

BWGmeet14 Ash 3-28-2000

SCOS97-NARSTO: Biogenic Working Group Twenty Third Conference Call

Staff from Research Division (RD), Planning and Technical Support Division (PTSD), UCLA, UC Berkeley, Atmospheric Environmental Research (AER), and San Diego and Ventura County air pollution control districts held the 23rd Biogenic Working Group (BWG) conference call on March 8, 2000. We are keenly aware that underestimating Biogenic emissions seriously undervalues the contribution of Nitrogen Oxides emission control to ozone and aerosol abatement. We are better resolving Biogenic Emissions Inventories through simulations with Geographic Information Systems (BEIGIS). Development of vegetation maps and leaf mass databases useful to our aerosol program depends on continuing research. However, critical information gaps exist in this area and after September 2000, we have no further funding to support BEIGIS with field data.

The primary information gaps that bear upon our evaluation of control strategies are fine resolution leaf mass data, biogenic aerosols ambient data, leaf level regional emission reconciliation, and continuous ambient monitoring. To properly support California-wide BEIGIS with fine resolution leaf mass data, we can see no immediate alternative paths than funding acquisition of 30-meter resolution leaf area index (LAI) data. This is a more critical need for Central and Northern California where vegetation density is high. Distinctions between emission data at leaf level, area fluxes, and regional emissions have not yet been completely resolved; we need ambient data to devise the proper module for BEIGIS. Consensus is that Biogenic emissions are location specific; plants of the same variety have emission profiles in Europe different from United States and different from Africa. We have no alternative to developing California specific information. Plants emit year around with particular impact of Biogenic Aerosol formation in fall and winter months and thus year around monitoring is required. This year, such monitoring has continued at Blodgett Forest with minimal support. Biogenic aerosols are a substantial and developing issue and air quality simulations at California Institute of Technology and Atmospheric Environmental Research will likely produce results important to our evaluations but we have no commensurate ambient data for validation.

For new developments on these issues please look up
<http://www.arb.ca.gov/research/ecosys/ecosys.htm>. We invite critical commentary on this site to respond

to new challenges and to refine our research program. The next conference call is scheduled for April 19th, 2000.

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