



UNDERSTANDING PROVISIONING FISHERIES IN THE GREAT LAKES

FINAL SUMMIT REPORT

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Understanding Provisioning Fisheries in the Great Lakes Summit

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Final Report: Understanding Provisioning Fisheries in the Great Lakes

Executive Summary

In the context of the Great Lakes, provisioning fisheries represent a complex sub-fishery within the recreational fishing sector that provides critical benefits beyond recreation, including food and nutritional security, cultural continuity and preservation, and economic relief, particularly for low-income communities including immigrants and other underrepresented people. The term "provisioning fisheries" is proposed as a framework to recognize the overlap or 'fuzzy boundaries' between commercial, subsistence, and recreational fisheries while addressing their unique contributions and challenges. These 'fuzzy boundary' fisheries remain largely understudied and result in their contributions and challenges often being overlooked in traditional fisheries management research and frameworks.

Early research in the Great Lakes indicates that provisioning fisheries predominantly support anglers who may rely on fishing to supplement nutrition and income, or cultural practices and culturally appropriate foods. Provisioning fisheries also emphasize food sovereignty and wellbeing. In the context of urban shore fishing, provisioning fishers frequently encounter significant barriers, including:

- Limited access to financial, natural, and informational resources
- Regulatory inequities
- Public health risks from consuming potentially contaminated fish species
- Communication gaps that break information transfer in both directions from officials to provisioning fishers

The "Understanding Provisioning Fisheries in the Great Lakes" Summit, held in Windsor, ON, aimed to bridge these knowledge and management gaps by convening 35 fisheries-related researchers and practitioners from diverse sectors, including human health, outreach, fisheries management, academia, and enforcement. Participants examined the unique role of provisioning fisheries within the broader fishing community, identifying overlaps with recreational, subsistence, and commercial fishing. Discussions emphasized the importance of developing a cohesive understanding of provisioning fisheries, including their ecological, cultural, and social dimensions, while addressing challenges related to inclusivity, sustainability, and equity.

Key themes emerged from discussions among participants at the summit, highlighting the multitude of issues potentially faced by provisioning fishers where more research is needed:

- **Climate change** has exacerbated resource competition and environmental challenges. Declining ice cover prevents access to resources and changing water temperatures may mean shore fishers have more limited access to cold water preferring species. Concerns were raised that climate change challenges may disproportionately impact provisioning fishers who often lack the resources to adapt, however, there is lack of information to fully understand this.

- **Health risks** and information gaps from consuming contaminated species were emphasized, particularly for communities with higher fish consumption rates or preferences for species with unknown contaminant risks.
- **Regulatory shortfalls**, such as policies favoring more popular fisheries, sport-oriented fishing or commercial priorities may contribute to systemic inequities.
- **Limited infrastructure** for shore fishing creates access barriers for lower-income and marginalized groups, such as denial of fishing after dark or safety concerns due to poor infrastructure.
- **Lack of representation** for provisioning fishers in decision-making processes further compounds these challenges.

Despite these challenges, participants identified opportunities to support provisioning fisheries. Examples include:

- Creating multilingual educational resources
- Enhancing infrastructure for shore fishing
- Establishing culturally informed outreach programs

Participants also emphasized the need for better data on non-game species, targeted surveys to capture the practices and demographics of provisioning fishers, and tailored public health advisories to mitigate contamination risks.

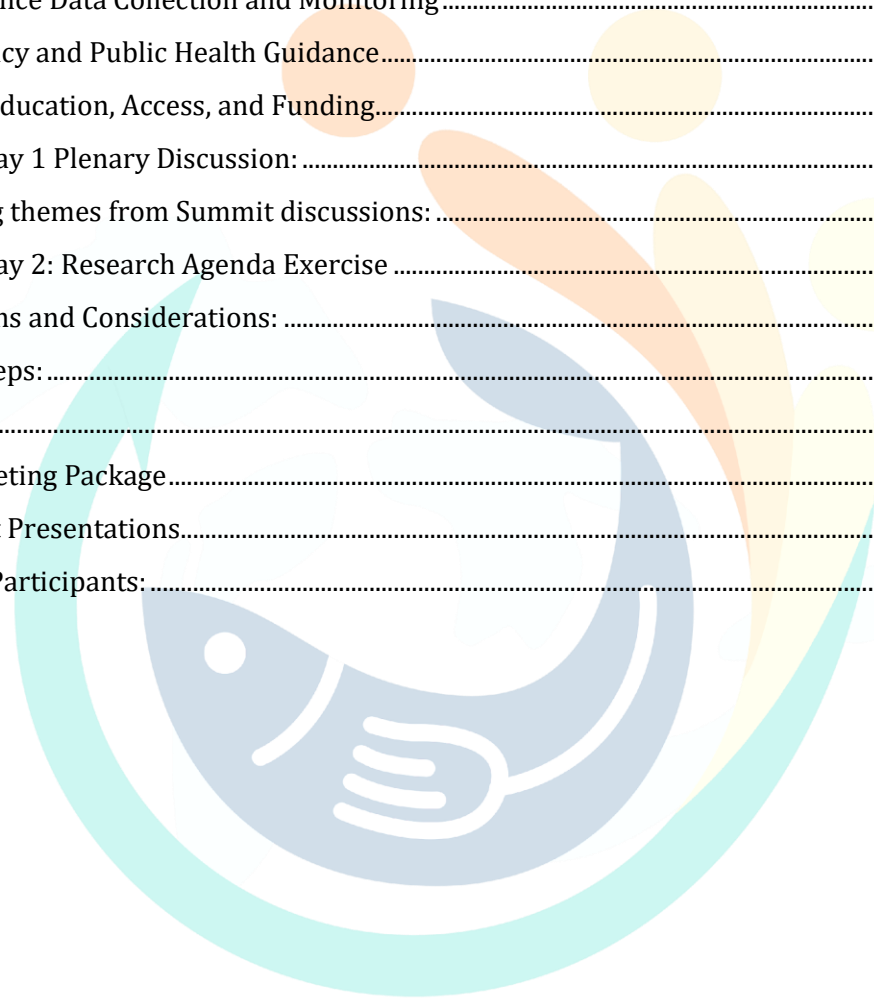
The summit fostered a collaborative environment to develop actionable strategies, including improving communication, investing in education and youth programs, applying for funding, and integrating provisioning fishers into governance structures. These efforts aim to balance cultural practices, ecological sustainability, and community well-being while addressing systemic barriers and inequities. There was also a desire to include more community members in the conversation.

