

Agenda
CUAHSI Board of Directors Meeting
January 10-11, 2006

Tuesday, January 10, 2006

8:00 am. Breakfast

Present: Jon Duncan, Kevin Dressler, Jay Famiglietti (phone), Efi Foufoula, Wendy Graham, Rick Hooper, Praveen Kumar, Venkat Lakshmi, Upmanu Lall, David Maidment (phone), Conrad Matiuk, Fred Ogden, Greg Pasternack, Fred Scatena, John Selker, Christine Shoemaker, David Tarboton, Laura Toran, Claire Welty, Chunmiao Zheng, Paul Thrasher (Financial Consultant to CUAHSI), Herman Zimmerman, Art Goldstein

Call to Order: 8:25 am

—————>
****The above symbol, when in the text, indicates a motion or important item

CORPORATE ISSUES

Beginning discussion on chair, past chair chair-elect

- Wendy will serve one more year as chair, tomorrow we will elect a chair-elect
 - A suggestion is made that the chair-elect be elected by the membership during the annual elections so that the membership has more say in the leadership – Tarboton
 - Also broadens the pool of candidates to the general membership
 - We can assume that the membership has power by electing BoD members, knowing that these elected persons could be a future chair-elect – Kumar
 - Hooper – keep the by-law regarding this issue, as is, for now

8:30 am Introduction. The Role of Board and its Executive Committee

8:45 am Administration and Business Issues

1. NSF Audit and Accounting System

- Have a cash balance. Hired Paul Thrasher to reconcile issues of errant book-keeping
- Have been largely underspent – through 7/31/05 (>\$500K)
 - Doug James suggested that this extra could be spent on the past December 2005 Declaration proposal that was the joint BES/Hydrological Sciences call

2. Relationship with AGU and Independent HR

- Through December 31, 2005, this relationship was maintained
 - However, AGU is having issues with accounting – CUAHSI has not receive any bills for payroll after

March 2005 (therefore, CUAHSI has not been able to close its books)

- However, have maintained relationship with AGU for space, telephone and other technical areas such as computing and web services, etc
- AGU has been very good to CUAHSI, however in advancing large amounts of money
- How will the problems be corrected? – Welty

Recommendations from Thrasher

- Replacing controllers – i.e. Vonetta’s role as controller will be hired out
 - CUAHSI now has a good understanding of all the balance sheets and reconciliation with the federal government
 - With a new person in controller role, the transition should be complete
 - Actually found ~\$53,000 from NSF that was not sent to CUAHSI
 - AGU has helped us out with: web services, rent & offices, salaries
 - Given that AGU has given us “insurance”, are we confident we want to do payroll ourselves – Tarboton
 - We do want to do it ourselves b/c of the huge accounting problems and the issues that arise; we must stand alone as a corporation; NSF was also uncomfortable with the AGU arrangement from the start – Hooper
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- Need to appoint an audit committee to receive the 2004 audit, independent of the BoD, b/c of conflict of interest
 - 2005 audit would not be expected before September (as 9 months is standard), but this could be later due to possible issues at AGU

3. Structure of Administrative Services

4. ACTION ITEM: Appointment of Audit Committee

Prioritized List of possible committee members

- Abriola, Warrick, Latman, Potter, Brooks, Lyons, Ramirez
 - Will call and select three from this – Hooper

5. ACTION ITEM: Corporate Policies – BoD (at least one member) needed to review these and eventually adopt a revised and expanded set (of policies)

- ***Plan to have something ready for consideration by the Spring meeting*** – Hooper
 - a. Employee Handbook
 - b. Travel (Staff and Participants)
 - c. Procurement
 - d. Proposals—lead, collaborating, and endorsements
 - e. Sub-award Monitoring

9:45 am

Corporate Finances

1. Financial Statements
 - a. NSF Grants (Restricted Funds)
 - b. Membership Dues (Unrestricted Funds)
2. Working Capital Fund and NSF Reimbursement

- The issue here is that we are spending approximately \$10,000/yr and need to replenish this – Hooper
- Lall – are we being a bit myopic?
 - We started out wanting to advance the science of hydrology
 - We end up trying to satisfy one client – instead we maybe need to focus on what we want to do and where we need to go to fund it – a portfolio
 - Corporate fundraising has precedence in the general community. An example is AMS – Foufoula
 - What would corporations get for their money? – Welty
 - Many just pass money to have their logo on a website – they don't even want anything out of it, just advertisement

