



2 Urban Agriculture

Gumbehene New Dam farming site in the city center of Tamale, Ghana.

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Urban and peri-urban farming are vibrant activities in Tamale and Ouagadougou. In this publication, we focus on food production within the urban boundaries, including crop, livestock and fruit production. Urban crop production has been classified as 1) open-space production of high-value products on undeveloped urban land and 2) mostly subsistence gardening in backyards.^{2.1} Both forms of urban farming can be found in Tamale and Ouagadougou, albeit with major differences between the cities. In Ouagadougou, open space sites play a greater role in production and marketing than in Tamale, where isolated urban fields, including backyards, are more relevant for food production than in Ouagadougou (Chapter 2.2).^{2.2} These differences are related to the historical urban development in both cities, but also to climate and water availability.

Because it only rains during a short rainy season, farming during the dry season is restricted to locations where irrigation is available, such as

along streams, wells or dams. In Tamale and Ouagadougou, farming often takes place on seasonally flooded or waterlogged areas not suitable for housing, which therefore may, despite the generally poor land tenure security, be sustained as farming sites.

In many cities, including Tamale and Ouagadougou, the use of wastewater for irrigation is also common, allowing a year-round supply of vegetables in particular (see pages 25 and 28, showing a simple waste-water treatment plant in Tamale and the use of industrial wastewater in Ouagadougou). Organic wastewater increases soil fertility in a region where soils are generally poor and low in nutrient and organic matter. As part of the UrbanFood^{Plus} project, different treatments, including the amendment of biochar, and their effect on soil fertility and yields was tested (see pages 22 and 23). Livestock keeping is a traditionally widespread activity in both cities (Chapter 2.3), and a better integration of crop–livestock systems may considerably improve soil fertility.

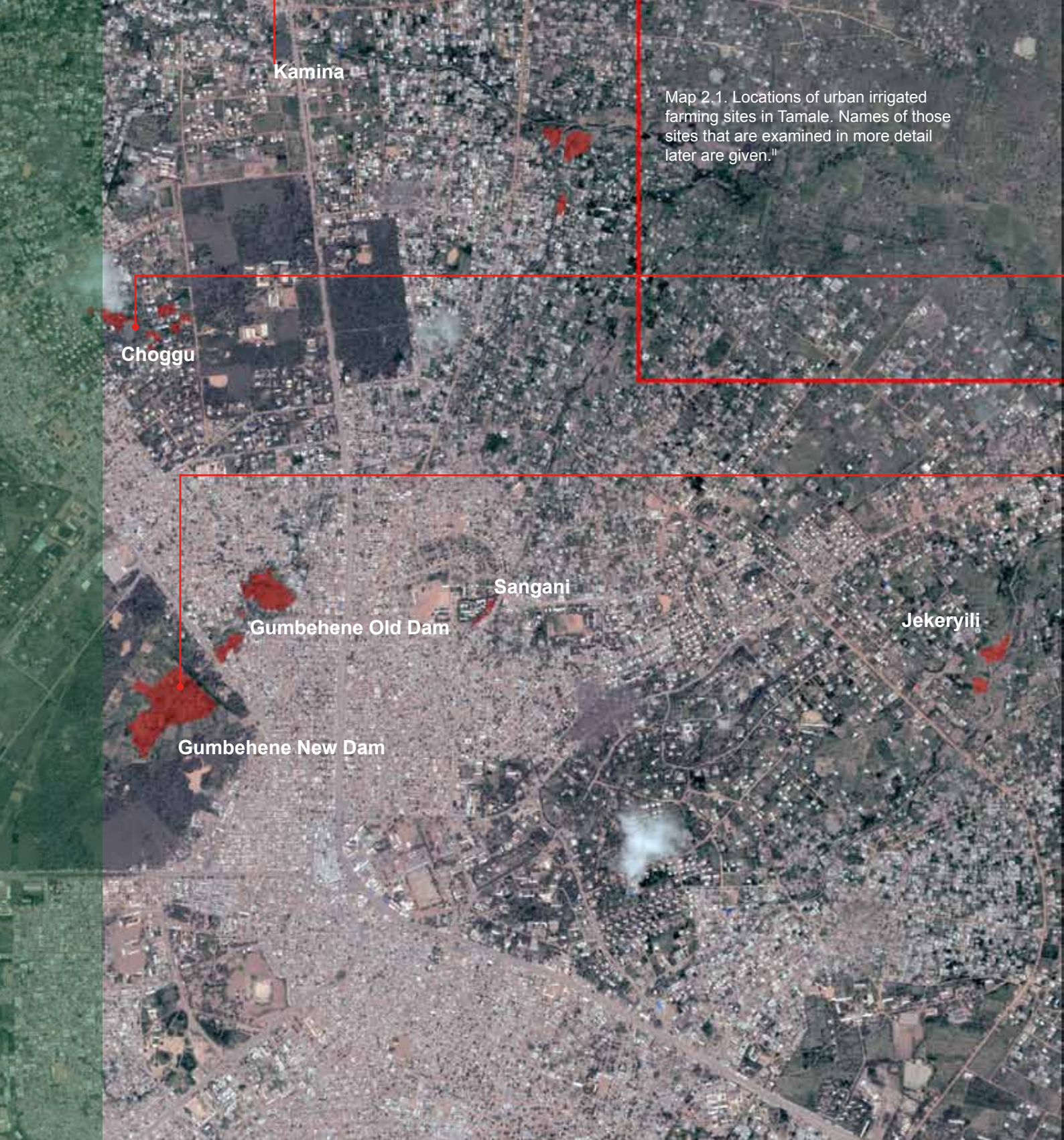


Urban farming in Ouagadougou (Burkina Faso) is characterized by large irrigated open space vegetable production and livestock rearing.



In Tamale (Ghana) crop production is part of the urban landscape, in particular during the rainy season when small, unused spaces are used for crop production. Livestock keeping is also common.





Map 2.1. Locations of urban irrigated farming sites in Tamale. Names of those sites that are examined in more detail later are given.ⁱⁱ

Because of the two distinct seasons, one wet and one dry, seasonal variation in terms of crop composition as well as area under cultivation is substantial. In the dry season, crop production is limited to areas with access to irrigation water. In Tamale, the main irrigated farming sites are located in the city center

(Gumbehene New Dam and Old Dam). Irrigation water sources vary and include groundwater, piped and gutter water, with varying degrees of contamination. During the dry season, around 25 ha are under cultivation within the urban boundary (see Map 2.1).ⁱⁱ During the rainy season, when people make

use of small, unused spaces, the area under cultivation increases considerably. A land use classification revealed that 3,700 ha within the urban boundary are covered by crop land and savannah.ⁱⁱⁱ This corresponds to 41% of land within the urban boundary, as compared to only 18% in Ouagadougou.