

## Chapter 4

### Water quality at selected sites in the Konashen COCA, Southern Guyana

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#### INTRODUCTION

Water is an essential natural resource and its quality and quantity generally guide management plans for its use. Water quality data indicates the existing health of a water body and highlights any current or potential threats to the water body. The data collected from the rapid assessment (RAP) can be used as a baseline for a water quality monitoring program for the 2500 square mile Konashen area, which supports a population of approximately 200 people, and diverse plant and animal life. Water quality is also an appropriate indicator for RAP surveys because it provides information on conditions required for some taxonomic groups studied by other researchers. Water quality plays a major role in human health, and an important aspect of this assessment was to test water quality in areas that the local Wai-Wai community regularly depends on. These include potable water in Masakenari village and water in two main fishing grounds, Wanyakoko and Kanaperu. As owners and managers of the areas, the well-being of the local community is critical to the long-term sustainability of the area. This assessment did not include water resources measurements which are just as important as water quality data for the development of a water management and monitoring program for the area.

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#### STUDY SITES

The five main sites sampled in the Konashen district were Sipu (SR), Acarai (AM), Kamoia (KR), Essequibo (ER), and Masakenari (MA). The complete list of sampling sites is included in Table 4.1 and a few are shown in Figure 4.1.

**Sipu:** The Sipu site was located on the Sipu River which is a tributary of the Essequibo River. There were no human or industrial sources of pollution evident at this site and dead trees were scattered throughout the river.

**Acarai:** The Acarai site was located below the Acarai Mountains adjacent to a creek that empties into the Sipu River. This creek was underlain with sand and rock and showed no human or industrial signs of pollution. Oral recollection from the Wai-Wai community signaled the presence of an illegal small-scale gold mining operation in the area around 1990. The two small creeks and a small stagnant pond sampled around the area were well shaded, covered with leaves, and less than a meter deep at the time.

**Kamoia:** The Kamoia site was located next to the Kamoia River, a tributary of the Essequibo River which was downstream of, and larger than the Sipu River. There were no human or industrial sources of pollution evident at this site and dead trees were scattered throughout the river.

**Essequibo:** The major river running through the Konashen District is the Essequibo which empties into the Atlantic Ocean. Sampling was conducted between the mouth of the Sipu River and the Kanaperu fishing ground. The village moved from Akuthopono in 2000 following a massive flood.