Pushing the Limits of ESRI Geoportal To Support the West Coast Data Network

Todd Hallenbeck, West Coast Governors Alliance for Ocean Health

Background

WEST COAST OCEAN DATA PORTAL

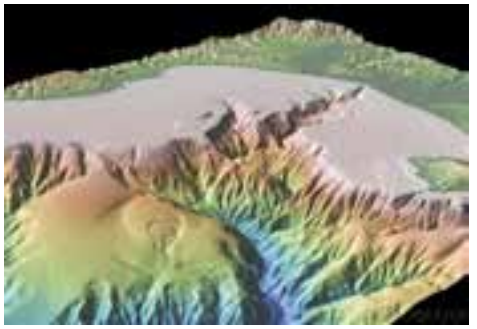
Background

- Identify and collaborate on issues of regional significance
- Inform, guide, and support the progress of Action Coordination Teams (ACTs)

Background

WEST COAST OCEAN DATA PORTAL

- Climate Change
- Polluted runoff
- Marine debris
- Spartina Eradication
- Integrated ecosystem assessment
- Renewable ocean energy
- Ocean education
- Seafloor mapping
- Sustainable communities
- Sediment management



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- **Climate Change**
- Polluted runoff
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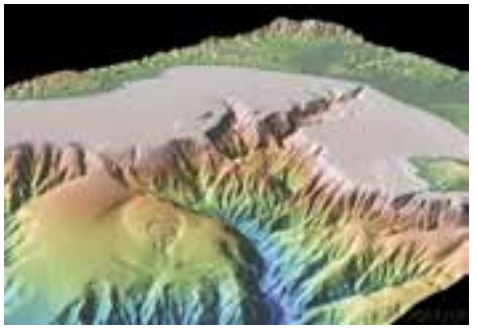


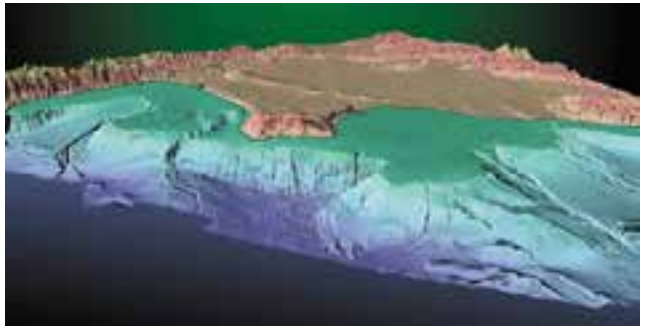
Background

WEST COAST OCEAN DATA PORTAL

WCGA ACTs Need…

- Better access to regional data;
- Ability to share data with experts and stakeholders;
- Ability to visualize and map data;
- Improved data management

