

SAFMC Citizen Science (CitSci) Operations Committee
Meeting Summary – DRAFT
Charleston, SC
October 30-31, 2024

Welcome and Meeting Overview

- Staff gave a short welcome; Committee members introduced themselves to one another
- Staff reviewed the meeting goals:
 - Researchers share findings from Citizen Science Program evaluation work. Discuss findings and develop recommendations for Citizen Science Program response.
 - Review Citizen Science Program Planning document and progress made toward addressing Program goals, objectives, and strategies. Provide guidance on Program priorities.
 - Provide update on Citizen Science program and project activities.

Citizen Science Program Initial Evaluation

OVERVIEW

- Staff provided background on the initial CitSci Program evaluation efforts and shared next steps in sharing this information with the Council

BONNEY RESEARCH

- Bonney presented findings from scientist/manager online survey (see Table 1 in Attachment 1d for a summary of findings)
- Key points from the group’s initial questions and discussion are highlighted below
 - Findings collected baseline data from scientists and managers; information gathered also helpful for Program design
 - Informative findings that reflect what many group members have observed; helpful to understand that scientists and managers are aware of and acknowledge trust issues with fishermen and that fishermen feel they aren’t being heard
 - Having a metric to measure that scientists and managers understand that fishermen feel their voices are not heard/valued as they should/could be is important

SWEENEY TOOKES ET AL. RESEARCH

- Sweeney Tookes et al. presented findings from fishermen interviews; interviews were conducted with all sectors – commercial, for-hire, and recreational fishermen (see Table 1 in Attachment 1d for a summary of findings)
- Key points from the group’s initial questions and discussion are highlighted below
 - Findings suggest focus on recreational fishermen for collaboration; recreational fishermen have differences in avidity/experience/etc. – important when thinking about project design and representativeness of data; helpful to understand the participants in your program and how that relates to the population at large
 - Appreciated the recommendations for citsci project design; noted importance in sharing results back with project participants
 - Initial interest in citsci projects high but typically have high attrition rates; how do you address this?; volunteer recruitment and retention is a challenge for many citsci projects and is a large part of citsci staff’s focus for all of our projects; look to other programs/projects working in this

space for ideas; think not just about how to motivate/incentivize participation but how to decrease barriers to participation

- CitSci projects would likely benefit from pre-determined timelines; volunteers would know they don't have to sign up to collect data indefinitely; volunteers would have sense of urgency and completion
- There wasn't overlap between these fishermen interviews and the Bonney research online survey respondents; interviews were conducted before online survey, so didn't have preliminary results from scientist / manager survey to share during interviews; make sure to mention this when present to Council
- Helpful to provide info on study focus, resources, and timeline when presenting this research to provide context

DISCUSSION OF FINDINGS & RECOMMENDATIONS

Committee Recommendations

- Group was generally supportive of Sweeney Tookes et al. and Bonney's recommendations; noted the Program is already doing many activities that overlap with these recommendations and suggested additional efforts for the Program and the broader Council to consider (see Table 1 and Table 2)
- Findings have helped quantify concerns heard from stakeholders and articulate some of the challenges for citsci projects in marine fisheries while also highlighting opportunities for the Program; group felt citsci could help chip away at some of the issues identified through this research
- Working to address trust issues cannot be done through the Citizen Science Program alone; this is a large issue that will require work on a much broader scale from the Council and wider fisheries community; important to be aware of and acknowledge this dynamic and citsci work (if carefully designed) could help address this problem and encourage participation in projects and broader Council process
- Recommend continuing the CitSci Program's overall approach and its goals and objectives; current activities are already helping address issues identified; should use Bonney and Sweeney Tookes et al. findings to further refine and focus Program's efforts
- Supported CitSci Program conducting similar research effort in the future after data from projects have been considered for use in assessment and management

Additional discussion points by the Committee

- Suggestion to add brief summary of methodology to the table comparing findings from the two research efforts; interviews had smaller sample size, but were longer (30min – over an hour +) and allowed for more expansive opportunities for quantitative and qualitative data collection; survey had higher sample size, took respondents less time (~10min) and was more quantitative in nature (e.g., discreet choice)
- Member asked about whether more traditional cooperative research (e.g., fishermen typically get paid for their expertise, can help with retention) falls under the CitSci Program's umbrella; when CitSci Program was developed, it was an intentionally designed Program that was different than the SE regions' cooperative research program; CitSci Program's focus was to work with volunteers for data collection via projects; cooperative research very valuable and Program encourages this type of work; whether or not CitSci Program should broaden focus to include cooperative research can be discussed by this group; if want to have these discussions likely helpful to think about the Program's resources and capacity

- Helpful to identify and acknowledge that it may be more challenging to develop citsci projects under some research priorities (e.g., numerous collaborators needed for success, logistics more complicated, statistical design critical)
- Important to acknowledge that the CitSci program does not control/decide whether citsci project data are used in management/assessment; try to give projects their best chance of success by using Design Teams, including data end users and fishermen in project development, being conduit for data being considered in decision making; if data are not used that will be detrimental to Program, will impact trust

Table 1. Sweeney Tookes et al. 2024 key findings and current Citizen Science Program efforts and ideas for the future.

