

6 Results

The modelled livestock distributions are now available globally, in regional tiles, for a wide range of species, as summarized in Table 6.1.

A representative selection of the numerous livestock distribution maps generated by the GLW project is presented in this section. This is the first example of global subnational transboundary distributions produced using a consistent methodology for all species. Cattle have been quite frequently mapped subnationally, at continental scale, but this is the first time such maps have been produced at this resolution for small ruminant and monogastric species.

DISTRIBUTION OF BOVINE SPECIES

Figure 6.1 shows the global distribution of bovine species. This is dominated by the distribution of cattle over most of the world, but in Asia represents the combined distribution of cattle and buffaloes.

Cattle are fairly ubiquitous, except in the very high latitudes where it is too cold for them to survive and in deserts and rainforests where no food is available. India stands out as having by far the largest population, with other global foci in north-

west Europe, the east African highlands and the Sahel, and parts of Brazil and Argentina. Figures 6.2, 6.3 and 6.4 show the modelled cattle distributions in South America, Australasia and Europe, respectively; as seen above, the cattle distributions for Africa are given in Figures 5.3 (observed) and 5.4 (modelled).

Buffaloes are primarily concentrated in India, with significant densities in Southeast Asia and the Philippines, and very limited numbers elsewhere. Figure 6.5 shows the distribution of buffaloes in Southeast Asia.

DISTRIBUTION OF SMALL RUMINANT SPECIES

At the global level, small ruminants are less widespread than bovine species (Figure 6.6). Major sheep populations occur in the Near East (Figure 6.7), throughout Australasia, in the United Kingdom and in southern Brazil. There is also a continuous band of comparatively high density stretching from Spain and northwest Africa (Figure 6.8) through to northwest India. Unlike cattle, sheep tend to have a more restricted distribution within the larger coun-

TABLE 6.1 SUMMARY OF GLW DATA BY SPECIES AND REGION

Species Group	Regional Tile							
	AFR	AMN	AMS	ASE	ASW	AUS	EUR	FSU
Cattle	•	•	•	•	•	•	•	•
Buffaloes				•	•			
Sheep	•	•	•	•	•	•	•	•
Goats	•	•	•	•	•	•	•	•
Pigs	•	•	•	•	•	•	•	•
Chickens	•	•	•	•	•	•	•	•
Poultry				•				

Notes:
 AFR = Africa; AMN = North America and the Caribbean; AMS = Latin America; ASE = East and Southeast Asia; ASW = West Asia & the Middle East; AUS = Australasia; EUR = Europe; and FSU = the former Soviet Union.

tries or regions: the African Sahel, South Africa, southern India, north-central China and Mongolia, for example.

Goats are more localized than sheep and often very restricted in their distribution, for example, to southern Texas in the United States and to the northeast of Brazil. Figure 6.9 illustrates how their distribution in the former Soviet Union is concentrated around eastern Turkmenistan and Uzbekistan, western Tajikistan and Kyrgyzstan, and southern Kazakhstan. Goats are widespread in Africa and more common than sheep in the Sahel and East Africa (Figure 6.10). Major foci also occur in India, Pakistan, Indonesia, north-central China and the Near East.

