Pre-Conference Workshop: Exploring the Elements of Effective Seafood Traceability, Including Key Data Elements

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Introduction and Purpose

As part of the 2015 Seafood Summit, a diverse group of stakeholders participated in a Pre-Conference Workshop: Exploring the Elements of Effective Seafood Traceability, Including Key Data Elements. The workshop provided an opportunity for seafood industry representatives and other stakeholders to come together to discuss best practices for effective seafood traceability schemes, including the Recommendations by the Presidential Task Force on Combatting Illegal, Unreported and Unregulated Fishing and Seafood Fraud, and a project by the Traceability Working Group of the National Fisheries Institute (NFI). FishWise would like to thank all the workshop participants for their time and valuable contribution to the discussion. Because of those contributions, the workshop achieved its goals of furthering stakeholder dialogue and understanding of seafood traceability, and the challenges and opportunities of enhancing traceability on a global scale.

The objectives for the workshop were to:
1) Create an environment for industry, NGOs and others to candidly share thoughts and comments on seafood traceability and ways to combat IUU fishing.
2) Discuss Task Force Recommendations #13, #14, and #15, and brainstorm implementation questions as a group.
3) Solicit feedback regarding NFI’s Key Data Elements (KDEs) to Identify Seafood Sources proposal.

The workshop was organized into two parts, with the first half dedicated to discussing Task Force Recommendations 13, 14, and 15, and the second half of the workshop dedicated to discussing NFI’s KDEs to Identify Seafood Sources. To ensure full participation, workshop attendees were seated in small groups of 8-10 and were given templates to record their individual table discussions. After each individual table discussion, the entire group reconvened for a plenary discussion. Given the goals and structure of the workshop, this interactive session focused on broadly gathering ideas, rather than choosing or prioritizing. All contributions were welcomed.

The appendices at the end of this summary capture in detail what was recorded during those small group discussions, as well during each plenary discussion. The appendices provide an objective record of what was said during the workshop, and can hopefully be used to guide or inform future conversations on these topics. If an item was written on more than one template, it is followed by a number in parentheses denoting how many times it was recorded.
Task Force Recommendations and Implementation Questions

I. Task Force Recommendation #13
Recommendation 13 directs the Task Force to establish a regular forum with harvesters, importers, dealers, retailers, processors, and non-governmental organizations to enhance collaboration in combating IUU fishing and seafood fraud, and to improve understanding of the levels and nature of IUU fishing and seafood fraud related activities.

Workshop participants were asked to brainstorm answers to the following questions:
1. “What would a regular forum of harvesters, importers, dealers, retailers, processors, and non-governmental organizations look like?”
2. “How can we ensure participation from many stakeholder groups?”

In response to the first question, suggestions included looking at similar initiatives in other sectors (e.g. beef and palm oil) and organizing forums dedicated to specific seafood topics. To ensure participation across stakeholder groups, attendees suggested integrating Task Force forums into existing seafood events and considering how to remove financial barriers for stakeholders to attend forum events.

For detailed responses to these two implementation questions, please refer to Appendix A1: Task Force Forum and Appendix A2: Ensuring Forum Participation.

II. Task Force Recommendation #14
Task Force Recommendation 14 directs the Task Force, with input from the U.S. industry and other stakeholders, to identify and develop within six months a list of the types of information and operational standards needed for an effective seafood traceability program to combat seafood fraud and IUU seafood in U.S. commerce.

To facilitate a discussion that would allow Task Force representatives to gain a deeper understanding of current challenges and opportunities related to the implementation of this recommendation, workshop participants were asked to brainstorm answers to the following question: “What types of information and operational standards should be included in a traceability program?”

For types of information, important themes that emerged included but were not limited to gear/catch method; COOL; point of harvest and country of catch, Latin species name, and vessel and crew information. For operational standards, important themes that emerged included but were not limited to verification of data; privacy; and standardization and interoperability.

Please refer to Appendix B1: Types of Information and Appendix B2: Operational Standards for the fully transcribed lists.
II. Task Force Recommendation #15
Task Force Recommendation 15 directs the task force to establish, within 18 months, the first phase of a risk-based traceability program to track seafood from point of harvest to entry into U.S. commerce.

Workshop participants were asked to brainstorm answers to the following implementation questions:

1. “What are the specific characteristics and workings of the global seafood supply chain that should be taken into account when requiring information for a risk-based traceability program?”
2. What factors contribute to species/regions becoming at high risk in the future?”
3. Which species and/or regions are currently at highest risk of IUU fishing and seafood fraud?”

