

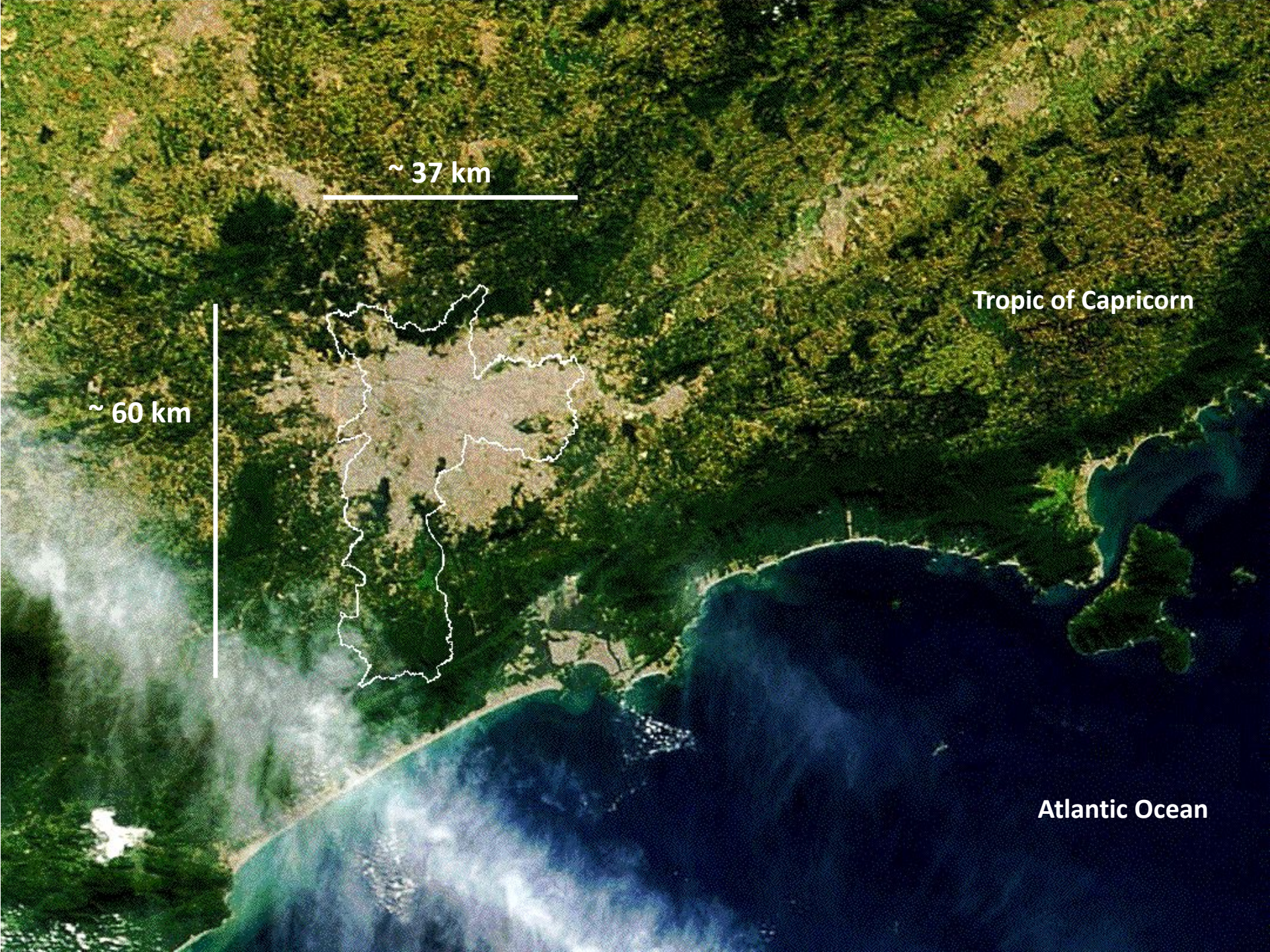


**CIDADE DE
SÃO PAULO**
VERDE E
MEIO AMBIENTE



Climate Action & Planning in São Paulo

Laura Lucia Vieira Ceneviva
16.th September 2019
São Paulo



~ 37 km

~ 60 km

Tropic of Capricorn

Atlantic Ocean

Créditos: José Cordeiro/ SPTuris.



