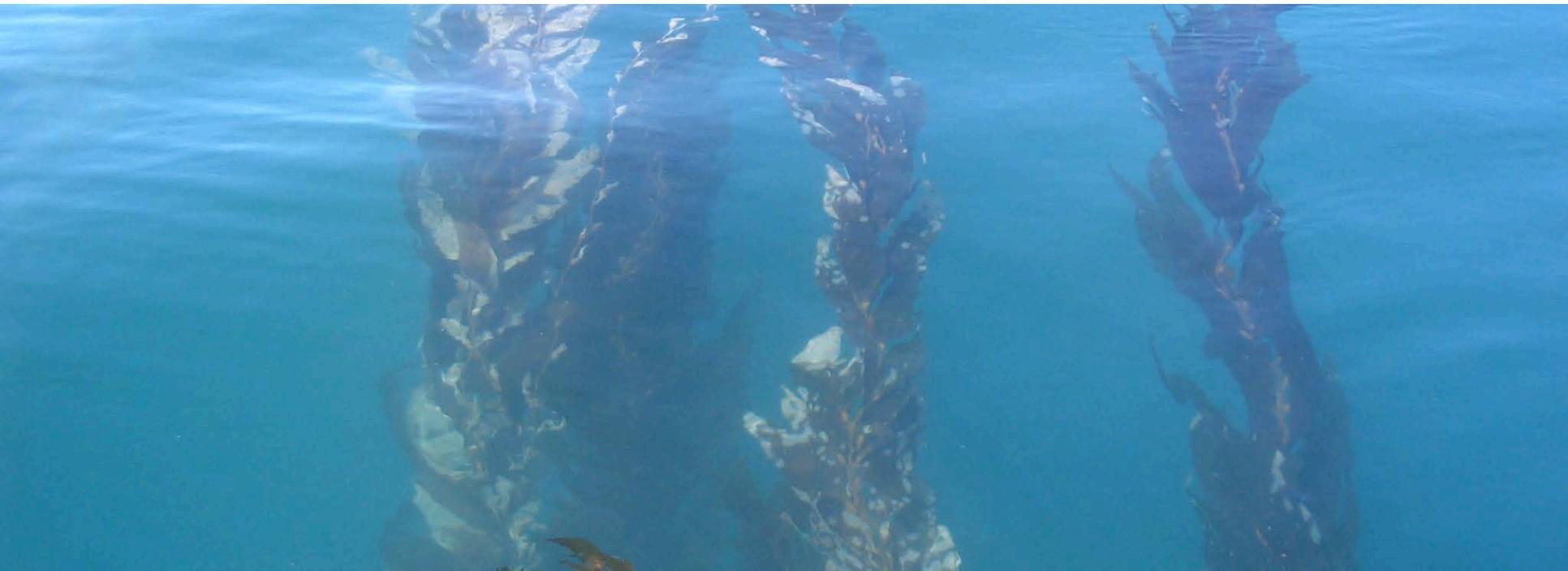


# Evolving MPA Monitoring: Technology solutions to inform decisions

*Data Management Workgroup, Water Quality Council, 22 Nov 2011*

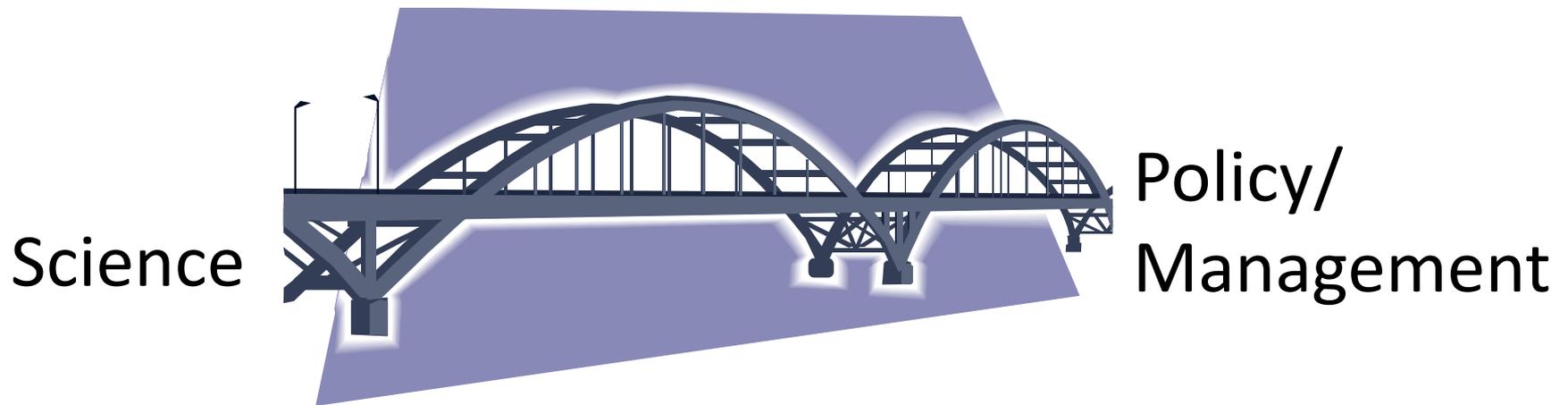


# Our Vision



Objective, reliable and timely monitoring information is used in management decisions for improved stewardship of California MPAs

# A boundary role



... new science approaches  
... new communications tools

...a technology solution?

# ... a technology solution

An online database? A data portal? An information management system? A website?

...An online community platform to steward, share and use MPA monitoring information

# User Needs Assessment



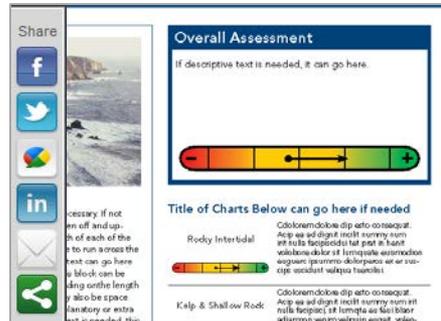
# An online community platform

## OceanSpaces.org

An online space to...



