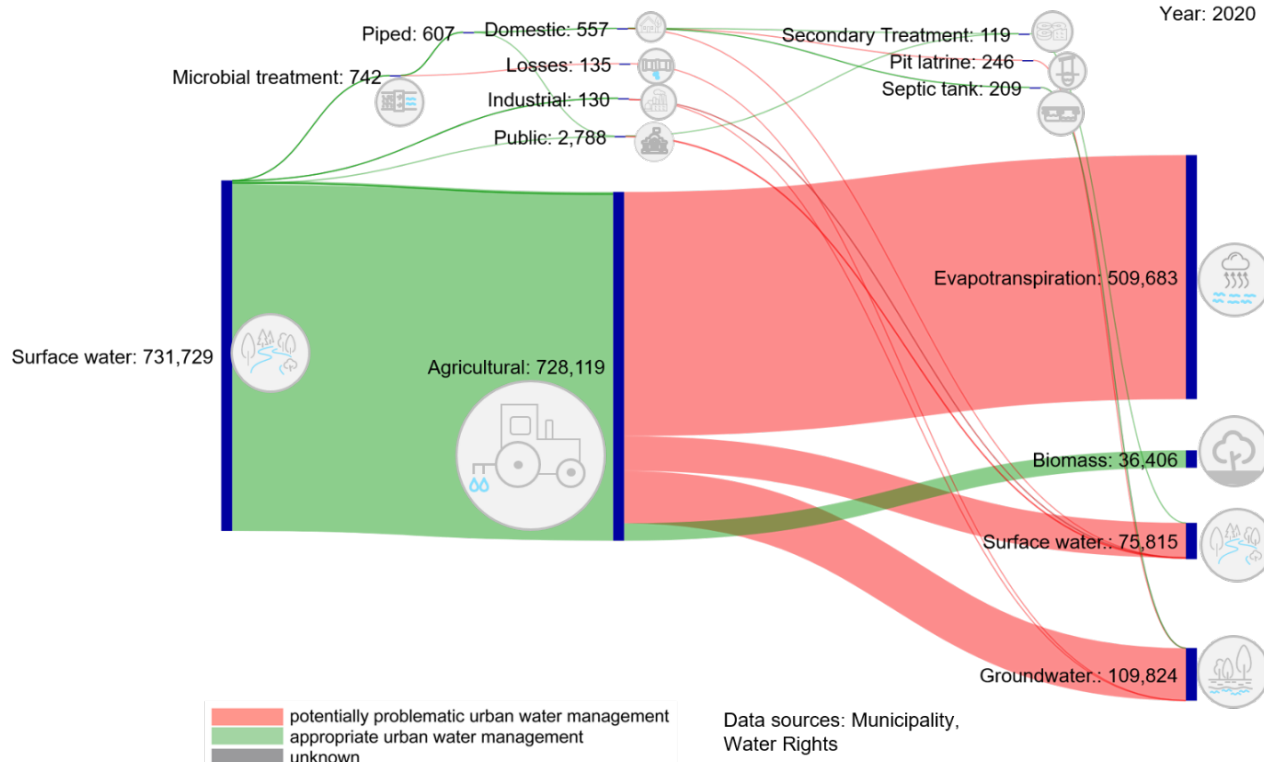


# Water Flow Diagram of Rio Pardo

Area: 3'130 km<sup>2</sup>  
Population: 31'000  
Inhabitants/km<sup>2</sup>: 10  
Unit: 1'000 m<sup>3</sup>/year  
Year: 2020



<b>Partners</b>	Swiss Church Aid (HEKS), Rural Workers Union of Rio Pardo de Minas (RWU), municipality of Rio Pardo de Minas
<b>Data sources</b>	RWU, municipality, governmental data base on water use rights
<b>System boundaries</b>	Municipality of Rio Pardo de Minas in Minas Gerais, Brazil (3'130 km <sup>2</sup> )
<b>Context and motivation</b>	Rio Pardo de Minas is a municipality in the northeast of the state of Minas Gerais. Its main economic activities are agriculture and small industries. The motivation to make a WFD was to show how the water in this area is allocated between agriculture, industry and private households, to amplify local voices and to advocate for the human right to water and sanitation.
<b>Interpretation and main learnings</b>	Rio Pardo was one of the first WFD that was made. Initially, the system boundaries chosen were of the urban populated area. Because the partner organisations were particularly interested to show the water allocation among the different sectors of the entire municipality, the system boundaries were widened to the municipality. Consequently, also less populated, rural areas were included in the WFD. The WFD in Rio Pardo identified a majority of water flows as problematic (red). Agriculture consumed almost 100% of the water. The water potentially polluted with pesticides and fertilizers infiltrating from the environment and inadequate agricultural practices. Irrigation methods caused an estimated 70% of water losses due to evapotranspiration. The proportion of domestic, industrial and public uses of the overall water consumption were minor. Nevertheless, they polluted the surface water and groundwater, since for a large proportion of this water, there was no appropriate treatment of the wastewater. Approximately 25% of the water was lost in the piped distribution network.
<b>Actions triggered</b>	Although the urban dimension of the water flow is hardly visible in this WFD, its visualization triggered an intensive dialogue on water utilization and water rights amongst different relevant stakeholders and the municipality. The debate was heated which even led to a meeting being disrupted by concerned mining operators.