The next immediate steps include continuing discussions and an informal network of researchers, practitioners and community members through future meetings. Academic activities include special issues, conference special sessions and publication of a research/action agenda on provisioning fisheries.

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Background

Research across the Laurentian Great Lakes and other parts of North America has identified a group of recreational fishers who fish for more than just leisure. Their activities can contribute to food security and sovereignty, cultural continuity and preservation, and alleviation of food and financial stress. Although little is known about this population, early evidence indicates that they often include urban shore anglers from underrepresented and/or immigrant communities. This group is suggested to engage in “provisioning fisheries”, an analytical fisheries framework highlighting the underrecognized multi-dimensional values of fishing and fisheries including:

- Recreation
- Food sovereignty and security
- Economic benefits
- Socio-cultural and traditional value
- Overall health and well-being

Sense of place, belonging, and identity

Despite their potential significance, their size, impacts, and specific needs remain largely unstudied, leading to the benefits and risks of fishing for this group being overlooked.

The research on provisioning fishers is fragmented, and thus a meeting on this topic was held to foster collaboration, shared learning, and identify knowledge and policy gaps to better understand this sub-group of fishers. This 1.5-day hybrid meeting held at the Great Lakes Institute for Environmental Research in Windsor, ON, between September 30 to October 2, 2024, gathered 35 fisheries-related researchers and practitioners from around the Great Lakes ranging from professions that relate to human health, outreach and communication, contaminants, and fisheries research, management and enforcement.

The term “provisioning fisheries” is proposed as an inclusive framework to recognize the overlap between commercial, subsistence, and recreational fisheries while addressing their unique contributions and challenges. Recognizing that provisioning fisheries are academic and theoretical, the summit provided an opportunity to verify assumptions and ground concepts from provisioning fisheries with practical contexts. This report summarizes key insights and outcomes resulting from discussions of summit participants, which are on experiences and insights of Great Lakes fisheries practitioners, and is intended for diverse audiences to use and refer to.

Goals of the Summit and Report

- Advance the management and understanding of provisioning fisheries.
- Identify and prioritize research and policy gaps and outline actionable steps.
- Develop a practitioner-focused research and action agenda related to provisioning fisheries.
- Facilitate cross-sectoral discussions and establish a supportive network for collaboration.

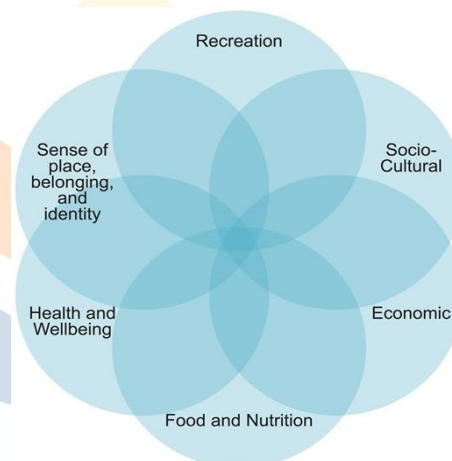




Figure 1 Photo of Day 1 of Summit held at Great Lakes Institute of Environmental Research at the University of Windsor, ON

Outcomes

This section represents the outcomes from the discussions at the summit and what impacts knowledge gaps may have on Great Lakes fisheries and fisheries management.

1. Knowledge Gaps in Provisioning Fisheries

Participants identified a range of knowledge gaps that limit our ability to understand, support, and manage provisioning fisheries. These gaps span ecological, cultural, regulatory, and social dimensions, and addressing them is essential for equitable and effective fisheries governance. Below we identify the gaps that emerged in the summit discussions.

1.1 Definition and Classification Gaps

- **Lack of Clarity and Consistency:** There is a lack of clarity and consistency in defining provisioning fisheries, which are often lumped into recreational categories despite having distinct motivations and needs. This confusion complicates data collection, policy development, and funding eligibility.
- **Survey Tools and Policy Frameworks:** Survey tools and policy frameworks often fail to capture the cultural significance of fishing, as terms like “cultural practice” or “heritage”

may be interpreted differently across Indigenous, immigrant, and settler communities, leading to inconsistent or incomplete data.

1.2 Ecological and Biological Knowledge Gaps

- **Species-Specific Data Deficiencies:** There is a lack of species-specific ecological data for non-game fish or unmanaged fisheries commonly harvested in provisioning fisheries (e.g., gar, bowfin, suckers, burbot), which are often excluded from traditional surveys and advisories. For instance, in Michigan, all suckers are grouped together in consumption advisories, obscuring species-specific risks and management needs.
- **Climate Change Impacts:** The effects of climate change on fish life histories, toxin levels, and species distributions are not well understood, particularly for species targeted by provisioning fishers. This includes how warming waters may increase overlap between sport and provisioning fisheries, potentially intensifying competition and conflict.
- **Basic Biological Information:** Basic biological information—such as movement patterns and reproductive cycles—is missing for many species, limiting the ability to assess sustainability under changing environmental conditions.