learn

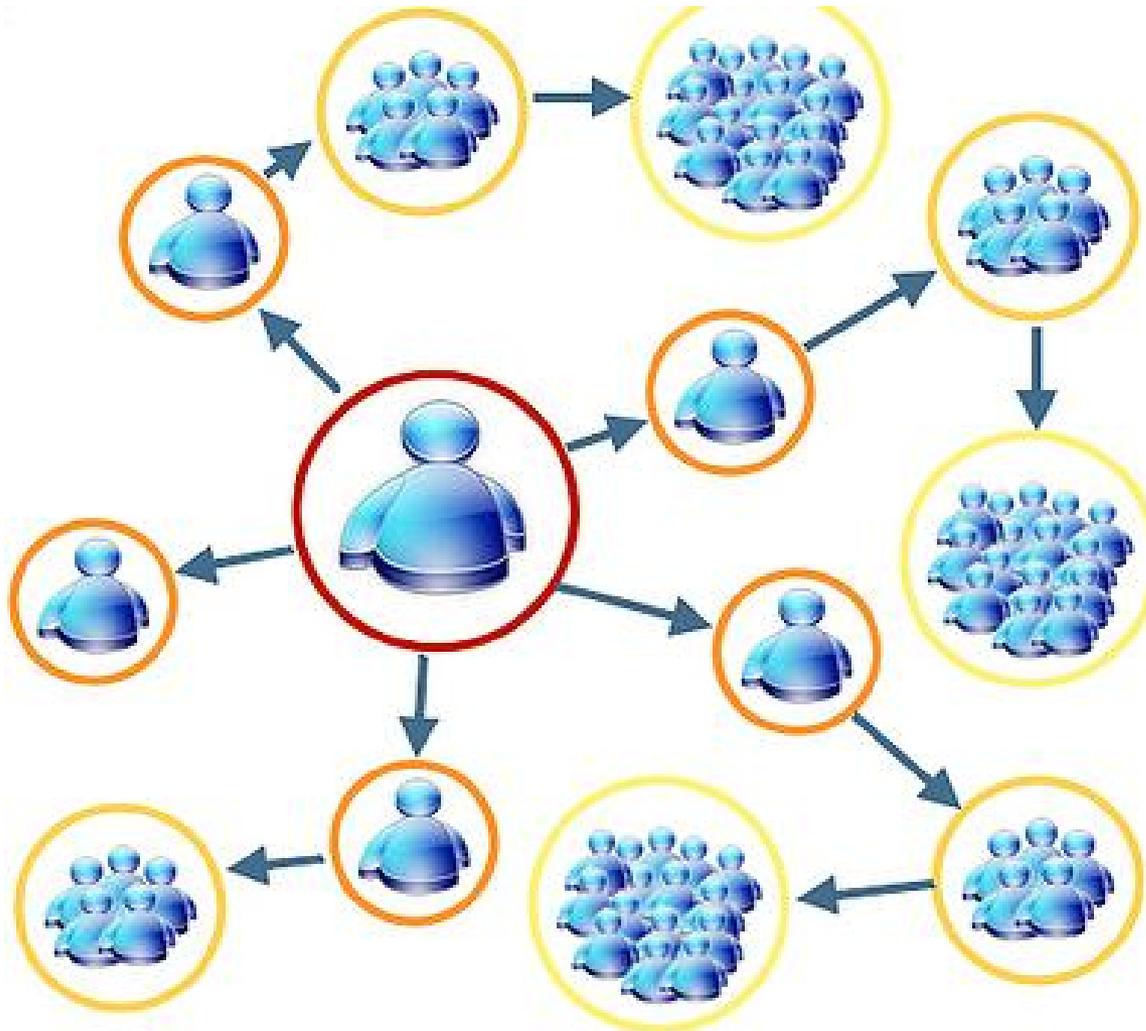


share



connect

# Starting with a flexible foundation



# Connect...identify communities

The screenshot shows a web browser window displaying the YouTube channel for MBARI. The browser's address bar shows 'YouTube - MBARIVideo's ...' and 'New Tab'. The YouTube logo and navigation links (Search, Browse, Upload, Create Account, Sign In) are visible at the top. The channel banner features the MBARI logo and the text 'Monterey Bay Aquarium Research Institute' with an image of a squid. Below the banner, the channel name 'MBARIVideo's Channel' is shown with 'Subscribe' and 'Playlists' buttons. The main content area displays a video player for the video 'Let's get together', which has 1,379 views. The video player shows a large school of fish. Below the video player, there are buttons for 'Info', 'Favorite', 'Share', 'Playlists', and 'Flag'. The video description reads: 'From: MBARIVideo | Mar 16, 2011 | 1,379 views. Biologists at the Monterey Bay Aquarium Research Institute (MBARI) use remotely operated vehicles (ROVs) to observe marine life behavior in the deep sea. These high definition video clips from the ROVs show different ways animals in the deep form groups. Aggregating can increase an animal's chances of surviving predation, capturing food or meeting a mate. ... (more info)'. To the right of the video player, there is a 'Back to Playlists' link and a section titled 'General MBARI videos' with a 'More info' link. This section lists several other videos with their titles, view counts, and durations: 'Let's get together' (1,379 views, 2:21), 'A deep-sea valentine' (3,832 views, 2:37), 'Feast in the deep' (3,184 views, 2:23), 'Tethys - A new breed of undersea robot' (2,592 views, 2:34), 'Robotic laboratory monitors bacteria at MBARIVideo' (2,588 views, 5:11), and 'Ghostly critters of the deep sea: Cirrate' (58,066 views, 0:59). The bottom of the browser window shows 'Local intranet | Protected Mode: Off' and a taskbar with 'Desktop' and 'Libraries' icons.



