

# **Working with Data**

## **A Workshop on Understanding, Visualising and Mapping Data**

**Chennai, 3-5 August 2012**

**Second day  
4<sup>th</sup> August 2012**

- |  |               |
|--|---------------|
| 1. Presentation by Open Knowledge Foundation | [10:30-11:00] |
| 2. What is data visualisation?               | [11:15-12:15] |
| 3. Tools for spatial data collection         | [13:30-14:15] |
| 4. Introduction to tools                     | [14:15-14:30] |
| 5. Session on geo/visualisation tools #1     | [14:45-16:00] |
| 6. Session on geo/visualisation tools #2     | [16:15-17:30] |

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# Collecting Spatial Data

# **Free Spatial Data**

Landsat

SRTM

WorldClim

GADM

Free Spatial Data

# **Landsat Extended Thematic Mapper+ and Multi-Spectral Scanner**

## **Landsat**

SRTM

WorldClim

GADM

Free Spatial Data

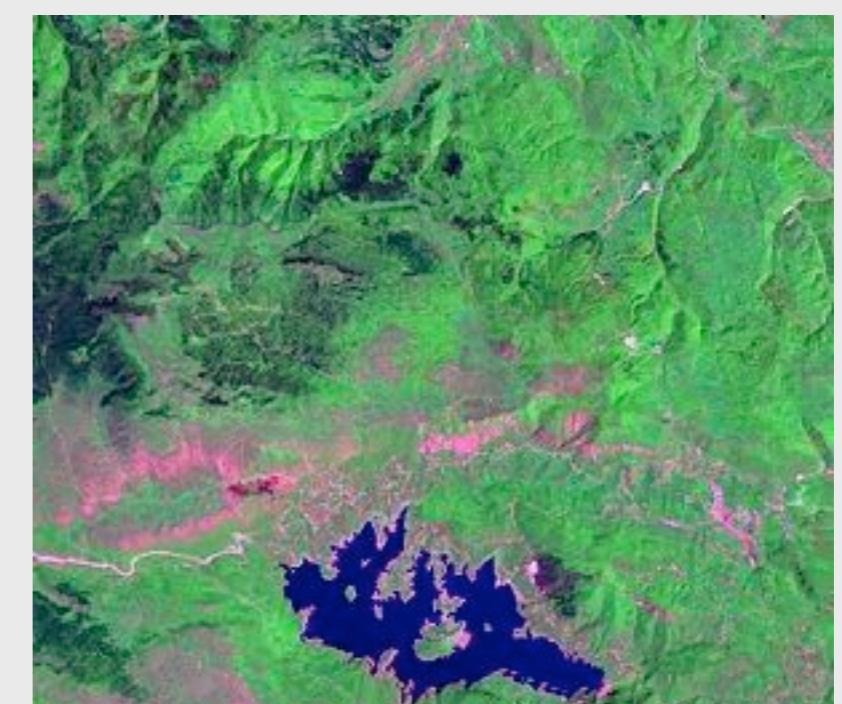
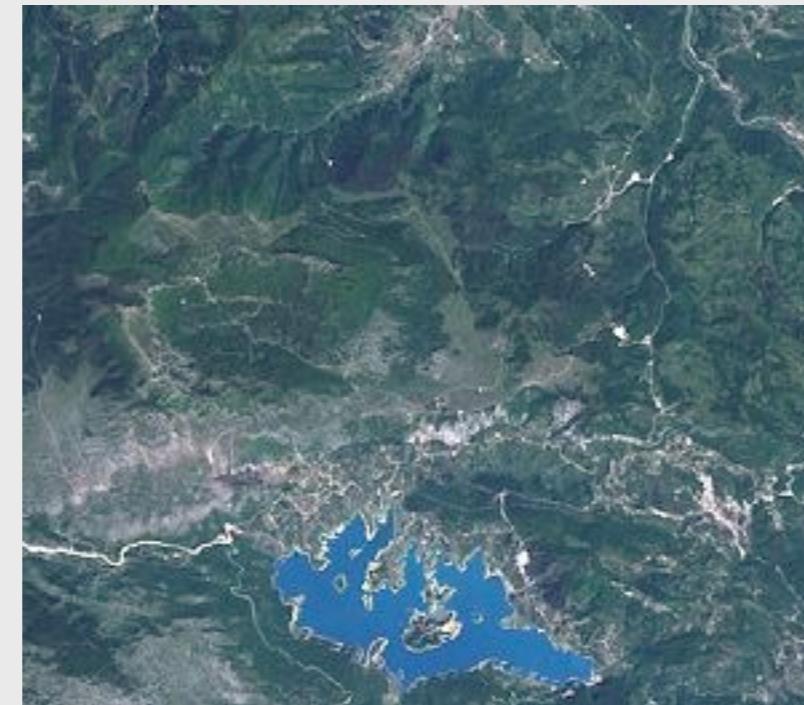
# Landsat Extended Thematic Mapper+ and Multi-Spectral Scanner

