A DATA CENTERED COLLABORATION PORTAL TO SUPPORT GLOBAL CARBON-FLUX ANALYSIS

Deb Agarwal (BWC), Marty Humphrey (Uva), and Norm Beekwilder (Uva)
Marconi Workshop – June 2000 - Marconi Conference Center, California
- Data from 38 sites
- ~96 site years of data
- 17 half/hourly variables
- 15 synthesis papers - published in a special issue of the Agriculture and Forest Meteorology, Volume 113, 2002

La Thuile Workshop – February 2007 – La Thuile, Italy
- Data from 253 sites (sensor, derived, and ancillary)
- ~960 site years of data
- 41 half/hourly variables
- ~70 active synthesis papers underway
FLUXNET COLLABORATION DATA FLOW

Measurement Site Scientists

Regional Networks

Quality Assess and Gap Fill

Data Access and Summaries, Site Biological and Ancillary Metadata, and Collaboration Support

Synthesis activities
SYNTHESIS COLLABORATION INTERACTIONS

- Site Measurement Scientists (129)
  - Ancillary site data
  - Data usage permission
  - Credit/co-authorship
  - Contribution to analysis

- Steering Committee of Regional Networks
  - Permission to pursue synthesis activity on the data

- Synthesis Paper Teams (70)
  - Clarification
  - Correction
  - Interpretation

- Fluxdata web site
  - Data access, updates, and corrections
  - Collaboration support
  - Information on other teams
FLUXDATA PORTAL USERS/USES

- Synthesis teams
  - Site selection and communication with site scientists
  - Data access (ancillary and flux/meteorological)
  - Data analysis support

- Site Measurement Scientists
  - Information about and communication with synthesis teams
  - Correct site ancillary information
  - Access the FLUXNET version of site data

- Public
  - Potential synthesis activity investigation
  - Funding agent verification of funding value
  - Modeler understanding of measurements
  - Updated information about the collaboration
FLUXDATA DESIGN PHILOSOPHY

- Minimize the barrier to entry
- Focus on functionality targeted at improving the science experience (get familiar with the science)
- Include critical content needed by a majority of collaborators
- Avoid adding extraneous functionality
- Listen to the target scientists (learn some of their science)
- Develop a relationship of mutual trust

Anticipate changes in users’ practices due to introduction of collaborative tools
Welcome to the Web Site for the FLUXNET Synthesis Data set.

This new database consists of over 550 site-years of data from over 253 eddy covariance measurement sites. Major efforts were made over the past 2 years to harmonize, standardize and gap-fill the raw 20-minute data records submitted by participants. The database also includes value-added products like gross primary productivity, ecosystem respiration, climate and site characteristic information. This database updates and supersedes the Marconi FLUXNET database that was produced in 2000 (with 97 years of data from 38 European and North American sites).

This database was produced in association with the FLUXNET-TCO synthesis workshop that was held in LaThuile, Italy, from February 18 to 22, 2007. The aim of the workshop was to produce a new and extensive FLUXNET dataset, discuss its scientific potential, propose new synthesis activities and start first analyses. The workshop was attended by 50 scientists, who represented a cross section of younger and established scientists and we were members of regional networks from around the world: CarbonEurope, Ameriflux, Fluxnet-Canada, LI2, AsiaFlux, ChinaFlux, USCCC, OzFlux, CarbonAfrica, KolFlux, NECC, TCGS-Gibet and AtFlux. More information about the FLUXNET project can be found here.
Links added to enable direct download of reports . . . .

Under the dataset information and the data browsing tabs on the site, there are now (ftp) links. Choosing these links will enable direct download of the excel version of the report.

Posted at 9:26 AM by Deb Agarwal | Category: FAQ | Permalink | Email this Post | Comments (0)

11/13/2008

Upgrade to ancillary data underway . . . .

Thanks to a great deal of work by site investigators, we have received significant amounts of new ancillary data. We are in the process of surfacing this data over the next week. We have now merged the ancillary data we had prior to the BDM template with the BDM data when it is available. The first part of the web site to get the ancillary data is the Ameriflux sub-page. The Data Browsing tab links will be updated next.

Posted at 12:05 AM by Deb Agarwal | Category: Dataset Changes and Updates | Permalink | Email this Post | Comments (0)

11/10/2008

Matlab interface now works under Unix systems

A new revision of the Matlab interface renders it compatible with Mac OS X, Unix, and Linux systems. You can get it as a zip archive directly http://bwc.lbl.gov/Tools/CubeAccessSub2008-11-10.zip Of course, this library still works under Windows.

Posted at 5:14 PM by Robin Weber | Permalink | Email this Post | Comments (0)

10/17/2008

Expanded site PI access . . .

