Fishery IDs: A Universal Language for Seafood Traceability

Proposal for a GDST-SFP Integration Dialogue

1. Strategic Vision and Interoperability

The current lack of standardized fishery identification across international seafood supply chains creates massive 'data silos'. These silos make environmental, social, and governance (ESG), corporate social responsibility (CSR), and sustainability reporting incredibly time-consuming, fragmented, and costly for companies. The Global Dialogue on Seafood Traceability (GDST) is building a standard to support traceability and interoperability in seafood supply chains. By integrating the globally harmonized Fishery IDs, made publicly accessible through Sustainable Fisheries Partnership's (SFP) FishSource and the Global Record of Stocks and Fisheries (GRSF), the GDST standard can bridge the gap between traceability and sustainability information, supporting interoperability for seafood stakeholders, regardless of which sustainability rating or evaluation system they choose to use. This document outlines a proposal to initiate a dedicated GDST-SFP integration dialogue to explore how Fishery IDs could be incorporated into the GDST framework.

> **The Aspirational Goal**
> Much like the introduction of Universal Product Codes (UPC) and European Article Numbers (EAN) in the 1970s revolutionized retail logistics and global trade, Fishery IDs aim to become the universal standard for seafood sustainability. The vision is that every fishery globally will possess a unique, computer-readable Universally Unique Identifier (UUID). This will allow all tracking data and sustainability metrics to be easily queried and seamlessly integrated across multiple systems, regardless of supply chain complexity.

2. Problem Statement & Objectives

The Gap: The farther a seafood buyer or retailer is from the harvest source, the harder it becomes to verify where the seafood originated. Today, mapping data across corporate departments, non-governmental organizations (NGOs), and regulatory bodies often fails because the identifiers used do not align. Most traceability systems rely on free-text names or overly broad FAO Major Fishing Area designations, resulting in widespread ambiguity and analytical inefficiency.

The Objective: The dialogue aims to explore how a single Fishery ID could potentially supplement, reference, or streamline four or more Key Data Elements (KDEs), while avoiding duplication and maintaining alignment with existing GDST core standards, thereby allowing for seamless integration

with sustainability information.

3. Sustainable Fisheries Partnership (SFP) Profile

Sustainable Fisheries Partnership (SFP) is a US-registered nonprofit organization that operates globally to rebuild depleted fish stocks and reduce the environmental and social impacts of fishing and fish farming. SFP works by directly engaging fishery stakeholders and seafood businesses throughout the supply chain to promote the sustainable production of seafood.

Core Mission & Vision

SFP Mission: To engage seafood supply chains globally to rebuild depleted fish stocks, reduce the environmental impacts of fishing and fish farming, and ensure sustained economic opportunities for fishing communities worldwide.

SFP Vision: A world of healthy marine and aquatic ecosystems, where 100 percent of the world's seafood is responsibly sourced and produced. Sustainable, responsibly produced seafood must not be a luxury item available only to a few; it should be the norm.

Theory of Change & Impact Areas

To achieve 100% sustainable fisheries, SFP's core strategy is to improve all fisheries and aquaculture, rather than focusing solely on the best sources or the improving few. SFP does not urge its partners to switch sourcing, nor does it support boycotting or red-listing poorly performing or managed fisheries. Instead, SFP asks its partners to 'stay and improve' – to engage with fishers, producers, processors, and other stakeholders to determine what improvements are needed and help them achieve those aims.

Why SFP is Uniquely Placed to Lead the Dialogue on Fishery IDs

Sustainable Fisheries Partnership (SFP) holds an credible position to lead the dialogue on fishery IDs due to its 20-year history of technical development, public data integration, and cross-sector alignment:

- Pioneering Operational Definitions: SFP developed its FishSource database and Seafood Metrics, a tool which helps companies understand the sustainability of their sources, almost 20 years ago, collaborating with seafood supply chains to establish a functional definition of a "fishery." This framework was engineered to match the realistic reporting scale of suppliers while enabling rigorous sustainability evaluations based on public information.
- FishSource Data Infrastructure: SFP operationalized this approach through FishSource, an open-access platform built exclusively on publicly available data and peer-feedback mechanisms. FishSource currently monitors over 1,700 identified stocks and 5,700 defined

fisheries, serving as a core contributing data source to the FAO's Global Record of Stocks and Fisheries (GRSF).

