

# REDESIGNING THE FLUXNET WEB SITE TO ENHANCE THE USER EXPERIENCE



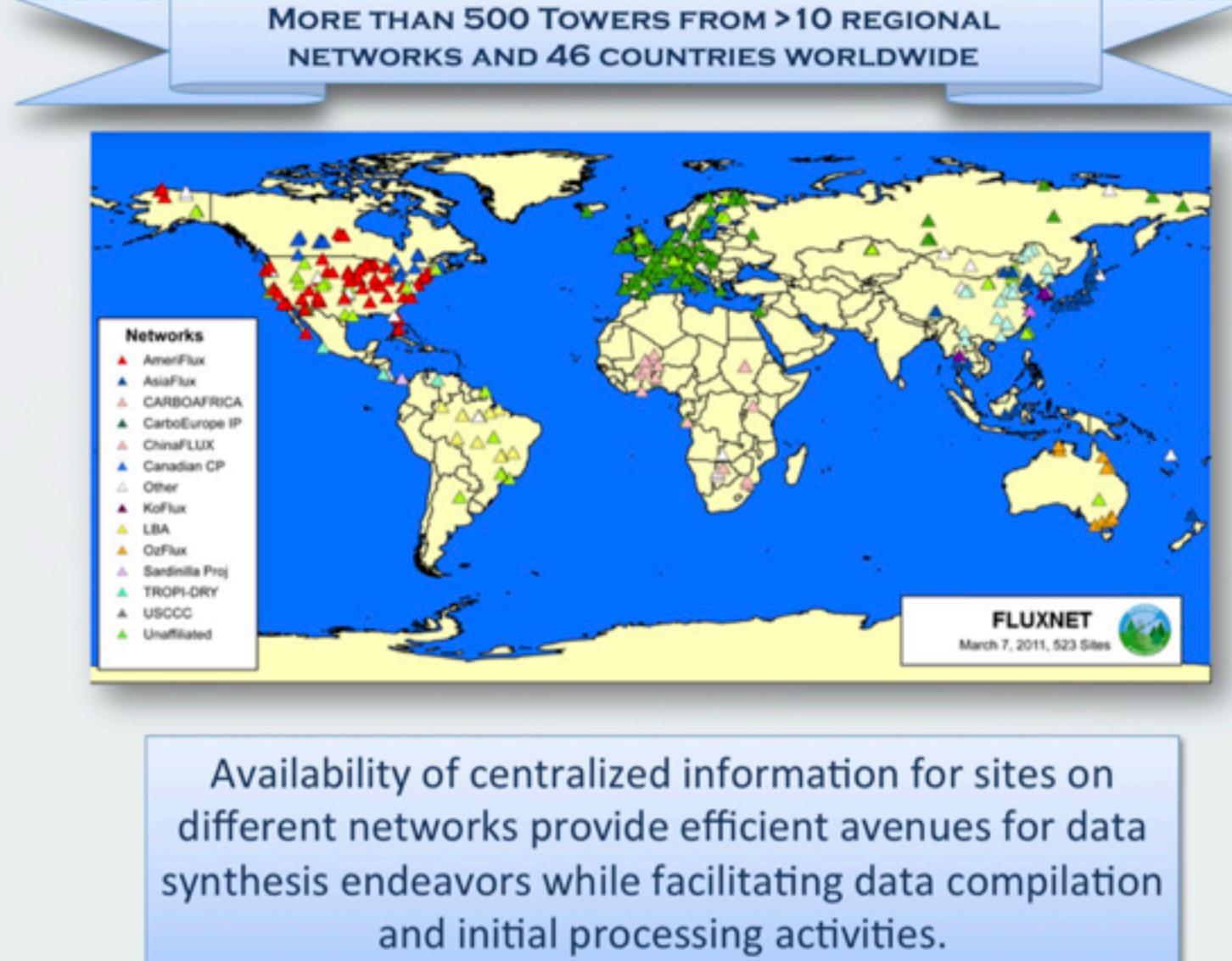
The purpose of this poster is to introduce the new Fluxnet web site and database design. The new combination of the PostgreSQL database with the Drupal content management system, as shown on the right, offer benefits to both the user and the administrator. The left portion below provides an overview of Fluxnet and the services provided through the network.