Intellectual property rights – they belong to the lowest person (Hooper)

- Only if it is CUAHSI employees doing the work, does CUAHSI have the rights
- Selker – believe that we are putting the “cart before the horse” somewhat
 - That is, we need to have products first before we spend our energies
- a. Investment Policy for Unrestricted Funds
 - Suggestion to invest in a modest strategy to recover an average of > 5% for short to moderate term sustainability – Dressler
- b. Additional Sources of Unrestricted Funds
 - i. Recurring dues

ii. Corporate memberships

- Should focus on NSF first but realize that we need other partners to realize our broad goals

10:15 am Elections

- Deferred for now
 1. At-large Executive Committee member
 2. Chair-Elect (if new by-laws adopted)

- Move to Break

10:30 am Break

SCIENCE PLAN

11:00 am Status of Science Plan (Wilson via phone; Dressler)

Discussion related to powerpoint-based report of the Science Plan shown at meeting

What about water quality? – Shoemaker

- No explicit mention in the science challenge section but touched on in the detail chapters – Wilson

Why doesn't the first question of the Science Challenges have two directions of the feedbacks? – Foufoula

- Every one of the science challenges can have wordsmithing issues and can become quite complex (wordy) if all angles are addressed

Pasternak – since CUAHSI already did a technical report, how does this report accept or reject the original Technical Report #1?

- Can this be incorporated in this science plan text?
- Wilson – we have incorporated some of Technical Report #1
 - We want to address them but not critique them

Selker – thought CUAHSI would take broad visions and cut down to doable efforts

- Sense of limitation for CUAHSI is not prioritizing practical efforts
- The section on “criteria” addresses some of this – Wilson
 - A few more iterations might help to disaggregate things better

Hooper – the science challenges are still very general and not actionable

- What are you going to measure on these?
- Must figure out the next step. Test this, test that, etc.....specific, specific
- There are at least 70 questions we could write at the actionable level
 - For each of the 3 challenge questions the plan addresses several specific examples and how to take action

Foufoula – impression was that the plan was presented with a hydro-centric view and that the water cycle is a passive component instead of the driver

- Process-based science vs place-based science and CI
 - Strange to couple them and must be said properly

- Need to refine the challenge questions to make sure feedbacks go two ways

Graham – What are the departures in terms of priorities?

Wilson

- Biggest departure is the Observing strategy
- Departure on synthesis in that we do not feel strongly that we need a center but activities. In some ways we need some centralization of activities – so there are some tensions here

James – need to specify and discuss actionable items now and get them out for review

Hooper – CUAHSI is here to make these decisions and that our priority is to do these things, otherwise we have not prioritized NSF's investment

Kumar – Place-based science definition is very problematic

- need to put the plan in context of value
- Problem is we could pick any number of attributes to put value on – Wilson
 - Point to slide 31 – predictions are the ultimate goal at all times and space scales
 - Some decades in the future is a very vague target b/c the metric itself is very vague

12:15 pm LUNCH (catered)

STRATEGIC CONSIDERATIONS

12:45 pm Issues to be considered

What is the near-term future of CUAHSI – how are we doing?

Doug James

- CUAHSI has a steady \$3M/yr
 - Plus there is an opportunity to put in proposals for other projects such as CI under Steve Meechum at NSF
 - Renewal grant in 2.5 years
 - Must document accomplishments and show what CUAHSI can do
- Definitely need synthesis activities
 - Need a process to keep growing scientifically
 - Needs some kind of centralized activity