## Join

Registering for us is free and open to anyone worldwide! With site membership you can create a profile page or an organization page, upload data upon approval and contact other members, save items to your favorites and more.

First name: \*

Last name: \*

Upload photo  [Browse](#)

Affiliation:

Job title:

Street:

City:

State:  Zipcode:

Country:

Website:

E-mail: \*

Confirm e-mail: \*

A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

## ▼ About Tony Hale

Dr. Tony Hale, Information Systems Officer, is an enterprise technologist with a doctoral degree in English literature, making him – among other things – a strong communicator of technology initiatives. Educated at University College Cork in Ireland, Tony received both his BA and PhD from UC Berkeley, while simultaneously honing his skills as an Oracle and Microsoft database programmer. Remaining in academia, Tony spent over seven years at Mills College in Oakland, where he led the college's information system's team and guided the institution through many complex technology projects including the creation of a business intelligence tool, the adoption of a database-driven communication system, and the launch of a community portal. Tony pioneered a movement for deeper institutional engagement with technology, promoting data-informed decision-making in his semiannual address called "The State of Information Technology." Later, in pursuit of new challenges, he assumed the directorship of the Enterprise Services team at the Peralta Community College District.

Having started in July 2011 with the Monitoring Enterprise team, Tony is charged with advancing the design and development of OceanSpaces, the online community platform for MPA Monitoring interests. He is enthusiastic about contributing his skills to such a talented and important organization.



**Tony Hale**

**Information Systems Officer**

**Affiliation** [California Ocean Science Trust](#)

**Location** Oakland, CA

**Interests/Expertise** New technologies, music composition, and hiking.

**Website** <http://monitoringenterprise.org>

**Joined** November 2011

## ▼ Tony Hale Follows



## ▼ Tony Hale's Connections



**California Ocean Science Trust**



**MPA Monitoring Enterprise**



**South Coast Baseline Monitoring Group**

## ▼ Tony Hale's Data Uploads



**MLPA CBS**

by [Tony Hale](#) from [MPA Monitoring Enterprise](#). 2 min ago

[Download package](#) (0) 2011-12-08

▼ About MPA Monitoring Enterprise

Working at the boundary between science and management, the MPA Monitoring Enterprise provides a unique combination of science and policy expertise to develop and test a realistic way to take the pulse of ocean ecosystems and evaluate the performance of the emerging statewide network of MPAs.

The MPA Monitoring Enterprise does not advocate for or against the implementation of MPAs, but rather ensures that policymakers, resource managers, and the public have impartial, timely and useful information to support MPA management decisions.



MPA Monitoring Enterprise

Affiliation MPA Monitoring Enterprise

Industry

Interests/Expertise

Website(s)

Joined December 2011

Follow

Message admin(s)

Edit | Member list | Add member(s)

Email all members | Create Event

▼ MPA Monitoring Enterprise Connections



Rocky Intertidal Ecosystems



Estuaries and Wetlands



Kelp and Shallow Rock



Soft-Bottom Intertidal and Beach Ecosystems



Soft-Bottom Subtidal (0-100m) Ecosystems



Deep Ecosystems (>100m) and Canyons



Consumptive Uses



Non-Consumptive Uses



Nearshore Pelagic Ecosystems

▼ Members



▼ News & Events

Working toward web site release

1 Dec 2011 - 2:30pm

Main Office

See map: Google Maps



▼ MPA Monitoring Enterprise Data Uploads



MLPA CBS

by Tony Hale from MPA Monitoring Enterprise. 23 sec ago

Download package (0)

