



**LD4D Community of Practice Meeting
Enashipai, Lake Naivasha, Kenya, 20-22 February 2018**

Tuesday 20th February 2018

In Attendance

[List of people who attended the meeting with email addresses](#)

Welcome & Introductions

Welcome from Karen Smyth SEBI, Jimmy Smith ILRI & Hannah Reed BMGF

Setting the Scene

Karen Smyth, SEBI gave a presentation on LD4D:

[Where we are now, where do we need to go? Becoming more than the sum of our individual parts. Global context.](#)

Livestock Data Collectors –Flash Talks

- [Neil Gammon – The Sharp end of Livestock Data](#)
- John Claxton – **Getting the data to work: SEBI in Tanzania**

Overall concept: Collect data on disease → use to improve livelihoods

- 1) Data sources – measuring perceptions, prevalence & incidence:
 - Livestock Standards Measurement Survey and other historical sources
 - Zoonoses and Emerging Livestock Systems programme
 - SEBI-data collection in Tanzania
- 2) Linking pathogens to the disease – using data to:
 - Clarify epidemiological pathways
 - Uncover unsuspected problems
 - Quantify problems
- 3) Estimating impact – using data to:
 - Estimate socio-economic importance of diseases
 - Quantify losses
- 4) Linking losses to predictors – what is affecting disease incidence?
 - Farming system
 - Shifts in national herd structure
 - Socioeconomic status of livestock owners
- 5) Defining practical interventions for disease control – what are the most effective targets for interventions?
 - The goats?
 - Changing management practices; shift in herd populations; cost of vaccines
 - The pastoralists?



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- Focused livestock vaccination efforts; increase awareness; change management practices; household hygiene
- The dogs?
 - De-worming/vaccination; combined programmes (e.g. with rabies); management changes (minimise or avoid pasture contamination with dog faeces)
- [Catherine Pfiefer – Getting Locally Relevant Livestock Numbers](#)
- Bridgit Muasa – Round the Clock Surveillance in livestock, can “cow alert” a behaviour monitor enhance data collection? (Slides not available)
- [Roy Woolley – Little Bees contributing to the Honey Pot](#)
- [Tadelle Dessie – Data Driven Understanding of the Chicken breeds and specific Traits that poor smallholder farmers, especially women, prefer in sub Saharan Africa](#)
- [Steve Kemp – Beyond the P Word](#)
- [Josephus Fourie – Principles for ensuring Data Quality and Integrity](#)

Feedback and Reaction to the flash-talks:

Standardization:-

- Pros and cons?
- Define Protocols and Standards (longer term)
- Draw out commonalities
- Better metadata / minimum standard (ethical) Geolocation
- Key Terms
- Tags to characterise

Networking

- To avoid duplication
- Who is doing what and when? – Bulletin board / wanted ads
- Mapping skillsets / expertise among members
 - Gaps? Further Learning?
- Piggybacking other data gathering
 - Problem of surveys getting too big

Data Sharing

- What are common data we all need?
 - Demography, ecosystem
- Open access at government level, have DOI and private sector Operating Agreement
 - Learn from private sector data collection
- Need to reduce risk of misuse

Streamline data gathering

- Avoid duplication
- Start with Common Questions



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Context around data

- How to share this knowledge
- Different terms for the same thing are a big challenge

Analyse user needs / feedback on data

- Machine Learning

Big Data Approaches

- Stimulate innovation e.g. Hackathon

CGIAR – Big Data in Agriculture

Brian King – Co-ordinator of CGIAR Big Data in Agriculture Platform gave a presentation on:
[LD4D Role as the CGIAR Big Data in Agriculture Livestock CoP](#)

The community again broke off into small groups to discuss reactions to this presentation. Key points from the discussions are as follows:

- Frame datasets in clusters of SDG's
- CeRes indexes metadata for now
- Metadata indexer with core CGIAR metadata scheme
 - Pulls on various data verse sources

LD4D - Data Portal

Louise Donnison – SEBI Data Scientist gave a presentation on:
[LD4D Data Portal](#)