- Lakshmi – add observatories as a core activity to begin some kind of equal footing
- Pasternak – focused campaign on a particular issue (let's say 1 year)
- Scatena – combination of observations and synthesis
- Lall – if we look at long enough time scales we see specific signatures associated with climate and areas such as geology – then view what water's role is in this
 - As we have progressed with increasing population, how has that manifested into changes in the hydrologic cycle
- Selker – must set out tasks we want to see done instead of discussing dollars, for example, for we have little control on how much is actually funded
- Kumar – determine the things that we can catalyze to have impact – in lieu of our new environment
- Ogden – we have been told that demonstrating a track record is important
 - Are there some of the declaration proposals that have a lot of match?
- Shoemaker – looking at the balance of the Hydroview
 - Why is HIS getting the larger share?
 - Are they going to do modeling, even now that the Synthesis Center was declined?
 - There is the Texas and SDSC proposal
 - Working on data access, data publication, digital watershed, meta-workflow sequences
- Selker – HMF is based on the idea that measurements lead us to new understanding
 - We have powerful toolboxes that are not available to everyone
 - Need to supply instruments and expertise so that individuals can make high quality measurements they normally would not be able to
- On Synthesis – Hooper
 - Right now there are various models of what synthesis is
 - This could cause issues in determining the issuance of block funding – makes it a tough sell
 - One problem is that the science plans have suffered from being completed but then abandoned – synthesis can keep it active – James
 - What CUAHSI does not have is the ability to make strategy for the community – that is very different than doing science
 - An alternative is to take this money and administer to certain activities such as workshops, conferences and so on
 - But this falls back on the BoD or Executive Committee for decisions

- Lall – Neither the current structure of HIS or Synthesis is particularly good on its own in this funding environment
 - That is, how you implement them is tremendous overhead that detracts from the overall function
 - Make it administratively more simply to have leaders of working groups, for example, also be the leaders on science planning and strategy efforts
 - It should be both articulating strategy for CUAHSI and also an avenue for proposing new things (from PIs and so on)

- Under the current funding environment, do we continue trying to support all four activities? OR do we feel we need to drop some activities and focus resources

—————→ Motion to allocate at least \$500K towards synthesis activities (the nature of which to be decided by a competitive process) – Kumar

Discussion on the motion

Selker

- BoD does not have sufficient information to make this decision
 - We need to know what we are choosing between and what the proposals are
 - We don't even know what the synthesis declaration looks like

Foufoula

- A center would be there for years to come and has its advantages – it would not be sustainable with out a central place

Lall – The original NCEAS proposal was scoped at about \$500K

- The concern is that we are not very much further in defining a research mission for this synthesis center
- We do not see a mapping even of what SAHRA is doing to what we are doing, so on and so on
- The Synthesis group should come back to CUAHSI in a few years time with a particular deliverable to help steer CUAHSI activities

Hooper – still thinks that our ideas of what synthesis “is”, is too varied among the group – must resolve this

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- Subsequent motion to table this motion until tomorrow to read the Synthesis Declaration – Tarboton
 - Second:Graham
 - Approved: Yes
 - 1 decline, 1 abstain

—————→ Straw pole on how many of the Hydroview activities to support
All 4 activities (10)
Fewer than 4 (1)
Abstain (2)

1. Continuing commitment to all 4 HydroView elements
 2. Defining CUAHSI's agenda in the face of funding uncertainty
 3. Engagement with other federal agencies
 - a. What are we marketing? To whom?
 - b. What are the funding opportunities that CUAHSI would have a competitive advantage over individual PI's? How do we identify them and respond to them?
 4. Sufficiency of HydroView.
 - a. What else should we be working on?
 - b. Education and outreach efforts (Re-appoint Standing Committee?)
 5. Defining CUAHSI's role in the future and the next core proposal
 6. Extent to which we desire relationship with CLEANER
- OUTCOMES
1. Allocation of \$3M
 2. Role of CUAHSI in community development (i.e., as intellectual center rather than administrative center)

2:30 pm BREAK

Opportunity to say what the (HIS) renewal proposal would like and some policy issues related to business partners (e.g. ESRI)

Maidment – in response to NSF instructions that they needed to seek out the business side of their work

- Have been thinking about the commercialization aspect of HIS and engaged ESRI to help
- ESRI is funding its own project in partnership with HIS
 - ESRI is dealing with weakness issues such as sustainability of datasets on the HIS framework from individual groups, etc
 - Maybe there is major nodes that can house individual contributions but must focus on how they can be sustained
 - Has worked with USGS and so on how to work through e-commerce solutions
- Services that were developed were discovered quickly by the broad community
 - Continued work needs to be portioned properly to support the community as a whole
 - Longer term issues should not be confused with shorter term science needs
 - How to you get uniformity in a data model across the whole country

