SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

OCEAN

# Supplementary material - Interpreting Steps 1 & 2 for Ocean v1.0 Guidance

Temporary supplemental document to support setting Science-Based Targets for the Ocean

STEP
3
MEASURE, SET & DISCLOSE

Version History

| Version | Update description | Release Date | Effective Dates |
|---|---|---|---|
| 1.0 | Initial supplementary material | 18 Mar, 2025 | 18 Mar, 2025 |
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# Contents

# Purpose of this Document

The purpose of this document is to supplement SBTN v1.1 Step 1 & Step 2 technical guidance documents for companies with material pressure in the ocean, in preparation for SBTN Ocean Hub v1.0 guidance.

The SBTN v1.1 Step 1 & Step 2 technical guidance documents were developed prior to the finalization of Ocean v1.0 technical methods and will not be updated at the time of publication for the Ocean v1.0 guidance. This document provides interpretation and supplemental guidance to help companies to work through the v1.1 Step 1 & Step 2 guidance with a view to setting Ocean Science-Based Targets.

No significant structural changes to Step 1 or Step 2 are made to the methods in this document. This document includes direct references to page numbers, tables, and figures in the v1.1 technical guidance documents for Steps 1 & 2 for ease of navigation. Companies should assume all guidance in v1.1 Steps 1 & 2 is relevant for Ocean v1.0 targets as written in the published documents, if not referenced specifically in this document.

# Step 1

In Step 1 of the five-step SBTN methodology, companies first screen their portfolio of economic activities for materiality (Step 1a: Materiality Screening), and then estimate their contributions toward key issues through an assessment of pressures and states/impacts associated with each category of activity (Step 1b: Value Chain Assessment). Step 1 enables companies to determine which environmental impacts they will need to address in Step 3 Guidance (Ocean, Freshwater, and Land).

## CONCEPTUAL FRAMEWORK – DPSIR [PG. 14]

The SBTN methods use the drivers, pressures, state, impact, and response (DPSIR) framework. Step 1 guidance references several examples of DPSIR adoption in academic, civil society, and other contexts, though all examples are land-based. One of the most notable applications of DPSIR in the ocean is the first World Ocean Assessment by GRID-Arenal and UNEP[1]. There is also a growing body of academic research[2,3,4].

[1] First World Ocean Assessment | Division for Ocean Affairs and the Law of the Sea
[2] How the DPSIR framework can be used for structuring problems and facilitating empirical research in coastal systems
[3] Quantifying effectiveness and sufficiency of measures – An application of the DPSIR framework for the marine environment - ScienceDirect
[4] Beach pollution from marine litter: Analysis with the DPSIR framework (driver, pressure, state, impact, response) in Tuscany, Italy - ScienceDirect

## IPBES PRESSURES MAPPED TO SBTN PRESSURES AND TARGETS [PG. 15]

Table 1: [FROM STEP 1] Subset of updated pressures managed with science-based targets for nature with new Ocean v1.0 guidance. This table presents the relevant SBTN pressure categories, descriptions, and coverage in Steps 1 to 3 of the methods for Ocean targets. This table highlights the primary connections between pressures and target-setting methods, though due to interactions between targets there are often multiple mechanisms for actions on pressures. These pressure categories are derived from the IPBES assessment and are currently in alignment with the 2018-2023 version of the web-based tool Exploring Natural Capital Opportunities, Risk and Exposure (ENCORE), which is the underlying dataset for the Materiality Screening Tool (MST) used in the Step 1a screening. The notes "req", "opt", and "-" describe whether the pressure category is required, optional, or not currently in scope in each step of the SBTN methods. Rows that are updated from the original Step 1 guidance document are highlighted.

| IPBES Pressure Category | SBTN Pressure Category | Description | New coverage in v1.1 methods + Ocean v1.0 methods | | | |
|---|---|---|---|---|---|---|
| | | | 1a | 1b | 2 | 3 |
| Ecosystem use and use change<br>Cell text | Land use and land use change | Examples include: area of agriculture by type; area of forest plantation by type; area of open cast mine by type; etc. | Req | Req | Req | No Conversion of Natural Ecosystems, Land Footprint Reduction. Landscape Engagement |
| | Freshwater ecosystem use and change | Examples include: area of wetland, ponds, lakes, streams, rivers or peatland necessary to provide ecosystem services such as water purification, and fish spawning; areas of infrastructure such as bridges, dams, flood barriers, etc. | Req | - | - | - |
| | Marine ecosystem use and change | Examples include: area of aquaculture by type; area of bottom contact wild capture fishing activity; area of offshore wind sites by type; etc. | Req | Req | Req | Protect Structural Habitats |
| Resource Exploitation | Water Use | Examples include: volume of groundwater consumed; volume of surface water consumed; etc. | Req | Req | Req | Freshwater quantity |
| | Other resource use | Examples include: volume of wild-caught fish by species; number of wild-caught mammals by species; etc. | Req | Req | Req | Avoid and Reduce Overexploitation, Reduce Risk to Endangered, Threatened, and Protected Marine Wildlife |

