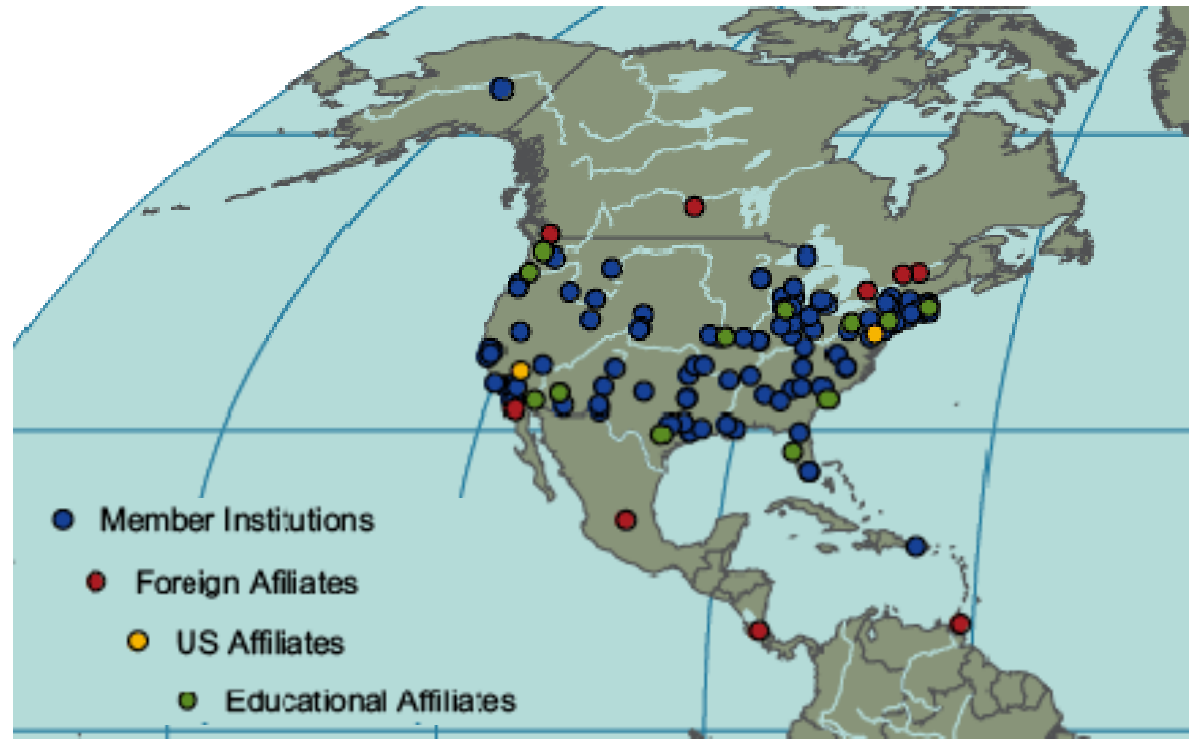


Facilitating Free and Open Exchange of Seismological Data

David W. Simpson & Ray Willemann
The IRIS Consortium



IRIS is a consortium of 105 US universities that are also affiliated with other seismological research institutions in the US and around the world. The US National Science Foundation funds IRIS to offer services for seismology.

