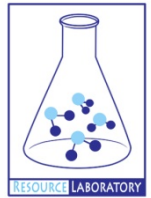




GROUNDWATER QUALITY ANALYSIS REPORT

Kandal - Ponhea Lueu - Kaoh Chen (N/A)



Kaoh Chen is located in the district of Ponhea Lueu. The population of this commune is approximately 8929 (2004). Groundwater sample collection occurred in January 2007 and consisted of the sampling of 3 tube wells throughout the commune. The attached figure presents the location of Kaoh Chen within Kandal as well as groundwater sample locations and exceedances of health-impacting contaminants (when applicable).

Groundwater Quality Rating

An insufficient number of samples were collected in this commune to adequately characterize groundwater conditions. A groundwater quality rating is not presented for this commune.

Contaminants of Potential Concern – Health

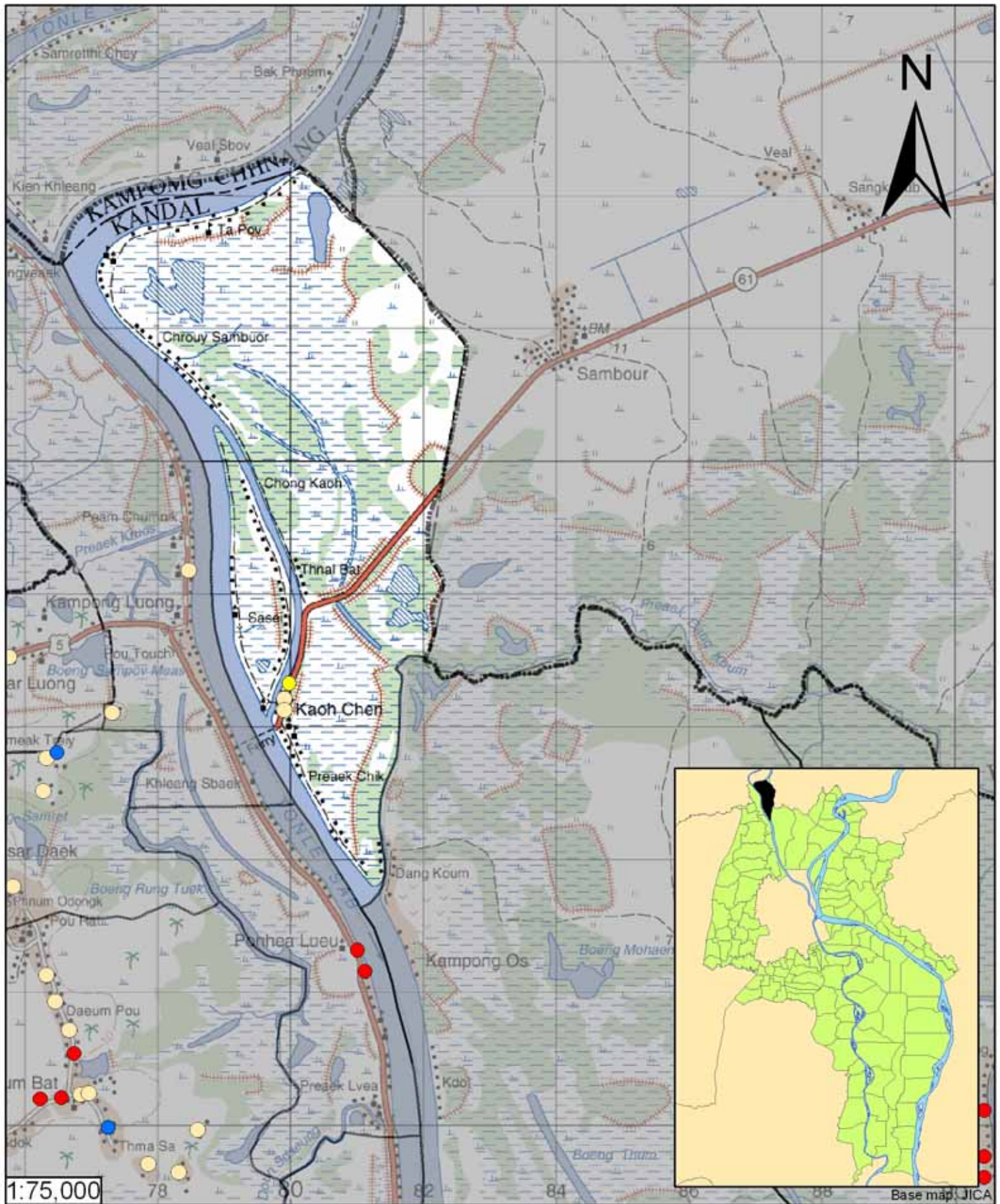
Fluoride - Elevated concentrations of Fluoride were observed within the commune. At concentrations greater than 1.5 mg/L, Fluoride can cause dental fluorosis and at concentrations greater than 4 mg/L, skeletal fluorosis can occur.

Contaminants of Potential Concern – Aesthetic

Iron - Elevated concentrations of Iron were observed within the commune. At elevated concentrations, Iron causes water to be cloudy and unpleasant to drink. An odor may also be encountered at high concentrations. Iron can also stain laundry, food (can cause discoloration of cooked rice), and leave deposits. Aeration allows oxygen to enter the water and react with Iron to form a compound which is insoluble in water. The newly formed solids will slowly settle to the bottom or can be removed more rapidly by filtration. Performing these procedures may reduce the concentration of Iron in water but follow-up testing is recommended to ensure water quality standards are met.

Turbidity - Elevated levels of Turbidity were observed within the commune. Turbid or cloudy water appears unpleasant to the eye and is more likely have an unpleasant taste or odor. Turbidity can be reduced by filtration.

Hardness - Elevated levels of Hardness were observed within the commune. Elevated hardness levels impact the effectiveness of soaps and detergents and can cause scaling on pipes and pans. Contrary to common belief, there is no relationship between consumption of hard water and urinary tract problems and kidney stones.



- Arsenic
 - Manganese
 - Fluoride
 - Nitrate
 - No Exceedance
 - Provincial Boundary
 - Commune Boundary
- Locations exceeding the Cambodian water quality standards for major health-impacting contaminants have been colour-coded and arranged such that they do not overlap.

Tube Well Sample Locations and Health-Based Exceedances

Kaoh Chen- Ponhea Lueu - Kandal - Cambodia

Resource Development International - Cambodia
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