1.3 Social, Cultural, and Demographic Gaps

- **Diverse Identities and Motivations:** There is insufficient understanding of who provisioning fishers are, including their demographics, motivations, and fishing practices. This includes both urban fishers taking advantage of seasonal runs and rural fishers accessing remote areas, whose shared motivations (e.g., food, tradition) are often overlooked in policy.
- **Cultural Valuation of Species:** Cultural preferences for certain fish species are poorly documented, despite their importance in shaping harvest behavior. Examples include Polish Christmas carp or Ontario's growing interest in burbot, which are often excluded from mainstream fisheries management.
- **Ethics and Norms:** Norms around harvest and release vary widely. In some communities, releasing fish is seen as wasteful; in others, harvesting certain species (e.g., muskie, steelhead) is frowned upon.
- **Barriers to engagement:** The barriers to engaging diverse angling groups may lead to lack of knowledge and data on social and cultural importance of fishing and certain fish species. It may also lead to underreporting of provisioning fishing activity.

1.4 Regulatory and Policy Gaps

- **Lack of Recognition:** Current regulations are often designed around popular game fish and sport fisheries and may miss other fishing practices and values. For example, wanton waste laws may conflict with bowfishing practices that target non-game species, potentially criminalizing culturally or nutritionally important harvests.
- **Inadequate Representation:** Anglers who have strong harvest motivations often lack formal representation in fisheries management processes and may not have organized groups to represent at policy discussions.

- **Terminology Confusion:** Terms like “recreational,” “subsistence,” and “cultural” fishing are interpreted differently across communities and jurisdictions, complicating policy development and survey design.

1.5 Communication and Outreach Gaps

- **Risk Communication:** Consumption advisories are typically based on sport/game fish and do not reflect the species or consumption patterns of provisioning fishers. For example, suckers—commonly consumed in some communities—are often excluded from monitoring, leading to gaps in health guidance.
- **Education and Stereotypes:** Risk communication strategies are often overly simplistic or alarmist, discouraging fish consumption altogether. Participants emphasized the need for more nuanced messaging that balances public health concerns with the benefits of local, culturally significant food sources (e.g., seasonal meals like Thanksgiving steelhead).
- **Community-Led Engagement:** Outreach and education efforts must be culturally relevant and accessible, especially in communities where language barriers or distrust of authorities may limit engagement with regulations or advisories.

1.6 Data, Research, and Representation Gaps

- **Underrepresentation from Data Collection and Creel Survey Limitations:** Provisioning fishers are frequently missed from data collection efforts such as creel surveys, especially those fishing from shore or through ice. This may be because surveying shore anglers is resource intensive or due to various language and cultural barriers. This leads to underrepresentation in management decisions and a lack of visibility in official statistics. New methods of creel surveys are needed to capture this effort.
- **Underreporting due to diverse barriers:** The potential for shame, distrust, and fear of judgment and other barriers may lead to underreporting of provisioning practices, especially when fishing is tied to survival or cultural identity (although this is not confirmed by anglers themselves). This could further marginalize these communities and their representation in data and decision-making.
- **Effort and Access Patterns:** There is limited data on shore-based versus boat-based fishing, seasonal access patterns, and the spatial distribution of provisioning fisheries.
- **Economic and Nutritional Contributions:** More research is needed on the economic value of provisioning fisheries, including their role in food security, nutrition, and cost-effective food access.
- **Gear and Technique Use:** Understanding the gear, techniques, and timing used by provisioning fishers can inform more inclusive and effective management strategies.

2. Conflicting Activities and Systemic Barriers for Provisioning Fisheries

Despite the growing recognition of provisioning fisheries, many existing policies, programs, and communication strategies may unintentionally create barriers or conflicts for those who fish to feed themselves, their families, or their communities. These challenges are often rooted in structural inequities, misaligned priorities, and a lack of resources for meaningful engagement. This section

outlines the key areas where current systems may reduce opportunities for provisioning fishers, as identified by summit participants, and where there could be consideration for change or improvements.

2.1 Access and Infrastructure Barriers

- **Restricted Shore Access:** In many areas, shore fishing is limited by unsafe conditions (e.g., strong currents), lack of infrastructure (e.g., trash bins, toilets), high crime rates (e.g., car break-ins, poorly-lit areas, little enforcement present) or outright bans—often as a response to social conflict or perceived nuisance.
- **Inconsistent Access Hours:** Park-based fishing areas may close before or after typical work hours, limiting access for those with inflexible schedules. This has resulted in fishers being fined hundreds of dollars.
- **Parking and Capacity Issues:** In some urban areas (e.g., Detroit River), limited parking and overcrowding create tension and reduce access for local fishers.
- **Americans with Disability Act (ADA) Compliance Costs:** Although accessibility improvements are essential, the high cost of compliance can delay or limit infrastructure upgrades in underserved areas.

2.2 Communication and Information Gaps

- **Language and Literacy Barriers:** Regulations, advisories, and educational materials are often only available in English which may not reach many immigrant and newcomer communities.
- **Uncoordinated Messaging:** Health advisories and fishing regulations are often issued by separate agencies (e.g., Departments of Health vs. Natural Resources), leading to confusion and inconsistent messaging.
- **Overly Complex Advisories and Regulations:** Risk communication that requires fishers to consider species, size, location, and demographic-specific consumption limits is often overwhelming and inaccessible. Complexities of regulations also discourage newcomers from participating in fishing. Translating these to digestible communication can support broader audiences.
- **Lack of On-Site Information:** Signage and outreach are often concentrated at boat launches, missing the shore-based locations where many provisioning fishers are active. Information on species, consumption guidelines, invasives, etc. would be useful at shore-based locations.