MIRANTE DO NÚCLEO CURUCUTU

<http://www.cidadedesaopaulo.com/ecoturismo/roteiros/mata-atlantica/>



01.07.2008 14:30

https://pt.wikipedia.org/wiki/Serra_do_Mar



<http://www.cidadedesaopaulo.com/ecoturismo/roteiros/mata-atlantica/>

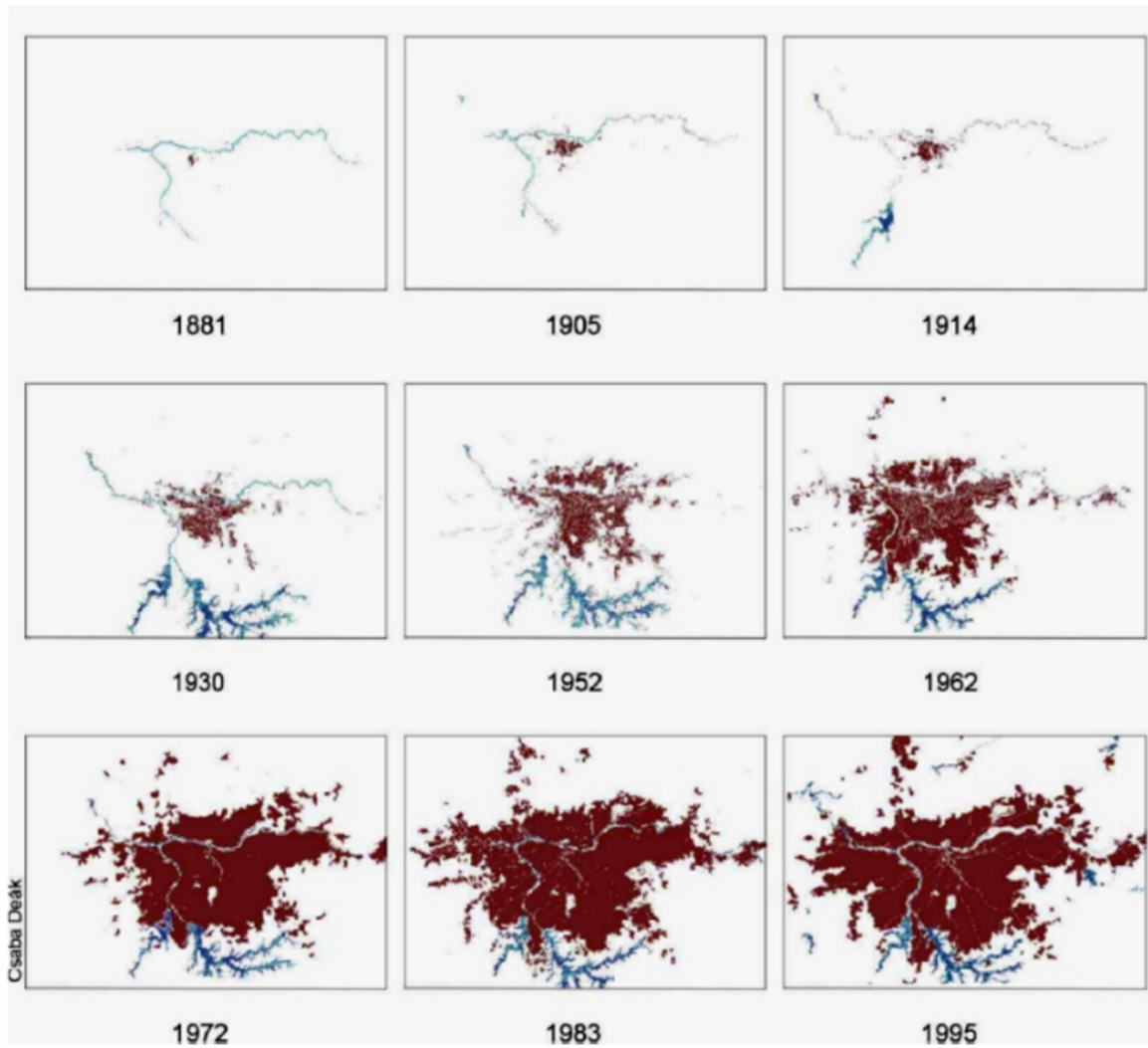


Fonte: <http://meioambiente.culturamix.com/natureza/grande-barreira-da-serra-do-mar> , acessado em 10/10/2017.



<https://viagemeturismo.abril.com.br/roteiros/um-inesquecivel-passeio-pela-serra-do-mar/>

Urban Growth of São Paulo



Csaba Deák

Urban Growth of São Paulo

População nos Anos de Levantamento Censitário Município e Região Metropolitana de São Paulo, Estado de São Paulo e Brasil 1872 a 2010								
Anos	Município de São Paulo		Região Metropolitana de SP		Estado de São Paulo		Brasil	
	População	Taxa de Crescimento ⁽¹⁾	População	Taxa de Crescimento ⁽¹⁾	População	Taxa de Crescimento ⁽¹⁾	População	Taxa de Crescimento ⁽¹⁾
1872	31.385	4,1	-	-	837.354	2,8	10.112.061	2,0
1890	64.934	14,0	-	-	1.384.753	5,1	14.333.915	1,9
1900	239.820	4,5	-	-	2.282.279	3,6	17.318.556	2,9
1920	579.033	4,2	-	-	4.592.188	2,3	30.635.605	1,5
1940	1.326.261	5,2	1.568.045	5,3	7.180.316	2,4	41.236.315	2,3
1950	2.198.096	5,6	2.622.786	6,1	9.134.423	3,6	51.944.397	3,1
1960	3.781.446	4,6	4.739.406	5,6	12.974.699	3,2	70.119.071	2,9
1970	5.924.615	3,7	8.139.730	4,5	17.771.948	3,5	93.139.037	2,5
1980	8.493.226	1,2	12.588.725	1,9	25.040.712	2,1	119.002.706	1,9
1991	9.646.185	0,9	15.444.941	1,6	31.588.925	1,8	146.825.475	1,6
2000	10.434.252	0,8	17.878.703	1,0	37.032.403	1,1	169.799.170	1,2
2010	11.253.503		19.683.975		41.262.799		190.755.799	

Fonte: IBGE, Censos Demográficos

(1) Taxa de Crescimento Geométrico Anual

Metropolitan Region of São Paulo



São Paulo	Population (2017)	Area	GDP (2014):
Municipality	11.696.088 hab.	1.522,99 km ²	R\$ 628,0 bi → ~US\$ 189,2 bi
Metropolitan Region	20.717.505 hab.	7.943,82 km ²	R\$ 1.022,9 bi → ~US\$ 308,1 bi

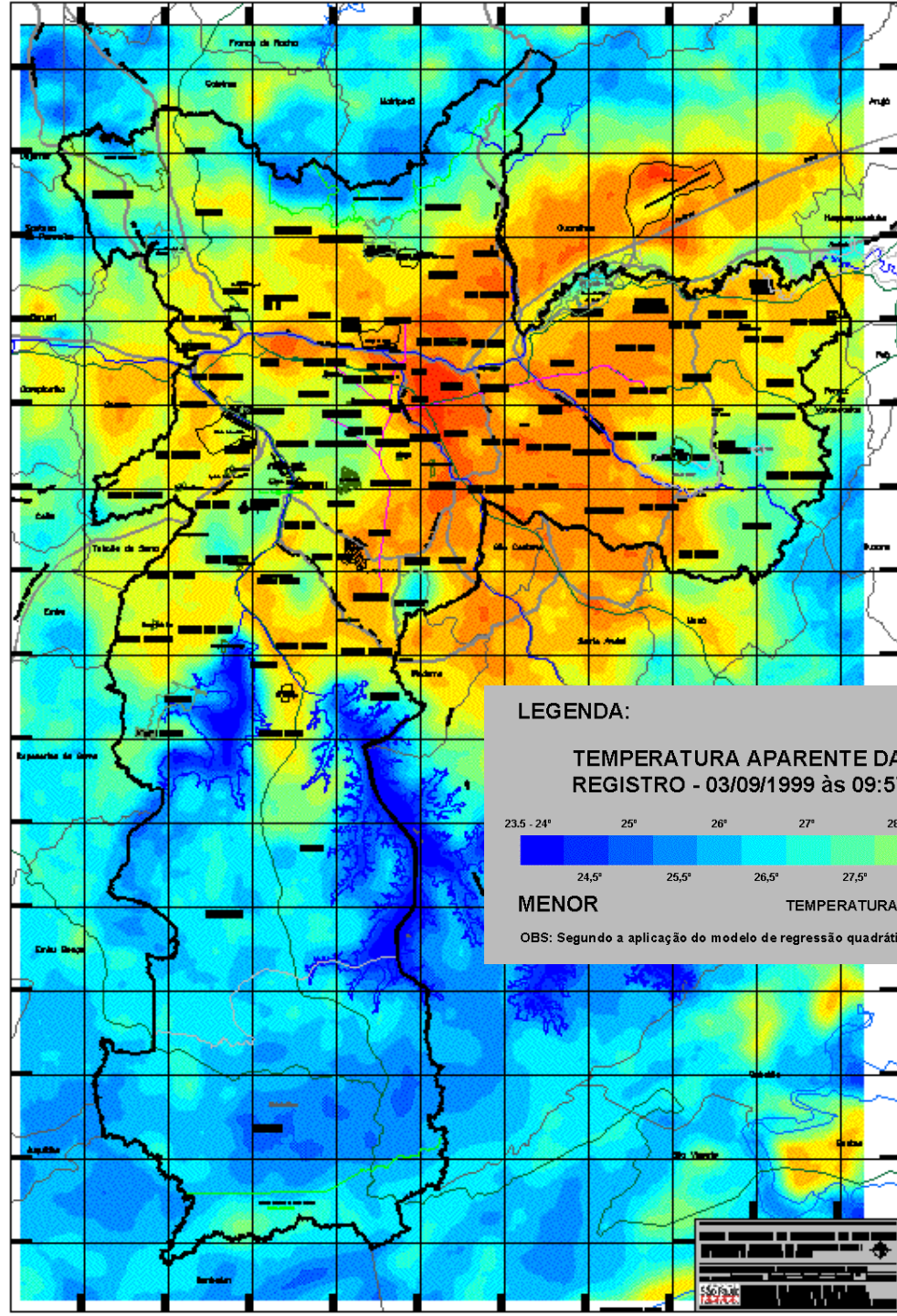
Regiões, Prefeituras Regionais e Distritos
Município de São Paulo



