

LTER Network Office Cyberinfrastructure Assessment Survey - Raw Analysis

This survey is designed to assess the current state, and cyberinfrastructure (CI) needs for LTER Network level science being developed as part of the LTER Planning Process. Components of the survey were developed by a CI Team which met in June to initiate the CI needs assessment. Further information can be found in the Cyberinfrastructure section of the LTER Planning Grant Wiki at: <http://intranet.lternet.edu/planning/>

This assessment covers only the LTER Network Office LTER sites only. The LTER sites were assessed separately.

This survey was written and processed by [John Vande Castle](#), LTER Network Office, using survey tools of "SurveyMonkey.com" (This is neither an endorsement or recommendation by the LTER Network Office). The survey was completed by John Vande Castle and James Brunt at the LTER Network Office. Since the survey was designed to assess LTER site capabilities, some of the information does not apply to the LTER Network Office, but was completed as well as possible.

This survey is meant to cover the following topic areas identified by the LTER CI team, although some questions were added at the request of site information managers or members of the LTER Technology Committee:

- General overview of data collection, QA/QC, archive, delivery
- EML/metadata completeness
- GIS/map services
- Instrumentation - sensors
- Remote sensing infrastructure, data storage
- Analytic tools
- Models
- Visualization
- Number of IM FTE's - break down by type, expertise
- Institutional/site support - email, admin, licensing
- Network bandwidth - internal-external
- Storage capacity, backup solutions
- Database formats/ organization/systems
- Partnerships
- Server architecture
- Computational capacity - models, stats, database
- Collaboration tools - Wikis, vtc, email, file sharing

Please enter YOUR LTER roles, duties or committee affiliations:			
		Response Percent	Response Total
LTER Site Principal Investigator		100%	1
LTER Research Scientist		100%	1
LTER Site Manager		0%	0
LTER Site Administrator		100%	1
LTER Information Manager		100%	1
LTER Climate Committee		0%	0
LTER Technology Committee Representative		100%	1
LTER Network Information System Advisory Committee		100%	1
LTER Education Committee Representative		0%	0
Other (please specify)		0%	0
Total Respondents			1
(skipped this question)			0

3. About how many total FTE's does your site allocate for information management from the LTER base funding? In other words, if the annual funding the site receives from NSF, how many FTEs are funded from this amount.			
		Response	Response

		Percent	Total
0		0%	0
0.25		0%	0
0.5		0%	0
0.75		0%	0
1.0		0%	0
1.25		0%	0
1.5		0%	0
1.75		0%	0
2.0		0%	0
2.5		0%	0
3.0		100%	1
3.5		0%	0
4.0		0%	0
4.5		0%	0
5.0		0%	0
5.5		0%	0
6.0		0%	0
6.5		0%	0
7.0		0%	0
7.5		0%	0
8.0		0%	0
8.5		0%	0
9.0		0%	0
9.5		0%	0
10.0		0%	0
Great than 10.0		0%	0
Total Respondents			1
(skipped this question)			0

4. About how many total FTE's does your site allocate for information management from non- LTER base funding? In other words, about how many FTE's are there at the site that are not directly funded from LTER funds. This would include cost-share, volunteers and what have you. For example, if in an average year, 0.75 FTE worth of an IM is funded from NSF LTER core funds, but there are really 5 FTEs working at the site from some sort of funds or "personal time donations" then you would want to put "4" here (when in doubt, round to the nearest value).