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## What is FLUXNET?

FLUXNET, a "network of regional networks," coordinates regional and global analysis of observations from micrometeorological tower sites.

The flux tower sites use eddy covariance methods to measure the exchanges of carbon dioxide ( $\text{CO}_2$ ), water vapor, and energy between terrestrial ecosystems and the atmosphere



Availability of centralized information for sites on different networks provide efficient avenues for data synthesis endeavors while facilitating data compilation and initial processing activities.

## Data Support Activities

FLUXNET provides a wealth of primary and secondary information about flux tower data collection activities around the world.

Information ranging from tower locations to land use classifications to network data repository information are available on individual site pages.

These site characteristics enable additional analyses, model evaluation, and scaling for use with the flux data files.

## Database & Website Redesign:

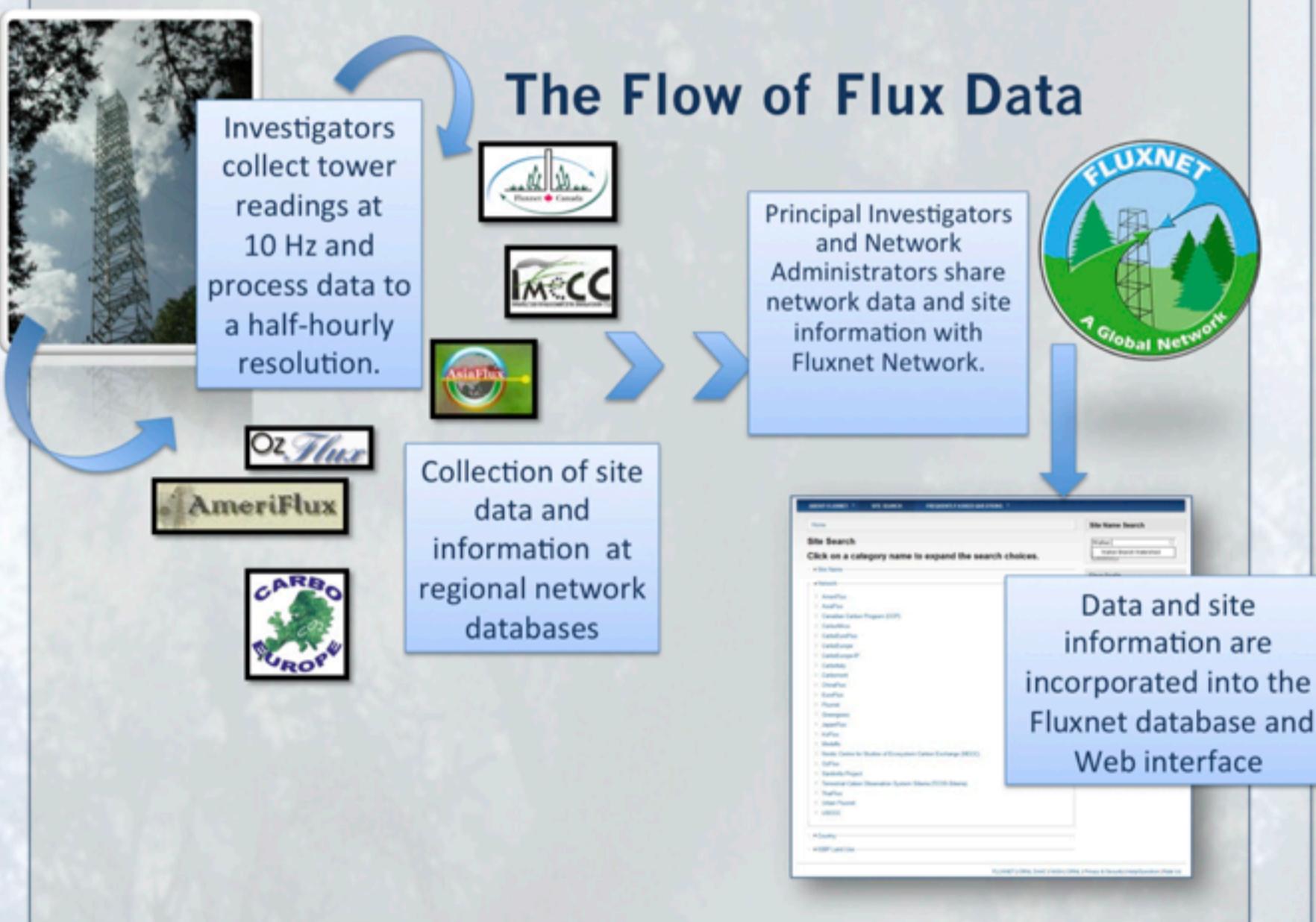
### For the User:

