

# Domination or Dependence for data collaboration in Africa

**Dr. Cheikh Mbow**

Executive Director,

START- International

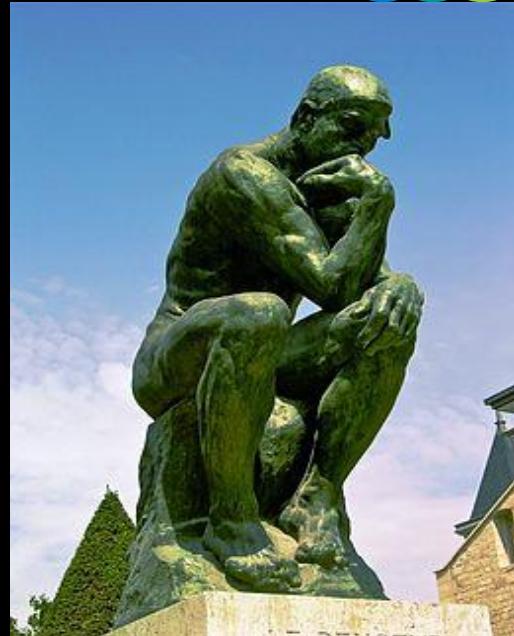
1440 G Street NW, Washington, DC 20009 USA

web [www.start.org](http://www.start.org)



# Background: Evolution of Ethical considerations

- Science is not only created using data: **Rational purity vs opinions!**
- **Open data:** What is open and for Who?
- **Aspirations:** Hidden agendas, contentious intent and objectives
- **Confusing**, fragmented landscape, tools, methods, truncated
- **Data disparity** between Global North and South: The power relationships
- **Lack of feedback mechanisms** between data providers and users
- Complex environmental issues through **Transdisciplinary data**