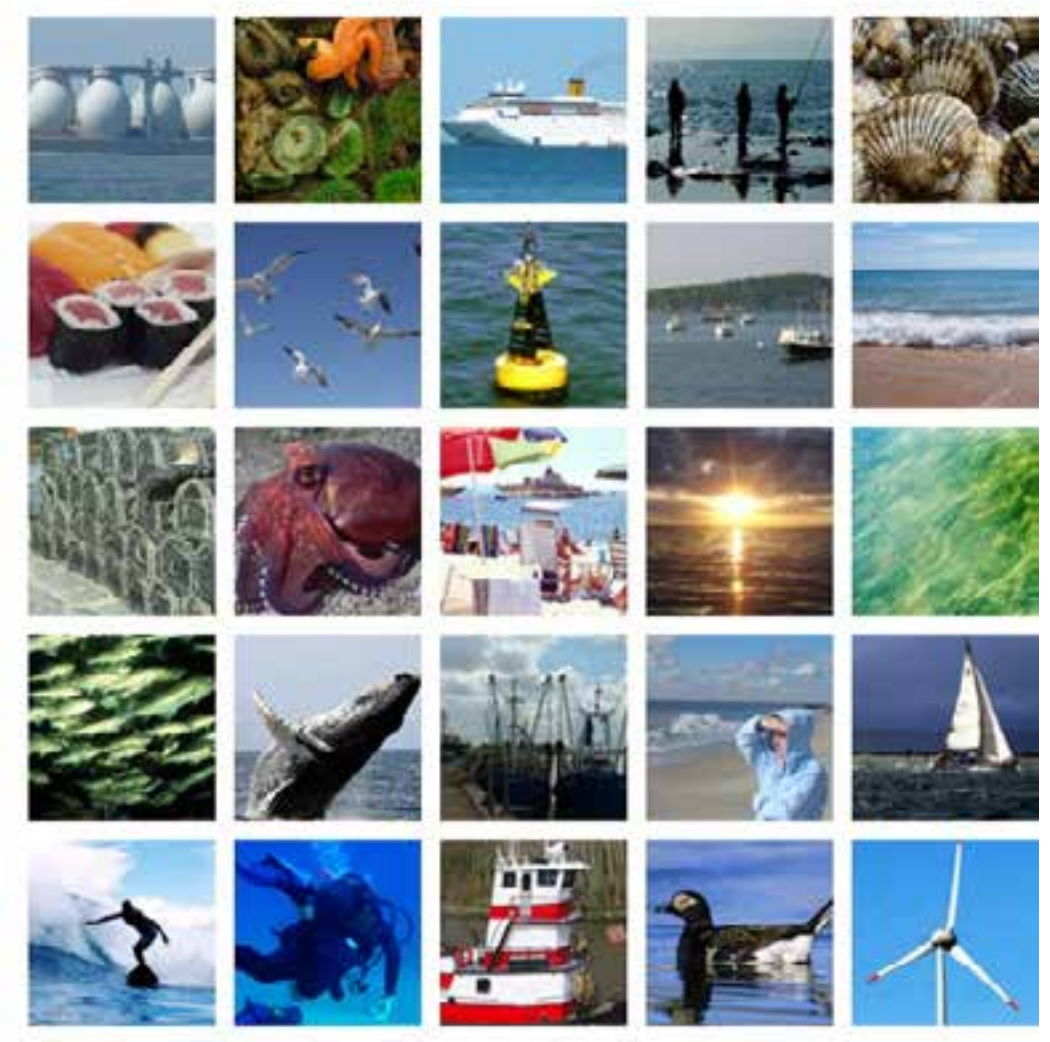
…To address priority ocean issues



Background

WEST COAST OCEAN DATA PORTAL

- Coastal and Marine Spatial Planning
- Balance ocean health and community prosperity
- Transparent community engagement
- Based on sound science
- Respect the unique character of each US region



Background

Vision

WEST COAST OCEAN DATA PORTAL

GOAL

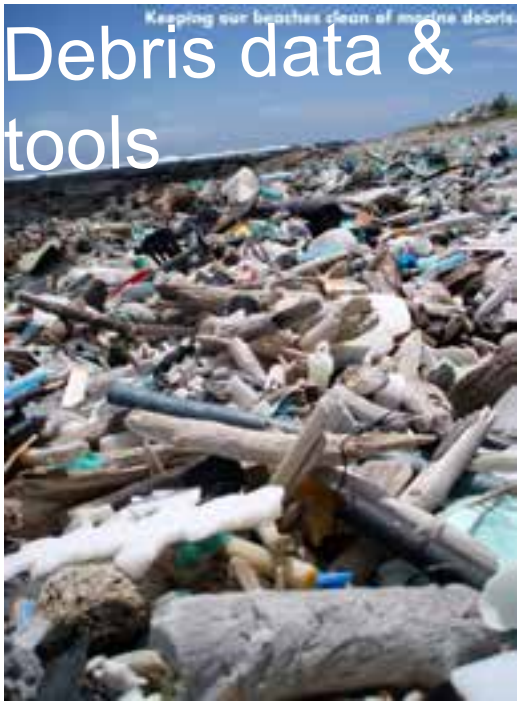
To increase **DISCOVERY** and **CONNECTIVITY** of ocean and coastal data and people to better **INFORM** resource management, policy development, and ocean planning on the West Coast

Vision

WEST COAST OCEAN DATA PORTAL

West Coast Ocean Data Portal

Discover • Connect • Inform



Connect Ocean Data Producers and Users

WEST COAST OCEAN DATA PORTAL

- West Coast Ocean Data Network
- Diverse, geographically widespread
- Different needs
- Decentralized "bottom up" approach

Supporting The Human Network

WEST COAST OCEAN DATA PORTAL

- Focus on discovery and connection to EXISTING data
- Ask the network what data they need, what they have, and where it's at.