**Landsat**

SRTM

WorldClim

GADM



Free Spatial Data

## **Landsat Extended Thematic Mapper+ and Multi-Spectral Scanner**

**Landsat**

SRTM

WorldClim

GADM

**Free Land Cover Data**

**[http://www.glcumd.edu/  
data/landsat/.org/](http://www.glcumd.edu/data/landsat/.org/)**

**Lots of derivative products**

Free Spatial Data

# Landsat Extended Thematic Mapper+ and Multi-Spectral Scanner

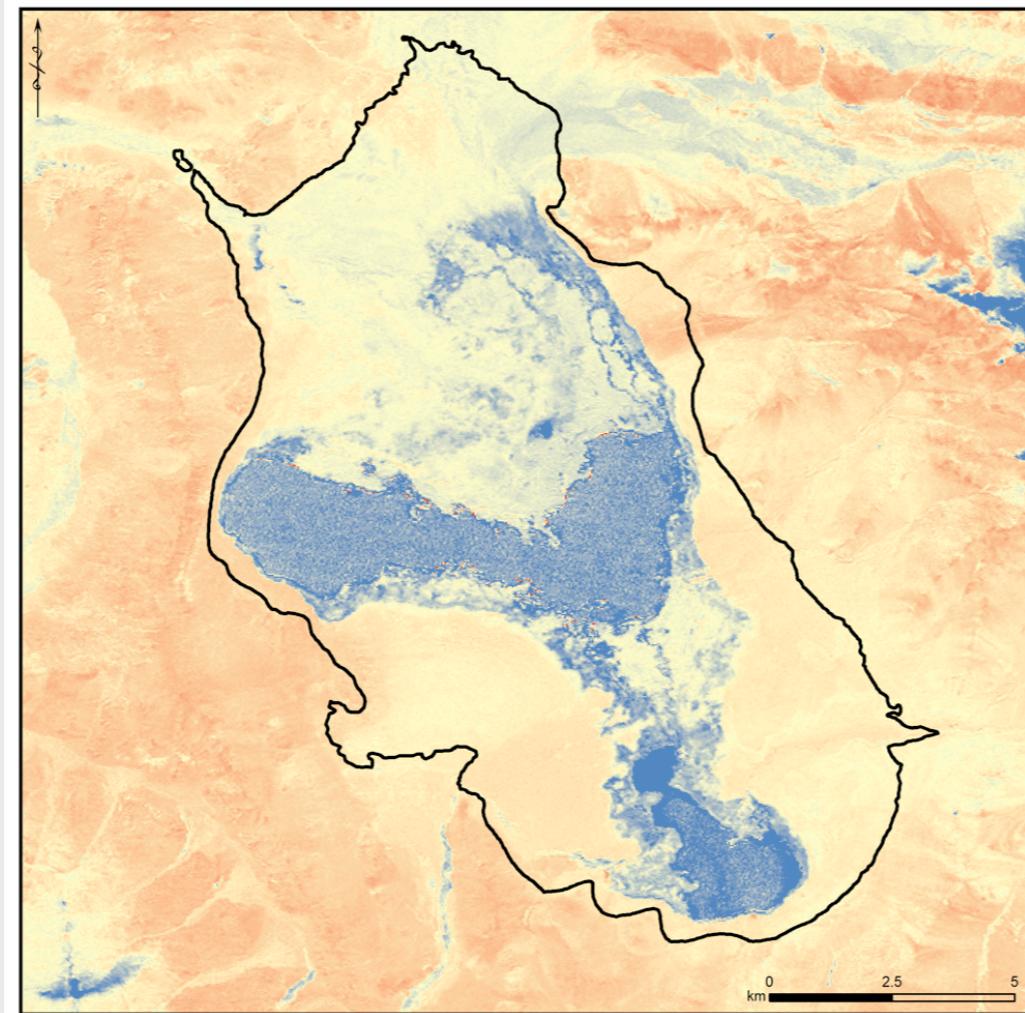