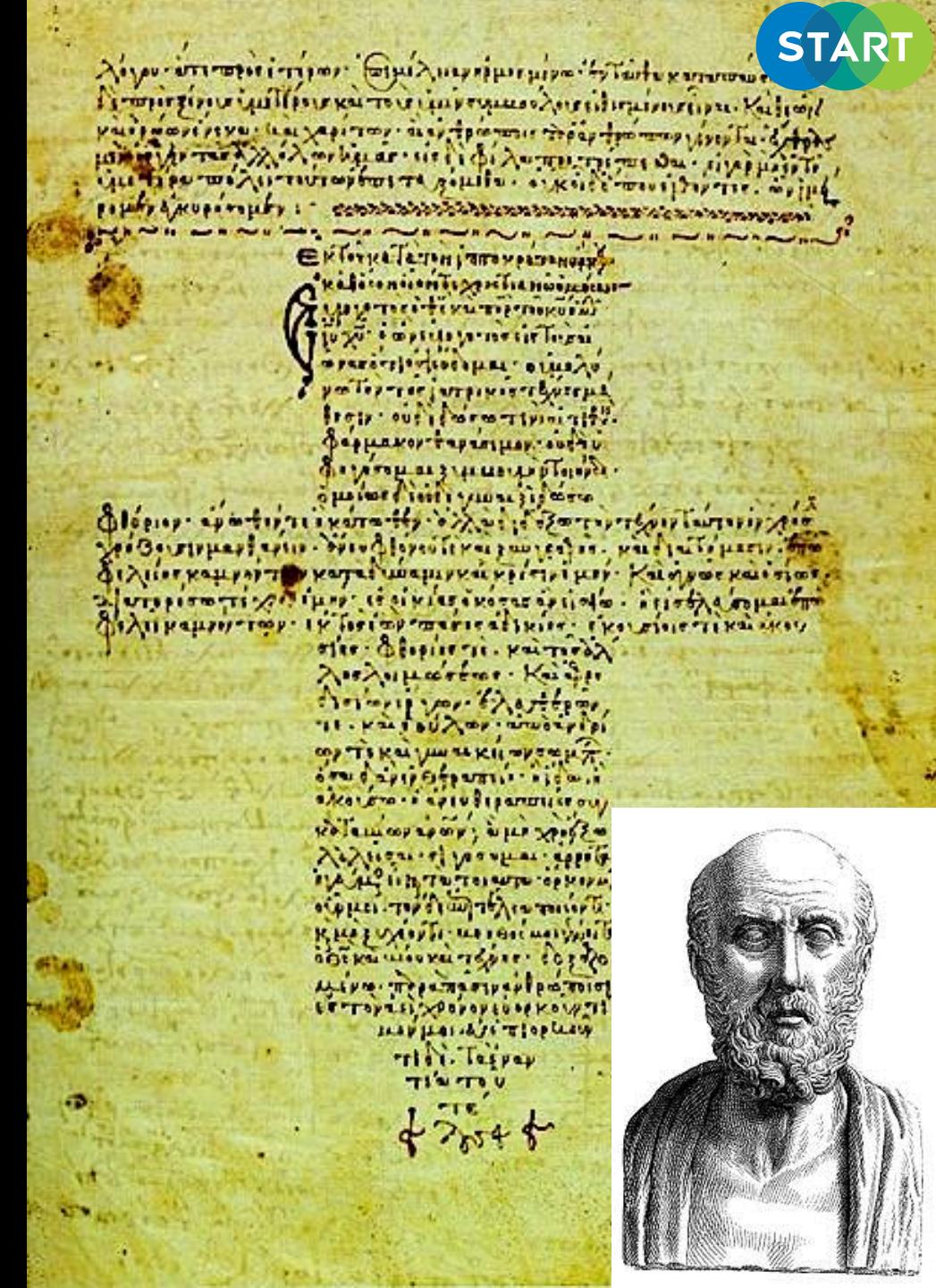


# Hippocratic Oath (IV Century Before JC)

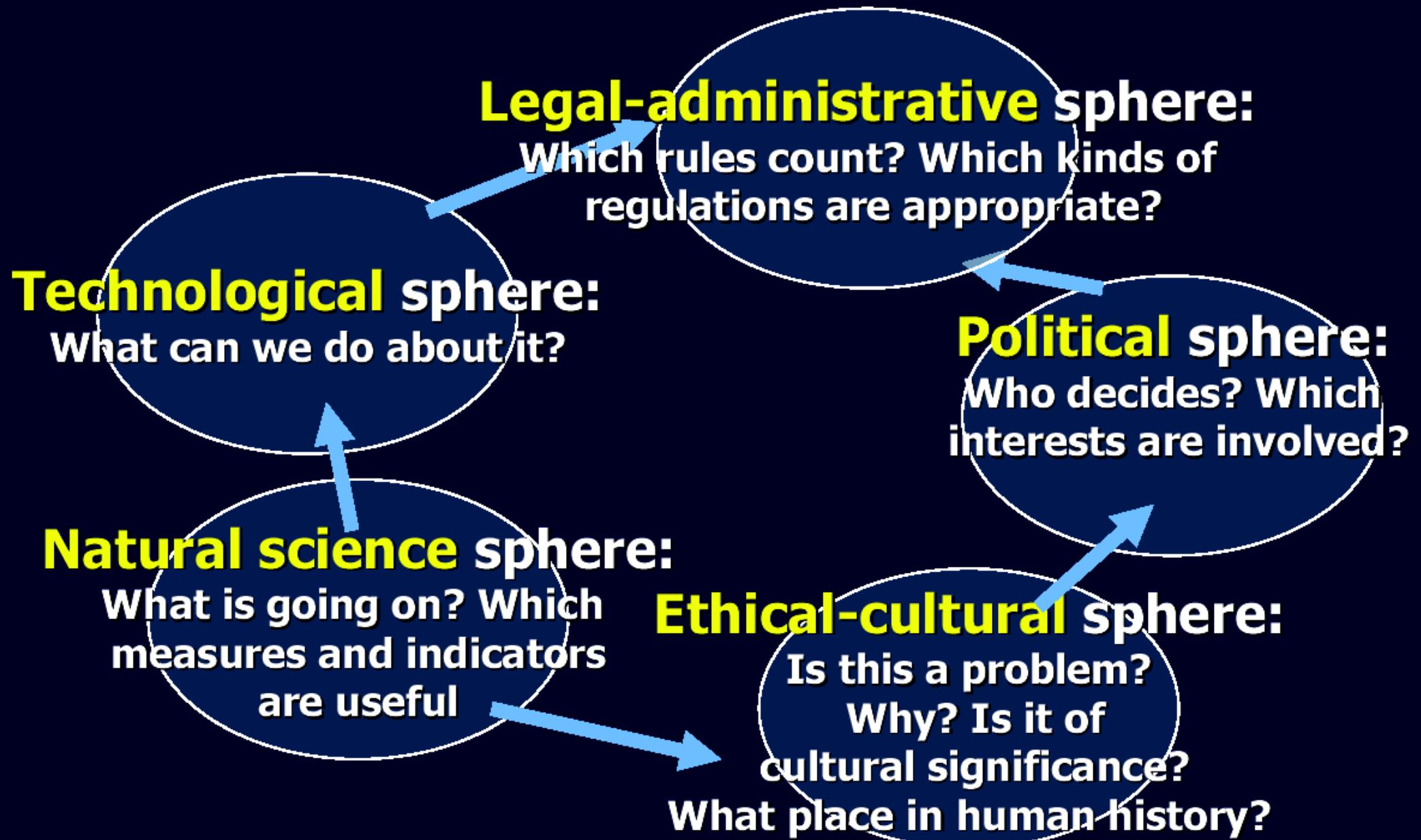
*“I swear upon a number of healing gods that he will uphold a number of **professional ethical standards**.*

*I **swear** by Apollo, the healer, Asclepius, Hygieia, and Panaceae, and I take to witness all the gods, all the goddesses, to keep according to my ability and my judgment:*

- **Never do harm** to anyone*
- **Not give a lethal drug** to anyone if I am asked,*
- **will preserve the purity of my life and my arts**”*



