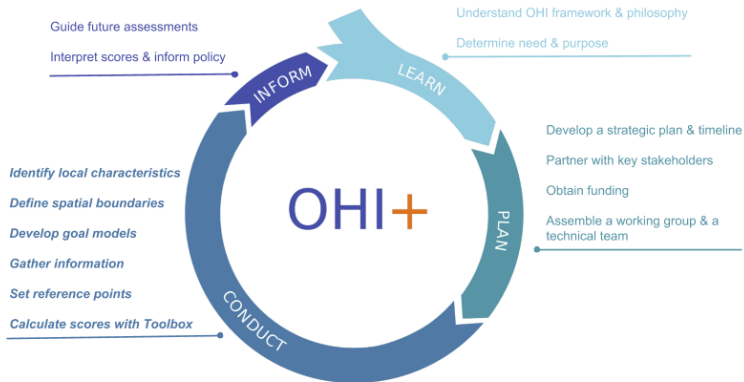# Introduction to **The Conduct Phase**

Ocean Health Index
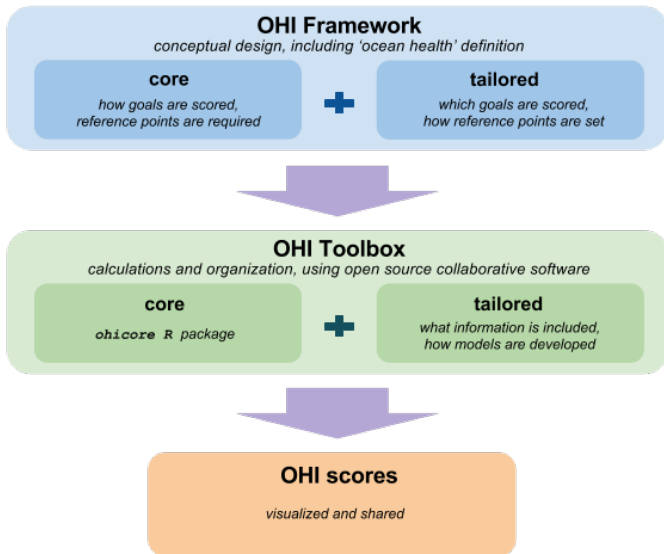
OHI-Science Team

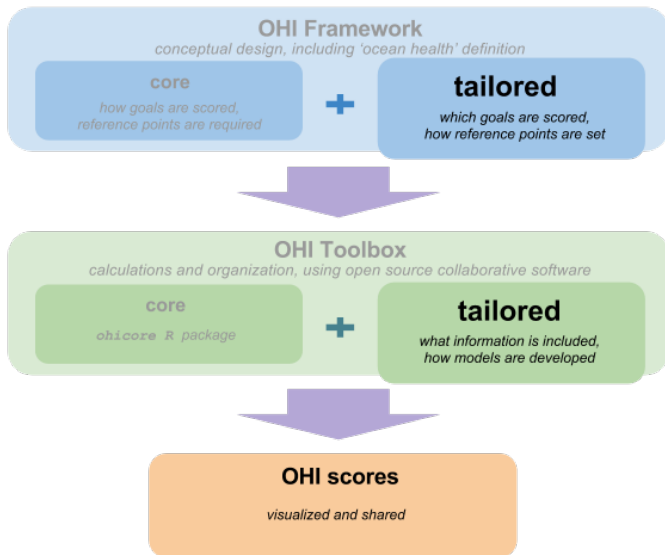January, 2016

Where you are in the OHI+ process

Conduct Phase

Conduct Phase - Tailored

Technical Team Structure

OHI Workflow

OHI Framework
conceptual design, including 'ocean health' definition

core + tailored
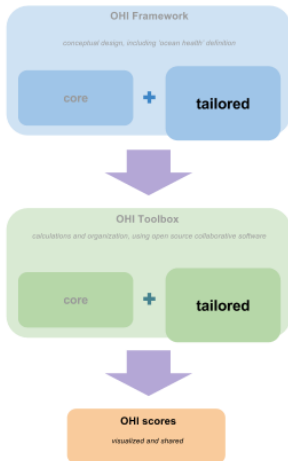
Define boundaries

Select and develop goal models

Gather data, pressures & resilience

Set reference points

OHI Toolbox
calculations and organization, using open source collaborative software

core + tailored

Request an OHI+ repository

Format, store, and register data

Modify goal models

Calculate scores

OHI scores
visualized and shared

Create flower plots and maps

Report results

*Note -- this not a strict timeline: the framework building and
analysis are not a linear process, but iterative. You will likely
develop and revisit different parts simultaneously.*

Best Practices

Follow these **Best Practices** when planning models and reference points (see publication or Manual):


Build the conceptual framework

Which benefits does the ocean provide in your local area? What are key ecological, social, and economic characteristics and priorities? Identify these and build a conceptual framework before gathering existing information.
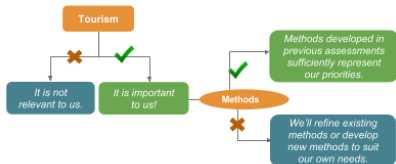
Remain true to the framework

Existing, available data can be limited or not ideal. But it is possible to fill gaps, use proxy data, or incorporate intermediate models. But stick to your conceptual framework and priorities to get a complete picture of ocean health.
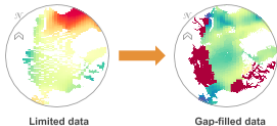
Define spatial boundaries

The boundaries of your assessment should be a driven by the boundaries where information is reported and policy decisions are made.