## Interpreting spatial scales for ocean data in Step 1 [beginning pg. 22]

At multiple points throughout Step 1, the guidance references spatial scale and location data, often at the national or subnational level. These spatial designations are not relevant in coastal or marine contexts, and this document instead will provide the relevant spatial scales that will serve as equivalents to the location data requirements present in the Step 1 guidance.

Table 2: [ORIGINAL] Reference to interpret the spatial scales listed in the Step 1 guidance for ocean data.

| Spatial scale in Step 1 | Ocean v1.0 equivalent | Notes |
|---|---|---|
| National | In territorial seas: the EEZ<br>On the high seas: Regional Management Area or FAO subarea | Examples of Regional Management Areas include: Western and Central Pacific, Northeast Pacific, Mediterranean, etc. |
| Subnational | In territorial seas: State/Province or other regional management area<br>*Recommended where available:*<br>On the high seas: Regional Management Organization subareas | Examples of State/Province management area: Northeast Fisheries Management Council, ICES fishing areas, Fisheries Committee for the West Central Gulf of Guinea<br>Example of RFMO subareas: ICES fishing areas |

## SPATIAL DATA REQUIREMENTS FOR OCEAN TARGETS IN STEPS 1-3 [PG. 24]

Table 4: [FROM STEP 1] Overview of spatial data requirements and associated target boundaries in Steps 1-3 for Ocean targets.

| Target | Value chain segment | Target boun-dary | Step 1 Data Requirement | Step 2 Data Requirement | Step 3 Data Requirement |
|---|---|---|---|---|---|
| Avoid and Reduce Overexploitation | Direct operations and upstream | A | Regional management area, subarea, or equivalent | Regional management area, subarea, or equivalent | Regional management area, subarea, or equivalent of all wild capture seafood quantities. |
| Protect Structural Habitats | | | | | Regional management area, subarea, or equivalent of all aquaculture products and wild capture seafood produced with bottom-contact gear. |
| Reduce Risk to Endangered, Threatened, and Protected Marine Wildlife | | | | | Regional management area, subarea, or equivalent of all wild capture and aquaculture seafood products. |
| All ocean targets | Direct operations and upstream | B | EEZ or Region | EEZ or Region | Improve traceability and transparency. Further guidance in Step 2. |

## Environmental pressure indicators [pg. 54]

Table 6: Environmental pressure indicators for the value chain assessment.

| Pressure category material in Step 1a | Pressure indicator(s) required in Step 1b |
|---|---|
| Land use and land use change | [SEE TABLE 6 IN STEP 1 FOR REFERENCE] |
| Water use | [SEE TABLE 6 IN STEP 1 FOR REFERENCE] |
| Marine ecosystem use (Area of seabed use) | **Marine ecosystem use:** Area (km2) of marine ecosystem use from bottom contact fishing and aquaculture operations.<br>**and also:**<br>**Marine ecosystem use change:** Area (km2) of coastal marine ecosystem (particularly wetlands) where the company operates compared to the historic or recent past (after 1999, according to the Ramsar Convention) |
| Other biotic resource extraction use | **Fishing:** Monthly, quarterly, or annual net volume (metric tons) of wild capture seafood.<br>The use of annual value is recommended whenever possible as it is consistent with how stock assessments are reported |

Table 7: Pressure-sensitive SoN indicators and their associated pressure categories. For data interpretation guidance please refer to documentation provided by dataset developers.