# Where data ties with ethics



External considerations

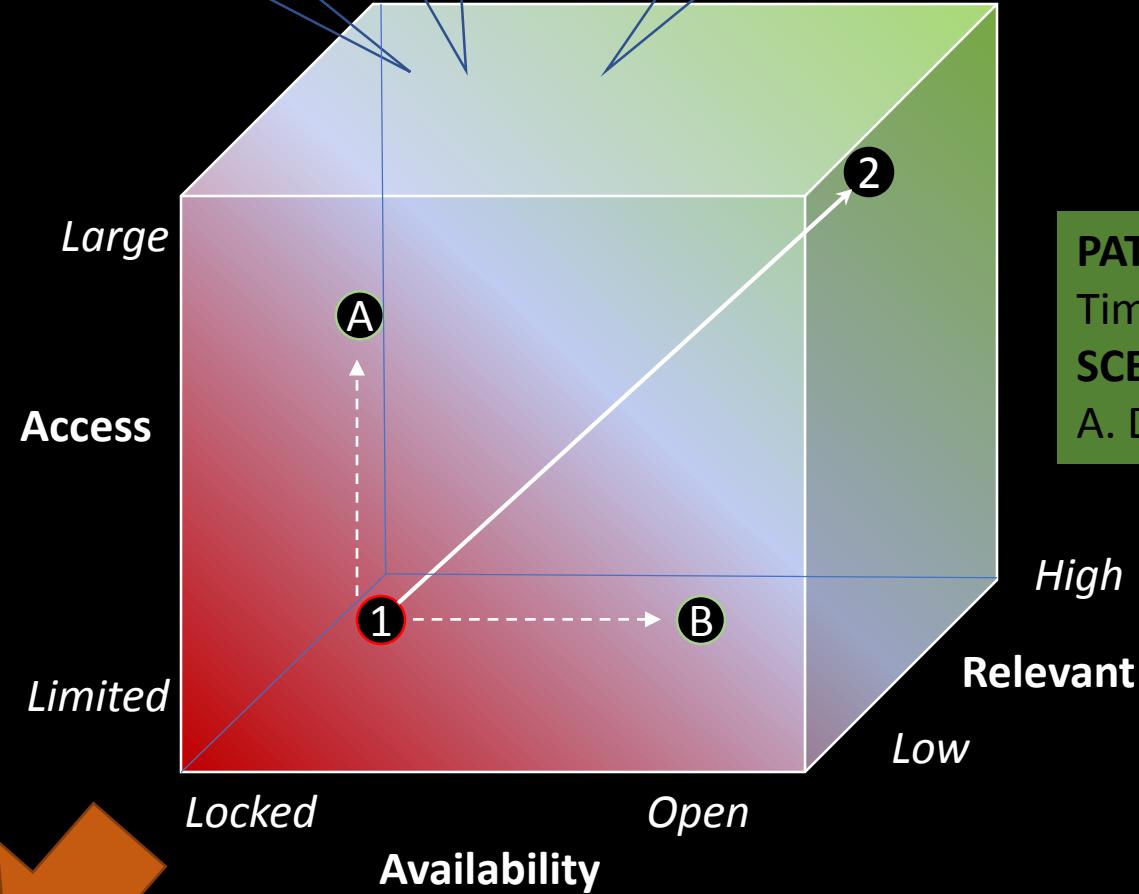
Budget

Storage

Operable

Ideal data framework

**Science is not only created using data**

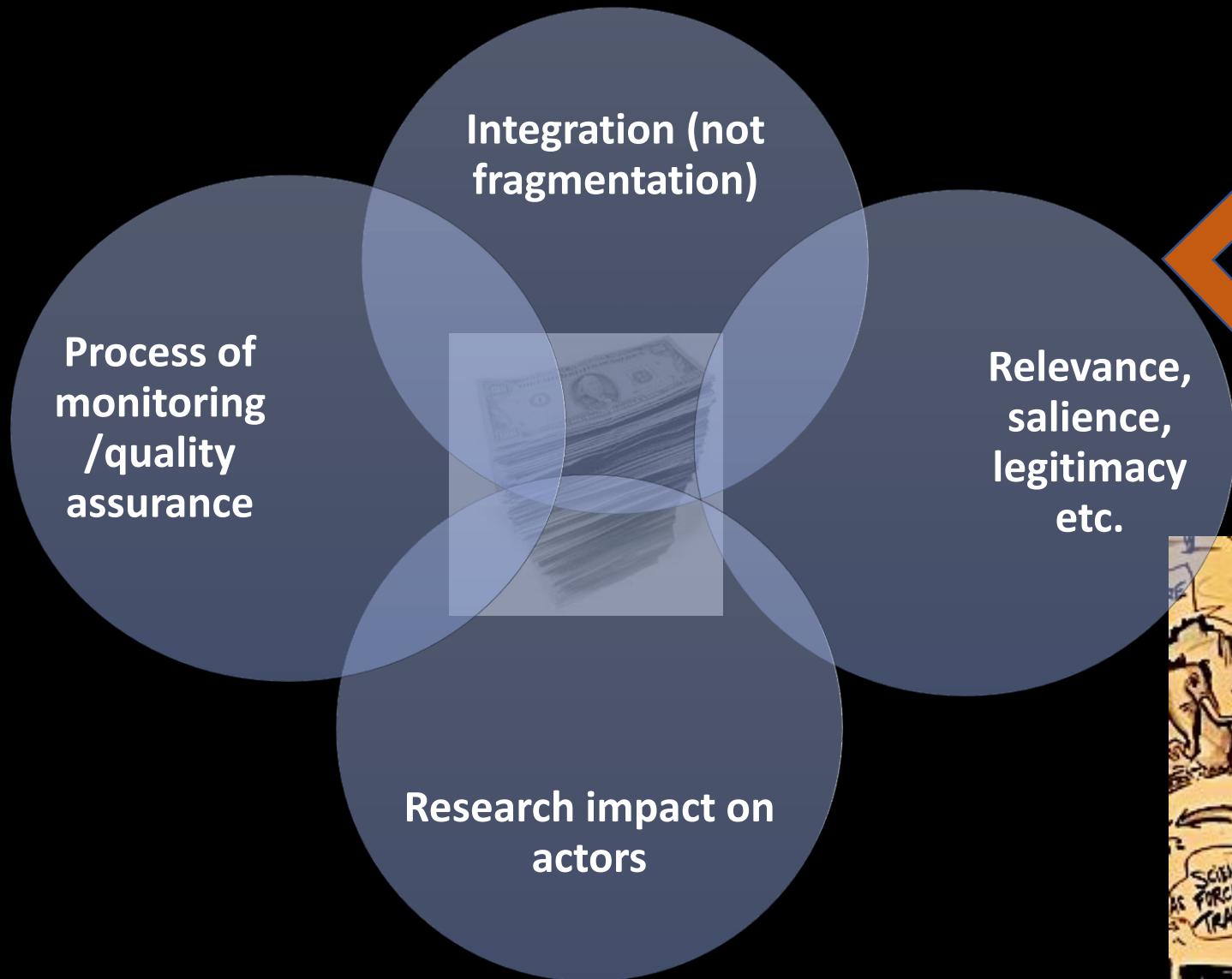


Poor data framework

*What are the Ethical Dimensions in Each of the Axis*

