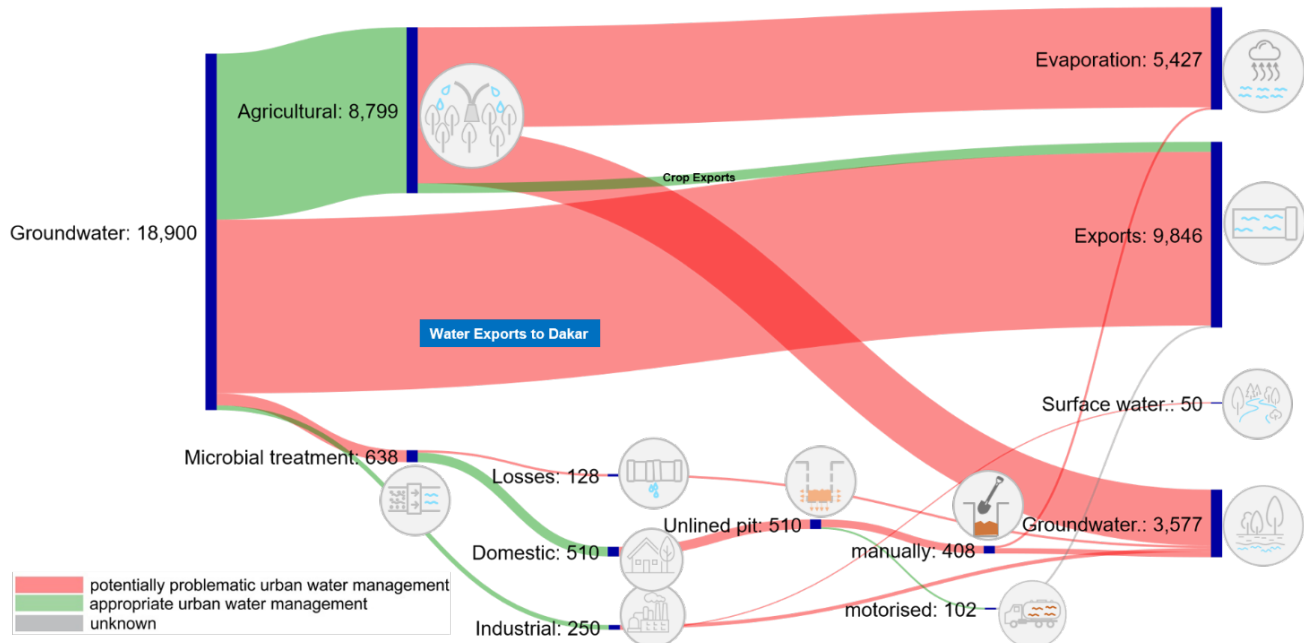


Water Flow Diagram of Diender

Area : 118 km²
Population: 43 465
Inhabitants/km²: 43
Unit : 1000m³/ year
Year : 2022



Partners

Swiss Church Aid (HEKS), Gaston Berger University (Senegal), Water Resources Management and Planning Department (government)

Data sources

Water Resources Management and Planning Department, the Office of Rural Water Wells, the Association of Borehole Users, the National Water Company of Senegal, Eau du Sénégal, the Environment Development Action for Natural Land Protection, the Federation of Agropastoralists of Diender and the World Health Organisation

System boundaries

Municipality of Diender (118 km²)

Context and motivation

Diender, Kayar and Keur Moussa, three communities in the suburbs of Dakar produced a WFDs in a joint effort supported by HEKS. Agriculture is the predominant economic activity in this water scarce area, while a part of the available groundwater is exploited for the water supply of Dakar. Actors were engaged to participate through regular workshops with representatives from the civil society, small- and large-scale farmers and the government.

Interpretation and main learnings

More than half of the pumped groundwater was exported to the city of Dakar. Another 47% of the water was used for agriculture. The water that was used in agriculture was probably polluted with pesticides what would have a negative impact on groundwater. Because of inadequate irrigation methods that are applied in the area the evapotranspiration rate was estimated to be 60%. The water consumption for domestic, public and industrial uses were minor. Nevertheless, inappropriate sanitation systems threaten the surface water resources and the groundwater on which the city of Dakar depends. The participative process of collecting data, analyzing the diagram and formulating potential measures in Dakar was characterized by a very active stakeholder engagement. The process was very effective in highlighting issues in water management that had been raised by the civil society since quite some time and achieving support for these issue from the authorities.

Actions triggered

Formation of a committee for integrated water resources management planning in the three communities, that consists of members from the utilities and civil society. Furthermore, the Ministry of water and sanitation in Senegal expressed interest to replicate the WFD in other communities and use it in local water resource management plans.