

GLEON 12: From Vision to Process

April 2011

PARTICIPANTS:

GROUP ONE: ELEANOR JENNINGS STEFAN BERTILSSON JAMIN DREYER SANDY NG CLAUDIA FERNANDA FORNERON DAVID MOTTA MARQUES	GROUP TWO: EVELYN GAISER JORDAN READ HANS-PETER GROSSART AMY HETHERINGTON ELVIRA DE EYTO GIDEON GAL	GROUP THREE: KEVIN ROSE DAVID WHITE YU LI LIZ RYDER FANG-PANG LIN MENGYUAN ZHU WERNER ECKERT
GROUP FOUR: TIM KRATZ MARIA CINTIA PICCOLO GERARDO PERILLO EMILY KARA SETH AVRAM SCHWEITZER VERA ISTVANOVICS MIRON LIVNY GUANGWEI ZHU	GROUP FIVE: SUSAN HENDRICKS ABEL UDOH JIM RUSAK JUSTIN BROOKES HSIU-MEI CHOU TRINA MCMAHON	GROUP SIX: ALO LAAS LUKE WINSLOW DON PIERSON BERNARD MONTUELLE VARDIT MAKLER DENNIS TROLLE

FACILITATORS: KATHIE WEATHERS, GRACE HONG, & CAYELAN CAREY

Goals

IN SMALL GROUPS:

- 1) THINK ABOUT AND DISCUSS WHAT MAKES A **GLEON** COLLABORATION SUCCESSFUL.
 - a. WHAT TANGIBLES MAKE **GLEON** COLLABORATIONS SUCCESSFUL? (DATA, FUNDING, ETC.)
 - b. WHAT INTANGIBLES MAKE **GLEON** COLLABORATIONS SUCCESSFUL? (LEADERSHIP, IDEAS, ETC.)
- 2) CREATE PERSONAL NETWORK MAPS AND DISCUSS THE GROUP'S VARIOUS RESOURCES AND CONNECTIONS.
 - a. WHAT RESOURCES AND CONNECTIONS AVAILABLE COULD AID **GLEON** COLLABORATIONS?
- 3) DISCUSS THE FOLLOWING TOPICS:
 - a. WHAT DO MEMBERS BELIEVE IS AT THE HEART OF THE **GLEON** MISSION?
 - b. HOW DO **GLEON** MEMBERS WANT TO GROW THE NETWORK?
 - c. PROACTIVE AND STRATEGIC RECRUITMENT OF NEW MEMBERS
 - d. DEVELOPMENT OPPORTUNITIES
 - e. LEADERSHIP OPPORTUNITIES
 - f. TRANSITIONS WITHIN THE NETWORK
 - g. FUNDING: STRATEGIES, RESOURCES, ETC.
 - h. WHAT ARE SOME OF THE BIG SCIENCE QUESTIONS **GLEON** CAN ADDRESS, BOTH IN THE LONG-TERM AND SHORT-TERM? HOW? INCORPORATE THE CONCEPT OF NETWORKING.
 - i. **GLEON** PROMOTION: PUBLICITY AND COMMUNICATION WITH THE PUBLIC
- 4) CREATE VISUAL DISPLAYS OF WHAT WAS DISCUSSED.

IN LARGE GROUP:

- 1) SHARE DISPLAYS TO FURTHER DISCUSSIONS ABOUT **GLEON'S** PROCESS FORWARD.

Comments From Participants



"I really enjoyed this session. It allowed us to look at the bigger picture and [see] how GLEON fits into this.... The small groups enabled each individual to give their own perspective of what makes GLEON collaborations successful ([the] tangible and intangible). I also enjoyed [creating] Personal Network maps.... Through GLEON and participating in GLEON meetings, each member's personal network map becomes interlinked.... At G13, I hope to discuss how to maintain motivation and collaboration links as GLEON moves into an annual meeting transition." – Liz Ryder

"... an awareness and appreciation of the many different [ways] GLEON contributes to quality of life.... This has inspired me to work harder to maintain contact with fellow GLEON members (in between meetings) and ... include GLEON activities when applying for funding from various sources." – Dennis Trolle

"It would be good to have a database of these expertise – to get them [the experts] all introduced to each other for possible collaborations." – Peter Arzberger

"I really liked the small group aspect of the session, where the moderator was tasked with making sure every voice could be heard and everyone had a chance to share. I also liked the report-back part at the end, where the whole group moved around to hear about the particular outcomes of each individual group's discussions." –Emily Kara

"From my perspective, it was the discussion of the GLEON community and [its] attributes... so important in allowing us to work together and maintain a long term working network... that was the most important thing to come out of the visioning session." – Don Pierson