**PATHWAY**  
Time 1 → Time 2  
**SCENARIOS**  
A. Different modulators

# What data matters?



**Research application**  
**Negotiating among various priorities and values**



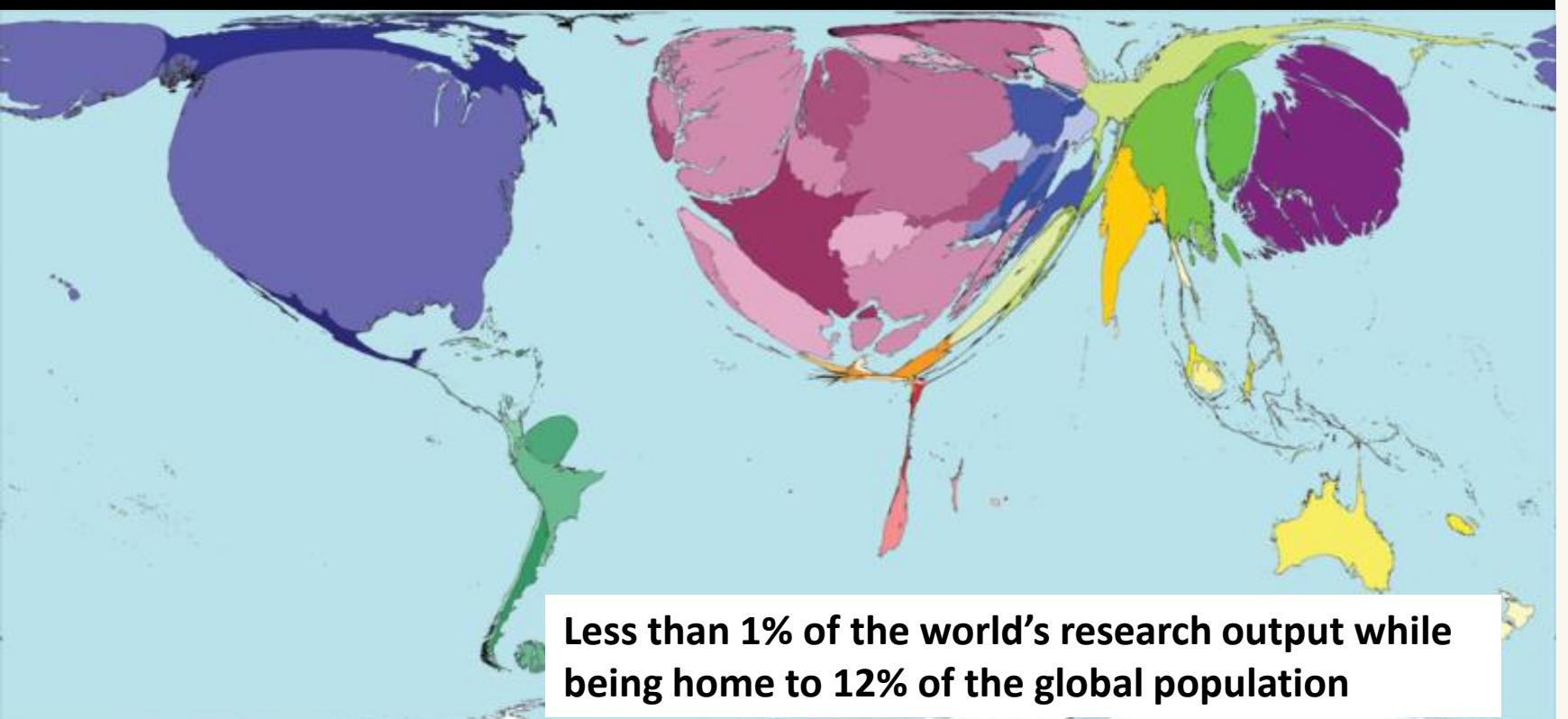
# A Big Continent with a Lot of Resources

But Who is telling us  
