European BVOC emission inventory

GENERAL INFO:

Dataset Name: European BVOC emission inventory

Long name: European plant-specific emission inventory of biogenic volatile organic compounds for use in atmospheric transport models

Description: Monthly European plant-specific emissions for the years 2004 and 2005 for isoprene, monoterpenes, sesquiterpenes and other VOC with a spatial resolution of 0.089x0.089 degrees on a regular latitude/longitude grid. Emissions are divided into the categories forest, agriculture and other land uses and cover the European continental domain.

Version: 1

Last upload: 2010-09-28 01:35:49 (novel_maps-2002.zip)

Status of data: Completed

Version history: Emission inventory created in Oslo 04/2009

Topic: climatologyMeteorologyAtmosphere; geoscientificinformation;

Keywords: agriculture; bioclim; biogenic emissions; BVOC; forest;

Further Information:
http://www.biogeosciences.net/6/1059/2009/bg-6-1059-2009.html

METHOD:

Type of method: Model simulation

Methodology: BVOC emissions are calculated with a model that contains four main parts: (1) retrieving geo-referenced spatial data from several Geographic Information System (GIS) databases and property data from tabular databases, (2) meteorological input data from the European Centre for Medium Range Weather Forecast (ECMWF) and leaf area index data from MODIS, (3) aggregation of the spatial GIS data for the Pan-European domain, processing of tabular input and writing output to HDF files, (4) calculation of BVOC emissions using a Canopy Environment Model written in Interactive Data Language (IDL).

Uncertainty: no

References: Karl, M., Guenther, A., Koeble, R., Leip, A., and Seufert, G. (2009): A new European

plant-specific emission inventory of biogenic volatile organic compounds for use in atmospheric transport models. Biogeosciences, 6, 1059-1087.

CONTACT:

Contact:	Guenther Seufert JRC-IES-CCU - EC - Joint Research Centre - Institute for Environment and Sustainability Climate Change Unit
Data owner:	Guenther Seufert JRC-IES-CCU - EC - Joint Research Centre - Institute for Environment and Sustainability Climate Change Unit
Last update of meta-data:	Oct 13 2010 8:29AM
Creation of meta-data by user:	mkabvoc

SPATIAL INFORMATION:

Geographic Projection:	WGS84
Spatial Resolution:	Scale: 9.6 km x 9.6 km at 20 degN Rast X: 0.089 Rast Y: 0.089 Rast Unit: grad (decimal)
Extent Name:	Pan-Europe, continental
Geographic window:	South: 20 North: 72 West: -20 East: 40

TIME INFORMATION:

Temporal resolution:	Time: 24 Unit: months
Begin year:	2004
End year:	2005

PARAMETERS:

Symbol:	name
Type:	String
Definitions:	gloabl attribute
Units:	none
Unit Symbol:	none
Group:	0
Label(s):	[name]

Symbol:	unit
Type:	String
Definitions:	global attribute
Units:	none
Unit Symbol:	none
Group:	0
Label(s):	[unit]

BVOC emission	
Symbol:	ntrace
Type:	Long integer
Definitions:	global attribute
Units:	none
Unit Symbol:	none
Precision:	1
Group:	0
Label(s):	[ntrace]

Isoprene, Emission by Area	
Symbol:	em_isop_{X}
Type:	Double-precision Floating-point
Definitions:	Monthly total emission of isoprene from forest (deciduous, evergreen), other land (deciduous, evergreen), agriculture (deciduous, evergreen, non-seasonal, barley, maize, potato, rape, sugar beet, sunflower,wheat) per square meter (average of grid cell)
Units:	milligramme per square meter
Unit Symbol:	mg/m^2
Precision:	31
Group:	2
Label(s):	[em_isop_fordec][em_isop_foreve][em_isop_othdec][em_isop_otheve][em_isop_agrdec][em_isop_agreve][em_isop_agrnon][em_isop_agrbar][em_isop_agrmai][em_isop_agrpot][em_isop_agrrap][em_isop_agrroo][em_isop_agrsun][em_isop_agrswh]

latitude	
Symbol:	jm
Type:	Long integer
Definitions:	global attribute
Units:	none
Unit Symbol:	none
Group:	0
Label(s):	[jm]

longitude	
Symbol:	im
Type:	Long integer
Definitions:	global attribute
Units:	none
Unit Symbol:	none
Precision:	1
Group:	0
Label(s):	[im]