2.3 Policy and Regulatory Misalignment

- **Catch-and-Release Bias:** Regulations shaped by catch and release fishing interests (e.g., strict harvest limits for rainbow trout) can effectively prohibit harvest, which may undermine food provisioning goals.

- **Lack of Representation:** Advisory committees and public consultations are often forums that are challenging for certain communities. Provisioning fishers are also diverse and fragmented and do not have a clearly defined group, which can lead to policy blind spots.

2.4 Social Stigma and Power Dynamics

- **Stereotyping and Racism:** Harvest motivated anglers, which can often be newcomers, immigrants and other marginalized communities, face negative perceptions, accusations of rule-breaking, and even racism, which has been documented in Ontario's Human Rights Commission. Whether it is perceived or actual rule breaking, this often can lead to or exacerbate conflict across groups. Attention to framing and effective communication to diverse audiences can potentially support preventing and diffusing conflict. Further understanding of interactions of anglers with regulations and enforcement can inform communication and enforcement gaps.
- **Distrust and Shame:** As noted communication challenges and stigma may discourage engagement from certain fishers, resulting in underreporting and underrepresentation in decision-making.
- **Dominance of Recreational Narratives:** Conversations with legislators and in community groups often center on sport fish (e.g., muskie) leading to overlooking some consumed species like bluegill, carp, or emerald shiner.

2.5 Structural and Institutional Challenges

- **Fragmented Governance:** Lack of coordination between agencies (e.g., health, environment, parks) results in disjointed support and missed opportunities for integrated programming.
- **Community Group Limitations:** Some fishing organizations may have less representation from harvest-oriented or even harvest-dependent anglers resulting in less diverse representation in these organized community groups.
- **Barriers to Participation:** Provisioning fishers often lack the time, resources, or familiarity with public processes to attend meetings or advocate for their needs.

3. Beneficial Programs and Practices Supporting Provisioning Fisheries

Despite the challenges faced by provisioning fishers, a number of programs, policies, and grassroots initiatives across the Great Lakes region are helping to improve access, safety, education, and inclusion. These efforts demonstrate how targeted, community-informed approaches can support the diverse needs of those who fish for food. This section highlights promising practices and real-world examples that are making a positive impact and could potentially be scaled up or replicated in other areas.

3.1 Community-Based Outreach and Education

- **Toronto Urban Fishing Ambassadors:** This program works with disadvantaged groups to help navigate fishing regulations, access, and safety. Ambassadors serve as local champions and peer educators.
- **NY Sea Grant’s “Train-the-Trainer” Model:** This approach empowers community members to educate others, extending the reach of outreach efforts and building local capacity.
- **Youth and School Programs:** Initiatives that introduce fishing and land-based activities in schools help foster early engagement and cultural connection to fishing.
- **Ohio DNR Angling Free Fishing Days:** Similar programs for free fishing days are available for recruiting and for anglers to engage in fishing without a license.
- **Supporting underrepresented groups in fishing:** Several community organizations play a critical role in supporting underrepresented groups to fish, and have collaborated with fishing agencies. For example, Ohio DNR in Cleveland have worked with [Footpath Foundation](#) (or their FB page: <https://www.facebook.com/FootpathFoundation/>)

3.2 Multilingual and Accessible Communication

- **Interactive Online Fish Consumption Guide (Ontario and Ohio):** This tool allows users to zoom into specific fishing locations and access consumption advisories tailored to species and demographics. It also supports translation software, improving accessibility. Example of Ohio’s interactive online consumption guide: [Statewide General Fish Consumption Advisory Map](#)
- **QR Code Signage at Fishing Sites:** Highly visual signs with QR codes link to real-time, site-specific information. These are especially useful in urban areas and for non-English speakers.
- **Pamphlets and Materials in Multiple Languages:** Efforts in Michigan and other jurisdictions are expanding beyond Spanish to include a wider range of languages spoken by newcomer communities.

3.3 Infrastructure and Access Improvements

- **Loaner Rod Programs at Libraries:** In New York, libraries offer fishing rods and help with licensing, making fishing more accessible to those without equipment or experience.
- **Free Fishing Days and License Waivers:** Ontario offers 17 free fishing days annually, and seniors (65+) do not require a license. Michigan also provides free fishing licenses, reducing financial barriers.
- **Improved Shoreline Access and Safety:** Some jurisdictions have invested in safer, more accessible fishing infrastructure, including ADA-compliant piers and better signage.

3.4 Collaborative Governance and Representation

- **Fishery Zone Advisory Groups:** These groups bring together health departments, fisheries managers, and community representatives to discuss shared concerns and coordinate responses.
- **Chicago Fishing Advisory Committee:** This local advisory body links fisher needs to municipal decision-making, offering a model for inclusive governance.
- **Public Input in Regulation Development:** In some areas, enforcement personnel and health officials are engaging directly with fishers at popular sites to gather input and provide education.
- **Ontario Federation of Anglers and Hunters (OFAH) NXT-GEN Ambassador Program:** An initiative within OFAH to increase diversity in the representation of perspectives and involve young people passionate about the outdoors, hunting, and fishing, and who want to get involved in conservation efforts.

3.5 Cross-Sector and Interagency Collaboration

- **Michigan Department of Health and Human Services + Wayne State University:** This partnership sends outreach teams to popular fishing spots including bait & tackle shops to educate fishers about health and safety, using trusted messengers and culturally relevant materials.
- **Metro Parks Signage and Infrastructure:** Parks in several jurisdictions have invested in clear, multilingual signage about catch limits, species identification, and safe fishing practices.