For specific characteristics and workings of the global seafood supply chain, workshop participants discussed issues of verification and standardization of information; how to better record, monitor, and enforce activity on the water; vulnerable points in the supply chain, including points of comingling, at-sea processing, and ports of entry into the U.S.; and seafood fraud. For factors contributing to species/regions becoming high risk, workshop participants identified drivers that included but were not limited to climate change, governance and capacity, and socioeconomic trends. For species and/or regions, participants identified numerous species, fisheries, and regions that were at highest risk for IUU fishing and seafood fraud.

Please refer to Appendix C1: Characteristics and Workings, Appendix C2: Factors Driving Future Risk, and Appendix C3: Species and/or Regions at Risk for detailed lists of what was discussed for Recommendation 15 implementation questions.
NFI Traceability Working Group Project: Key Data Elements to Identify Seafood Sources

The objective for the second half of the workshop was to share a project that NFI’s Traceability Working Group, led by Bill DiMento of High Liner Foods, has been developing on Key Data Elements (KDEs) to identify seafood sources. The pre-conference workshop was the first time the project had been shared publicly, and provided an opportunity for attendees to share their reactions and feedback to the project, and to discuss opportunities to align on these elements and standards of information sharing moving forward. The three KDEs to identify seafood sources include:

1. Latin Species Name
2. Wild Catch Method/Farmed Production Method (using the FAO lists for [wild catch method](#) and [farmed production method](#))
3. Location of Catch or Farming
   a. Within an EEZ: FAO Fishing Area, Country of Harvest or Farming
   b. Outside of an EEZ: FAO Fishing Area, Flag of Vessel, RFMO or High Seas designation

In order to solicit feedback from workshop participants, Bill DiMento posed the following questions:

1. “What do you like about this work?”
2. “What do you dislike about this work?”
3. “What considerations are important to keep in mind moving forward?”

For things they liked about the KDE project, participants noted that it was a first step towards interoperable systems, it would standardize information that is already being collected, and that it could provide a foundation for larger traceability and sustainability benefits. Many participants noted the KDEs could be more comprehensive, especially in regards to the granularity of the ‘Location of Catch or Farming’ field.

The KDE summary document that was distributed during the workshop is included here for your reference. Please refer to Appendix D1 for the full KDE summary document.

Also included for your reference are images of individual table templates, as well as the plenary template, that provide a visual record of workshop participants’ considerations regarding the KDE project. Please refer to Appendix D2 for the KDE template images.
Appendix A1: Task Force Forum

Design and Implementation
- Need a common vision and plan to work on these issues
- Someone needs to run these meetings and take responsibility
- Strong leadership/facilitator
- Neutral party with strong facilitation skills
- Would need current intelligence on fisheries issues/scams (industry, independent watchdogs)
- Clear terms of reference
- Specific problems to solve
- Get to technical nuts and bolts of building tools
- Needs to happen quickly
- Grassroots → Build/need leverage
- People in field convene → Look forward → Build → Implement
- Virtual – can be ongoing but has to/should be in person at least twice a year
- Social media

Forums
- Regional forums (both U.S. and global)
- Town hall style forums on specific topics
- Forum with specific parts of supply chain
- Technological forums – digitally transferred
- Topic or theme based (3)

Composition
- Academia (2)
- Government (plus those listed in the recommendations)
- Science (2)
- International participants (4)
- Coordinate with other players and U.S.
- Potential solution providers
- Consumers
- Need regulatory representation to advise/guide the legitimacy of the issues brought forth
- Must reflect supply chain makeup (industry & geography)
- Needs to be broader than one group/company
- Struggle to keep manageable size

Questions:
- Role of forum – advice or questions
- Conservation Alliance?
o International reach?
o What should the forum focus on?
o How formal and how often?
o Advisory board?
o Incentive for producers?
o Try to ensure producers participation?
o Consumer driven?
o Who coordinates?