MT pool, Emission by Area	
Symbol:	em_mott_{X}
Type:	Double-precision Floating-point
Definitions:	Monthly total emission of MT pool from forest (deciduous, evergreen), other land (deciduous, evergreen), agriculture (deciduous, evergreen, non-seasonal, barley, maize, potato, rape, sugar beet, sunflower,wheat) per square meter (average of grid cell)
Units:	milligramme per square meter
Unit Symbol:	mg/m^2
Precision:	31
Group:	4
Label(s):	[em_mott_fordec][em_mott_foreve][em_mott_othdec][em_mott_otheve][em_mott_agrdec][em_mott_agreve][em_mott_agrnon][em_mott_agrbar][em_mott_agrmai][em_mott_agrpot][em_mott_agrrap][em_mott_agrroo][em_mott_agrsun][em_mott_agrswh]

MT synt, Emission by Area	
Symbol:	em_motl_{X}
Type:	Double-precision Floating-point
Definitions:	Monthly total emission of MT synt from forest (deciduous, evergreen), other land (deciduous, evergreen), agriculture (deciduous, evergreen, non-seasonal, barley, maize, potato, rape, sugar beet, sunflower,wheat) per square meter (average of grid cell)
Units:	milligramme per square meter
Unit Symbol:	mg/m^2
Precision:	31
Group:	5
Label(s):	[em_motl_fordec][em_motl_foreve][em_motl_othdec][em_motl_otheve][em_motl_agrdec][em_motl_agreve][em_motl_agrnon][em_motl_agrbar][em_motl_agrmai][em_motl_agrpot][em_motl_agrrap][em_motl_agrroo][em_motl_agrsun][em_motl_agrswh]

OVOC, Emission by Area	
Symbol:	em_ovoc_{X}
Type:	Double-precision Floating-point
Definitions:	Monthly total emission of OVOC from forest (deciduous, evergreen), other land (deciduous, evergreen), agriculture (deciduous, evergreen, non-seasonal, barley, maize, potato, rape, sugar beet, sunflower,wheat) per square meter (average of grid cell)
Units:	milligramme per square meter
Unit Symbol:	mg/m^2
Precision:	31

Group:	3
Label(s):	[em_ovoc_fordec][em_ovoc_foreve][em_ovoc_othdec][em_ovoc_otheve][em_ovoc_agrdec][em_ovoc_agreve][em_ovoc_agrnon][em_ovoc_agrbar][em_ovoc_agrmai][em_ovoc_agrpot][em_ovoc_agrrap][em_ovoc_agrroo][em_ovoc_agrsun][em_ovoc_agrswh]