4. Challenges and Arguments Against Formalizing Provisioning Fisheries

A key question is whether there is a need to formalize or distinguish provisioning fishers and fisheries from recreational, subsistence or commercial sectors. In this section, we highlight concerns about the risks, costs, and unintended consequences of formalizing this category. These challenges reflect both conceptual and practical tensions, including definitional ambiguity, representation issues, and resource constraints. Below are the key arguments against formalizing provisioning fisheries, supported by real-world examples and reflections from the summit.

4.1 Definitional and Conceptual Ambiguity

- **There is no clear consensus on what defines a provisioning fishery,** and formalizing it may blur lines between recreational, subsistence, and cultural fishing. Some participants argued that recreational fishers also eat their catch and derive cultural value from fishing—so the distinction may not be as meaningful as it seems.
- **Provisioning fishers are a highly diverse and fluid group,** making it difficult to define or represent them under a single category. For instance, fishers may include newcomers,

urban and rural residents, or culturally diverse communities who do not self-identify with a formal label or group. Some may prefer to remain “under the radar” to avoid scrutiny or enforcement.

- **Fish is not a staple food for most people**, making it difficult to argue that provisioning fisheries meets a subsistence threshold. Participants noted that fish is often a luxury item, and few people meet their aquatic protein needs through fishing alone.
- **Provisioning may be better understood as a framework or orientation**, rather than a distinct fishery type. Some suggested grouping fishers by characteristics like “urban,” “shore-based,” or “new immigrant” may be more useful than creating a new regulatory category.

4.2 Representation and Identity Challenges

- **Formalization risks creating a monolithic identity that erases internal diversity** and overlooks the nuances of why and how people fish for food. Unlike recreational anglers who may identify with specific species (e.g., steelheaders), provisioning fishers often shift species based on availability, seasonality, or cultural preference.
- **Labeling could unintentionally stigmatize or isolate communities**, especially if provisioning is associated with ethnicity or poverty. Participants warned of the risk of casting ethnic groups as myopic or creating new social tensions by labeling people based on how or why they fish.
- **Engaging provisioning fishers in formal processes may be burdensome or ineffective**, especially if they are fishing out of necessity or lack trust in institutions. For example, asking newer immigrants or low-income urban residents to participate in regulatory discussions may not be a good use of their time or energy, particularly if they are not compensated for their time.

4.3 Survey and Monitoring Limitations

- **Provisioning fisheries are difficult to study using conventional methods**, due to their seasonal, opportunistic, and often informal nature. Fishers may only appear at specific times and locations, making it hard to capture their activity through standard creel surveys or outreach events. Language and cultural barriers also make it difficult to study provisioning fishers and skew results of broad angler surveys.
- **Flying under the radar may offer flexibility that formalization could take away**. Some fishers may prefer the current informal status, even if it comes with risks, because it allows them to fish without additional scrutiny or regulation.

4.4 Legal, Regulatory, and Political Complexity

- **Creating a new regulatory category could complicate existing frameworks**, especially if it introduces new tiers or exceptions. Efforts to streamline fishing regulations could be undermined by adding a separate category for provisioning fishers, particularly if it overlaps with subsistence or personal-use definitions.

- **Formalization could trigger legal scrutiny if it appears to favor one group over another** without strong data to support the distinction. For example, if Group A is allowed to harvest under a provisioning license, other groups may challenge the policy unless its ecological and social impacts are clearly justified. Similar events have been seen in Alaska and its subsistence fishery.
- **Jurisdictional harmonization would become more difficult**, especially across provincial, state, or tribal boundaries. Participants cited challenges in Michigan, Minnesota, and Wisconsin with Ojibwe fishing rights and food distribution programs that were shut down due to liability and inspection issues.

4.5 Resource and Management Constraints

- **Formalizing provisioning fisheries would require significant investment in data collection, policy development, and outreach—resources that are already limited in fisheries management.** Participants noted that creating new regulations for a relatively small group could divert funding from broader programs and face legal challenges from larger, more organized recreational fishing groups.
- **The cost-benefit ratio may not justify formalization if the size of the provisioning fisher population is small or difficult to quantify.** Without clear data on the scale and impact of provisioning fisheries, it may be hard to justify new management frameworks or regulatory changes.
- **Management concerns may not be justified if there is no evidence of overharvest or ecological harm.** Rather than creating a new category, it may be more effective to manage specific species (e.g., suckers) or protect spawning seasons, regardless of fisher identity.

5. Opportunities and Arguments for Distinguishing Provisioning Fisheries

While there are valid concerns about formalizing provisioning fisheries, summit participants also identified compelling reasons to recognize and support them more explicitly. Doing so could improve equity in fisheries management, enhance data collection, support public health, and strengthen cultural and community well-being. This section outlines the key opportunities and benefits of distinguishing provisioning fisheries within current frameworks.

5.1 Equity and Representation

- **Provisioning fishers are underrepresented in advocacy and decision-making**, despite their reliance on fisheries for food and cultural practices. For instance, shore fishers often lack the political influence of organized groups. Including them in management discussions would promote environmental justice and more inclusive governance.
- **Formal recognition can help address systemic inequities** in how fishing infrastructure and resources are allocated. For example, many shore fishing infrastructures are neglected

potentially because competing priorities with urban development projects, or other municipal priorities.

- **There is a duty to manage fisheries in the interest of all people.** Expanding representation to include provisioning fishers aligns with public trust responsibilities.

