

MULTISECTORAL WATER RESOURCES MANAGEMENT: COPIAPÓ CASE AND ITS CONTRIBUTION TO THE MINING INDUSTRY

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ABSTRACT

The present paper uses the problem of water resources availability in Copiapó Valley-Up to propose solutions which could help maintain a sustainable equilibrium for all the actors involved.

Copiapó valley's water resource characteristics are presented, as well as different initiatives and proposals developed to modify and increase the resource availability. Similar experiences in other regions and countries are also described, as they may help to understand the problem better. Possible solutions are formulated by using information based on international experiences.

A relatively new organization to improve the regional water management a "Public-Private Water Study Table" (or "Mesa de Agua"), was created to overcome the water crisis. This institution congregates public organizations, representatives of the private world and community's representatives, all from different interests. Several proposals have been promoted on this organization to improve the water deficit: a rain stimulation system, hydrogeological studies and building desalination water plants.

In this paper, artificial recharge of aquifer's and the increase of water efficiency in the mining industry are presented as alternatives to provide a regional solution for the water crisis in the region. Tax incentives that target water resources are also discussed.

INTRODUCTION

Copiapó Valley faces a severe water shortage: on one hand, mining and agriculture have become two growing economic activities, causing a strong increase in water demand. On the other hand ground water resource availability, which are the zone's most important water sources, are extremely scarce. For example, the assigned water rights ("derechos de agua") on ground water resources are four times the volume of the natural recharge of the aquifer. These two facts have led to a serious fight over water resources in the area, which has been close to producing rationing of human consumption water.

The region's principal economic activity is mining, which provides almost 40% of the regional GDP. Despite the job opportunities, the community's perception is that the mining activity