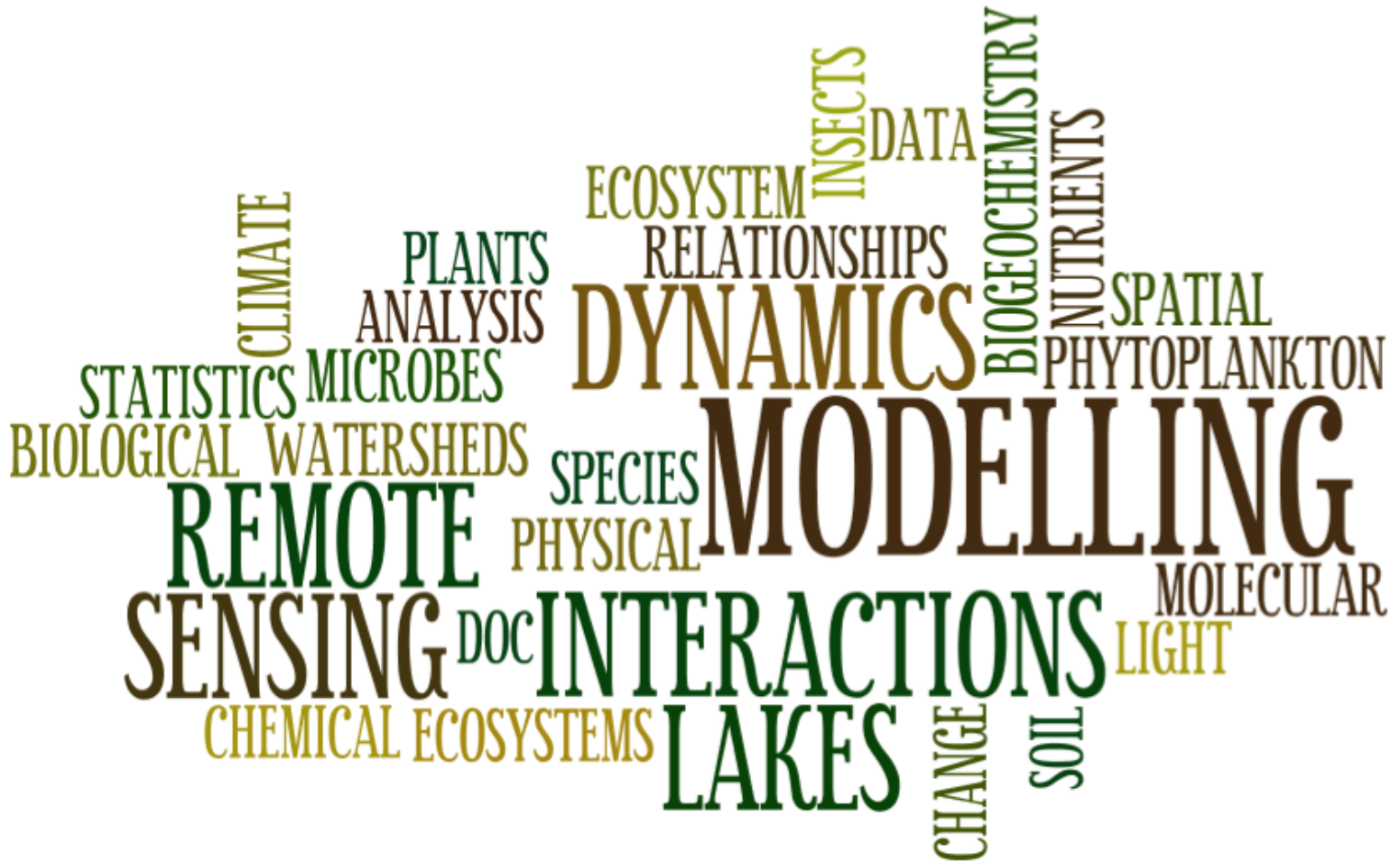
"I think the GLEON 12 visioning exercise was useful in that it provided a platform for all GLEON members who were present to express their concerns and individual visions for the future of GLEON. The format of multiple small groups then built on these individual concerns and interests to summarize a sort of pan-GLEON planning and concern document. At GLEON 13, I'd like to see us build on this visioning session by first summarizing the major concerns and then articulating an action plan to address these concerns." – Kevin C. Rose

"We were thrown out of our comfort zones by working in these small group sessions, often with new people, and with time constraints. However, I think that this resulted in new, fresh ideas, and having a time constraint kept everyone focused.... I find I keep coming back to ideas that were expressed during those sessions even months afterwards.... The session got me to think about how any project gets from 'vision to process'! By putting this into practice since I got back, I now have a new set of collaborators who will be supplying instrumentation/buoy for a new lake for a year!"— Eleanor Jennings

"This is an opportunity to generate a portfolio of cross-site, worldwide questions, and the base for GLEON applications to foster collaborative work." — David Motta Marques

Group One

THIS GROUP FIRST IDENTIFIED THE SKILL SET OF EACH PARTICIPANT:



ELEANOR JENNINGS

- NUTRIENTS/DOC
- MODELLING, CLIMATE CHANGE
- SOIL/PLANTS

STEFAN BERTILSSON

- BIOGEOCHEMISTRY
- MICROBES
- LIGHT MOLECULAR DATA AND MV STATS

JAMIN DREYER

- **SPECIES INTERACTIONS/RELATIONSHIPS ACROSS ECOSYSTEMS**
- **INSECTS**

SANDY NG

- **MODELLING SPATIAL ANALYSIS**
- **PHYTOPLANKTON DYNAMICS**
- **REMOTE SENSING**

CLAUDIA FERNANDA FORNERON

- **SHALLOW LAKES**
- **PHYSICAL/CHEMICAL/BIOLOGICAL INTERACTIONS**
- **REMOTE SENSING**

DAVID MOTTA MARQUES

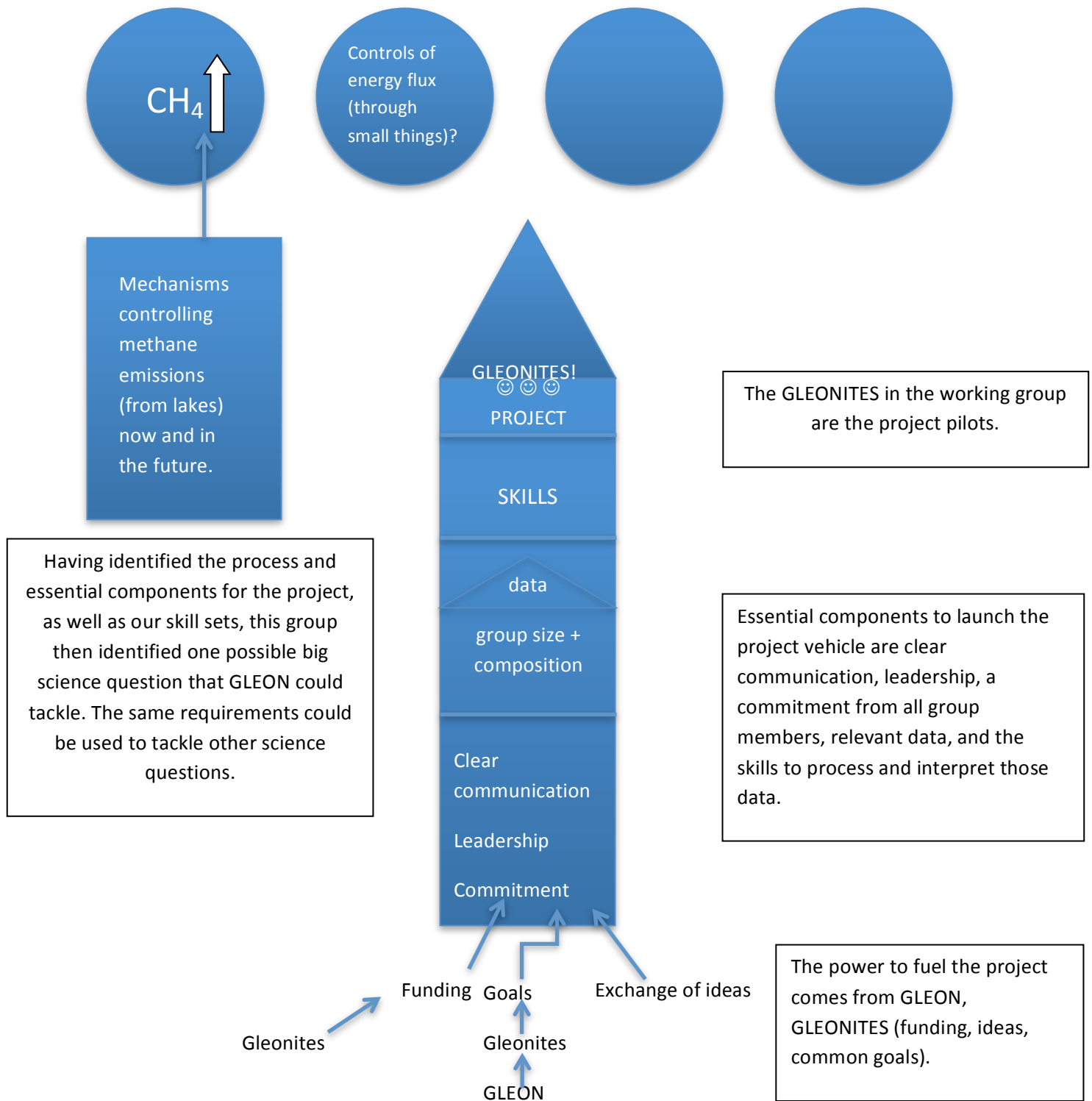
- **ECOSYSTEM DYNAMICS**
- **MODELLING LAKES AND WATERSHEDS**

CENTRAL IDEAS OF DISCUSSION

- 1) FOCUS ON CONCEPT OF MULTI-SITE/GLOBAL NETWORK**
- 2) NEED FOR NEW INFORMATION TECHNOLOGY**

BIG QUESTIONS OF SCIENCE

THIS GROUP DECIDED ON A GRAPHICAL VISUALIZATION OF THEIR CONCEPT:



THIS GROUP FIRST IDENTIFIED THE SKILL SET AND RESOURCES OF EACH PARTICIPANT:



- JORDAN READ**

- HANS-PETER GROSSART**

- **TOOLS:** EXP. LAKES, MOLECULAR PLATFORM, MONITORING DATA, BIOGEOCHEMISTRY EQUIPMENT
- **KNOWLEDGE:** LIMNOLOGY, BIOGEOCHEMISTRY, MICROBIAL SCIENCES
- **PEOPLE:** GLOBAL LIMNOLOGISTS AND OCEANOGRAPHERS, NORTHERN EUROPEAN SCIENTISTS, NAM
- **FUNDING:** FUNDS FROM GERMANY, THE INSTITUTE, EUROPEAN FUNDING, NSF, EU-INDIA COLLABORATION