Enduring Reasons Why Seismology Facilitates International Collaboration

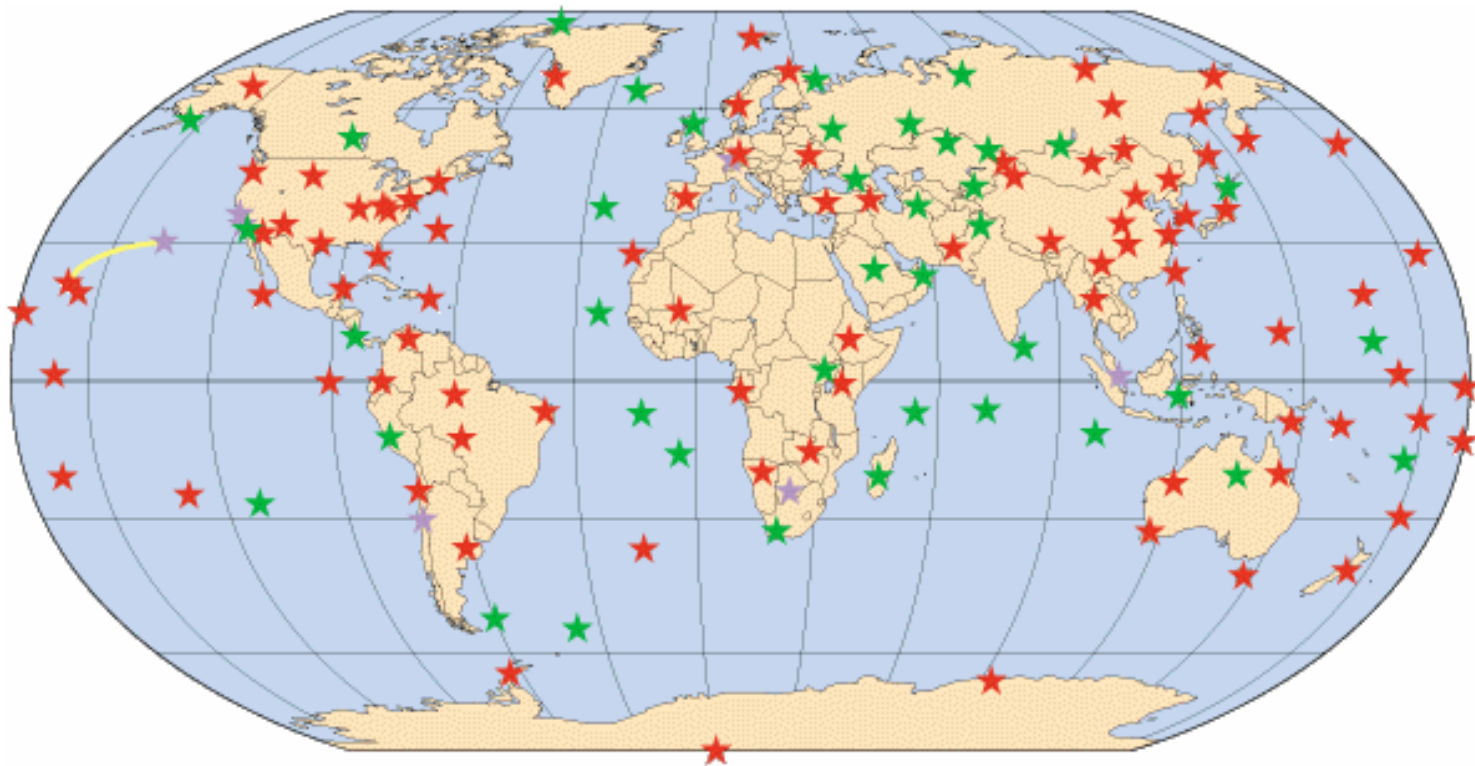
- International data exchange is essential to earthquake studies, and has been for more than 100 years. IRIS has been instrumental in expanding this spirit of data exchange into the modern era of digital technology.
- In common with other geoscientists, seismologists are compelled to collaborate with local scientists in “place-based” experiments around the globe.
- Seismology is of vital interest to developing nations for assessing and mitigating earthquake hazards. Training and capacity building, to build support and local expertise, are essential to long-term success.



