

Dimension	Acronym	Type	Variable	Driving force	Scenarios	Data	Unit	Description	Source
Physical/natural	uso18XR	categorical	dependent	Land use and land cover	Do nothing (action)	2018	class	Land use and land cover classes	MapBiomas
Physical/natural	AreaNat	categorical	dependent	Land use and land cover	AreaNat (action)	Action	class	Land use and land cover (2018) with the action of natural areas rehabilitation	MapBiomas
Physical/natural	uso00XR	categorical	independent	Land use and land cover	BAU, OT, PT	2000	class	Land use and land cover classes	MapBiomas
Physical/natural	temp	scalar	independent	Temperature	BAU, OT	2002	°C	Average air temperature	Center for Environmental Resources Information and Hydrometeorology-Epagri/Ciram
Physical/natural	tempPT	scalar	independent	Temperature	PT	*2036	°C	Increase in average air temperature by 4°C	Center for Environmental Resources Information and Hydrometeorology-Epagri/Ciram
Physical/natural	precip	scalar	independent	Accumulated precipitation	BAU, OT	2002	mm	Accumulated precipitation	Center for Environmental Resources Information and Hydrometeorology-Epagri/Ciram
Physical/natural	precipPT	scalar	independent	Accumulated precipitation	PT	*2036	mm	Increase in accumulated precipitation by 84mm	Center for Environmental Resources Information and Hydrometeorology-Epagri/Ciram
Physical/natural	solos	categorical	independent	Type of soil	BAU, OT, PT	2004	classes	Soil typology	Embrapa
Physical/natural	tpi	categorical	independent	Type of relief	BAU, OT, PT	2000	classes	Physiographic classes	SRTM
Physical/natural	mde	scalar	independent	Altitude	BAU, OT, PT	2000	mm	Elevations	SRTM
Physical/natural	estrad_osm	scalar	independent	Road network	BAU, OT, PT	2018	km/km2	Road density	OSM/IBGE
Economic	agrov_06	scalar	independent	Rural agribusiness	BAU	2006	%	Percentage of family farming participation in the value of rural agribusiness production	Agricultural Census/IBGE
Economic	agrov_17	scalar	independent	Rural agribusiness	BAU, OT, PT	2017	%	Percentage of family farming participation in the value of rural agribusiness production	Agricultural Census/IBGE
Economic	agrovOT	scalar	independent	Rural agribusiness	OT	*2036	%	55% increase in the participation of family agriculture in rural agribusiness (2017)	Agricultural Census/IBGE
Economic	agrovPT	scalar	independent	Rural agribusiness	PT	*2036	%	18% increase in the participation of family agriculture in rural agribusiness (2017)	Agricultural Census/IBGE
Economic	efetb_00	scalar	independent	Cattle herd	BAU, OT, PT	2000	%	Of cattle in the total herd	Municipal Livestock Survey-PPM/IBGE
Economic	efetb_18	scalar	independent	Cattle herd	BAU, OT, PT	2018	%	Of cattle in the total herd	Municipal Livestock Survey-PPM/IBGE
Economic	efets_00	scalar	independent	Swine Herd	BAU, OT, PT	2000	%	Swine in the total herd	Municipal Livestock Survey-PPM/IBGE
Economic	efets_18	scalar	independent	Swine Herd	BAU, OT, PT	2018	%	Swine in the total herd	Municipal Livestock Survey-PPM/IBGE
Economic	efetg_00	scalar	independent	Chicken Herd	BAU, OT, PT	2000	%	Chicken in the total herd	Municipal Livestock Survey-PPM/IBGE
Economic	efetg_18	scalar	independent	Chicken Herd	BAU, OT, PT	2018	%	Chicken in the total herd	Municipal Livestock Survey-PPM/IBGE
Economic	empco_06	scalar	independent	Formal employment—commerce	BAU, OT, PT	2006	individuals	Formal employees in commerce	Annual Social Information Report - RAIS/Ministry of Economy
Economic	empco_18	scalar	independent	Formal employment—commerce	BAU, OT, PT	2018	individuals	Formal employees in commerce	Annual Social Information Report - RAIS/Ministry of Economy
Economic	empin_06	scalar	independent	Formal employment—industry	BAU, OT, PT	2006	individuals	Formal employees in industry	Annual Social Information Report - RAIS/Ministry of Economy