Document and share the process

Methods developed and lessons learned through the assessment process should be shared with future assessments. Methods should be reproducible in one location through time and repeatable in different locations. This requires transparency and communication throughout the assessment.

Framework: Define Spatial Boundaries

Scores are calculated for each region within an assessment area. Jurisdictional boundaries are often appropriate.

Example: How to Turn Land Boundaries to Marine Boundaries
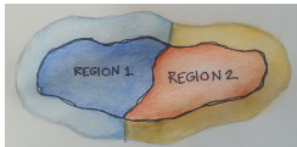

1. Start with land-based boundaries

2. Draw offshore buffers for each region

3. Offshore buffers overlap

4. With the Thiessen Polygon approach, the overlap is divided...

5. ...to produce the final borders between the regions

Framework: Select & Develop Goal

Select from *Ten commonly assessed goals*

See **Conceptual and Practical guidance** for each goal

- Understand each goal, maintain the definition but think critically how to represent it (Best Practices 1 & 3)
- Work on similar goals simultaneously
- Evaluate **reference point, pressures, resilience** while collecting data

Prepare **data and models** for the Toolbox (Appendix 2 & 3)

Framework: Gather Information

Information (data and/or indicators) are required to calculate **Goal status, Pressures, and Resilience**

Gather **open-access** data that will be **updated regularly**

Data must be at appropriate **spatial and temporal scales**

Give preference to high quality data collected by respected organizations

If can't find ideal data, use **proxy data** or **gapfill**
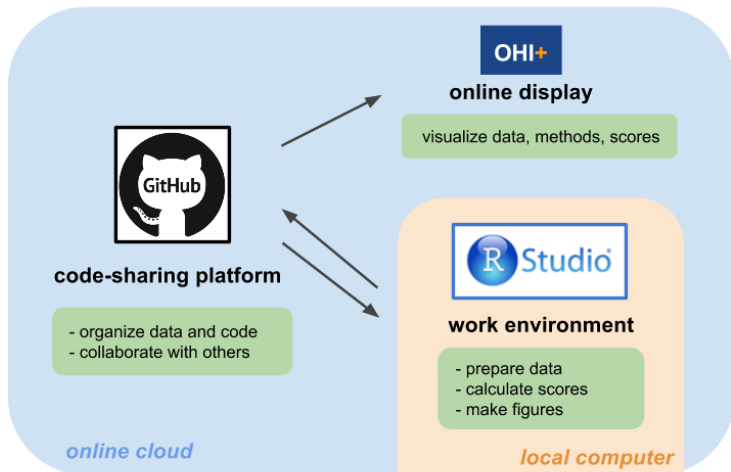
Prepare to use the Toolbox

Once you have:

- gathered data
- developed goal models with available data
- finalized spatial boundaries with available data

Request a Toolbox Tailored Assessment Repository

- where your data will be stored, formatted, and managed
- scores will be calculated using the Toolbox Core package
- use of R and GitHub are required

Toolbox: Github - R

Toolbox: Data Preparation

Format, store, and register data

Script preparation process as much as possible for transparency, explanation, and comparable future assessments

Toolbox requires specific preparation:

- each data layer as a separate *.csv* file
- each layer has long formatting
- most layers rescaled to 0-1
- each layer must be registered

Toolbox: Modify Goal Models & Calculate Scores

Toolbox Calculations - Tailored *vs.* Core
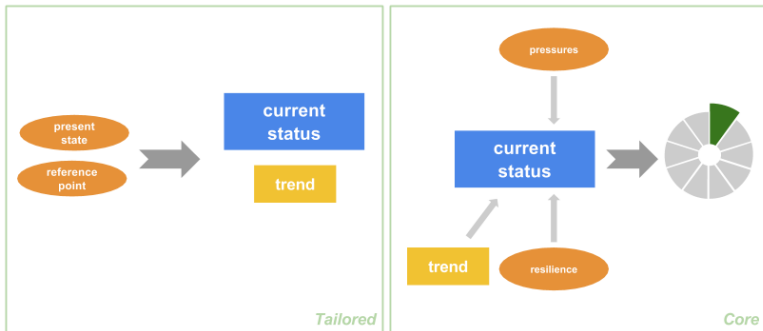
Main Resources

ohi-science.org: main site for all OHI+ related topics

Manual: conceptual and technical guidance for each step

Other OHI+ Projects: materials from completed and on-going projects

Forum: on-line community for OHI+ practitioners to connect and learn from each other

Turorials: presentations

Contact our team: `info@ohi-science.org`