Additional Comments
o Declining N.A. market influence (so need other nations, too)
o 25% landings never recorded
o US should fund capacity building (World Bank, USAID)
o Bring basic management to developing countries
o Benchmark of EU
o Not reinvent the wheel
o Case studies – look at results – start immediately
o Legitimacy → know what results are sought → action oriented

Appendix A2: Ensuring Forum Participation

Incentives
o Positive incentives: tax breaks
o International participants needs financial incentives
o Get funding for participants’ travel/expenses (x2)
o Low cost for small (& large) groups → central location
o Proper incentives (ID value for industry, etc.) (x2)
o Make clear business case (financial incentives in order to persuade developing countries to table)
o Not time or cost prohibitive

Timing and Location
o Tack onto existing forums and events (e.g. Boston Seafood Show and Brussels) (x6)
o Connection to meetings/activities outside government
o Schedule outside of fishing seasons for harvesters
o Move location (including internationally) (x2)

Design
o Transparency in nomination and selection
o Term limit on participation
o Identify focus groups & then self-select participants
Multiple avenues for participation
Diverse representation (countries/groups)
Non-partisan or diverse political motivations and groups
Equal voice between stakeholders
Regionally and listening-oriented (x2)
Specific outcomes/action steps
Have long-term focus (don’t suggest quick results)
Clear TOR/framework (time, commitment/scope, cost of participation)
Quick wins

Additional Suggestions and Considerations
Ask other industry groups what successful techniques have been (Canada National Seafood & value chain roundtable)
How to improve regulatory systems, need government stakeholders
Need more capacity for enforcement → can this group/forum stimulate that?
Level of authority (connection between recommendation & outcome)
Engage internationally (importers, RFMOs)
Need for coordination with other key players (FAO/EU/ASEAN)
Forum should look at the value of traceability (case studies, etc.)
  Make it dedicated to this issue, not a side meeting or after thought

Appendix B1: Types of Information

Gear/Catch Method
Gear registry & tagging gear (ghost gear)
Gear (appropriate national/international requirements)
Gear/production method (x2)
Catch method → FAO standard (x2)
Gear type (x4)
Expanding gear type – realistic gear for species landed
How do you verify how it was caught?

Country of Origin Labeling (COOL)
COOL (x4)
Certificate of Origin which includes COOL and specific fishing area, identifies harvest location/seal #/cargo vessel (3rd party issued)
Certificate of Origin
Issue EU certificate of origin → issue inspection regimen?

Country of Catch
Country of Catch
Country of Catch (If within an EEZ. RFMO/ocean name/FAO zone if outside EEZ.)

Point of Harvest
- Point of harvest or offloading (country of management zones, FAO grid, COOL, and EEZ)
- Catch area (FAO areas or more granular, if accurate → note sensitivity to proprietary info)
- Harvest location (x4)
- Place of harvest over place of landing (need to make FAO zones more granular, lat/long on capture but not recorded throughout)
- Where it is caught (lat/long at best)
- Specific fishing area
- Area of catch – TBD as specific as possible
- How do you verify where it was caught?

Date of Harvest
- Date of harvest (x4)
- Time of harvest (x2)
- When it is caught/time stamp
- Landing date
- Date lot #

Transshipment/Transport of Product
- Record of transshipment (processing and trading points)
- Port of landing/trans-shipment (x2)
- Entry/re-import to U.S. (questions of “end” of trace cycle?)
- Transport Details

Landings
- Build on existing standards from regulated fisheries
- Catch quantity (x2)
- Size (how many mature fish?)
- Bycatch (x2)
- Reporting of landings

Vessel Information
- Vessel ID (x3)
- IMO/UVI
- Vessel name/IMO#/vessel type/H.P.
- Vessel registration (x2)
- Owner, owner’s address
- Flag (x3)
- Cargo vessel
• Destination
• Port of Departure
• From Register: who, what, where, when
• Crew registry (China is restrictive, not enough technical capacity to implement, financial barriers to implementation)
• Captain/crew info or manifest (x2)
• Who caught it
• Observers (x2)
• Fishing license

Species
• Species (Latin name, common name) (x2)
• Species name (Latin/scientific name) (x4)
• Species (x2)
• DNA testing (x3)
• Seasonality

Aquaculture
• Farmed or wild (non-consensus)
• Farm name/location/company
• Aquaculture production/method (x2)
• Farm level data
• Feed input
• Feed input & grow up pens → varies by sector

Validity and Verification of Information
• Lists of certifications
• Health certificate
• Lists of “suspect countries”
• IUU – Lacey Act
• Who is handling? Catching? Processing? Who are the flag states?
• It is caught in compliance with applicable laws and regulatory system? How do you verify: what fish? Where caught? Is it legal? How it is caught? When was it caught?
• Elements where things blurred (i.e. frozen or not)
• What system is being used to record?
• What ‘management system’ is being used?
• Standardization across the board needed
• Commercial consistency
• Terminology and definitions? (international)
• GSI, ISO, Canada, & NFI traceability data standard
• Creating accessible software systems (matter of technology)
Data
- Need both transactional data and base data (transactional data → less of an issue with farmed? Unique identifiers for both types of data)
- Info already included on trip tickets (non-consensus)
- Collect enough data for determination
- Data should be meaningful rather than drilled down
- Degree of transparency (commercial)
- Mandate electronic once in US