The community fed back on the data portal questionnaire and key points are as follows:

- Mix of Metadata and Tagging
 - Maybe not sufficiently in-depth
 - Could we use electronic search
- Add social science relevant questions and categories
 - Very cross disciplinary so difficult to fill in
 - Could be repetition
- Consistency e.g. Income / Gender Missing on one side
 - Form finder too detailed
 - More aggregated data
 - Filter depending on user type / domain
 - Examples of datasets to view
- Define Terms in Questionnaire
 - Date of survey
 - GPS / Fine Granular Location
 - Unique ID for each interviewee



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- Points of intersection with CGIAR big data metadata indexes

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Overnight Thoughts

- Hackathon
- “Lonely Hearts” to connect with others
- Data Ontologies for LD4D
- Data Portal developments for BMGF Grantees

Livestock Decision Makers – Flash Talks

- [Dai Harvey – Data For Project Design](#)
- [Hannah Reed – Data and Decision Making at the Bill and Melinda Gates Foundation](#)
- [Harriet Mugeru – Livestock in the Household Economy: What Survey Data Can tell us](#)
- [Musa Molongo – Mixing Facts, Myths and Guesswork to Prioritize Vaccine Research](#)
- [Karl Rich – Livestock Master Plans for Prioritizing Intervention Strategies](#)
- [Ochieng Odede – Role of data in business decision making](#)
- [Maggie Gill – Risks associated with data and decision making](#)
- [Orsoyla Mikecz – One Health Data for Policy Decisions](#)

Data to decisions discussion

- **What are decision makers’ biggest difficulties when it comes to data?**
 - Limitations
 - Underlying Complexity
 - i. Message of data is often not clear
 - Capacity Issues
 - i. Extent and rigour of the analysis
 - Timeliness
 - i. Decisions of today based on old datasets
 - Ownership
 - i. Including more people in the process
 - Differentiation needed between decision makers
 - i. E.g. Government, Donors, NGO’s, Private, Farmers
 - Who are the decision makers?
 - i. Grantees, Government level, Farmers, Donors, Private sector, Organisations who can invest.
 - Ability to compare adoption rates, Need to understand drivers
 - Should be context-relevant and fit for purpose but how to provide information on context
 - i. Danger of misinterpreting data that is taken out of context

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- Combine data but need to understand the context
 - i. Farmers previous vaccine use
- Need information not data per se
- Data access & cost, timeliness and reliability
- Knowing what is available
- Could use impact data from a range of geographies, Temporal data to provide rigour
- Interacting Factors
 - i. Multiple diseases
- Brucella in cattle sheep and goats
- Perinatal mortality in sheep and goats
- GI Parasites
- Tanzania
 - i. Wetter
 - ii. Tick borne diseases
 - iii. Meeting of Tanzanian vets – 20 diseases
 - iv. Foot and mouth disease
 - 1. Milk yield loss
 - 2. Movement sales regulations
- **How could these difficulties be overcome?**
 - Need almost real time, aggregated synthesised simple data
 - Resources for data collection (often remain unused)
 - Data Needs to be packaged in options, risks and costs
 - People with different backgrounds working on the data
 - Feedback
 - Sustainable institutions
 - i. Network Building
 - Trusted, reliable broker
 - Appropriate fit for purpose – data portals
 - Long term commitment and investment including human capacity to implement over the long term
 - Targeted information and interpretation
 - Bottom up user data aggregated
 - i. Farmer – Co-op – Bank
 - ii. More emphasis on finance / credit data
 - Industry research linkages
 - Modelling
 - Rigour around metadata – can reduce the risk of misuse
 - i. History, caveats
 - Already repurposing - models
 - Older data
 - Tanzania Impact Study – John Claxton
 - Neil Gammon – DFID Investment

