

**19th GEIA Conference: The Global Emission Initiative's efforts to accelerate societal transformations
Detailed Draft Agenda - September 8**



Start Length SESSION
Time Minutes Presenter First Na Presenter Last Name Presentation Title

Tuesday November 5

19:00 120 Icebreaker

Wednesday November 6

8:00 30 Registration

8:30 30 Welcome/Introductions

Greg Frost

Nicolas Huneus

9:00 90 Theme 1. Natural Sources, Fires, Dust, Agriculture

Moderators: Alison Steiner, Cathy Liousse

Introduction to Theme 1

Oral Session 1a

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| Solene | Turquety | Wildfires' impact on air quality (PM, O3) in Europe: evaluation of emissions and long-range transport against satellite observations (IASI, MODIS) |
| Yuxuan | Wang | Intensified effects of climate, weather, and fuels on wildfire burned areas during drought in the Southern US |
| Angelika | Heil | Uncertainties in biomass burning emission inventories for Africa: implications for atmospheric modelling |
| Rene | Reyes | Estimating firewood consumption and emissions in a context of energy transition for two regions in Chile |
| Martin Otto Paul | Ramacher | The impact of BVOC emissions from urban forests on ozone production in urban areas under heat period conditions. |

Q&A

Oral Session 1b

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| Mokhele Edmond | Moeletsi | Enteric methane emissions trends for livestock in South Africa |
| Jorge E. | Pachon | Chemical composition and influencing factors for road dust in a tropical urban environment |
| Alex | Guenther | Heterogeneity and rapid changes in biogenic VOC emissions from managed landscapes |
| Edward | Carnell | A comparison between the UK's agricultural N ₂ O emission inventory model and tall tower measurements |
| Ulrike | Dragosits | Spatially targeted mitigation of agricultural emissions to maximise benefit for sensitive habitats and designated nature conservation sites |

Q&A

10:30 30 Coffee/Tea Break

11:00 90 Poster Session 1

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| Allison | Steiner | Developing regional to global pollen emissions inventories |
| Tomas Rafael | Bolano-Ortiz | Analysis of open biomass burning using WRF-Chem model with FINN fire emissions in the Central Andes of Argentina and Chile |
| Efstratios | Bourtsoukidis | Northern Red Sea deep brine pools - a potent natural source of atmospheric ethane and propane |
| Jana | Doubalova | Spatial and temporal changes in biogenic VOC emissions due to land-cover changes |
| David | Edwards | Next generation fire pollution prediction: What satellite observations are required to monitor and predict air quality hazards from fires? |
| Lenin Babu | Kamepalli | Suitability of Tier One Approaches for Quantification of Emission: A Case study of Emissions from Agricultural Sector, India. |

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| Jeroen | Kuenen | Impact of improved PM emissions and emission timing for wood combustion in Europe |
| Poonam | Mangaraj | Seasonal Gridded (~10km) Emission Inventory of Crop Residue Burning in India (2018) - Presented by Saroj Kumar Sahu |
| Manisha | Mishra | Atmospheric Reactive Nitrogen Measurements at the Selected Sites of Indo-Gangetic Plains |
| David | Pfotenhauer | Emissions from Rural and Urban Open Waste Burning in Ghana |
| Enrique | Puliafito | A HIGH RESOLUTION EMISSIONS INVENTORY OF ARGENTINA FOR AIR QUALITY ESTIMATION |
| Lijuan | Qi | Intermediate-volatility organic compound emissions from nonroad construction machinery in China |
| Sagar | Rathod | Anthropogenic combustion-related bioavailable iron supply to global oceans |
| Maheswar | Rupakheti | New Nepal emissions inventory (NEEMI) - both technology-based (NEEMI-Tech) and open burning (NEEMI-Open) emissions for 2001-2016 |
| Katerina | Sindelarova | Global emissions of biogenic VOCs based on ECMWF meteorology |
| Atif | Taoussi | Simulation and Analysis of the DMS and Sulfate during the C-SOLAS SABINA Campaign. |
| Samuel James | Tomlinson | Improving estimates of NH3 emissions from anaerobic digestion and integration with other inventory sectors |
| Saraswati | Yadav | Reactive nitrogen emission from agricultural fields in India: A case study of nitrogen fertilizers application |
| A.M.R. | Petrescu | Assessing the greenhouse gas emission balance of agriculture/land-use activities and ecosystems in the EU. |

