Evaluation Data Report
Ocean Viral Dynamics Working Group
Meeting One: April 11-13, 2012

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Evaluation Design

Evaluation Questions

The evaluation of the working group was both formative and summative in nature, in that the data collected from participants was intended to both gain feedback from participants about the quality of the current working group and also to inform future meetings. Several questions constituted the foundation for the evaluation:

1. Were participants satisfied with the working group overall?
2. Did the meeting meet participant expectations?
3. Do participants feel the working group made adequate progress toward its stated goals?
4. Do participants feel they gained knowledge about the main issues related to the research problem?
5. Do participants feel they gained a better understanding of the research across disciplines related to the working group’s research problem?
6. What impact do participants feel the working group will have on their future research?
7. Were participants satisfied with the accommodations offered by NIMBioS?
8. What changes in accommodations, group format, and/or content would participants like to see at future meetings?

Evaluation Procedures

An electronic survey aligned to the evaluation questions was designed by the NIMBioS Evaluation Coordinator with input from the NIMBioS Director and Deputy Director. The final instrument was hosted online via the University of Tennessee’s online survey host mrInterview. Links to the survey were sent to 14 working group participants on April 16, 2012. Reminder emails were sent to non-responding participants on April 23 and May 1, 2012. By May 8, 2012, all 14 participants had given their feedback, for a response rate of 100%.
Evaluation Data

Respondent Satisfaction

Figure 1. Satisfaction with content and format of the working group

Scale: -2 = “Strongly disagree” to 2 = “Strongly agree”
Figure 2. Satisfaction with working group accommodations

Scale: -2 = “Very dissatisfied” to 2 = “Very satisfied”

Suggestions for NIMBioS to improve the resources and/or accommodations available to working group participants:

- Easier access to printers would have been great. I had a mac and could not connect to the network somehow, but it might just be a mac problem.
- Everything was great.
- I shorter, more direct flight would be preferable.
- None I can think of at this time.
- The recycling bins were not labeled in a manner for participates to know if the cups and utensils were recyclable or compostable. A little more labeling would have helped us not just throw everything into the trash.
- These were fantastic. Wouldn’t change a thing.
Views of Group Progress

Figure 3. Do you feel the working group made adequate progress, for its first meeting, toward finding a common language across disciplines in the research area?

Comments about finding a common language:

Absolutely. Several lines of collaborative projects were identified and planned.

Joshua and Steve really kept us on track and facilitated very useful discussions.

We left the meeting with a series of action items to be accomplished by our next meeting. In my mind, that demonstrates real progress and a desire from the group to keep the momentum.

Working Group Format and Content

Figure 4. How do you feel about the format of the working group?

Suggestions for improving group format:

No comments
Figure 5. Do you feel the participating in the working group helped you understand the research happening in other disciplines in the group’s topic area?

Yes 100%

Comments about understanding research in other disciplines:

As a biologist, I’m still working to understand the math/modeling component. The representatives from those fields that participated in this working group were great and I think we made real progress. It will just take some time.

Especially the discussions in smaller groups allowed getting a much better understanding of perspectives and limitations and of the possibilities for interactions between disciplines. And to focus on what was required for moving the interactions forward.

Good with attendance of people working in areas relevant to but not within the standard marine virus community

It was enriching to learn about the current attempts to incorporate biology into global biogeochemical models and climate models.

This was a very well organized workshop that brought together a diverse and motivated group to address the role of viruses in global marine ecosystems and biogeochemical cycles. I felt that we laid the groundwork for some innovative and productive activities that bridge large-scale marine ecosystem modeling, mathematical ecology and observational disciplines.
Figure 6. Learning about issues related to the working group’s research problem

Scale: -2 = “Strongly disagree” to 2 = “Strongly agree”

**As a result of participating in this working group, I have a better understanding of:**

![Graph showing ratings of various aspects of the meeting]

**Most Useful Aspects of the Meeting**

- Ability to come together as a small group to work and discuss issues face to face.
- Basic level presentations of each group.
- Bringing diverse group together to tackle concrete question
- Effectively bringing together leading observational scientists and modelers.