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- i. GALVmed will share data
 - o Josephus Fourie - Wide Data sets
 - i. Final phase of project will look at interventions on production and mortality
- **What scope is there for using “big data” approaches in decision making?**
 - o Livestock big data
 - o More comprehensive data
 - i. learning scaling out
 - o Get the bigger context
 - i. Addressing this complexity
 - ii. Drawing out hyper localised point but process of aggregated
 - o Use the power of big data but deliver simple, digestible messages
 - o Ownership demand can be detected before collecting. Start with a question – not the data
 - o Lots of scope but relevance in critical
 - o Need access
 - o Transparency and reliability becomes more important
 - o Greater involvement of private sector
 - o Need to customise / prioritise for LD4D / Grantees
 - o Opportunities – e.g. remote sensing
 - o Clarify what questions we need to answer and the most appropriate way to answer
 - o Look where there will be most impact
 - o Who are the target audience and what do they need?
 - o Private sector
 - i. Data Integrity & Quality Essential
 - 1. Can we provide this?
- **Do we understand demand for data and how do we respond to it?**
 - o No demand for data but for options (cost / risk)
 - i. Illustrate these options
 - o Livestock is underestimated – more awareness at government level is needed
 - o Indicators of change
 - i. M&E Function
 - o Market access

LD4D Data Modellers and Economists Flash Talks

- [Brian King – Electronic Data Collection and living ontologies](#)
- [Louise Donnison – Livestock data standards, advice for a Grantee](#)
- [Tim Robinson – Sustainable Livestock: Key Facts for Advocacy](#)
- [Benjamin Kibor – Livestock Statistics in Kenya](#)
- Michael McLeod – Data Collection Flash Talk (No slides)
 - Don't Collect data unless you have to



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- Only collect what you need
- Collect data on livestock to improve Health
- Don't Measure everything
- Think about Cost, time and money and how to gather data
- Make the most of the data you have

Reaction to Flash Talks

- Talks were innovative
- There are issues of standardisation
- Data should be more accessible / presentable
- How do we address opportunities
 - Surveys – could piggy back / parasite
- Look at evaluating how data is collected
- Simple survey designs
- Networking
 - Lists of Talent in particular areas for advice
- Data Sharing
- Improve access / have open access
- Clearly identify users, analysis and needs
- Set minimum standards
- Geo location is most important
- Think about the maintenance of the data and the terminology used
- Diseases can have different names
- Machine learning
- We need computer science tagging
- Look to the private sector – Sidai are very open

LD4D Demand Study – Update

Tim Robinson, Hannah Reed and Brian Perry gave an update on the demand study.

[Brian Perry – Decision Making in the Livestock Sector: Pilot Demand Study of the Ethiopian Dairy Sector](#)

Reaction to demand Study

- There is confusion about the next steps – more detail required
- Different incentives / demands
- Research may differ dependent on policy makers and timescales
- How to deal with different users / types of data?



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- Institutional data knowledge
 - Lots of data
 - Identify where needs are
- Do we support existing policies or inform policy choices?
- Collection should be as close to source as possible
- Clarify of land study is key
- Understand user needs and differentiate different users value chain
- Seasonal geographical distribution of milk production

CSIRO LiveGAPS Session

[Di Mayberry & Andrew Ash – Livestock Modelling and Data](#)

[Feedback from the CSIRO session](#)

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Taster Talks – Scene Setting Talks

- [Gareth Salmon – Livestock key Facts](#)
- [Steve Staal - GLAD](#)
- [Maggie Gill – Livestock Data Quality Standards](#)
- [Neil Gammon – Impact Modelling for Grantees](#)
- [Steve Kemp – Big Data & Analytics](#)
- [Bernard Bett – Targeting Disease Interventions to Enhance Effectiveness](#)

Selection of Small Working Group Sessions

The members broke off into small working groups for high-level discussions on impending topics.

Data Viz Group

Brendan Power, Tadelle Dessie, Okeyo Mwai, Musa Molongo, Catherine Pfeifer, Steve Kemp (Gareth Salmon to join)

Feedback:

Innovative uses of real time livestock data

Delivery of farm management tailored to each farmer (e.g. use in breeding)

Forecasting system for livestock disease outbreaks

Data quality control (i.e. research managers need to know what is happening in the field today)



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See project "last mile" for examples
Availability of data to access farm finance

Data visualisation

Need for web designer / developer to develop a self-supporting platform (e.g. LLNAP)
A community of data scientist etc.