		Response Percent	Response Total
0		0%	0
0.25		0%	0
0.5		0%	0
0.75		0%	0
1.0		0%	0
1.25		0%	0
1.5		0%	0
1.75		0%	0
2.0		0%	0
2.5		0%	0
3.0		0%	0
3.5		0%	0
4.0		100%	1
4.5		0%	0
5.0		0%	0
5.5		0%	0
6.0		0%	0
6.5		0%	0
7.0		0%	0

7.5		0%	0
8.0		0%	0
8.5		0%	0
9.0		0%	0
9.5		0%	0
10.0		0%	0
Great than 10.0		0%	0
Total Respondents			1
(skipped this question)			0

5. Of the site FTE's for information management, rate from low to high, the level of expertise in the following areas:

	High	Medium	Low	Response Total
Formal training or education in computer science.	100% (1)	0% (0)	0% (0)	1
Acquired (on the job training) computer science training.	100% (1)	0% (0)	0% (0)	1
Formal training or education in data management/database software.	100% (1)	0% (0)	0% (0)	1
Acquired (on the job training) in data management/database software.	100% (1)	0% (0)	0% (0)	1
Formal Ecological/Biological Science training or education.	100% (1)	0% (0)	0% (0)	1
Formal GIS/Remote Sensing training or education.	100% (1)	0% (0)	0% (0)	1
Social Science training or education.	0% (0)	0% (0)	100% (1)	1
Total Respondents				1
(skipped this question)				0

6. What is the GENERAL information management task allocation at your site ? (Please have the total allocation = 100% - the survey software is too dumb to do this...). This question will take some thought to answer since it covers the effort of any and all IM FTEs at an LTER site. It is meant to assess what type of effort goes in to various IM "tasks" at an LTER site. For example, if you select 50% for General site data management, the rest of the tasks can only add up to the remaining 50%...

	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	Response Total
General site data management including data entry and access.	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Data archive and backup.	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Site System Administration (site-based hardware and network support).	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
User System Support (hardware support for site personnel).	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
User Support (help for site personnel such as data retrieval, study design, statistics, etc.).	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Network and cross site IM support.	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1

Software development.	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Site administrative tasks (filling out paperwork, and doing things like answering surveys).	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Other tasks.	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Total Respondents																				1
(skipped this question)																				0

7. What major information management support, and level is provided by the home/host institution(s) of your site? Select any that apply.

	None	Some	All	Response Average
Email (use the institution's email system)	100% (1)	0% (0)	0% (0)	1.00
Database (use the institution's database system)	100% (1)	0% (0)	0% (0)	1.00
Computational Infrastructure (use the institution's computational infrastructure for analysis, statistics, modeling, etc.)	100% (1)	0% (0)	0% (0)	1.00
System administration is provided by the institution	100% (1)	0% (0)	0% (0)	1.00
Technical support is provided by the institution	100% (1)	0% (0)	0% (0)	1.00
Institutional (site) software licensing or educational discount	0% (0)	100% (1)	0% (0)	2.00
Total Respondents				1
(skipped this question)				0

8. In contrast to the direct support provided by the home/host institution(s) of your site, what does the site support by itself?

	None	Some	All	Response Average
Email (the site uses its own email system)	0% (0)	0% (0)	100% (1)	3.00
Database (the site uses its own database system)	0% (0)	0% (0)	100% (1)	3.00
Computational Infrastructure (use the site's computational infrastructure for analysis, statistics, modeling, etc.)	0% (0)	0% (0)	100% (1)	3.00
System administration is handled by the site itself.	0% (0)	0% (0)	100% (1)	3.00
Technical support is handled by the site itself.	0% (0)	0% (0)	100% (1)	3.00
The site itself has arranged special software licensing or educational discounts.	0% (0)	100% (1)	0% (0)	2.00

Total Respondents	1
(skipped this question)	0

9. What type of collaboration tools are used at your site (select all that apply, and enter any other not listed here)?

	Response Percent	Response Total
Email is used extensively.	100%	1
Common filesharing is used (such as a shared file system for users at the site).	100%	1
Telephone and video conferencing.	100%	1
Web Calendars.	100%	1
Collaborative web tools such as wikis are used at the site.	100%	1
Other (please describe)	0%	0
Total Respondents		1
(skipped this question)		0

10. What type of collaborative cyberinfrastructure / information management partnerships (outside of LTER) is your site engaged in?