Category	Sub-Category	Theme	Sub-Theme	Existing D		
				WA	OR	CA
Physical Data						
	Atmosphere					
		Wind	Wind speed Potential - NREL	Yes	Yes	Yes
			Wind power potential - NREL	Yes	Yes	Yes
		Air Quality	Air Quality Monitoring Database	Yes	Yes	Yes
	Earth					
		Topography / Bath	Depth Contours	Yes	Yes	Yes
			Digital Elevation Model 100m	Yes	Yes	Yes
			Bathymetric Digital Elevation Model 100m, ATSML, 2011	Yes	Yes	Yes
		Geologic	Benthic Surveys - NOAA CMSP Data Inventory	Yes	Yes	Yes
			Surficial Geologic Habitat	Yes	Yes	Yes

Supporting The Human Network

WEST COAST OCEAN DATA PORTAL

- Focus on discovery and connection to EXISTING data
- Ask the network what data they need, what they have, and where it's at.
- Build a data portal that provides access to it.

Assessment

WEST COAST OCEAN DATA PORTAL

WCGA RDF Data Registry Design Assessment

Report by Ecotrust to the WCGA Regional Data Framework Action Coordination Team

In partial fulfillment of NOAA Award # NA12NOS4730004

Authors:
Tim Welch
Ryan Hodges
Tanya Haddad

Jan. 17th, 2013

WEST COAST GOVERNORS ALLIANCE on OCEAN HEALTH
CALIFORNIA OREGON WASHINGTON

ecotrust

http://tinyurl.com/CatalogResearch

What We Discovered

WEST COAST OCEAN DATA PORTAL

- West Coast focused data catalogs already exist, just with limited linkages

What We Discovered

WEST COAST OCEAN DATA PORTAL

- West Coast focused data catalogs already exist, just with limited linkages
  - Oregon Coastal Atlas
  - Washington Geospatial Clearinghouse
  - California Geoportal
  - Data.gov
  - NOAA Marine Cadastre
  - …

What We Discovered

WEST COAST OCEAN DATA PORTAL

- Desire to limit number of datasets
  - Priority need
  - Readily available
  - State or regional scale
  - Has metadata

What We Discovered

WEST COAST OCEAN DATA PORTAL

- Desire to map datasets to priority regional issues
  - Marine debris
  - Sea level rise

What We Discovered

WEST COAST OCEAN DATA PORTAL

- Desire to map datasets to priority regional issues
  - Marine debris
  - Sea level rise
- And data categories
  - Biological
  - Human use
  - …

What We Discovered

WEST COAST OCEAN DATA PORTAL

- Multiple metadata standards and profiles are in active use by Network partners (Dublin Core, FGDC, ISO)

What Was Needed

WEST COAST OCEAN DATA PORTAL

- Ability to curate.
  - Selective metadata harvest from existing catalogs (many formats)
  - Tag records with one or more WC issues and categories

What Was Needed

WEST COAST OCEAN DATA PORTAL

- Ability to curate.
  - Selective metadata harvest from existing catalogs (many formats)
  - Tag records with one or more WC issues and categories
- A simple interface on top for search/discovery, tailored to the regional audience

What We Decided

WEST COAST OCEAN DATA PORTAL

- Seriously considered over 10 data catalog products for this portal

What We Decided

WEST COAST OCEAN DATA PORTAL

- Narrowed it down to 4

What We Decided

WEST COAST OCEAN DATA PORTAL

- Narrowed it down to 4
  - CKAN
  - GeoNetwork
  - ESRI Geoportal
  - PyCSW

What We Decided

WEST COAST OCEAN DATA PORTAL

- Narrowed it down to 4
  - CKAN
  - GeoNetwork
  - ESRI Geoportal
  - PyCSW
- Thoroughly researched, tested, and compared each of them.