5.2 Improved Data and Monitoring

- **Recognizing provisioning fisheries can help fill critical data gaps**, especially in understanding harvest levels, species use, and fishing effort. For example, creel surveys in Wisconsin and Ohio often miss shore-based and urban fishers, while Illinois has made progress by focusing on shore anglers. Including provisioning fishers in data collection would help “balance the checkbook” for fisheries modelers.
- **Better data supports more informed and equitable management decisions**, including setting harvest limits and understanding ecological impacts. Fisheries committees that currently include charter and boat anglers could be expanded to include shore and provisioning fishers to ensure their practices are reflected in policies and regulations.
- **Targeted engagement strategies are needed to reach provisioning fishers**, who are often missed by conventional outreach. There is need for novel approaches to build trust and gather reliable data from communities that may be wary of formal institutions.

5.3 Public Health and Safety

- **Provisioning fishers may consume more fish, or different species**, than previously assumed. For instance, including less commonly consumed species in contaminant testing could provide better information on potential risk for people who choose to eat these fish.
- **Education on safe fish consumption can be more effectively targeted** when provisioning fishers are recognized and engaged. For example, youth education programs and culturally relevant outreach can help communities make informed choices about fish consumption and contamination risks.

5.4 Cultural and Community Well-Being

- **Provisioning fisheries support cultural and traditional practices**, contributing to individual and community resilience. Recognizing these practices can help sustain intergenerational knowledge transfer and strengthen community identity, especially among Indigenous and newcomer populations.
- **Formalization could help communities adapt to climate change**, by supporting flexible, seasonal, and species-diverse fishing practices. For example, encouraging the harvest of less contaminated or more abundant species while others recover could promote both ecological and human health.

5.5 Policy and Regulatory Opportunities

- **Provisioning fisheries could be integrated into existing frameworks** without creating entirely new categories, offering a path toward simplification rather than complexity. For example, adjusting regulations to allow for additional species or uses of species could better reflect the realities of food-focused fishing.

- **Setting realistic expectations for all angler groups** requires understanding the full range of fishing practices, including those of provisioning fishers. Educational programs and outreach can help align regulations with actual behaviors and needs, reducing conflict and improving compliance.

6. Goals for the Next Five Years: Advancing Support for Provisioning Fisheries

Summit participants identified a range of actionable goals to guide the advancement of provisioning fisheries over the next five years. These goals reflect a desire to improve equity, communication, data, and governance, while also preparing for long-term challenges such as climate change and shifting fish populations. The following priorities emerged across breakout groups.

6.1 Improve Communication and Information Access

- **Develop clear, multilingual, and culturally relevant communication materials** to support safe fish consumption and regulatory understanding. *Example:* Translate advisories and rules into multiple languages; use visual tools like interactive maps and QR codes; leverage informal networks like Facebook groups and diaspora communities.
- **Make government websites and digital tools more accessible and user-friendly**, especially for newcomers and low-literacy users. *Example:* Use AI and internet literacy training to help communities navigate online resources and overcome language barriers.
- **Simplify and clarify consumption risk messaging** to avoid overwhelming or discouraging fishers. *Example:* Focus on practical, risk-based guidance rather than overly technical or contradictory advisories.

6.2 Strengthening Community Engagement and Representation

- **Empower underrepresented communities** by reducing barriers to participation in advisory boards and governance processes. *Example:* Support community-based organizations (e.g., “Black to the Land”) and create spaces for co-learning and self-advocacy.
- **Build trust through co-production of knowledge** and adaptive co-management approaches. *Example:* Include experiential and Indigenous knowledge in research and decision-making; foster long-term relationships between agencies and communities.
- **Create more inclusive enforcement and outreach models** that prioritize education over punishment. *Example:* Shift from command-and-control enforcement to community-based education and support.

6.3 Advance Data Collection and Monitoring

- **Reanalyze existing fisheries data through a provisioning lens** to better understand usage patterns and community needs. *Example:* Use general fish monitoring datasets to identify trends in shore-based or culturally specific fishing practices.

- **Expand creel surveys to include demographic and cultural data**, and improve their design to capture shore-based and urban fishers. *Example:* Current creel surveys often miss these groups; adding demographic questions could open new insights into who is fishing, where, and why.
- **Conduct targeted research on species harvested, harvest levels, and economic impact** of provisioning fisheries. *Example:* Identify commonly harvested species (e.g., freshwater drum, baitfish), assess their role in local diets, and estimate their economic value.
- **Map provisioning fishing activity** across jurisdictions and urban-rural gradients. *Example:* Visualizing where and how provisioning fishing occurs can support more equitable infrastructure and policy planning.

6.4 Align Policy and Public Health Guidance

- **Harmonize consumption advisories with fishing regulations** to reduce confusion and better reflect real-world practices. *Example:* Align catch limits with contaminant risk levels; avoid contradictory messages that discourage safe fish consumption.
- **Clarify the definition of provisioning fishers** to support consistent inclusion in management discussions. *Example:* Develop a working definition that can be used across agencies and jurisdictions to guide outreach, data collection, and policy.
- **Explore pilot programs for formal provisioning fisheries** to test regulatory models and gather feedback. *Example:* Launch a small-scale pilot in one jurisdiction to explore feasibility, benefits, and challenges before broader implementation.

6.5 Expand Education, Access, and Funding

- **Develop educational curricula** on fishing and fish consumption for schools and youth programs. *Example:* A regional science curriculum could teach safe fishing practices, species identification, and cultural significance.
- **Reimagine access through an equity lens**, focusing on the needs of shore-based and lower-income fishers. *Example:* Engage communities directly to understand what they want from access sites and how to improve safety, comfort, and usability.
- **Secure dedicated funding streams** for community-led research, outreach, and infrastructure improvements. *Example:* Encourage Request for Proposals (RFPs) that support provisioning-focused projects; advocate for more inclusive funding criteria.