the region's stories?



# Normative science vs domestic knowledge

- Addressing common problems through **transdisciplinary** research
- **Europe and USA dominates** the Science in Africa!

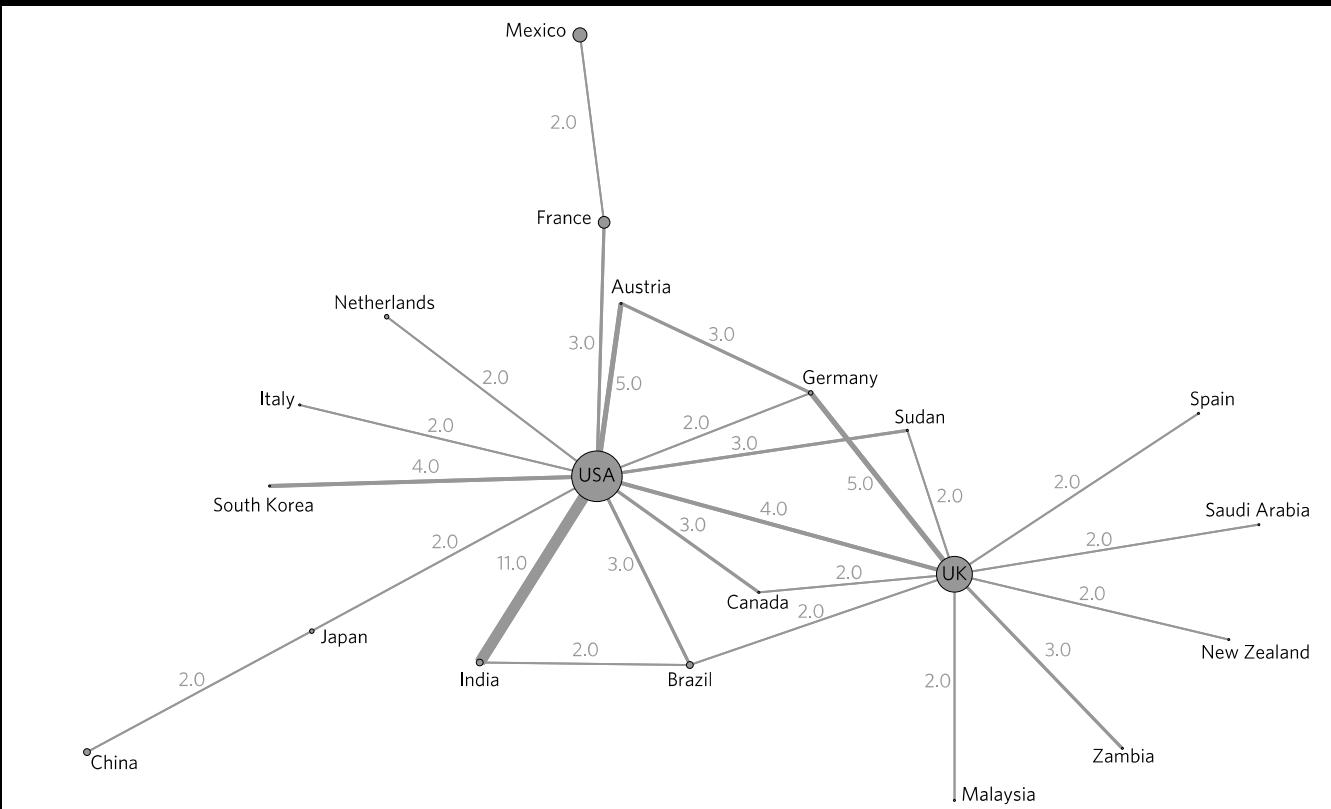
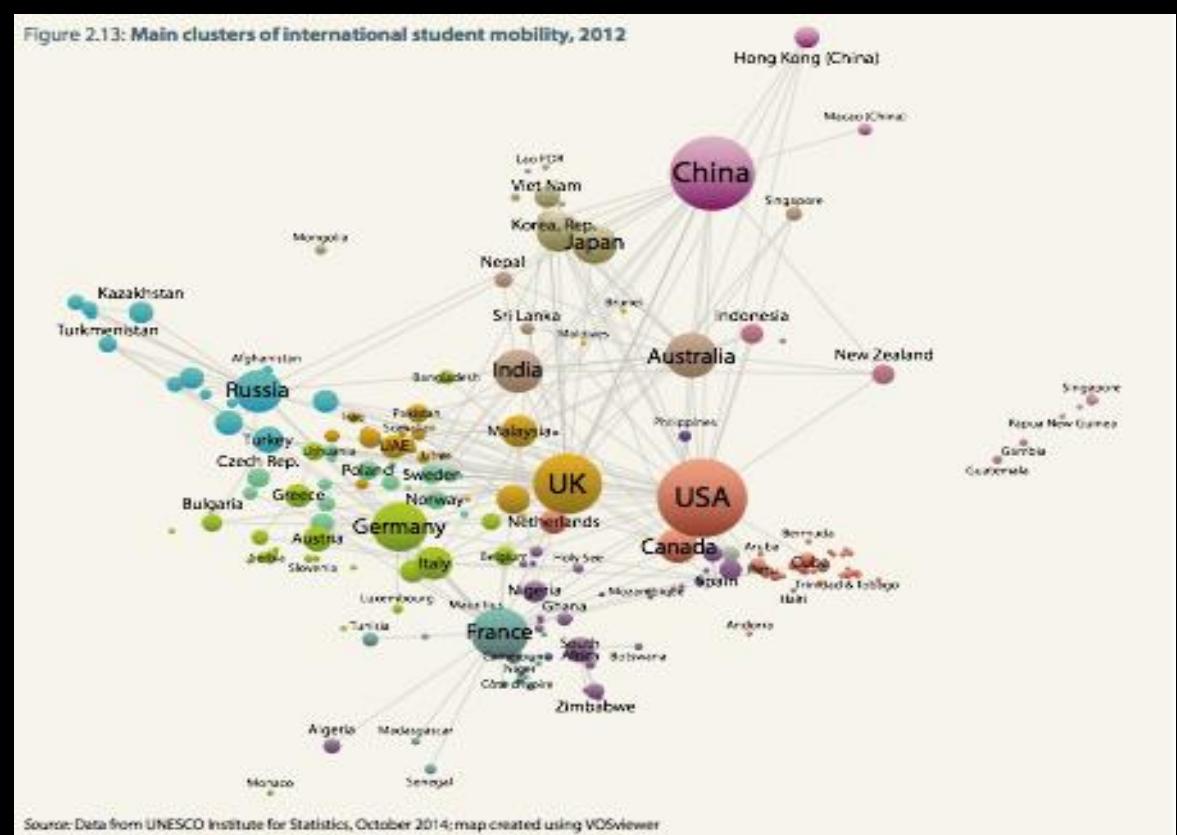


