

2021-22 Biocrusts Response to Desertification: Present and Future Projections. Centre National de Recherche Scientifique.

IR: P. Flombaum

Otros investigadores del CIMA: F. Ibarbalz y S. Velasco Ayuso

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RESUMEN:

Desertification is arguably the most relevant conservation problem in global drylands. It inevitably leads to a loss in essential ecosystem services such as soil fertility and productivity. Biological soil crusts (BSCs) are topsoil geobiological assemblages that enhance soil fertility and stability in drylands, thus partially alleviating the pernicious effects of desertification. Climate and land use changes represent major threats to BSCs. Numerous works have reported negative effects on BSCs directly related to grazing, but the effects of climate change on BSCs are less studied. Because grazing plays a central role in the economy of human societies, finding an optimal balance between animal production and ecological health of BSCs is a primary goal in drylands, especially in a changing world. Our main objective is to build an ecological risk map that assesses desertification due to degradation of BSCs as a consequence of grazing and climate change in Argentinian drylands. This map will serve to establish measures that protect the production and the well-being of local populations over time in a sustainable way.