

CLIMATE CHANGE AND *ARAUCARIA ANGUSTIFOLIA* BERT O. KTZE CONSERVATION STRATEGY

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Araucaria angustifolia, known as Parana pine, sets the boundary of the Ombrophylous Mixed Forest. Natural occurrence is above 500 m on the Brazilian Southern tableland and it has been related to climatic fluctuation during the Quaternary. The species was intensively exploited for timber use and due to the expansion of the area for agricultural use. The bioma conservation status is considered critical and only a restricted area is left on an advanced successional stage. The majority of the remaining area is under considerable pressure because it is located on the most populated areas. Besides human pressure, the species is also threatened by recent global climate change. It is a threat to some protected sites that can be decimated in a nearby future. The aim of this work is to point out areas threatened by climate change to support araucaria conservation programs.

Using 30 years climatic series with multiple linear regression maps were drawn with 1°C, 2°C and 3°C temperature increased over the natural distribution map. Latitude, longitude and elevation were use as independent variables to establish temperature suitable zones. These are preliminary results and show a significant decrease on what is nowadays favorable for the species development. With an increase of 3°C in temperature, the favourable area will be confined to a small part of the highest part of Southern Tableland. More climate variables will be used to improve maps future limits and to give priority for germplasm collection and conservation.

Key words: Atlantic rain forest, climate change, conservation.

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