Assisted phytostabilization of massive mine wastes in Chile: an opportunity for valuing biosolids in semiarid areas

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Our main goal has been the development of cost-effective methods for assisted phytostabilization of TSF using biosolids (and other massive organic residues)
Case study sites in north-central Chile

Biosolids and other organic residues were incorporated into tailings, at different doses (100 to 200 ton/ha, d.w. basis). Native herbs and shrubs were planted in all plots. Irrigation was supplemented the first winters.
EL SOLDADO COPPER MINE, CENTRAL CHILE

5 m x 5 m plots

Biosolids were incorporated into tailings at different doses (100 to 400 ton/ha, d.w.basis), either mixed or on surface of tailings. Native herbs and shrubs were planted in all plots. No irrigation was given to the plots.

2006 2011

EL SOLDADO COPPER MINE, CENTRAL CHILE – WORK ON WALL

2 ha – experimental site

Biosolids (100 ton/ha, d.w.basis) were mixed with rubble from discarded lixiviation piles and herb/grass seeds at the base of the wall and then moved up the wall and mixed with tailings. No irrigation was given to the site.

2011 2014