

COLLABORATIVE SCIENCE FOR ESTUARIES

WEBINAR SERIES



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NERRS Science Collaborative

Going Virtual (and a Bit Stir-Crazy): Lessons from and for Collaborative Science Amid a Pandemic



National Estuarine
Research Reserve System
Science Collaborative

Date: Wednesday, March 30, 2022

Time: 3:00– 4:00PM ET

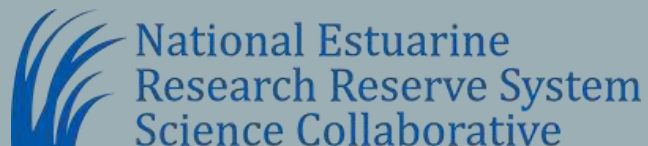
March 30, 2022 • NERRS Science Collaborative Webinar Series

GOING VIRTUAL (AND A BIT STIR-CRAZY)

Lessons from and for Collaborative Science Amid a Pandemic

Susi Moser, Ph.D.

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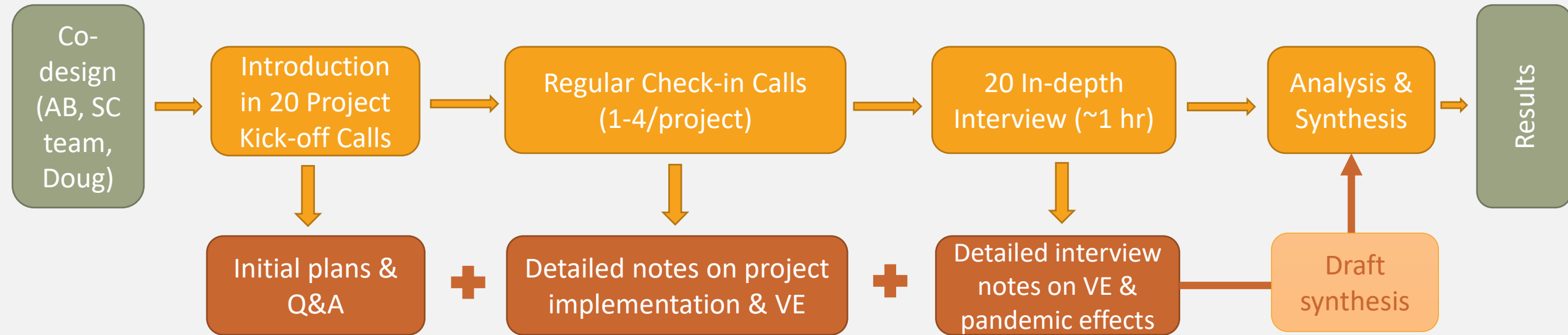


OVERVIEW

- Methodology
- Projects and Context
- Results
- Summary & Implications
- Q&A



METHODOLOGY



Thank you to all project participants!!!

A DIVERSITY OF PROJECTS & CHANGING CONTEXTS

- 6 Collaborative Science Projects | 6 Science Transfer Projects | 8 Catalyst Projects

800,000 cases

- Varying start dates (awards with intended start dates in 2020), project length (1-3 years), degree of complexity of projects => status at the time of interviews

600,000

- Projects involving a single vs. multiple other reserves => different COVID-19 contexts; safety protocols; institutional requirements

400,000

- Projects aimed at diversity of “end users” (e.g., other reserves, local/state decision-makers, natural resource managers, land owners)

200,000

- Project staff turn-over

7-day average

Feb. 2020

Jun.

Oct.

Feb. 2021

Jun.

Oct.