IRIS



Longstanding International Activities The Global Seismographic Network

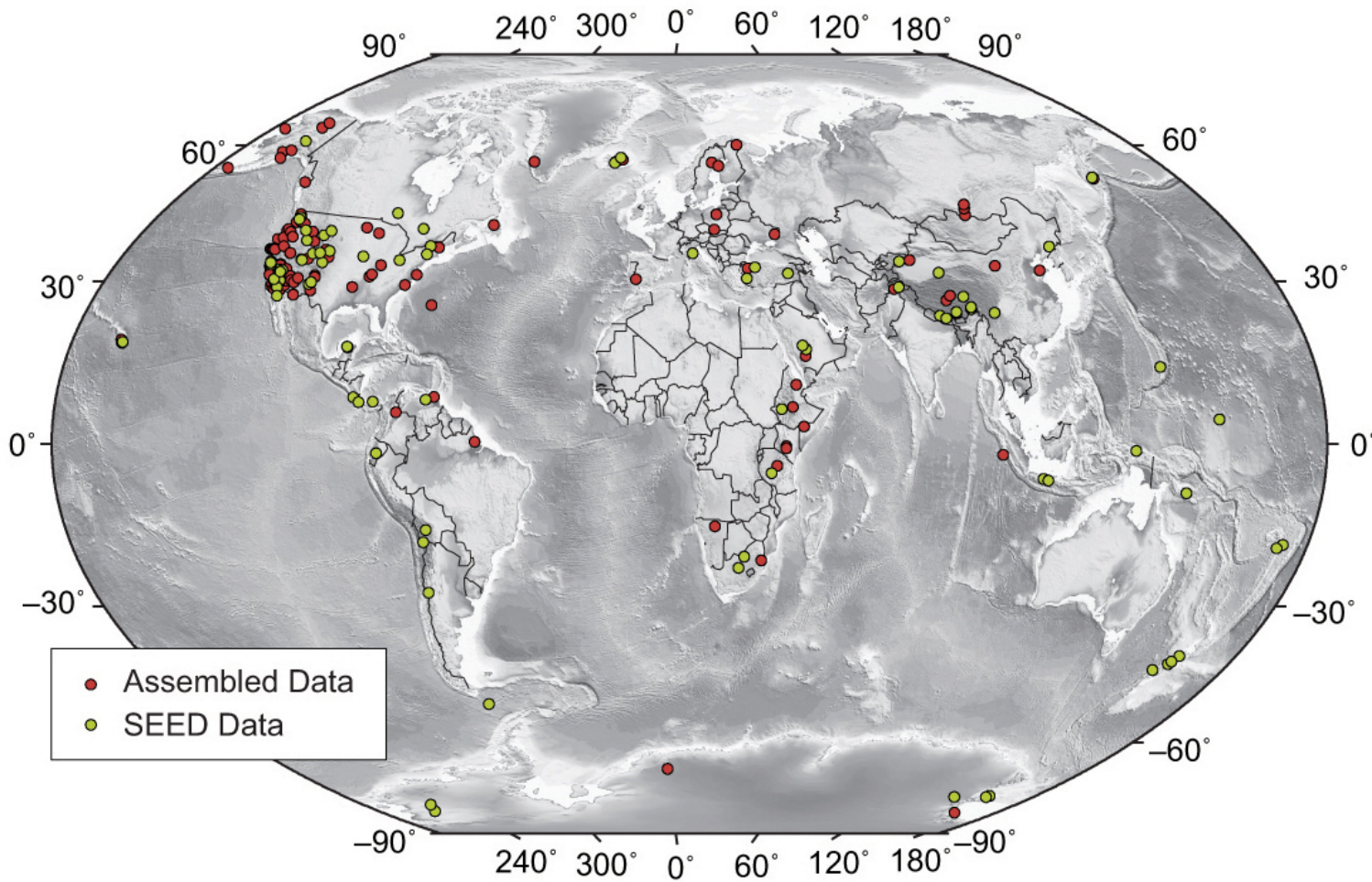


- ★ USGS Albuquerque Seismological Laboratory
- ★ IRIS/IDA Group at IGPP, Scripps Institution of Oceanography, University of California, San Diego
- ★ University Networks and Affiliates

IRIS



Longstanding International Activities Experiments Around the World



IRIS



Longstanding International Activities Archive for FDSN and Many Other Networks



IRIS had a lead role in promulgating use of the “Standard for Exchange of Earthquake Data” and freely shares its software for processing data in SEED format.

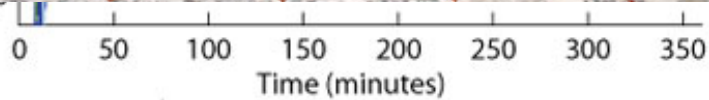
The IRIS Data Management Center archives data from backbone stations of networks join the International Federation of Digital Seismograph Networks