Summarized Sweeney Tookes et al. Key Findings & Recommendations	Current CitSci Program Efforts & Thoughts	Future CitSci Program Efforts for Consideration
<p>Fishermen do not feel valued or heard</p> <ul style="list-style-type: none"> • Be aware of and acknowledge this dynamic • CitSci projects, if carefully designed, could help address this problem and encourage participation in projects and broader Council processes 	<ul style="list-style-type: none"> • Outreach initiatives – working to build relationships with key stakeholders, organizations; trying to go into fishing communities (e.g., tackle shop visits, seminars partnering with leaders in fishing communities, fishing expos, etc.); partnership with Best Fishing Practices team leverages resources, extends reach, increases outreach opportunities • Have had some project participants engage in other Council related activities • Other Council outreach efforts – Stakeholder Engagement Meetings (SEM) hoping to help with this • Participant communication emphasizes that we are listening to their perspectives and appreciate their participation and knowledge 	<ul style="list-style-type: none"> • Important to make formal acknowledgement of trust issues between stakeholders (e.g., fishermen and scientists/managers); scientists and managers recognize this distrust and recognize fishermen do not feel heard • Important to acknowledge experience and knowledge of fishermen; think about how citsci can help turn their knowledge (e.g., often referred to as simply “anecdotal info”) into data streams • When sharing info on the CitSci Program – important to demonstrate what the Program has done, and potential data uses; also important to personalize the Program’s ‘story’ providing background on how the projects came to fruition; important to not only share results but also tie the Program back to stakeholders • View projects / project ideas through the lens of this research (e.g., how do projects amplify fishermen being heard?) • Critically important to continue investment in outreach initiatives in fishing communities (e.g., CitSci, BFP, SEM) • Important to acknowledge fishermen viewpoints in Council communication platforms (e.g., when describing rationale for management action in newsletter, etc.) • Council process offers many opportunities for stakeholder engagement; could be helpful to quantify the opportunities for engagement, summarize annual engagement (# people engaged per sector, per state, per engagement type (online vs in-person), etc.), and share this info • Many stakeholders may not know the limitations of what actions the Council can take (e.g., MSA); may be helpful to develop messaging and outreach products addressing this

		<ul style="list-style-type: none"> Managing expectations is critical – Council often uses ‘older’ data for management decisions which may not match what fishermen are currently seeing on the water; develop communications / messaging explaining these limitations NOAA effort highlighting how citsci data have been used in assessment nationally; important to highlight these ‘good’ results in communication and messaging too
<p>Voices at public hearings often don’t represent the fishery</p> <ul style="list-style-type: none"> CitSci projects could help with engagement in broader Council process 	<ul style="list-style-type: none"> Council (via CitSci Program, BFP, general Council) has increased outreach initiatives to hopefully increase engagement by those both in and out of the Council network Opportunities for those outside of Council network to share ideas with Program (e.g., Citizen Science Project Idea Portal) 	<ul style="list-style-type: none"> Continued investment to support outreach initiatives critical Council meeting locations impact participation and engagement; need to be cognizant of this when selecting meeting locations
<p>Fishermen deeply distrust management</p> <ul style="list-style-type: none"> Since level of distrust high, staff were surprised with the positive opportunities for CitSci Highest level of trust from recreational sector Burden of proof on CitSci projects to be transparent about project goals, data use, impact on management 	<ul style="list-style-type: none"> Council (via CitSci Program, BFP, broader initiatives) has increased outreach to work on building relationships within fishing communities; starting to see some positive benefits but this is a long-term process CitSci Program’s projects try to clearly communicate about project goals, how data can or cannot be used, potential impacts; try to keep expectation management front of mind 	<ul style="list-style-type: none"> Continued investment to support outreach initiatives critical Project selection important – try to support ‘win-win’ projects; this can be challenging to do in practice May be helpful to focus on the recreational sector within current projects and for future projects; rec sector has many data challenges and highest level of trust Encourage use of program ambassadors