- Must leave in place the original data set structure and use a tool for a computation procedure to read the file and transform it
 - That is, Extract, Transform and Load (ETL)
 - ETL become a component of a larger toolbox that is both open and interoperable
- Main elements of “Bridge Proposal”
 - Build a multi-scale web portal system
 - Focusing on national and point scale and then will gradually fill in the intermediate levels during the renewal proposal
 - Construct will be to prototype at SDSC
 - Software package will be deployed to the watershed level
- How do you see this deployed? – Hooper
 - If it is deployed at the watershed level with all the groups, the support level requirements are already understood
 - Of course starting with friendly sites
 - What does it mean to deploy the software? – Graham
 - Generic – piece of Linux and Windows
 - Praveen Kumar – at Illinois, they have one person converting metadata and other issues (on 600 Gb of data)
- In the Renewal Proposal it is expected that most of these friendly sites will need local funding – Maidment
 - Can you justify the level funding and how rigid that is? – Selker
 - What do different levels get us?
 - Effort will go into developing central nodes to let people slice out pieces of framework data sets
 - Around a dozen data nodes to stage deployment
 - Right now more effort based on the national access system
 - Once up, more focus will shift to regional watersheds, etc
- How long to work with friendly sites? – Hooper
 - Within the first year of renewal grant would be trying to move on to the other nodes – Maidment

Selker – relationship with ESRI

- How does that work?
- What happens if ESRI sets restrictions on the products or process?

Maidment Response

- What we are building is the back end technology that the users do not work with directly
- ESRI would be serving similar information to other organizations, separate from CUAHSI
- Doing design right now and it does not necessarily mean implementation with ESRI – no proprietary issues
 - For example, people have used ArcHydro without ESRI at all

Goldstein – Must make sure that the renewal proposal has clear language of the relationship to ESRI and what NSF's investment is going to do in the relationship and vice versa

- That is, remember this is going to external reviewers who must easily make the connection and be supportive of it, not to raise a red flag
- This will not likely be reviewed by a panel in informatics, but not by a panel exclusive to HIS

Art Goldstein and Doug James join us. Issues to be considered

1. NSF's view of CUAHSI's activities and role

- Doug James – want to come up with a set of projects that are attractive to the community (science and users)
 - Find some principles that you can now understand that you would not have before
 - How close you can get to that is the next issue
 - Deliver a strategy that would get us there
 - Goldstein – the different elements of HydroView are being funded separately
 - Makes this discovery metric difficult
 - Must make the renewal proposal distinct from these other activities (must articulate how these other activities interact with the core grant and so on)
- What role would NSF play for Observatories? – Selker
 - Zimmerman – not even good sense of what NSF wants to do internally with water and programs
 - What creates this stagnation? – Toran
 - Zimmerman remarks that at his level that he cannot understand why it is not being picked up and moved forward
 - Would creating an exciting plan take care of this stagnation? – Selker
 - Zimmerman says that he has not seen the fundamental arguments that push us forward
 - Zimmerman
 - Thinks that CUAHSI and the community ought to go to the prototype route at around ~\$2M
 - Will force more detailed questions
 - Should do this b/c NSF and other will see the opportunity

- James
 - Vijay Gupta won an observation location in Kansas
 - Nothing is stopping groups for going out to do something like this
- Open up the synthesis process to PIs – Goldstein

2. Near-term prospects
 - a. General funding levels
 - b. Likelihood of "Water as a Complex System" cross-directorate program
3. Coordination with CLEANER and MREFC preparation

RECEPTION AND HEAVY HORS D'OEUVRES

5:00 pm – 6:30 pm

EVENING

7:00 pm HYDROVIEW ELEMENTS AND MISCELLANEOUS ISSUES

1. Location of CUAHSI

—————→ **Motion to allow Rick Hooper to explore with NSF if moving to Boston is an option and what that would like in the form of a proposal – Kumar**

Second: Lall

Approval: Yes

No abstentions

Discussion

- a. Move to Boston
 - Not doing high frequency activities at NSF or the Hill at this time
 - Essential to be in Washington DC due to favoritism – Pasternak
 - A CEO should be located wherever the corporate headquarters are – Tarboton
 - Daily issues at work are a fact of life and need to be dealt with for efficiency

What is Hooper in Washington DC for?

