


# **InfoCommons Workshop Case Study Reports: ILRI, GBIF, IDC**

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# Case Studies

- Information Dissemination Challenges Facing the International Livestock Research Institute (ILRI)
  - **Patti Kristjanson**, Senior Agricultural Economist
- Global Biodiversity Information Facility (GBIF)
  - **James Edwards**, Executive Secretary
- International Seismological Data in International Data Centre (IDC) Products and Services
  - **Igor Chernobay**, Chief, Services, Review and Training Section

# ILRI Overview

- NGO based in Nairobi with 700 staff in over 40 countries, part of CGIAR network
- \$30M annual budget, less than half from CGIAR
- Works through partnerships and alliances in livestock research and related scientific and applications areas.
- Shares and disseminates its research results through print, CD, and online formats
  - free to developing country audiences; mostly free to developed country users.
  - working with CGIAR system on a new strategic analysis & knowledge support system
- See [www.ilri.org](http://www.ilri.org).

# ILRI: Strengths of Current Approach

- Focus on making the information useful as a result of extensive consultations with users, e.g.:
  - Characterizing biophysical potential, market accessibility, livelihood and land use to develop strategies for livestock activities
  - poverty maps used by donors etc. for targeting projects and investments
  - Poverty-environment sustainability trends and models, formulating potential responses to identified stresses
- Collaborative research with researchers and policy makers
- Free distribution of most info; openness of data and information pushes scientists and challenges policy makers to respond.
- Lack of bureaucracy and substantial organizational flexibility
- Using existing standards
- Credibility with national partners and perceived lack of bias

# ILRI: Weaknesses of Current Approach

- Historical *ad hoc* approach to the organization's data and info policy and dissemination efforts and lack of deep expertise in this area.
- Lack of stable sources of funding
- Local/national government constraints on access to socioeconomic data because of national security, secrecy, confidentiality, and general absence of culture of openness
- Mostly low resolution data, data gaps, problems of comparability
- Indigenous rights barriers
- Different access rights/permissions need to be negotiated separately with each journal publisher
- Linking and integrating of macro and micro scale, and real-time and retrospective data
- Difficulties with peer review and adequate feedback

# ILRI: Opportunities & Threats

- **Opportunities**

- Meeting the practical needs of farmers in better and more responsive ways.
- Pursue cutting-edge IT based approaches
- Seek more feedback and develop more expertise

- **Threats**

- Becoming too rigid an organization and not sufficiently adaptive.
- Potential inability to raise adequate funds, including for information dissemination activities.

# ILRI: Case Study Lessons

- Research process matters a lot. Team building and letting the national partners get due credit helps in working relationships and capacity building.
- Information dissemination is not just about journal articles per se, but about productivity and creativity in more direct communication efforts
- Multidisciplinary teams are more creative, innovative and better able to communicate and widely disseminate results in a useful way than individual researchers or groups focused on one discipline area.

# GBIF Overview

- International megascience project initiated by the OECD in 2001
- Goal to make the world's biodiversity data freely and universally available via the Internet, and especially to share primary scientific biodiversity data for science, society, and a sustainable future.
- Both digital and legacy (non-digitized data); >80 million data records from 132 data providers in 30 countries
- Focusing on partnerships with countries and biodiversity organizations to bring primary data online, help overcome the digital divide, and effectively repatriate data to the countries of origin through open sharing.
- Currently 78 members—47 full Participant and Associate Participant countries, and 31 organizations.
- Each Participant agrees to share biodiversity data, set up node(s) to organize data and serve them online, and make other investments in biodiversity information infrastructure.
- See [www.gbif.org](http://www.gbif.org) and [www.gbif.net](http://www.gbif.net).