<p>Fishermen skeptical of science used by management</p> <ul style="list-style-type: none"> Lack of trust in science both a barrier and could be an opportunity for CitSci Program 	<ul style="list-style-type: none"> Focus on projects filling data gaps that meet specified research priorities Messaging for projects and volunteer recruitment – opportunity to share on the water knowledge and expertise 	<ul style="list-style-type: none"> Consider more neutral parties for partnership
<p>Federal fisheries management is a black box</p>	<ul style="list-style-type: none"> Communication with project participants; address questions and encourage opportunities to share public comment Broader Council outreach – BFP MVP workshops, SAFMC overview presentation, Stakeholder Engagement Workshops, etc. – working to improve this 	<ul style="list-style-type: none"> Helpful to develop and/or distribute fisheries management 101, Council 101, and MSA 101 outreach products; examples that are already available: fisheries management 101 and Magnuson 101 Encourage CitSci Program participants take part in the Marine Recreational Education Program (MREP) Consider hosting mini-seminars (15min presentation, 15 min Q & A) and/or videos to share info on these topics
<p>Power dynamics mean this is NOT traditional citizen science</p>	<ul style="list-style-type: none"> Aware of this dynamic (i.e., fishermen providing info/data that could affect their fishing activities); challenging trying to figure out how best to address; influences motivations and increases barriers for participation 	<ul style="list-style-type: none"> Acknowledge this power dynamic; this can help demonstrate hearing stakeholders’ views Need to think about this dynamic when selecting/deciding if a project is a good fit for CitSci Program Incorporating specific QA/QC and validation into projects could help address this issue
<p>‘Pro Bono’ services for commercial and for-hire sectors & Recreational fishermen as partners for citizen science</p>	<ul style="list-style-type: none"> Current projects focus on different audiences (fishermen, recreational divers, broader public) 	<ul style="list-style-type: none"> Consider focusing more projects / collaboration with recreational sector; but important to note this group is likely less avid Consider focusing commercial / for-hire projects on more passive data collection efforts Use these findings to inform project development and identify target audiences for projects
<p>Recommendations for well-designed projects</p> <ul style="list-style-type: none"> Genuinely collaborative Relevant Simple 	<ul style="list-style-type: none"> CitSci Program Approach: support projects that meet identified South Atlantic research priorities / data gaps; complement / supplement existing data sources and partners; intentional project design – direct application to assessment and management; 	<ul style="list-style-type: none"> Prioritize project ideas where fishermen and scientist interest overlaps Project selection important – try to support ‘win-win’ projects Constant transparency and expectation management critical

<ul style="list-style-type: none"> • Non-duplicative • Culturally appropriate • Carefully selected initial projects 	<p>encourage scientist and fishermen collaboration</p> <ul style="list-style-type: none"> • CitSci research priorities updated every two years to keep relevant; informed by SAFMC, SAFMC APs, Project Idea Portal • Encourage continued use of project Design Teams – diverse stakeholder work groups to design and develop projects; include scientists & fishermen in all phases • Use tools / resources (e.g., Pocock et al. 2014) to decide if project idea/research question would work well with a citizen science approach (e.g., simple protocol, motivation of participants, resources available) • Challenging to select projects with no risk for fishermen; trying to fill data gaps and want data to be used in decision making; often don't know what outcome/impact could be 	
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Table 2. Bonney 2024 key findings and current Citizen Science Program efforts and ideas for the future.

Summarized Bonney Key Findings & Recommendations	Current CitSci Program Efforts & Thoughts	Future CitSci Program Efforts for Consideration
Increase involvement of scientists and managers in project design and development	<ul style="list-style-type: none"> • Encourage continued use of project Design Teams – diverse stakeholder work groups to design and develop projects; include scientists & fishermen in all phases 	<ul style="list-style-type: none"> • Work to increase involvement of scientists and managers in Design Teams • Work to increase diversity of organizations/agencies involved in Design Teams
Advertise that project design is accomplished through collaborations among scientists, managers, and fishermen	<ul style="list-style-type: none"> • Whenever staff present on the overall CitSci Program we try to include information on the Program's Approach and project selection and development which includes info on use of Design Teams 	<ul style="list-style-type: none"> • Highlight use of Design Teams in project development through CitSci Program communication efforts • Use scientists/managers currently involved in Program/Design Teams as

		<p>ambassadors to communicate this message</p> <ul style="list-style-type: none"> • Ask CitSci Pool / Design Teams for suggestions of other scientists and managers who may be interested in getting involved in the Program
Engage with willing survey respondents in current and future projects / project design		<ul style="list-style-type: none"> • Encourage willing survey respondents to apply for the CitSci pool • Work to incorporate interested and willing individuals into project Design Teams
Engage with willing survey respondents that were less supportive of citizen science to better understand, explore, and address their concerns		<ul style="list-style-type: none"> • Consider holding an online meeting with relevant scientists and managers to better understand, explore, and address their concerns with CitSci; could approach this via American Fisheries Society or other similar organizations
Work to support / develop citizen science projects where there was overlapping interest between scientists/managers (Bonney 2024) and fishermen (Sweeney Tookes et al. 2024)		<ul style="list-style-type: none"> • Use the findings from these research efforts to inform the CitSci research priorities when they are updated in 2025 • Prioritize project ideas where fishermen and scientist interest overlaps
Consider conducting similar survey with scientists and fishermen in future to compare with these survey results		<ul style="list-style-type: none"> • Strive to conduct similar survey in the upcoming years