## Landsat

SRTM

WorldClim

GADM

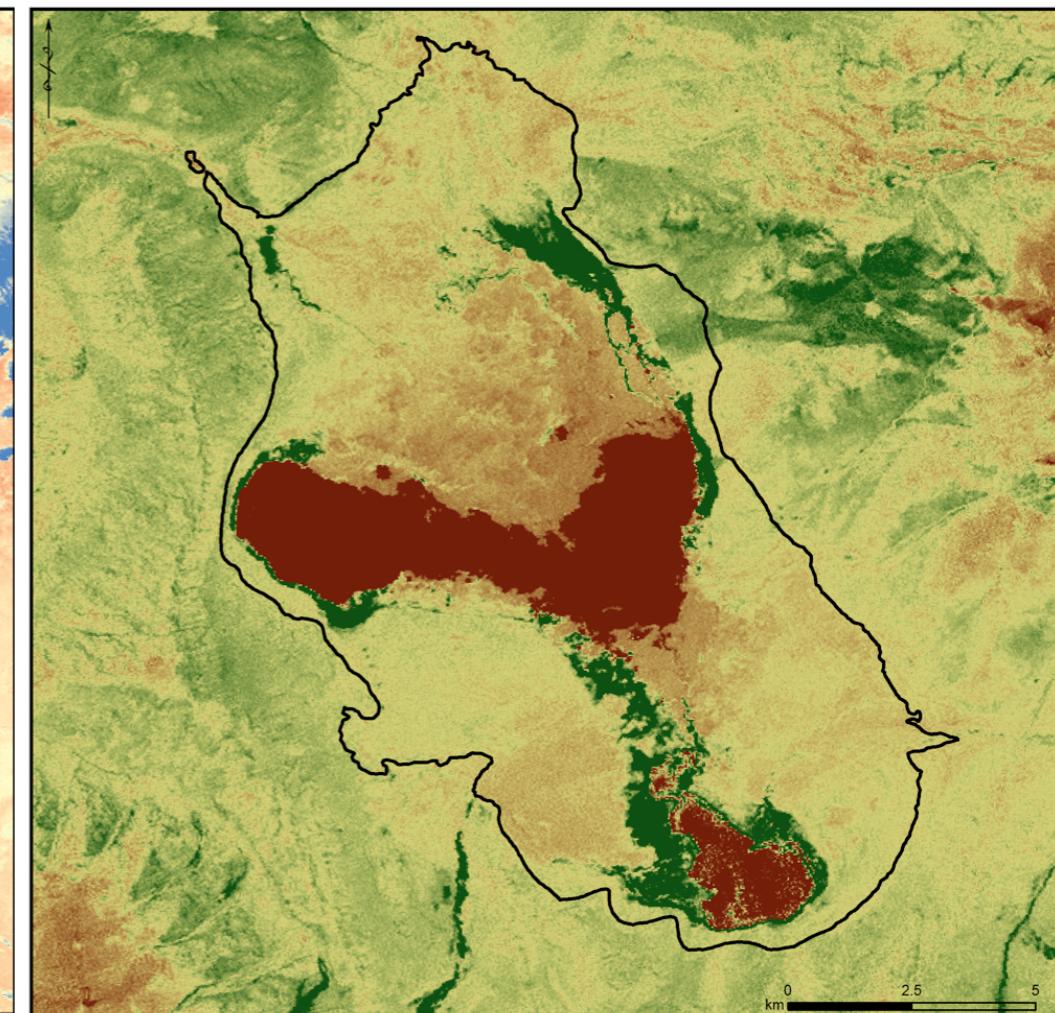
### NDWI



NDWI 2000



### NDVI



NDVI 2000



Free Spatial Data

# Shuttle Radar Topography Mission

Landsat

**SRTM**

WorldClim

GADM

Free Spatial Data

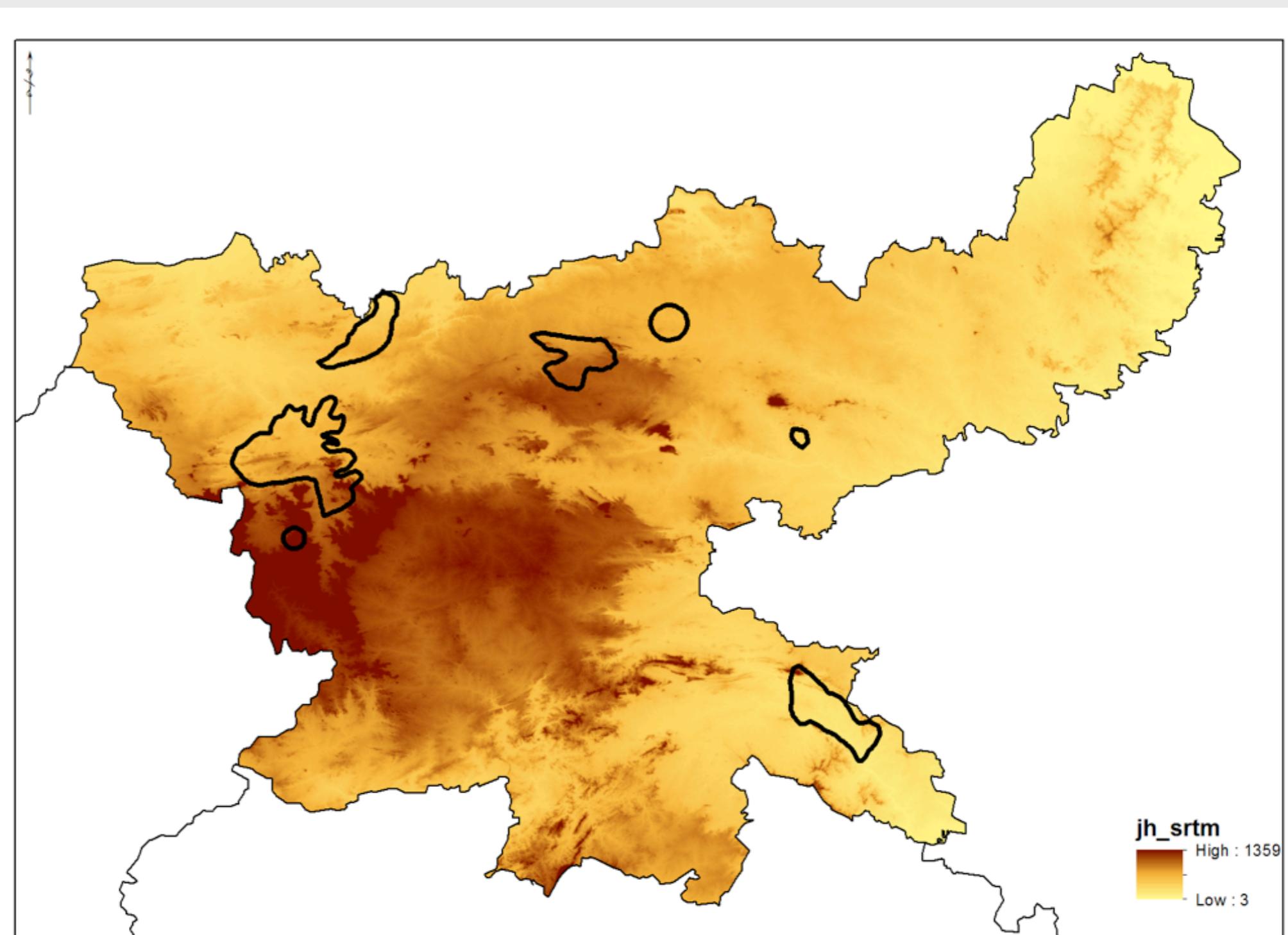
# Shuttle Radar Topography Mission

Landsat

**SRTM**

WorldClim

GADM



Jharkand: Corridor Mapping Description

SRTM\_Heights