Municipality of São Paulo

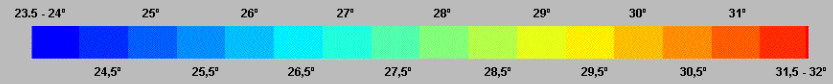
32 Subprefectures

96 districts



LEGENDA:

TEMPERATURA APARENTE DA SUPERFÍCIE (ALVO) DE REGISTRO - 03/09/1999 às 09:57h



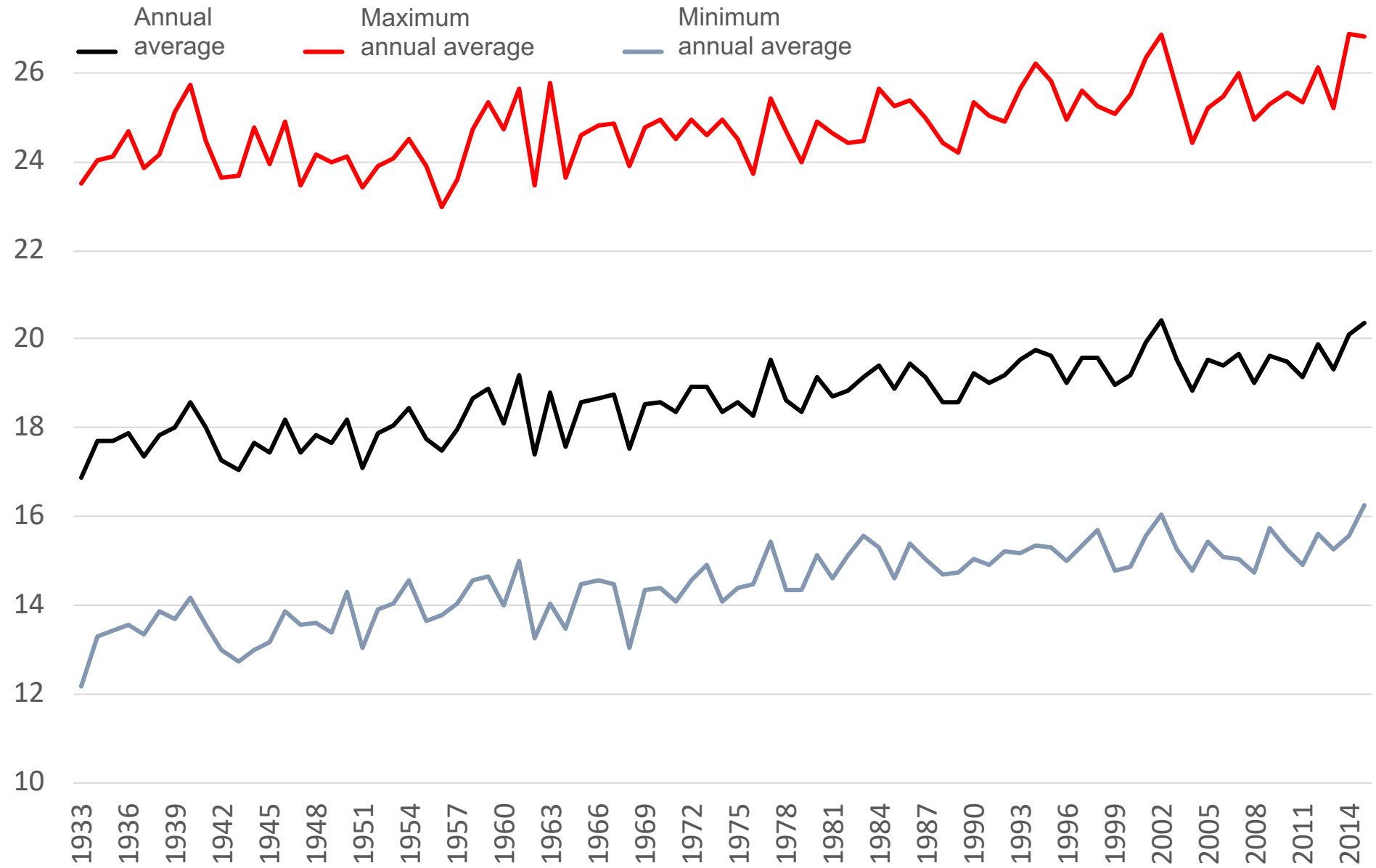
MENOR

TEMPERATURA ($\pm 1^\circ \text{C}$)