CITSCI PROGRAM PLANNING DOCUMENT

- Group reviewed the CitSci Program’s activities under each goal and objective and provided feedback on the Program’s approach and activities
- Recommended continuing the CitSci Program’s overall approach and its goals and objectives; group supported continued focus on the objectives and strategies Program staff have concentrated on over the past 5 years
- Recommended continuing to focus on the objectives and strategies the Program has currently been addressing; recommended additional strategies to prioritize under a few objectives (highlighted below); and recommended working to incorporate suggestions to address recommendations from Sweeney Tookes et al. and Bonney’s research into Program activities
 - *Objective 1.1: Establish organizational infrastructure to provide program administration and oversight* – group recommended exploring whether a CitSci Program Advisory Panel was necessary; Council’s CitSci Committee, the two advisory groups – Operations & Projects Advisors, and ad-hoc committees may be sufficient (see [CitSci SOPPS](#) pg. 2 for ‘org’ chart); consider renaming Operations & Projects Advisors from ‘committees’ to ‘advisory panels’
 - *Objective 1.3: Create a funding strategy that is adaptable to changing circumstances and needs* - group recommended updating the project and Program funding inventory during 2025; recommendation largely based on the new ASMFC Memorandum of Understanding that is newly in place as of October 30, 2025; this collaboration will help expand avenues the Program can pursue for funding
 - *Objective 2.2: Implement the SAFMC’s Citizen Science Project Endorsement Program* - group supported holding off on creating the CitSci Project Endorsement Program at this stage of the Program; Program has been able to provide support to projects more informally via letters of support
 - *Objective 3.1: Implement program guidelines that address data management, standards, quality, and accessibility* – since projects under the CitSci Program’s umbrella are diverse, it may be challenging to develop minimum data standards across all projects, needs to be flexible to support different types of projects; recommend making citsci data standards resources available via the Program’s webpage; NOAA’s MAFAC electronic reporting requirements may be a good resource for this effort and to share via webpage; recommend prioritizing the development of data accessibility agreement templates and make these available via the Program webpage; would like Program to be as open as possible with data accessibility
 - *Objective 3.3: Document the contribution of citizen science projects and data to specific SAFMC research priorities and science and management decision making* – group recommended incorporation of appropriate citsci data into Fishery Overview / Data Summary shiny apps that are presented/used when Advisory Panel’s are developing Fishery Performance Reports; also suggested that Fishery Performance Reports and corresponding Fishery Overview / Data Summary shiny apps be easier to access via the Council’s webpage
 - *Objective 4.5: Develop Citizen Science Program volunteer engagement (recruitment, training, retention) strategies, products, and activities using best practices outlined by the Citizen Science Action Teams* – group recommended incorporating findings from Bonney and Sweeney Tookes et al.’s into the Program as resources and capacity allow; recommended identifying and supporting projects that meet stakeholder needs

NEXT STEPS

- Bonney and Sweeney Tookes will present their research findings to Council at their Dec 2024 meeting; CitSci staff will present Ops team's recommendations and feedback to the Council's CitSci Committee at the Dec meeting and get their feedback and guidance

Citizen Science Program Update

- Staff provided a brief update on Citizen Science Program & project activities
- Group asked for details about promotion of the SciFish platform and how many projects have gone through application process (2 have gone through full process thus far)

Other Business

- CitSci Program's advisory groups are referred to as 'Committees' which can potentially be confusing with Council Committees; helpful to use consistent naming convention for CitSci advisory groups
- CitSci Ops recommends changing the name of the CitSci Advisory Committees to: CitSci Operations Advisory Panel and CitSci Projects Advisory Panel

Next Meeting

- Staff will send out doodle poll to select spring meeting dates in early 2025; target to hold virtual meeting week of May 12th

Meeting Attendance:

Committee Members: **In-person** - Scott Baker, Wally Bublely, Michelle Duval, Kathy Knowlton, Bob Zales; **Virtual** - Rob Cheshire, Will Heyman, Nik Mehta

Council Members: **In-person** - Kerry Marhefka, Amy Dukes, Tom Roller, Trish Murphey

Other attendees: **Virtual** - Rick Bonney, Jennifer Sweeney-Tookes, Genine McClair, Michelle Willis

Council Staff: **In person** - Julia Byrd, Meg Withers; **Virtual** – Myra Brouwer, Allie Iberle, Judd Curtis, Ashley Oliver, Nick Smillie, Christina Wiegand, Kim Iverson, Rachel Silvas, Suzanna Thomas, Greyson Webb, Emily Ott