Free Spatial Data

# Shuttle Radar Topography Mission

Landsat

SRTM

**Free Digital Elevation Model**

WorldClim

GADM

**<http://srtm.csi.cgiar.org/>**

**Many applications**

Free Spatial Data

# Shuttle Radar Topography Mission

Landsat

Slope

SRTM

Hydrology

WorldClim

Contours

GADM

Aspect

Line of Sight

Free Spatial Data

# Shuttle Radar Topography Mission

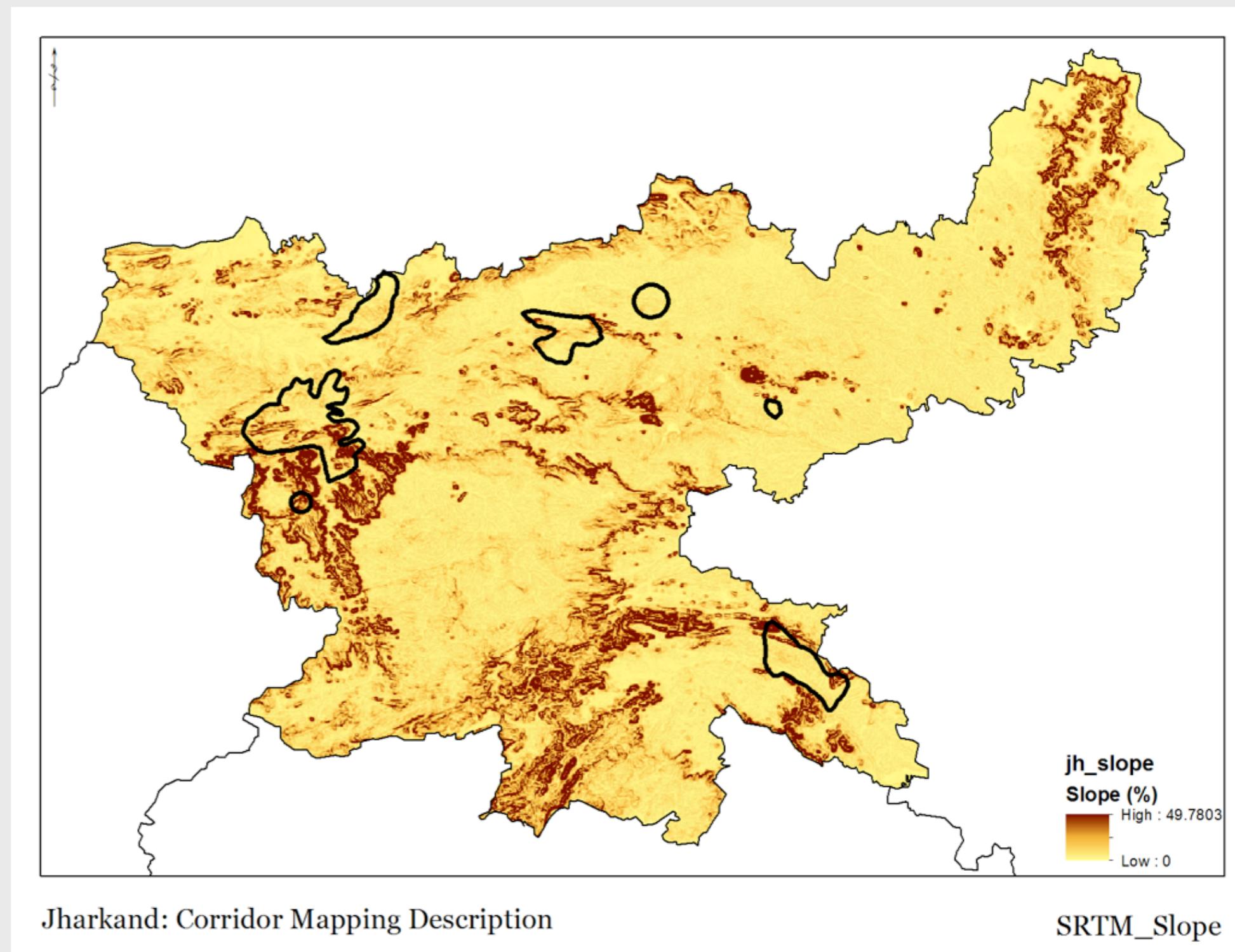
Landsat