AMY HETHERINGTON

- **TOOLS:** DATA
- **KNOWLEDGE:** MODELLING ECOLOGY, FINANCE CONSULTING, MANAGEMENT
- **PEOPLE:** CORNELL UNIVERSITY'S BIOLOGY FACULTY
- **FUNDING:** FELLOWSHIP, USDA

ELVIRA DE EYTO

- **TOOLS:** DATA, LAKE, BUOY
- **KNOWLEDGE:** ECOLOGY AND BIOLOGY
- **PEOPLE:** IRISH MARINE BIOLOGISTS, EUROPEAN LAKES, EPA
- **FUNDING:** IRISH GOVERNMENT, EUROPEAN FRAMEWORK FUNDS

GIDEON GAL

- **TOOLS:** DATA, LAKE, MODELS
- **KNOWLEDGE:** MODELLING, ECOLOGY, ZOOPLANKTON, TROPHIC LEVEL DYNAMICS, HYDROACOUSTICS
- **PEOPLE:** ISRAELI SCIENTISTS, EUROPEAN, AMERICAN, AND AUSTRALIAN LIMNOLOGISTS AND OCEANOGRAPHERS
- **FUNDING:** FUNDS FROM ISRAEL, UNITED STATES, GERMANY, AND EUROPE

THIS GROUP THEN IDENTIFIED WHAT DEFINES A SUCCESSFUL COLLABORATION:



SUCCESSFUL COLLABORATIONS NEED:

- TIMELINES WITH SET DATES
- LEADER FOLLOWING UP ON DEADLINES AND TASK COMPLETION
- FEELING OF RESPONSIBILITY TO GROUP
- FACE-TO-FACE MEETINGS WITH KEY COLLABORATORS
 - EASIER TO SET DEADLINES FOR PRODUCTS
 - MORE EFFICIENT
 - IMPROVES GROUP DYNAMICS
- WORK IN SMALL GROUPS OR PAIRS FACE-TO-FACE
- GOOD, CONSISTENT, PERSONAL E-MAIL CORRESPONDENCE

TANGIBLES (FUNDING, DATA...)

- ABILITY TO ATTEND MEETINGS IN-PERSON = A NEED FOR \$ MONEY FOR TRAVEL
- DATA = A NEED FOR THE UNDERSTANDING OF A COMMON STANDARD
- TEAM = A NEED FOR EQUALITY IN RESPONSIBILITIES
- "ALL-HANDS" MEETINGS = A NEED FOR SMALLER BREAK-OUT GROUPS

INTANGIBLES (LEADERSHIP, IDEAS...)

- IN-PERSON MEETINGS → HELP MEMBERS GAIN A SENSE OF TRUST, ESPECIALLY WHEN IT COMES TO DATA SHARING

- MAINTENANCE OF EXISTING CONNECTIONS AND EXPANSION TO INCLUDE NEW COLLABORATORS → HELPS BUILD THE NETWORK
 - FREQUENT, IN-PERSON MEETINGS ALSO BUILD ON THESE NETWORKS
- CLEAR GOALS AND REALISTIC EXPECTATIONS → IMPROVE RESULTS
- DIVERSITY OF BACKGROUNDS, CULTURES, EXPERIENCES AND PERSPECTIVES → ENHANCES RESEARCH
- SHARING INFRASTRUCTURE → IS KEY TO SUCCESS
- ENDLESS OPPORTUNITIES FOR LEADERSHIP → GIVE MULTIPLE PEOPLE THE CHANCE TO SHINE

OTHER NOTES:

- 1) WE SHOULD TRY TO BRING MORE COLLABORATORS TO INTERNATIONAL MEETINGS.
- 2) WE SHOULD ASK MORE GLOBAL QUESTIONS.
- 3) STUDENTS SHOULD SEEK APPROVAL AND ACCEPTANCE BY THEIR ADVISORS FIRST, BUT ARE ENCOURAGED TO PARTICIPATE.
 - a. THEIR INVOLVEMENT MAKES A HUGE DIFFERENCE, WITH OR WITHOUT A DISSERTATION.
 - b. GLEON MEETINGS OFTEN FIT IN WITH STUDENTS' DISSERTATIONS.
- 4) MARINE COMMUNITIES OFTEN WORK TOGETHER, BUT LIMNOLOGY COMMUNITIES HAVE NOT DONE SO AS FREQUENTLY IN RECENT YEARS. THIS SHOULD CHANGE.
- 5) PRODUCTS SUGGESTION: SPECIAL ISSUE OF *LIMNOLOGY AND OCEANOGRAPHY* ABOUT GLEON (TALK TO AMY)