	Response Percent	Response Total
The site maintains an active collaboration with high performance computer centers (SDSC, NCSA, etc).	100%	1
The site maintains an active collaboration with NASA archive centers.	100%	1
The site maintains an active collaboration with USGS centers such as NBII.	100%	1
Other (please describe)	100%	1
Total Respondents		1
(skipped this question)		0

Other:

SEEK project (9 institutions) NCEAS, Partnership for Biodiversity Informatics (PBI) NEON development CLEANER, and other related projects.

11. What percentage of all site data has corresponding structured metadata of any type, including EML?

	Response Percent	Response Total
0	0%	0
10	0%	0
20	0%	0
30	0%	0
40	0%	0
50	0%	0
60	0%	0
70	0%	0

80		0%	0
90		100%	1
100		0%	0
Total Respondents			1
(skipped this question)			0

12. What percent of all site metadata has been converted to EML to at least the "identification" (base) level?

		Response Percent	Response Total
0		0%	0
10		0%	0
20		0%	0
30		0%	0
40		0%	0
50		0%	0
60		0%	0
70		0%	0
80		0%	0
90		100%	1
100		0%	0
Total Respondents			1
(skipped this question)			0

13. What percent of all site metadata has been converted to EML to the "discovery" level or beyond?

		Response Percent	Response Total
0		0%	0
10		0%	0
20		0%	0
30		0%	0
40		0%	0
50		0%	0
60		0%	0
70		0%	0
80		0%	0
90		100%	1
100		0%	0
Total Respondents			1
(skipped this question)			0

14. What percent of all site metadata has been converted to EML to the "integration" level or beyond?

		Response Percent	Response Total
0		0%	0
10		100%	1
20		0%	0
30		0%	0
40		0%	0
50		0%	0
60		0%	0
70		0%	0
80		0%	0
90		0%	0
100		0%	0
Total Respondents			1
(skipped this question)			0

15. Of the known site historical/legacy data - i.e. data the site might not consider part of its standard research data, what percentage has corresponding EML metadata (at any level)?			
		Response Percent	Response Total
0		100%	1
10		0%	0
20		0%	0
30		0%	0
40		0%	0
50		0%	0
60		0%	0
70		0%	0
80		0%	0
90		0%	0
100		0%	0
Total Respondents			1
(skipped this question)			0

16. What is the general way research data are managed at your site? Select all that apply.			
		Response Percent	Response Total
The site information manager(s) enter and manage most site data.		100%	1
Researchers at the site enter most of their data into the site information management system.		100%	1
Student research data (i.e. thesis data) are generally included in the site information management system.		0%	0
Standard procedures are in place for use by researchers to enter and manage their data.		0%	0
Other (please describe)		0%	0
Total Respondents			1
(skipped this question)			0

17. What type of QA/QC procedure does your site follow for site data? Select all that apply.			
		Response Percent	Response Total
The site has documented specific QA/QC procedures of its own.		0%	0
The site follows specific QA/QC guidelines (e.g. EPA, USGS etc).		0%	0
QA/QC guidelines are followed for MOST site data.		0%	0
QA/QC guidelines are not necessarily followed for all site data (such as student thesis data).		0%	0

Other (please describe)		0%	0
Total Respondents			0
(skipped this question)			1

18. What is the general "delivery" procedure for data at your site? Select ALL that apply.

		Response Percent	Response Total
Most site data are online and freely available.	<input checked="" type="checkbox"/>	100%	1
A "data license" or data use agreement is required for data use.	<input checked="" type="checkbox"/>	100%	1
Some site data are online although most data requests are filled by an information manager.	<input type="checkbox"/>	0%	0
Most site data are provided to requesters by an information manager.	<input type="checkbox"/>	0%	0
Other (please specify)	<input type="checkbox"/>	0%	0
Total Respondents			1
(skipped this question)			0