12:30 90 LUNCH GEIA Working Group Meetings, TFHTAP, New Ideas

14:00 90 Theme 2. Top-down Emissions & Satellite Analyses
Moderators: Yuxuan Wang, Erika von Schneidmesser

Introduction to Theme 2

Oral Session 2a

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| Christopher | Beale | Satellite observations of ammonia over India for improved emission source estimates |
| David | Crisp | Progress Toward Top-Down Atmospheric CO ₂ and CH ₄ Flux Inventories |
| Hugo | Denier van der Gon | Quantification of accidental and continuous methane emissions from the energy sector using earth observation |
| Enrique | Puliafito | SPATIAL VARIABILITY OF METHANE CONCENTRATIONS OVER ARGENTINA. SATELLITE MEASUREMENTS COMPARE TO HIGH RESOLUTION INVENTORIES. |
| Katherine | Saad | Parsing out emissions sources in urban environments with airborne hyperspectral imaging |
| Monica | Crippa | Towards real time mapping of human emissions: insights on the EDGARv5.0 scientific developments |

Q&A

Oral Session 2b

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| Trisevgeni | Stavrakou | Distributions and trends of biogenic emissions over South American ecosystems deduced by multiyear inversion of satellite data |
| Jorge | Vargas | Evaluation of air quality in Colombia based on data from the Copernicus Atmosphere Monitoring Service (CAMS) and surface monitoring |
| Helen | Worden | Partitioning top-down carbon monoxide flux estimates to understand how sources of CO from anthropogenic, biomass burning and biogenic sectors have been changing over recent decades |
| Yu | Zhao | Top-down Estimate of Regional Black Carbon Emissions using Ground and Satellite Observations |

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| | | Paul | Ginoux | Anthropogenic contribution to dust emissions from satellite based estimates and climate model simulations |
| | | Q&A | | |
| 15:30 | 30 | Coffee/Tea Break | | |
| 16:00 | 90 | Poster Session 2 | | |
| | | Vanessa | Brocchi | Analysis of Anthropogenic Combustion and Associated Pollution in Major Cities of Africa |
| | | Jason Blake | Cohen | Coupling Remote Sensing, Models, and Mathematics to Constrain the Emissions Associated with Extreme Pollution Events |
| | | Maite | Bauwens | Detecting trends in anthropogenic VOC emissions over large cities using the long record of OMI observations |
| | | Papori | Dahutia | Vertical distribution of aerosols and clouds over North-Eastern South Asia: aerosol-cloud interactions |
| | | Nellie | Elguindi | Analysis of recent surface emissions from inventories and inverse estimates: are future emission scenarios valid for the recent past? |
| | | Muhammad Zaffa Hashmi | | Spatio-Temporal Trends of Chlorinated Hydrocabons and their Relationship with Meteorological Parameters over Pakistan |
| | | Daven | Henze | Top-down constraints on reactive nitrogen (NO _x and NH ₃) emissions: consistencies and discrepancies with bottom-up inventories |
| | | Jean-Francois | Muller | Non-methane volatile organic compounds emissions over Latin America and China inferred from TROPOMI HCHO |
| | | Kazuyuki | Miyazaki | Decadal changes in global NO _x , CO, and SO ₂ emissions for 2005-2018 derived from multi-model multi-constituent satellite data assimilation |

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| Chaitri | Roy | Transport of trace gases via eddy shedding from the Asian summer monsoon anticyclone and associated impacts on ozone heating rates |
| Takashi | Sekiya | Global top-down NOx emissions derived from TROPOMI NO2 data assimilation at 0.56-degree resolution |
| Jianxiong | Sheng | Bottom-up/top-down estimates of coal mine methane emissions in China: a gridded inventory, emission factors, and trends |
| Salman | Tariq | Physical and chemical characteristics of air pollutants during recent intense haze/smog events over Pakistan and India |
| Ronald | van der A | Deriving NH3 and NOx emissions in South America from satellite observations |
| John | Worden | Quantifying and Partitioning the Global Methane Budget Using Satellite and Ground Observations of Methane and Its Correlative Tracers |
| Naila | Zeb | Exploring the temporal trends and seasonal behaviour of tropospheric trace gases over Pakistan by exploiting satellite observations |
| Jing | Zhao | Spatiotemporal heterogeneity and patterns of China,Äôs anthropogenic CO2 emission integrating OCO-2 and multiple inventories |
| Yuanqian | Xu | Dynamic estimation of open crop residue burning emissions by combining fused fire radiative energy with bottom-up emissions, a case study in Guangdong, China |