Increased functionality and convenience

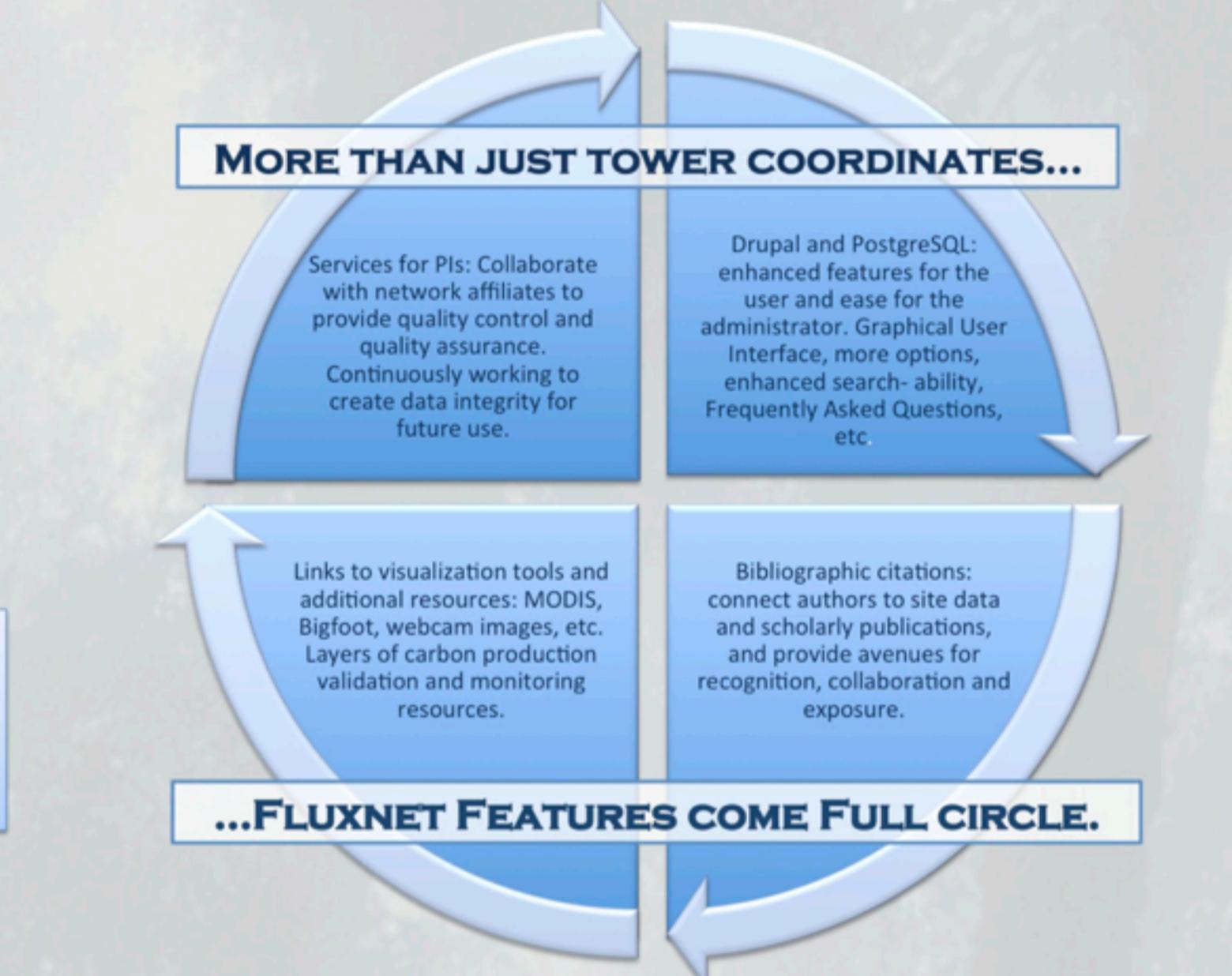
- Wide range of site characteristics available for users to use as search parameters
- Hundreds more documented publication citations give recognition to the sites networks and scholars
- Links allow user connection to outside collections and visualization tools.
- Collaborative environment for scientists to share, tag, and discuss site tower information