BIG QUESTIONS OF SCIENCE AND GLEON

- 1) IS IT WORTH DOING **HIGH-RES MONITORING?**
 - a. WOULD **HIGH-RES DATA** HELP **FURTHER UNDERSTANDING** OF **BIOLOGICAL/ECOLOGICAL PROCESSES** THAT ARE CRITICAL TO **LAKES?**
 - b. WHAT ARE THE **VIEWPOINTS** ON THIS FROM DIFFERENT **SCIENTIFIC PERSPECTIVES?**
- 2) HOW CAN **GLEON** USE ITS **NETWORK** TO ADDRESS **SPECIFIC SCIENCE QUESTIONS?**
- 3) HOW ARE **LAKES CHANGING GLOBALLY?**
 - a. **MODELLING**
 - i. USING DATA FROM GLEON LAKES
 - b. **TESTING**
 - i. USING DATA FROM GLEON LAKES

Group Three

KEVIN ROSE

DAVID WHITE

YU LI

LIZ RYDER

FANG-PANG LIN

MENGYUAN ZHU

WERNER ECKERT

TOM BERMAN

SUCCESSFUL COLLABORATIONS IMPLY:

- 1) THE ABILITY TO TALK AND COLLABORATE ACROSS DISCIPLINES
- 2) TRAINING OPPORTUNITIES
- 3) DIVERSITY OF SKILLS, STRENGTHS, FUNDING, INFRASTRUCTURE AND NETWORKS
 - a. APPLYING THIS DIVERSITY TO THE COMMON GOAL/PROBLEM
- 4) COMPLEMENTARY SKILLS
- 5) OPEN SHARING OF DATA
 - a. TRUST
- 6) SHARED PRIORITIZED INTEREST
- 7) SERENDIPITY
 - a. BRING PEOPLE TOGETHER AND UNEXPECTED, WONDERFUL THINGS WILL HAPPEN!!! 😊
- 8) MATCHED-UP PERSONALITIES (SO MEMBERS CAN HAVE FUN TOGETHER!!! 😊)

GLEON SCIENCE

- 1) HOW CAN GLEON FACILITATE A CULTURE OF INTERACTION?
- 2) HOW CAN GLEON DEVELOP SKILLS TODAY FOR THE UNKNOWN TOMORROW? HOW CAN GLEON REMAIN FORWARD-LOOKING?
- 3) HOW CAN GLEON MONITOR TRAINING SO IT IS GLOBAL IN SCOPE AND INCLUSIVE IN NATURE?
- 4) HOW CAN GLEON ATTRACT FUNDING?

BIG QUESTIONS OF SCIENCE

- 1) HOW DOES ONE IDENTIFY GLOBAL ENVIRONMENTAL CHANGE? HOW DOES ONE BEGIN TO UNDERSTAND IT?
- 2) HOW DOES ONE ADDRESS AN EMERGENT PHENOMENON?

Group Four

TIM KRATZ

MARIA CINTIA PICCOLO

GERARDO PERILLO

EMILY KARA

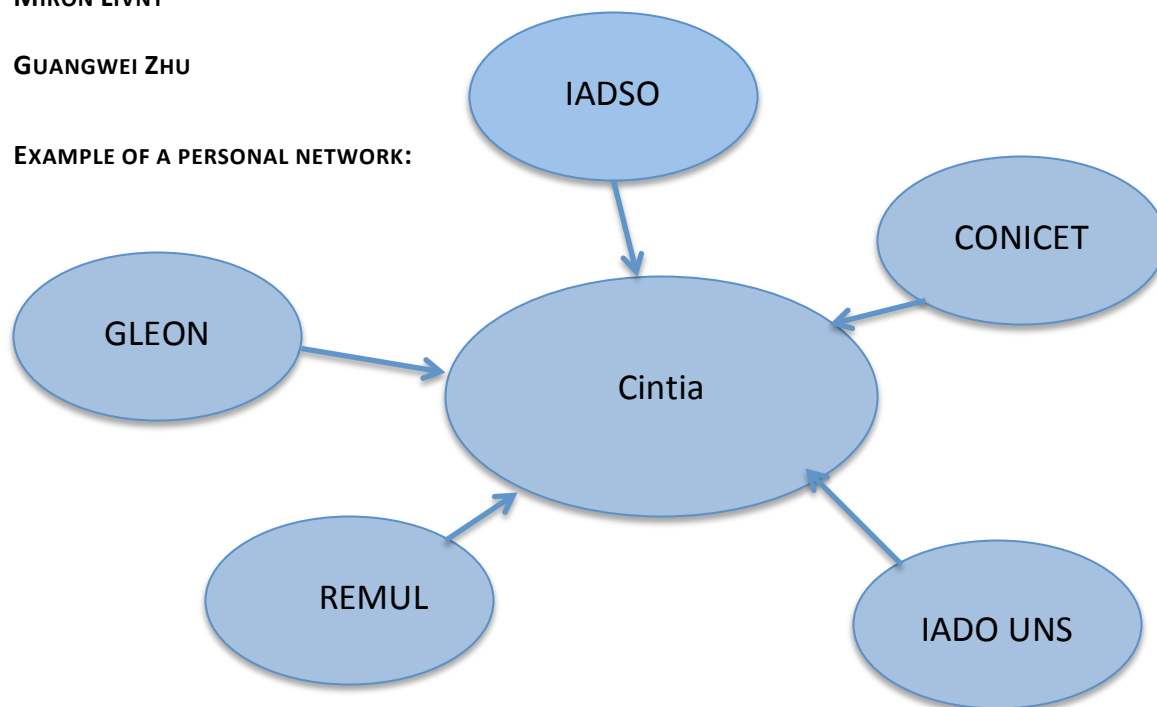
SETH AVRAM SCHWEITZER

VERA ISTVANOVICS

MIRON LIVNY

GUANGWEI ZHU

EXAMPLE OF A PERSONAL NETWORK:



WHAT MAKES A GLEON COLLABORATION GREAT:

- EXTENDED SCOPE
- COMPREHENSIVE UNDERSTANDING
- AWESOME RESOURCES
 - STUDENTS, FACULTY, RESEARCHERS
 - ALTERNATIVE FUNDS
- EXCHANGE OF INFORMATION
- ACKNOWLEDGEMENT OF CREDIT WHERE CREDIT IS DUE

THIS GROUP THEN DISCUSSED GLEON CULTURE AND SUGGESTIONS FOR THE FUTURE:

GLEON CULTURE:

- FLAT, OPEN STRUCTURE
- EQUALITY
- EXPOSURE TO NEW PLACES AND CULTURES
- ENTHUSIASM
- NON-COMPETITIVE ATMOSPHERE
- FEELINGS OF “WE’RE IN THIS TOGETHER” AND “JUST DO IT!” ☺



SUGGESTIONS FOR GLEON:

- MORE SITES IN TRAINING
- MORE FUNDING FOR STUDENTS
- OPPORTUNITIES FOR STUDENT EXCHANGE
- ADDITIONAL HIGHLIGHTING OF INTERNATIONAL CONNECTIONS
- MORE PUBLICATIONS WITH GLEON COLLABORATORS
- MORE PUBLICITY

- GROWING EXPERTISE ABOUT BUOYS
- MORE DISCUSSION ON SOCIAL SCIENCE AND THE WATER MOVEMENT
- NEW IDEAS → ALWAYS! 😊

HOW CAN GLEON GROW?

- MORE SITES
- MORE MEMBERS
- THOUGHTFUL USE OF THE WWW

ATTRIBUTES OF BIG SCIENCE QUESTIONS GLEON IS POISED TO ANSWER:

- INTERDISCIPLINARY
- OF GLOBAL SPATIAL SCALE
 - PEOPLE
 - SITES
 - DATA
- OF LARGE TEMPORAL RANGE
- ANSWERED WITH DATA AMENDABLE TO MODELLING
 - AIDS THE INFERENCES THAT POTENTIALLY COME FROM MODELLING
- RELEVANT TO MANAGEMENT AND POLICY
- RELATE CHANGES IN DRIVERS TO CHANGES IN $W.Q_1$
- USEFUL FOR TEACHING/PUBLIC EDUCATION
 - DATA, BUOYS MAKE GREAT CLASS MATERIAL
- AID THE FUTURE UNDERSTANDING OF THE NATURE OF CHANGE IN LAKES
- COUPLE SATELLITE IMAGERY WITH IN-SITU DATA
- COHERENT ACROSS GRADIENTS
 - DRIVERS ARE FROM DIFFERENT REGIONS

Group Five

SUSAN HENDRICKS

ABEL UDOH

JIM RUSAK

JUSTIN BROOKES

HSIU-MEI CHOU

TRINA MCMAHON

AT SUCCESSFUL GLEON COLLABORATIONS...

- THERE IS GOOD ARTICULATION OF THE **INTENT, PURPOSE AND GOALS** OF THE MEETING.
- THERE IS **CONTINUITY** BETWEEN CURRENT AND PREVIOUS MEETINGS.
- THE MOOD IS **ACTIVE**, NOT PASSIVE.
- THERE IS A FOCUS ON THE DESIRED **POSITIVE OUTCOME**.
- MEMBERS ARE WILLING TO **PARTICIPATE** AND **COMMUNICATE** INFORMATION WITH OTHER MEMBERS; MEMBERS ARE EXPECTED TO MAKE **MEANINGFUL CONTRIBUTIONS**.
 - **SHARING KNOWLEDGE** IS KEY TO **BUILDING UP A NETWORK**.
 - MEMBERS SHOULD BE GENEROUS AND **TRUST** THAT THEY CAN SHARE DATA SAFELY.
 - ALL MEMBERS ARE **INCLUDED**.
- MEMBERS ARE **FORWARD-THINKING** AND COME PREPARED.
- A **LEADER IS IDENTIFIED**.
 - HE OR SHE SHOULD BE ACCOUNTABLE, AS HE OR SHE IS RESPONSIBLE FOR FOLLOWING UP ON PROJECTS AND FOR MAINTAINING CLOSE COMMUNICATION IN BOTH LARGE AND SMALL GROUP SETTINGS.
 - STUDENTS SHOULD BE OFFERED THE OPPORTUNITY TO BE THE LEADER.
- **STUDENTS ARE ENCOURAGED TO PARTICIPATE**.
 - BY DOING SO, THEY GAIN **VISIBILITY, EXPOSURE, RECOGNITION, AND OPPORTUNITIES** THAT SET THEM APART FROM THEIR PEERS.
- THERE ARE **OPPORTUNITIES TO LEARN** MORE ABOUT FUNDING.

