

Sodium

Sodium is the sixth most abundant element on the Earth and is widely distributed in soils, plants, water and foods. Most parts of the world has significant deposits of sodium-containing minerals, most notably sodium chloride (salt). Sodium dissolves easily in water and is always present at some level. If well water is treated for hardness, that process usually involves sodium and can lead to higher levels of sodium in the water. (Some water softeners use potassium and are not a threat). Other sources of sodium are natural occurrences and runoff.

Effects on Environment and Human Health

Sodium is a normal component of the body and adequate levels of sodium are required for good health. Food is the main source of daily human exposure to sodium. Less than one percent of daily intake of sodium comes from water. The people with high blood pressure are sensitive to sodium and can reduce blood pressure by reducing sodium. Although some people can consume excessive levels of sodium without increased blood pressure, many cannot. Other risk factors for high blood pressure include excess weight, alcohol consumption, and a family history of high blood pressure. High levels of sodium may aggravate existing high blood pressure. Factors to help reduce high blood pressure include a low sodium diet, increased fruit and vegetable consumption, exercise, weight control, and medication if necessary. Sodium in drinking water may be an issue for someone with heart disease, hypertension, kidney disease, circulatory illness or on a sodium-controlled diet.

Remedial Measures

Reverse osmosis will reduce the amount of sodium in drinking water a significant amount.

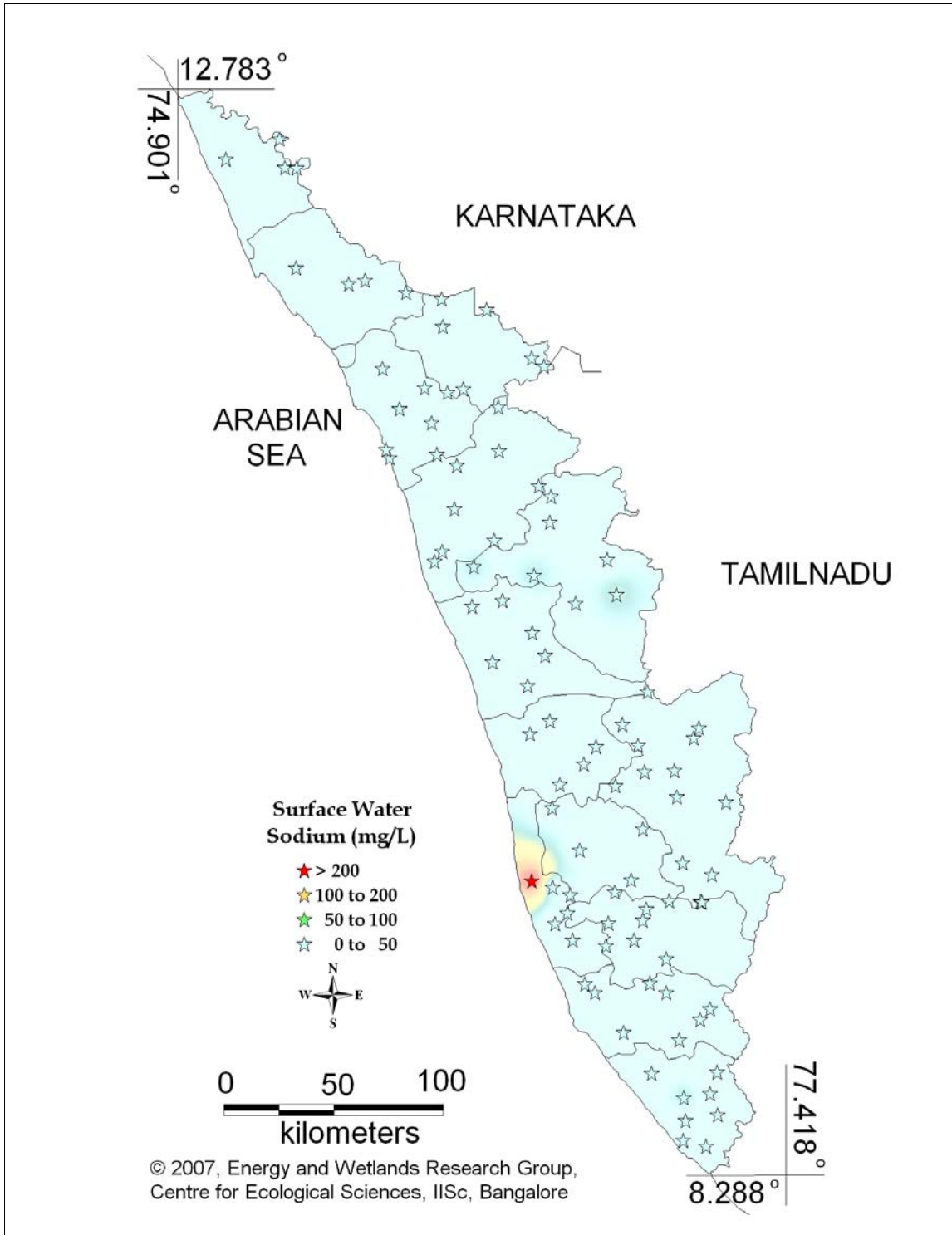
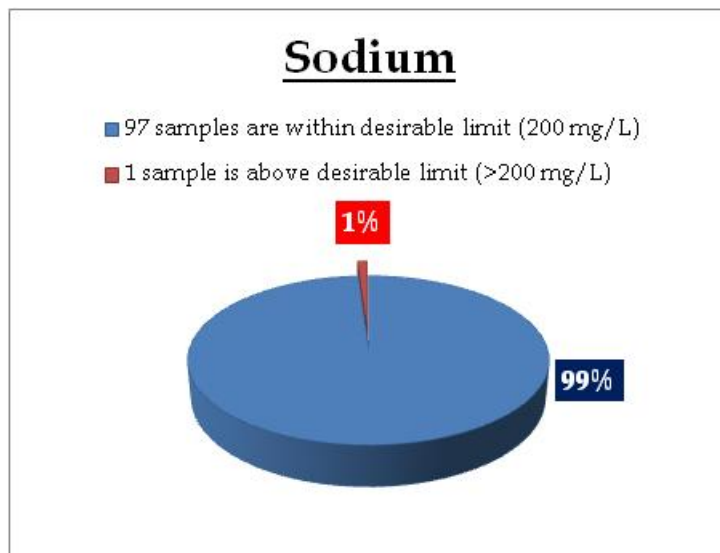