17:30 30 Demonstration of ECCAD, GEIA's Emissions Data Portal

Thursday November 7

9:00 90 Theme 3. Development of Integrated Inventories & Evaluation of Air Quality Models

Moderators: Hugo Denier van der Gon, Greet Janssens-Maenhout

Introduction to Theme 3

Oral Session 3a

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| Xiaotong | Wang | Improved AIS-based shipping emission model and its latest application in China |
| Ekbordin | Winijkul | Development of Real-time Spatial and Temporal Distribution of Traffic Emission Using Google Maps API in Bangkok, Thailand |
| Carlos David | Gomez Ortiz | DROVE: An algorithm for the spatial and temporal disaggregation of on-road vehicle emission inventories |
| Joana | Leitao | YETI, a high resolution traffic emission inventory for the city of Berlin |
| Henrik | Grythe | Norwegian Emission Road Vehicle Exhaust (NERVE) model |
| Sergio | Ibarra Espinosa | Evaluation of emissions factors and estimations from road transportation in China, Argentina, Brazil and Chile |

Q&A

Oral Session 3b

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| McDonald | Brian | Characterizing Volatile Chemical Product and Mobile Source Emissions in Global Megacities |
| Paula | Castesana | Combining global and local emission inventories in Latin America and the Caribbean region |
| Saroj Kumar | Sahu | National Gridded (~10km) Emission Inventory of Major Pollutants and GHGs for India (2018) |
| Marc | Guevara Vilardell | The new CAMS global and regional emission temporal profiles |
| Nicolas | Huneus | Evaluation of anthropogenic air pollutant emission inventories for South America at national and city scale |
| Pamela | Dominutti | Evaluating emission ratios of anthropogenic VOC from the main emission sources in Vietnam, Cote d'Ivoire and Brazil |

Q&A

10:30 30 Coffee/Tea Break

11:00 90 Poster Session 3

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| Oswaldo | Cuesta -Santos | Emissions Inventory from Cuba's Stationary Sources and Management of Air Quality |
| Sabine | Darras | The Emissions of atmospheric Compounds and Compilation of Ancillary Data (ECCAD) : datasets and analysis tools |
| Arindam | Datta | Sector specific air pollution emission inventory of India |
| Madina | Doumbia | Mapping urban emission sources in West Africa cities: Case of the Yopougon district (Abidjan - Cote d'Ivoire) - Presented by Keita Sekou |
| Dennis | Gilfillan | The nature, history, and future of the CDIAC dataset on CO2 emissions |
| Claire | Granier | The Copernicus Atmosphere Monitoring Service Global and Regional Emissions |
| Gabriel Friday | Ibeh | Modelling of Methane Emission Distributions in Nigeria using Neural Network |
| Greet | Janssens-Maenhout | Uncertainties of EDGAR's CO2 emissions as prior for ECMWF's atmospheric model |
| Juan Sebastian | Larrahondo Cruz | National Inventory of Emissions of volatile non-methane organic compounds by stationary sources in Colombia |
| Ana Isabel | Lopez | Evaluation of WRF-Chem performance in the Air Quality modeling over Metropolitan Area of Buenos Aires: inter-comparison of global vs. local emission inventories. |
| Johann Andres | Mendez Alcazar | Spatial and temporal disaggregation of the national emission inventory for criteria pollutants, greenhouse gases and black carbon from on-road mobile sources in Colombia |
| Samiha | Nahian | Characterization of Atmospheric Fine Particulate Matter at Indoor Environment of Several Residential Homes in Dhaka, Bangladesh |
| Mogesh | Naidoo | Development of a model ready emissions inventory for a coastal city in South Africa |