- Could presumably travel to DC at any time he is needed
- b. Corporate vs. Campus Location
 - Advantage of a campus is access to students and a learning environment
 - A precedence is AMS – they move to where their director is

2. HIS

- a. Bridging Grant (April – October, 2006)
- b. EAR IF/Geoinformatics Competition
 - i. "HIS Central"
 - ii. Thematic Centers
- c. Policy Issues
 - i. Relationship with ESRI
 - We must decide what is good for the community in general – to the extent that we can make a recommendation that is helpful – Tarboton
 - CUAHSI on its website is stating that it will partner with anyone submitting to NSF – Kumar
 - Let NSF decide if these things are a valid way of doing things

—————→ Motion to request a briefing document from David Maidment on what ESRI and HIS are working on and its implication for future use from CUAHSI members – Kumar

Second: Pasternack

Approval: Yes

Discussion

- Rick Hooper to communicate to David Maidment to make sure meeting with Art Goldstein occurs that addresses the relationship with ESRI
 - Goldstein, earlier in the meeting, expressed that this meeting had been planned
 - ii. SWAQ engagement
 - Great deal of interest from federal agencies, but this would open up many meetings and at least time resources we have to provide
 - Hooper only informing the board of this activity – the concern from Maidment is how much resources is this going to take, the value of meetings notwithstanding
 - iii. CUAHSI's role in open competitions
- CUAHSI must be careful to find out who is submitting before they release their own proposal for review
 - Toran gives an instance of the GeoEd proposal for which she had been submitting singularly

There was no discussion at this time on the following two subjects:

3. Synthesis Center
 - a. Call for Pilot Synthesis Center
 - b. Structure and Funding Levels
4. Hydrologic Observatories
 - a. Vision for HOs
 - b. Science Plan
 - c. Implementation Plan
 - d. CLEANER/Role of MREFC funding

Adjourned: 8:45 pm

Wednesday, JANUARY 11

8:00 am Breakfast

Present: Jon Duncan, Kevin Dressler, Efi Foufoula, Wendy Graham, Rick Hooper, Doug James, Praveen Kumar, Venkat Lakshmi, Upmanu Lall, Conrad Matiuk, Jami Montgomery, Fred Ogden, Greg Pasternack, John Selker, Christine Shoemaker, David Tarboton, Laura Toran, Claire Welty, Chunmiao Zheng, Herman Zimmerman

From Yesterday: Synthesis Activities (the \$500K/yr that Doug James has at NSF) has three options, as the BoD sees it

1. Center
2. Activities
3. Money to Observatories

Open Discussion on Synthesis

- Selker – we need to define what this synthesis is
- Hooper – should be more directed studies that takes something like the NEUSE to the next level
- Pasternack – Yoram’s way was reasonable in his strategic planning and structure; skeptical of creating a large center or activity without this
 - Provide more guidance on the proposals coming out
- Lakshmi – would it behoove us to give Berkeley the money and move on?
 - Everyone – no, this was already discussed and turned down for various reasons
- Foufoula – by having a focused center (not some elaborate location or anything), the activity has a better chance of advancing quickly

- Hooper – does the existing RFP capture this enough
 - Foufoula – no, it must be rewritten
- Toran – Could see a center if the RFP is rewritten to get a better look at CUAHSI's vision for what it would like
- Shoemaker – what can we do? Here is what she understands as the list
 - A: RFP for \$500K/yr
 - B: Divide into smaller tasks and have people compete for that
 - C: CUAHSI asks for the money and has a plan for how the activities are going to be divided up

Doug James would like to see multiple proposals for a center so that NSF has a choice among alternate views – Hooper

- Doug could then take that and shop it around to other program officers
 - So that option C (above) would make it less likely as James would not be able to market this option
- Shoemaker – split option C into multiple competitions so that we don't just get rejected on one proposal
 - Could also be dynamic with this and continually evaluate each activity
 - Part of the challenge of this is to be specific enough for NSF to get behind it
- Kumar – not sure we understand the role of this board
 - This board is a governing body and not a science body
 - Thinks that the center option is better, but if CUAHSI were to do a proposal that Hooper would write it b/c it would be inappropriate for the board to write it
 - Need to provide an intellectual environment; that is the purpose of the synthesis center
- Selker – everyone seems to think synthesis is a good idea but we differ on the best way to do it
 - Feels we do not need to make the decision of a center versus activities here
 - Let the community propose and be creative for how to meet CUAHSI's metrics of success
 - That is, the board can set the metrics for success and let the community propose to meet them
- Toran – do we just vote on setting up sub-committees to work on the RFP?
- Ogden – Option B is too prescriptive and we could end up with more of the same