Figure 18.1: Spatial variation of sodium in Kerala's surface water

Surface water - Sodium

Standard for Drinking Water (WHO)

Desirable Limit: 200mg/L



Remarks

Sampling site having Sodium above desirable limit

Location	Value	District
Kuppapuram	279.18	Alappuzha

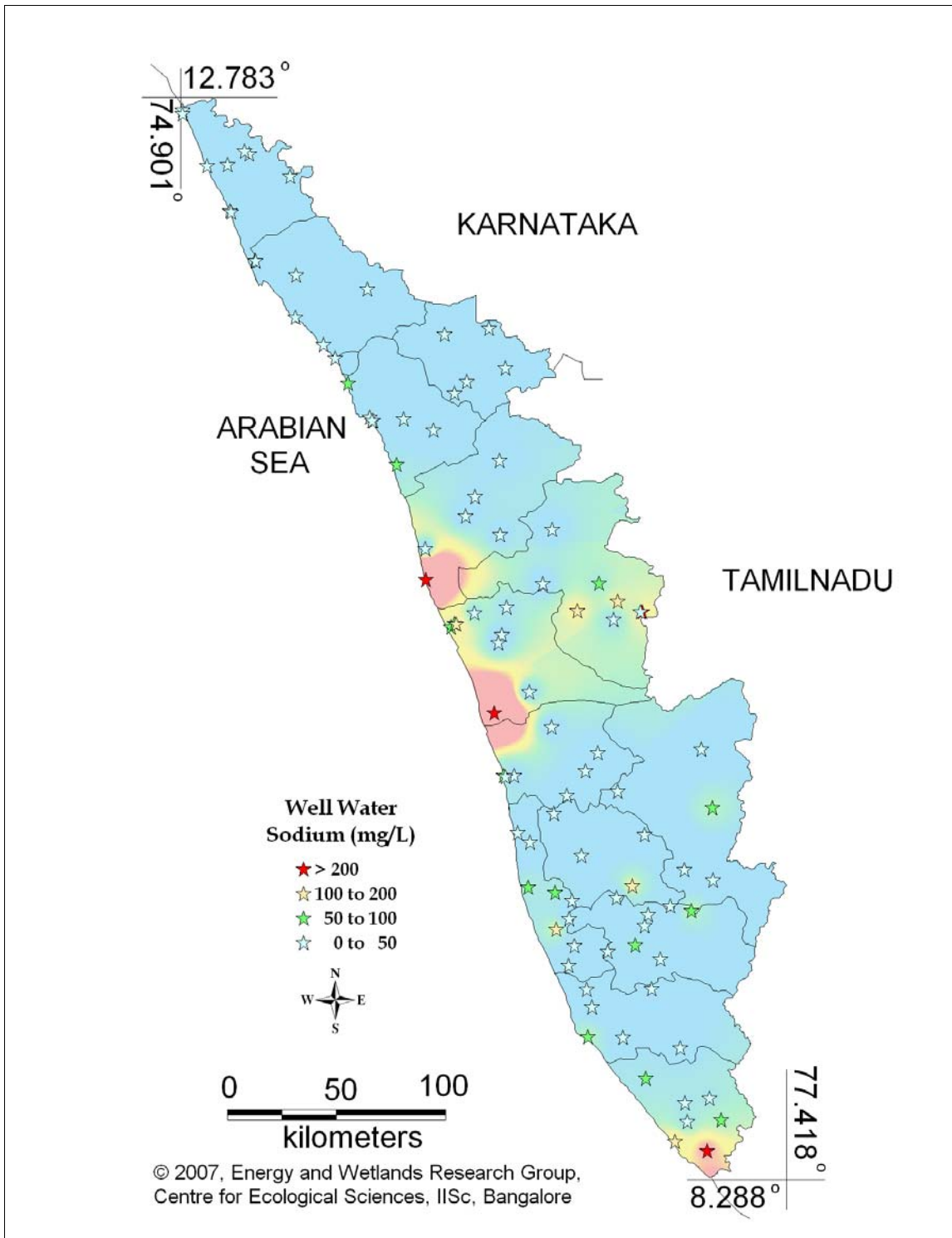
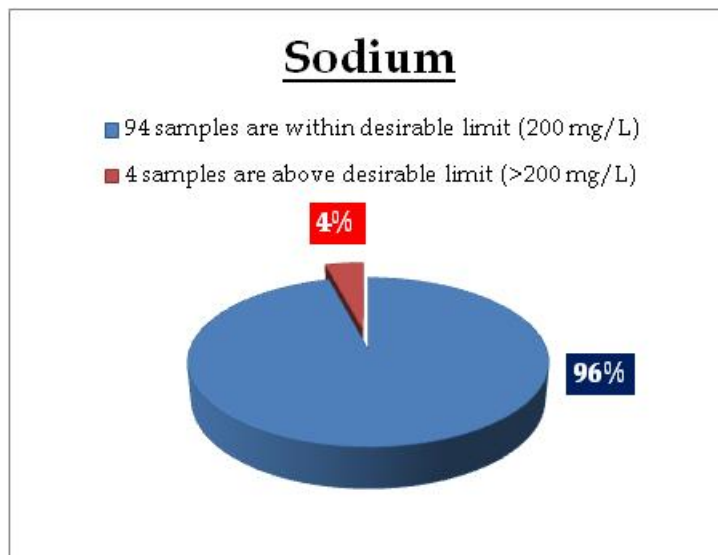


Figure 18.2: Spatial variation of sodium in Kerala's well water

Well Water - Sodium

Standard for Drinking Water (WHO)

Desirable Limit: 200mg/L



Remarks

Sampling sites above desirable limit of Sodium:

Location	Value	District
Neyyathinkara	216.20	Tiruvanthapuram
Placimada	229.32	Palakkad
Ponnani	1120.14	Palakkad
Koodungalur	1203.20	Thrissur