Source: Thomson Reuters' Web of Science,  
Science Citation Index Expanded, 2014

# The value of affiliation

- A global Family or a global competition?
- Developing **soft power** through data
- **Asymmetrical power relationship** largely related to funding disparities (Command control vs Engage-align)

Figure 2.13: Main clusters of international student mobility, 2012



*Abstracts supposedly originating from leading US and German universities scored higher than identical ones attributed to top universities in Ethiopia and Malawi ([M. Harris et al. Health Aff. 36, 1997–2004; 2017](#))*

# Context specific data and power relationships

- **Data & knowledge means power**, and thus that the struggle to have data is an inherently political one.
- **Engaging users to identify what data they need** to act (Legitimacy and salience/relevance)
- **Mobilizing various epistemic groups-not just scientists- to produce that knowledge**, in ways that...
  - Integrate knowledge of practitioners, outside experts
  - Assure access by all to the fruits of such knowledge mobilization



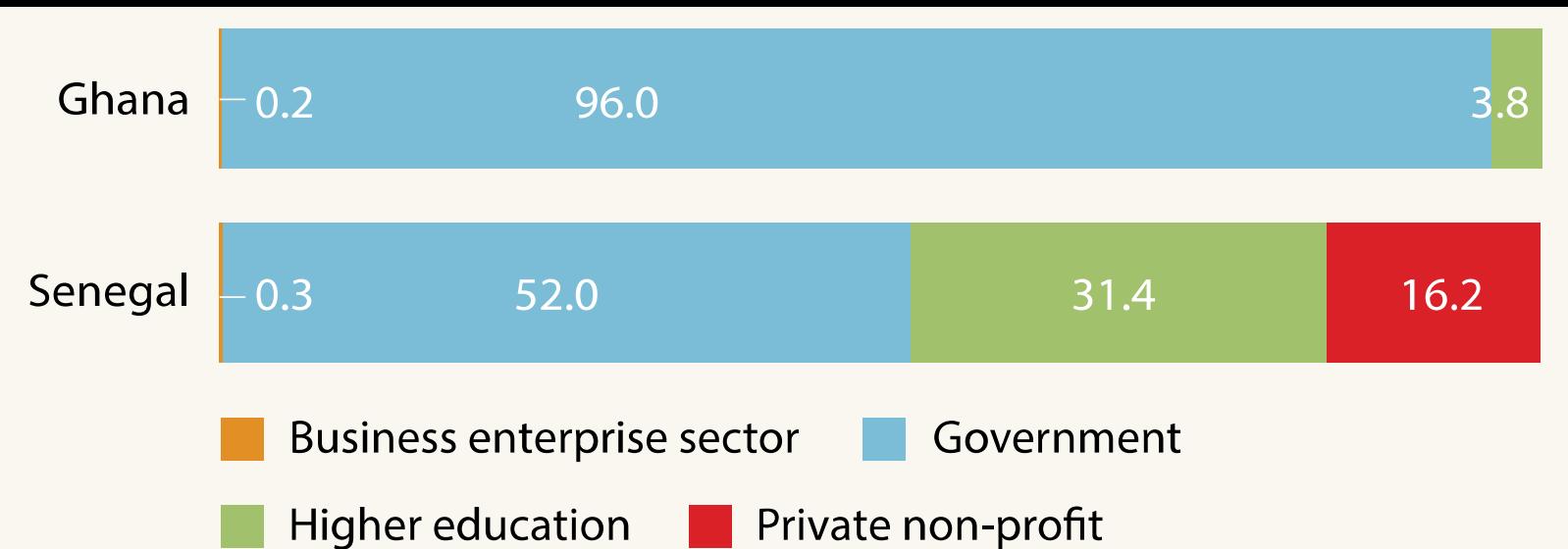
# Data fatigue

Are we producing data we use  
Who takes credit of the data collected in Africa



# Opportunities Prioritization

- Double equation
  - **Where the money comes from?**
  - **Where the money is invested?**

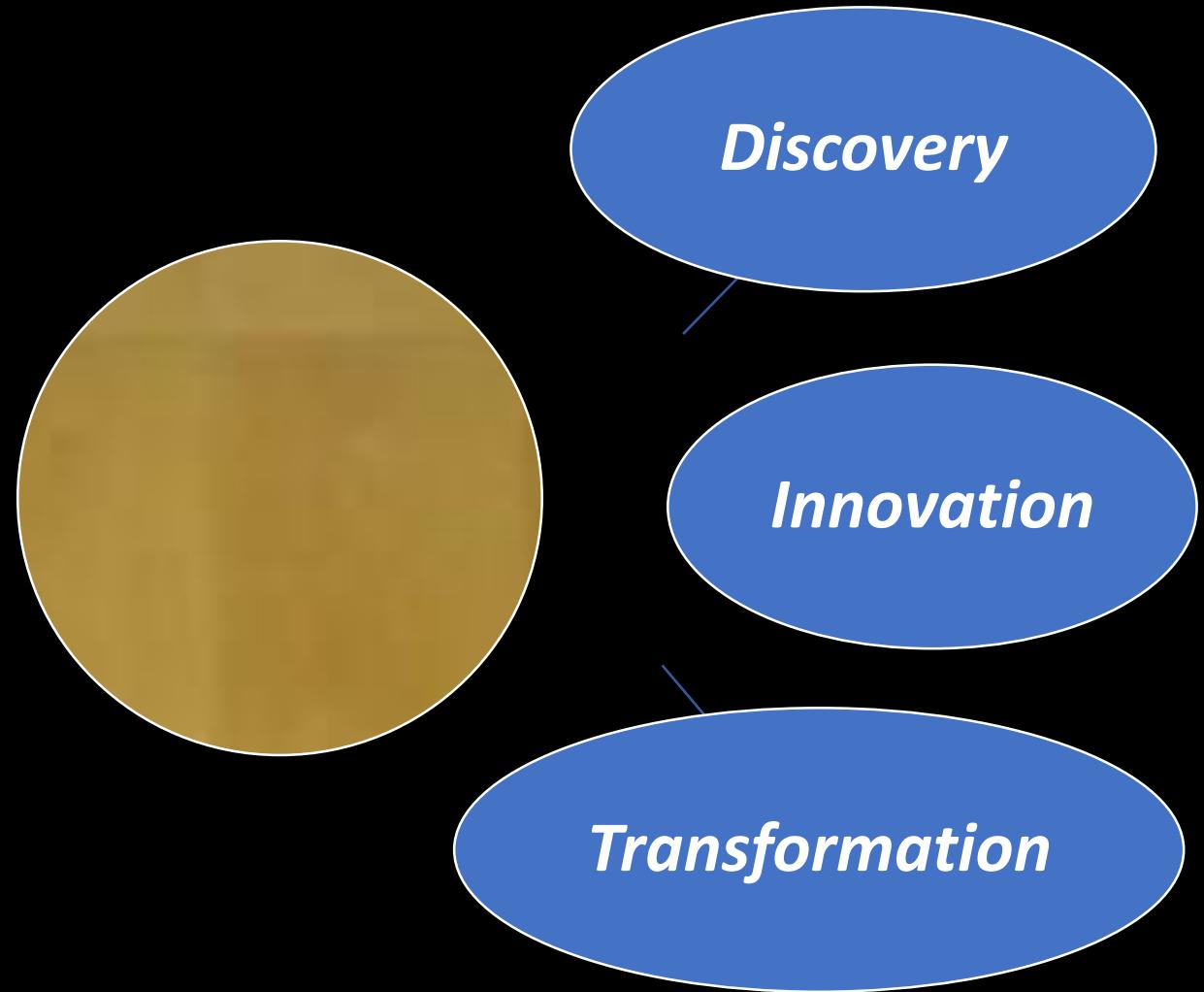


Note: Complete data for each sector are unavailable for other West African countries.

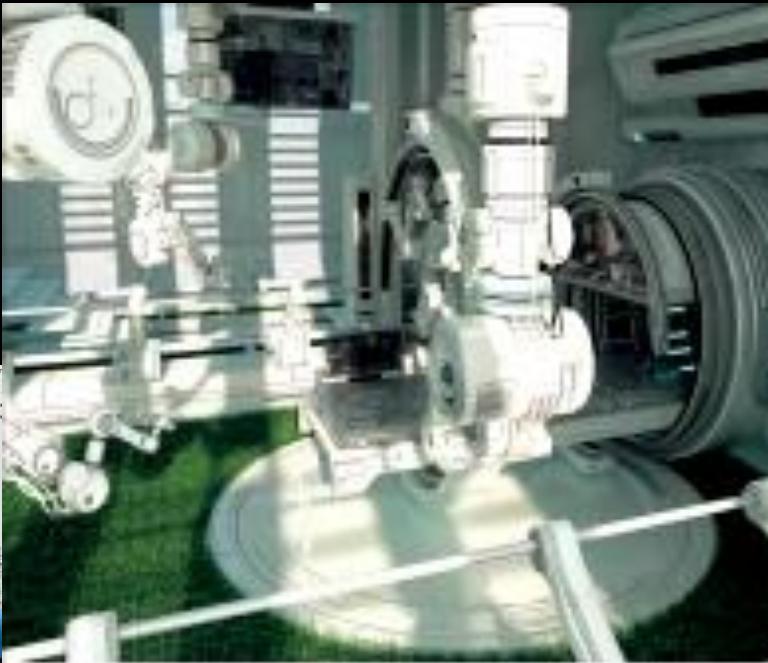
Source: UNESCO Institute for Statistics, January 2015