2011-12-08

# Connect...customize user experience

The screenshot displays the BBC mobile website interface. At the top, the BBC logo and 'Mobile' label are on the left, while navigation links for News, Sport, Weather, Travel, TV, Radio, and More are on the right, along with a search bar. The main content area features a 'TOP NEWS STORY' section with a photo of Muammar Gaddafi and the headline 'Libyans 'will fight' no-fly zone'. Below this is a 'News' category menu with a sub-menu containing a 'Deadly attack at Pakistan funeral' and a list of other news items. To the right of the News menu are 'Sport' and 'Business' category menus. Further right is a 'Travel' section with a 'Sotheby's International Realty' logo and a 'TOP PICKS' section featuring a 'Perfect Trip: Canadian Rockies' image. On the far right, there are promotional banners for '1.15% APY NO FEES' and 'PERSONAL SAVINGS from AMERICAN EXPRESS'. At the bottom right, a 'Spotlight' section titled 'UKRAINE DIRECT' includes a 'Hard times' image and a list of related articles.

**BBC** Mobile News | Sport | Weather | Travel | TV | Radio | More

**TOP NEWS STORY**

**Libyans 'will fight' no-fly zone**  
Libya's Col Muammar Gaddafi says his people will take up arms if a no-fly zone is imposed, as state TV says the city of Zawiyah has been "liberated".  
[» More from BBC News](#)

**News** Edit x

**Deadly attack at Pakistan funeral**  
about 2 hours ago

- Ice loss quickens, raising seas
- Taylor's trial 'neo-colonialist'
- Seven children die in farm fire
- Two property tycoons are arrested
- Google donates to Mandela archive
- Europe 'not ready' for cookie law
- Discovery set for final landing

**UK** + -

- Squatters in Gaddafi London home

[» More from BBC News](#)

**Sport** Edit x

**Business** Edit x

**Travel** x

IN ASSOCIATION WITH **Sotheby's**  
INTERNATIONAL REALTY

**TOP PICKS**

**Perfect Trip: Canadian Rockies**

**1.15% APY** | NO FEES  
A HIGH-YIELD SAVINGS ACCOUNT FROM

**PERSONAL SAVINGS** from **AMERICAN EXPRESS**  
Accounts offered by American Express

**Spotlight**

**UKRAINE DIRECT**

**Hard times**

- Is the Ukrainian economy finally one of the world's worst recessions?
- Ukraine's shifting border: A
- Searching for a place in Eu
- More from Ukraine Direct

## Manage Dashboard

▶ **My groups** ×

▶ **Manage Follows / Subscriptions** ×

▼ **Welcome to Ocean Spaces** ×

Please complete your profile

▶ **My Saved Searches** ×

▼ **Inbox** ×

Send your first message



**Liz Whiteman**  
Researcher

**Affiliation** Monitoring Enterprise

**Location** ,

**Interests/Expertise**

**Website**

**Joined** August 2011

[View](#) | [Edit](#)

## Profile complete



Filling out *Bio* will bring you to 43%.

## Dashboard

[Inbox](#)

[Saved Searches](#)

[Manage Dashboard](#)

## Tools

# Connect...identify common interests

LinkedIn®

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Get the most from your professional network

## Re-connect



Find past and present colleagues and classmates quickly. LinkedIn makes [staying in touch](#) simple.

## Power your career



Discover inside connections when you're [looking for a job](#) or new business opportunity.

## Get answers



Your network is full of industry experts willing to share advice. Have a question? [Just ask.](#)

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## ▶ Rocky Intertidal Ecosystems

### ▼ MPA Monitoring Metrics

MPA monitoring metrics were developed for each MLPA region to track trends in the status or condition of ecosystems. Click on the thumbnails to view the current monitoring metrics from each region's monitoring plan. Monitoring plans are living documents and these metrics will be updated as we learn more about these ecosystems and the effects of MPAs.



North Central Coast Metrics



South Coast Metrics



South Coast Metrics



South Coast Metrics



South Coast Metrics



South Coast Metrics

[See all](#)

### ▼ MPA Monitoring in the Rocky Intertidal Ecosystems

Click on the thumbnails to learn more about the groups monitoring rocky intertidal ecosystems.



