

## ICA Commission on Open Source Geospatial Technologies

## Building and Supporting "Geo for All" initiative



Open Source Geospatial Labs are being established worldwide to scale up research and teaching globally as part of the ICA-OSGeo MoU ICA-OSGeo MoU in Sep 2011

# Over 100 labs established worldwide in 4 years

North America – 20+ labs Europe – 40+labs South America – 9 labs Africa – 4 labs Asia – 15 labs Australia - 2 labs

## Details at http://www.geoforall.org

# **Big Picture - Open Geospatial Science is key for innovation in GIS**

science () [sahy-uhns] Show IPA

- a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws: the mathematical sciences.
- systematic knowledge of the physical or material world gained through observation and experimentation.
- any of the branches of natural or <u>physical science</u>.
- systematized knowledge in general.
- knowledge, as of facts or principles; knowledge gained by systematic study.

C EXPAND

Ability for showing the operation of general laws is fundamental for scientific research

## **Open Data**

data.gov.uk<sup>™</sup> Opening up government



### Maturity of open source software (for ex. OSGeo stack)

OSGeo Projects

Web Mapping deegree Mapbender MapBuilder MapGuide Open Source MapServer OpenLayers

Desktop Applications GRASS GIS OSSIM Quantum GIS gvSIG

Geospatial Libraries FDO GDAL/OGR GEOS GeoTools MetaCRS

Metadata Catalog GeoNetwork

Other Projects Public Geospatial Data Education and Curriculum

Project in incubation

## Geospatial Standards (for ex. OGC spec.)



#### Standards

- OpenGIS® Standards
- Catalogue Service
- CityGAAL
- Coordinate Transformation
- Filter Encoding
- Geographic Objects
- Geography Markup Language
- Geospatial eXtensible Access Control Markup Language (GeoXACML)
- GML in JPEG 2000
- Grid Coverage Service
- KAAL
- Location Services (OpenLS)
- Observations and Measurements
- Sensor Model Language
- Sensor Observation
  Service
- Sensor Planning Service
- Simple Features
- Simple Features CORBA
- Simple Festures OLE/COM

# We are Global community



## 

#### ICA-OSGeo laboratory at University of Melbourne

The University of Melbourne is home to Australia's first Open Source Geospatial Laboratory. The international open source geospatial laboratory is a joint initiative of the International Cartographic Association (ICA) and the Open Source Geospatial Foundation (OSGeo). This Australian facility will be part of a global network of open geospatial research labs known as ICA-OSGeo labs. Currently there are 22 ICA-OSGeo labs operating globally.

"The University of Melbourne is one of the top research universities in the world and has been a pioneer in Australian geospatial science research. We are delighted to collaborate with the ICA and OSGeo to create this opportunity for our students and researchers, which will encourage open geospatial teaching and related research in other universities"

- Professor Tom Kvan, Dean of the Faculty of Architecture, Building and Planning.

#### Vision Statement

The ICA-OSGeo lab at the University of Melbourne will promote access and use of geospatial data for evidencebased research and decision-making. This will be achieved by the provision and sharing of data and tools supporting urban issues, with a capacity for extended collaboration across multiple disciplines. About Us News & Events Research Publications Training and Education Resources People Other OSGEO labs



#### Open Source Geospatial Lab Newcastle

Newcastle OSGEO lab is supported by

Ba Un

> Civil Engineering &Geosciences

> > SGeo

The Open Source Geospatial Research and Education Laboratory (osgeolab) is located at the <u>School of Civil</u> <u>Engineering and Geosciences at Newcastle University</u> in the North of England. The lab is run by the <u>Geospatial</u> <u>Engineering Research Group</u> but draws heavily on interactions with other research groups and partners within the University, nationally and internationally.

Our mission, as part of the OSGeo worldwide network, is to develop collaboration opportunities for academic, industrial, and government organizations in open source GIS software and data.

Find out about our Open Source Geo Research and development projects, our training and education programmes in OSGEO and relevant <u>publications</u>. Other resources and downloads that we release as Open Source can be found in the <u>resources</u> section.



# We are Multi disciplinary



## We are all passionate about Cartography

#### Malaysia Campus

Study Research and bus Student life Schools and departments

University of Nottingham, Malaysia > School of Geography > Research > Geospatial Science > OSGEO lab

### School of Geography

Welcome
Courses
Careers
Research
Water Resources
Tropical Conservation Ecology
Geospatial Science
Research Students
Student experience
Make an enquiry

People

#### OSGEO lab

The Open-Source Geospatial Research lab was established late 2011 following the MoU signed between International Cartographic Association (ICA) and OSGEO foundation. It was the first of its kind in Southeast Asia and is playing its active role in promoting the similar establishment in the region.