Additional Comments
- Need capacity building
- Artisanal fisher community

Appendix B2: Operational Standards

Critical Tracking Events
- Harvest/creation
- Landing or transshipment
- Aggregation/transformation (co-mingling)

Data
- Mandatory catch documentation
- Each nation should have publically available registry of licenses issued
- Global vessel registry with unique identifiers
- Gear Tagging
- QC information/food safety
- 100% coverage of plant and vessel
- Aggregation/De-aggregation of batch systems
- Quality of data (x6)
- Need actual data, not just samples
- Data quality standard
- High value species → better quality data
- Scale of unit/data and level of granularity (x4)
- Different questions = different data
- Pangas vs. large vessels – different level of info
- Non-divisible unit
- Electronic record-keeping/data (x3)
- Approach depends on ability to audit
- Farmed/wild for info collections/requirements
- Transparency (x2)
- Minimum requirements (x2)
- Robustness
  - Minimum requirements, but don’t limit what info can move forward

### Verification of Data
- Verification process (real time/infrastructure, unified language → electronic)
- Checkers/verifiers to provide oversight on info provided
- Legal status of the system used and use of data
- Verification methodology
  - Electronic vs. spot check
  - Risk-based
- Challenge → comingled → need protocols (rating system)
- Verification/validity of data being used – reliability/transparency
- Role of RFMO in managing info (creating data rules)

### Standardization/Interoperability
- Standardization of key data elements (EU good to model after, NW Fisheries Management Council)
- Interoperability between systems (x4)
- Map the types of information and how they relate
- Flow out of value chain vs. to management
- Unifying units of metrics
- Standardized reference list
- Clarity of terms need to be international

### Privacy
- Challenge of confidential/proprietary info (solution: impartial 3rd party)
- Privacy/confidentiality (x2)
- Permission of information
- Public – U.S. government permissions
- Clear articulation of what can be asked/shared
- What availability/access and how to assure renewability

### Best Practices
- Transponders/tracking
- Units/metrics
- Separate holds
- Data reporting

### Other Comments/Suggestions:
- How not to exclude small-scale fishers from global markets?
- Spread the burden of cost → suppliers already receive pressure from both ends
On demand vs. with product (what brings more value)
- Social license concept
- Active certification
- Coordinated with FDA and others
- Retention longer than 2 years
- Chain of custody/logistics chain

Bristol Bay example:
- System determines sustainability
- Would be a fool’s errand to track every vessel

Don’t reinvent the wheel
- Look at existing standards already used and audited

Appendix C1: Characteristics and Workings

Species
- High value species are at risk
- Species vulnerable to substitution
- Common names used by many species
- Higher risk = replaceability substitution (i.e. farmed vs. wild)

Risk
- Be clear on degrees of risk
- Define what types of risk (e.g. sustainability, labor abuses, etc.)
- System has to be responsive to what is ‘risky’ at any given time
- Incorporate uncertainty
- Lower risk – vertical integration (existing certifications and safety standards)

Supply Chain Characteristics and Consideration
- Composition of value chain
- Products processed multiple times (level of product transformation)
- Products with longer supply chains
- Flexibility to accommodate complexity of different supply chains
- Accommodate different scales (e.g. not possible to touch all fishermen/vessels)
- Scale should be taken into account
- Artisanal vs. industrial reporting/recording capabilities
- Keep pace with flow of goods (because of dynamic nature of supply chain)
- Accommodate trans-shipment & high seas fishing
- Consider re-entry of domestic product that is processed abroad
- Lose traceability at freight forward
- Movement of product (i.e. input into system and caught at different times)
- Comingling
Secondary Processing
- At-sea processing
- Reimports
- Repacks

Government
- Regulation and enforcement
- Need for federal and state regulators to work closer
- Government regularity framework → where harvested?
- Preferred entry based on level of transparency (higher risk if lack of management and enforcement)
- Accommodate flux in foreign currencies
- Targeting capacity-building in developing countries
- Corruption indices
- Transparency