*It was an exciting and fruitful exercise to identify areas where the combination of expertise present can come up with new approaches to viral ecology, on different levels of detail and complexity. I think that in this group there is a large potential for providing new tools for studying the role of viruses in on a variety of scales.*

*Meeting all the participants and learning about their work.*
The acknowledgment in the experimental part in the community that models may be useful or even necessary to understand the role of marine viruses

The discussions between empiricists and modelers in small groups, but also then in larger groups. There was a lot of data to go through before the modelling questions could be addressed.

The opportunity to do nothing else but focus on specific science questions with colleagues for two whole days. That is indeed a rare opportunity and I truly enjoyed the high-level intellectual engagement.

The opportunity to talk about what sort of data the empiricists have, and what relationships they have a solid understanding of versus what relationships they suspect. The modelers were able to share their ideas about how/what to model and explain our needs for empirical data to inform certain relationships.

The potential to make significant progress on combining existing data with the expertise of theoreticians and modelers.

Impact on Future Research Plans

Figure 7. Do you feel that the exchange of ideas that took place during the working group will influence your future research?

Comments about influence on future research:

Definitely. I got a lot of good insight from members of the working group.

I have worked with conceptual models of marine virus ecology for a long time. New ideas acquired.

I hope to develop a number of papers on this topic in close collaboration with the workshop participants.

I think it will open up for some interesting collaborations and projects.
I’m hoping that the eventual models developed by the group will help me shape how I might use high-throughput sequencing to address critical knowledge gaps.

Knowing the type of models the math folks are thinking about and the type of data that the biologists have makes it possible for me to think about what kinds of statistical modeling will be necessary to meld the two.

This was the first meeting, so it is a little hard to see how things will evolve. At this point I will primarily be supplying data. However, the contacts that I have made and the putative outcomes from the workshop have a strong potential to influence my future work.

Figure 8. Did you develop unanticipated plans for collaborative research with other working group participants?

- Yes 58%
- No 42%

**Comments about plans for collaborative research:**

I discovered shared interest in other relevant topics with workshop attendees. For example, dynamic nutrient stoichiometry may influence microbial food-web dynamic that are relevant for marine viruses but also have broader relevance to biogeochemical cycles. This may be another area of collaborative effort in future work.

I’ll be working with one of the empiricists to formulate a standardized template for the experimental data. We also chatted about their need for somebody to work on some of the genomic data and that is a statistical area that I’ve been meaning to explore. I’m not sure if I’ll have time to dive into it this summer, but might be a good project for next summer.

No concrete plans, but unexpected ideas which I am sure will develop into collaborations over the next year’s meetings.

Not yet, but I expect to.

Not yet, but I think this will develop with each workshop.
Not yet, but I’m hopeful given the trajectory.

Figure 9. Do you feel the expectations for the next working group are clear (in the sense that you are leaving this meeting with a good idea of what your contribution will be at the next meeting)?

![Pie chart showing 92% Yes and 8% No]

**Comments about understanding what is expected of working group members:**

By the end of the meeting, we had a definite timeline for certain milestones and the goals were manageable.

I will be contributing inventory and process data from our work to a group pool of data.

Organizers were sure to identify specific goals for the next workshop and my responsibilities were clear.

**Suggestions for Future Meetings**

*Demonstrations on how models run.*

I felt things went as well as they could and I wouldn’t change a thing.

I would have preferred to miss fewer days of work at my home institution (heavy teaching load this semester) and having travel days during the weekend would help me, but I can understand other people are trying to balance family obligations as well.

I would like for the modeling to be more transparent to the empiricists, and the data collection more explicit to the modelers. I would like to see the sharp division between the two broken down a bit, at least for the people who are interested in really understanding how the other works.

