

Chapter 2

Irrigation in the context of sub-Saharan Africa

DEFINITIONS OF IRRIGATION

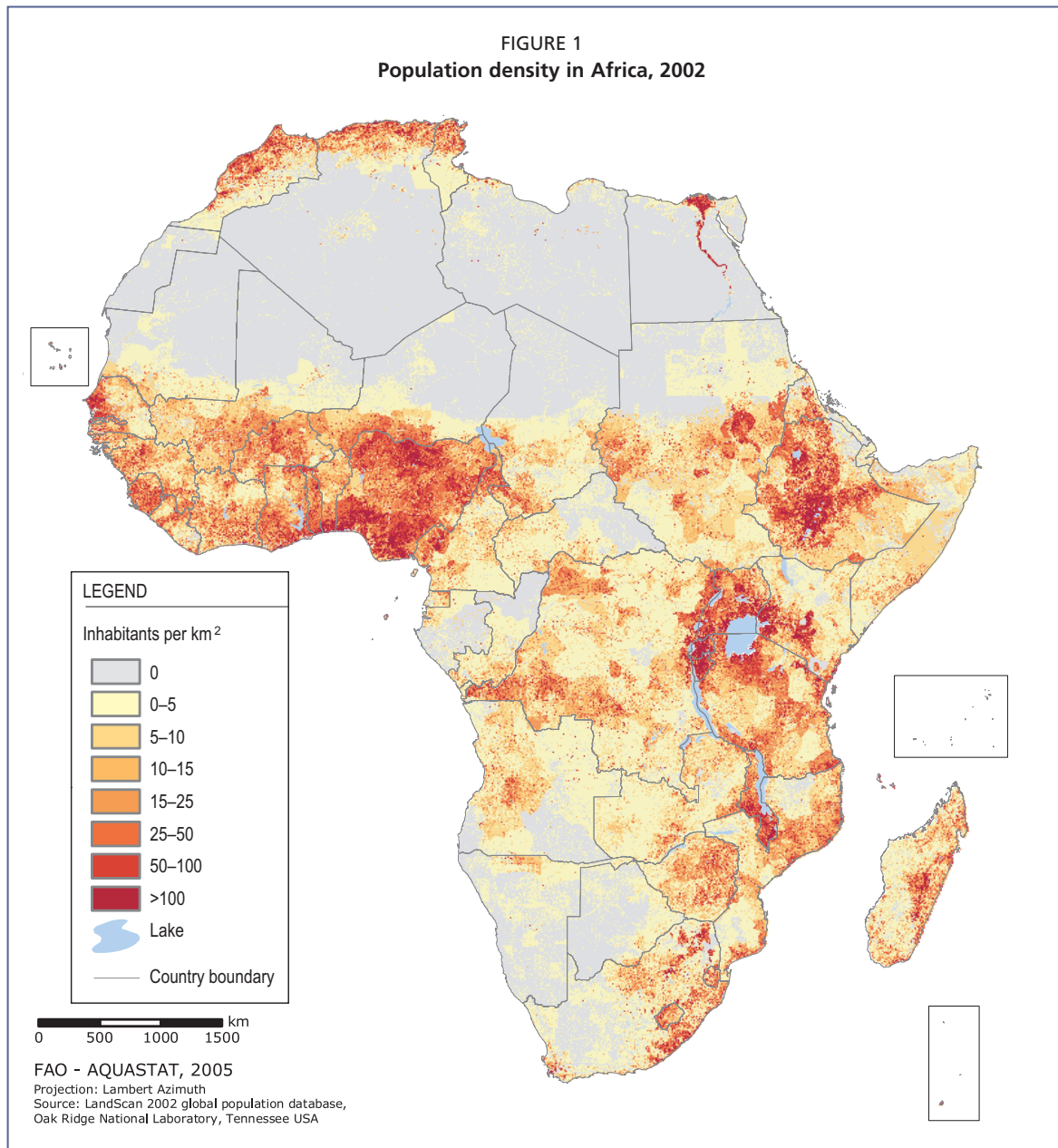
Formal irrigation constitutes only a part of the agricultural systems in sub-Saharan Africa and this study adopts a broader definition of “agricultural water management” to reflect the overall contribution of water management to agriculture. To this end, FAO has developed a typology (Annex 1) for all kinds of agricultural water management. This typology is used as the template for data contained in a comprehensive and regularly updated FAO database – AQUASTAT (<http://www.fao.org>). AQUASTAT compiles data on land areas upon which water is added and/or managed in order to allow or improve agricultural production. The level of management and control of the water may vary greatly according to the agricultural water management types involved. The FAO typology has proved robust when applied across a range of differing countries and, for the sake of consistency, it has been adopted for the purpose of this exercise as presented in Table 1.

THE REGIONAL CONTEXT

This paper examines the scope for meeting future demand for agricultural products in sub-Saharan Africa through increases in irrigated output. At the outset, in order to establish the relative context, Figures 1 and 2 show, respectively, the population density and the irrigation density in Africa as at 2002. Figures 1 and 2 indicate how rainfed agriculture and transport access underpin human settlement in sub-Saharan Africa. They

TABLE 1
A working template for the FAO area under agricultural water management typology

AREA UNDER AGRICULTURAL WATER MANAGEMENT>	COUNTRY OR REGION TOTALS			
		a+b+c+d+e+f+g+h+i		
AREA EQUIPPED FOR IRRIGATION>		a+b+c+d+e+f+g		
Area equipped for full control irrigation	a+b+c			
Surface	a			
Sprinkler	b			
Localized	c			
Area under spate irrigation		d		
Area of equipped lowlands			e+f+g	
Equipped wetlands and inland valley bottoms			e	
Equipped flood recession			f	
Other			g	
Area with other forms of agricultural water management				h+i
Non-equipped cultivated wetlands and inland valley bottoms				h
Non-equipped flood recession				i



also indicate where demand for intensive agricultural production can be anticipated, particularly in order to supply rapidly growing urban populations in countries such as Nigeria. However, with the exceptions of Madagascar and South Africa and central Sudan, there is no strong spatial link between population and irrigated production. What is irrigated in sub-Saharan Africa?

Table 2 summarizes the calculated percentage of irrigated production by crop type.

Table 3 shows the current irrigated statistics for the whole of Africa (sub-Saharan Africa plus Algeria, Egypt, Libya, Morocco and Tunisia).

Table 4 presents a regional breakdown of irrigated areas in accordance with FAO country clusters as detailed in Annex 2.

The relatively low levels and slow growth of irrigation in sub-Saharan Africa (see Box 1) are often attributed, in part, to a lack of demand for irrigated produce. In practice, agricultural commodities can usually be sold. For an existing or potential producer of an agricultural commodity, the key issue is the level of the selling price not whether