California  
Ocean



MPA  
Monitoring

## Follow This Topic

### ▼ Additional Resources

[Oceanography Lecture](#)  
[Monitoring Life](#)

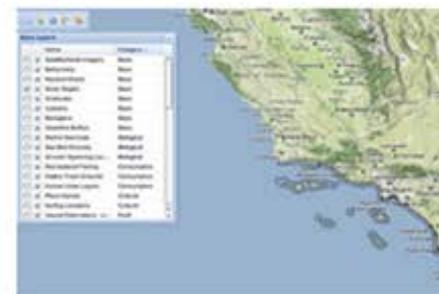
[Learn More About Monitoring](#)

### ▼ Explore Other Ecosystems

[Kelp and Shallow Rock](#)

[Browse Other Topic Pages](#)

### ▼ Explore the Rocky Intertidal

[Go to map](#)

# Learn...about ongoing monitoring

The screenshot displays the Google Earth interface. On the left, the 'Places' panel lists several SMCA and SMR locations, including Bodega Head SMCA, Estero Americano SMRMA, Estero de San Antonio SMRMA, Point Reyes SMR, Point Reyes SMCA, and Point Reyes Headlands Spec. The 'Layers' panel shows various map layers like Borders and Labels, Places, Photos, Roads, 3D Buildings, Ocean, Street View, Weather, Gallery, Global Awareness, and More. The main map area shows the San Francisco Bay Area with a yellow outline highlighting a specific region. A data popup window is open over the Estero de Limantour SMR, providing the following information:

**Estero de Limantour SMR**

- NAME = Estero de Limantour
- Type = SMR
- CCR = Section 632 (b) (24)
- Area\_sq\_mi = 1.48905
- Study\_Regi = NCCSR
- Label = Estero de Limantour SMR
- Shape.area = 3.85663e+006
- Shape.len = 24671.6

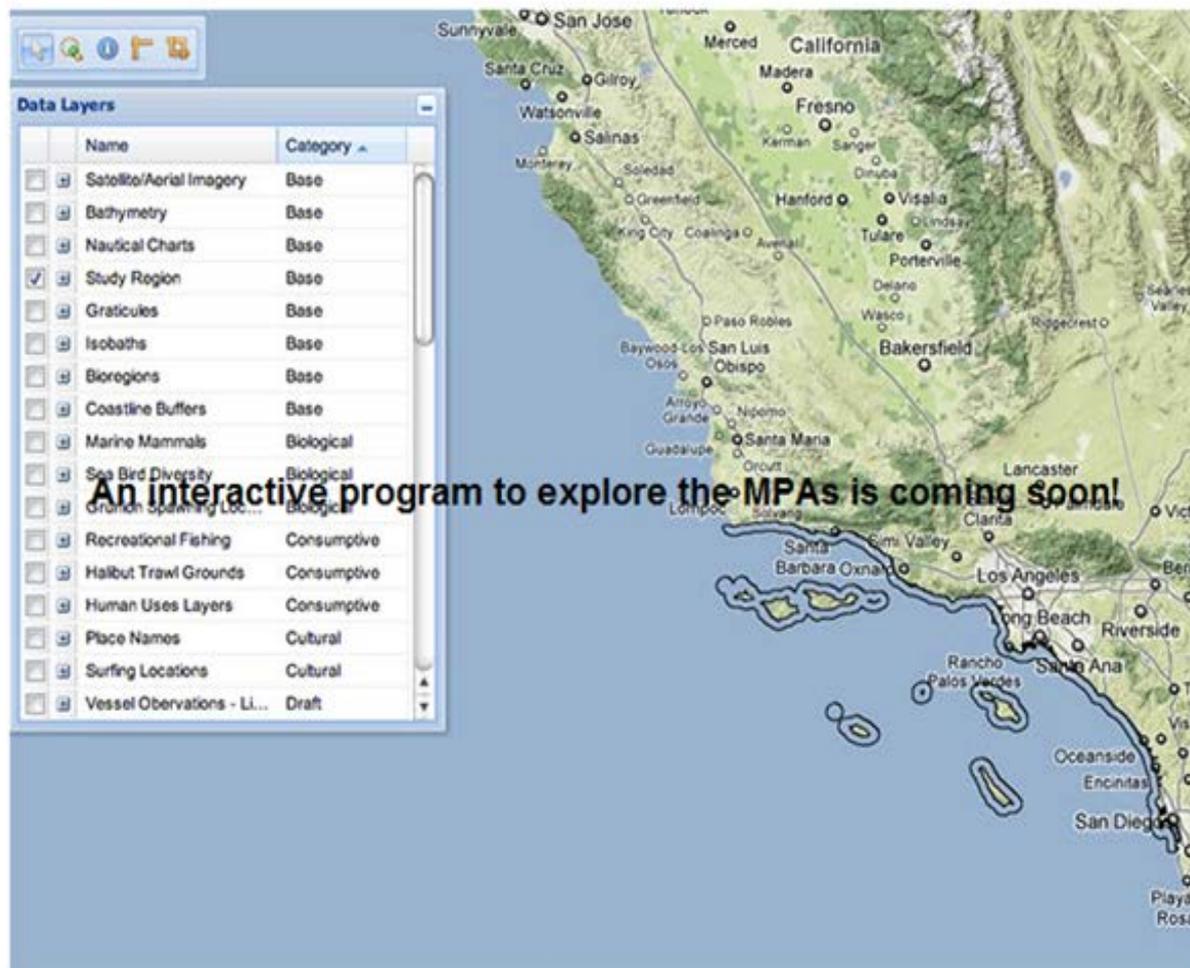
The map also shows labels for Cordell Bank, Rittenburg Bank, Petaluma, Marin, San Rafael, Richm, Angel Island, and San Francisco. The bottom status bar indicates the coordinates 37°55'14.84"N, 122°56'42.88"W, an elevation of -212 ft, and a distance of 60.83 mi. The system tray at the bottom shows the time as 6:07 AM.