7. Summit Day 1 Plenary Discussion:

Overall, the terminology and definition of provisioning fisheries is still debatable given it is not clear and may lead to confusion, and the need for labeling a group may lead to unintended consequences. There was, however, agreement that using it as a framework may be beneficial to begin the conversation and considerations of less represented groups of fishers, but it must remain

broad while allowing for the possibility of a unique identity separate from sport fishing. Suggestions of “harvest-oriented” fishers or other terms could be more palatable. It was also clear that there is a need to continue this discussion with community members and to ensure interdisciplinary approaches are used when conducting research in this space.

Participants’ Last Thoughts:

Funding and Resources

- **Free Licenses vs. Funding:** Proposals for free fishing licenses could reduce revenue for resource management agencies like the Department of Natural Resources.
- **Cultural and Food Framing:** Highlighting fishing as a culturally significant activity that contribute to healthy food could attract funding and increase appreciation among non-anglers.

Self-Identification and Needs

- Provisioning fishers may want to distinguish themselves from sport anglers; however, their self-perception and specific needs should be explored without imposing unwanted labels.
- It's crucial to avoid assumptions or speaking on their behalf in research and advocacy.

Representation and Collaboration

- Direct input from provisioning fishers is missing in the working group, highlighting the need to understand their motivations, practices, and cultural significance.
- Co-developing research questions with provisioning fishers can ensure relevance and accuracy.
- Expanding research to include rural areas to better understand the needs, preferences, and other social constructs relative to the provisioning fisheries framework and comparing with urban fishing data.

Finding Commonalities and Raising Awareness

- Expanding the concept of provisioning fisheries to include diverse angler types could highlight their social and cultural roles. For example, highlighting recipes from other cultures on non-traditionally consumed fish can offer a shared view of fish as food for diverse angler groups.
- Challenges remain in defining provisioning fisheries as to whether they are distinct from recreational fishing, given their harvest orientation and provisioning significance. Further questioning and methodologies should be explored to better understand potential distinctions in values, motivations, and needs.

Cross-cutting themes from Summit discussions:

Three cross-cutting challenges emerged repeatedly across discussions throughout summit:

- **Lack of Representation:** Provisioning fishers—especially immigrants, newcomers, and low-income communities—may be unintentionally overlooked by researchers, decision-making processes, and advisory bodies. Their needs and knowledge may not be known given they are hard to reach communities with several barriers such as language and cultural barriers.
- **Terminology and Classification Confusion:** Terms like “recreational,” “subsistence,” and “cultural” fishing are inconsistently interpreted across jurisdictions and communities. This lack of clarity complicates data collection, policy design, and access to resources or programs.
- **Communication and Engagement Barriers:** Many provisioning fishers face language, literacy, and trust-related barriers that limit their ability to access advisories, understand regulations, or participate in outreach efforts. Messaging is often not culturally relevant, accessible, or coordinated across agencies.

8. Summit Day 2: Research Agenda Exercise

Day 2 of the summit included an exercise to prioritize research questions that were submitted by participants prior to the meeting. Questions also arose in Day 1 discussions which were also included. Overall, there were eight broad themes for the research agenda with 43 subquestions. Each participant was given three votes to select which questions were most important to them (Table 1).

Table 1. Participant priorities of identified themes and questions from the provisioning fisheries summit survey in Fall 2024.

Theme	Theme Question	In-person Votes	Online Votes	Total Votes
1. Characterizing Provisioning Fisheries	Who are provisioning fishers and what are their distinguishing characteristics? (demographics, (age, gender, ethnicity), values, and motivations) and how they vary site to site?	15	4	19
	How do provisioning fishers differ from “recreational”, “sport”, and indigenous fisheries? (users, purposes, regulations, species preferences, etc)?	4	2	6

	What are the broad identifying characteristics of prov. Fishers, and what drives individuals to participate in them? (activities, social organization, economic, cultural and social drivers, how fish resources are shared, exchanged and/or distributed)?	5	3	8
2. Measuring and Characterizing Provisioning Fisheries Harvest	How extensive are prov. Fisheries compared to rec?	9	1	10
	What are the potential impacts and value of provisioning fisheries?	1	N/A	1
	What are the hotspots in terms of density and distribution?	8	0	8
	How do provisioning fisheries vary temporally and spatially?	7	3	10
	What are the harvests of provisioning fisheries including number, size, species?	4	N/A	4
	What are the drivers (ex. Motivations, needs) that influence harvest practices +preferences?	5	N/A	5
	What is the relative importance +frequency of self-caught fish consumption compared to other sources (ex. Store bought fish)?	2	6	8
	What are the ecological knowledge gaps + methodological approaches needed to understand their impact?	7	1	8
	How are prov. Fisheries changed through history into the present? What can we learn from history?	1	0	1

3. Needs and Experiences of Provisioning Fisheries (+comms & power dynamics)	What challenges do provisioning fisheries face, and how can access be improved?	6	2	8
	How can we effectively communicate to provisioning fishers?	15	5	20
	What does awareness have on their behaviors and practices?	0	0	0
	How can affluent and disadvantaged anglers interests align?	0	2	2
	What are conflicts between prov. anglers and other fishers? How can they be addressed?	6	3	9
	What are the interactions between harvest - oriented and catch-and-release angler groups?	1	1	2
4a. Management and Policy Implications	How can we support prov. fishers' needs (food, cultural, spiritual) while ensuring sustainable stocks and effective co-management?	0	0	0
	What new management/ governance approaches or frameworks could support prov. fishers/ fisheries, and how might these challenge traditional governance methods? (how can current frameworks be molded)?	8	0	8
	How do we better train fisheries managers to deliver services that benefit a suite of resource users? A	0	5	5