- The concept of the Traceability Unit - referred to as the Fishery ID in this context - was developed within the GRSF project to support public and private actors involved in seafood ecolabelling, traceability, and sustainable fisheries. The use case specifically focused on seafood traceability was handled by SFP. The Traceability Unit was designed out of the necessity to uniquely evaluate a fishery based on four critical sustainability pillars: the status of the fished stock, the adequacy of its management measures, the degree of fisher compliance with those measures, and the fishery's ecosystem impacts. The Fishery IDs align with definitions used by most rating, certification or evaluation systems, remaining agnostic and widely compatible. By capturing these essential knowledge elements, the Fishery IDs aim to make sustainability information more easily accessible to all stages of the supply chain.Inter-NGO Technical Consensus: SFP has initiated a technical dialogue with leading NGOs focused on sustainability evaluations (including Monterey Bay Aquarium, WWF offices, Ocean Wise, and the Marine Conservation Society). These collaborations have reinforced widespread alignment around standardized fishery definitions and the essential Key Data Elements (KDEs) required for evaluation.
- Leadership in FIP Architecture & Evaluation: Having pioneered the Fishery Improvement Project (FIP) model to mobilize industry leadership, where over half of global FIPs are now industry-led, SFP manages the FIP Evaluation Program. Through our FIP Evaluation Tool (assessing six stages of achievement) and FIP Progress Ratings (assigning time-benchmark grades from A to E), SFP oversees the standard frameworks used to track and measure FIP progress globally.
- Harmonization of Sourcing and Sustainability Data: SFP's technical experience allows it to bridge commercial supply chain reporting formats with global sustainability evaluation standards, making it the ideal entity to facilitate a standardized fishery ID framework.

4. Technical Architecture of the Fishery ID

The Fishery ID is not merely a single code; it represents a comprehensive digital data package. As of July 2026, approximately 3,700 fishing units have been successfully connected to stock records to produce functional GRSF Traceability Units or Fishery IDs.

The Three Core Components of a Fishery ID

Each Fishery ID is structurally composed of two identifiers:

- **Universally Unique Identifier (UUID):** A single, machine-readable, immutable 128-bit digital identifier that serves as a permanent key.
- **Semantic Identifier:** A human-readable, concatenated string of standard codes describing the key characteristics of the fishery. It is structured as: <Species> + <Assessment Area(s)> +

<Management Authority(ies)> + <Management or Reporting Area(s)> + <Flag State> + <Gear type>.

Standards and Key Data Elements (KDEs)

To ensure interoperability, the constituent components of the Semantic Identifier rely on authoritative global standards:

- **Species:** Codified using the FAO ASFIS 3Alpha code or the World Register of Marine Species (WoRMS) AphiaID. In their absence, a scientific Latin name may be entered.
- **Assessment Area(s):** The geographic area of stock assessment. Together, Species and Assessment Area must match a GRSF Stock Record. If unassessed, it contains 'unassessed'.
- **Management Authority(ies):** The governing entity, codified with prefixes like “authority:NAT:” + ISO3 country code, or “authority:INT:” for international organizations.
- **Management or Reporting Area(s):** The geographical area where distinct management measures (e.g., catch limits) are applied. As for the Assessment Areas, this field should be completed with codes from a growing geodatabase of global aquatic areas jointly compiled by FAO, SFP and University of Washington in support of the GRSF standard.
- **Flag State:** The flag state of the fishing vessel, codified using the ISO 3-letter country code.
- **Fishing Gear:** The harvesting gear, codified using the FAO ISSCFG (International Standard Statistical Classification of Fishing Gear) or the specific SFP gear classification.

5. Defining Scope, Limitations & Known Gaps

To ensure a focused and successful integration within the GDST standard, the technical scope of the Fishery ID framework has been clearly defined, along with identified gaps that are actively being addressed.

In-Scope Activities

- **Wild Capture Fisheries:** Direct mapping of active wild capture fishing units.

Out-of-Scope (Future Developmental Priorities)

- **Aquaculture:** Core IDs for aquaculture areas have not yet been developed. They are a priority for the next development phase and are anticipated to be structurally simpler.
- **Industrial vs. Small-Scale Fisheries (SSF):** Differentiation is highly complex due to the lack of a clear dividing line and varying national definitions. The Illuminating Hidden Harvests (IHH) project proposed a matrix approach to determine likelihood of inclusion, which may serve as a future differentiator. SFP has also registered as a participant in the GDST SSF dialogue to explore development synergies.
- **Seasonality**: Many short-lived species have seasonal spawning and cohorts which are reproductively isolated whose geographic location cannot be differentiated except temporally.

The addition of a parameter to differentiate these stocks has been identified as a short-term priority.

- **Multispecies:** Multispecies-multigear fisheries account for the majority of fisheries globally, particularly in tropical regions. Many countries in these regions are increasingly conducting multispecies assessments, as both the only practical approach in fisheries landing hundreds of species, but also have the advantage of being closer to an Ecosystem Approach to Fisheries (EAF). Genus or family-level assessments are already included in the model, but future developments aim to include assessments which include a group of species which are not taxonomically connected.