19. On-line site data are provided through the following mechanisms: Select all that apply.

		Response Percent	Response Total
The site website provides direct access to data.	<input checked="" type="checkbox"/>	100%	1
Site data are available though an "ftp" mechanism.	<input checked="" type="checkbox"/>	100%	1
Site data are generally managed as "flat files" in an organized file system.	<input checked="" type="checkbox"/>	100%	1
Site data are managed through a database system such as MySQL or Oracle.	<input type="checkbox"/>	0%	0
Site data are registered in the Metacat server.	<input checked="" type="checkbox"/>	100%	1
Other (please specify)	<input type="checkbox"/>	0%	0
Total Respondents			1
(skipped this question)			0

20. For GIS data maintained at the site (select all that apply):

		Response Percent	Response Total
Most site GIS data are provided online.	<input checked="" type="checkbox"/>	100%	1
Most site GIS data have corresponding EML metadata.	<input checked="" type="checkbox"/>	100%	1
Internet map services are used at the site for DISPLAY of GIS data.	<input type="checkbox"/>	0%	0

Internet map services are used at the site for ACCESS to GIS data.		0%	0
Total Respondents			1
(skipped this question)			0

21. For site GIS data, how are remote sensing data managed ? Select all that apply.

		Response Percent	Response Total
Remote Sensing Data are primarily managed by the site Information Manager.		0%	0
Remote sensing data are generally managed by researchers rather than site information managers.		100%	1
Most remote sensing data (for instance, original Landsat data) are provided online.		100%	1
Products generated from remote sensing data are provided online.		100%	1
Other (please specify)		0%	0
Total Respondents			1
(skipped this question)			0

22. What archive and backup procedures are used at your site (select all that apply) ?

		Response Percent	Response Total
Active site data are maintained on fault-tolerant (i.e. RAID) systems.		100%	1
The site uses a documented archive and backup plan.		100%	1
Site data are archived using tape backup systems.		100%	1
Site data are archived using CD or DVD backup systems.		0%	0
Site data are archived using mirrored disk systems.		0%	0
Site data are archived using remote data archive facilities.		100%	1
Data backup includes off-site/secure storage.		100%	1
Other (please describe)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

Some remote sensing data are mirrored/archived using the SRB at SDSC.

23. How are routine meteorological data collected/managed at the site (select all that apply)?		
		Response Percent Response Total
Meteorological data are manually collected by observing static instrument readings.		0% 0
Meteorological data are collected by interpreting paper, strip-chart or other information.		0% 0
Meteorological data are automatically collected by a digital or digitized hard-wired system.		0% 0
Meteorological data are collected by automated data logger systems, and later downloaded.		0% 0
Meteorological data are collected by automated wireless phone (i.e. cell phone) system.		0% 0
Meteorological data are collected by automated radio or wireless transmission and collected automatically.		0% 0
Other (please specify)		100% 1
Total Respondents		1
(skipped this question)		0

Other:

N/A

24. What type of GPS location information is maintained for the LTER site? Please select all that apply, and add any information not listed here.		
		Response Percent Response Total
The primary research site locations are maintained in a file or database.		100% 1
The primary research site locations are publicly available on the site webpage.		100% 1
High precision control points are established for reference at the LTER site.		0% 0
The LTER site is mapped with a consistent grid of GPS locations.		0% 0
Most research data are not generally stored with GPS location information.		0% 0

Most research data are collected with GPS location information.		0%	0
Most research data are collected with GPS location information accurate to better than 15m.		0%	0
GPS location information is required for all research data.		0%	0
Other (please describe)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

LTER site locations are available in the site characteristics database (<http://savanna.lternet.edu/site/>). Primary site locations have also been verified in a GPS map file.

25. What type of GPS equipment is available for use at the site (select all that apply).			
		Response Percent	Response Total
A high precision GPS base station (for differential correction) is maintained or is available for use at the LTER site.		0%	0
Differential GPS (DGPS) equipment (> 3m accuracy) is available for use at the site.		0%	0
Wide Area Augmentation System (WAAS) enabled (> 5m accuracy) GPS receivers are available for use at the site.		100%	1
Conventional GPS receivers (15m accuracy) are generally available for use at the site.		100%	1
The site does not maintain GPS receivers for research use.		0%	0
Other (please specify)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

LNO has an older GPS receiver although some staff have newer equipment of their own.