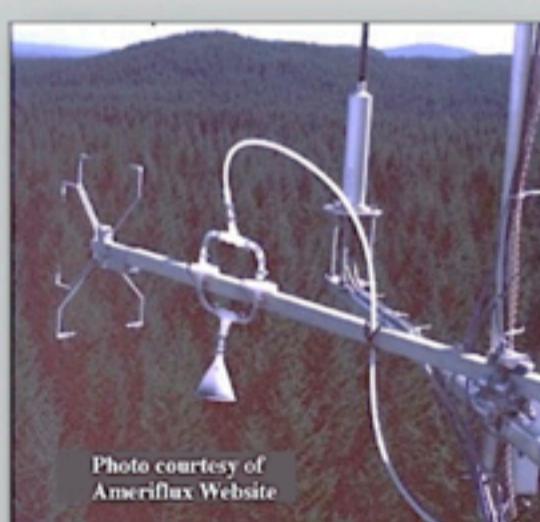
## The Flow of Flux Data



## MORE THAN JUST TOWER COORDINATES...



## In current and future research scientists are using FLUXNET data to assess problems in:



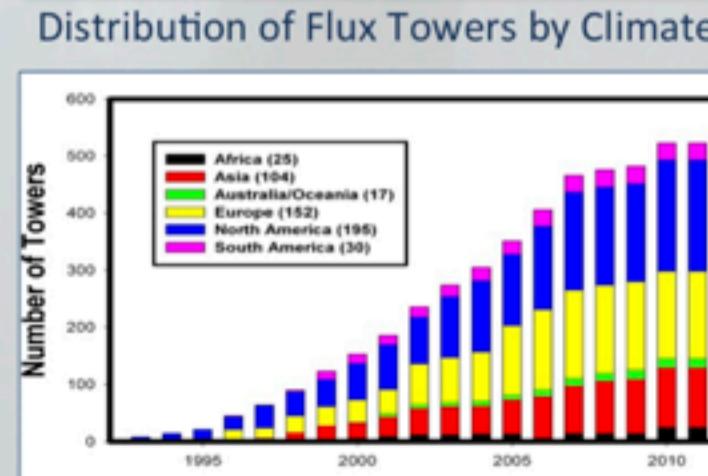
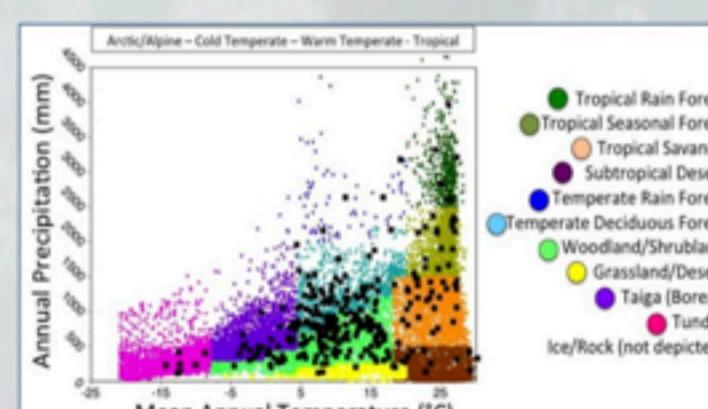
- Ecology, Eco Hydrology, Biogeochemistry, Biogeography, Remote Sensing, Global Modeling, Biodiversity
- Testing Maximum Entropy, Ecosystem Ecology, Biogeography and Eco Hydrology Theories