#### Activities

- · Researches on development and deployment of open-source geospatial resources in various applications.
- · Develop open-source geospatial material for education and training. Promote open-source geospatial technologies applications in Malaysia and the region

#### Current projects

- · Deployment of OSGEO tools in teaching and learning (on-going, School of Geog
- Remote sensing image understanding services on cloud-computing platform (or Remote sensing data synergy for monitoring large-scale construction projects (
- Terra SAR-X for monitoring large-scale construction projects (on-going, DLR)
- Crowd-sourcing interactive quality data assessment (on-going, CFFRC)
- Unmanned Aerial Vehicle (UAV) intercropping mapping (on-going, CFFRC)
- · Urban growth monitoring with multi-scale remote sensing approach (completed
- · Multi-scale remote sensing disaster recovery monitoring (completed, GeoGRID,



GAD CLIMATE PREDICTION AND APPLICATIONS CEN

#### Products Data Portal WMORCC MESA African Drought Monitor Applications About Us Chec

#### PAC PRODUCTS AND BULLETIN

- · 10 day Bulletin
- Monthly Bulletin
- Climate Watch
- Newsletter

TATUS OF THE CLIMATE

#### · WMO Update: Prepare for El Niño

- EL NIÑO/LA NIÑAUPDATE
- · High Impact Weather
- · El Nino Southern Oscillation Watch (EN) El Nino Southern Oscillation Watch (FR)
- Heavy Rainfall/ Flood Risk
- ITCZ/ITD
- SST Indices
- ITCZ/ITD
- ORECAST



#### BACKGROUND

In 1989, twenty four countries in Eastern and Southern Africa established a Drought Nairobi (the DMCN) and a sub centre in Harare (Drought Monitoring Centre Harare weather related disasters. In October 2003, the Heads of State and Governments of th Development (IGAD) held their 10th Summit in Kampala, Uganda, where DMCN w

### ICA-OSGeo OSGL at ETH Zurich

#### Training Research : Cooperation : Contact Home Team

#### Welcome to ICA-OSGeo Open Source Laboratory at ETH Zurich

Quality open source training and software for Cartography and GIS



GeoTools

The Open Source Geospatial Laboratory (OSGL) at ETH Zurich is a joint initiative of the International Cartographic Association (ICA) and the Open Source Geospatial Foundation (OSGeo)

In September 2011, the International Cartographic Association (ICA) and the Open Source Geospatial Foundation (OSGeo)

signed a Memorandum of Understanding (full text here) with the aim of developing on a global basis collaboration opportunities for academia, industry and government organizations in open source GIS software and data.

The OSGL at ETH Zurich is actively implementing this memorandum with the vision to support the development of open-source geospatial software technologies, training and expertise. It also aims to provide support for increasing the number and quality of open source teaching and training materials for Cartography and GIS. As a proud member of the ICA-OSGec Network, the ETH Zurich OSGL is focusing on Education. Open Geodata and on Cartographic and Geospatial Research. Additionally we are participating in the the ICA Commission on Open Source Geospatial Technologies and through the Institute of Cartography and Geoinformation

we are an associate member of the Open Geospatial Consortium. Milminato NCSU OSGeoRE Overview Projects Software Courses Publications Contact About

#### **Open Source Geospatial Research and Education** Laboratory

The NCSU OSGeo Research and Education Laboratory (NCSU OSGeoREL) is located at the North Carolina State University, Center for Geospatial Analytics in Raleigh, NC, USA. We are part of the worldwide network of ICA-OSGeo laboratories following the motto Geo for All. As one of the founding laboratories we are the central node for North America

Our mission is to develop collaboration opportunities for academic, industrial, and government organizations in free and open source GIS software and data.

Follow us on Google+, YouTube and GitHub.

#### Offered courses

Through our GIST program we offer interdisciplinary, graduate level courses on geospatial analysis and modeling. Students are taught the fundamentals and methods in a software independent way by using both open source and proprietary tools. Go to courses and find out more.

#### People

#### Faculty:

- Helena Mitasova, Laura Tateosian, Ross Meentemeyer (home page at FER) Graduate students and visiting scholars:
- Anna Petrasova, Vaclav Petras, Emily Russ, Brendan Harmon, Keren Cepero, Nathan Lyons, Paul Paris Former graduate students and visiting scholars:
  - Eric Hardin, Katie Weaver, Margherita di Leo, Eva Stopkova

If you want to become a member of NCSU OSGeoREL or you feel as a part of it and you are not listed here, please do not hesitate to contact us.



#### Acknowledgements

The ICA-OSGeo Open Source Geospatial Laboratory is kindly integrated in the Institute of Cartography and Geoinformation

Links







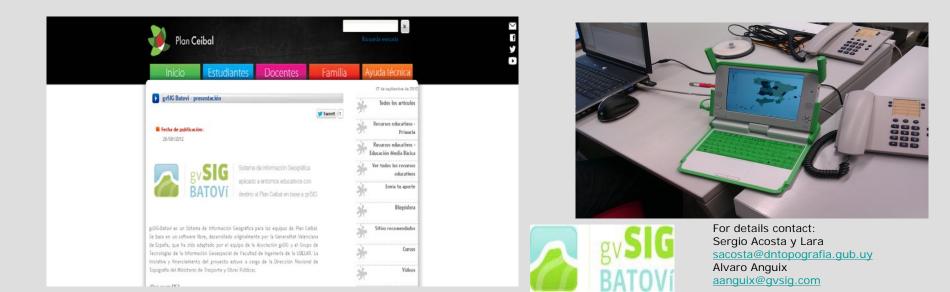
# Our Mission

Making Geospatial education accessible to all "Geo for All"

# Why - Social Responsibility

Making resources including software and data openly available offers an opportunity for knowledge to be shared widely so as to increase learning opportunities.

Example – Collaborating with educational initiatives like gvSIG Batoví





# Thanks to all colleagues in the "Geo for All" initiative

