
Contents

Abbreviations and Acronyms	v
Foreword	vii
Acknowledgements	viii
Summary	ix
1 Introduction	
WHY MAP LIVESTOCK?	1
LIVESTOCK DIVERSITY	1
WHICH FEATURES TO MAP?	2
2 Disaggregating Population Data	
DATA PREDICTION AND EXTRAPOLATION	4
3 Subnational Livestock Statistics	
AGRICULTURAL CENSUS METHODS	5
UNDER-REPRESENTATION	6
DATA SUPPRESSION	6
4 FAO Global Livestock Information System	
DATA ARCHIVE STRUCTURE AND PROCESSING	7
SUPPLEMENTARY AND MISSING DATA	9
MASKING LAND SUITABLE FOR LIVESTOCK	10
Input criteria	10
Thresholds and results	13
5 Modelling Livestock Distribution	
A WORKED EXAMPLE - AFRICA	16
STANDARDIZING PREDICTED DISTRIBUTIONS	19
PREDICTOR VARIABLES	20
Satellite imagery	20
Other eco-climatic and land-related data	22
Human population data	22
6 Results	
DISTRIBUTION OF BOVINE SPECIES	25
DISTRIBUTION OF SMALL RUMINANT SPECIES	25

DISTRIBUTION OF PIG SPECIES	26
DISTRIBUTION OF POULTRY SPECIES	26
7 Applications	
LIVESTOCK BIOMASS	43
LIVESTOCK PROJECTIONS	43
Carrying capacity and spread	43
Mapping the carrying capacity	45
Spread modelling	46
LIVESTOCK PRODUCTION SYSTEM CLASSIFICATION	48
LIVESTOCK PRODUCTION ESTIMATES	53
LIVESTOCK PRODUCTION BALANCE	53
LIVESTOCK MOVEMENT	61
LIVESTOCK DISEASE ASSESSMENT	63
LIVESTOCK DISEASE RISK MAPPING	64
BTB in the United Kingdom	65
FMD status	65
The global spread of bird 'flu	70
ENVIRONMENTAL IMPACT ANALYSIS	70
SPATIAL TARGETING OF INTERVENTIONS	71
8 Challenges And Future Directions	73
9 References	77
10 Appendices	81
APPENDIX A	
Livestock numbers for Central America, the Caribbean and South America	83
APPENDIX B	
Livestock numbers for Africa	97
APPENDIX C	
Livestock numbers for Central, Eastern, Southern and South-Eastern Asia	113
APPENDIX D	
Livestock numbers for North America, Western Asia, Europe and Oceania	127