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## Reclamation of salinity affected unproductive soils and lands into productive one and production of microalgae biomass for commercial purposes

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The issue of salinization and salinity intrusion is one of the elevated global problems. The issue of the salinization of Australia's inland ground water is a recurring and major environmental problem that is often the result of previous uses of the land for agricultural purposes and the use of certain irrigation practices. Inundation of land by saline water for long periods leads to its percolation into the surrounding soils, resulting in altered soil chemistry. Prolonged inundation inhibits the fixation of free nitrogen and halts mineralization, thus impairing soil fertility within a few years. The elevation of a water table that features increased salinity levels (sometimes approaching or even exceeding that of seawater) means that while the environmental ramifications are potentially massive (and include crop damage), it is true also that such waters are an untapped and largely unexplored aquatic resource. It is no doubt true that such inland areas present a wonderful opportunity to farm a variety of fish, Mollusca and crustaceans (an opportunity that has thus far been realized on a relatively very small scale), but there is no doubt considerable scope to grow microalgae, which underpin the bottom of the food chain in aquatic systems and have an enormous number of potential uses. Microalgae are potentially ideal candidates for remediation of these salt affected soil and lands. Microalgae can be deployed for bioremediation at sites with highly variable salinities, without significant effects on end-product potential.

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