SRTM

WorldClim

GADM

## Slope



Free Spatial Data

**Climate Models**

Landsat

SRTM

**WorldClim**

GADM

# Free Spatial Data

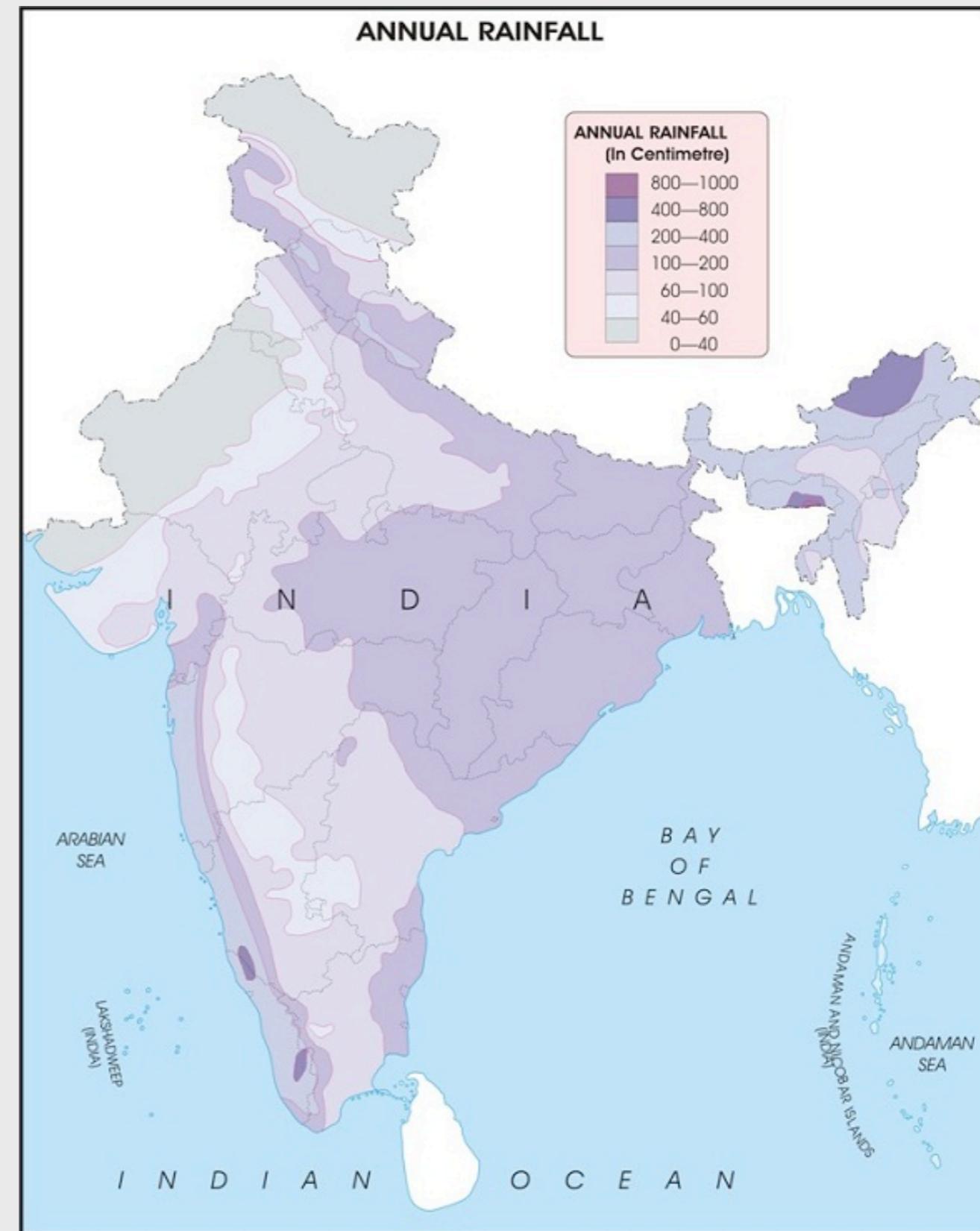
Landsat

SRTM

# WorldClim

GADM

# Climate Models



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Climate Models

Landsat

<http://www.worldclim.org/>

SRTM

WorldClim

Interpolation of average **monthly** climate data from weather stations