More breaks to allow recharge our batteries to be able to discuss the topics thoroughly for longer. It was hard to keep our focus after 3 h of intense discussions. But it would have been wonderful to be able to just take a longer
break and then come back to the table fresh to continue even if we had to finish later in the evening.

The discussions in the large group were interesting, but due our very different scientific backgrounds and interests, they also tended to run in various directions at the same time and to occasionally lose focus. I think that this was necessary for this first meeting. However, more focused discussions and concrete work in smaller groups may be a more efficient way of driving the process forward in the coming two meetings.

Thought it worked well.

Additional Comments about working group

A good experience and I’m excited to start organizing and exploring the data.

I feel privileged to have been invited. It was great and I look forward to the next one.

I really enjoyed this and look forward to the next meeting!

I think it was fantastic and appreciated the efforts of the NIMBioS staff and administration.

I thought it was very interesting, fruitful and well organized. Looking forward to the next meeting.

It’s a group of great people, both scientifically and life-wise. Due to the fact that I have to leave early, I cannot fully participate the group meetings. Another factor is that, I am not very familiar with the biological field, and I was brought here because of my math expertise - multiscale modeling. However, I found that, in order to apply that technique, I need some concrete data, and some concrete understanding on one scale when trying to infer knowledge on another scale below or above. However, I did not find these during the first meeting. The group realized this drawback later in our discussion. Hopefully more progress can be made before the second meeting.

Thank you. This workgroup was very productive and went really smoothly thanks to the great support and organization of the Institute.

Very positive, good interactions and the space, leadership and technical staff facilitated that.
Appendix

Ocean Viral Dynamics Working Group Evaluation Survey
Ocean Viral Dynamics Working Group Survey

Thank you for taking a moment to complete this survey. Your responses will be used to improve the working groups hosted by the National Institute for Mathematical and Biological Synthesis. Information supplied on the survey will be confidential, and results will be reported only in the aggregate.

Please check the appropriate box to indicate your level of agreement with the following statements about this working group:  (Very satisfied, Satisfied, Neutral, Dissatisfied, Very dissatisfied)

I feel the working group was very productive.
The working group met my expectations.
The presenters were very knowledgeable about their topics.
The presentations were useful.
The group discussions were useful
I would recommend participating in NIMBioS working groups to my colleagues.

Please check the appropriate box to indicate your level of agreement with the following statements.

As a result of participating in this working group, I have a better understanding of:
(Strongly agree, Agree, Neutral, Disagree, Strongly disagree)
the research data available on the working group's topic
the modeling techniques available on the working group's topic
the types of data needed to better inform existing models
new methods and modeling techniques that need to be developed

Do you feel the working group made adequate progress, for its first meeting, toward finding a common language across disciplines in the research area?
Yes
No
Comments:

Do you feel the participating in the working group helped you understand the research happening in other disciplines in the group's topic area?
Yes
No
Comments:

Do you feel the expectations for the next working group are clear (in the sense that you are leaving this meeting with a good idea of what your contribution will be at the next meeting)?
Yes
No
Comments:
Do you feel that the exchange of ideas that took place during the working group will initiate or influence your future research?
   Yes
   No
   Please explain:

Did you develop unanticipated plans for collaborative research with other working group participants?
   Yes
   No
   Please explain:

What do you feel was the most useful aspect of the working group?

What would you have changed about the working group?

How do you feel about the format of the working group?
   This was a very effective format for achieving our goals
   This was not a very effective format for achieving our goals ->
      The working group format would have been more effective if:

Please indicate your level of satisfaction with the working group accommodations:
(Very satisfied, Satisfied, Neutral, Dissatisfied, Very dissatisfied)
   Travel arranged by NIMBioS
   Housing arranged by NIMBioS
   Comfort of the facility in which the working group took place
   Resources of the facility in which the working group took place

Please indicate any changes NIMBioS can make to improve the resources and/or accommodations available to working group participants:

Please provide any additional comments about your overall experience with the working group: