

Summary Of The Pre-workshop Survey and Literature Review

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Valuation of Great Lakes Fisheries and Ecosystem Services Virtual Workshop

Day 2: April 13, 2021

Pre-workshop Survey

- Survey ran for 11 days (March 25th until April 4th)
- Conducted using MS Forms
- 8 survey questions
- 18 anonymous responses

Q1: In what ways are Great Lakes fisheries and aquatic ecosystem services **valuable** to you and/or society at large?



Economy



Food



Human health and well-being



Recreation



Water



Navigation



Socio-cultural

Q2: Who are the most important **audiences** for communicating the value of Great Lakes fisheries and aquatic ecosystem services?



Q3: What are some **metrics** to effectively communicate the values of Great Lakes fisheries and aquatic ecosystem services to the key audiences (e.g. jobs, water treatment costs, hospital visits)?



Economy

GDP

Expenditures

Costs

Impact

Valuation/Values
Jobs



Human Health and Well-being

Nutrition/food

Psychological/behavioral



Great Lakes Health

Air and water quality

AIS

Nutrients

Toxins



Cultural

Heritage

Connections



Sustainability

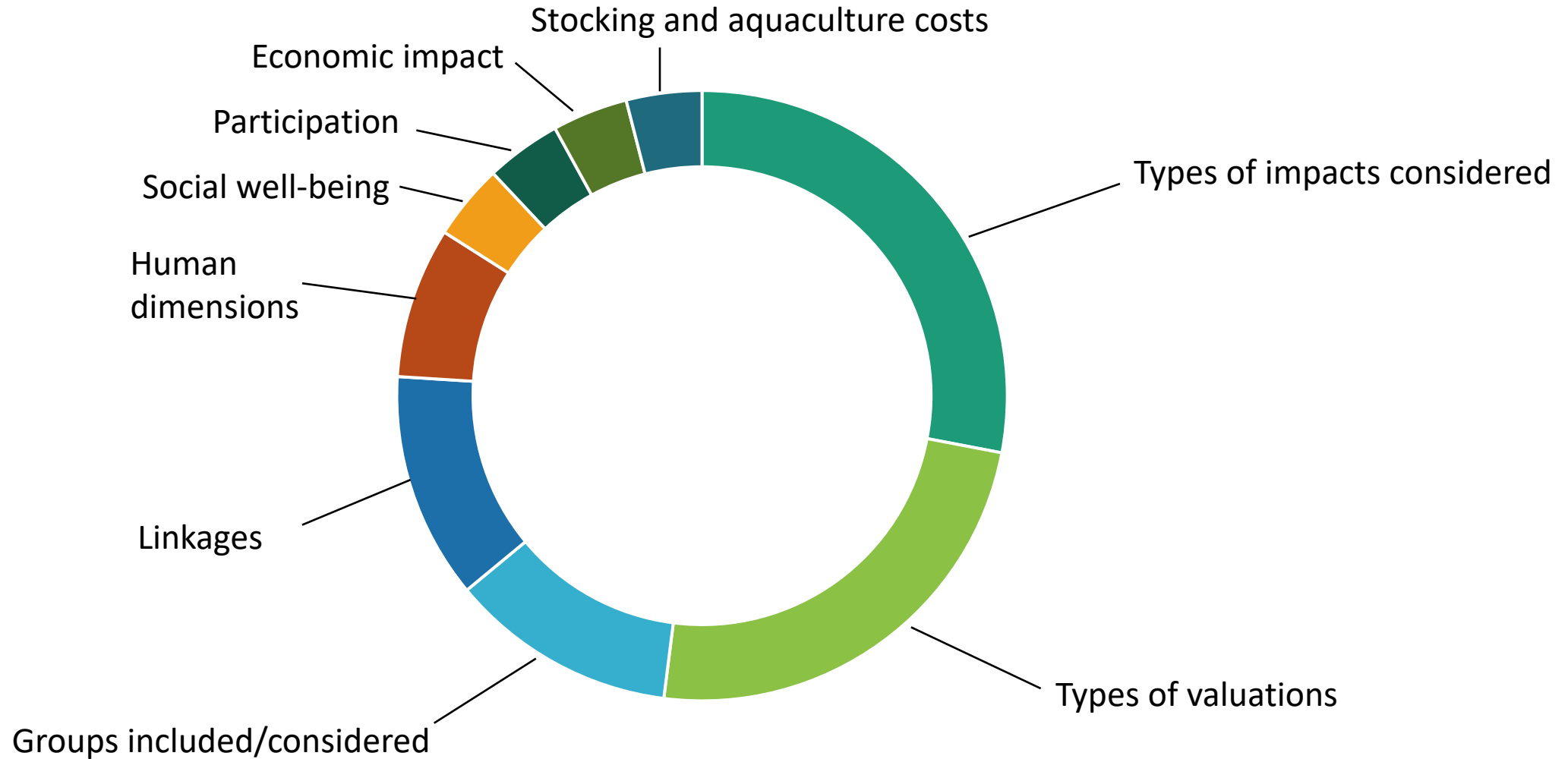


Individual

Participation

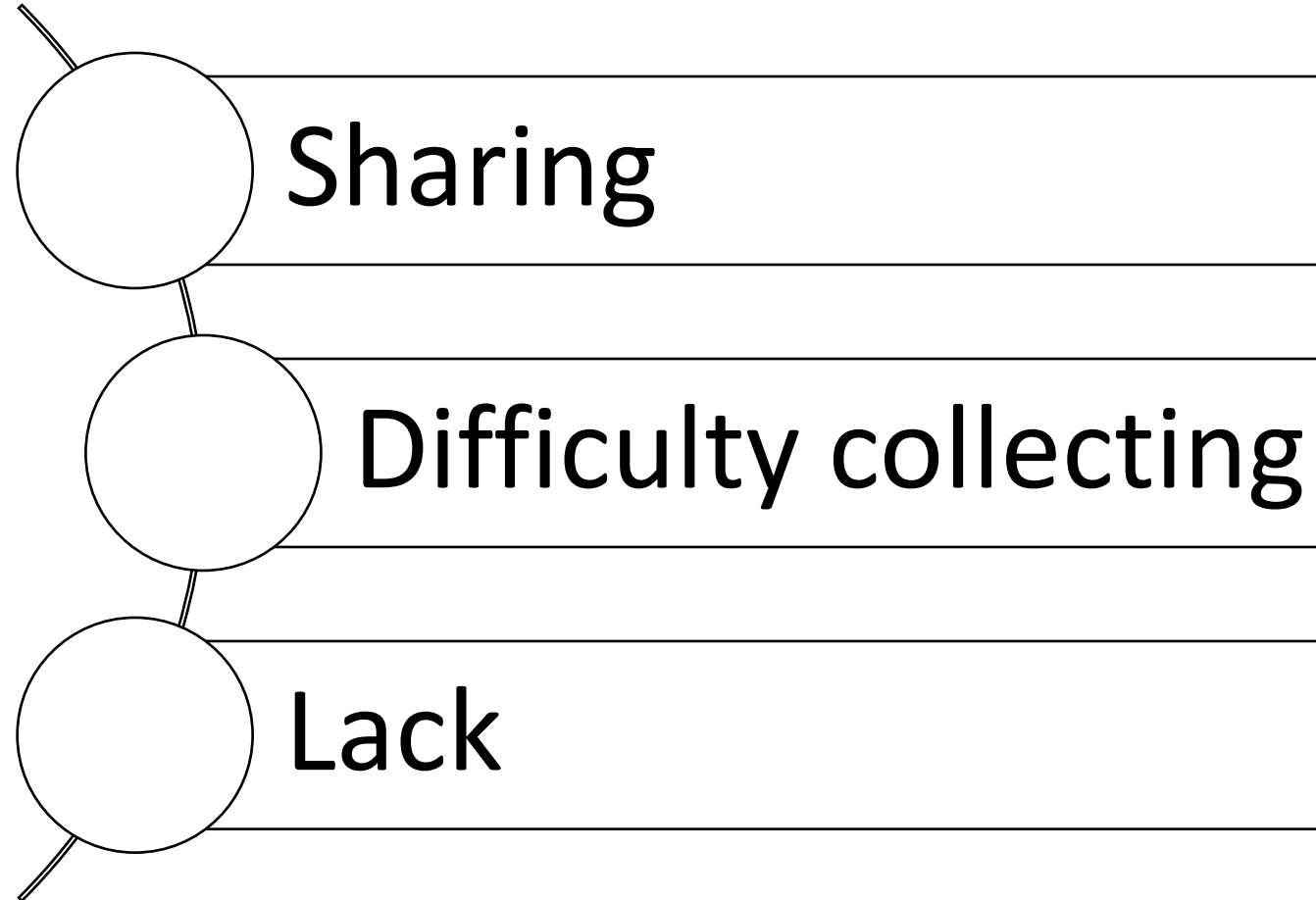
Stories

Q4: Most critical gaps and/or priority areas of research - Fisheries

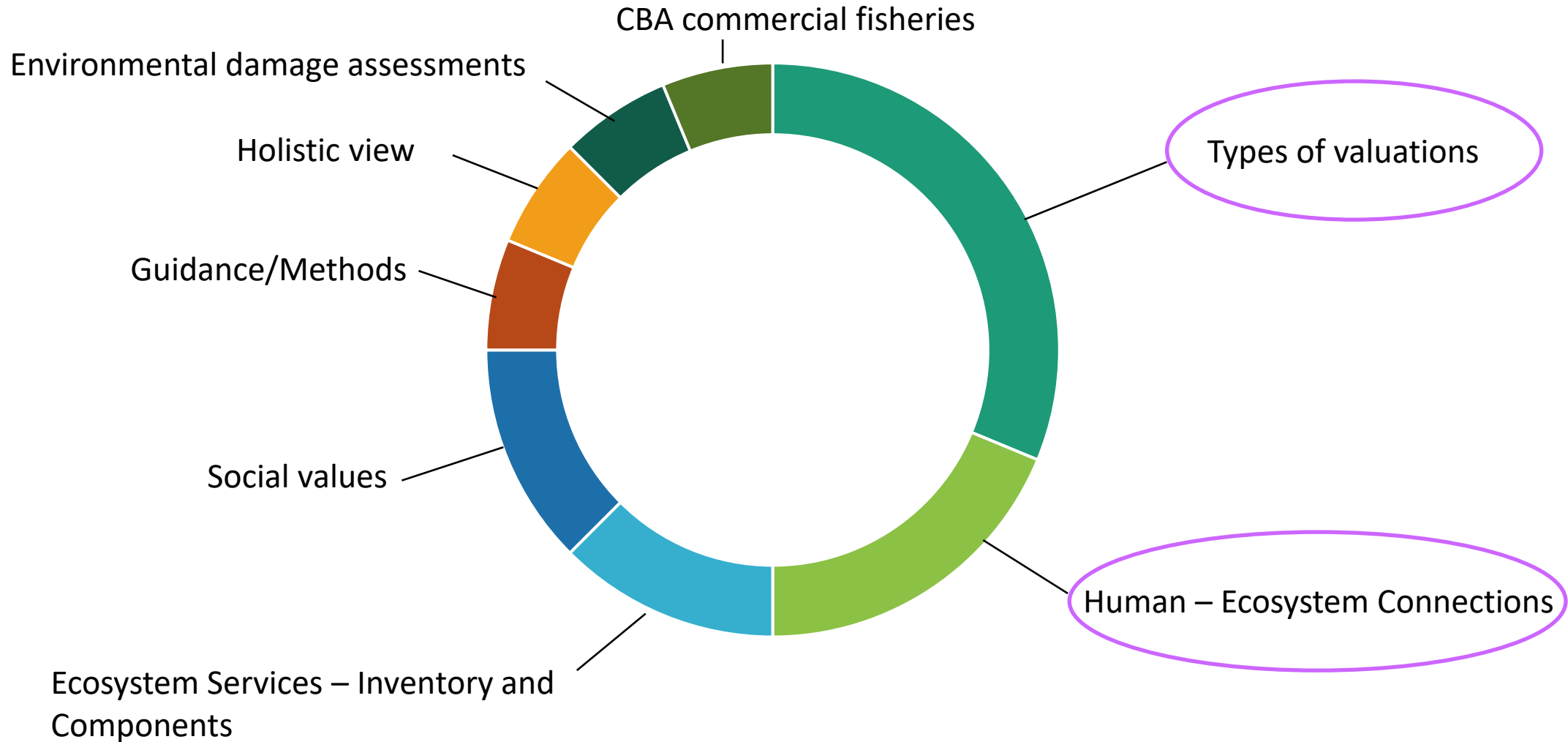


Q4: Challenges

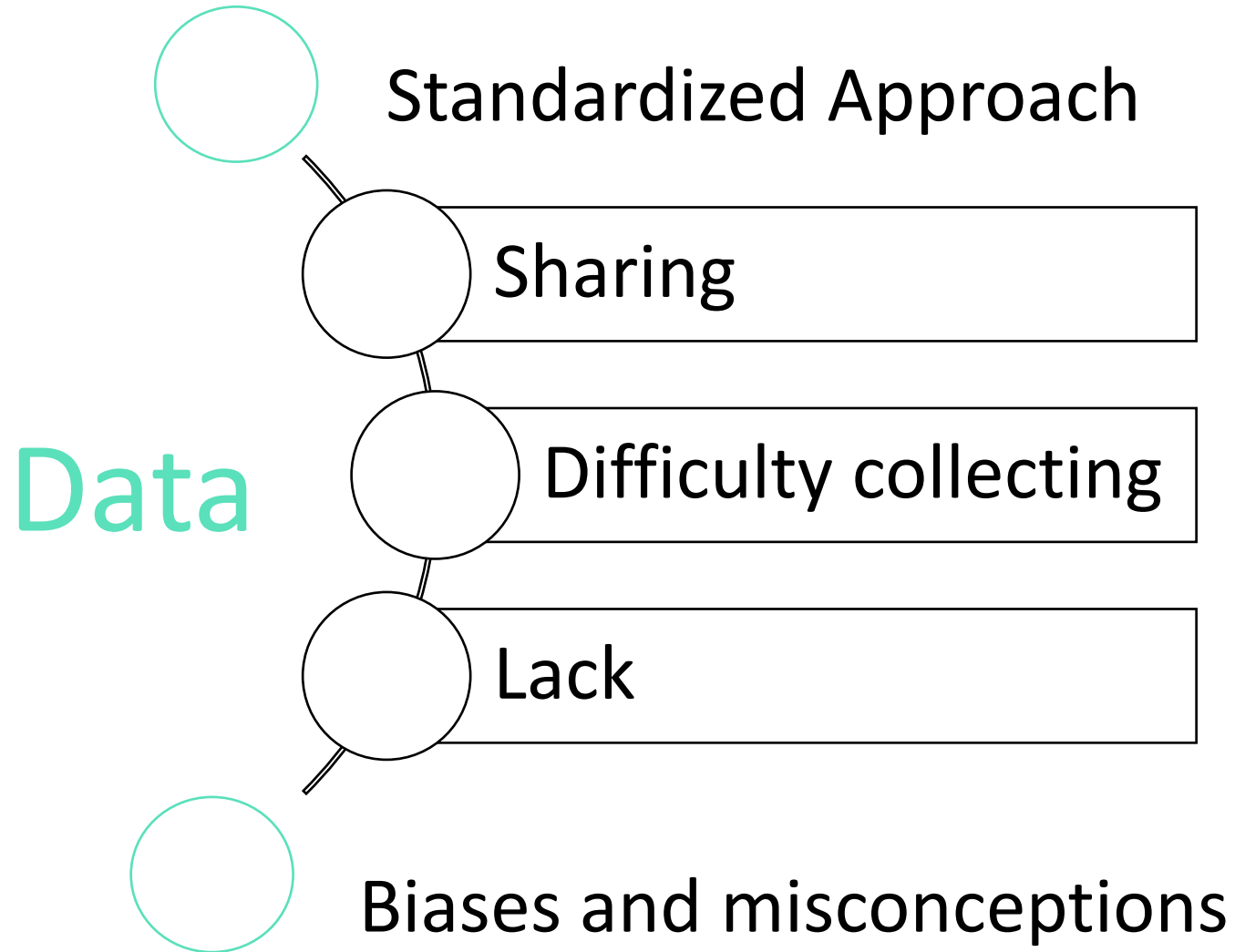
Data



Q5: Most critical gaps and/or priority areas of research – Ecosystem Services



Q5: Challenges



Q6: Communication Tools and Approaches



Quantitative
Approaches



Qualitative
Approaches



Comparisons



Bibliography



Style



Framework



Outreach

Q7: Additional Sources

- Added 12 new sources:
 - 7 - ecosystem services
 - 5 - fisheries

Q8: Closing Remarks

Looking forward to the discussion and hopefully producing actionable items going forward that can be realized both in the short- and long-term.

Methodologies are important. It would be helpful to better understand the methods behind economics and to get some agreement among economists that a research agenda that might arise from the review of the gaps is the right agenda.

I look forward to this workshop, this should prove to be very informative and compelling. We need to much more social science work to understand how people value and view the Great Lakes.

My hope is that this workshop will build a consensus to forge better collaboration in research and work in tandem with the general governing policies from which both nations win and no one else loose.

The several noted studies that discuss Human Dimensions integration as well as more comprehensive consideration of ecosystem services in the GLs are a good start; perhaps do a literature review beyond the Great Lakes for studies on social and human well-being indicators; incorporation of human dimensions; ecosystem-based fisheries management (in an SES context).

The limitations in terms of the valuation of the Great Lakes fisheries and aquatic ecosystem services are being mitigated to some extent through the adoption of assumptions and application of proxies, with appropriate adjustments within the existing time constraints. However, the appropriate remedy for these limitations would be further research. For example, in order to have a proper assessment of baseline value(s) and impact, a possible next step might be to undertake a comprehensive survey in the study area to obtain values (including willingness to pay and subsistence harvests) being generated by activity and by lake.

I think it will be helpful to distinguish between research and implementation gaps. For example, do we know enough about the system but just haven't been effective (to-date) at communicating or acting on that knowledge?

One of the most valuable parts of any multi-day meeting is the opportunity to meet new people and speak with them. You don't have any of these opportunities (8:45-9:00 AM is hardly sufficient). You might have to build it in to the end of the day and hope people attend, but I think that it is worth trying to do so. There are ways to do this with zoom, if that is all the budget can support, but there are better options for networking. I particularly like Spatial Chat, but it can be expensive.

I am a fan of spatial analyses of the distribution of ES, as attempted in my own work (JD Allan, included in biblio), and recent paper by Mitchell et al. 2021 looks interesting. I think spatial analyses can help us see when ES actually are high in locations that are relatively degraded (follows pretty directly from people usage stats), and also remind us that ES at a location may depend strongly on conditions far removed. Second, while I have a high regard for direct and indirect valuation methods, I worry a bit about too great an emphasis on being methodologically correct. As a dedicated conservationist, I worry about placing our bets on economic analysis to the extent that reverence for nature receives less attention. My favorite Richard Powers quote is "The best arguments in the world never changed anyone's mind. The only thing that will do that is a good story". I think that good story is based on reverence for nature.

These data and their interpretation are among the largest challenges in managing fisheries resources. The idea of optimizing amalgamated yields of benefits and parsing them by resources use/benefits is essential, but difficult. I currently have a great deal of concern regarding methodology of current surveys and am keenly interested in how we do a better job quantifying and modeling human values, behaviors, social and economic benefits of specific resources.

I'm looking forward to the discussions!!!

Economic methodologies that are currently being used by federal agencies related to fisheries in preparing Environmental Impact Statements and those which have been upheld by federal courts in the past.

I completely disagree in the remarks made under commercial fisheries annotated bibliography that it is "straight forward" this is not true as the seafood supply chain and value added of seafood processing is not considered in current or previous studies. The value and equitable access to local seafood should be evaluated as food supply chains, subsistence fishing, and food sovereignty other than tourism fisheries of charter and recreational fishing in which not everyone has the skills, time, or access to. Equitable access to local seafood also needs to be considered and evaluated. This is why current values of commercial and recreational fisheries are not comparable, yet these are used in testimonies for legislative decisions. I believe the lack of research or awareness of such research is due to the perceived biasness to conserve and restore the GL fisheries to a sport-fishery only. Which is a highly overlooked equitable and public trust concern.

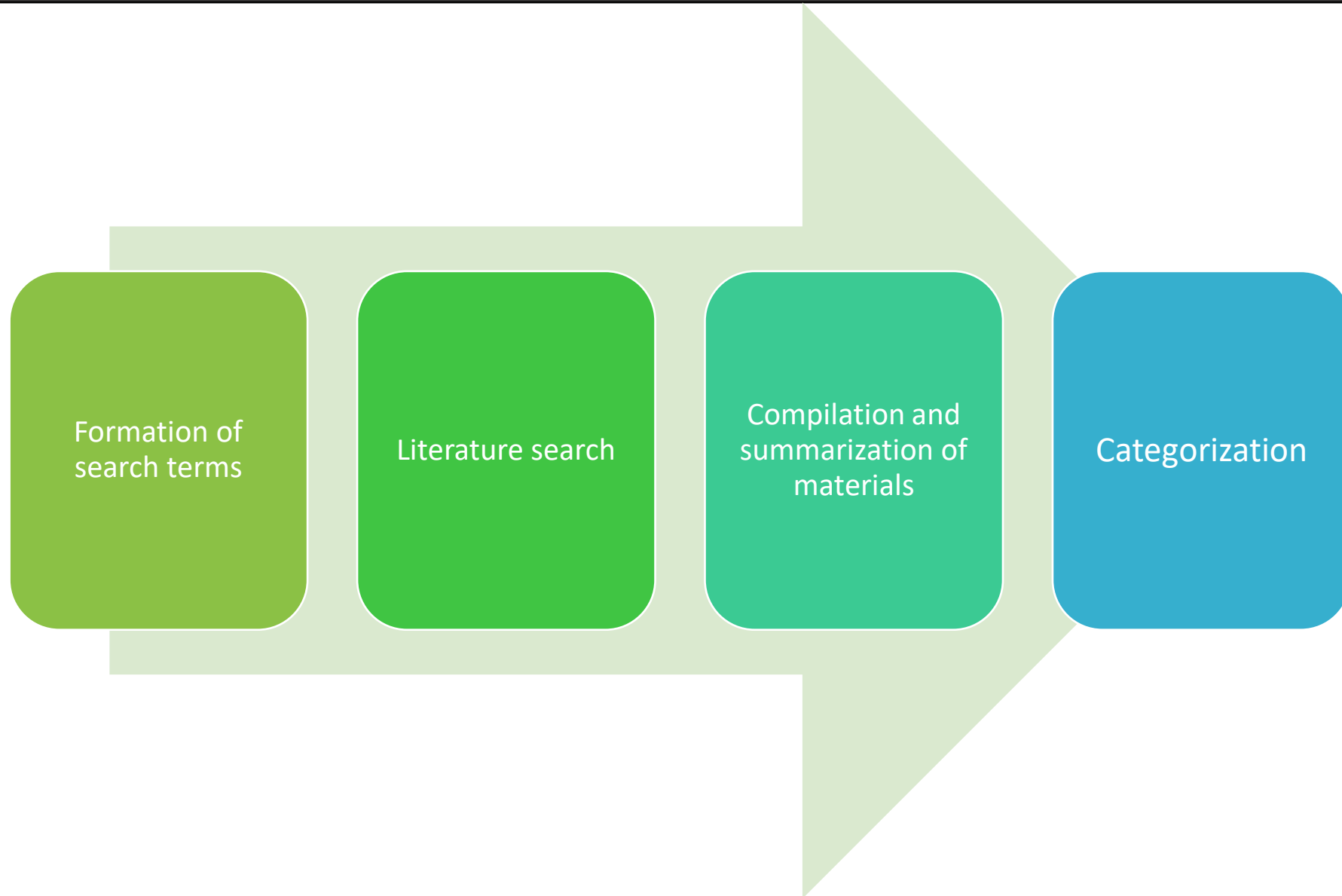
Needs

- Further research
- Value of seafood supply chain and value added of seafood processing.
- Consider and evaluate equitable access to local seafood

Literature Review

- 116 literature sources
- Received suggestions for other resources e.g. websites
- Workshop Materials
 - Annotated bibliography
 - List of Abstracts
 - Categorization Table

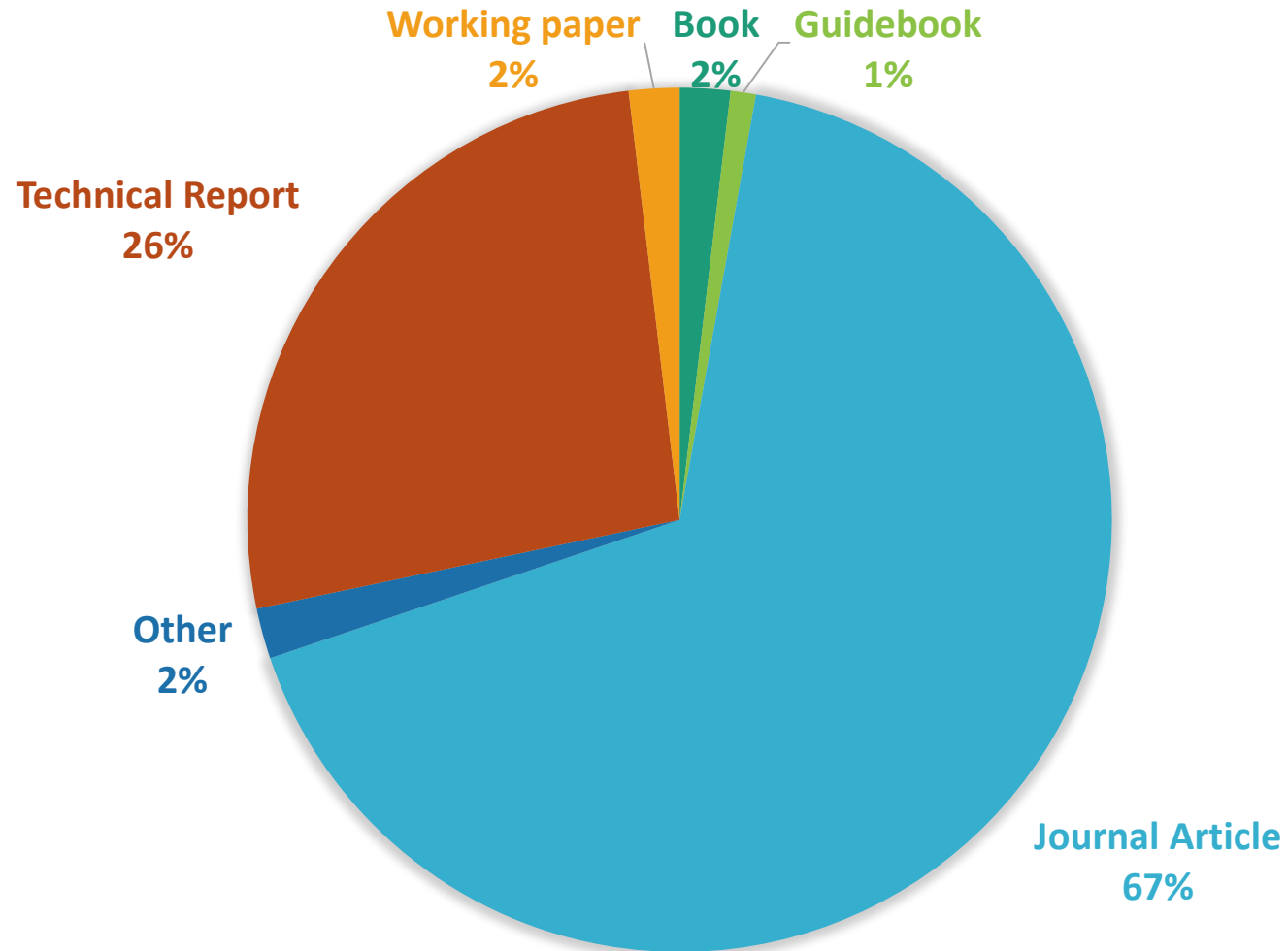
Literature Review Process



Categories

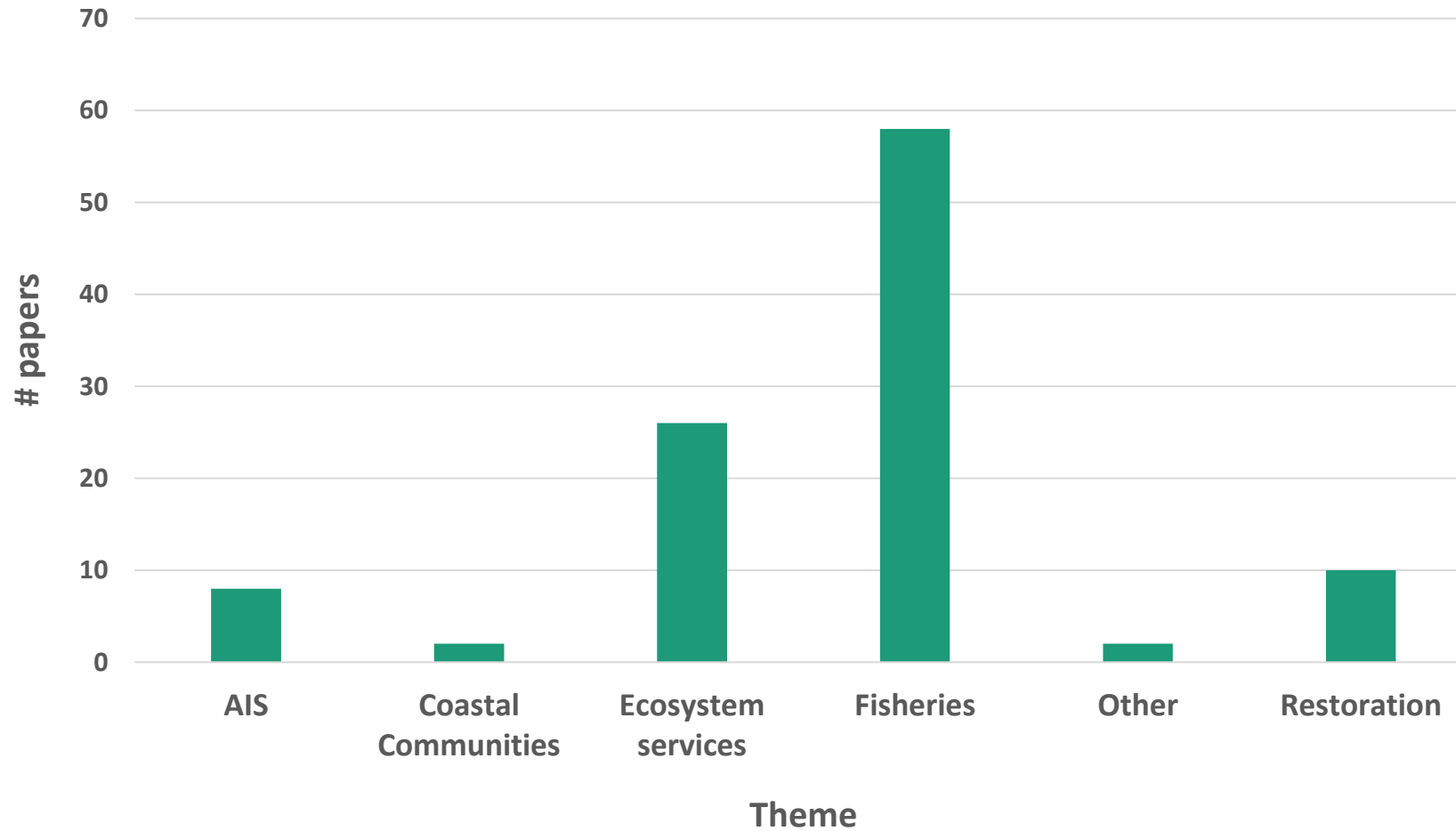
Category	Subcategories	Information
Scale	Micro	Specific location(s) within the Great Lakes region
	Meso	Specific Lake or State/Province
	Macro	Great Lakes wide
	Mega	Broad topic, not location specific
	Outside	Outside of the Great Lakes
General Focal Topic	AIS	
	Coastal Communities	
	Ecosystem Services	HAB reduction/control, Human use (Boating, swimming) etc.
	Fisheries	
	Other	
Method Specific Focal Topic (as used in annotated bibliography)	Restoration	Habitat restoration
	Great Lakes Recreational Fisheries: Non-market Valuation Studies	
	Great Lakes Recreational Fisheries: Economic Impact Studies	
	Great Lakes Recreational Fisheries: Other Socioeconomic Studies	
	Great Lakes Ecosystem Services: Non-market Valuation Studies	
	Great Lakes Ecosystem Services: Economic Impact Studies	
	Great Lakes Ecosystem Services: Other Socioeconomic Studies	
	Studies Outside the Great Lakes	
	Great Lakes Commercial Fisheries	
	Other	Methodology, Data or Other Great Lakes Studies and Documents
Timespan	Past	Restrospective
	Current	Relative to the publication date
	Future	Forward projecting
Publication Date	2000 and earlier	
	2000 - 2005	
	2011-2015	
	2016+	
Publication Type	Book	Book or is a chapter within a book
	Guidebook	Information on methods, approaches etc.
	Journal Article	
	Other	Memorandum, conference proceedings
	Technical Report	
Approach	Working Paper	Unpublished
	Qualitative	Focus groups, interviews etc.
Research Type	Quantitative	Travel cost, input-output models etc.
	Aquaculture	
	Economic	
	Guidance	
	Historical review	
	Risk assessment	
	Social sciences	
	Socioeconomic	
	Sociocultural	
	Spatial analyses	
Stewardship		
Fisheries Type	Commercial	
	Both	Commercial and recreational
	Recreational	
Taxa	Subsistence	
	General	Species at large, does not center or focus on particulars
	Specific	Focus on a specific species
	N/A	Not relevant

Literature Type

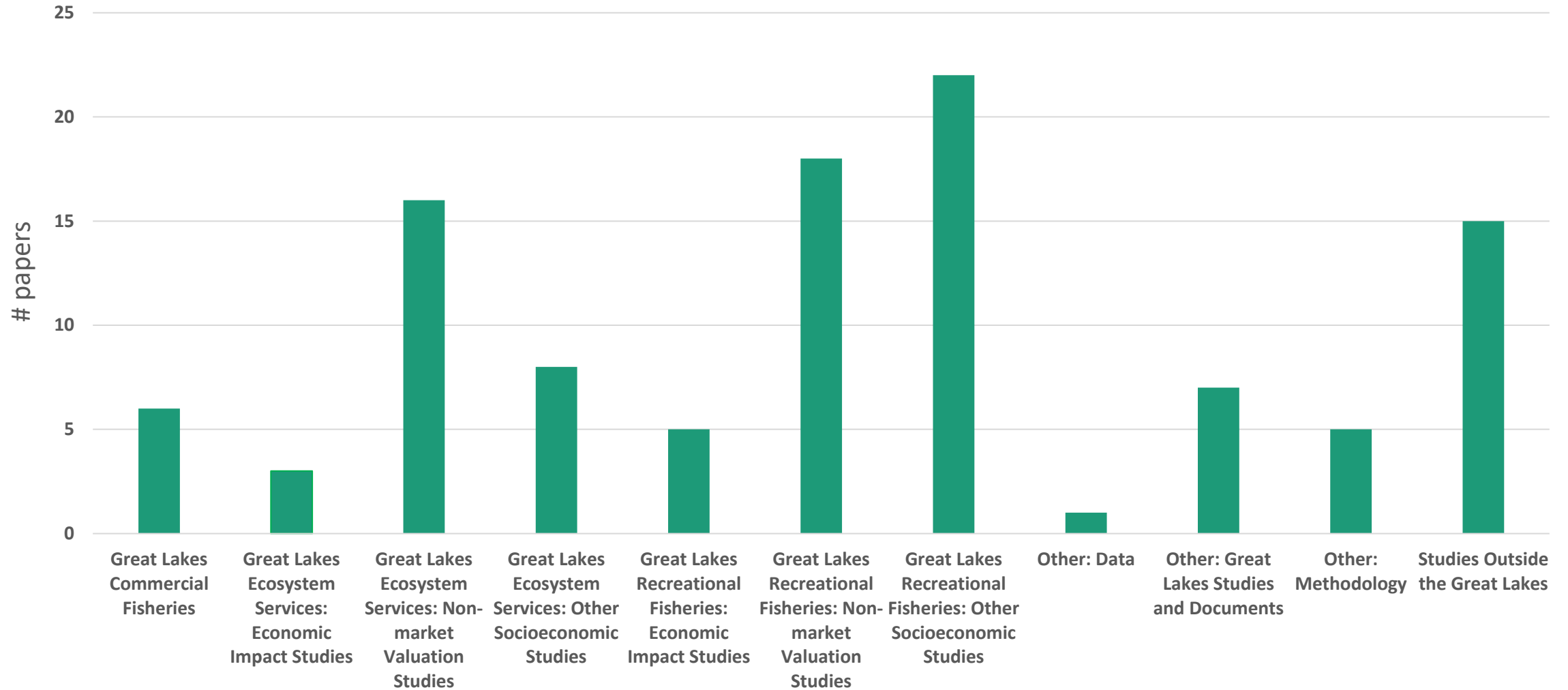


*From the surveys:
Journal articles
mentioned as a tool for
communication

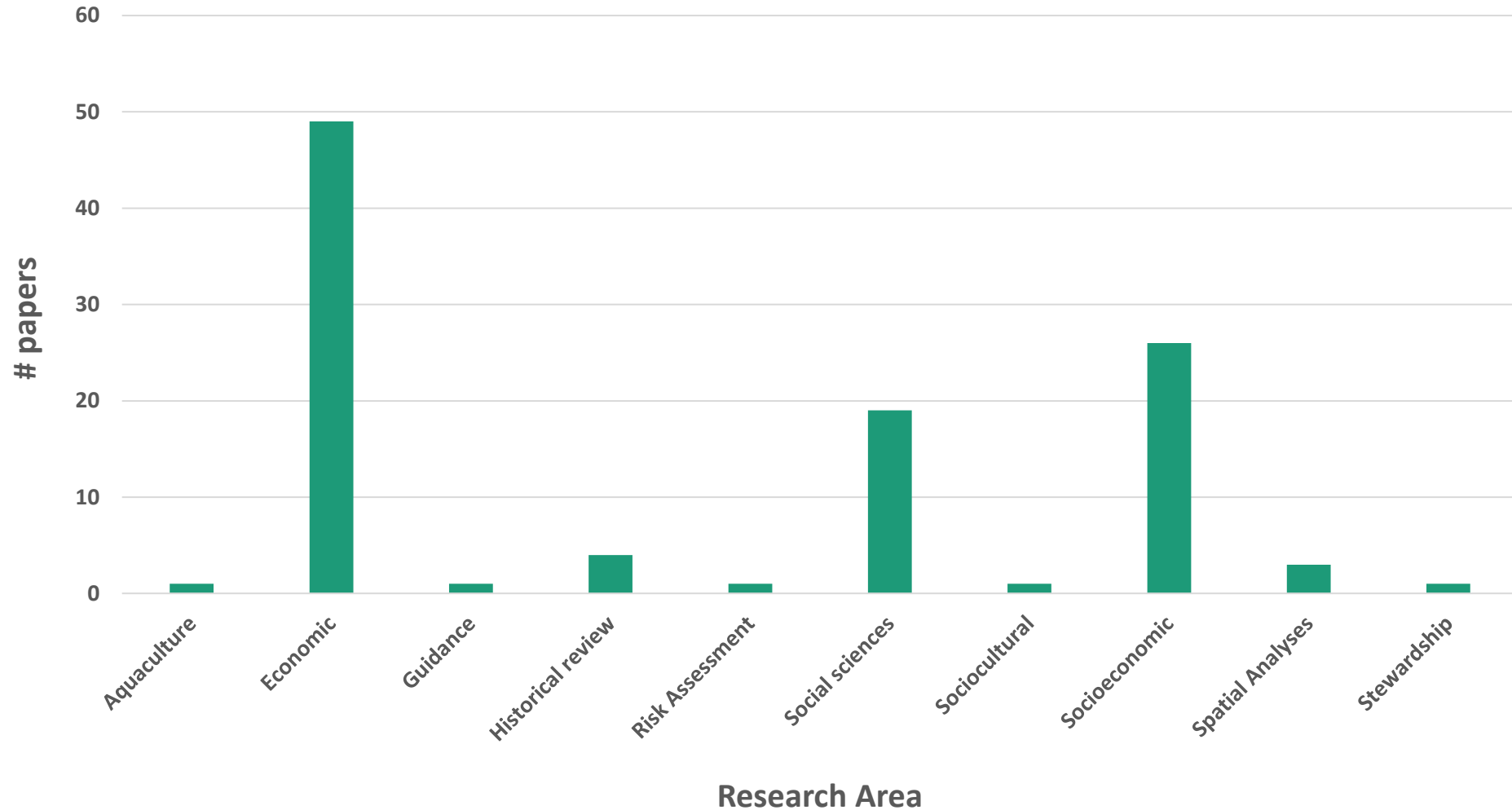
General Theme



Annotated Bibliography Categories

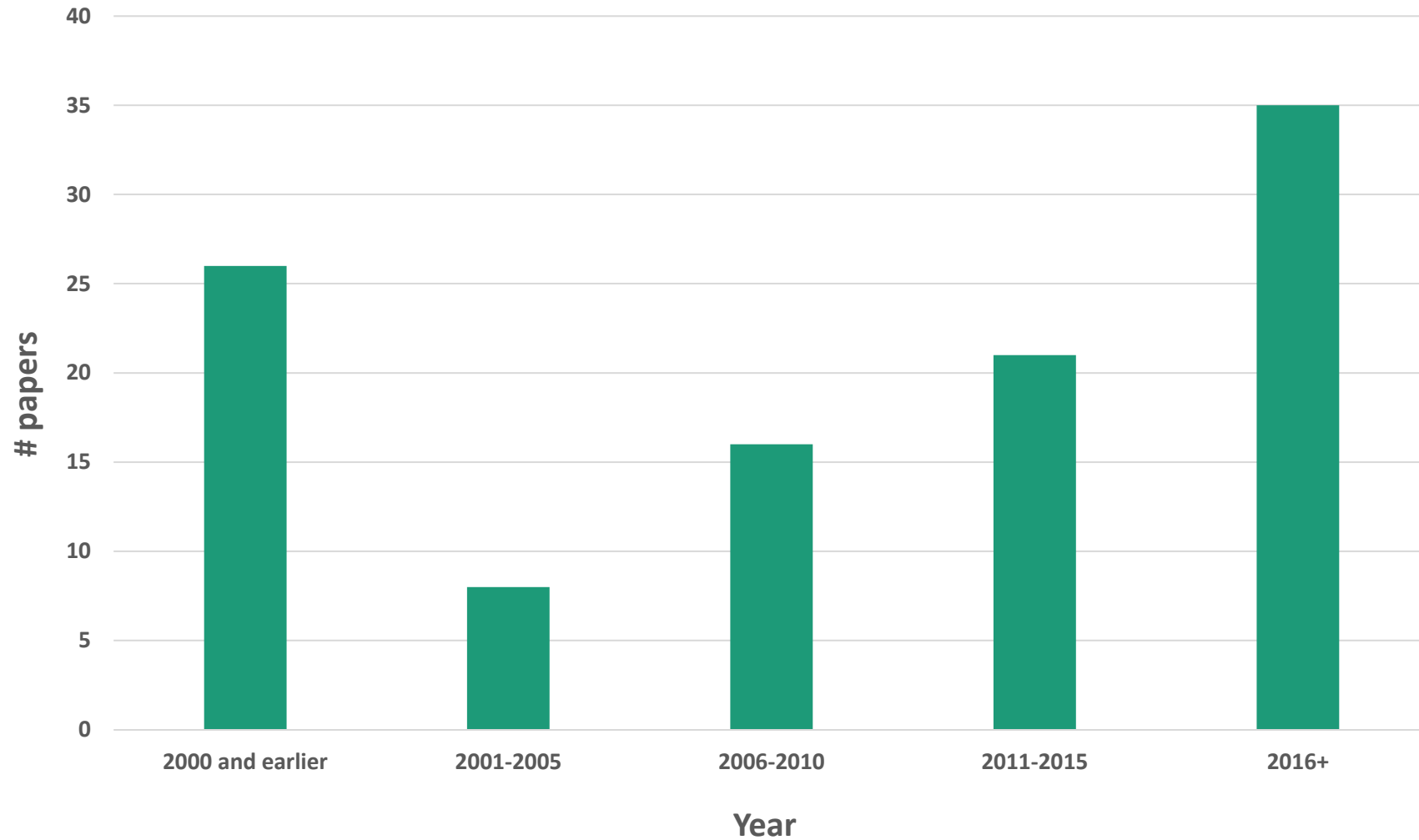


Research Type

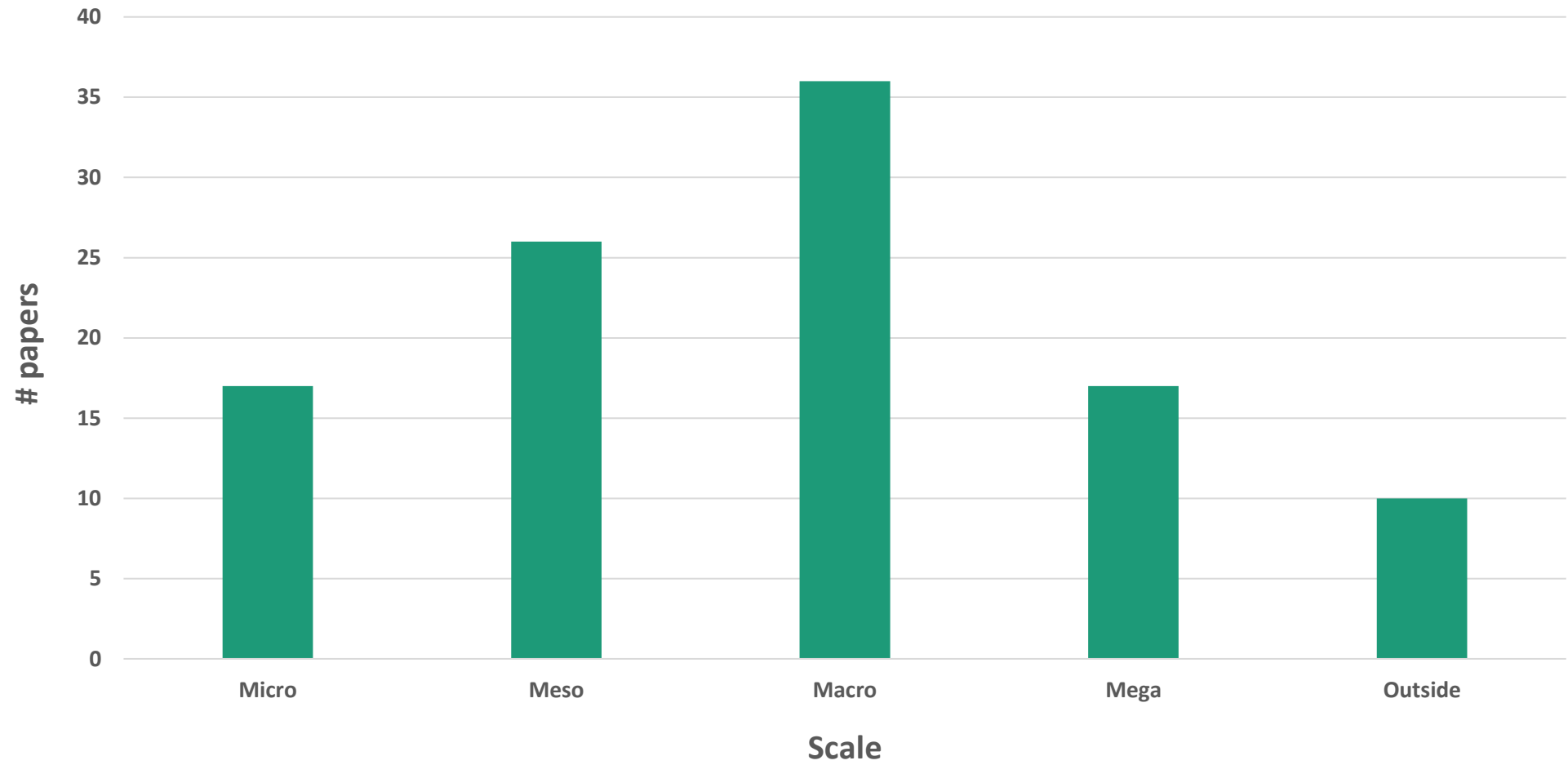


*From the survey, noted gap around:
1) the link between ecological and socio-economic impacts and
2) Human- ecosystem connections

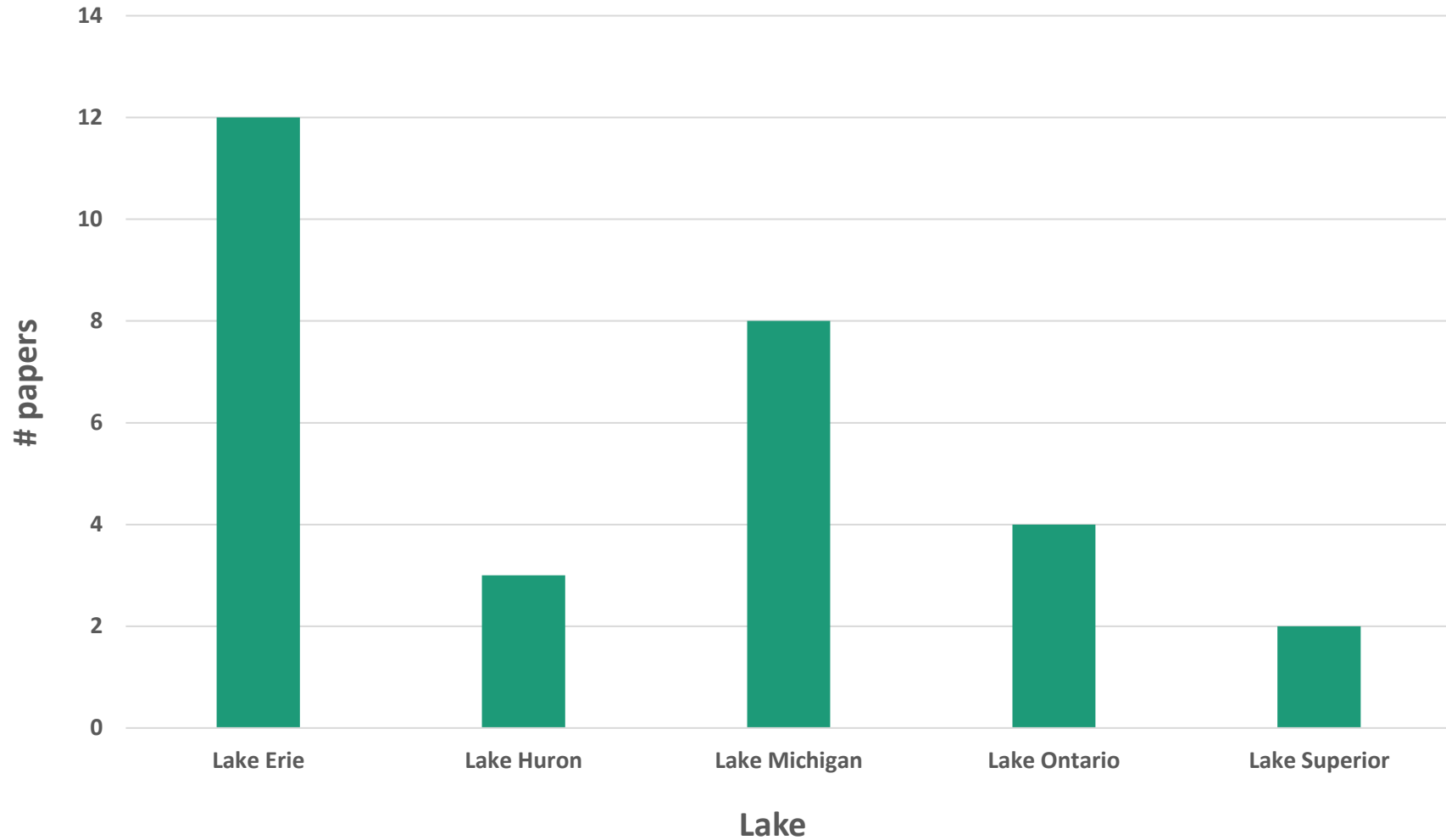
Publication Dates



Scale

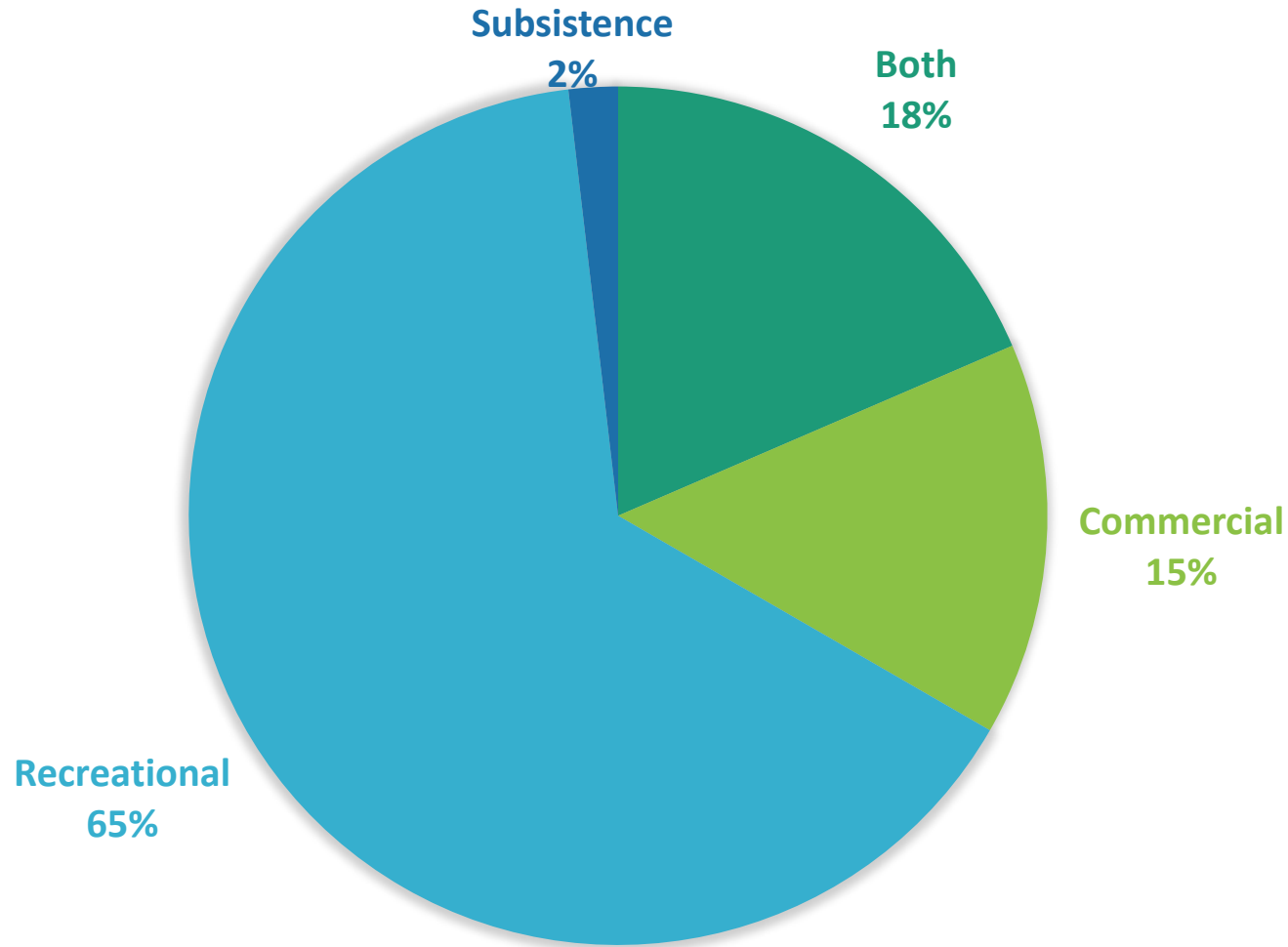


Lake Specific



n=29

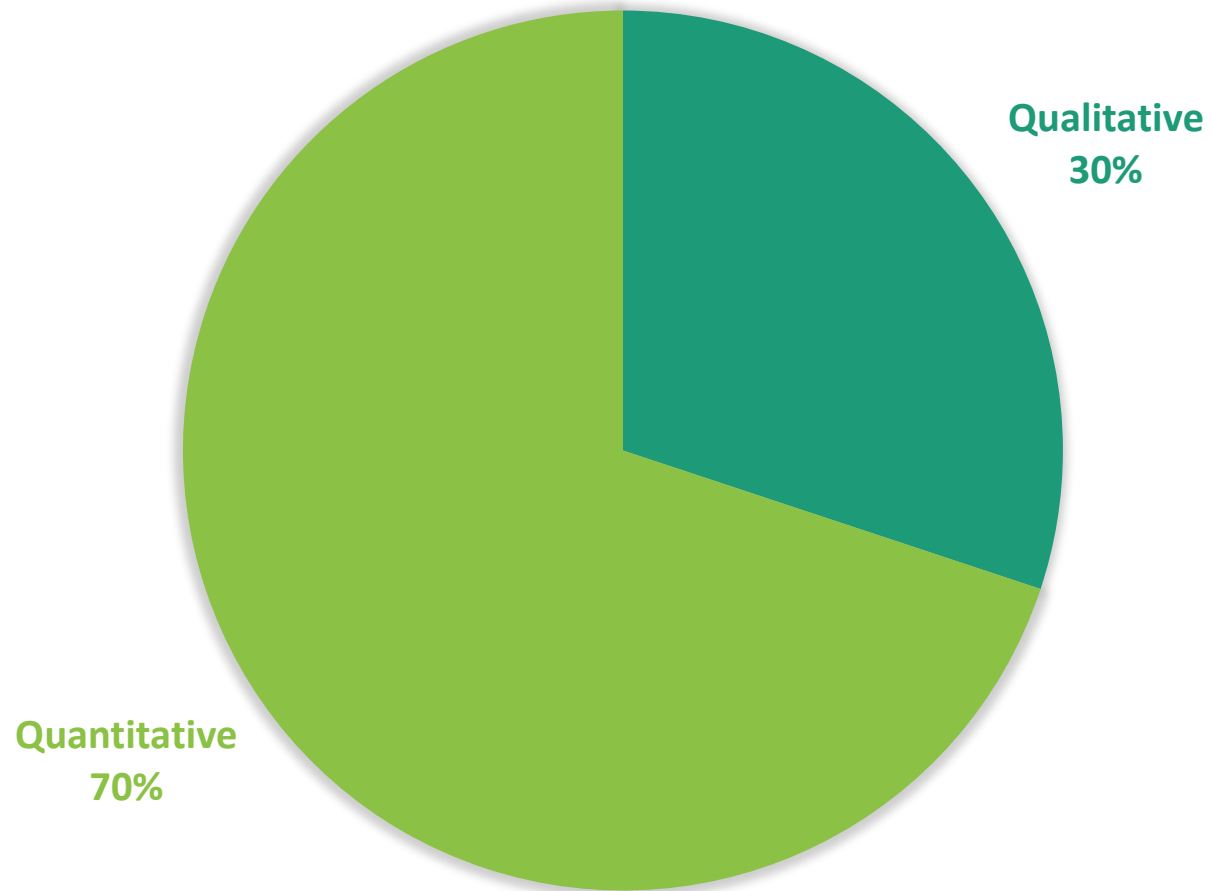
Fisheries Specific – Type Breakdown



*From the surveys:
noted gap and need for
valuation of commercial
and subsistence
fisheries

n=54

Approach



*From the surveys: both types of approaches mentioned for communication tools and approaches