Feb. 2022

RESULTS OVERVIEW

1. Big picture: Direct and Indirect pandemic impacts on projects
2. How projects adjusted
3. Which technologies and techniques were used and proved useful
4. What benefits and losses people experienced due to the shifts made during the pandemic
5. Which advantages, successes, “failures” and shortcomings were experienced in virtual engagement
6. Which lasting impacts of the pandemic people hope for, fear and what they now long for



BIG PICTURE: DIRECT & INDIRECT PANDEMIC IMPACTS



- **Impacts on NERR System as a whole**
- **Impacts on project staff**
- **Research/Project implementation**
- **Impacts on home institutions**
- **Impacts on stakeholders/end users**
- **Supply chain issues**
- **Fiscal impacts**
- **Benefits**



HOW PROJECTS ADJUSTED



PROJECTS ALREADY MAINLY VIRTUAL

- Already expected virtual interaction; just got easier
- Delays in start, implementation
- More internal/team interactions
- Regular meetings are non-mandatory
- Reliance on NERRS Annual Meeting meant needing to create alternative virtual meetings

PROJECTS MAINLY IN-PERSON/DIRECT CONTACT

- Project delay (up to a year) – dependence on hands-on work, timing of species
- Shift from empirical data collection > info synthesis
- Dealing with constant uncertainty with situational changes, changing institutional contexts
- Creative use of outdoor classroom spaces
- Constant communication with team/end users (“What are you comfortable with?”)
- Conducting more frequent but shorter virtual meetings
- Rolling with initial spike in participation > decline in participation > enthusiasm to meet again in person > decline
- Concern with “computer access equity”



TECHNOLOGIES AND TECHNIQUES USED AND PROVEN USEFUL



TECHNOLOGIES

TECHNIQUES

• Meeting Platforms

- Zoom (Break-out groups [BOGs])
- Adobe Connect (BOGs)
- WebEx (BOGs)
- GoToMeeting (no BOGs)
- MS Teams (no BOGs)
- Google Meet
- EventBrite
- WhatsApp (instead of phone)
- YouTube

• Interactive/Sharing Tools

- Google (folders, slides, maps, sheets, docs, forms, jamboard)
- Inst. file sharing platforms
- Dropbox
- Padlet & Slido
- Mural & Miro
- Word clouds
- Menti & polleverywhere
- Calendly, WhenToMeet & Doodle
- Qualtrics & Survey Monkey
- Plectica
- ArcGIS Online

VE - in session

- Fun icebreakers
- Group discussions
- Break-out groups
- Short presentations
- Chat
- Polling
- Interactive mapping
- Hand-outs
- Whiteboards

Other

- Asynchronous engagement (e.g., annotating map; 1-on-1 calls; document reviews)
- Safety protocols (for travel, field work, lab work, in-person meetings)

LESSONS ABOUT TECHNIQUES & TECHNOLOGIES

1. Relationships are more important than fancy technology
2. Almost everything is possible to do virtually, just takes patience and practice
3. Don't go more complex or fancy than necessary
4. Sometimes simple is best
5. Beware of "form over function"
6. Use different techniques and technologies for different types of meetings
7. Vary approaches
8. In break-out groups, go long to go deep



BENEFITS AND LOSSES EXPERIENCED DUE TO THE SHIFTS MADE DURING THE PANDEMIC



Credit: Hallmark Resorts

OVERALL BENEFITS

- **Ease and efficiency** of attending meetings, conferences
- **Less time spent on travel**
- More attention on connecting with people; **valuing people over work**
- **Colleagues became (better) friends**
- **Wider geographic reach** to end users
- **Greater creativity, proactivity in engaging users**
- More **respectful and mindful** in requests of others
- **Equalization** effect of Zoom squares (though still need to manage “loud voices”)
- Overall sense of **“sharing the stage”** rather than “spotlighting individuals”
- **Greater appreciation of visual tools** (e.g., GIS)

OVERALL LOSSES

- **Human connection; fraying of social ties**
- **Networking opportunities** and spontaneous, creative side conversations, hallway chats, real-time feedback, ease
- **Nuance**; cues from body language
- **Seeing people “in context”**; seeing the whole landscape
- **In-person interaction skills** due to long isolation
- **No more time** to think and reflect
- **Added stresses on staff**
- People’s **burnout**

