

## 5.C.2 - Open Burning of Waste

Category Code	Method					AD					EF				
5.C.2	CS					Q					D, CS				
Key Category	SO <sub>2</sub>	NO <sub>x</sub>	NH <sub>3</sub>	NM VOC	CO	BC	Pb	Hg	Cd	Diox	PAH	HCb	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>
5.C.2	-/-	-/-	-	-/-	-/-	-/-	-/-	-	-/-	-/-	-/-	-	-/-	L/-	L/-

**T** = key source by Trend **L** = key source by Level

Methods	
<b>D</b>	Default
<b>RA</b>	Reference Approach
<b>T1</b>	Tier 1 / Simple Methodology *
<b>T2</b>	Tier 2*
<b>T3</b>	Tier 3 / Detailed Methodology *
<b>C</b>	CORINAIR
<b>CS</b>	Country Specific
<b>M</b>	Model

\* as described in the EMEP/CORINAIR Emission Inventory Guidebook - 2007, in the group specific chapters.

AD - Data Source for Activity Data	
<b>NS</b>	National Statistics
<b>RS</b>	Regional Statistics
<b>IS</b>	International Statistics
<b>PS</b>	Plant Specific data
<b>AS</b>	Associations, business organisations
<b>Q</b>	specific questionnaires, surveys
EF - Emission Factors	
<b>D</b>	Default (EMEP Guidebook)
<b>C</b>	Confidential
<b>CS</b>	Country Specific
<b>PS</b>	Plant Specific data

Within NFR sub-category 5.C.2 - Open Burning of Waste, the German emissions inventory provides emissions from registered bonfires and other wooden materials burnt outdoors. Emissions from bonfires are key source for PM<sub>2.5</sub> and PM<sub>10</sub>, but in principle of minor priority.

Emissions from open burning of wood and green waste for traditional purposes, so-called bonfires such as Easter fires, are reported model-based. In addition to biogenic carbon dioxide, emissions of NO<sub>x</sub>, SO<sub>2</sub>, CO, NMVOC, particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub> and TSP) and Polycyclic Aromatic Hydrocarbons (PAHs) are covered so far.

### Method

For developing of a estimation frame a survey regarding the number of such bonfires was carried out by an expert work (Wagner & Steinmetzer, 2018) [1]. As the result, questionnaires from municipalities and statistical projections for Germany for the year 2016 were checked. The project has shown a declining trend since 1990. On the basis of expert judgement, a further reduction of emissions in the future is expected.

### Activity data

Activity data for this category are based on data from a step by step calculation: After the evaluation of the questionnaires an extrapolation of the volume and the number of bonfires was made for Germany. The median values of clusters of city-sizes were used for the calculation, resulting in the following values <sup>1)</sup>:

<sup>1)</sup> Wagner & Steinmetzer, 2018: Jörg Wagner, Sonja Steinmetzer, INTECUS GmbH Abfallwirtschaft und umweltintegratives

Management: Erhebung der Größen und Zusammensetzung von Brauchtums- und Lagerfeuern durch kommunale Befragungen; URL:

[https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-02-19\\_texte\\_11-2018\\_lager-brauchtumsfeuer.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-02-19_texte_11-2018_lager-brauchtumsfeuer.pdf); UBA-Texte 11/2018