Because FLUXNET is a "network of networks," we rely on the hierarchical structure of networks to collect information whenever possible. We request that individual PI's and tower operators update their networks with new information in a timely manner. FLUXNET directs users interested in acquiring data for research purposes to first contact their regional network, and then where necessary, to contact the specific tower operators.



## FLUXNET Successes:

- Many new findings on emergent processes, environmental controls and seasonality and annual C fluxes
- Data for validating and improving ecosystem models used for weather, climate, biogeochemistry and ecosystem dynamics
- Collaboration & synthesis through workshops and hosting visitors
- Building a collaborative, cooperative, multi-disciplinary & international community of researchers
- Training new and next generation of scientists, postdocs, students



Growth of affiliated towers per continent over the years since the first site at Harvard in 1992.

OAK RIDGE NATIONAL LABORATORY  
MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

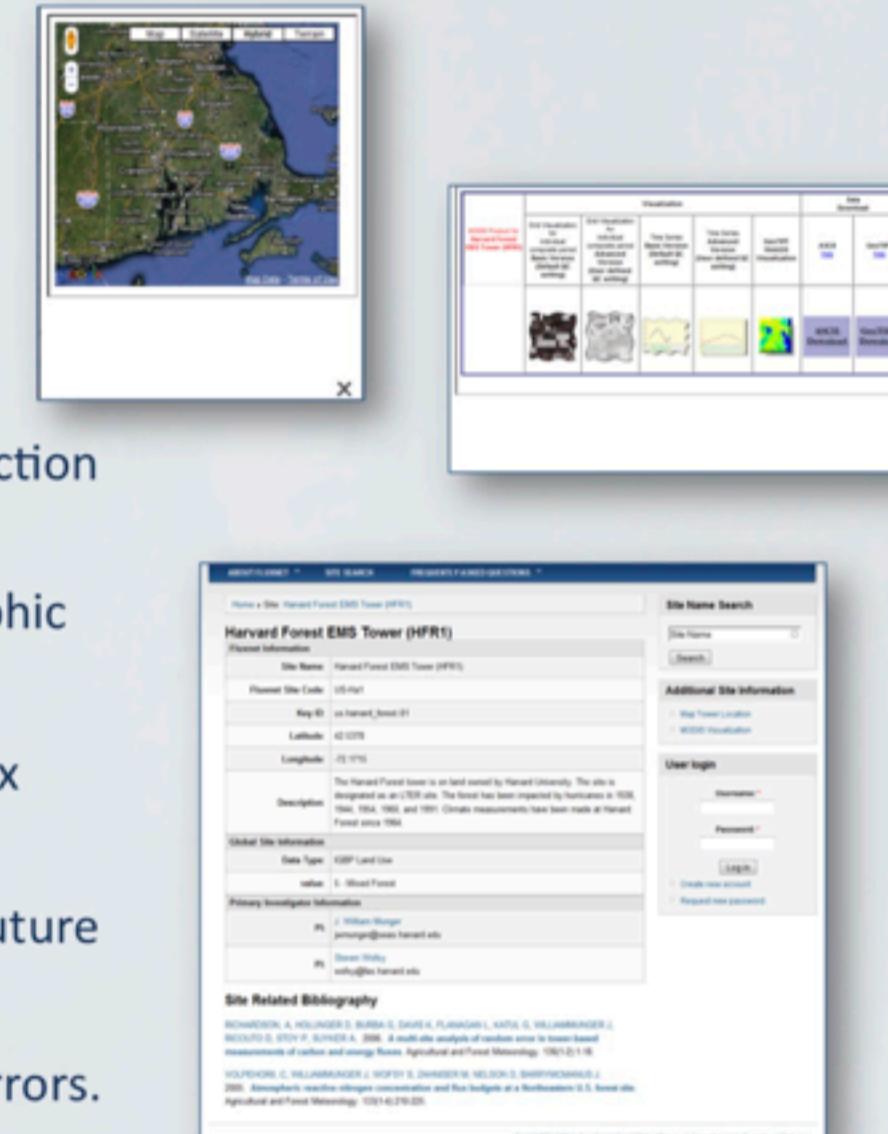
The Distributed Active Archive Center and Fluxnet is a NASA funded project: NNG09HP12I.