Economic	empin_18	scalar	independent	Formal employment—industry	BAU, OT, PT	2018	individuals	Formal employees in industry	Annual Social Information Report - RAIS/Ministry of Economy
Economic	empag_06	scalar	independent	Formal employment—agriculture	BAU, OT, PT	2006	individuals	Formal employees in agriculture	Annual Social Information Report - RAIS/Ministry of Economy
Economic	empag_18	scalar	independent	Formal employment—agriculture	BAU, OT, PT	2018	individuals	Formal employees in agriculture	Annual Social Information Report - RAIS/Ministry of Economy
Economic	fipro_06	scalar	independent	Financing—Pronaf	BAU,PT	2006	%	Of the establishments with financing, percentage of those that received PRONAF**	Agricultural Census/IBGE
Economic	fipro_17	scalar	independent	Financing—Pronaf	BAU,OT, PT	2017	%	Of the establishments with financing, percentage of those that received PRONAF**	Agricultural Census/IBGE
Economic	fiproOT	scalar	independent	Financing—Pronaf	OT	*2036	%	Increase of 0.3% in the number of agricultural establishments with Pronaf financing (2017)	Agricultural Census/IBGE
Economic	indge_06	scalar	independent	Processing industries	BAU,OT, PT	2006	unit	Processing industries	Annual Social Information Report - RAIS/Ministry of Economy
Economic	indge_18	scalar	independent	Processing industries	BAU,OT, PT	2018	unit	Processing industries	Annual Social Information Report - RAIS/Ministry of Economy
Economic	pibca_02	scalar	independent	Gross Domestic Product—GDP	BAU	2002	R\$	GDP per capita (relation between the GDP and the municipality's population)	Gross Domestic Product of the Municipality/IBGE
Economic	pibca_17	scalar	independent	Gross Domestic Product—GDP	BAU,OT, PT	2017	R\$	GDP per capita (relation between the GDP and the municipality's population)	Gross Domestic Product of the Municipality/IBGE
Economic	pibcaOT	scalar	independent	Gross Domestic Product—GDP	OT	*2036	R\$	54% increase in GDP per capita (2017)	Gross Domestic Product of the Municipality/IBGE
Economic	pibcaPT	scalar	independent	Gross Domestic Product—GDP	PT	*2036	R\$	13.5% increase in GDP per capita (2017)	Gross Domestic Product of the Municipality/IBGE
Economic	terra_00	scalar	independent	Agricultural land price	BAU,OT, PT	2000	R\$/h	Most common value of hectare of land in the category: Prime land	Center of Socioeconomics and Agricultural Planning-Epagri/Cepa
Economic	terra_18	scalar	independent	Agricultural land price	BAU,OT, PT	2018	R\$/h	Most common value of hectare of land in the category: Prime land	Center of Socioeconomics and Agricultural Planning-Epagri/Cepa
Economic	renda_00	scalar	independent	Per capita income	BAU,OT, PT	2000	R\$	Ratio of the sum of the income of all the individuals in the family and the total number	Demographic Census/IBGE
Economic	renda_10	scalar	independent	Per capita income	BAU,OT, PT	2010	R\$	Ratio of the sum of the income of all the individuals in the family and the total number	Demographic Census/IBGE
Economic	mad_00	scalar	independent	Log Production	BAU,OT, PT	2000	m <sup>3</sup>	Amount of log produced	Production of Vegetable Extraction and Forestry-PEVS/IBGE
Economic	mad_18	scalar	independent	Log Production	BAU,OT, PT	2018	m <sup>3</sup>	Amount of log produced	Production of Vegetable Extraction and Forestry-PEVS/IBGE
Economic	vabag_00	scalar	independent	Gross value added of agriculture and cattle raising	BAU,OT, PT	2000	%	Participation of the gross value added (GVA) of agriculture and cattle-raising in the total	Gross Domestic Product of the Municipality/IBGE
Economic	vabag_17	scalar	independent	Gross value added of agriculture and cattle raising	BAU,OT, PT	2017	%	Participation of the gross value added (GVA) of agriculture and cattle-raising in the total	Gross Domestic Product of the Municipality/IBGE
Economic	vllei_00	scalar	independent	Milk production value	BAU,OT, PT	2000	%	Value of milk production as a function of total farming GVA	Municipal Livestock Survey-PPM/IBGE
Economic	vllei_17	scalar	independent	Milk production value	BAU,OT, PT	2017	%	Value of milk production as a function of total farming GVA	Municipal Livestock Survey-PPM/IBGE
Sociocultural	agrif_06	scalar	independent	Family agriculture	BAU,OT, PT	2006	%	Rural establishments with family farming typology	Agricultural Census/IBGE
Sociocultural	agrif_17	scalar	independent	Family agriculture	BAU,OT, PT	2017	%	Rural establishments with family farming typology	Agricultural Census/IBGE
Sociocultural	escps_06	scalar	independent	Schooling of the head farmer	BAU,OT, PT	2006	individuals	Head farmers with higher education	Agricultural Census/IBGE

