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Desalination Treatment of Irrigation Water

Guest Editors:

Dr. David D. J. Antia

DCA Consultants Ltd., The
Bungalow, Castleton Farm,
Falkirk FK2 8SD, UK

Dr. Chicgoua Noubactep

Angewandte Geologie,
Universität Göttingen,
Goldschmidtstraße 3, D-37077
Göttingen, Germany

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Message from the Guest Editors

Dear Colleagues,

Irrigation accounts for about 70% of global anthropogenic water usage. Global agricultural land is about 5 billion ha. About 20% of arable land is irrigated. About 30% of irrigated land is irrigated with saline water (>60 million ha). The amount of land affected by saline irrigation is increasing by about 4 million ha a⁻¹. Soil salinization, associated with saline irrigation, results in the abandonment of about 20,000 ha a⁻¹. Irrigated land accounts for 40% of global food production. Irrigated water demand is <5,000 m³ ha⁻¹ a⁻¹ for most greenhouses, 1000–10,000 m³ ha⁻¹ a⁻¹ for most arable crops, and >50,000 m³ ha⁻¹ a⁻¹ for some rice crops. Global food demand is expected to rise by between 60% and 100% by 2050, to feed 9.1 billion people. The majority of the future increase in food production, required to meet this demand, will be confined to areas which are currently irrigated with saline water or which will become newly irrigated with saline water. [...]

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Special Issue



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Water Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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