What We Decided

WEST COAST OCEAN DATA PORTAL

- Narrowed it down to 2
  - CKAN
  - ESRI Geoportal

What We Decided

WEST COAST OCEAN DATA PORTAL

- Narrowed it down to 2
  - CKAN
  - ESRI Geoportal
- It was so close we started talking to their development teams about their 3-6 month roadmap

Winner:
ESRI Geoportal

Source - VectorsLand

These colors are inspired by natural systems along the West Coast, particularly kelp forests. Blues are minimized in an effort to stand out from the pack.

WEST COAST OCEAN
DATA PORTAL

PT MONO IS FOR TITLES AND HEADLINES

PT MONO IS FOR TITLES AND HEADLINES

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789

Open Sans Light is for body copy.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
0123456789

Open Sans bold is for sub heads.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
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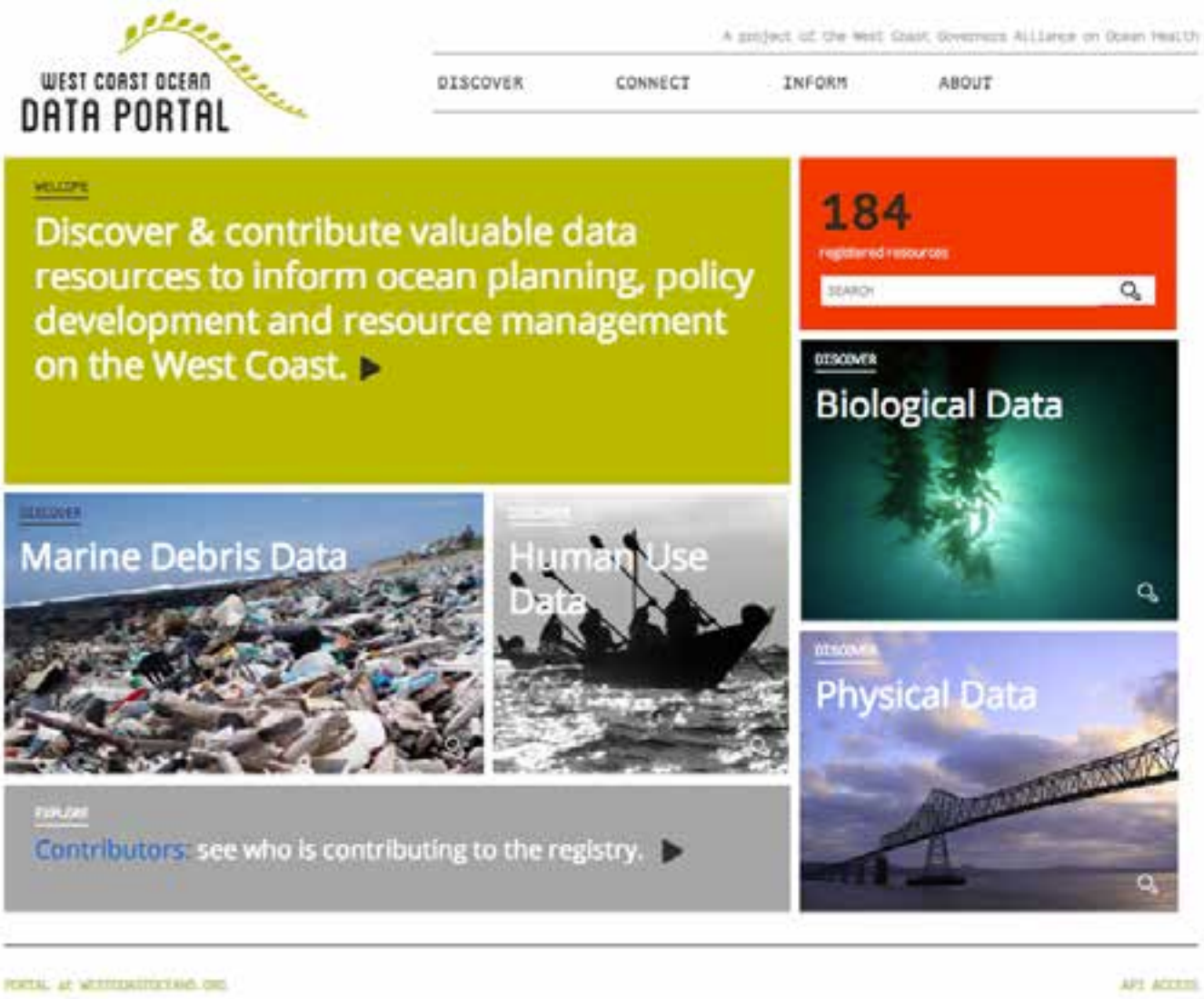