# Economic Stakes entails Legal implications

Managing the tension between:  
confidentiality and transparency



Patents, Property rights, protectionism, private competitions, etc



## Big Data and Ethics

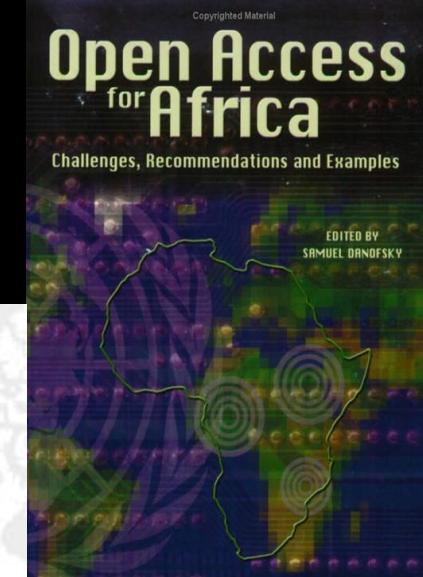
Jérôme Béranger

The Medical Datasphere

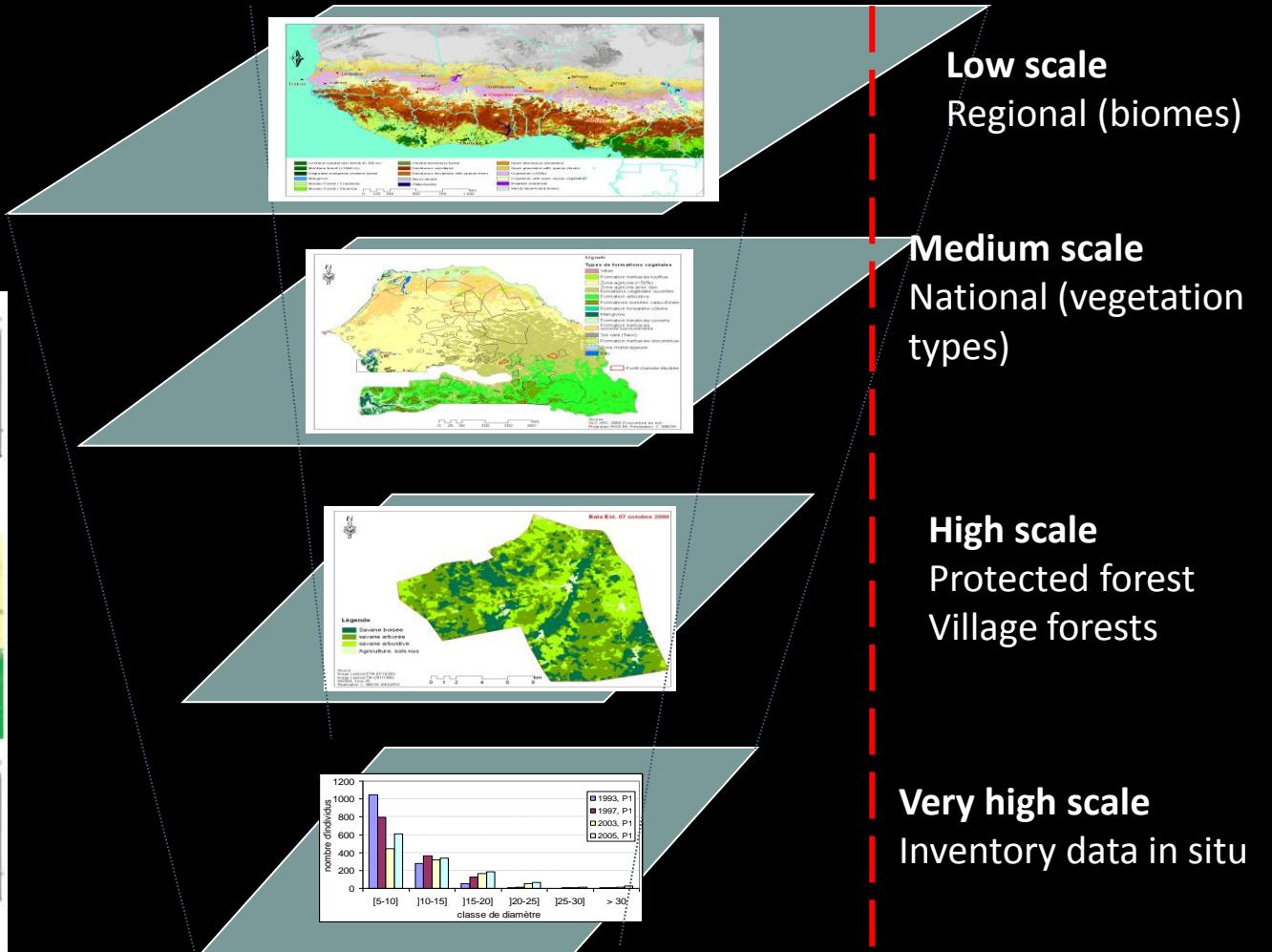
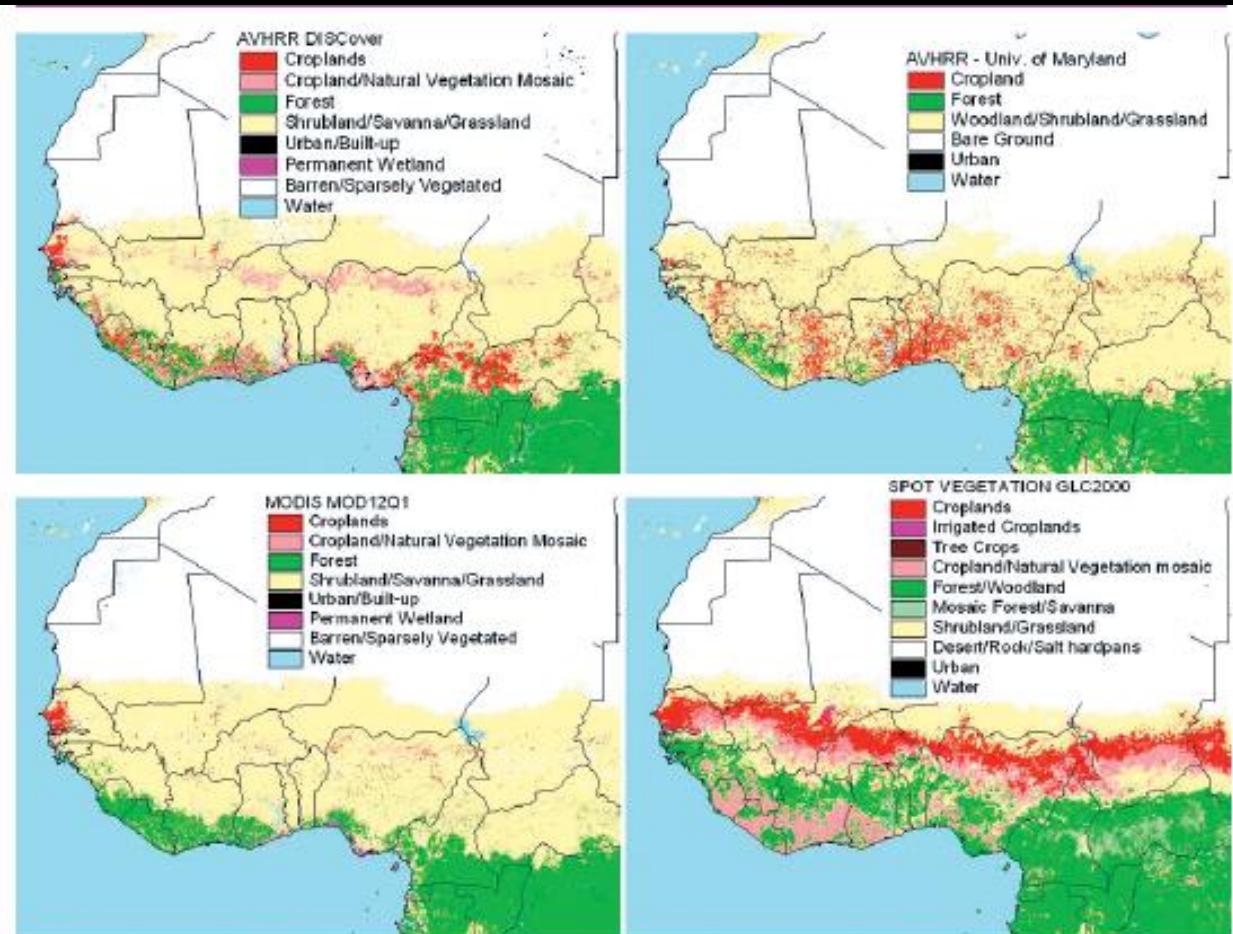
ISTE  
PRESS