On the Water
- Fishing effort
- Gear types matter (intangible)
- Access to technology
- Identify as IUU or human rights (2)
- System is about whether IUU product is being bought vs. is the product traceable?
- Are there laws on the boats? How are they enforced?
- Catch documentation systems
- Red-carded countries not part of Port State measures (2)
- Days at sea (2)
- Crossing into international waters (2)

Verification and Standardization
- Transparency of rules
- Verification systems
- When you put attention on something, the risk shifts – need a broad system to address*
- Time factor for verification for fresh product
- Electronic data/records that are secure, audited
- Information requirements for all seafood with risk-based enforcement
- Speed: Data unable to keep up or mismatched processes, evidence otherwise → speaks to interoperability
- Need a quick, electronic database – trusted traders (e.g. TSA pre-check)
- Global standardization
- Build in flexibility for different standards in different countries
- Borrow from other food sectors (e.g. produce)
- Overcoming the challenges in the system
Seafood Fraud
- Most is mislabeling – restaurants and chefs
- Committing fraud to get a license
- Why would you be fraudulent?
- Reputational risk
- Fines
- Either imported into U.S. or caught within U.S.
- Fraud happens at Port of Entry at U.S. border (learn from other commodities/processes)
- Is the grocer the best place to test/verify?
- Food Service
- Generic menu-ing

Appendix C2: Factors Driving Future Risk

Species Migration Patterns
- Species life history factors
- Migration patterns/nature (x2)
- Migration patterns due to climate change (x2)

Supply Chain/Value Chain
- High value or readily available substitute
- High product value can drive/create incentives for IUU
- Relative value of different species
- Level of processing
- Transition to aquaculture (slow)
- Availability of alternative method

Governance and Capacity
- Government stability – lack of enforcement
- Lack of governance capacity including enforcement
- Lack of monitoring & enforcement capacity (x2)
- Lack of rule of law and enforcement/surveillance
- Lack of visibility
- Unregulated areas
- Recreational & subsistence fishing are often unreported
- Non-adapters of FAO, Port State measures
- Corruption (x2)
- Poor compliance
- Areas without transnational cooperation
- Overcapacity (x2)
- Distant water fleets
FishWise

- Flags of convenience
- Unintended consequences of regulation

**Socioeconomic Factors**
- Food insecurity
- Poverty
- Growing population/protein demand
- Rapidly expanding population
- Income growth
- Pay margins
- Importance of sustainability from a cultural lens (culture toward info sharing)
- Demand/sustainability of fish population
- Culture/sustainability

**Appendix C3: Species and/or Regions at Risk**

**Species**
- Snapper (x2)
- Grouper (x3)
- Tuna (x2)
- Bluefin tuna (x3)
- Bigeye tuna (x2)
- Crab
- Russian Crab
- Pollock
- Salmon
- Russian salmon
- Sharks
- Pelagic sharks (commercial and recreational)
- Farmed shrimp
- Shrimp
- Catfish/Fraud
- Whitefish (fraud)
- Anchovy (reduction fish → fish oil/meal)
- Spiny Lobster
- Lobster
- Sturgeon
- Squid (China)
- Low fecundity/long-lived, slow to mature
- Migratory vs. stationary
Fisheries
- Small fisheries managed by U.S. states of high value (e.g. scallops, shellfish, blue crab)
- Reef fisheries using destructive methods
- Fish meal & fish oil operations
- Bottom trawls in Asia

Regions
- West Africa
- Bering Sea
- Indonesia
- Russia
- China
- High Seas
- U.S. fraud: 1) Substitution, 2) short-weighting (shrimp, tilapia, pollock, squid) occurs at restaurant level – mislabeling, 3) Grocery stores

Characteristics
- High degree of sustainability
- High trans-shipment areas/areas of isolation/low oversight
- Regions without enforcement capabilities/poor history of enforcement
- Regions/developing countries that lack capacity-building resources
- Non-FAO Port States (x2)

Other Comments
Where is risk of fraud? High value, low value/high volume, feed – aquaculture
Appendix D1: KDE Summary Document

Key Data Elements to Identify Seafood Sources

A project by the NFI Traceability Working Group

Project Goals:

• Create a common lexicon for these KDEs so all industry stakeholders have a shared understanding of the terminology
• Determine which KDEs to identify seafood sources should be communicated throughout seafood supply chains
• Develop master lists for this terminology so that all companies are using a common set of terms when answering KDE requests
• Allow for the harmonization of databases by adopting the same KDEs and lexicon
• Encourage implementation by seafood stakeholders

Project Rationale:

• KDEs to identify seafood sources have not yet been standardized but are key pieces of information
• Not all companies in a supply chain request, share, and maintain the same source information, and when they do, they often use different language to capture the same KDE like Region of Catch or Production Method
• There are currently no uniform guidelines in the seafood industry or among NGOs for how source information is collected and shared throughout the supply chain
• An aligned approach may help reduce redundant information requests

The anticipated benefits of this work will be:

• Streamlined communication among industry stakeholders
• Increased coordination among NGOs and their business partners when collecting and sharing source KDEs
• Aligned KDE requests by industry and NGOs
• Simplified data collection and entry throughout the supply chain
• Improved product tracking and inventory management for seafood businesses
• Increased efficiency when evaluating if products meet a company’s sustainability policy
• Standardized information to identify and mitigate IUU & mislabeling risk
Outside of project scope:

This work is clearly related to traceability and sustainability, however there are some important distinctions.

First, we recognize that these are not the only pieces of information required for seafood traceability. As a best practice, other traceability information should be available upon request. These 3 KDEs are important and should be traced throughout the supply chain but we recognize there may be more important KDEs to enable full chain traceability. Again, these 3 KDEs are only meant to identify seafood sources.

Second, this information can be used in evaluating sustainability, such as MBA ratings and SFP scores, and can be used to double-check information from a company claiming certification using the certification’s website. Being able to provide these 3 KDEs does not mean that a product is sustainable.

Lastly, verification is an important component of any traceability program. This is out of scope of this project today, but could be a topic for future discussion.
The Proposed Key Data Elements

Figure 1: KDEs to identify seafood sources

![Diagram showing the proposed key data elements]

1. Latin Species Name

2. Production Method
   - Wild Catch Method
     - FAO Parent Gear Type
     - FAO Sub-Method
   - or
   - Farmed Production Method
     - FAO System & Technique
     - FAO Environment

3. Location
   - Fishery Location
     - FAO Major Fishing Area
     - Country EEZ
     - OR
     - Flag of Vessel + RFMO/High Seas
   - or
   - Farming Location
     - Country of Farming

Figure 2: KDEs and subcategories
KDE Details

**Latin Species Name:** The first KDE is Latin species name. As you know, this is a standardized way to identify a species globally and does not vary like other common, local, and market names.

**Fishery Location:** A hierarchical approach is used here starting with the FAO Major Fishing Area, which is widely adopted by the industry and applies globally. Since FAO Major Fishing Areas are quite large, a finer level of resolution is captured within a ‘region’ field.

1. FAO Major Fishing Area
2. Region
   a. Country of Harvest (if within EEZ)
   b. Flag of Vessel and the RMFO Name OR High Seas-Ocean Designation

The first and most straight forward is Country of Harvest (if a product is caught within a country’s 200-mile EEZ). If a product is harvested from outside an EEZ, companies can provide the flag State of the vessel, along with the RFMO name or note that it came from the high seas (in which case they would indicate the name of the ocean).

**Farming Location:** Companies should indicate the Country of Farming if product is farmed on land or within an EEZ. Management zone is included here as aquaculture moves towards zonal management in the future to account for cumulative impacts.

1. Country of Farming
2. Management Zone (TBD)

**Wild Capture Method:** This category again uses standardized lists by the FAO. There is a placeholder for future work to discuss if any further specificity is needed in this list. (The FAO lists and draft ‘specific gear type’ list are included at the end of this document)

1. FAO Parent Gear Type
2. FAO Sub-Method
3. Specific Gear Type (TBD)

**Farmed Production Method:** This category also follows FAO categories for ‘Technique’, ‘Systems’ and ‘Environment’. A placeholder has been added to discuss if additional fields are needed to define production method. (The FAO farmed production methods definitions are included at the end of this document).

1. FAO Technique
2. FAO System
3. FAO Environment

Fields for future consideration include habitat, intensity, control, management/regulation, and an ‘other’ category.
Appendix D2: KDE Templates

*See pages 23 – 26
**LIKE?**

- Industry-driven - built on existing standards.
- Will get the low-hanging fruit - Latin name = commodity
- Solidarity + NGO involvement -
  - Of the NFT types

**CONSIDERATIONS**

- Build in levels of access:
  - Be clear - what these represent?
- First-mover advantage - part of NFTs
- Include data mapping & integration
- Encourage some countries to do better - might?
- Why don’t we have total transparency?

**DISLIKE?**

- Communicated enough?
- Lack of transparency
- Area too broad ➔ need a smaller scale
- Need additional info added