—————→ Motion to allocate at least \$500K/yr towards synthesis (the nature of which to be decided by a competitive process) – Kumar

Second: Welty
Approval: Yes
Discussion: Too vague
Opposed: Selker

—————→ Motion to move forward with the call for a synthesis center with an RFP instead of CUAHSI writing a proposal for the community – Foufoula

Second: Welty
Approval: Yes
Two abstentions

—————→ ***Hooper would like to see comments from the board by Monday, January 15 to help with the RFP and then provide forum for discussion on Wednesday, January 17 at the Executive Committee Meeting***

CUAHSI Carryover of \$460K

1. Synthesis
2. Return to NSF for HO declarations
3. Additional CUAHSI Staff, etc

8:30 am CLEANER (Jami Montgomery)

Powerpoint was presented on various aspects of CLEANER

9:30 am Discussion with Jami about coordination

- We should try to get people into each of the CLEANER committees – Tarboton
 - Selker – appealing b/c CLEANER is not just aiming for MREFC and that in working together we explore many different opportunities. At the same time MREFC is giving us a sense of deadlines to help us move
 - Hooper – we need the BoD to help with getting 3 people for each committee and then to join them by March 2006 for the CLEANER All Hands Meeting
- Side Discussion on the WATERS Network organizational structure
- Montgomery – would like to see CUAHSI input on this

- Need a formal agreement on how CUAHSI cooperates towards the documents in meeting Pat Brezonik's deadlines
- Hooper – must be a better way to communicate formally between CLEANER's organizational committee and CUAHSI
- Selker – seems strange to try for one consortium right now based on the fact that there is already greater than 50% CUAHSI participation in CLEANER committees
 - If CLEANER would like to have regular input from CUAHSI, then CUAHSI should have BoD members on their organization committee or wherever necessary to provide good input
 - Graham and Shoemaker – We already have people on the advisory board but maybe we need people on the executive committee “where the action is”

—————→ Motion of thanks for Jami Montgomery for coming and to make sure synergistic activities with CLEANER occur – Selker

Second: Graham

Approved: Yes

Discussion: No

10:00 am Break

ELECTIONS

—————→ Motion to drop Jeff Dozier as vice-chair and continue as an “At Large” member of the Executive Committee, Wendy Graham serve as chair in 2006 and past chair in 2007: Kumar

Second: Selker

Approval: Yes

Discussion: No

Discussion on what the Chair position takes from Graham

- Requires more than a day a week
 - Travel, reading, phone calls, preparation
- Should change the structure so that the load is distributed – Foufoula
 - Establish Director or ExCom portfolios

—————→ Motion is to compensate the chair 1 ½ months, and ½ month each for the chair-elect and past chair, subject to NSF approval beginning in FY 2006 – Ogden

Second: Lall

Approval: Yes

Discussion: No

—————→ *Vote for Chair-Elect (if new by-laws adopted)*

Efi Foufoula – If there is no one else stepping in I will consider – Withdrawn

Claire Welty

David Tarboton – Thinking ahead to the idea that if he gets a synthesis center, HIS, GSLHO, etc. Does not know to what extent these are conflicts

Jay Famiglietti – Nominated by Efi Foufoula – he has confirmed an interest by e-mail

—————→ ■ Claire Welty carried the majority

—————→ *Vote on At-Large Member to the Executive Committee*

Famiglietti

Pasternack – Removes nomination

Lakshmi

Tarboton

—————→ ■ Jay Famiglietti carries the majority

—————→ Motion to re-instating the follow standing committees: Ogden

Second: Welty

Approval: Yes

Discussion: No

Chair of HIS – Lettenmaier (Chair), Shoemaker (Liaison)

Chair of HO and/or Liaison – Toran (Liaison), Chair (TBD)

Chair of HMF or Liaison – Pasternack (Liaison), Chair (TBD)

Chair of Science and Synthesis – Lall (Liaison), Chair (TBD)

Assignments

■ Chunmiao Zheng to look into Corporate sponsorships and unrestricted funds

■ Quarterly Newsletter – Member Communication

○ Foufoula is our liaison to the newsletter

■ Policy of relationship with ESRI

○ Maidment to give presentation at next week's ExCom

○ Tarboton is working on the official general policy issues

Adjourned: 12:30 pm