

FAO's Global Livestock Information System

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



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Overview

- The information system
- Input and output
- **Global Livestock Production and Health Atlas**
- Livestock modelling
- Applications of global livestock distributions



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Livestock Information System

Sub-national
admin. boundaries

Sub-national
livestock data

Livestock
disease data

Livestock prod.
coefficients



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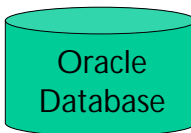
Livestock Information System

Sub-national
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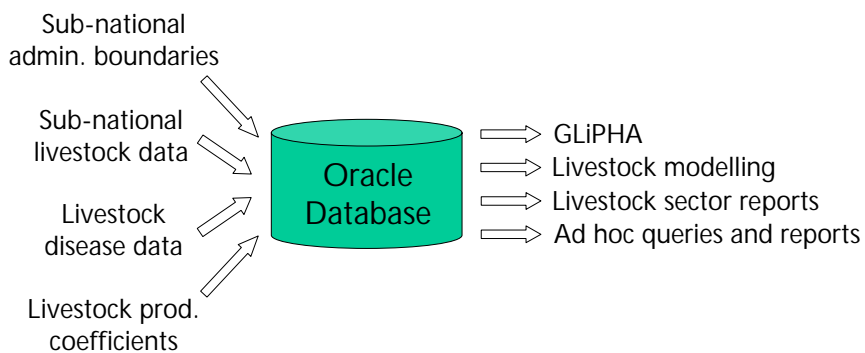
Livestock prod.
coefficients



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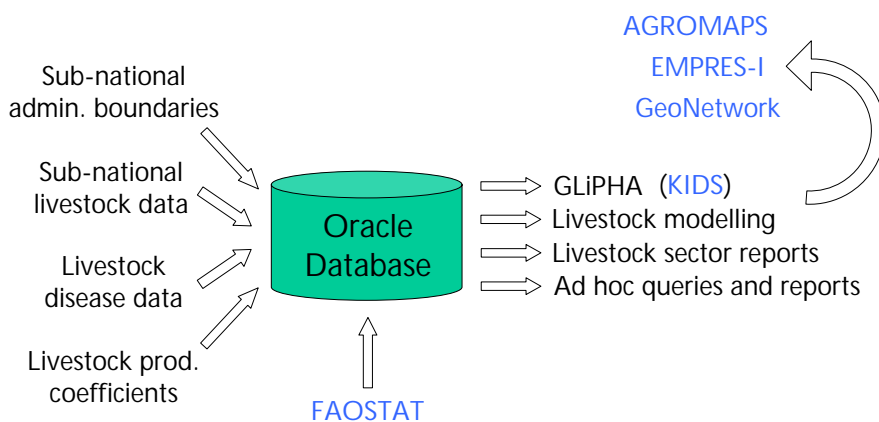
Livestock Information System



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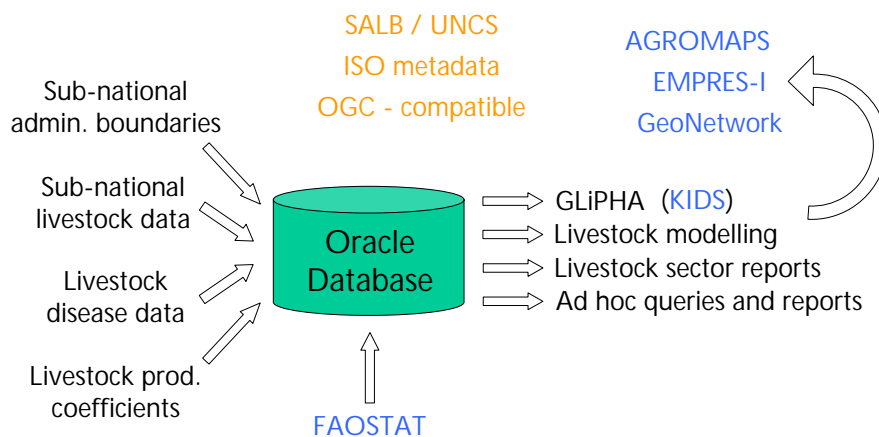
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Livestock Information System