## Explore the MPA's

Explore the Map

## Explore the MPAs





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Share

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- Twitter
- Google+
- in
- ✉
-

# Share...meaningful data

**Gapminder World**

Current Search: **hemp**

**Keywords**  
hemp

low lists all indicators displayed in Gapminder World. Click the name of the indicator or the data provider to access about the indicator and a link to the data provider. Labeled "Various sources" are compiled by Gapminder. They can be reused freely but please attribute Gapminder.

**Indicators in Gapminder World**

Narrow Your Results

**Keyword(s)**  
Enter Keyword(s)

- Photos
- Illustrations
- Video
- Audio
- Flash
- Exclude Editorial

Indicators	Data provider	Category	Subcategory	Download	View
... (%)	Based on UNAIDS	Health	HIV		
... (women)	undefined	Population			
... (%)	International Labour Organization	Work	Employment rate		
... participation	International Labour Organization	Work	Labour force participation		
... (%)	International Labour Organization	Work	Unemployment		
... (%)	International Labour Organization	Work	Employment rate		
... (%)	International Labour Organization	Work	Unemployment		

### Upload Data

Please fill out all the boxes below before uploading your data package.  
If you have any questions refer to the text to the word.

Save Draft

### ▼ Project Information

Title: \*

Abstract:

### ▶ People and Organizations

### ▶ Keywords

### ▶ Geographic / Temporal Coverage

### ▶ Usage Rights

### ▶ Methods and Sampling

### ▶ Upload Files

Some text here

Save Draft

Submit package



Liz Whiteman  
Researcher

**Affiliation** Monitoring Enterprise  
**Location** ,  
**Interests/Expertise**  
**Website**  
**Joined** August 2011

[View](#) | [Edit](#)

### Profile complete

29%  
Filling out **Bio** will bring you to 43%.