26. What type of sensor systems are routinely used for data collection at the site (Please describe)?			
Total Respondents			1
(skipped this question)			0

27. Wireless internet is available for researchers at the site.			
		Response	Response

		Percent	Total
Yes		100%	1
No		0%	0
Total Respondents			1
(skipped this question)			0

28. The site has installed wireless internet for automated data collection at the site (this would include radio data transmission that is eventually linked directly to the internet). An example is the wireless network that was installed at the VCR LTER site. If, so please BRIEFLY append a description to question #34 (sorry, a data flow error here)

		Response Percent	Response Total
Yes		100%	1
No		0%	0
If present, please describe in "other" of question #34		0%	0
Total Respondents			1
(skipped this question)			0

29. What primary SERVER architecture is used for SITE data management (select all that apply) ?

		Response Percent	Response Total
MS Windows-based systems		100%	1
Mac-based systems (OS X Tiger, etc)		0%	0
Linux-based systems		100%	1
Other Unix (SunOS etc) based systems		100%	1
Other (please describe)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

LNO is moving towards an integrated Linux server system.

30. What general online data storage capacity does your site maintain for site data (round to nearest power of ten - i.e. 4tb would select 1tb, 6tb would select 10tb)? Please ALSO describe more complex storage systems.

		Response Percent	Response Total
1gb		0%	0
10gb		0%	0
100gb		0%	0
1tb		0%	0
10tb		100%	1
100tb		0%	0
>100tb		0%	0
Other (please describe)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

LNO maintains about 8tb of online data storage - including development systems, although about 2tb are publicly used in "production" systems for web, ftp and general data support.

31. What is the primary link speed from the Home Institution(s) to the Internet? In other words, what kind of Internet connection does your primary site institution, university etc. have? For multiple institution sites, select what most have, or what the primary site institution has.

		Response Percent	Response Total
Internet link is greater than 1 GB/s		100%	1
Internet link is 1Gb/s.		0%	0
Internet link is 100mb/s		0%	0
Internet link is 10mb/s		0%	0
Internet link is less than 10mb/s		0%	0
There is no internet connection.		0%	0
Total Respondents			1
(skipped this question)			0

Other:

LNO maintains about 8tb of online data storage - including development systems, although about 2tb are publicly used in "production" systems for web, ftp and general data support.

32. What is the primary Internet Link at the Research SITE ?			
		Response Percent	Response Total
Internet link is greater than 1 GB/s.		0%	0
Internet link is 1Gb/s.		100%	1
Internet link is 100mb/s		0%	0
Internet link is 10mb/s		0%	0
Internet link is less than 10mb/s		0%	0
There is no internet connection.		0%	0
Total Respondents			1
(skipped this question)			0

33. What type of internet capability is available for researchers at the Home Institution(s)? Select any that apply.			
		Response Percent	Response Total
Internal (local area) connections are 1gb/s or better		100%	1
Internal (local area) connections are 100mb/s		100%	1
Internal (local area) connections are 10mb/s or slower		0%	0
External (wide area) internet connections are BETTER 10mb/s		0%	0
External (wide area) internet connections are 10mb/s or less		0%	0
Wireless internet network is available		0%	0
Other (please specify)		0%	0
Total Respondents			1
(skipped this question)			0

34. What type of internet bandwidth is available at the research SITE (select all that apply)?			
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		Response Percent	Response Total
Internal (local area) connections are 100mbs or better.		0%	0
Internal (local area) connections are 10mbs or slower.		0%	0
Wide area internet connections are better than T1 speeds.		0%	0
Wide area internet connections are T1 speeds or less.		0%	0
Wide area internet connections are generally not available on site.		0%	0
Wireless internet network is available.		0%	0
Wireless internet network is used to collect site data.		0%	0
Other (please describe)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

The LTER Network Office maintains both secure and open 802.11 local internet connections as well as portable 802.11 equipment including a high capacity CISCO 802.11 DHCP and router unit.