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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 FAOSTAT
- Livestock disease data
 - OIE standards
- Livestock production coefficients
 - Regional estimates



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Data output

- Specialised outputs
 - GLiPHA
 - Livestock modelling
 - EMPRES-I
 - AGRIMAPS
- Database query
 - Livestock sector reports
 - Ad hoc queries and reports
- Data dissemination
 - GLiPHA
 - GeoNetwork (ISO metadata)



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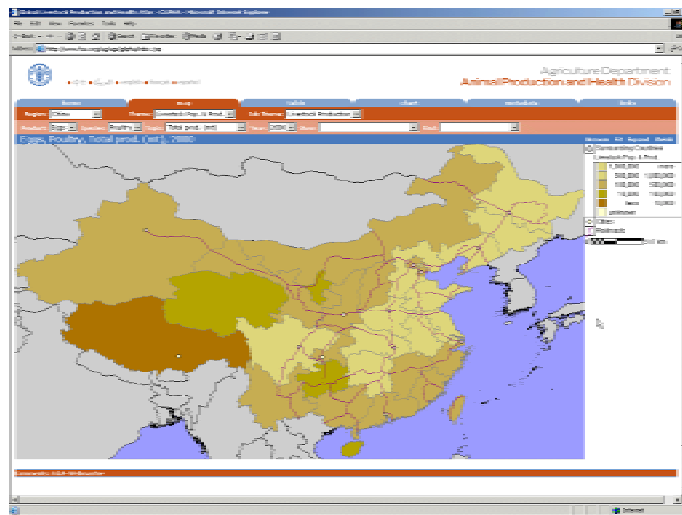
GLiPHA on the Web



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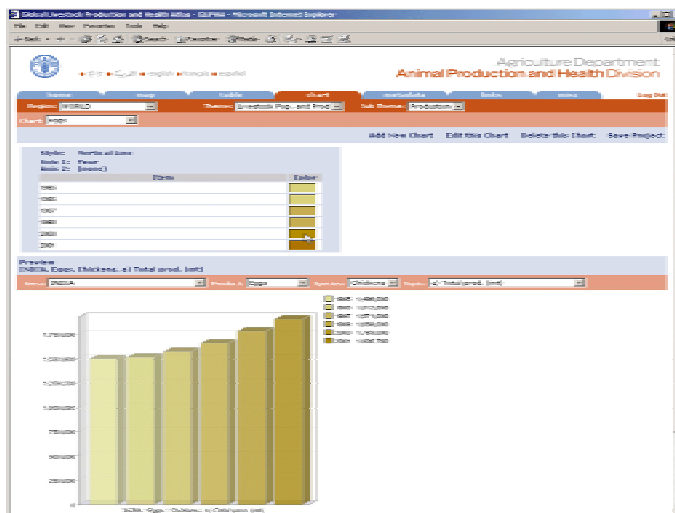
GLiPHA on the Web



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GLiPHA on the Web



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GLiPHA on the Web

The screenshot shows the GLiPHA web interface with a data table titled 'Eggs, Chickens, a) Total prod. (mt)'. The table lists production data for various countries and years from 1980 to 2000. The columns represent years and the rows represent countries.