GADM

Mean, minimum and maximum temperature

Total precipitation

Free Spatial Data

# Climate Models

Landsat

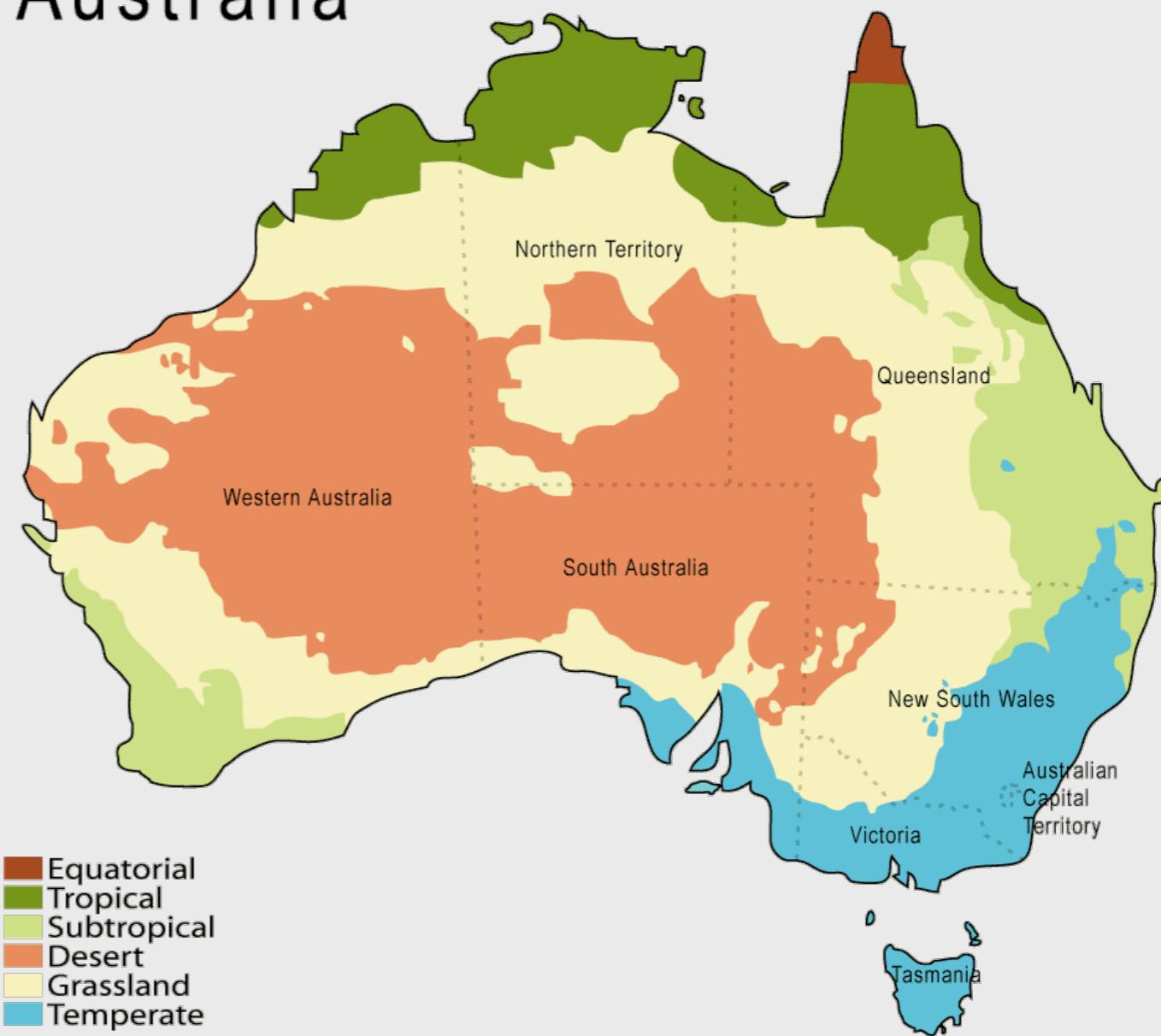
SRTM

**WorldClim**

GADM

## Climate Zones

Australia



Free Spatial Data

Climate Models

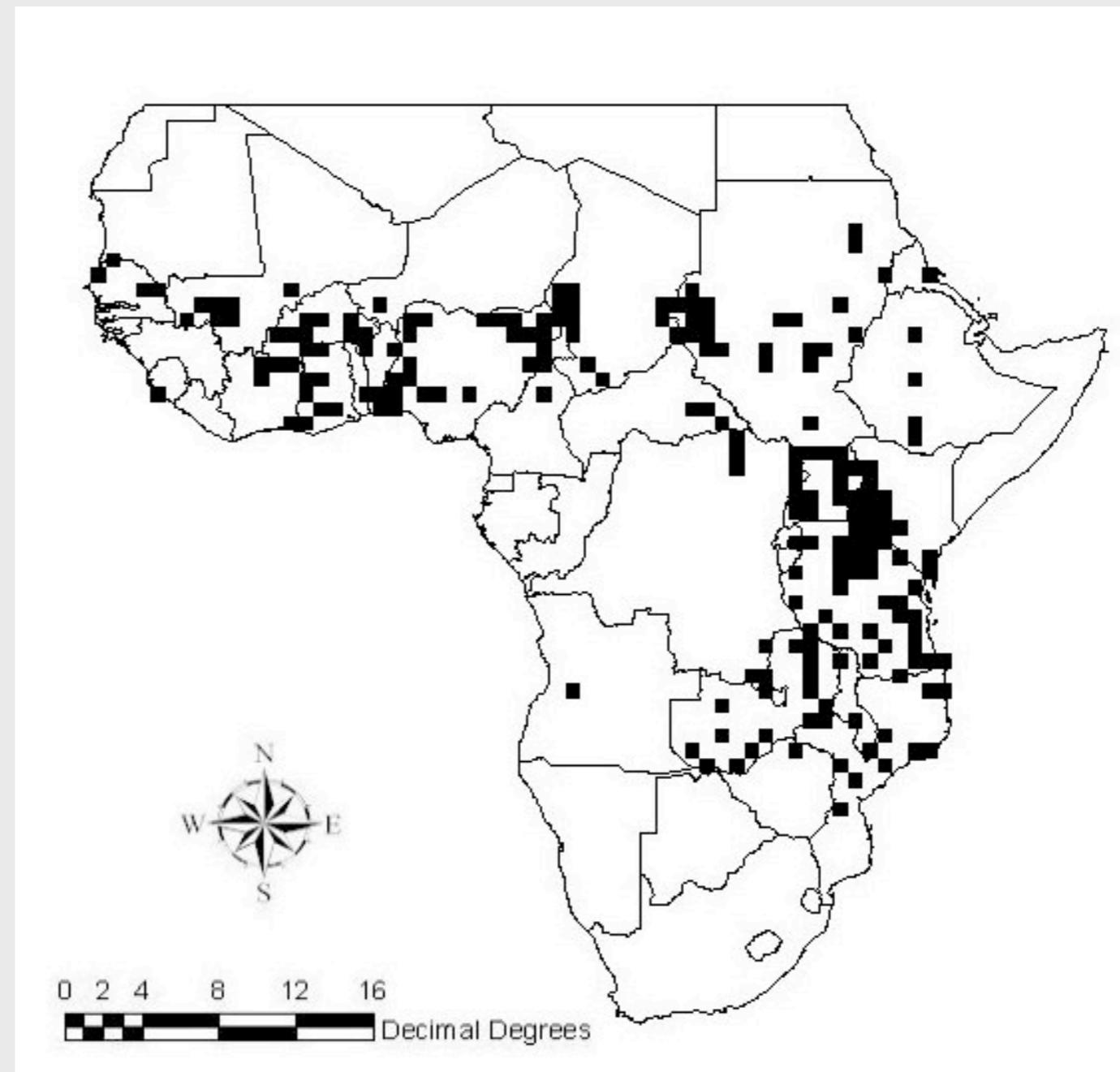
Landsat

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GADM

Species Envelopes



Present day African *Acacia sieberiana* habitat