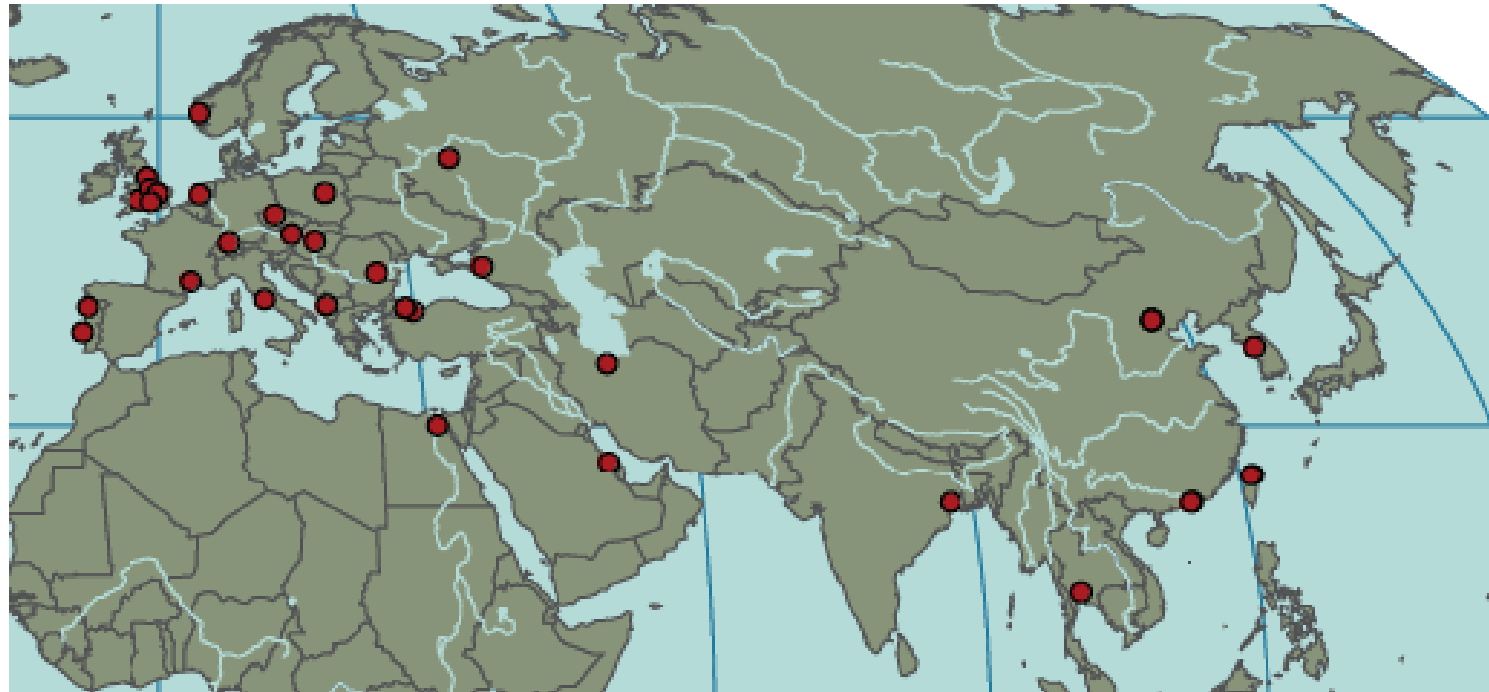
The IRIS DMC archives data for numerous seismographic networks around the world – providing the operators secure, flexible access to their own data.

Wider Recognition of Societal Benefits from International Collaboration in Seismology

Sumatra - Andaman Islands Earthquake ($M_w=9.0$) Global Displacement Wavefield from the Global Seismographic Network



Growing Number of IRIS Foreign Affiliates – Now More Than Sixty



New Foreign Affiliates during 2006

China Earthquake Networks Center, CEA
Institute of Earthquake Science, CEA
Council for Geoscience (South Africa)
Meteorological Res. Inst., KMA (Korea)
AWE Blacknest (Great Britain)
King Fahd Univ. (Saudi Arabia)
Indian Inst. of Technology, Kharagpur

Sultan Qaboos Univ. (Oman)
Oulu Univ. (Finland)
Univ. of Bucharest (Romania)
Univ. of the West Indies
Royal Observatory of Belgium
Geological Survey of Denmark
CERESIS (Peru)

IRIS





IRIS

The IRIS Mission

- Facilitate and conduct geophysical investigation of seismic sources and Earth properties using seismic and other geophysical methods.
- Promote exchange of geophysical data and knowledge, both through use of standards for network operations, data formats and exchange protocols, and through pursuing policies of free and unrestricted data access.
- Foster cooperation among IRIS Members, Affiliates, and other organizations in order to advance geophysical research and convey benefits from geophysical progress to all of humanity.





