology

Activity Data

The National Energy Balance of the Federal Republic of Germany (AGEB) provides the basis for the activity data used. Since the National Energy Balance (NEB) does not provide separate listings of military agencies' final energy consumption as of 1995 , including these consumption data in line 67: 'commerce, trade, services and other consumers' instead, additional energy statistics and data sources are used here.

Here, data fuel-specific data from the Federal Ministry of Defence (BMVg, 2020)[1] is being used, providing the "Energy input for heat production in the German Federal Armed Forces" for all years as of 2000.

For liquid fuels, data is derived from the official mineral-oil data of the Federal Republic of Germany (Amtliche Mineralöldaten der Bundesrepublik Deutschland), compiled annually by the Federal Office of Economics and Export Control (BAFA, 2019)[2]. The consumption figures given in units of [1000 t] are converted into [TJ] based on the relevant heating statistics published by the Working Group on Energy Balances.

All non-NEB figures are deducted from the figures in NEB line 67 (commerce, trade, services) and are reported in *1.A.5*, rather than in *1.A.4*.

Emission Factors

The database for the emission factors used for source category *1.A.5.a* consists of the results of a research project carried out by the University of Stuttgart, under commission to the Federal Environment Agency (Struschka, 2008)[3]. Within that project, device-related and source-category-specific emission factors for combustion systems in military agencies were calculated, with a high level of detail, for all important emissions components for the reference year 2005. The method used to determine the factors conforms to that described for source category *1.A.4*. The following table

shows the sectoral emission factors used.

Table 1: Emission factors for Military stationary combustion plants

	NO$_x$	SO$_x$	NMVOC
	[kg/TJ]		
Hard coal	46	403	1
Brown coal briquettes	86	289	332
Light heating oil	46	77	2.8
Gaseous fuels	25	0.5	0.34

Trend discussion for key sources

The following diagrams give an overview and assistance for explaining dominant emission trends of selected pollutants
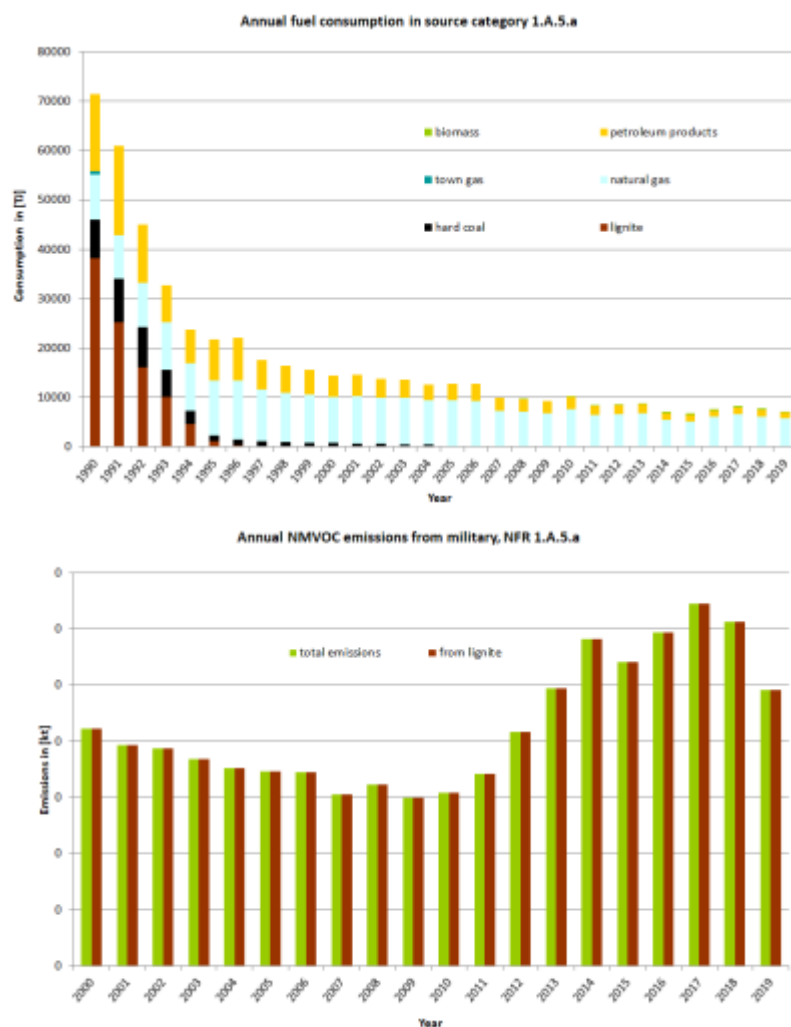
NMVOC emissions show a remarkable falling trend due to the closure of military agencies especially at the beginning of the 1990s as well as the reducing use of lignite for heating purposes.

Recalculations

Recalculations of PAH Emission due to a Revision of PAH Emission factors for all small combustion sources.

For more information on recalculated emission estimates for Base Year and 2018, please see the pollutant-specific recalculation tables following chapter 8.1 - Recalculations.

Planned improvements

Currently no improvements are planned.

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[1] Bundesministerium der Verteidigung: Energieeinsatz zur Wärmeversorgung der Bundeswehr (unpublished).

[2] Federal Office of Economics and Export Control (BAFA): Official petroleum data of the Federal Republic of Germany 2018; table 7j, column: 'An das Militär'; URL:
*https://www.bafa.de/SiteGlobals/Forms/Suche/Infothek/Infothek_Formular.html?nn=8064038&submit=Senden&resultsPerPage=100&documentType_=type_statistic&templateQueryString=Amtliche+Daten+Mineral%C3%B6ldaten&sortOrder=dateOfIssue_dt+desc

[3] Struschka, Dr. M., Kilgus, D., Springmann, M.; Baumbach, Prof.Dr. Günter: Effiziente Bereitstellung aktueller Emissonsdaten für die Luftreinhaltung; UBA Forschungsbericht 205 42 322; Dessau, 2008. URL:
*https://www.umweltbundesamt.de/publikationen/effiziente-bereitstellung-aktueller-emissionsdaten