User Services Experience
GSFC DAAC

MODIS Science Team Meeting
Greenbelt, MD
July 2002

http://daac.gsfc.nasa.gov/

http://daac.gsfc.nasa.gov/MODIS/

Outline

1. Data Discovery / Data Access / Data Delivery

2. Data Usability

3. How Are MODIS Data Being Used?

4. IGARSS 2002

5. Suggestions / Products / Services

6. Coming Attractions

Data Discovery / Data Access / Data Delivery

- MODIS Mission is unknown to potential users

- Data Maturity

- Enhanced Data Preview

- Time Series are difficult to obtain from the DAAC
  - Large Orders
  - Distribution limits (FTP Push, Pull and Media, Number of granules)

- Look and feel of the web interfaces

- Unknown status of order
  - Inconsistent notifications
  - Cryptic error messages

- Multiple product ordering
  - Ocean Quality (Q) maps with Mean (M) maps
  - Geolocation with Ocean Level 2

- Quality of the archived data (duplicates, DFA'ed and missing data)

- Data Ordering To Delivery Group (DODGr)

Data Usability

- Data Formats
    - How to get MODIS data into a GIS (i.e., GEOTIFF) or other simple format?

- File Structure
    - Too many parameters in a single file (i.e., 9 to about 800 SDSs!).
    - File sizes are too big (e.g., MOD021KM ~340 MB and Higher Level 10 to 800 MB!).

- Tools
    - No simple code segments (e.g., IDL) that one can get and easily insert into their own standard program.

- What product(s) should be used for a specific application?

- What channels should be used?

- Documentation

How are MODIS Data Being Used?

- Most Popular MODIS/Terra Products

Discipline	Data Product	Number of Orders	Number of Granules
Radiometric/Geolocation	*MOD021KM*	*9548*	*78,802*
	MOD03	5365	64883
	MOD02QKM	5293	27810
Atmosphere	**MOD04_L2**	**2257**	**121,766**
	MOD35_L2	2214	32661
	MOD06_L2	2081	71396
Oceans	MOD28L2	625	78802
	MODOCL2A	503	64883
	MODOCL2B	438	27810
ALL	ALL	41,405	527,104 (53 TB)

← *Time Series*

- Regional Studies

  - *Seasonal Variations of SST Gradient Cross Georgia Bight – MODIS and in-situ Observations [Chunyan Li[1], Jim Nelson[1], and Jim Koziana[2]]*
    [1]Skidaway Institute of Oceanography , [2]NASA Goddard Space Flight Center

- Global Studies

- MODIS image being used on Oceanography Department's Graduate admission brochure.

IGARSS 2002

1.   Are you aware of the MODIS products that are available?

2.   If the products are of interest to you, and you have not ordered any, what stopped you or why did you decide not to:
   •   Technical Problems?
   •   What should data providers do so that you can acquire the desired data more easily?
   •   What are your plans to continue your research or work, given your experience attempting to get MODIS data?

3.   What would make the data access better in the future?

4.   What is your area of research?

Response of Remote Sensing data users from IGARSS 2002

1. Those who did not know anything about MODIS data or that it is available (**24%**).

2. Those who have *NOT* used it, but see its improvement over older remote sensing data and plan to use it in the future (**32%**).

3. Those who work with higher resolution data than MODIS offers and/or requires real time data (**18%**).

4. Those who are very satisfied with their acquisition of MODIS data (**22%**).

5. Those who expressed some kind of dissatisfaction (**4%**).

Sample size -- 50

IGARSS 2002 Conclusions

1. MODIS data is being accessed at a healthy pace by small data volume users

2. MODIS data is relatively unknown outside the IWG extended community

3. There is a natural lag between the availability of a new data set and users preparing (i.e., proposing) to use the dataset.
   - We should NOT expect a significant increase in users retrieving MODIS data until the opportunity arises.
   - TRMM data distribution saw a marked increase approximately 20 months after TRMM launch.

Suggestions/Products/Services

1. Subsetting
   - ***On-Demand Channel***
   - ***Ocean Parameter***
   - ***DODS***

2. MODIS L1B Subsample
   - ***5 km, HDF-EOS and Binary***

3. Tools: ***SiMAP, HDF-LOOK***

4. End User Subscriptions

5. On-line data access

6. GIS Conversions (RSIP)

7. Good quality data for time of their field experiment

8. Direct broadcast

9. Private Companies providing support to fisheries

Coming Attractions

1. Enhancements to WHOM

2. Deployment of Spatial Subscription Server (SSS)

3. Data Pool at the GES DAAC
   - ftp anonymous
   - web interface

4. External Subsetter

5. Order Management System (OMS)