Free Spatial Data

## Global Administrative Areas

Landsat

SRTM

WorldClim

**GADM**

Free Spatial Data

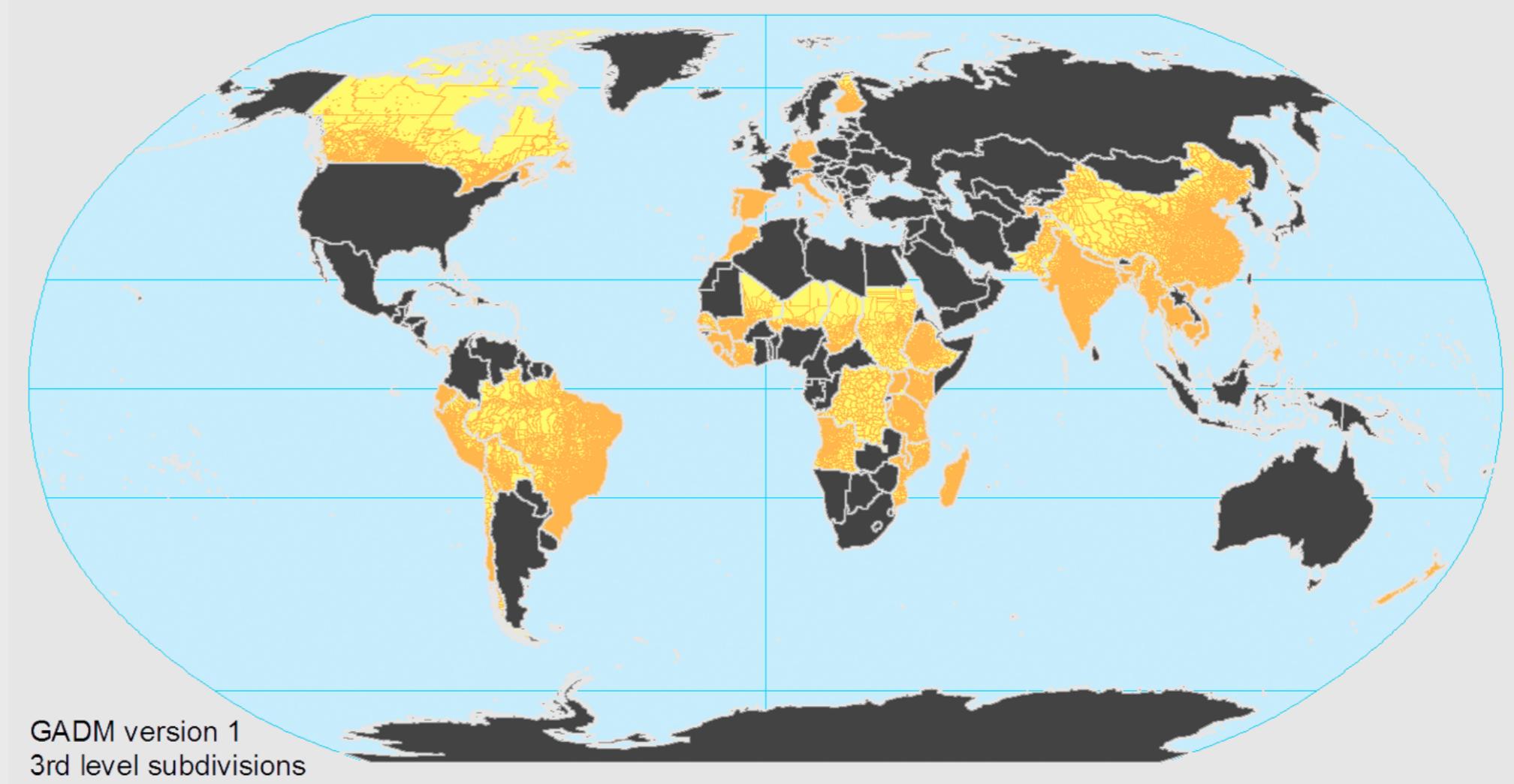
# Global Administrative Areas

Landsat

SRTM

WorldClim

**GADM**



Free Spatial Data

# Global Administrative Areas

Landsat

SRTM

WorldClim

**GADM**

**“Boundaries without Limits”**

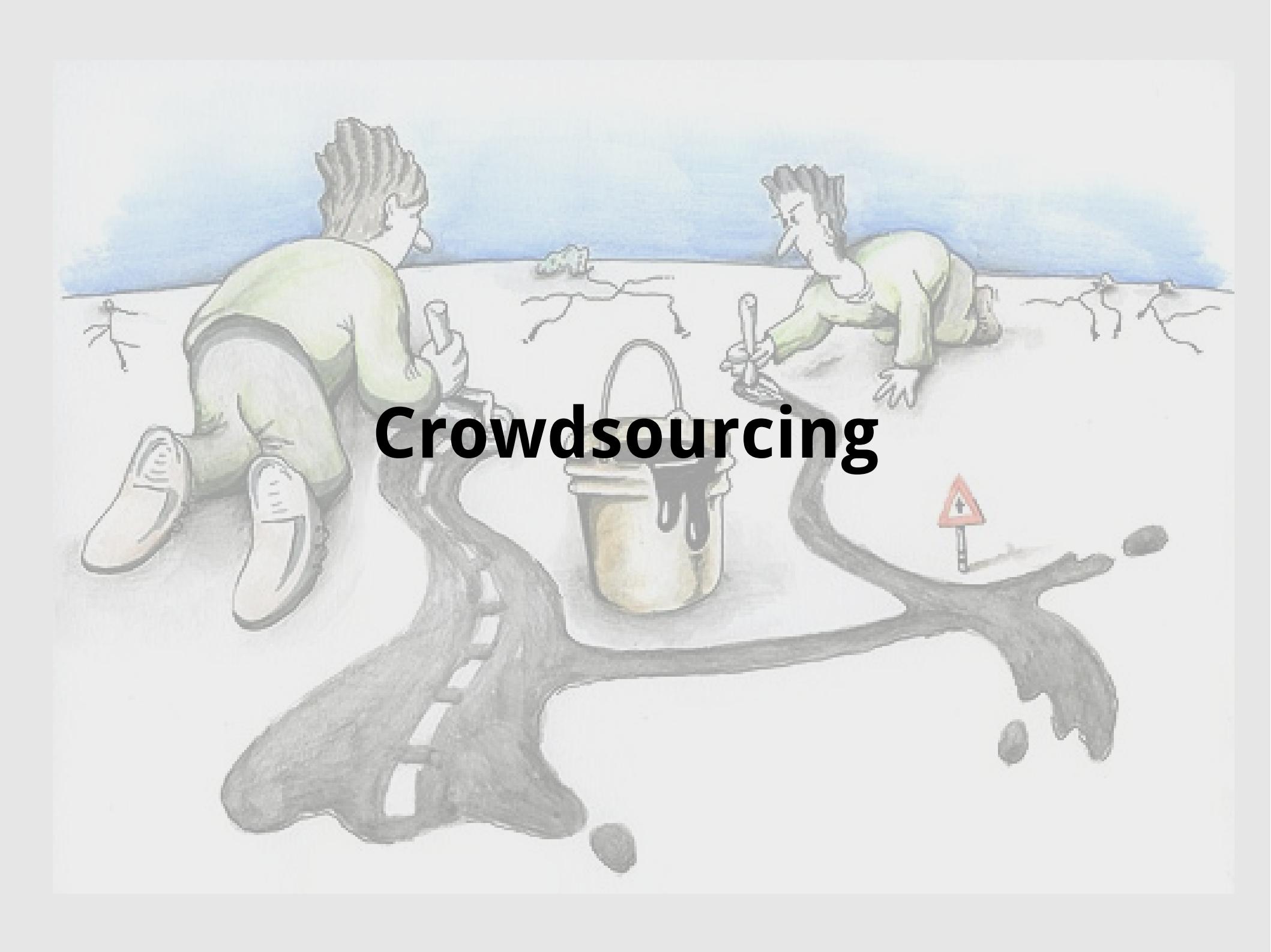
[www.gadm.org](http://www.gadm.org)