Area / Year	1980	1985	1990	1995	1997	1998	1999
AFGHANISTAN							
ALGERIA	11,800	12,000	22,200	24,800	28,100	27,670	24,000
ANGOLA	2,410,000	2,400,000	2,210,000	2,22,000	190,000	80,000	2,22,000
ANDORRA	4,200	4,200	4,200	4,200	4,200	4,200	4,200
ANTIGUA AND BARBUDA	250	250	250	250	250	250	250
ARGENTINA	225,000	225,200	224,470	227,420	220,240	228,470	229,400
ARMENIA	27,400	28,400	24,200	22,200	22,200	22,200	22,200
AUSTRIA	240,000	240,000	240,000	240,000	239,000	238,000	238,000
AUZSTRALIA	170,000	169,200	169,200	169,200	169,200	169,200	169,200
AZERBAIJAN	740,000	740,000	740,000	740,000	740,000	740,000	740,000
BANGLADESH	800	800	1,200	1,200	800	800	700
BARBADOS	3,000	3,000	3,000	3,000	3,000	3,000	3,000
BELGIUM	240,000	239,200	239,200	241,200	240,200	239,200	239,200
BELIZE	1,700	1,700	1,700	1,700	1,700	1,700	1,700
BENIN	20,500	20,500	20,500	20,500	20,500	20,500	20,500
BERMUDA	250	250	250	250	250	250	250



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Livestock modelling

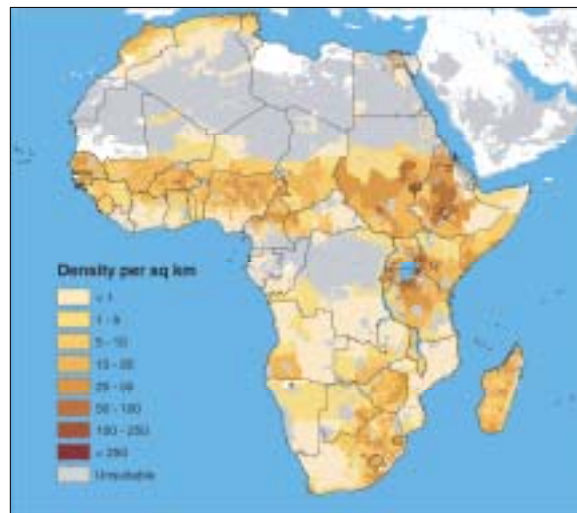
- Sub-national numbers from database
- Area suitable for livestock (slope, land-use etc.)
- Sub-national "Observed" densities
- Environmental predictor variables (5 km rasters)
- Ecological zonation (cluster analysis)
- Multivariate models for each zone
- "Predicted" density of livestock
- Adjust to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



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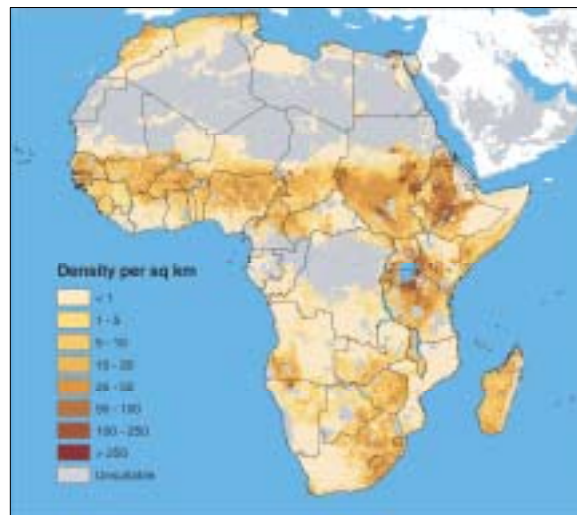
Cattle in Africa - Observed



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Cattle in Africa - Predicted



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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



