



Figure 1 Location and layout of the Middle Nzoia River Catchment study area (source: Kenya waterways open street map export)

## 2.2 Assessment of the current water availability and demand

### 2.2.1 Hydrological data collection

To assess current water availability in the Middle Nzoia River Catchment, historical hydrological data were gathered from various gauging stations located along the river and its tributaries. This data consisted of daily or monthly discharge records spanning the past 40 years, which provided a comprehensive overview of river flow patterns and fluctuations. Additionally, historical and contemporary rainfall data were sourced from local meteorological stations within the catchment area to understand precipitation trends and their impact on surface water availability.

### 2.2.2 Water demand data

Water demand data were collected across the major sectors to provide a comprehensive understanding of current water use patterns within the Middle Nzoia River Catchment.

**Agricultural sector:** Data on irrigation practices, including crop types, irrigation methods, and seasonal water requirements, were collected through surveys and interviews with local farmers. These data were used to assess water consumption patterns in the agricultural sector, which is a major contributor to overall water demand in the catchment.

**Domestic sector:** Data on household water use, including daily or monthly consumption rates, water sources (e.g., piped water, wells, and surface water), and seasonal variations, were collected through household surveys, interviews, and utility records. This information provided a basis for assessing domestic water demand in the catchment.