The Ocean Health Index: Introduction to the Toolbox

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Introduction

The **Ocean Health Index (OHI)** measures the sustainable delivery of ten 'goals' (key benefits and services) to people now and in the future. At any spatial scale, OHI assessments use the best available information to develop goal models and set targets, and goal scores are combined together to give a comprehensive picture of coastal ocean health.

The OHI Toolbox is an open-source, cross-platform resource to calculate OHI scores at any scale. Here, we will explore the Toolbox. We will use Belize as an example: this is for teaching purposes only.

Note: this presentation is made with Rmarkdown. It is viewable rendered online and in its raw form on GitHub.

Outline

- What is the Toolbox?
- The Toolbox and WebApps
- Explore a WebApp
- Explore an Assessment Repository

What is the Toolbox?

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The OHI Toolbox = assessment-repo + ohicore:

- **your assessment repository** you will edit with your data, goal models, and updated pressures & resilience matrices.
- **the *ohicore* repository** you will not edit: it provides the underlying functionality of the Toolbox and WebApps.

The Toolbox and WebApps

The OHI Toolbox = assessment-repo + ohicore.

OHI **WebApps** visually display the information stored in **Toolbox** repositories (data, models, and calculated scores). Each are identified by a three-letter code.

To use Belize as an example:

- three-letter code: **blz**
- WebApp: `http://ohi-science.org/blz`
- assessment repo: `https://github.com/ohi-science/blz`

Explore a WebApp

Let's look at an example for Belize:
`http://ohi-science.org/blz`.

WebApp tabs:

- App: interactive to explore data and scores
- Regions: Belize has four
- Layers: alphabetical list of all data
- Goals: global goal model equations
- Scores: calculated based on extracted global data

Explore an Assessment Repository

Belize's **assessment repository** is **blz**, available on GitHub at `https://github.com/OHI-Science/blz`.

The **scenario folder** is **subcountry2014**.

Note the `blz.Rproj` file that allows you to sync this repository through RStudio.

Explore an Assessment Repository

Within the **subcountry2014** folder are some key files we will work with:

- **layers.csv**
- **layers folder**
- **conf/functions.r**
- **conf/goals.csv**
- **conf/pressures_matrix.csv**
- **conf/resilience_matrix.csv**