Next Steps

Co-ordinate a working group with miles stones
Needs someone to champion the group
Funding to maintain group
Small example that demonstrates the potential of real time data

Data Quality Group

Louise Donnison, Andy Peters, Maggie Gill, Harriet Mugeru, Jane Poole, Josephus Fourie, Bridgit Muasa & Roy Woolley

[Feedback](#)

Modelling Group

Di Mayberry, Andrew Ash, Neil Gammon, Karl Rich, Dai Harvey, Bernard Bett (Louise Donnison & Gareth Salomon to join)

[Feedback](#)

Key Messages / Livestock Key Facts Group

Tim Robinson, Alan Duncan, Marioo Herrero, Michael MacLeod, John Claxton, Orsoyla Mikecz, Karen Smyth, Vanessa Meadu, Susan MacMillan, Shirley Tarawali, Steve Staal (Louise Donnison & Gareth Salmon to join).

[Feedback](#)

Future Working Groups to be considered in addition to the above:

Consolidating Livestock Modelling Group
Demand Study
LD4D Communitisation
Data Portal / Catalogue
LiveGAPS
CGIAR Big Data in Agriculture
Burden of Disease Workshop



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Communications and Future Networking

[Vanessa Meadu – Communications & Future Networking](#)

Group Feedback

GROUP 1

- Tool – moderated group with a moderator who is enthusiastic and provides information
- Share events, Travel plans, changes to CSIRO apps, New Data
- Email digest for those who don't want to login to the platform
- Possible tool: D Group

GROUP 2

- Meet and understand what data / info people have
- Best way is face to face
- What should we share?
 - New Facts emerging from everyone's work
- How to share
 - Video Presentations like Gareth's

GROUP 3

- Forum / Discussion Groups
 - Use an existing platform – SEBI to moderate & Facilitate
 - Stack overflow?
- Webinar with recorded video – like Gareth's so people can view at their leisure
 - Bring in experts to exchange info
- Interested in photo sharing
- NOT keen on social media

GROUP 4

- Not keen on social media but understand the need and benefits (not keen on twitter or facebook)
- Like newsletters but to be simple, straight forward and no more than 1 page (with links for more information)
- Focus on improving LD4D website and update

Samoan Circle on Livestock Decision Making and Impact

- Data Users need to be well defined and understood to effectively share data
 - People who want to make a difference to livestock holders



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- Donors
- Multilaterals
- Investors
- Project Implementers
- Test run some data – think through possible users and uses
 - Build cases to get concrete
 - Demand Study a good starting point
 - Data jam / hackathon
- Gain some perspective by broadening / including other users or experts
- Data Quality
 - What level of precision is needed to make decisions?
 - Needs to be fit for purpose
 - Embrace imperfection and articulate limitations – how to present uncertainty compellingly?
 - Consider data literacy among users
- Fact check of data quality – what does data tell us, limitations
- Decision making in Fake News world
 - Present LD4d as trustworthy and caring
 - Appeal to political self interest
 - Consider a solutions based approach

Next Steps

Working Groups

- SEBI will write up notes and circulate.
- Members can opt in or out
- We would like a timeline from each group
- WG – Karl Rich, Steve Kemp, Mario Herrero and Tim Robinson to formalise a working group putting together activity data for foresight and modelling

Areas that we will continue conversations over email

- Hackathon
- Communications – Vanessa Meadu to lead
- Data Portal – Louise Donnison to lead

Areas we didn't cover

- Community Growth and development
- Group Maintenance
- Who is missing
- LSMS – Karen Smyth will follow up electronically / Item for next meeting



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- BMGF Livestock Indicators, community to look at them and consider if BMGF would want us to?
- Defining decision makers' types??

Next Meeting

Ideas, when and where - Hanoi, Nov / Dec 2018

AOB

Flagging Conferences and events