**“This is a never ending project”**

# **GPS**

# **Global Positioning System**

# **Restrictions**



# Crowdsourcing

- Distributed problem-solving and production model.
- Coined by Jeff Howe in a June 2006 Wired magazine article "The Rise of Crowdsourcing"
- Oxford English Dictionary.

**"Wisdom of the crowd"**

WE CROWDSOURCE THE DESIGN PROCESS, ALLOWING THOSE WITH THE BEST DESIGNS TO CONNECT—  
VIA ALREADY-IN-PLACE SOCIAL NETWORKING INFRASTRUCTURE—  
WITH INTERESTED MANUFACTURERS, DISTRIBUTORS, AND MARKETERS.



NOBODY CAUGHT ON THAT OUR BUSINESS PLAN DIDN'T INVOLVE US IN ANY WAY—IT WAS JUST A DESCRIPTION OF OTHER PEOPLE MAKING AND SELLING PRODUCTS.

# **Mobile**

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[FULL SCREEN MAP](#)



From: May 2011 to: Jul 2012

[Play](#)



↓ [CATEGORY FILTER](#) [HIDE]

**ALL CATEGORIES**

UNPLANNED

PLANNED

VOLTAGE

GOOD NEWS

COMMENTS

DAILY

THEFT

AUDIO REPORTS

VIDEO REPORTS

# **Social Media**

# barometer

Visualizing Sentiment on Twitter – by memetic labs & nth loop



[Tweet](#) 35

88,774

positive buzz today

6  
mentions by  
6  
users today

20,082

negative buzz today

hover over the question marks to  
learn more about the chart.  
click to dismiss this popup

click on the various brand logos to  
see the statistics for the brands.  
click to dismiss this popup

# **Web/paper based forms**

# **Interviews**

# **Online Petitions/Campaigns**

### ① Start a Petition



*Param Vir Dhar starts a protest against corrupt RTO officials in Hardoi*

### ② Mobilise Support



*450 people petition the District Magistrate*

### ③ Win Change



*The DM suspends corrupt officials and installs anti-corruption signboards*

[TIPS & GUIDES](#)[START A PETITION](#)[MORE VICTORIES](#)

# Rationalise Auto Rickshaw fares in Chennai

## #ChennaiAuto

**SIGN THIS PETITION**

First Name

Last Name

Email

Address

City

Country

Post Code

Why are you signing? [Add a reason \(optional\)](#)

**SIGN**



Signatures

9,365 out of 10,000

Petitioning

Transport Commissioner, Govt. of Tamil Nadu  
(+ 2 others)



Created By  
**Prahalathan Karunakaran**  
Chennai, India

[About this Petition](#)

[Petition Letter](#)

[Petition Updates](#)

Auto rickshaw drivers in Chennai are fleecing passengers at rates close to Rs.25 per km. The auto-rickshaw fares haven't been revised in the last five years, even though fuel prices have been hiked frequently. This has resulted in considerable inconvenience for commuters who depend on autorickshaws for their transport needs as well to the auto rickshaw drivers.



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We're a non-profit tech company that  
**changes the way information  
flows in the world.**

[Check out Ushahidi 2.5: Cairo >](#)

CAIRO, Egypt



#### What is the Ushahidi Platform



#### Manage the River of Information

GETTING STARTED WITH  
**SWIFT RIVER**

[Watch The Video >](#)



#### Crowdsourcing In "the cloud"



**CROWD MAP**

# **Crisis Response**

## Making critical information more accessible in times of disaster

When disaster strikes, people turn to the internet for information. We help ensure the right information is there in these times of need by building tools to collect and share emergency information, and by supporting first responders in using technology to help improve and save lives.

Photo courtesy of: Bill & Melinda Gates Foundation\*



# **Humanitarian OpenStreetMap Team**

# Haiti

# Sahana