## Database & Website Redesign:

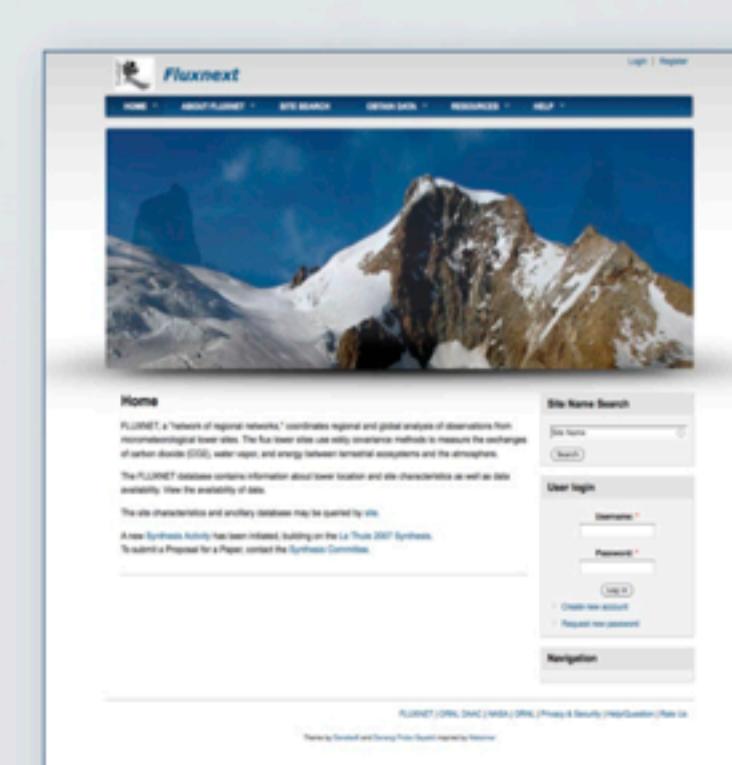
### For the Site Administrator:

Ease of construction and maintenance

- Graphical User Interface streamlines maintenance
- Flexible architecture allows for integration and interaction with investigator tools
- Digital Object Identifiers convert records to bibliographic citations automatically with Crossref.org
- Offers multiple ways to insert citations; paste in Bibtex records, DOIs, or manually
- Structured format of records facilitates efficiency in future retrieval and manipulation
- Autocomplete Type-ahead function decreases entry errors.
- Administrator accounts allow for secure and simultaneous activity.



The expected public release date for the new website is September 2011.



FLUXNET strives to provide users with information about all topics related to flux measurements. Users can find information about proper instrument configuration in our newly designed FAQ page or browse recent publications by author using our enhanced publications feature. Employment and post-doctoral opportunities can be found on the FLUXNET website. As always, we welcome your suggestions for new ways in which we can serve the Fluxnet community.

[www.fluxnet.ornl.gov](http://www.fluxnet.ornl.gov)  
Email us at [fluxgroup@fluxnet.ornl.gov](mailto:fluxgroup@fluxnet.ornl.gov)