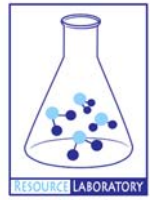




GROUNDWATER QUALITY ANALYSIS REPORT

Kampong Cham - Batheay - Tang Krang (60C)



Tang Krang is located in the district of Batheay. The population of this commune is approximately 8787 (2004). Groundwater sample collection occurred in March 2008 and consisted of the sampling of 14 tube wells throughout the commune. The attached figure presents the location of Tang Krang within Kampong Cham as well as groundwater sample locations and exceedances of health-impacting contaminants (when applicable).

Groundwater Quality Rating

The groundwater quality rating for Tang Krang is 60C. Therefore, the general safety of deep aquifer groundwater is poor and the aesthetic quality of the water is excellent, according to the contaminants measured and samples collected. The following two sections describe all major health and aesthetic contaminants that exceeded drinking water standards in at least one sample within the commune.

Contaminants of Potential Concern – Health

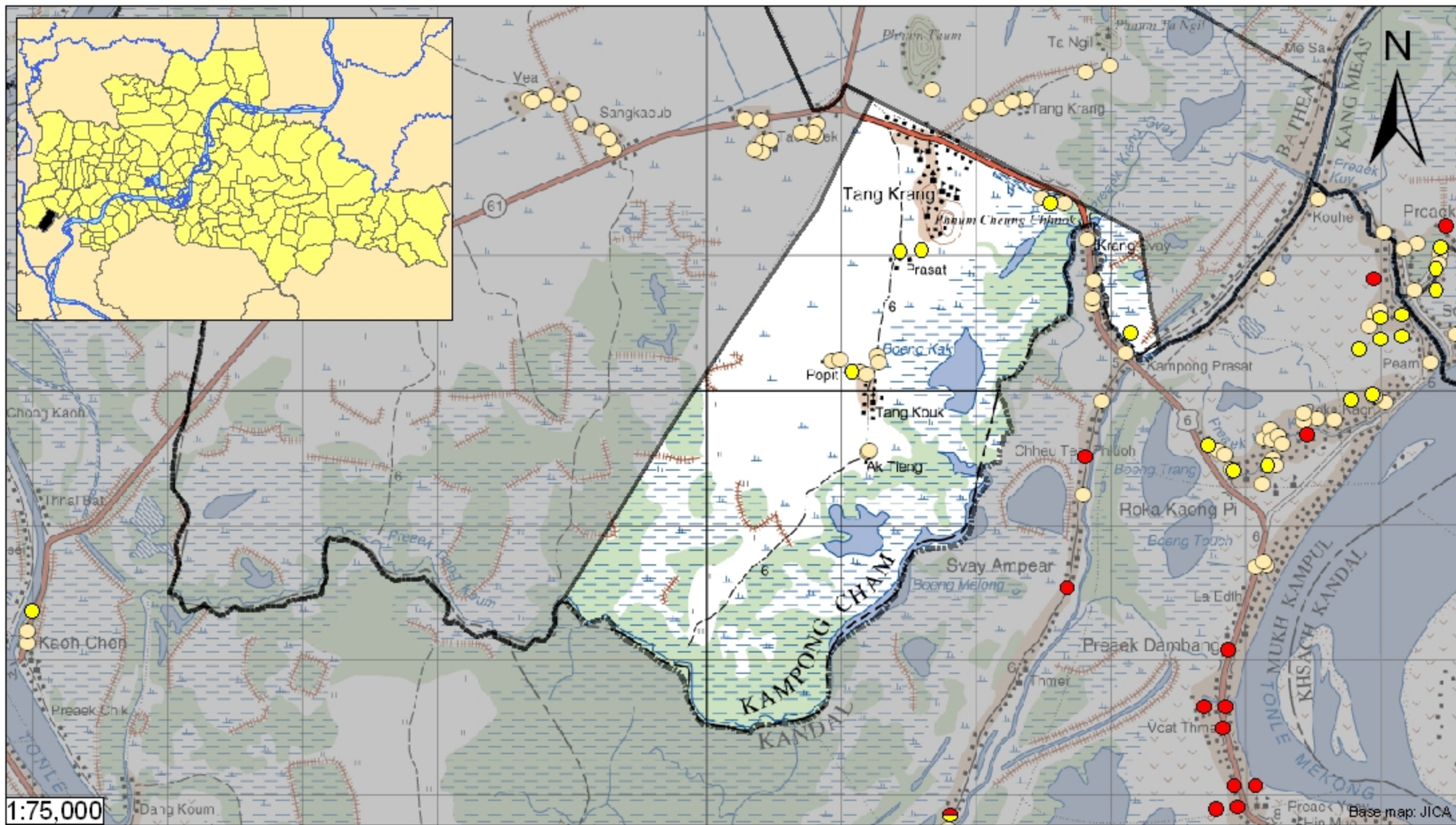
Fluoride - Elevated concentrations of Fluoride were observed within the commune. The estimated probability of encountering unacceptable concentrations of Fluoride (>1.5 mg/L) in tube wells is 51%, based on the observed data. At concentrations greater than 1.5 mg/L, Fluoride can cause dental fluorosis and at concentrations greater than 4 mg/L, skeletal fluorosis can occur.









Contaminants of Potential Concern – Aesthetic

Turbidity - Elevated levels of Turbidity were observed within the commune. The estimated probability of encountering potentially unacceptable levels of Turbidity (>20 ntu) in tube wells is 6%, based on the observed data. 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. The estimated probability of encountering potentially unacceptable levels of Hardness (>500 mg/L) in tube wells is 16%, based on the observed data. 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.



-   No Exceedance
-  Arsenic
-  Manganese
-  Fluoride
-  Nitrate
-  Commune Boundary
-  Provincial 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 Tang Krang - Batheay - Kampong Cham - Cambodia