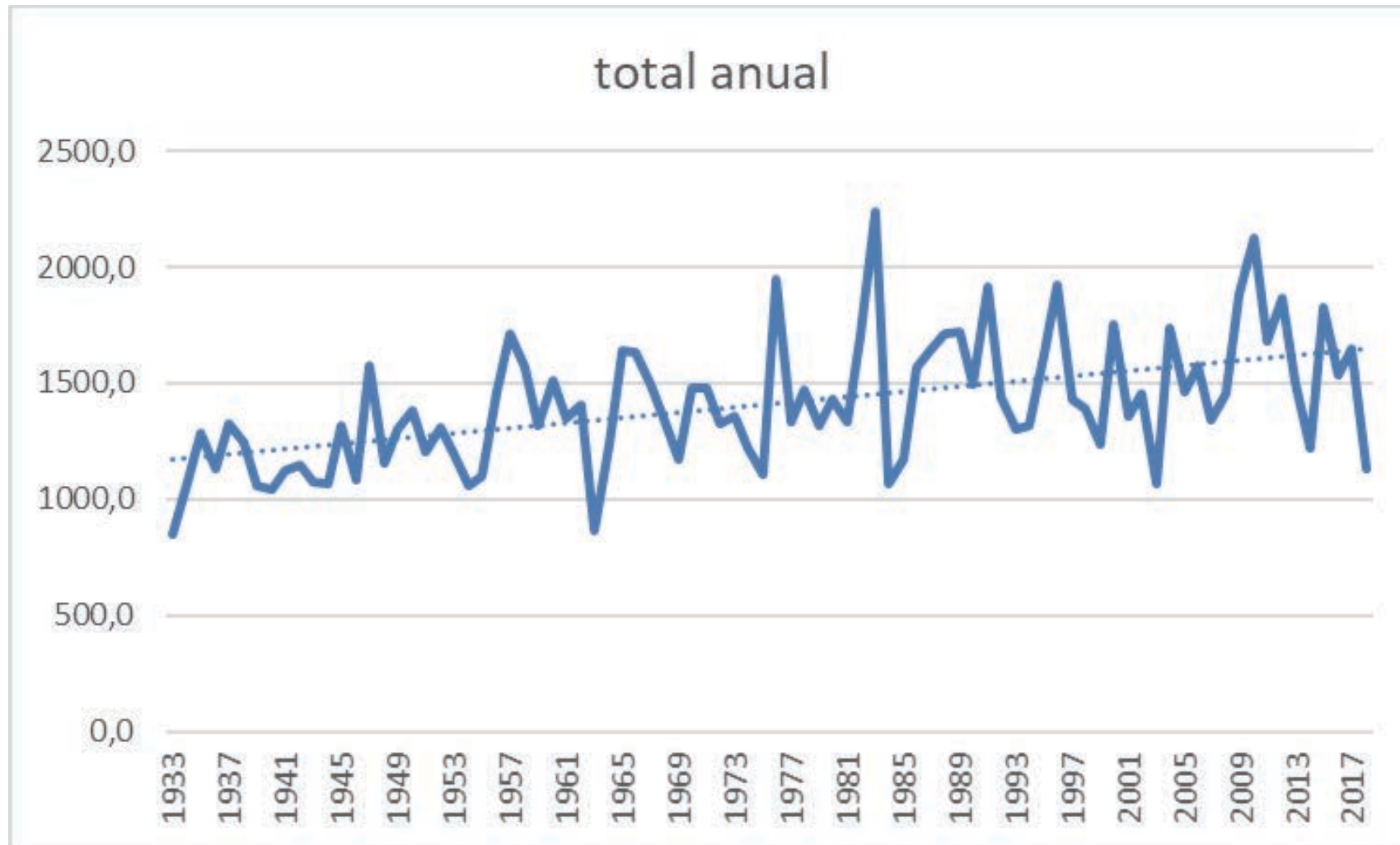
MAIOR

OBS: Segundo a aplicação do modelo de regressão quadrática de Malaret et al. (1985)

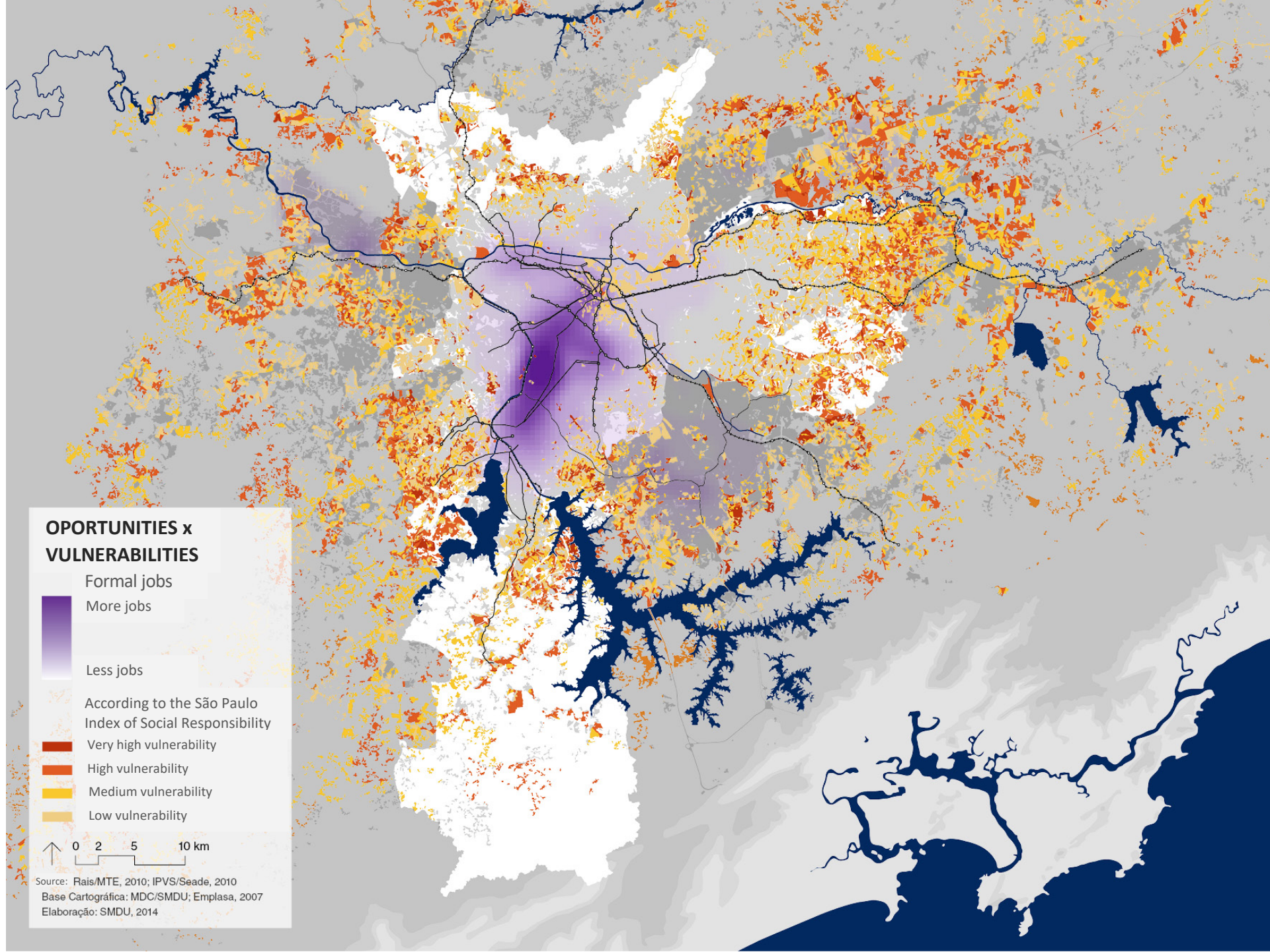
Temperature – Meteorological Unit Água Funda



Annual accumulated rainfall

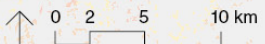


Source: Apresentação da Prof. Dra. Maria Assunção Faus da Silva Dias, do IAG/USP, feita ao Comitê Municipal de Mudança do Clima e Ecoeconomia, em 25/03/2019



OPORTUNITIES x VULNERABILITIES

- Formal jobs
- More jobs
- Less jobs
- According to the São Paulo Index of Social Responsibility
- Very high vulnerability
- High vulnerability
- Medium vulnerability
- Low vulnerability



Source: Rais/MTE, 2010; IPVS/Seade, 2010
Base Cartográfica: MDC/SMDU; Emplasa, 2007
Elaboração: SMDU, 2014