Sociocultural	escps_17	scalar	independent	Schooling of the head farmer	BAU,OT, PT	2017	individuals	Head farmers with higher education	Agricultural Census/IBGE
Sociocultural	idadp_06	scalar	independent	Age of the head farmer	BAU, OT	2006	individuals	Head farmers 55 years of age or older	Agricultural Census/IBGE
Sociocultural	idadp_17	scalar	independent	Age of the head farmer	BAU,OT, PT	2017	individuals	Head farmers 55 years of age or older	Agricultural Census/IBGE
Sociocultural	idadpPT	scalar	independent	Age of the head farmer	PT	2036*	individuals	70% increase in the number of head farmers 55 years of age or older	Agricultural Census/IBGE
Sociocultural	idhm_00	scalar	independent	Human Development Index—HDI	BAU,OT, PT	2000	index	Municipal human development index	Atlas of Human Development of Brazil/PNUD
Sociocultural	idhm_10	scalar	independent	Human Development Index—HDI	BAU,OT, PT	2010	index	Municipal human development index	Atlas of Human Development of Brazil/PNUD
Sociocultural	trabp_06	scalar	independent	Rural workers	BAU,OT, PT	2006	individuals	Rural workers linked to the head farmer	Agricultural Census/IBGE
Sociocultural	trabp_17	scalar	independent	Rural workers	BAU,OT, PT	2017	individuals	Rural workers linked to the head farmer	Agricultural Census/IBGE
Sociocultural	arees_06	scalar	independent	Land structure	BAU,OT, PT	2006	ha	Average area of rural establishments: total occupied area (ha)/number of establishments	Agricultural Census/IBGE
Sociocultural	arees_17	scalar	independent	Land structure	BAU,OT, PT	2017	ha	Average area of rural establishments: total occupied area (ha)/number of establishments	Agricultural Census/IBGE
Technology	renmi_02	scalar	independent	Maize yield	BAU	2002	kg/ha	Average maize yield	Municipal agricultural production-PAM/IBGE
Technology	renmi_17	scalar	independent	Maize yield	BAU,OT, PT	2017	kg/ha	Average maize yield	Municipal agricultural production-PAM/IBGE
Technology	renmiOT	scalar	independent	Maize yield	OT	2036*	kg/ha	45% increase in maize yield (2017)	Municipal agricultural production-PAM/IBGE
Technology	renmiPT	scalar	independent	Maize yield	PT	2036*	kg/ha	15% increase in maize yield (2017)	Municipal agricultural production-PAM/IBGE
Technology	renso_02	scalar	independent	Soybean yield	BAU	2002	kg/ha	Average soybean yield	Municipal agricultural production-PAM/IBGE
Technology	renso_17	scalar	independent	Soybean yield	BAU,OT, PT	2017	kg/ha	Average soybean yield	Municipal agricultural production-PAM/IBGE
Technology	rensoOT	scalar	independent	Soybean yield	OT	2036*	kg/ha	53% increase in soybean yield (2017)	Municipal agricultural production-PAM/IBGE
Technology	rensoPT	scalar	independent	Soybean yield	PT	2036*	kg/ha	17.5% increase in soybean yield (2017)	Municipal agricultural production-PAM/IBGE
Technology	renfe_02	scalar	independent	Bean yield	BAU,OT, PT	2002	kg/ha	Average bean yield	Municipal agricultural production-PAM/IBGE
Technology	renfe_17	scalar	independent	Bean yield	BAU,OT, PT	2017	kg/ha	Average bean yield	Municipal agricultural production-PAM/IBGE
Technology	renfu_02	scalar	independent	Tobacco yield	BAU,OT, PT	2002	kg/ha	Average yield for tobacco	Municipal agricultural production-PAM/IBGE
Technology	renfu_17	scalar	independent	Tobacco yield	BAU,OT, PT	2017	kg/ha	Average yield for tobacco	Municipal agricultural production-PAM/IBGE
Technology	agrot_06	scalar	independent	Use of agrochemicals	BAU,OT, PT	2006	%	Rural establishments that use agrochemicals	Agricultural Census/IBGE
Technology	agrot_17	scalar	independent	Use of agrochemicals	BAU,OT, PT	2017	%	Rural establishments that use agrochemicals	Agricultural Census/IBGE
Technology	mecan_06	scalar	independent	Mechanization in the rural property	BAU,OT, PT	2006	index	Level of mechanization of rural property (number of tractors/area occupied by	Agricultural Census/IBGE