The LTER Network Office obtained two Freewave wireless serial data radios which it loaned to various LTER sites for wireless assessments (SEV, VCR, NWT, CWT) as well as 802.11 and Webcam equipment, some of which remain in operation at LTER sites.

35. What type of conferencing capability is available at the site's home institution(s)? Select all that apply.

		Response Percent	Response Total
Local (on-site) phone conferencing is available.		100%	1
Shared phone conferencing capabilities are available at the institution.		0%	0
Local or shared ISDN video teleconferencing.		100%	1
Voice over Internet (such as Skype).		100%	1
Local internet video conferencing (such as Polycom video).		100%	1
Shared internet video conferencing (such as Polycom video) is available at the institution.		0%	0
Local satellite video conferencing.		0%	0
Shared satellite video conferencing is available at the institution.		100%	1

Local advanced video conferencing (such as ACCESS Grid) is available i.e. the site has direct access or maintains an ACCESS Grid system.		0%	0
Shared advance video conferencing (such as ACCESS Grid) is available somewhere at the institution.		100%	1
Other (please describe)		0%	0
Total Respondents			1
(skipped this question)			0

36. What type of conferencing capability is available and used at the research SITE (select all that apply)?

		Response Percent	Response Total
Phone conferencing.		0%	0
Internet video conferencing.		0%	0
Satellite video conferencing.		0%	0
Advanced video conferencing (such as ACCESS Grid).		0%	0
Other (please specify)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

The LTER Network Office maintains its own Polycom system capable of linking 4 simultaneous sites in addition to a phone line. All LNO directors have desktop or separate Polycom video conference systems. LNO also has a portable Polycom video system available for use by sites, and has sent desktop Polycom video systems to some LTER Principle investigators. LNO is currently pursuing acquisition of a high capacity video conferencing system capable of multiple, separate simultaneous conferences.

37. What type of computational capabilities does your site provide to researchers for data analysis - modeling, statistical analysis and data synthesis? Select all that apply.

		Response Percent	Response Total
Investigators use their personal systems for analysis.		100%	1
The university/home institution provides most computational support for data analysis.		0%	0
A dedicated system is supported by the site for data analysis.		100%	1
A local computer cluster is available to researchers for data analysis.		0%	0
A remote computer cluster is available to researchers for data analysis.		0%	0
A direct link to high performance computer center is		100%	1

available to researchers for data analysis.			
Other (please describe)		0%	0
Total Respondents			1
(skipped this question)			0

38. What PRIMARY database system is used at your site for METADATA? Select any that apply.

		Response Percent	Response Total
SQL Server		100%	1
Oracle		0%	0
MySQL		100%	1
Ingres		0%	0
Postgres		100%	1
Paradox		0%	0
Other (please specify)		0%	0
Total Respondents			1
(skipped this question)			0

39. What PRIMARY database system is used at your site for DATA? Select any that apply.

		Response Percent	Response Total
SQL Server		100%	1
Oracle		0%	0
MySQL		100%	1
Ingres		0%	0
Postgres		100%	1
Paradox		0%	0
Other (please describe)		0%	0
Total Respondents			1
(skipped this question)			0

40. Does your site use any CASE tools (database design tools) for database management? Select any that apply.

		Response Percent	Response Total
None		0%	0
xCase		0%	0
ERStudio		100%	1
Rational Rose		0%	0
Oracle Designer		0%	0
ERwin		100%	1
Microsoft Visio		100%	1
Other (please specify)		100%	1
Total Respondents			1
(skipped this question)			0

Other:

DbDesigner

41. Does your site currently use web services ?

		Response Percent	Response Total
Yes		100%	1
No		0%	0
Total Respondents			1

(skipped this question) 0

42. What basic analytic tools are used at your site (i.e. software)? Select any that apply, unless used rarely.

	Response Percent	Response Total
Microsoft Office Tools (Excel, etc.)	100%	1
Matlab	0%	0
Splus	0%	0
SAS	100%	1
SYSTAT	100%	1
SigmaStat	100%	1
SPSS	0%	0
R	100%	1
Other (please specify)	0%	0
Total Respondents		1
(skipped this question)		0

43. Please select or enter MAJOR Analytic MODELS or MODEL TOOLS in use at the site (there is a good model registry at <http://eco.wiz.uni-kassel.de/ecobas.html>)

	Response Percent	Response Total
BASIN	0%	0
CENTURY	0%	0
COVER	0%	0
GARP	0%	0
GEM	0%	0
PNET	0%	0
RAMS	0%	0
REMM	0%	0
RIVMOD	0%	0
SAGE	0%	0
SAVANNA	0%	0
Other (please specify)	0%	0
Total Respondents		0
(skipped this question)		1

44. What type of data visualization software tools (separate from GIS and statistical tools) are used at your site? Select any that apply, unless used rarely

	Response Percent	Response Total
OpenDX	100%	1
VisDB	0%	0
XmdvTool	0%	0
Spotfire	0%	0
Visionary	0%	0
NONE are used (site uses statistical and GIS packages)	0%	0
Other (please specify)	0%	0
Total Respondents		1
(skipped this question)		0

45. What type of GIS software tools are used at your site ? Select any that apply, unless used rarely.

	Response Percent	Response Total
ArcInfo	100%	1

ArcView		100%	1
ArcGIS		100%	1
Erdas Imagine		100%	1
IDRISI		0%	0
ENVI		100%	1
IDL		100%	1
GRASS		0%	0
ERMapper		0%	0
None		0%	0
Other (please specify)		0%	0
Total Respondents			1
(skipped this question)			0

46. What type of project management tools are used at your site ?

		Response Percent	Response Total
Microsoft Project		100%	1
Open Workbench		0%	0
MindManager		100%	1
None		0%	0
Other (please describe)		0%	0
Total Respondents			1
(skipped this question)			0

47. If your site were to participate in a cross-site study that involved installation of instruments generating 10 MB (ten MEGabytes) of streaming data per day from the field, what parts of your network infrastructure would REQUIRE upgrading in order to for you to automatically collect and store that data (select any that apply):

		Response Percent	Response Total
Network from Field to Laboratory (wireless).		0%	0
Network from Laboratory to Internet.		0%	0
Network at home institution(s).		0%	0
More data storage capacity at the field laboratory.		0%	0
More data storage capacity at the home institution(s).		0%	0
File servers at field laboratory.		0%	0
File servers at home institution(s).		0%	0
Nothing.		100%	1
Total Respondents			1
(skipped this question)			0

48. NOW (read carefully, this is different!), if your site were to participate in a cross-site study that involved installation of instruments generating 10 GB (ten GIGabytes) of streaming data per day from the field, what parts of your network infrastructure would REQUIRE upgrading for you to automatically collect and store that data (select any that apply):

		Response Percent	Response Total
Network from Field to Laboratory (wireless).		0%	0
Network from Laboratory to Internet.		0%	0
Network at home institution(s).		0%	0

More data storage capacity at the field laboratory.		0%	0
More data storage capacity at the home institution(s).		100%	1
File servers at field laboratory.		0%	0
File servers at home institution(s).		0%	0
Nothing.		0%	0
Total Respondents			1
(skipped this question)			0

49. If new cross-site experiments were to increase the volume of data or the number of datasets you are managing by a factor of 10, which of the following would MOST need to be increased at the site. (check ONLY up to 3)

		Response Percent	Response Total
Faster internet connection speed.		0%	0
Better, faster software for managing metadata.		0%	0
Better, faster software for managing data.		0%	0
A faster server(s).		0%	0
Disk space for data storage.		100%	1
More personnel.		100%	1
Nothing.		0%	0
Total Respondents			1
(skipped this question)			0