http://portal.westcoastoceans.org

http://portal.westcoastoceans.org

A project of the West Coast Governors Alliance on Ocean Health

DISCOVER CONNECT INFORM ABOUT

PAGE 1 2 3 4 5 SHOW

SEARCH KEYWORDS

Location

Categories

Human Data

- Boundaries 25
- Demographics And Culture 1
- Economy 23
- Infrastructure 28
- Management 55

Physical Data

- Earth 1

Issues

Sources

131 *results found for* Category: Human ⊙.

SOORC COMMERCIAL FISHING FISHERIES USES AND VALUES GRID, ECOTRUST, 2010

These data are an *aggregation* of several individual fishery layers across three sect...

KML ⓘ
WMS ⓘ
ZIP ⓘ
METADATA XML ⓘ
JSON ⓘ

OREGON TERRITORIAL SEA 3NM LINE, OCMP, 2008

This data set shows the limit of Oregon's westward jurdiction, three nautical mile l...

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This point dataset includes the locations of a comprehensive list of seafood proces...

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INDIAN RESERVATIONS OF WASHINGTON STATE

Boundaries of Indian Reservations recognized by the U.S. Bureau of Indian Affairs.

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SEARCH KEYWORDS

Location

Categories

Issues

Sources

- Bureau Of Ocean Energy Management - Pacific Region 15
- California Coastal Geoportal 36
- Federal Marine Cadastre 14
- Oregon Coastal Atlas 44
- Oregon Spatial Data Library 1
- Wcga Marine Debris Waf 1
- Washington Geospatial Clearinghouse 20

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SEARCH KEYWORDS

Location

Categories

Issues

Sources

Oregon Coastal Atlas 44

44 *results found for* Category: Human & Oregon Coastal Atlas.

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SHORESIDE INFRASTRUCTURE - RECREATIONAL CHARTER BUSINESSES, ECOTRUST, 2011

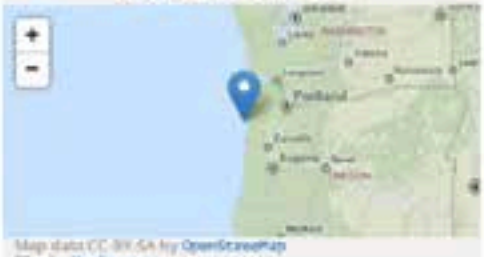
This point dataset includes the locations of a comprehensive list of recreational ch...

WFS KMZ ZIP METADATA XML JSON

SEARCH KEYWORDS

Location

CLEAR | CLICK MAP TO SELECT



Map data CC-BY-SA by OpenStreetMap
Tiles by MapQuest

Categories

Human Data

- Boundaries 4
- Economy 15
- Infrastructure 10
- Management 9

Issues

Sources

- Oregon Coastal Atlas 36

36 *results found for* Category: Human, Oregon Coastal Atlas & current location.

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WEST COAST OCEAN DATA PORTAL

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PAGE 1 2 3 SHOW

SEARCH KEYWORDS

13 *results found for* Category: Human, Human: Economy, Oregon Coastal Atlas & current location.

Location

CLEAR / Click map to select

Map data CC-BY-SA by OpenStreetMap
Tiles by MapQuest

Categories

Human Data

- [x] Economy 13

Issues

Sources

- [x] Oregon Coastal Atlas 13

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KML
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ZIP
METADATA XML
JSON

These data are an aggregation of several individual fishery layers across three sectors: commercial charter, and private vessel sport boat. The fisheries layers used were derived from interviews with fishermen/captains in Charleston/Coos Bay, Bandon, and Winchester Bay/Reedsport. The fishing grounds combined were Dungeness crab (trap), rockfish (fixed gear), salmon (troll), and shelf bottom trawl.