	What are the conservation implications of prov. Fishers, and how can policies be developed to support their ecosystem services?	2	3	5
	What are lessons learned from other fisheries systems that can be adapted to support prov. Fish?	1	N/A	1
	Assess inclusivity and enabling participatory process of current governance system A	0	N/A	0
4b. Justice and Equity in Representation of Provisioning Fisheries Management	How can provisioning fisheries be integrated into decision-making processes to ensure meaningful inclusion of fishers' voices?	14	9	23
	How can provisioning fisheries be understood as a part of a broader movement for food justice/ food sovereignty, especially for marginalized communities?	9	0	9
	How can environmental justice considerations be incorporated into management of provisioning fisheries?	2	0	2
	How do provisioning fisheries fit within a larger framework of sustainable, nutritious, and socially just provisioning services, such as wild harvesting, food forests, and community gardens?	1	1	2
5. Role of Provisioning Fisheries in Nutritional and Food Systems	What is the degree to which provisioning fisheries depend on fishing for food and wellbeing?	5	1	6

	What role do provisioning fisheries play in the food system? (ex. Nutrition, food provisioning, offset food costs, food security, food sovereignty).	4	6	10
6. Socio-cultural Dimension of Provision Fisheries	What role does culture play in perpetuating specific practices of provisioning fishers?	1	3	4
	What role do provisioning fisheries play in both informal and formal economic practices?	1	1	2
	Do fish play a role in community or group ceremonialism?	0	0	0
	How do provisioning fisheries contribute to cultural practices, preservation, continuity, social bonds, and social capital?	15	1	16
7. Implications on Health Risks and Benefits	How does consuming wild-caught fish affect the health of prov. fishers, do these fish sources contribute to toxin risk or food security?	3	0	3
	How do provisioning fishers perceive and navigate the benefits and risks of eating the fish they harvest?	6	3	9
	How does the quality and toxin content compare to commercially available fish?	7	0	7
	What needs are provisioning fishers meeting by fishing for food and are there alternative ways to meet these needs, especially if some fish are contaminated?	2	4	6

	Which, if any, species that provisioning fishers take are insufficiently supported in regulatory or advisory policies?	5	1	6
8. Impacts of Anthropogenic Stressors on Provisioning Fisheries	What are the impacts of climate change, invasive species, etc. on provisioning fisheries?	4	3	7
	How do provisioning fisheries support social resilience to food insecurity and climate change?	4	4	8
	What role do provisioning fisheries play in fostering climate resilience?	0	0	0
	What are the attitudes + perceptions of fishers towards habitat protection and environmental issues?	9	0	9

9. Conclusions and Considerations:

It is important to note that there were disproportionate representations of various states at the Summit, and thus the perspectives captured may not be representative of the entire Great Lakes watershed. For instance, we did not have representatives from Wisconsin, and only few from Indiana and Illinois given the networks of the organizing team. Further, we had few representations of members from the angling community, which is a large gap in this discussion. Overall, the summit highlighted the critical need for integrated approaches to support provisioning fisheries. Moving forward, the more immediate steps for practitioners and actors looking to support 'provisioning fishers' can include:

1. **Enhancing Outreach and Communication:** Develop multilingual, culturally tailored resources to ensure effective communication of consumption advisories and regulations.
2. **Improving Access and Equity:** Address access barriers by investing in shore fishing infrastructure, ADA-compliant facilities, and community-specific programs.
3. **Strengthening Research and Data Collection:** Focus on understudied non-game species, economic contributions, and contamination risks to better understand and support provisioning fisheries.

4. **Fostering Representation and Collaboration:** Include provisioning perspectives in advisory groups, promote interdisciplinary engagement, and build trust through inclusive governance.
5. **Educating Communities:** Launch youth-focused initiatives and mentorship programs to sustain cultural and ecological awareness across generations.
6. **Facilitate a Forum for Members of the Angling Community,** particularly those engaging in provisioning fisheries. It is important to engage with these members and better understand their needs and preferences when it relates to fisheries and fisheries management. This may include compensating them for their time to contribute and participate through honoraria or other appropriate alternatives.
7. **Funding:** Exploring different funding areas that are not traditionally applied to by fisheries researchers such as funds addressing environmental or social justice, newcomer inclusion, health and wellbeing, among others. By prioritizing these steps, stakeholders can ensure that provisioning fisheries are recognized, supported, and sustainably managed, benefiting both marginalized communities and the broader ecosystem. Following these steps, other steps outlined in the above sections would be highly beneficial to support provisioning fisheries.

10. Next Steps:

As a group and network of practitioners, immediate future plans include:

1. Launching a **seminar series** related to provisioning fisheries and adjacent topics to continue knowledge sharing
2. Developing a **special issue or collection** for a peer-reviewed journal on the topic of provisioning fisheries or inclusive fisheries management to gather more knowledge and research in this space.
3. Collaboratively publishing the provisioning fisheries **research and policy agenda** as a call to the research community on knowledge gaps discussed at the Summit, which are outcomes of Day 2 of the summit.
4. Holding a **future meeting** / session at a conference such as the International Association of Great Lakes Research or American Fisheries Society



Figure 2 Group photo of participants at networking event

Appendices:

1. [Pre-Meeting Package](#)

2. [Summit Presentations](#)

3. List of Participants:

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