### Dashboard

[Inbox](#)  
[Saved Searches](#)  
[Manage Dashboard](#)

### Tools

[Upload data](#)  
[Edit data](#)  
[Guidelines](#)



## Search Data



## Our Data

Some text here about the Data. MPA monitoring metrics were developed for each MLPA region to track trends in the status or condition of ecosystems. Click on the thumbnails to view the current monitoring metrics from each region's monitoring plan. Monitoring plans are living documents and these metrics will be updated as we learn more about these ecosystems and the effects of MPAs.

- > Transparency
- > Accessibility
- > Collaboration

[Learn More About Our Data](#)

226 x 165

## Latest Upload

*PRTO, Transit Fairland*



### Thursday

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### twenty-third

Uploaded by [Randy Smith](#) from [AMPR, PRTO](#) 9 weeks ago

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### new test

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## Search

Search data

Kelps

Search

### - Search Data Options

#### Sort

Relevance Latest Popular

#### Uploaded

- Anytime
- This week
- This month
- This year

#### File Type

- All
- Data
- Images
- Reports

#### Regions

- All
- North Coast
- North Central Coast
- Central Coast
- South Coast
- San Francisco Bay

#### Data Time Capture

## Results



### Kelps count in North Central Coast and Beyond

Uploaded by **Paul Batrivo** from **AMPR**

Credits: **Sandy Johnson (AMPR)**, **Bob Thron (LTYYS4)**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ultricies luctus sem idertfty quis urna dolor. Integer accumsan dignissim leo sit amet auctor...

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### Kelps count in North Central Coast and Beyond, Kelps count in North Central Coast and Beyond

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Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ultricies luctus sem idertfty quis urna dolor. Integer accumsan dignissim leo sit amet auctor...

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## Search

Search data

Kelps

Search

- Search Data Options

### Sort

Relevance

Latest

Popular

### Uploaded

Anytime

This week

This month

This year

### File Type

All

Data

Images

Reports

### Regions

All

North Coast

North Central

Central Coast

South Coast

San Francisco

## Results



### Kelps count in North Central Coast and Beyond

Uploaded by *Paul Batrivo* from *AMPRB*

Credits: *Sandy Johnson (AMPRB)*, *Bob Thron (PRAMBJ)*

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### PROJECT FILES

Preview



Ocean\_bigfish.jpg

Big fish with a fisherman next to it in cape cod.

3,2mb

Preview



Ocean\_north...ption.doc

Lorem ipsum dolor sit amet, consectetur adipiscing elit and fishermen tryuh...

55,5kb

Preview



Sealion\_under.xls

Ocean horizon.

55,13kb

(Files must be downloaded as a package)

Download Package

### PROJECT DESCRIPTION

**Title :** Kelps count in North Central Coast and beyond

**Description :** Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ultricies luctus sem idertfy quis uma dolor. Integer accumsan dignissim leo sit amet auctor. Vestibulum ut elit quis nunc convallis volup nec nec nibh. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ultricies luctus sem id elementum. Donec quis uma dolor. Integer accumsan dignissim leo sit amet auctor. Vestibulum ut elit quis nunc convallis volutpat nec nec nibh.

### People and Organization :

Credits: *Sandy Johnson (AMPRB)*, *Bob Thron (PRAMBJ)*

Contact: *Sandy Johnson (AMPRB)*

### Geographic and Temporal Coverage :

Geographic Region: North Central Coast

# Collaborate...build consensus

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mountainrain shared a treatment

97,854 patients  
500+ conditions

Who's like you?

**Share your experience.**  
The more you share, the easier it will be to find patients like you. Start by adding a condition, symptom or treatment.

**I have**

Type at least 3 letters of a condition

**Get your health in order.  
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*" We are all here on PatientsLikeMe for a reason. For me, the most important reason is that everyday I chart my moods, and every week I update my symptoms, treatments, etc. so that bonafide researchers have access to my information as well as thousands of others... "*

—PatientsLikeMe member

# Next steps - building a community