# GBIF: Strengths of Current Approach

- A positive example of an internationally distributed, volunteer, open access data network.
- Data access principles are based on default rule of open access (with IPRs remaining with the original data providers), requiring users to acknowledge source(s) of the data. Openness helps expose errors and provides feedback opportunities.
- Data sharing/use agreements establish rights and obligations.
- Helping to remove impediments to data access through policy and practice, including major efforts to catalogue and document data in a standard way and to promote technical and semantic interoperability. GBIF and its partners also are developing data cleaning tools and processes that can have broader application.
- Strong focus on research & applications of primary biodiversity data.
- Major effort to build capacity by biodiversity data sources to make their data resources more accessible and usable.
- Significant assistance to developing countries in this area.

# GBIF: Weaknesses of Current Approach

- GBIF cannot assure the validity of any specific data it serves and GBIF cannot easily enforce users' acknowledgement of the data source(s).
- Prototype data portal still needs major improvements.
- GBIF does not yet have a sufficiently broad membership, especially among major mega-diverse countries.
- Applications of data for policy makers and educational users still not developed.
- Participant nodes very uneven in implementation and capabilities.
- Finding resources and effective approaches to digitizing large amounts of legacy data very difficult.
- Overall funding still falls short of meeting the very ambitious goals.

# GBIF: Opportunities & Threats

- **Opportunities**

- GBIF has already and promises to provide results that are substantially greater than the sum of its parts by establishing a focal point for international collaboration, integration of disparate data resources, and enabling unprecedented research and application opportunities with these data, with potentially important social and economic results.

- **Threats**

- Future continuation of Participants as members is not guaranteed, which potentially threatens withdrawal of some data sources, loss of some funding, and adverse effects on GBIF's mission and activities.

# GBIF: Case Study Lessons

- A non-binding MoU is a workable organizational model, despite reduced leverage over the Participants' commitment and fulfilment of obligations
- A distributed mega-science information facility at a global scale is workable
- Need to pay more attention and assistance to the Participants' data infrastructure and management activities at the national level
- Need to devote a great deal of attention to end-user needs and to data quality
- Outreach to potential data sources, member organizations, and users requires substantial efforts and strategic prioritization
- Need to initiate this type of distributed data network activity with a sufficient core of technical and operational standards

# IDC Overview

- International organization established under the auspices of the Comprehensive Nuclear Test Ban Treaty
- Mandate to receive, collect, process, analyze, report on and archive data from the International Monitoring System facilities, including results of analysis conducted at certified labs
- Processes data from seismic, hydroacoustic, infrasound, and radionuclide stations in real time or near real time
- Stations in nearly 80 countries around the world
  - about 50 primary stations with continuous monitoring, linked by dedicated satellite communications network
  - Also important inputs from auxiliary stations and networks that improve location and characterization of events
- Annual budget >\$90 million, through dues (using UN scales)

# IDC: Strengths of Current Approach

- Strong focus on data timeliness, e.g.:
  - 97% of data should reach IDC within 5 minutes
  - Initial reports within 1 hour
  - Bulletins within 1-2 days with more in-depth analysis
- Ability to detect small/medium events around the world, not just largest events
- Broad international participation: ~ 170 signatories, high payment rate for dues
- Strong training program, both management and technical level
- Strong links with national data centers and other international networks
- Clear set of users
- Scientific uses of data not restricted by treaty provisions

# IDC: Weaknesses of Current Approach

- Mandate very specific to test ban treaty context; any extension of mandate to other applications would require agreement by signatories to treaty
- Some countries collecting data but not yet providing data to IDC
- Data access not fully open due to treaty constraints

# IDC: Opportunities

- Extension of use of data and bulletins by national data centers is possible; e.g., each country allowed to share data with up to 6 relevant institutions/agencies within country
- Technology and standards used may be usable in other applications
- Training activities directly beneficial to other applications

# IDC: Case Study Lessons

- Possible to establish a global, highly automated, real-time monitoring and notification system incorporating data from multiple sensors and networks, technical analysis and expertise, and delivery of high quality information products to key users
- Clear, focused mandate and high level of interest linked with resources