“Soft skills have come to the fore”

SKILL-BUILDING

Improved skills

- **Better facilitation** (end users, team)
- **Better communications**
 - Giving presentations/public speaking
 - Clear communication with team/end users
- **Making meetings worthwhile** (purpose-driven, task oriented, clear next steps)
- **Scheduling** people
- **Time management**
- **Caring** about people
- **Relationship focus** (recognition of importance, needed investment)
- **Greater creativity** in maintaining cultural forms of respect (e.g., importance of food)
- **Self care & pacing** (body, mind, spirit)

New skills

- **Team leadership/tending**
- **Managing people** (from afar)
- **Mastering operation and etiquette of VE technologies** (many more options)
- **Organizational skills** (logistics)
- Comfort with change; **adaptability**
- **Learning** by watching/hearing/doing without modelling



ADVANTAGES OF VIRTUAL ENGAGEMENT

- **Travel & Opportunities to be at meetings/conferences**
- **Organizing Meetings**
- **People management**
- **Handling multiple demands during pandemic**
- **Access to resources**



SUCCESSSES IN VIRTUAL ENGAGEMENT

- **Switch from Analog to Virtual**
- **Team interactions**
- **Creativity**
- **Respect**
- **Time management**
- **Partner engagement**
- **Get input from all (even quiet people)**



“FAILURES” & SHORTCOMINGS OF VIRTUAL ENGAGEMENT



- **Meeting design & Follow-up**
 - Going on too long with presentations
 - Meetings too long and/or too large
 - Couldn't recreate "socializing"
 - People bailing when going to BOGs
 - Use of technology too complicated => tech struggles rather than focus on contents
 - Naiveté how much you can get done in one meeting
 - Failure to engage meaningfully between meetings
- **Time management & Scheduling**
 - Harder to delegate
- Many more shorter meetings is very time consuming
- Getting harder and harder to schedule people
- **Diversity & Hearing all voices**
 - Unsure which end user voices we're missing (many already under-staffed, under-resourced)
 - Inability to get as much diversity as hoped
- **Presence & Fatigue**
 - People only "half-present" (camera off; distracted by other work/demands; children; pets etc.)
 - Facilitator's exhaustion -> errors more likely
 - "Zoom fatigue" is real (for everyone)

Resource: <https://www.global-integration.com/insights/advantages-and-disadvantages-of-virtual-working-12-months-in/>

LESSONS LEARNED AND GOOD ADVICE FROM PEERS

- VIRTUAL ENGAGEMENT
- HYBRID MEETINGS
- ASYNCHRONOUS ENGAGEMENT
- OTHER

Lessons in Virtual Engagement: The Hard-Won Lessons and Advice from Peers

The following bits of advice were gleaned from 20 interviews with project and engagement leads of projects funded by the NERRS Science Collaborative during the COVID-19 pandemic. Compiled by Susanne Moser, Ph.D. (March 2022).