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| Tomohiro | Oda | Assessing errors and uncertainties in a global high-resolution fossil fuel CO ₂ gridded emissions |
| Peter Michael | Oduor-Odote | THE IMPROVED FRIED FISH DISPLAY SHELF "The Mama Karanga Box" in Kenya |
| Alan | Ordonez Campos | Methodology for characterizing soot morphology of particulate emissions in a diesel engine through thermophoretic sampling and HR-TEM analysis |
| Romina Maria | Pascual Flores | WRF-Chem simulations and potential sources contribution on the Central Andes |
| Keita | Sekou | Local emissions inventories development for air quality modelling in Abidjan and Korhogo cities |
| Josielli | Simoes | EVALUATION OF A GLOBAL INVENTORY OF EMISSIONS OVER THE STATE OF RIO GRANDE DO NORTE, BRAZIL |
| Steven | Smith | Next Steps With The Community Emissions Data System |
| Saurabh | Sonwani | Characteristics of carbonaceous aerosol with respect their sources and wet scavenging during pre-monsoon and monsoon season over Delhi, Region |
| Beatriz | Cardenas G | Emissions inventories as a key tool to shift from "the air is bad" to "what do we do about it": a pilot process |
| Carlos Mario | Gonzalez Duque | Integrating tools for air quality management in a medium-sized Andean city: Emissions inventory, air pollutant monitoring and atmospheric modeling |
| Fanyuan | Deng | The high-resolution emission inventory of on-road freight truck by large scale GPS big-data: the case study in north China |
| Vikas | Goel | 3-Dimensional Characterization of Atmospheric Particles using FIB-SEM-EDS Collected from Arid Environment: Implications to Aerosol Optics |

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| Swettaleena | Dash | Gridded (~10km) Inventory of PM10 and PM2.5 Emission from Paved and Unpaved Road in India (2018) - Presented by Saroj Kumar Sahu |
| Augustin | Garcia | Mexico National Emissions Inventory, 2014 base year for Air quality Modeling |
| Fei | Yu | A multi-scale dynamic vehicle emission estimation method by combining real-time traffic big data and instantaneous emission factors |
| Manni | Zhu | On-line measurements of formaldehyde emissions from motor vehicles based on a chassis dynamometer |
| Efio | Solazzo | Uncertainty analysis of greenhouse gases emission: application to the EDGAR inventory |

12:30 90 LUNCH GEIA Working Group Meetings, TFHTAP, New Ideas

14:00 90 Town Hall
Moderators: Paulette Middleton, Leonor Tarrason, Greg Frost

15:30 30 Coffee/Tea Break

16:00 90 Theme 4. Climate Change & Air Quality Assessments

Moderators: Zig Klimont, Beatriz Cardenas

Introduction to Theme 4

Poster Session 4

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| Daniel | Tong | Community Emission Testbed: Accelerating emission updates through community collaboration |
| Alberto | Diaz Garzon | Estimating energy consumption and particulate matter emissions due to oil production and transport in the Colombian Orinoco River Basin |
| Jacinta | Edebeli | Effect of engine and ambient temperature on emissions of aircraft turbine engines at low power modes. |
| Marcelo | Felix Alonso | STUDIES OF AIR QUALITY IN THE METROPOLITAN REGION OF PORTO ALEGRE USING NUMERICAL MODELING |

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| Sadig | Hasanov | GHG emissions reduce by changing are the fuel type in the power generation in Azerbaijan. |
| Takayuki | Hayashida | A simulation-based urban observation network design for monitoring carbon dioxide (CO ₂) emissions from Megacity Osaka, Japan |
| Jeroen Meng | Kuenen Li | Emissions of engineered nanoparticles to the environment Persistent growth of anthropogenic NMVOC emissions in China during 1990-2017: trends, speciation, and ozone formation potentials |
| Li | Liu | Impact assessment of Picea koraiensis leaves exposed to fine particulate matters beside highway in Urumqi |
| Huan | Liu | New approach for establishing global shipping emission inventory and allocating responsibility to nations |
| Zhaofeng | Lv | Development of a real-time on-road vehicle emission inventory and its impacts on air quality in a megacity |
| Saroj Kumar | Sahu | Changing Emission Trend in World's most polluting Megacity Delhi in India (2010-18) |
| Edgar | Sandoval-Garcia | Energy efficiency indicators of road freight transportation sub-sector for the development of an integrated transport policy. |
| Muhammad Zeeshan Shahid | | Case study of air quality during winter season over northeastern Pakistan during 2007 to 2015 |
| Hiroshi | Tanimoto | Quantifying Combusted Carbons from Cities for Climate Change Mitigation: The Megalopolis Tokyo GHG-AQ - (MegalopolisTokyo) Project - Presented by Tomohiro Oda |
| Josefina | Urquiza | Land transportation black carbon emission distribution in a medium sized latin american city |
| Kopal | Verma Saini | Control of indoor carbon through soft approaches in Himachal Pradesh (India) |

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| Ngoc | Vu | Development of Emission Inventory for Air Pollutants in Hanoi Metropolitan Region 2015 for Air Quality Modelling and Health Effect Assessment |
| Camilo | Zapata Mora | CONCENTRATIONS AND SOURCES APPORTIONMENT OF POLYCYCLIC AROMATIC HYDROCARBONS IN AMBIENT AIR OF A MEDIUM-SIZED ANDEAN CITY |
| Naila | Zeb | Performance Evaluation of VAR Model to Forecast Atmospheric Carbon monoxide and Ozone over regions lacking air quality monitoring networks |
| Rubio Ignacio | Calvo Gallardo | Projections of residential emissions for south central Chile: Scenario analysis for 2014-2050 |
| Chunxi | Zhang | Spatial and Temporal Distribution Characteristics of PM2.5 in Urumqi City Based on GIS and Its Relation with Forest Cover |
| Monica | Crippa | EDGAR support at COP25: 'Fossil CO2 and GHG emissions for all world countries – 2019 report' |
| Gabriel | Oreggioni | EDGAR v5.0: a tool to evaluate the influence of technology incorporation and regulatory frameworks on global greenhouse gases and air pollutant emissions |

17:30 30 Demonstration of the Community Emissions Data System

18:00 120 Reception

Friday November 8

9:00 90 Theme 4. Climate Change & Air Quality Assessments

Moderators: Zig Klimont, Beatriz Cardenas

Oral Session 4a

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| Guy | Brasseur | The International Monitoring, Analysis and Prediction of Air Quality (MAP-AQ) Project |
| Mark | Parrington | The impact of timely and updated emissions on near-real-time forecasts of global atmospheric composition |

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| Kevin | Bowman | From concentrations requirements to emission commitments: prospects and challenges for the Global Stocktake |
| Cathy | Liousse | African Regional distribution of aerosol health impact due to anthropogenic sources |
| Susana | Lopez-Aparicio | Does subsidy towards clean stoves for residential wood combustion affect emission reductions? - A case study in Oslo Municipality |
| Yimin | Zhang | An integrated approach to assessing air quality impact of biomass feedstock production |

Q&A

Oral Session 4b

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| Raul | O'Ryan | EMISSION AND ECONOMIC IMPACTS OF RENEWABLE ENERGY EXPANSION IN CHILE: A HYBRID CGE MODEL APPROACH |
| Hans | Schlager | Aircraft measurement of emissions from alternative fuel in aviation |
| Ricardo | Suarez Bertoa | Unexpected vehicle emissions due to recent changes in vehicle technologies |
| Kushal | Tibrewal | India's climate action must include warming short-lived climate pollutants |
| Shuxiao | Wang | Transition in source contributions of PM2.5 exposure and associated premature mortality in China |
| Yiqi | Zhang | Combined Impact of Multilevel Regulations of Shipping Emissions Control on the Global Environments |

Q&A

10:30 30

Coffee/Tea Break

11:00 90

Conference Next Steps

Working Groups and TFHTAP - Moderators Terry Keating, Claire Granier
 How are we going to work between conferences? – cooperation with ILEAPS – IGAC –ESA? Others?
 China - Yuxuan Wang

VOC - Erika Von Schneidemesser
Latin America and Caribbean - Nicolas Huneus
Urban Emissions - Leonor Tarrason
Africa - Cathy Liousse

Q&A

Future directions from the Town Hall – Message to Policy Makers (in the afternoon) -
Greg Frost, Leonor Tarrason, Paulette Middleton

Conference Summary - Leonor Tarrason

Announcement of GEIA 2021

14:00 120 Special Closed Event on Policy Implications