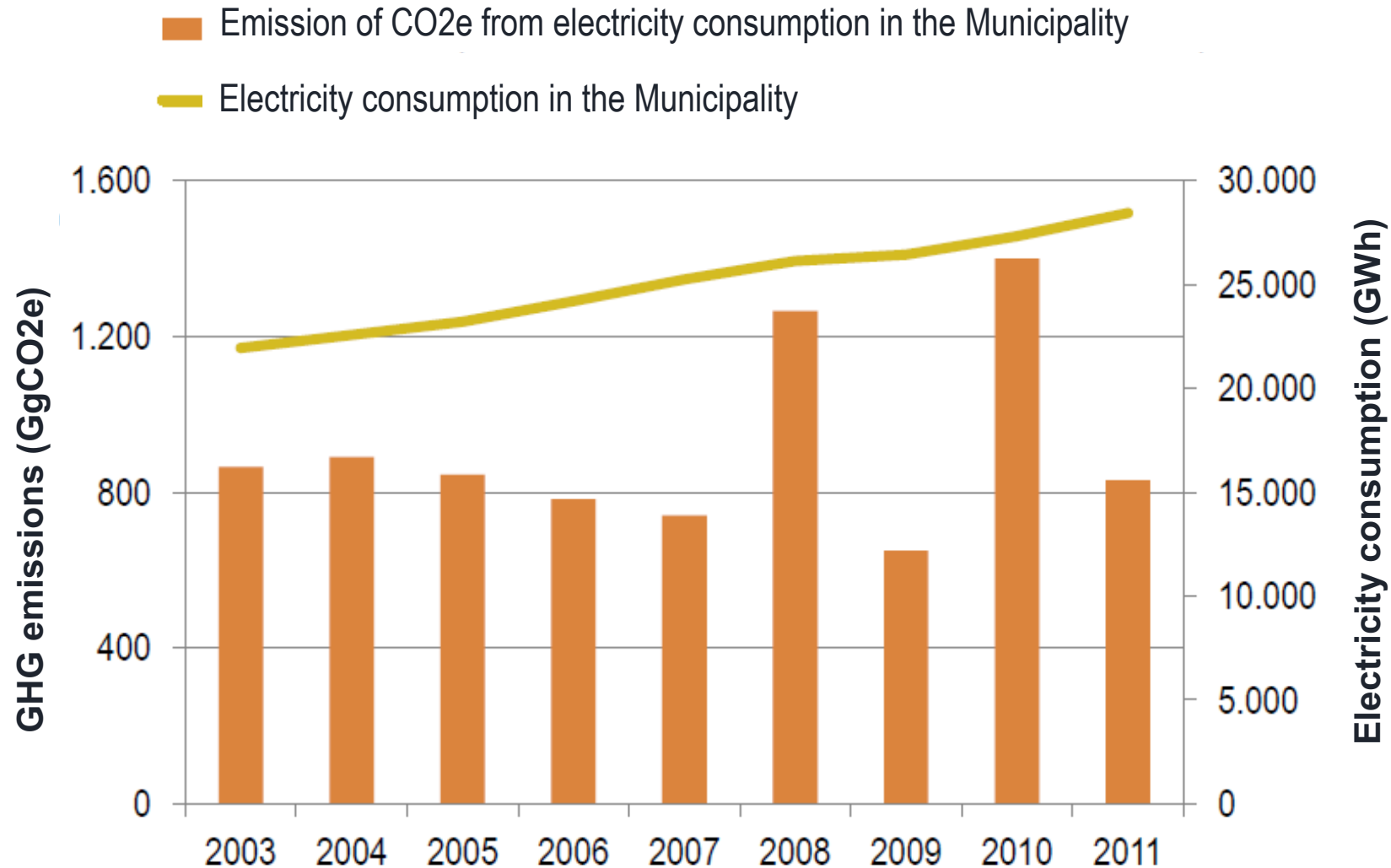


Greenhouse gas emissions inventory 2003-2009, extended to 2010 and 2011 in sectors Energy and Waste

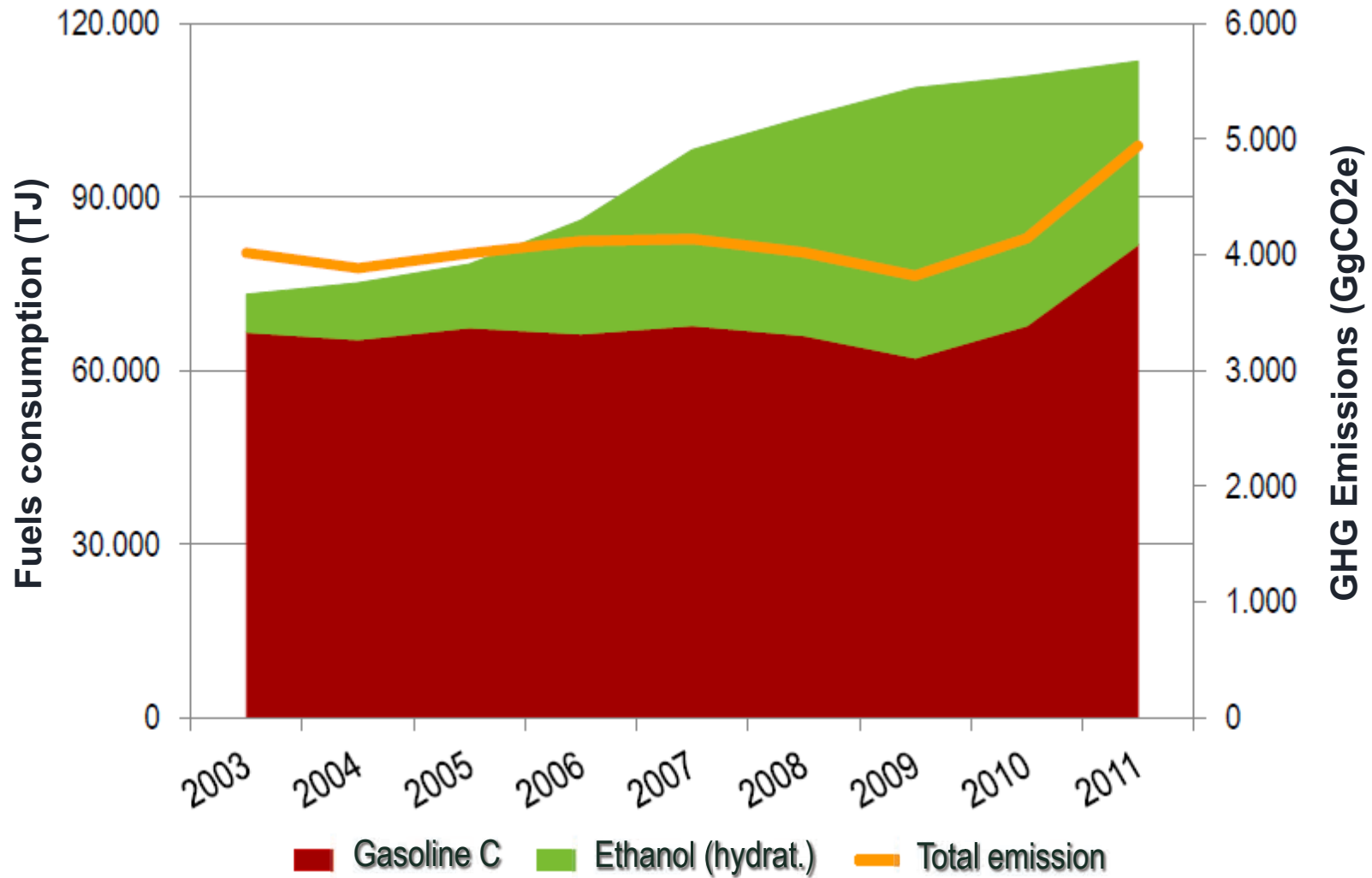
Emissões totais de GEE do Município de São Paulo 2003-2009 mais ampliação para 2010 e 2011 nos setores Energia e Resíduos