- **Take a training in virtual engagement – it's time well spent!**
- **Plan really well for virtual meetings => it takes more time – just plan for it to avoid stress**
 - Set clear goals (get buy-in)
 - Develop a detailed facilitator/process agenda
 - Share a shorter public agenda in Google doc so people can follow
 - Orient participants upfront and regularly over the course of the meeting
 - Include multiple stretch & bio breaks
 - Have note-takers in break-out groups (BOGs)
 - Overschedule, then let people go "early" (people feel grateful as they leave)
 - Really know who is coming; keep notes on their goals, interests, concerns
 - Prior to meeting train people on how to give ppts online
- **Have handler of technical issues (separate from facilitator)**
 - To help move in/out of BOGs; to deal with tech. challenges; to mind and monitor chat
 - Always put prompts, questions in chat
 - Don't name the problem/mistakes; just act cool and collected; no one knows
- **Have good ice-breakers or check-in prompts**
 - Examples: Guessing game to recognize locations, wildlife; favorite foods in childhood and now > change
 - Relate check-in prompt to the theme of the day somehow
 - Doodling (pencil and paper)
 - Manage people introducing themselves
- **Keep it interesting and doable for all**
 - Vary presentation, discussion, interactive activities/exercises, leads on different parts
 - Value discussion over information delivery (can be sent upfront)
 - Always give more than one option to provide input (in and after meeting)
 - Move ~~it~~ keep it fast-paced – people need surprises (e.g., virtual beer, gift boxes)
 - Be patient; grow comfortable with silence; give people time to respond
- **Beware of and respect everyone is on overload**
 - Due to email overload, try several times and in different ways to reach people (e.g., with survey requests, email and call people)
 - Recognize that different stakeholders/team members have different needs (e.g., meeting frequency)
 - Be cognizant and respectful of everyone's stresses
 - Beware of vulnerability of points of contact – loss of connection to key communities
 - Be patient! Give yourself/others grace!
- **Be conscientious and purposeful in follow-up**
 - Record sessions, then share post-meeting with notes; but recognize most don't watch
 - Share agenda with links to presentation (time-stamped)

Lessons in Virtual Engagement (cont.)

Additional Tips for Hybrid Meetings

- Beware that hybrid field trips and/or classroom activities are hard to pull off well (often it doesn't work)
- Work with one facilitator for people in the meeting room; another for people online;
- Must have good rapport between the two facilitators
- Practice hand-off/integration beforehand
- Ensure people online can hear well, have opportunity to participate equally (e.g., repeating questions, sending visuals, specific times for their questions, input)
- It's worth investing in good video conferencing system

Additional Tips for Asynchronous Engagement Between Virtual Meetings

- Send materials to participants
 - Ahead of meeting with clear instructions to prepare
 - After meeting (e.g., notes, prompt follow-ups, presentation links)
- Give people opportunities to co-design shared protocols/approaches
- Set expectation of "homework" but be respectful of people's added demands at home
- Follow-up or have advance one-on-one conversations – may get more useful input
- A deeply-embedded person on the ground who can serve as connector, legitimizer, mobilizer helps to maintain contact and engagement

Good Advice

- Keep your various physical and digital calendars up-to-date and synched; otherwise, you create yourself extra work having to work out the schedule conflicts
- Experience shows that both sequences of engagement work and there is no simple rule for when to use which:
 - In-person > virtual meetings
 - Virtual > in-person meetings
- Beware of the technical limits for small organizations and rural/remote locations (band-width)
- Don't worry too much about problems until you face them
- Encourage people to "choose their own adventure" (multiple ways to engage with you)
- Recognize different learning styles (visual, audio, hands-on)

LASTING IMPACTS OF PANDEMIC

HOPES

- **Humanity @ work**
 - Greater empathy and tolerance for range of emotions, stresses people have
 - Intentional creation of spaces for care
- **Lower environmental impact**
 - Fewer traffic jams, less time spent commuting
 - More local meetings, fewer long-distance meetings
- **Flexibility**
 - Mix of in-person/virtual programming
 - Much greater use of VE
 - Flexibility of funds (cf. catalyst projects)
 - Greater work flexibility

FEARS

- **Lasting emotional impact** of trauma
- **Social fabric**
 - Lingering distrust and fears due to polarization around vaccines
 - “Social threads are wearing thin”
- **Negative impacts on students, ECRs**
 - Complete loss of contact > lifelong impacts
 - Loss of social experiences
 - Entering career
 - Recruitment into the field
- **FOMO** – “fear of missing out” due to physical distance