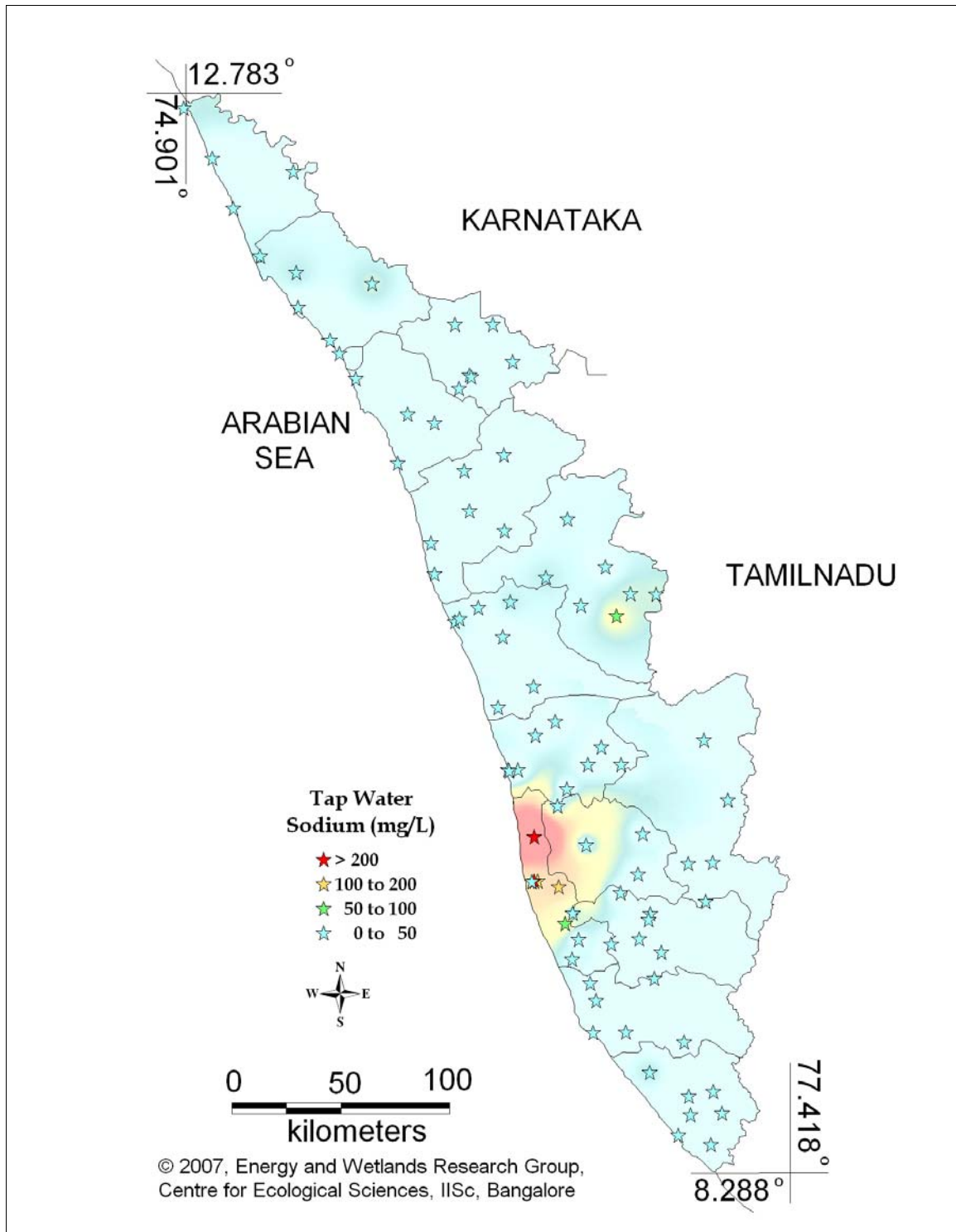
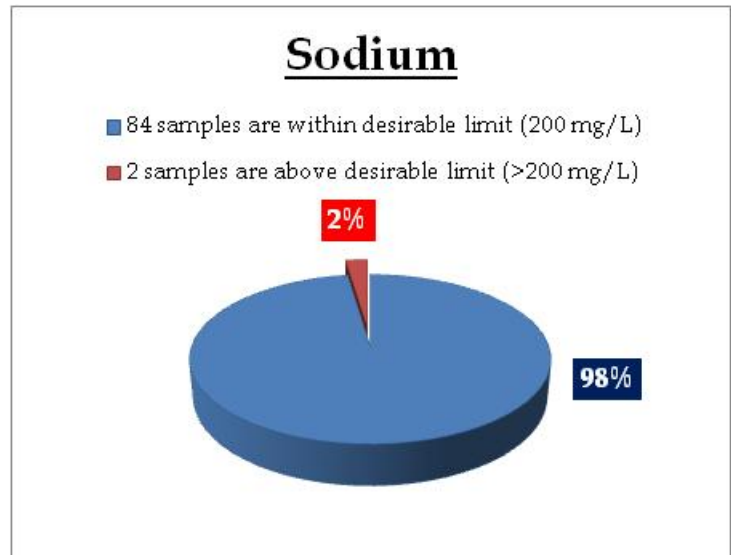


Figure 18.3: Spatial variation of sodium in Kerala's tap water

Tap water - Sodium

Standard for Drinking Water (WHO)

Desirable Limit: 200mg/L



Remarks

Sampling sites above desirable limit of Sodium are:

Location	Value	District
Thathampally	257.56	Alappuzha
Kalikulam Junction	1259.60	Alappuzha