Setor	2003	2004	2005	2006	2007	2008	2009	2010	2011
	GgCO ₂ e								
Energia	12.911	13.065	12.689	12.544	13.114	13.860	12.384	13.642	13.990
Resíduos	2.199	2.260	2.335	2.474	2.658	2.307	2.363	2.445	2.440
AFOLU	10	10	9	10	10	9	8		
IPPU	206	224	251	268	301	350	359		
Totais	15.326	15.559	15.284	15.296	16.083	16.526	15.114	16.087	16.430

Electricity consumption and emission

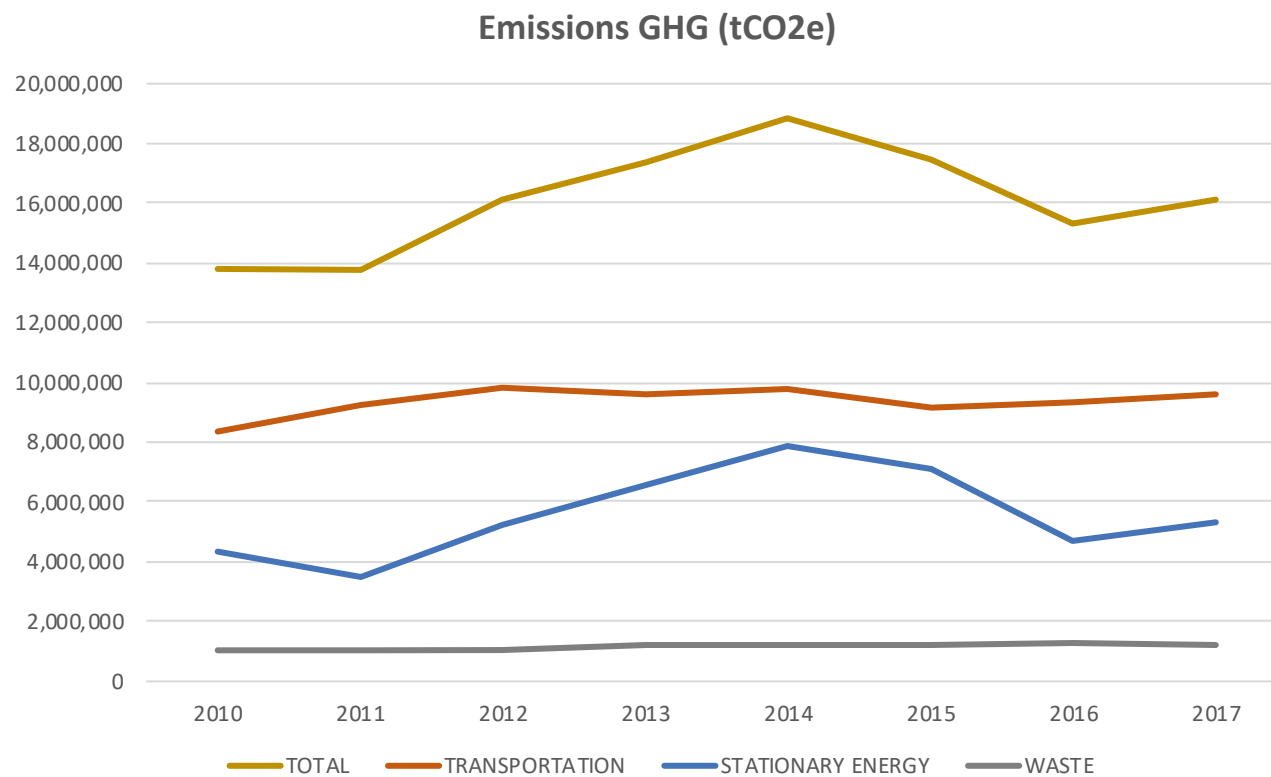


Ethanol and gasoline

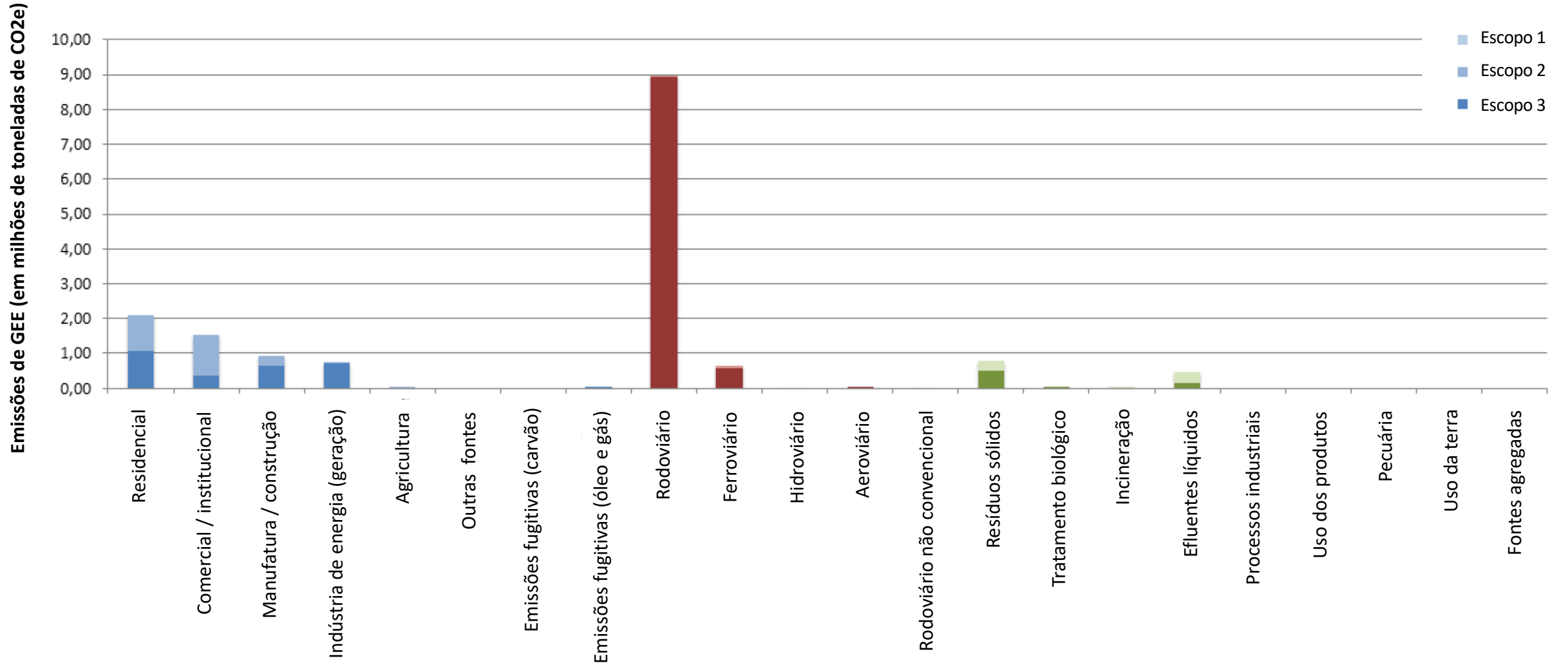


GHG Emissions in the Municipality of São Paulo from 2010 to 2017 at mode Basic of the methodology GPC