# 35% of African population has access to internet



# Diversity of products and scales



More parameters,  
Higher complexity

# Data Governance: Scaling up information

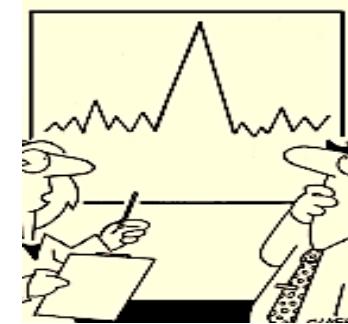
Knowledge transfer platform



Research Centers

Curation of data

Audit/Screening of Demand driven data



## Data Governance



Data Package

All Actors / Partners Lessons learnt



Data by sector vs integrated data



Application, scaling up, partners



*Ethics should be managed along the data value chain*

# PARTNERSHIP FOR RESILIENCE & PREPAREDNESS

## Building Resilience Through Data

<https://www.prepdata.org/>

PREP — both through the Partnership and its PREPdata platform — helps visualize and customize data, improves access to datasets, and supports the climate resilience ecosystem.

### PREP Membership Today

#### Coordination & Core Partners



**futurearth**  
research for global sustainability



United States  
Global Change  
Research Program

#### Public Sector Partners



**GEO** GROUP ON  
EARTH OBSERVATIONS

#### NGO Partners

AMERICAN SOCIETY OF  
ADAPTATION PROFESSIONALS



**THE COLLIDER**  
Market-Driven Climate Solutions  
[thecollider.org](http://thecollider.org)



**EcoAdapt**



**SIP**  
MAKING DATA MATTER



**INTELLIGENT ECOSYSTEMS**  
INSTITUTE

**KITE**  
York Institute for Tropical Ecosystems



**O.S.C.A.R.**



**Pepperwood  
PRESERVE**  
Inspiring conservation through science



**SEI** STOCKHOLM  
ENVIRONMENT  
INSTITUTE



**START**

#### Private Sector Partners



**ACCLIMATISE**  
building climate resilience



**adaptation  
international**



**amazon  
webservices**



**azavea**



**CARTO**



**COASTAL RISK CONSULTING**



**Descartes  
Labs**



**EarthKnowledge**  
SOFTWARE SOLUTIONS FOR GLOBAL CHANGE



**esri**



**FORUM ONE**



**Google**



**Microsoft**



**The Weather Company**  
An IBM Business



**VIZONOMY**



**vizzuality.**

# Ninad Bondre

Independent Scholar working on Science Communication in Sweden

- *At times, the role of the local researchers is reduced to that of a tourist guide: they help negotiate and open up the physical and cultural terrain rather than conceive of projects or contribute equally.*
- *These local researchers, too, accept this role, perhaps because the resources/facilities at their disposal don't always allow them to rectify the imbalances of privilege. For them, thus, the choice is between being the last author on a paper versus not being an author at all.*
- *There are many good recommendations, hopefully some of them will be implemented with unrelenting diligence!*