

# Potassium

Hard water is indicative of the presence of higher levels of magnesium. The need for magnesium increases with age as well as level of stress. Magnesium controls muscle contraction, protein metabolism, blood coagulation, and energy production, among other vital tasks. Failure to take in enough magnesium over time leads to high blood pressure and osteoporosis.

Magnesium aids in body functions; it can also help prevent disease. Studies show that magnesium in drinking water protects against the deaths of patients with diabetes mellitus, and prevents the development of cerebrovascular disease. Magnesium also lowers the risk of fatality from acute myocardial infarction (heart disease), particularly in females. In high-risk patients, magnesium is recommended to protect against gastric cancer

## **Effects on Environment and Human Health**

There is currently no background document or summary statement for potassium in the Guidelines for Drinking-water Quality. Potassium water softeners are being used as an alternative to sodium water softeners, in response to a perception that potassium is better for health. However, some people with specific diseases or on certain medications are susceptible to hyperkalaemia, and some mention of this needs to be made in WHO guidance.

## **Remedial Measures**

Magnesium can be removed by reverse osmosis, along with other total dissolved solids. Other removal methods like distillation and deionization

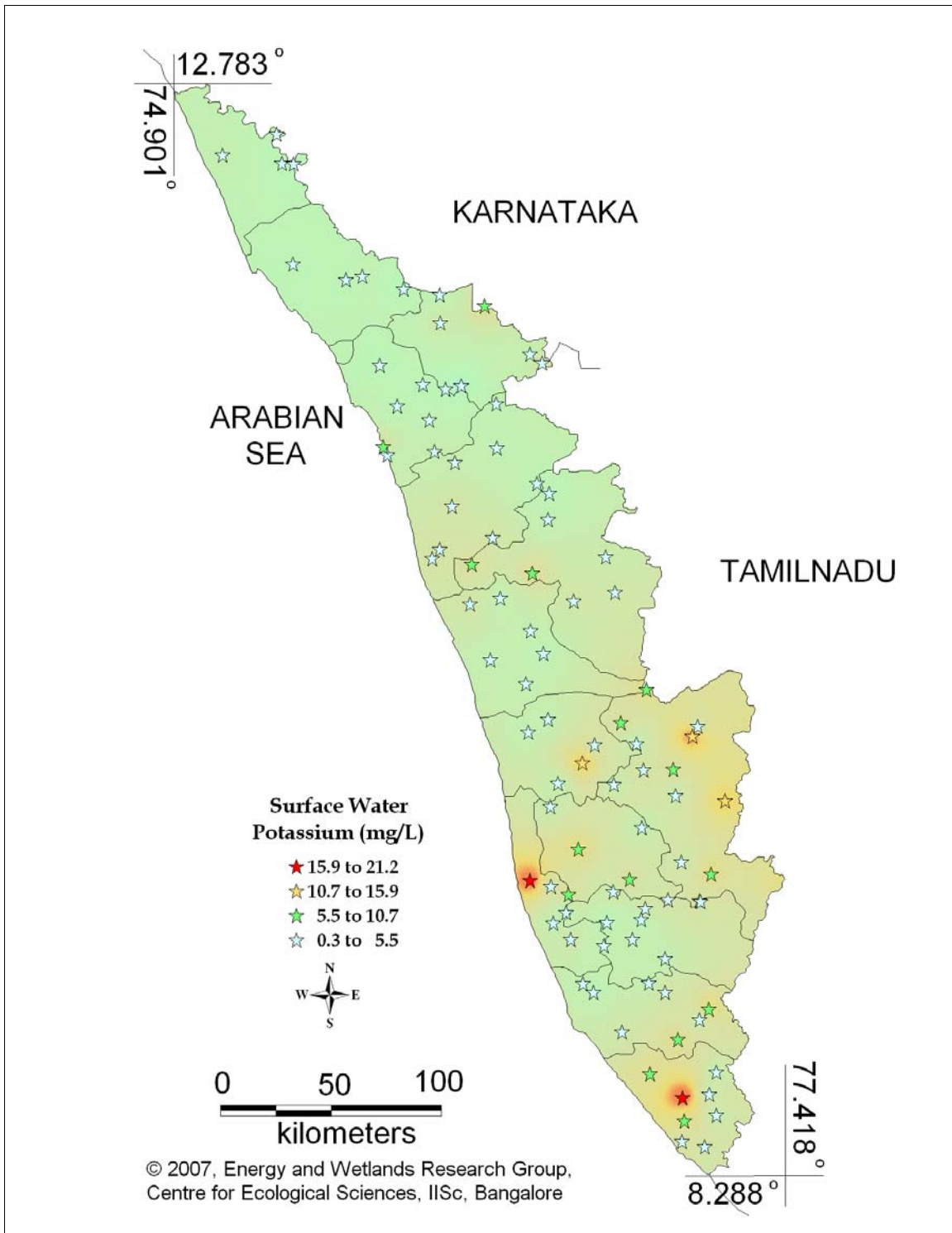


Figure 19.1: Spatial variation of potassium in Kerala's surface water

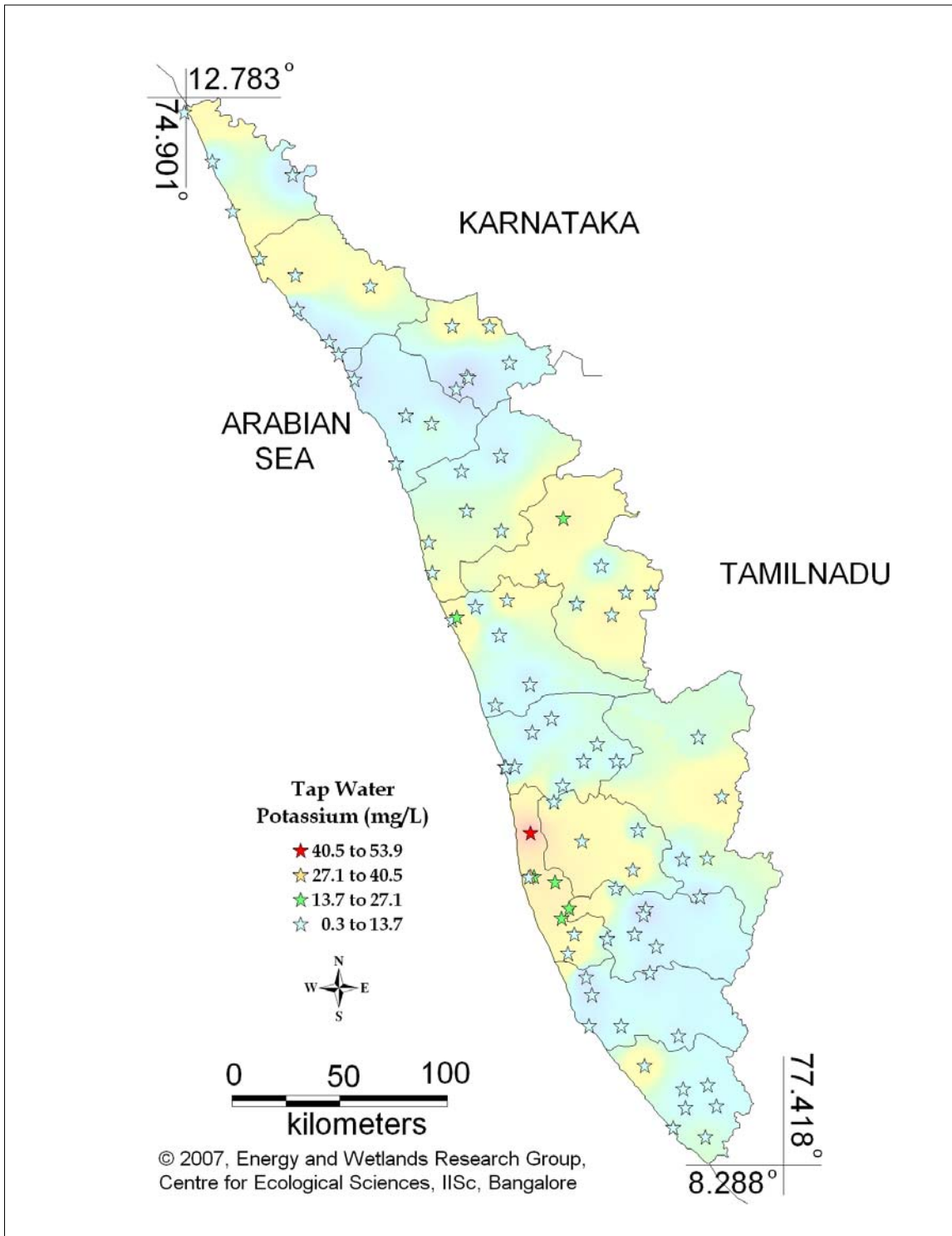


Figure 19.2: Map showing spatial variation of potassium in Kerala's tap water