Technology	mecan_17	scalar	independent	Mechanization in the rural property	BAU,OT, PT	2017	index	Level of mechanization of rural property (number of tractors/area occupied by Agricultural establishments that received technical orientation from government	Agricultural Census/IBGE
Technology	ortec_06	scalar	independent	Technical orientation	BAU,OT, PT	2006	%	Agricultural establishments that received technical orientation from government	Agricultural Census/IBGE
Technology	ortec_17	scalar	independent	Technical orientation	BAU,OT, PT	2017	%	Agricultural establishments that received technical orientation from government	Agricultural Census/IBGE
Demographic	depop_00	scalar	independent	Population density	BAU,OT, PT	2000	density	Number of inhabitants in the municipality/area of the municipality	Population estimate/IBGE e Demographic Census/IBGE
Demographic	depop_18	scalar	independent	Population density	BAU,OT, PT	2018	density	Number of inhabitants in the municipality/area of the municipality	Population estimate/IBGE e Demographic Census/IBGE
Demographic	txrur_00	scalar	independent	Rural population	BAU, OT	2000	%	Rural population in relation to the total population	Demographic Census/IBGE
Demographic	txrur_10	scalar	independent	Rural population	BAU,OT, PT	2010	%	Rural population in relation to the total population	Demographic Census/IBGE
Demographic	txrurPT	scalar	independent	Rural population	PT	2036*	%	20% reduction in rural population (2010)	Demographic Census/IBGE

\*2036 - Scenario for the year 2036, as per analyzed/observed period of 18 years of data

\*\*PRONAF - Programa Nacional de Fortalecimento da Agricultura Familiar (national program for strengthening family agriculture)

BAU - business as usual scenario

OT - optimistic scenario

PT - pessimistic scenario