> **Technical Gaps & Dialogue Status**
> 1. Uniqueness Gaps: Semantic IDs are intended to be globally unique, but data gaps in underlying standards exist and are being progressively addressed by the GRSF technical team.
> 2. NGO Alignment Dialogues: SFP is engaging other NGOs conducting sustainability evaluations to ensure widespread alignment on defining fisheries and respective KDEs.

6. GDST Key Data Element (KDE) Rationale Matrix

The dialogue proposes evaluating how GRSF Traceability Units could interact with the GDST standard. This would include options ranging from expanding or refining the GDST Standard Data Options for select KDEs, to a proposal to adapt the Catch Area KDEs to identify both Assessment Area and Management Area, to the option of a pre-population of the four relevant KDEs when a Fishery ID is selected. This could streamline data collection, reduce administrative burden while adding validation and improving interoperability for stakeholders who use the Fishery IDs.

GDST KDE	GDST Definition	GRSF Field	GRSF Code Standard	Alignment Rationale
W07 Vessel Flag	Nation supervising safety, operations, and catch reporting.	Vessel flag	ISO 3-letter country code	Direct Match. Note: GDST uses ISO 2-letter codes, while GRSF utilizes ISO 3-letter codes.
W10 Gear Type	Equipment used to extract seafood.	Fishing gear	ISSCFG 2016 or SFP gear code	Match, with expansion. GRSF also allows SFP gear codes (e.g., 'pole-lines hand operated') to handle fine-grained gear variations which may result in differentiated impacts.
W14.1 to W14.4	Location where capture occurred	Management or reporting area	GRSF area codes	GRSF area codes from the nascent FAO Global Catalogue

Catch Area	(FAO, EEZ, RFMO, sub-national).			of Water Areas, a GRSF sub-product, complement and expand the data standards. Adding GRSF's Assessment Area and Management Area uniquely identifies the specific stock and management unit .
W15 Species	Scientific (Latin) name of the seafood.	Species	ASFIS (FAO 3Alpha) or WoRMS (AphiaID)	Match, with expansion. WoRMS AphiaID resolves potential gaps or taxonomic limitations in the ASFIS list.

7. Stakeholder Value Propositions & Urgency

For Brands & Retailers: Drastically reduces the time and effort required to aggregate ESG and sustainability data. Retailers can instantly query and connect sustainability metrics or fetch consumer marketing assets (e.g., fisher livelihood videos) linked directly to the specific Fishery ID.

For Small-Scale Fishers: Provides visibility in complex international supply chains. By connecting catch to a unique ID, they can develop distinct branding, share their stories directly with end buyers to secure fairer pricing, and request support for local stock assessments.

For Governments: Simplifies data collection challenges by ensuring that data collected by local enumerators, stock assessment scientists, and trade agencies cleanly map to a single unit of analysis.

For Tech & Service Providers: Future-proofs software architecture by providing a global, unified dropdown standard that minimizes manual data entry errors and ensures global interoperability.

Why Act Now: Exploring adoption early prepares supply chains for emerging regulatory trends Universal identifiers and digital traceability codes are increasingly being referenced in catch documentation schemes, import control regulations (such as EU IUU regulations and US SIMP), and corporate ESG reporting frameworks.

8. Dialogue Process and Governance

The GDST-SFP integration dialogue will be structured flexibly according to the needs of participating stakeholders. The duration and frequency of meetings will be determined based on the scope of discussion and the feedback received from GDST partners.

Scope of the Dialogue

The dialogue will focus on the usability and practical implementation of the Fishery ID concept within the GDST standard. Specifically, the dialogue will:

- Gather feedback from GDST partners and key stakeholders on the usefulness, applicability, and voluntary adoption options of Fishery IDs within the GDST framework.
- Identify and discuss potential technical implementation considerations, including identifier lifecycle management, API architecture, and source referencing.
- Explore how implementation can support interoperability as an optional expansion framework while avoiding duplication with existing GDST KDEs.

The dialogue is not intended to redesign or modify the underlying Fishery ID concept. The Fishery ID framework and its constituent data are established; the focus of the dialogue is on how the IDs can be used and implemented within the GDST standard.

Potential Stakeholders & Steering Group

The dialogue aims to bring together a balanced, broad engagement group from across the seafood sector, convening supply chain representatives, traceability and technology providers, technical service organizations, and non-governmental organizations (NGOs).

Key References

To review the foundational standard of the Global Record of Stocks and Fisheries, please consult the official FAO GRSF service document:
https://www.fao.org/fishery/services/storage/fs/firms/documents/2025_06_firms_fsc14/Inf.7.pdf