GLEON RESOURCES:

- BRAINS
- DATA
- CONNECTIONS
- \$
- EMERGENT PROPERTIES CAPACITIES

- BROAD, MULT DISC. SKILL SETS

NOTES ON GLEON:

EXPAND THE NETWORK?

ENHANCE THE NETWORK?

CONTINUE THE NETWORK?

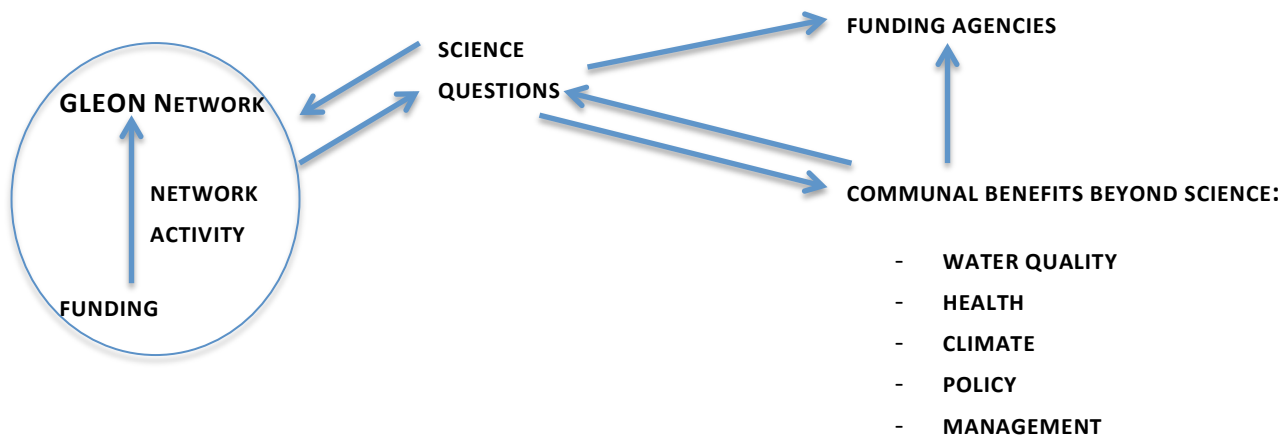
How?

- NETWORK – PARTNERSHIP INTERACTIONS
- CONNECTIONS/ABSORPTIONS ARE REALLY EFFECTIVE

BIG QUESTIONS OF SCIENCE – NOTES

- SCIENCE QUESTIONS ~ UNIQUENESS
- BIG → LITTLE SCIENCE = FUNDING
- SCALES OF FUNDING
- RESEARCH?
- CONTRIBUTION TO GLOBAL NETWORK = BROADER IMPACTS

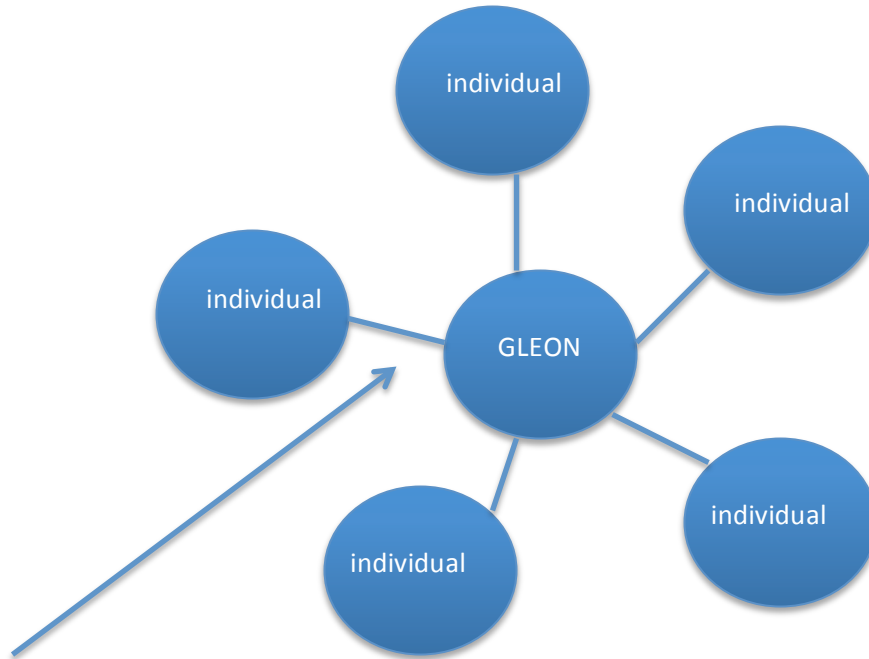
CONCEPT MAP:



1) BIG SCIENCE → 2) LITTLE SCIENCE → 3) SOCIETAL BENEFITS

(CHANGE FROM 1 TO 2.)

