

# SUCCESS CASES OF THE STATE OF MINAS GERAIS/BRAZIL

## CLIMATE ACTION PLAN – PLAC MG

### Minas Gerais State Climate Vulnerability Index

The Minas Gerais State Climate Vulnerability Index (IMVC), updated in June 2024, is an assessment of the vulnerability of the Minas Gerais territory to climate change based on an integrated analysis of climate impacts and potential impacts on natural and socioeconomic systems. The study aims to define to what extent the state of Minas Gerais is and can be affected by climate change, being, therefore, the technical basis for proposing a strategy to adapt to climate change in the state.

Therefore, it is the representation of municipal vulnerability to the effects of climate change, built on the basis of the definition of vulnerability proposed by the Intergovernmental Panel on Climate Change (IPCC, 2007) and its three main components classified as sensitivity, exposure and adaptability. For each of the three dimensions of vulnerability, the main factors that allow the evaluation of the degree of exposure, sensitivity and adaptability of the territory to climate change are analyzed. For each dimension, a set of indicators is proposed to inform about each of the identified factors.

Thus, estimated vulnerability can be understood as the "extent to which a municipality in Minas Gerais is susceptible to - or is unable to deal with - the adverse effects of climate change, including natural variability and extreme weather events such as long droughts and heavy rainfall." (IPCC, 2007, p.7), being:

- Sensitivity is the "degree to which a system is influenced, positively or negatively, by climate variability or change" (IPCC, 2007);
- Exposure is defined as the "nature, amplitude, and pace of climate variation to which the system under consideration is exposed" (IPCC, 2007);
- Adaptive capacity is the "ability of a system to adapt to climate change (especially climate variability and extreme events) in order to mitigate potential damage, to seize opportunities or to address their consequences" (IPCC, 2007).

The IMVC is fundamental for the basis of public policies since it assists decision-making at the state and municipal levels regarding the definition and prioritization of local actions to reduce territorial vulnerability and adapt to climate change.

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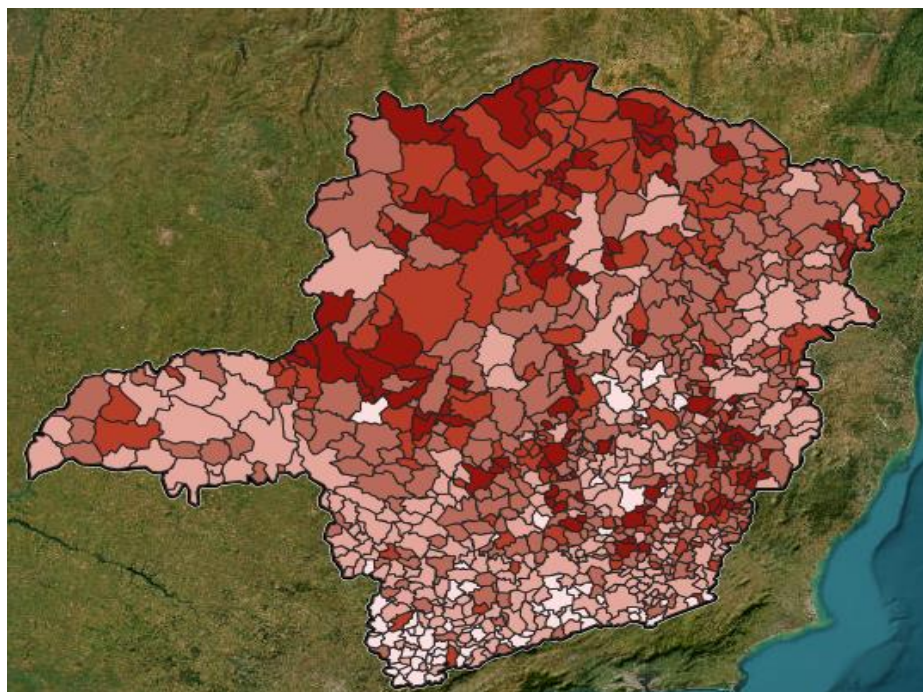
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#### CLIMATE VULNERABILITY 2024

About 38% of municipalities have relatively low or moderate vulnerability. However, the regions of Norte de Minas and Jequitinhonha appear as regions most vulnerable to climate change. The territory of Minas Gerais has about 13% of its municipalities in areas of extreme vulnerability and is home to more than 7% of the total population of the state.

	Classification	Municipalities	Population (inhabitants)	Area (square kilometers)	
	Categoria	Municípios	População (hab.)	Área (km2)	
Relatively low	Relativamente baixa	71	8%	1 340 040	22 438
Moderate	Moderada	259	30%	9 972 349	171 069
High	Alta	262	31%	5 845 268	189 709
Very high	Muito alta	147	17%	1 785 757	125 764
Extreme	Extrema	114	13%	1 493 121	77 802



Minas Gerais State Climate Vulnerability Index (2024)

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