In order to improve the ancillary data collection process, access to the fluxdata web site has been expanded to include PIs from flux sites that do not currently have data in the fluxnet dataset. If you are in this category, access to the fluxdata site will give you access to update and view your data we have about your site only. It will not give you any other access beyond that provided to the public. If you are a flux tower PI and would like a login on the fluxdata site, please contact fluxdata-support@fluxdata.org for the access code.
**FLUXDATA PUBLIC VIEW - SYNTHESIS TEAMS**

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**FLUXNET Paper-Writing Teams Information**

<table>
<thead>
<tr>
<th>Coordinator</th>
<th>Title</th>
<th>Paper Status</th>
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### FLUXNET Paper-Writing Teams Information

#### Current Information
- **Coordinator**: May Myklebust
- **Title**: [LAI] influence on bias in night time eddy covariance data during windy conditions
- **Abstract URL**: Mayklebust LAT influence on bias in night time eddy covariances data during windy conditions
- **Collaborators**: Myklebust; Misson; Wohlfahrt

#### Towers

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</table>

#### FLUXNET Paper Writing Teams Information

- **Author(s)**: May Myklebust, Misson, Wohlfahrt
- **Abstract**: LAI influence on bias in night time eddy covariance data during windy conditions

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*Note: The above screenshot and text are placeholder images and text to illustrate a webpage related to FLUXNET paper writing teams information.*
Data Browsing

This page provides access to all available ancillary data for the sites as well as to the core daily data variables (including quality) via pivot tables served up through sharepoint. It also provides a link to the preliminary list of paper teams. Documentation describing the variables can be found under the 'Dataset Information' tab.

Site Ancillary Data including BDM data

- Chart of Ancillary Data Availability
- All Ancillary Data Available
  - By Site (ftp)
  - By Type (ftp)
- Core Ancillary Data (ftp)
- Litter threshold used for processing and related plots (ftp)
- Chemistry of Forest Floor and Live Foliage (non-soil) (ftp)
- Chemistry of Soil (ftp)
- Disturbance Data
  - By Site (ftp)
  - By Type (ftp)
- Phenology (ftp)
- Plot Condition (ftp)
- Productivity (ftp)
- Soil Respiration (ftp)
- Vegetation Condition (ftp)

Dataset Curation Information

- Pending and rejected ancillary data web submissions (report is updated weekly)

Data Summaries

- Flux/Met Aggregations by Site
- Flux/Met Aggregations by Site Year (color coded by quality and availability)
- Flux/Met Aggregations by Site Year with qcOK and amount of data listed
- Flux/Met Minimums and Maximums by Site
- Datumtype/Offset/Datumtype Explanation
**FLUXDATA SYNTHESIS VIEW - ANC UPDATE**

In the image, a screenshot of the FLUXDATA Synthesis View - Ancillary Data Update is displayed. The screenshot shows a web page with a form for data correction. The form includes fields for selecting a site, variable type, variable, status, value, reference, submit date, and submit group. The screenshot provides an example of how data can be updated and monitored within the FLUXDATA platform.
FLUXDATA DESIGN

- Minimize the barrier to entry
  - Put as much as possible in the public domain
- Focus on functionality targeted at improving the science experience
  - Aggregate and data quality reports
  - Data browsing
  - Easy communication with measurement site scientists
  - Easy ability to generate typical analysis graphs
- Include critical content needed by a majority of collaborators
  - Data download
  - Access to ancillary data about sites
- Avoid adding extraneous functionality
- Listen to the target users
  - Understand what is important to them
  - Read their papers and identify typical analyses and techniques
  - How they work with the data (units/time periods/etc)
- Develop a relationship of mutual trust

Desperate users are the best kind!
ACKNOWLEDGEMENTS

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   Jim Hunt (UCB)
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   Monte Good (LBL)
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   Carolyn Remick (UCB)
   Susan Hubbard (LBL)

University of Virginia
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   Norm Beekwilder

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   Bora Beran
   Jayant Gupchup (student)
   Nolan Li (student)
   Stuart Ozer
   Tony Hey
   Dan Fay
   Savas Parastidis
   Andy Sterland
   Jing De Jong-Chen
   SQL product team
   Jim Gray

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   Youngryel Ryu (UCB postdoc)
   Tara Stiefl (UO student)
   Chris Williamson (UO student)
   Gretchen Miller (UCB student)
   Tom Boden (ORNL)

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   Peter Thornton (ORNL)
   Kevin Schaefer (NSIDC)
   Daniel Ricciuto (ORNL)

FLUXNET Collaboration
   Dennis Baldocchi (UCB)
   Rodrigo Vargas (UCB postdoc)
   Dario Papale (UTuscia)
   Markus Reichstein (Max Plank)
   Bob Cook (ORNL)
   Dorothea Frank (Max Plank)

URLs: http://bwc.berkeley.edu and http://www.fluxdata.org
E-mail: fluxdata-support@fluxdata.org