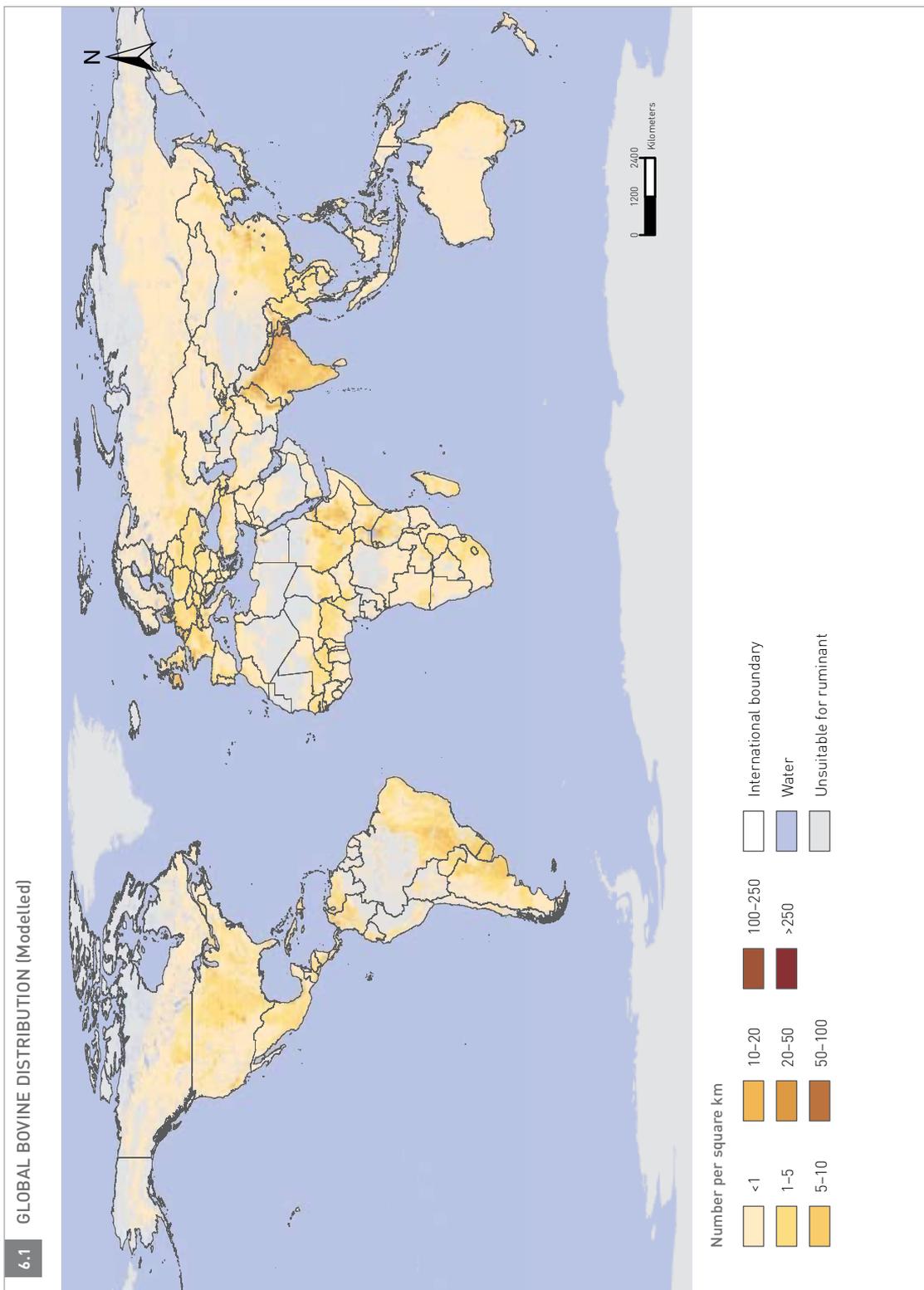
DISTRIBUTION OF PIG SPECIES

Figure 6.11 shows the distribution of pigs at the global level. Distribution of this particular livestock species is that most influenced by religious and cultural factors. There are few or none of these animals in predominantly Islamic countries such as Pakistan (Figure 6.12). Large populations occur in

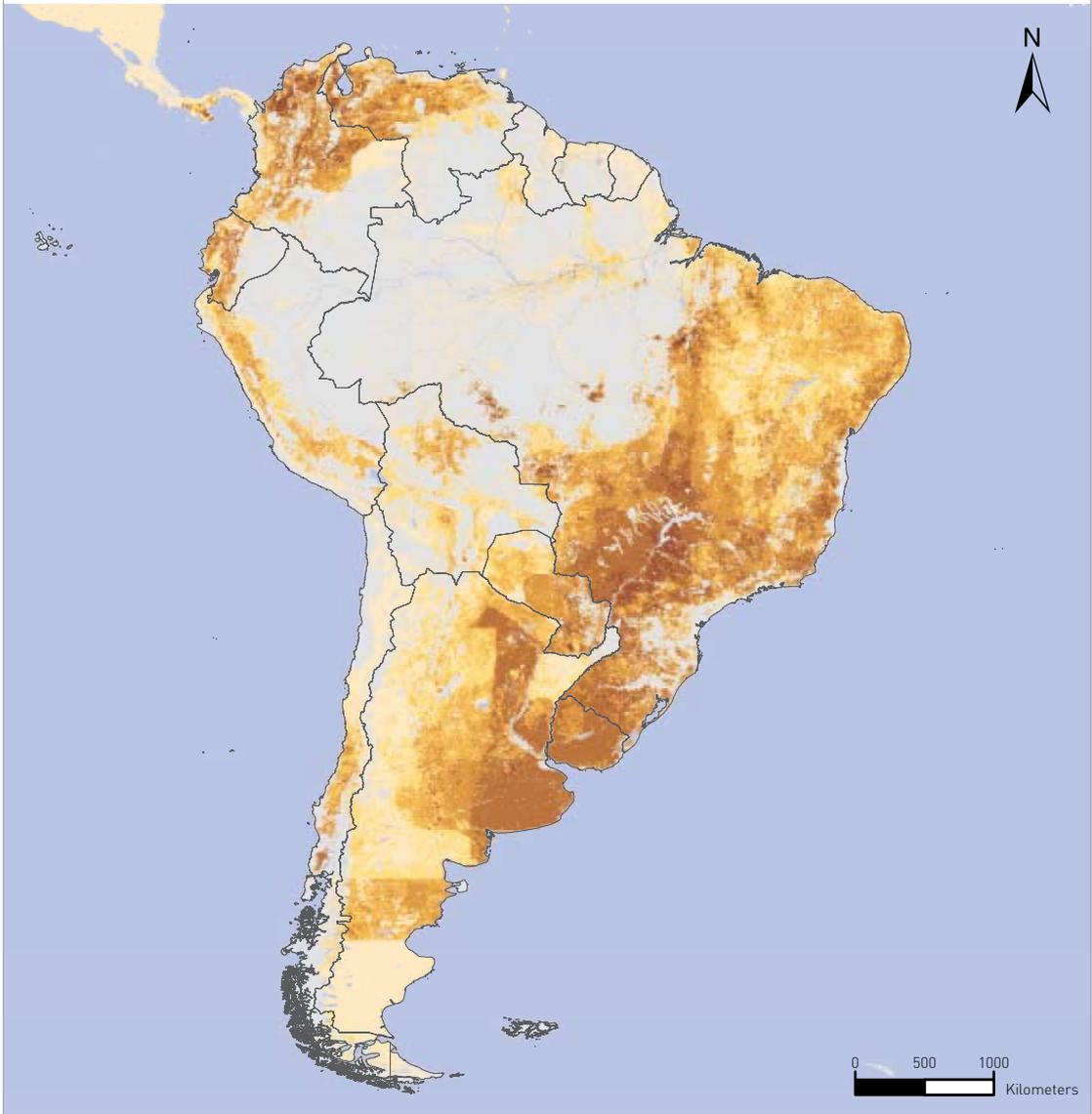
eastern China and parts of Southeast Asia, such as Viet Nam (Figure 6.12), Western Europe, central and eastern areas of the United States (Figure 6.13), Central America (Figure 6.13) and southern Brazil.

DISTRIBUTION OF POULTRY SPECIES

Figure 6.14 shows the global distribution of poultry. Massive numbers of birds occur in China and Southeast Asia (Figure 6.15), but Europe also has large poultry populations. Whereas in areas where poultry are abundant (particularly in rural settings) human population is by far the strongest predictor variable, the global distribution is not wholly related to human population distribution. India, for example, though densely populated, does not have a correspondingly ubiquitous poultry population. Some countries with large absolute populations appear not to have a widespread distribution of poultry, probably because very large numbers of birds are concentrated in small areas or in individual production units that are not easily visible at continental resolution.



6.2 DISTRIBUTION OF CATTLE IN SOUTH AMERICA (Modelled)



Number per square km