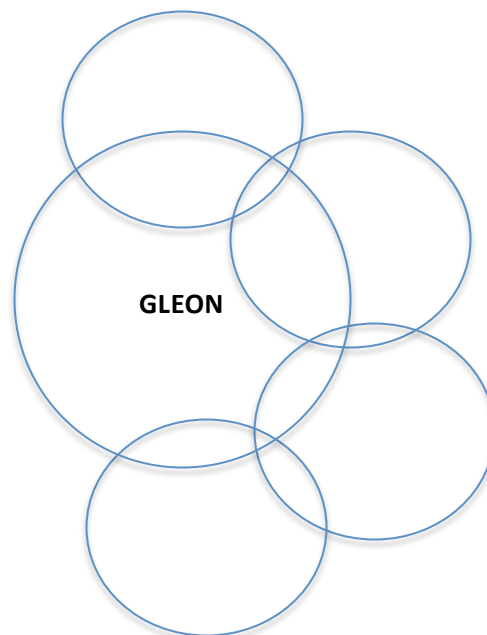
(NEED FOR EDUCATION ON
GOOD ENVIRONMENTAL
PRACTICES)



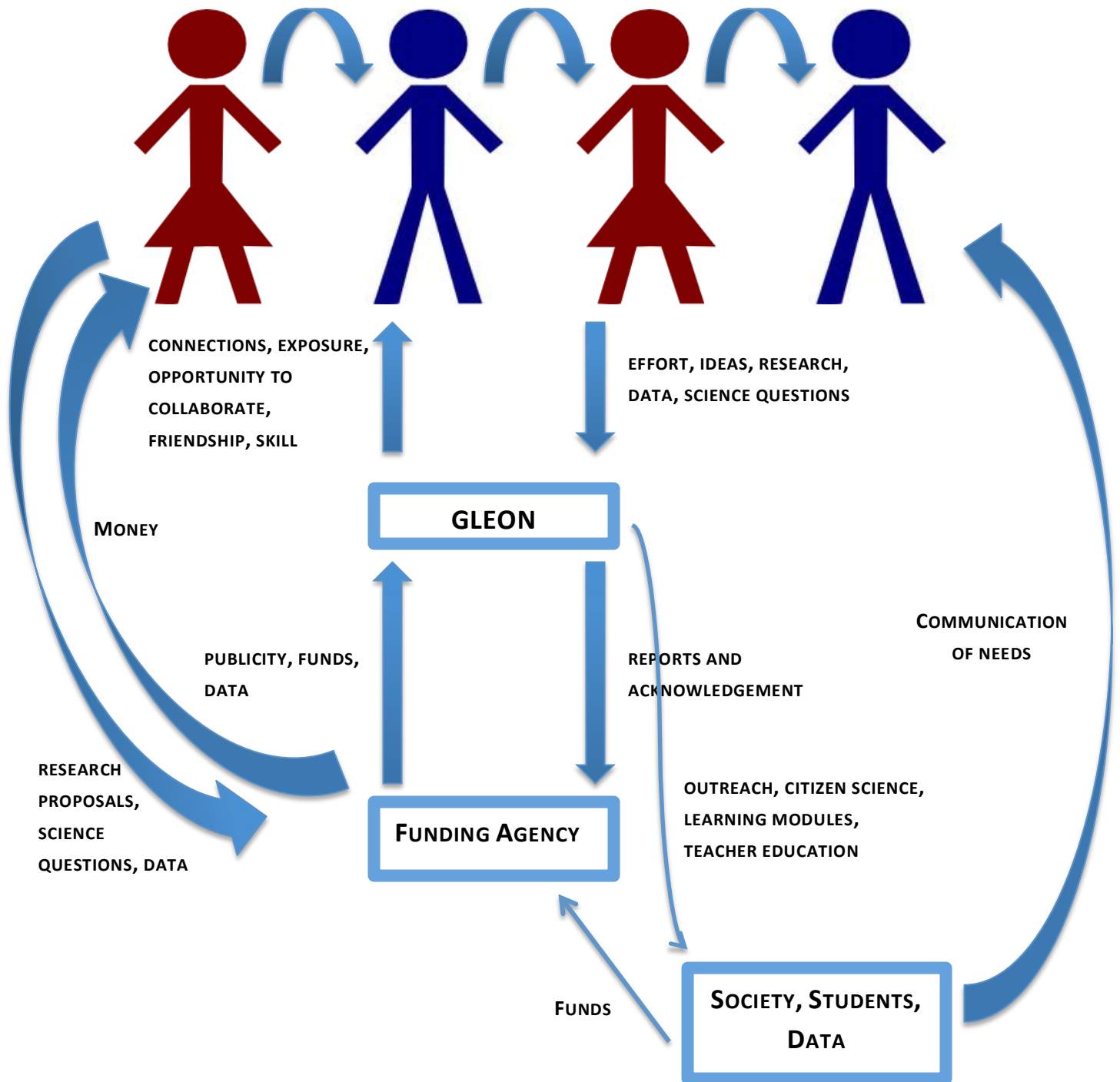
**A CONNECTION, BUT NOT ALWAYS AS DAY-TO-DAY
BUSINESS**

BUILD THE NETWORK

BLUR THE LINES BETWEEN GLEON AND ONE....



INDIVIDUALS



Group Six

ALO LAAS

LUKE WINSLOW

DON PIERSON

BERNARD MONTUELLE

VARDIT MAKLER

DENNIS TROLLE