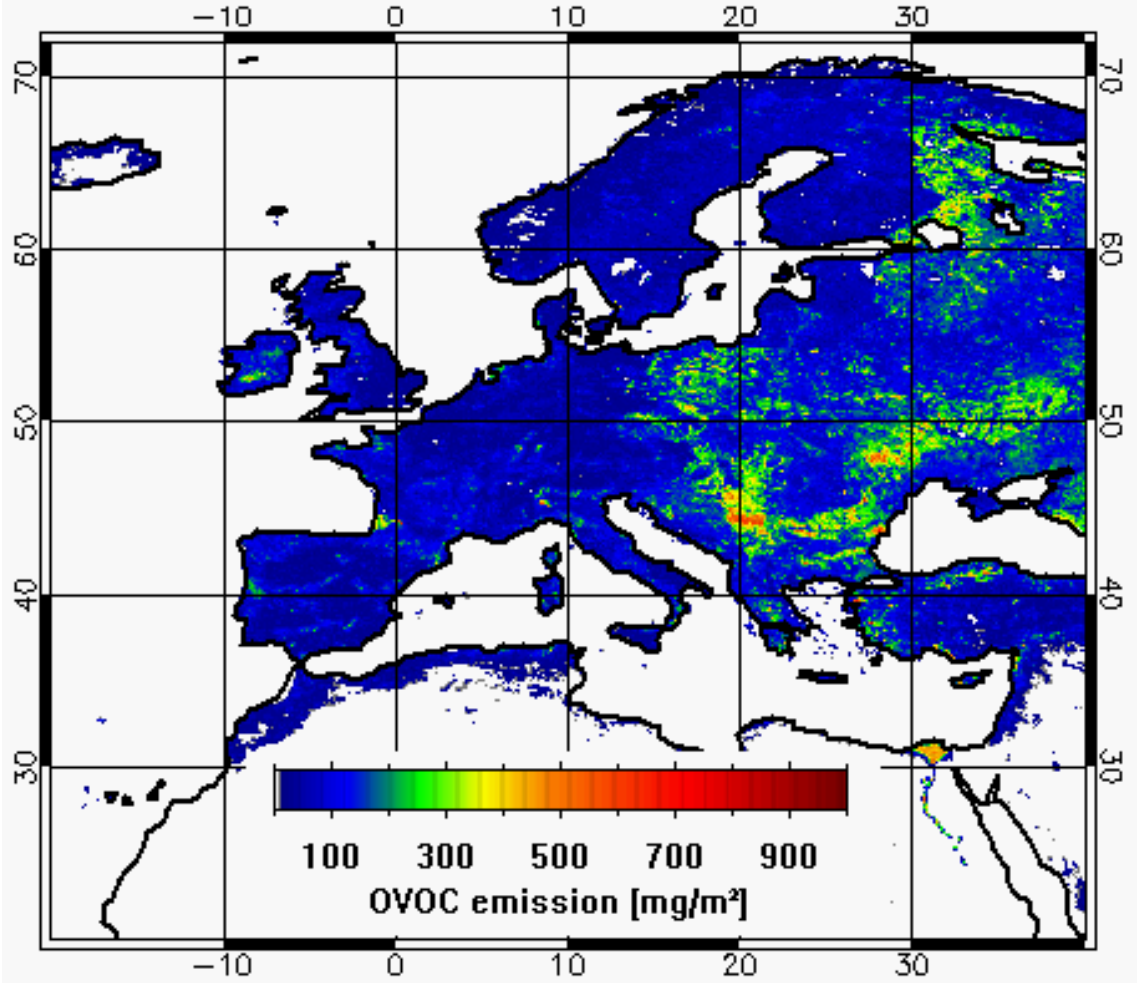
Sesquiterpenes, Emission by Area	
Symbol:	em_sesq_{X}
Type:	Double-precision Floating-point
Definitions:	Monthly total emission of SQT from forest (deciduous, evergreen), other land (deciduous, evergreen), agriculture (deciduous, evergreen, non-seasonal, barley, maize, potato, rape, sugar beet, sunflower,wheat) per square meter (average of grid cell)
Units:	milligramme per square meter
Unit Symbol:	mg/m^2
Precision:	31
Group:	6
Label(s):	[em_sesq_fordec][em_sesq_foreve][em_sesq_othdec][em_sesq_otheve][em_sesq_agrdec][em_sesq_agreve][em_sesq_agrnon][em_sesq_agrbar][em_sesq_agrmai][em_sesq_agrpot][em_sesq_agrrap][em_sesq_agrroo][em_sesq_agrsun][em_sesq_agrswh]

surface	
Symbol:	lm
Type:	Long integer
Definitions:	global attribute
Units:	none
Unit Symbol:	none
Precision:	1
Group:	0
Label(s):	[lm]

Total Emission by Area	
Symbol:	em_{BVOC}
Type:	Double-precision Floating-point
Definitions:	Monthly total emission of BVOC per vegetated area (average for each grid cell)
Units:	milligramme per square meter
Unit Symbol:	mg/m^2
Precision:	31
Group:	1
Label(s):	[em_isop][em_motl][em_mott][em_ovoc][em_sesq]

IMAGES:

121_thb.png [38.32Kb]
[http://afoludata.jrc.ec.europa.eu/index.php/dataset/download/131]



DISCLAIMER:

Disclaimer GHG-AFOLU: These data were generated or collected within the GHG-AFOLU action of the Institute of Environment and Sustainability of the European Commissions Joint Research Centre. The user agrees(i) to restrict the use of the data to the context of the research topic specified at the time of the application, when this application was made to access data still restricted from the public domain;(ii) not to disclose the data to other parties without written consensus of the Data Orignator;(iii) not to use the data for commercial purposes;(iv) that the Intellectual Property Right remains with the Data Originator;(v) as long as feasible, to contact the Data Originator prior to any use of the data;(vi) to offer the Data Originator(s) co-authorship of any publication or communication based on CAPRI-Dynaspat data; in the event that the offer is declined or when the Data Originators cannot be contacted, Data Originators must be duly acknowledged.