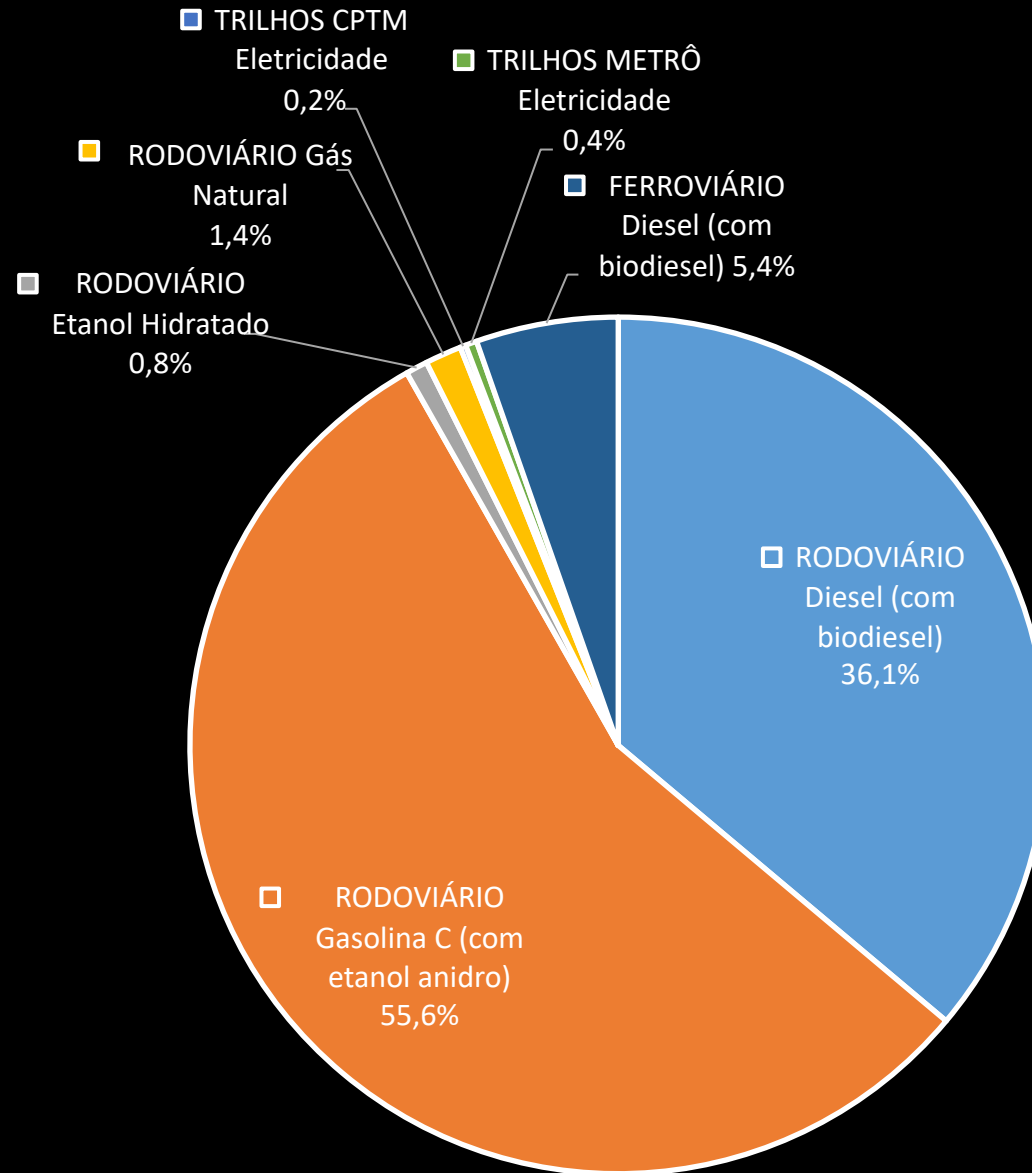
Emissões (tCO ₂ e)	2010	2011	2012	2013	2014	2015	2016	2017
Transportes	8.360.264	9.208.935	9.827.120	9.606.916	9.774.644	9.128.019	9.327.073	9.576.663
Energia Estacionária	4.366.929	3.493.047	5.202.307	6.567.184	7.877.359	7.113.776	4.707.484	5.297.164
Resíduos	1.070.858	1.065.079	1.050.680	1.175.788	1.191.014	1.233.217	1.285.942	1.257.135
TOTAL	13.798.051	13.767.061	16.080.107	17.349.888	18.843.017	17.475.012	15.320.499	16.130.962



GHG Emissions in the Municipality of São Paulo from 2010 to 2017 at mode Basic of the methodology GPC by subsector and scope



Transportation Sector Emissions - 2017 (tCO₂e)



Example of the importance of decision making opportunity: Mayor of São Paulo

The Mayor of São Paulo participated of the U20, a reunion with the most importante cities of G20, in Buenos Aires last year.

The post bellow, in his Instagram, was done two days after brazilian presidential elections last year (2018).

brunocovas In these moments when the brazilian participation in the Paris Agreement is uncertain, São Paulo reaffirms its commitment with the greenhouse gas emissions reduction. It's for this reason that I am today in Buenos Aires participating in the first reunion of the U20, which gathers the most importante cities of G20.



http://planejasampa.prefeitura.sp.gov.br/assets/up/Programa%20Metas%202019-2020_texto.pdf

Goals Program 2019-2020

(goals of the current government)

It included:

- the greenhouse gas inventory (2010 to 2017)
- Climate Action Plan

Partnership with C40



São Paulo endorsed the Deadline 2020 Commitment

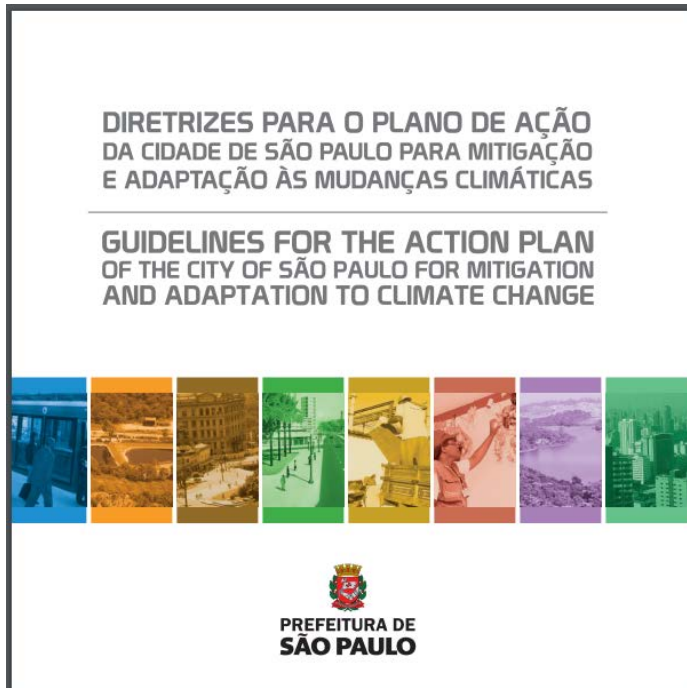
- SP did the GHG Inventory using GPC Methodology (the other inventories used first IPCC 1996 and second IPCC 2006)
- SP will prepare its Climate Action Plan, in accordance with C40 CAP framework

Existing framework precedent to the Climate Action Plan

2005 Creation of the Municipal Committee for Climate Change and Sustainable Ecoeconomy

2009 Law 14.933 established the Municipal Climate Change Policy and reaffirmed the Municipal Committee for Climate Change and Ecoeconomy

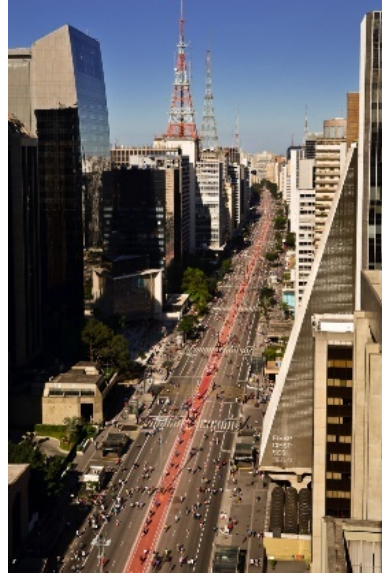
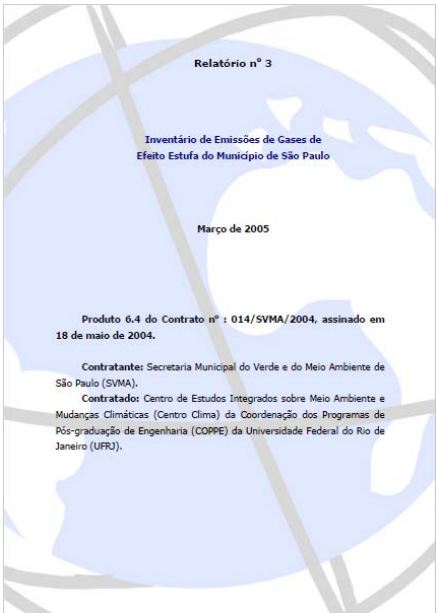
2011



Designed by six Working Groups:

- Energy
- Transportation
- Waste
- Health
- Buildings
- Land Use

Examples of what São Paulo has done/is doing to minimize emissions and to adapt to the impacts of climate change



Before After



Climate Action Plan

1.st Step

Political support

2.nd Step

“Knowledge” support

3.rd Step

Technical support

4.th Step

Government Working Group

It is **not** an environmental plan!

Sectorial policies need to incorporate

the climate change issues and the

Climate Action Plan is a very good

opportunity to do it



**CIDADE DE
SÃO PAULO**

General coordination: International Relations

Technical coordination: Green and Environment

Government

Housing

Civil Defense

Metropolitan Housing

Mobility

Licensing

Traffic

Subprefectures

Public Transportation

Urban Cleaning

Emergencies Center

Economic Development

Urban Development

Health

SP Urbanism

Human Rights

SP Works

Social Assistance

Urban Infrastructure

Urban Security

Controllership

and other institutions,
when needed

Climate Action Plan



**Neutralize GHG emissions
in SP until 2050**



**Adapt to the impacts of
climate change**

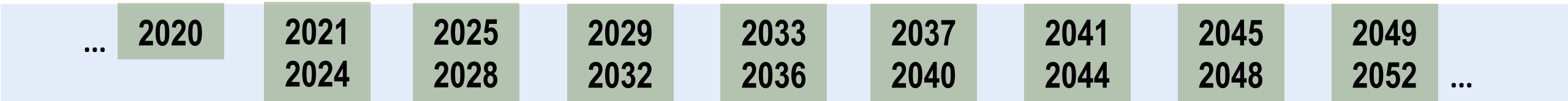


**Improve the equitable
distribution of the benefits
to the city's population**

**Support the
implementation of
the Paris Agreement**

**Adopt now the no
regrets decision
making**

**Provide society with the
ability to address the
impacts of climate change**



...a new government each four years...

**Doubts
&
Hesitations
&
Suspicious
&
Scruples
&
Puzzles
&
Objections
& & & ...**

Licitation

Do it yourself (with municipal officers)

Long term plan: which rationality

Fear of not knowing

Fear of not getting adhesion

Control it and catch participation

How to communicate to people

What have other cities done

Colonial approach or not

Local governments “can” or don’t

Etc., etc. ...

Speaking about values

“We scientists don’t know how to do that”

“I used to think the top environmental problems were biodiversity loss, ecosystem collapse and climate change.

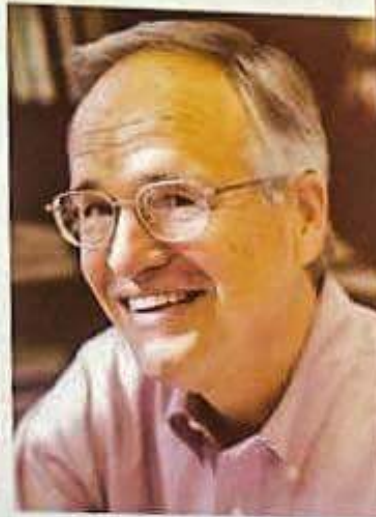
I thought that with 30 years of good science we could address those problems.

But I was wrong.
The top environmental problems are selfishness, greed and apathy...

...and to deal with those we need a spiritual and cultural transformation

- and we scientists don't know how to do that.”

Gus Speth



PAPA FRANCESCO
LAUDATO SI'

TESTO INTEGRALE DELL'ENCICLICA



CON GUIDA ALLA LETTURA DI
CRISTINA SIMONELLI
PRESIDENTE COORDINAMENTO TEOLOGHE ITALIANE

PIEMME

Speaking about values



Inauguration of the bikeway at the Avenida Paulista, in 28/06/2015



Example of individual reasoning predominance

São Paulo, 02 de fevereiro de 2017, corner of Avenida Brigadeiro Faria Lima with Avenida Juscelino Kubitschek





Thank you!

lauraceneviva@prefeitura.sp.gov.br