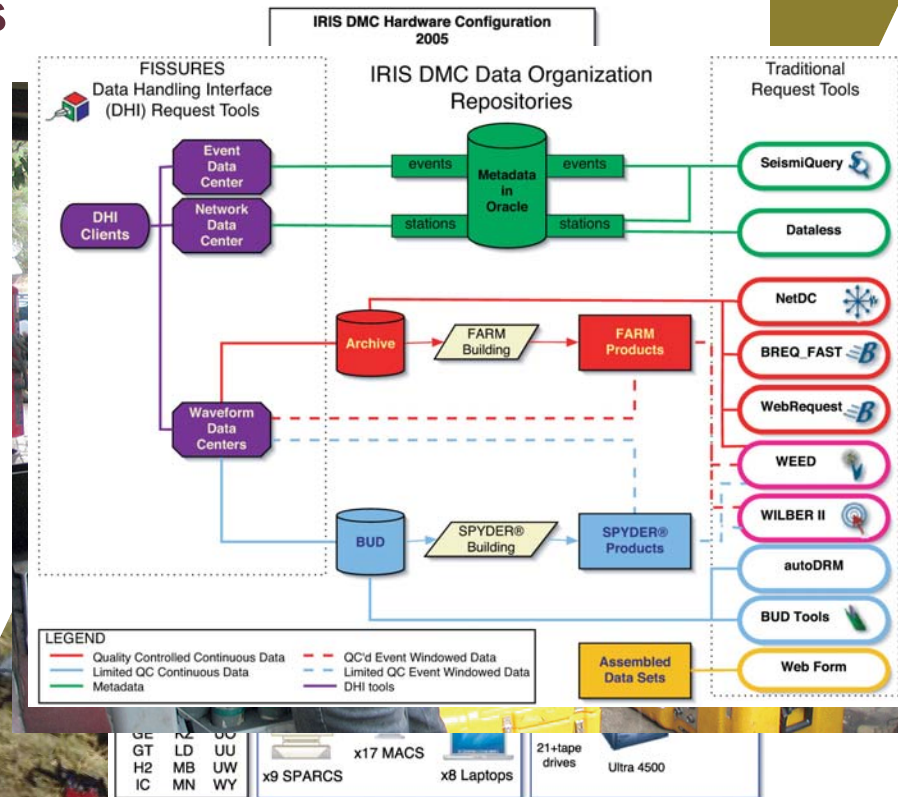
IRIS

IRIS Training

- Run regional workshops in network data management.
- Create an illustrated guide on seismic network requirements.
- Develop a training roster and materials for network building.
- Run “schools” at IRIS facilities.



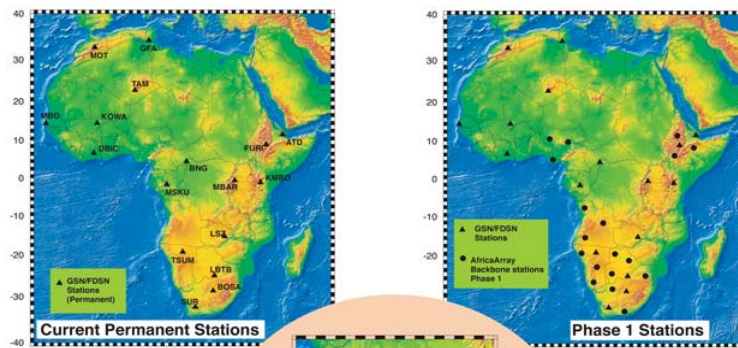
- Instrument Loans
- Data Archiving
- Rapid Array Mobilization Pool
- Consultation Service



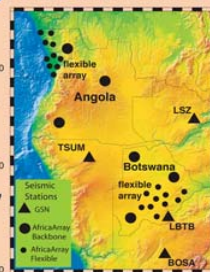
IRIS

AfricaArray: Illustration and Inspiration

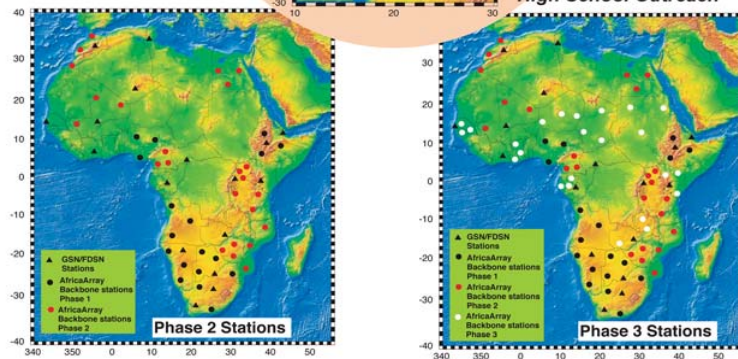
Strategic partnerships of seismologists with development agencies and regional and local scientific institutions offer mutual benefits.



AfricaArray
"Training a Scientific Workforce for Africa's Natural Resource Sector"



Components
BSc MSc Ph.D. Programs
Technical Training
Community Building
Seismic Networks
Data Management
Data Exchange
Research
High School Outreach



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Council for Geoscience

IRIS