FAO’s Global Livestock Information System

Global Spatial Data and Information User Workshop
CIESIN, Columbia University
September 21 to 23, 2004

Overview

• The information system
• Input and output
• Global Livestock Production and Health Atlas
• Livestock modelling
• Applications of global livestock distributions
Livestock Information System

- Sub-national admin. boundaries
- Sub-national livestock data
  - Livestock disease data
  - Livestock prod. coefficients

![Diagram of Livestock Information System]

- Oracle Database
- Sub-national livestock data
- Livestock disease data
- Livestock prod. coefficients

**A Living from Livestock**
Pro-Poor Livestock Policy Initiative
Livestock Information System

- Sub-national admin. boundaries
- Sub-national livestock data
- Livestock disease data
- Livestock prod. coefficients
- Oracle Database
  - GLiPHA
  - Livestock modelling
  - Livestock sector reports
  - Ad hoc queries and reports

A Living from Livestock
Pro-Poor Livestock Policy Initiative

Livestock Information System

- Sub-national admin. boundaries
- Sub-national livestock data
- Livestock disease data
- Livestock prod. coefficients
- Oracle Database
  - GLiPHA (KIDS)
  - Livestock modelling
  - Livestock sector reports
  - Ad hoc queries and reports

- AGROMAPS
- EM PRES-I
- GeoNetwork

A Living from Livestock
Pro-Poor Livestock Policy Initiative
Livestock Information System

Data input

- Sub-national administrative boundaries
  - Standards and codes (UNCS, SALB, FAO-SDRN)
- Sub-national livestock data
  - Global network of data providers
  - Statistical year books, project contacts, Internet
  - Data verification - link to FAO STAT
- Livestock disease data
  - OIE standards
- Livestock production coefficients
  - Regional estimates
Data output

• Specialised outputs
  • GLiPHA
  • Livestock modelling
  • EM PRES-I
  • AGRIM APS

• Database query
  • Livestock sector reports
  • Ad hoc queries and reports

• Data dissemination
  • GLiPHA
  • GeoNetwork (ISO metadata)
Livestock modelling

- Sub-national numbers from database
- Area suitable for livestock (slope, land-use etc.)
- Sub-national “Observed” densities
- Environmental predictor variables (5 km rasters)
- Ecological zonation (cluster analysis)
- Multivariate models for each zone
- “Predicted” density of livestock
- Adjust to observed totals where available

Cattle in Africa - Observed
Cattle in Africa - Predicted

Applications

- Livestock projections
- Livestock production system classification
- Livestock production estimates
- Environmental risk mapping
- Livestock disease risk mapping
- Public health risk mapping
- Poverty analysis
- Policy analysis
Applications

- Livestock projections
- Livestock production system classification
- Livestock production estimates
- **Environmental risk mapping**
- **Livestock disease risk mapping**
- Public health risk mapping
- Poverty analysis
- Policy analysis

Environmental risk mapping
Environmental risk mapping

[Map of Asia showing different risk areas with color coding]

Environmental risk mapping

[Map of Asia showing different risk areas with color coding]
Disease risk mapping