| Pressure category material in Step 1a | State of nature (SoNP) indicator(s) required in Step 1b |
|---|---|
| Land use and land use change | [SEE TABLE 6 IN STEP 1 FOR REFERENCE] |
| Water use | [SEE TABLE 6 IN STEP 1 FOR REFERENCE] |
| Marine ecosystem use and ecosystem use change (Area of seabed use) | **Habitat extent:** Area (km2) of extent of natural habitats, ideally separated by habitat type.<br>Companies with production unit data for pressures should calculate SoNP values with a 5km buffer around production units indicating the surrounding state of nature (but state data should still be associated with the relevant production unit used for calculating pressures). |
| Other biotic resource extraction use | **Wild Capture Stock Health**:<br>*In territorial seas:* The Ocean Health Index score for Wild Capture Fisheries, Food Provision measures the amount of sustainable wild-caught seafood harvested globally at sustainable levels.<br>*On the high seas:* The most recent FAO State of World Fisheries and Aquaculture percentages of biologically sustainable and unsustainable fishery stocks by FAO major fishing area reports the percentage of sustainable stocks in the FAO major fishing area.<br>Companies may use these scores or other equivalent cumulative stock health scores for their pressure-sensitive SoN indicator. |

Appendix 1. State of Nature Biodiversity (SoNB) indicators—minimum approach

There are only a few global marine biodiversity datasets fit for use by corporate end users. To assess marine species extinction risk, companies are encouraged to reference marineSTAR (Companies may reference Appendix 1, datasets and tools in the SBTN Step 1 Toolbox (31) or use another dataset that meets the SBTN criteria (32)). Companies may also reference the Ecologically or Biologically Significant Marine Areas (EBSAs)[5] database for ecosystem biodiversity data.

[5] Ecologically or Biologically Significant Marine Areas (EBSAs)

# Step 2

As described in the Step 2 methods V1.1, companies must prioritize target setting using a combination of pressure and state data.

## Data requirements [pg. 16]

Table 3: Overview of spatial data requirements in V1.1 through Steps 1–3.

| Target | Direct vs Upstream Operations | Target Boundary | Step 1 Data Requirement | Step 2 Data Requirement | Step 3 Data Requirement |
|---|---|---|---|---|---|
| Avoid and Reduce Overexploitation | Direct operations and upstream operations | A | Exclusive Economic Zone, Regional Fishery Management Organization sub-area, FAO sub-area, or finer spatial resolution | Data Level 1: At spatial granularity necessary to set targets in Step 3. Data Level 2: EEZ, RFMO sub-area, FAO sub-area state or province or finer spatial resolution. | Companies must demonstrate that targets protect thresholds at the resolution of the stock assessment or data-limited methodology used. |
| Protect Structural Marine Habitats | Direct operations | | Exclusive Economic Zone, State or Province, FAO sub-area, finer spatial resolution | | All production units and operation sites should have a 5km buffer. |
| | Upstream operations | | | | Companies must demonstrate that targets protect thresholds at the resolution of the models used. |
| Reduce Risk to ETP Marine Wildlife | Direct operations and upstream operations | | Exclusive Economic Zone, Regional Fishery Management Organization sub-area, FAO sub-area, finer spatial resolution | | Companies must demonstrate that targets protect thresholds at the resolution of the models used. The status of species is determined at national and international levels. During this process, companies ***must*** acknowledge local population-level dynamics of ETP species |

When prioritizing for the Avoid and Reduce overexploitation target, companies should rank locations based on the pressure-state index values (Ip), the pressure (net volume of wild

caught seafood per location) multiplied by the state of nature (SoNP-Ocean Health Index/FAO) data. Companies *must* use marineSTAR as the SoNB in the prioritization.

To prioritize the Protect Structural Marine Habitats target, companies should rank locations based on the pressure-state index values (Ip), the pressure (Marine ecosystem use or Marine ecosystem change) multiplied by the state of nature (SoNP-Habitat Extent) data. Companies *must* use marineSTAR as the SoNB in the prioritization and are *recommended* to use a metric of marine ecosystem extent, condition, or intactness as a further metric of SoNB in the prioritization if available.

Companies prioritizing for the Reduce Risk to ETP Marine Wildlife target should use either the pressure-state index (Ip) used for the Avoid and Reduce overexploitation target for wild caught fisheries or the pressure-state index for the Protect Structural Marine Habitats target for aquaculture. Due to the differences between pressure indexes for wild caught and aquaculture operations, companies should conduct the prioritizations separately for each of these categories and combine for a shared ranking. To identify locations critical for action on ETP species, companies *must* use marineSTAR as the SoNB in the prioritization.

## Task 9. Prioritize within target boundaries [pg. 56]

**Cutoff within the Ocean target boundaries**

For Ocean targets, companies should select the highest 10% of locations, or 10 locations if there are more than 100 in each target boundary.

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