DATE PUBLISHED
2010-11-01T00.00.00

CREATOR
ECOTRUST

PUBLISHER
OREGON COASTAL MANAGEMENT PROGRAM

CONTACT
CHARLES STEINBECK

CHARLES@ECOTRUST.ORG

CONSTRAINTS
NOT AVAILABLE

Harvested Oct 31, 2013 from Oregon Coastal Atlas

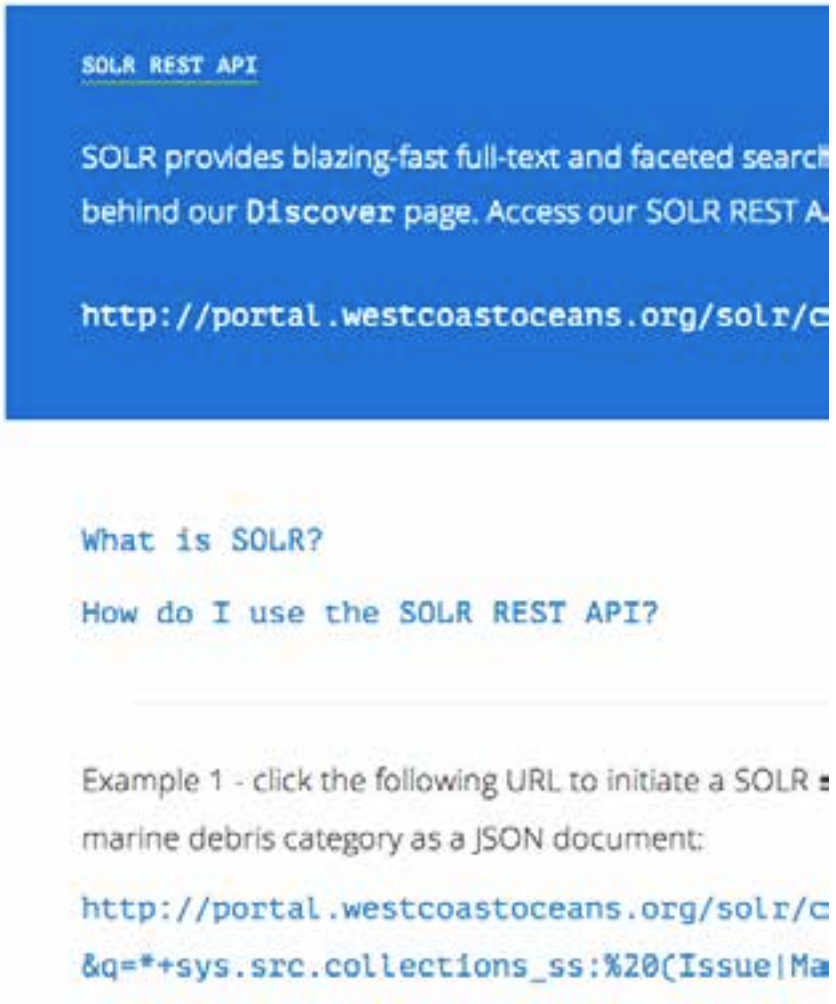
SHORESIDE INFRASTRUCTURE - SEAFOOD PROCESSORS AND DISTRIBUTORS, ECOTRUST,

WFS
KMZ
ZIP

Connect - APIs

WEST COAST OCEAN DATA PORTAL

- CSW
- SOLR REST
- Geoportal REST
- Open Search



Contributions

WEST COAST OCEAN DATA PORTAL

- Catalog Assessment
- Custom UI
- Enhanced Indexing
- Github.com/ecotrust/wc-data-registry

Lessons Learned

WEST COAST OCEAN DATA PORTAL

- You can create a data network but you need a strong human network to sustain it.
- Metadata was written as a footnote in years past and now it’s the face of our data.

What's Next

WEST COAST OCEAN DATA PORTAL

- Expand and fill data gaps
- Encourage higher minimum for metadata, publishing of more service links
- Identify and service a specific use case related to marine debris

Contact

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http://portal.westcoastoceans.org

http://tinyurl.com/CatalogResearch