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Applications

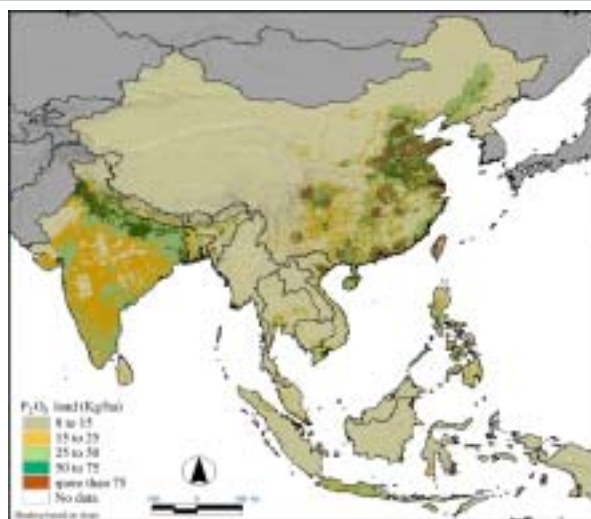
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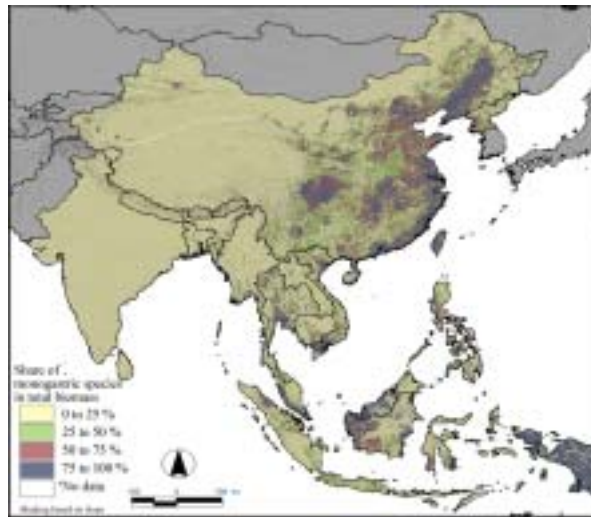
Environmental risk mapping



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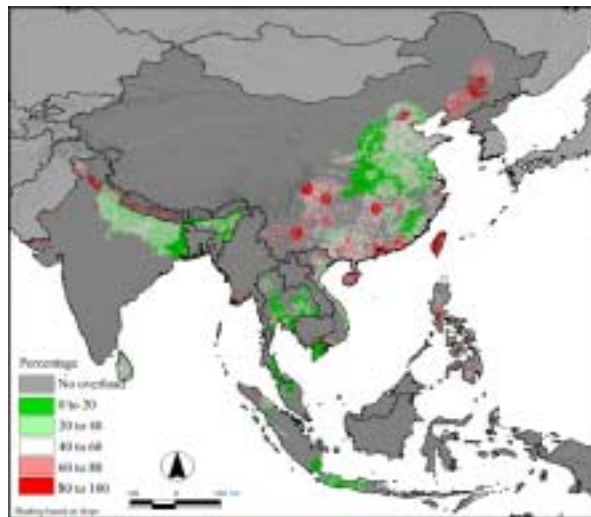
Environmental risk mapping



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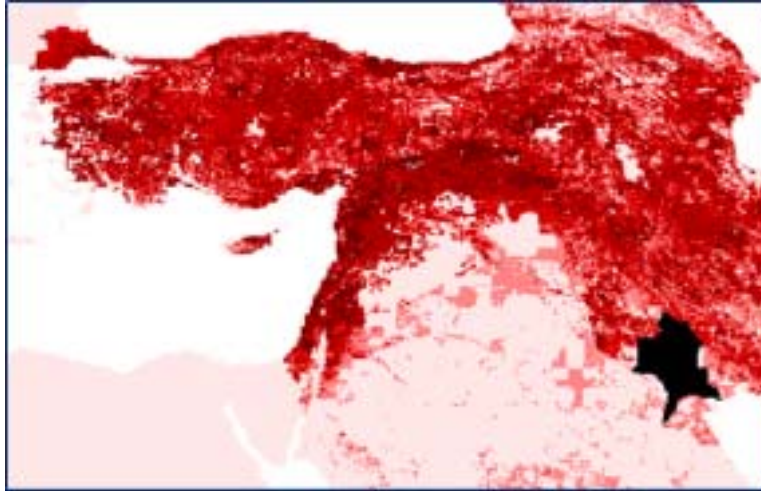
Environmental risk mapping



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Disease risk mapping



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