LONGINGS

- **Direct human interaction again**
 - Field work/field trips
 - Conferences/annual meeting
 - Office interactions
 - Seminars
 - “A breath of relief when we can meet again...”
 - “Really miss having a lobster together again”
 - VE is “just a tool in the box, not the only one we’re afforded”
- **Travel**
 - Travelling less – time, \$, carbon benefits
 - Travelling more again



SUMMARY & IMPLICATIONS



1. A yeoman's job to keep things going

- Environmental monitoring
- Reserve management
- Implementation of research projects
- Relationships to stakeholders/partners
- Staff morale

2. Success factors

- People's willingness and ability to be flexible and learn
- Caring for each other and their partners
- Commitment and passion for the work
- Enabling technology and widespread availability
- Social capital in the NEERS system

3. Status of/Appreciation for engagement specialists (CTPCs) seems to have risen

4. Future of VE

- Many hope for "virtual" meetings to stay; become part of the way people work now (part of portfolio, but not sole or dominant approach)
- Does NOT replace direct human contact, face-to-face networking
- Comes at significant cost; compounds existing "overwork" culture

5. The success should not hide the **tremendous cost** involved ("burnout is real")

6. Replenishment is needed

7. System-wide implications to be discussed further

Q&A • CONTACT FOR FOLLOW-UP



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Thank you!

Q&A

Q: I have been surprised to find that it's been hard to engage the younger generation in a virtual space. For example, I was in a meeting where the students did not use their cameras, did not use chat or speak up, and bailed during the break outs. Did you see similar demographic patterns, and any ideas on how to target that audience?

- **A:** It varied over time. Fatigue for students, having to be online all the time, was certainly mentioned. I don't think there was a simple solution for it, aside from using a variety of modes to reach people; e.g, email, WhatsApp, etc. What's also interesting is that virtual methods provided access to other demographics that were previously harder to reach, such as ranchers, fishers, etc.

Q: What techniques have teams used to get closer to those social connections that are not always easy to achieve virtually?

- **A:** Creating spaces of care was a big one; e.g., having a "virtual beer," or sending care packages. A lot of success seemed to come from those 1:1 interactions, even if it was virtual, especially when people started to shift to the phone from being on camera.

Another important note: there seems to be a widespread norm that providing culturally-appropriate food is important for these kinds of meetings, so people highlighted a few creative ways that they tried to replicate that as well.

Q: Are there certain moments in a project when the social connections matter most?

- **A:** I don't think I heard that. There were interesting conversations about whether it was important to start virtual and then shift to in-person or to start in-person and shift to virtual. The consensus seems to be that both work, and it kind of varies. Some people insisted that their project wouldn't have worked virtually if they hadn't had an existing relationship with their collaborators, while others noted that starting virtual made it feel like a reunion when they finally met in person.

I think people recognize that it varies how much people want to be engaged over time, and that you have to stay in contact with them to understand how much is too much, to be respectful of the level of engagement, and give them many different forms of engagement.



**National Estuarine
Research Reserve System
Science Collaborative**

EXTRAS

IMPLICATIONS FOR NERR SYSTEM

- What helped NERR system weather the pandemic
 - Many sites/team members/labs already remote => used to working virtually
 - Sector meetings already virtual
 - Many projects intended to be virtual
 - Pre-pandemic use of Zoom etc.
 - Social capital in system to feed off of
 - Relationships built previously via capacity building grants
 - Flexibility of catalyst grants
 - Flexibility of adjusting timelines, budgets with help from NSC
- Status of/Appreciation for engagement specialists (CTPCs) seems to have risen
- Questions about the NERRS “sense of family” after prolonged period of not meeting in person
 - Across-the-board hope to have in-person annual meetings again (“Everyone is chomping at the bit”)
 - Missing side-bar conversation, comradery, networking
 - On-ramping of new staff in light of significant turn-over
- Many hope for “virtual” meetings to stay; become part of the way people work now
 - Esp. short meetings (with team members or end users, advisors)
 - Esp. for projects with regional/national scope
 - Generally smaller budget allocation for travel