

Brazilian National Plan for Basic Sanitation (Plansab) Theoretical and methodological issues



Panorama of basic sanitation in Brazil

- **Universidade Federal de Minas Gerais/UFMG**
- **Universidade Federal da Bahia/UFBA**
- **Universidade Federal do Rio de Janeiro/UFRJ**

Ministry of the Cities / National Secretary of Environmental Sanitation



Panorama of basic sanitation in Brazil

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Conceptual elements

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Situational analysis of the deficit in basic sanitation

Volume 3

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Political-institutional analysis of basic sanitation sector

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Strategic vision for basic sanitation in Brazil

Volume 7

Thematic papers



Thematic papers

- 1) *Universality, integral approach and equity*
- 2) *Territorialisation*
- 3) *Intersector approach*
- 4) *Economic aspects*
- 5) *Basic sanitation for rural areas, indigenous and traditional populations*
- 6) *National system for information in basic sanitation*
- 7) *Technological development*
- 8) *The metropolitan issue*
- 9) *Democratic management*
- 10) *Institutional development*
- 11) *Professional capacitation*
- 12) *International experiences and public-public partnership*
- 13) *Basic sanitation policy and the role of Brazilian state*

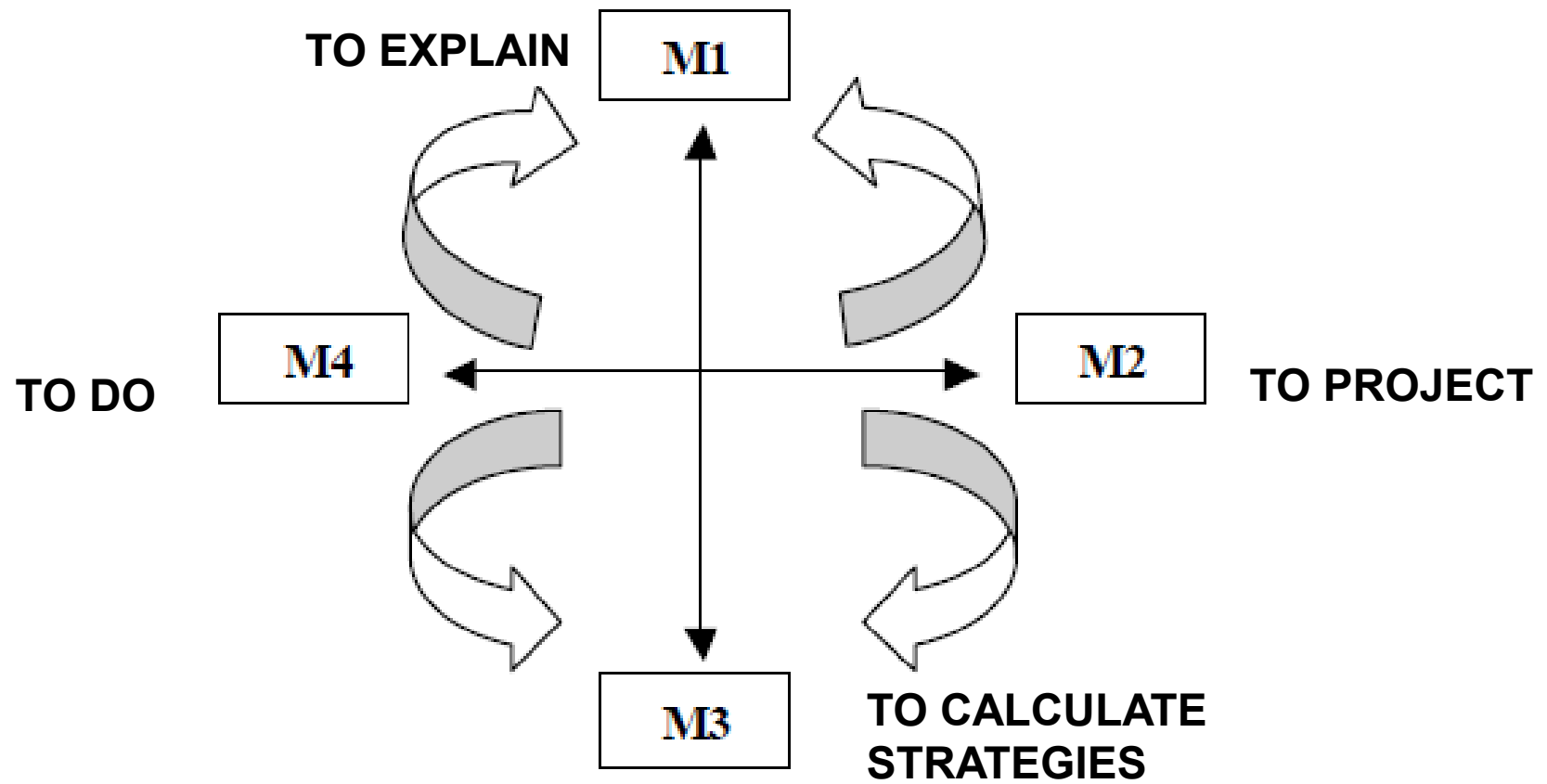


Schools of planning

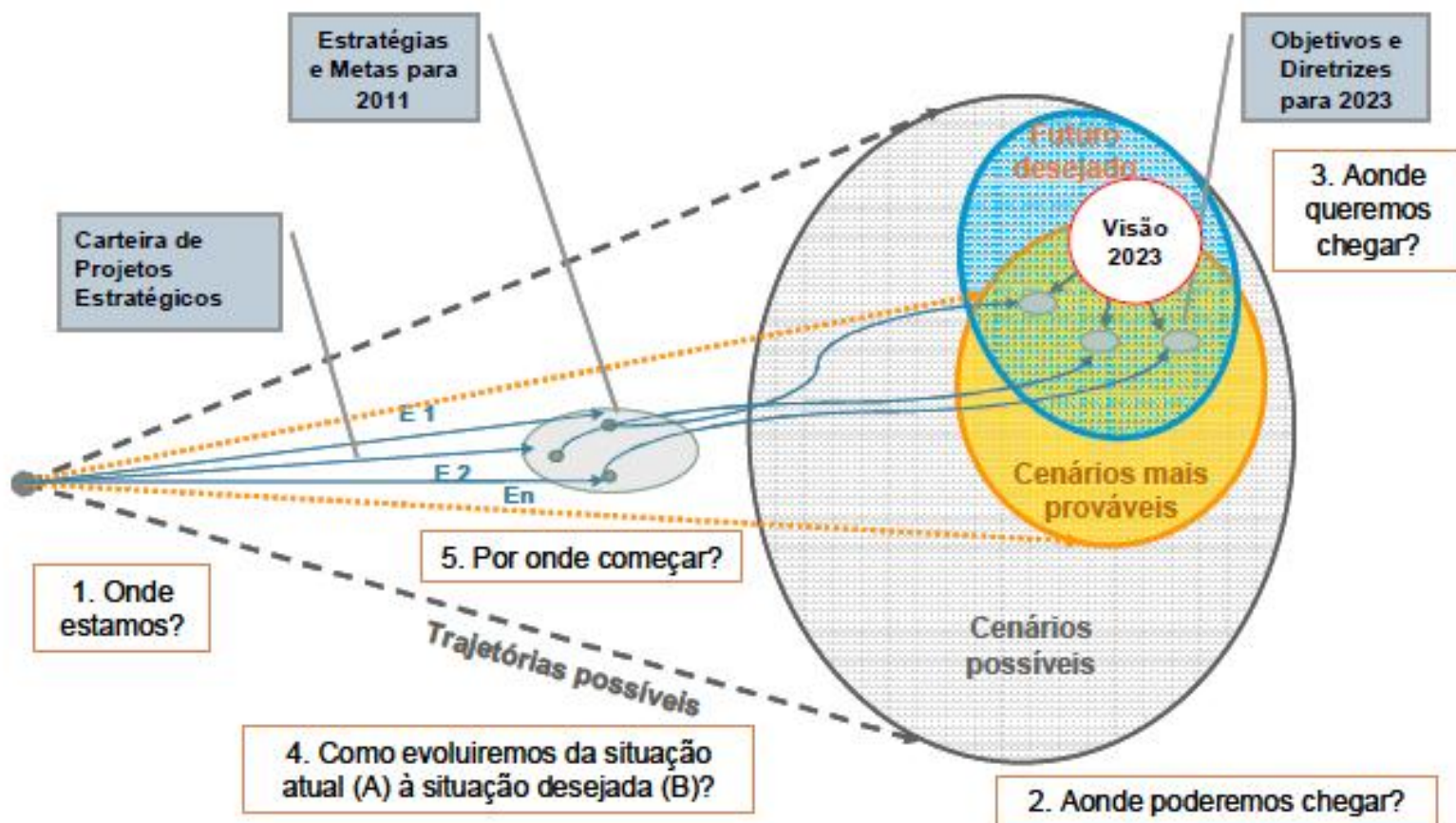
Traditional planning	Situational strategic planning
Deterministic	Situational
Only one actor (the State)	Several social actors, in a diffuse game
Prediction: a single plan	Scenarios forecasting: alternative plans
Focus in sectors	Focus in problems
A single scarce resource: the economic	Several scarce resources
Technical approach	“Technopolitical” approach
Certainty	Uncertainty

Source: Carlos Matus

Four moments



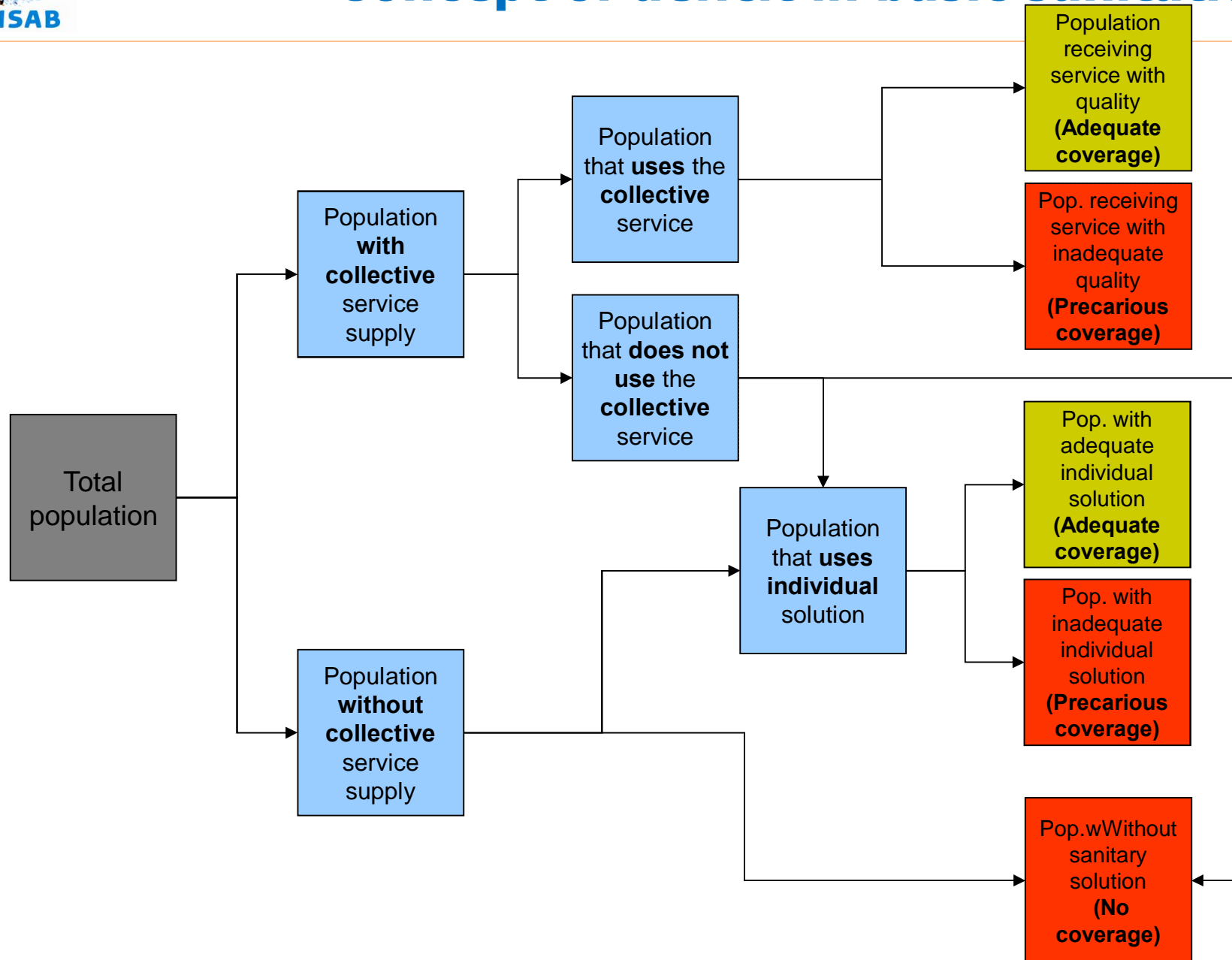
Scenarios-based planning





Situational analysis of the deficit

Concept of deficit in basic sanitation



Coverage and deficit per component of basic sanitation in Brazil, 2008

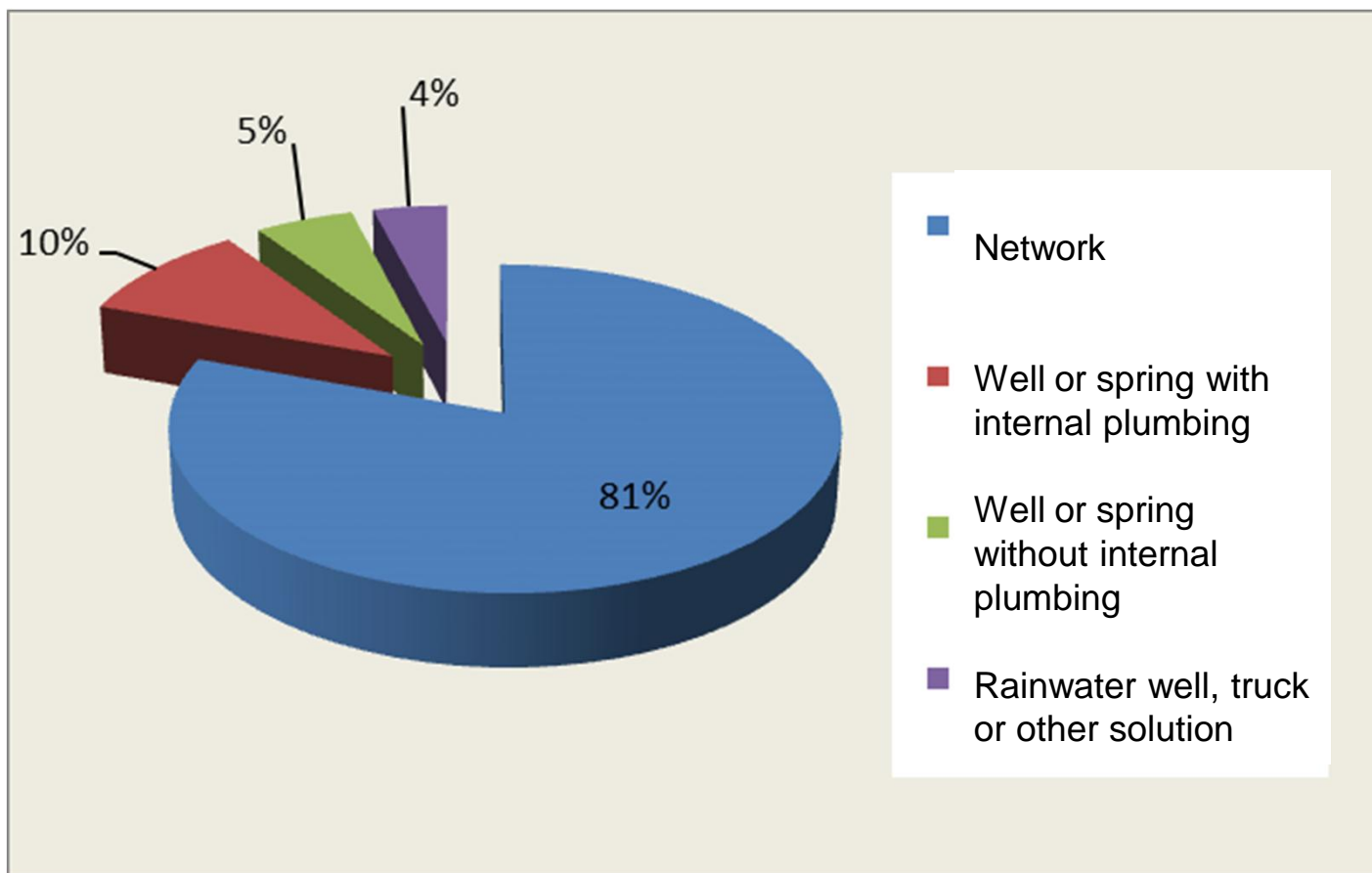
COMPONENT	ADEQUATE COVERAGE		DEFICIT			
			Precarious coverage		No coverage	
	x1,000 inhab.	%	x1,000 inhab.	%	X1,000 inhab.	%
Water supply	118,616	62.4	62,699	33.0	8,638 ⁽²⁾	4.5
Sanitation	88,930	46.8	83,797	44.1	17,226	9.1
					24,883	13.1

NSB (IBGE, 2008)

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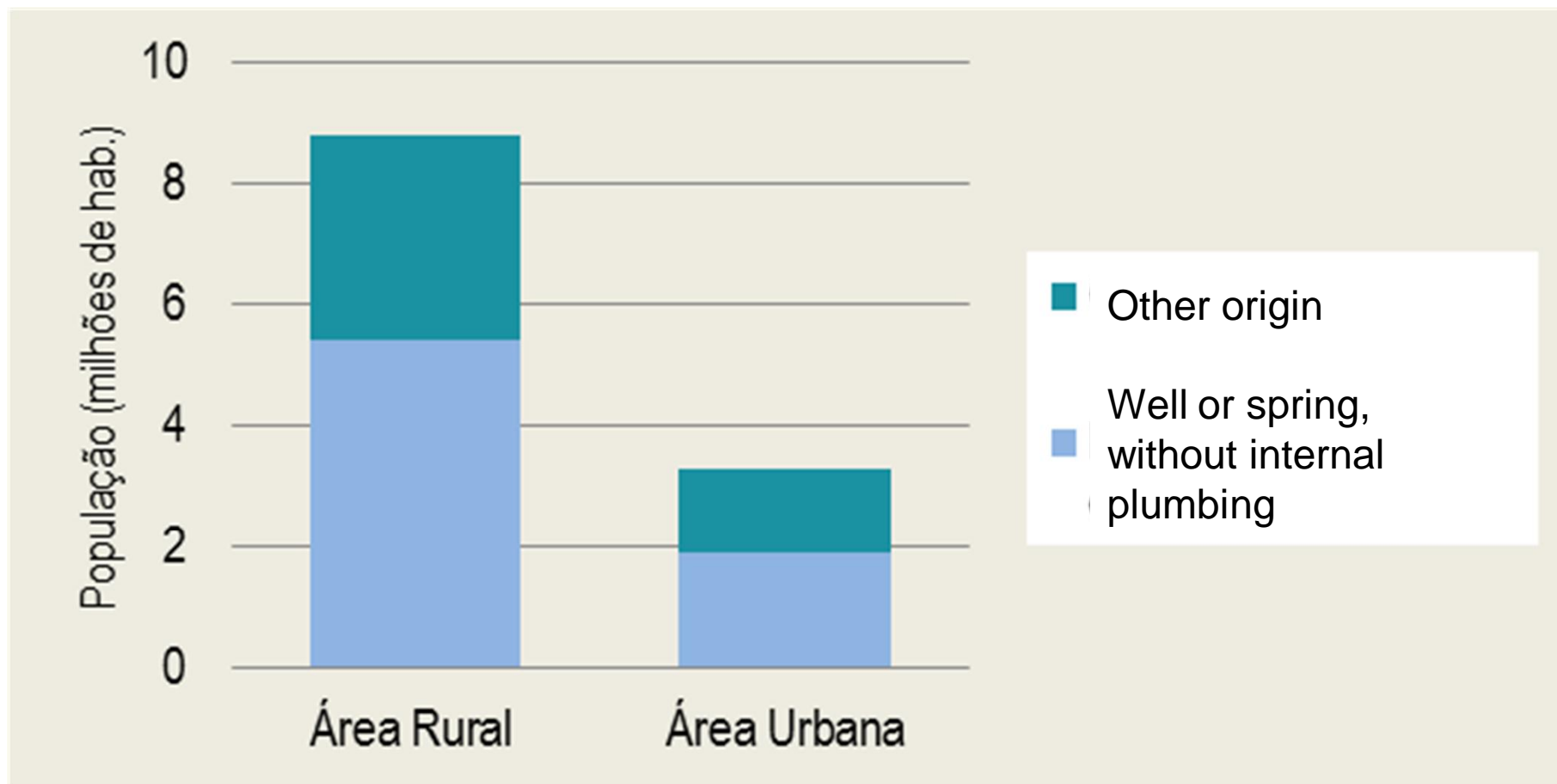
Brazil						
Series	1990	1995	2000	2005	2008	
7.8 Proportion of population using an improved drinking water source						
MDG ? Total, percentage Last updated: 23 jun 2010	88	91	93	95	97	
? Urban, percentage Last updated: 23 jun 2010	96	97	97	98	99	
? Rural, percentage Last updated: 23 jun 2010	65	70	75	81	84	
7.9 Proportion of population using an improved sanitation facility						
MDG ? Total, percentage Last updated: 23 jun 2010	69	72	75	78	80	
? Urban, percentage Last updated: 23 jun 2010	81	82	84	86	87	
? Rural, percentage Last updated: 23 jun 2010	35	35	36	37	37	

Water supply



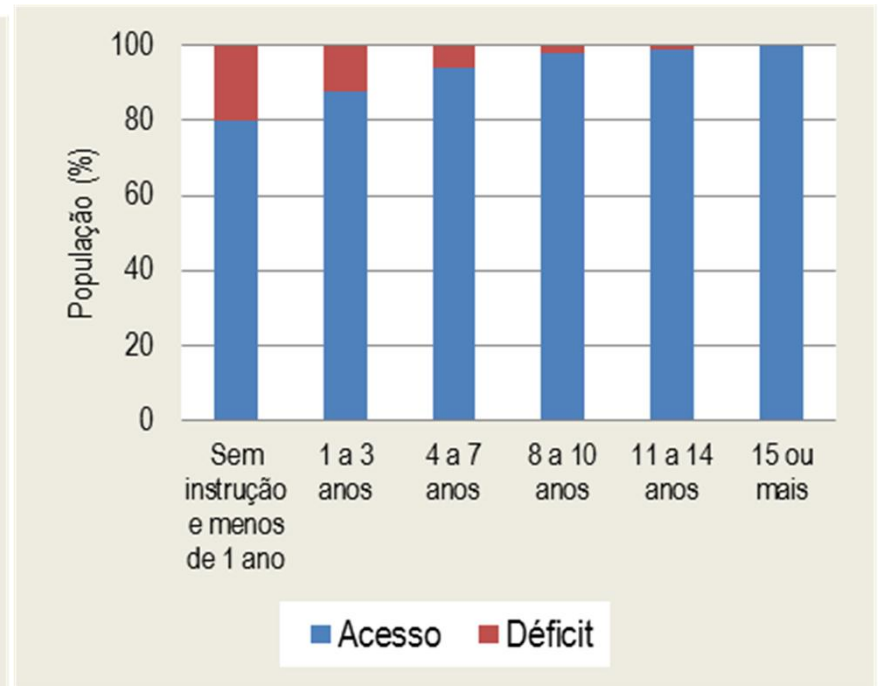
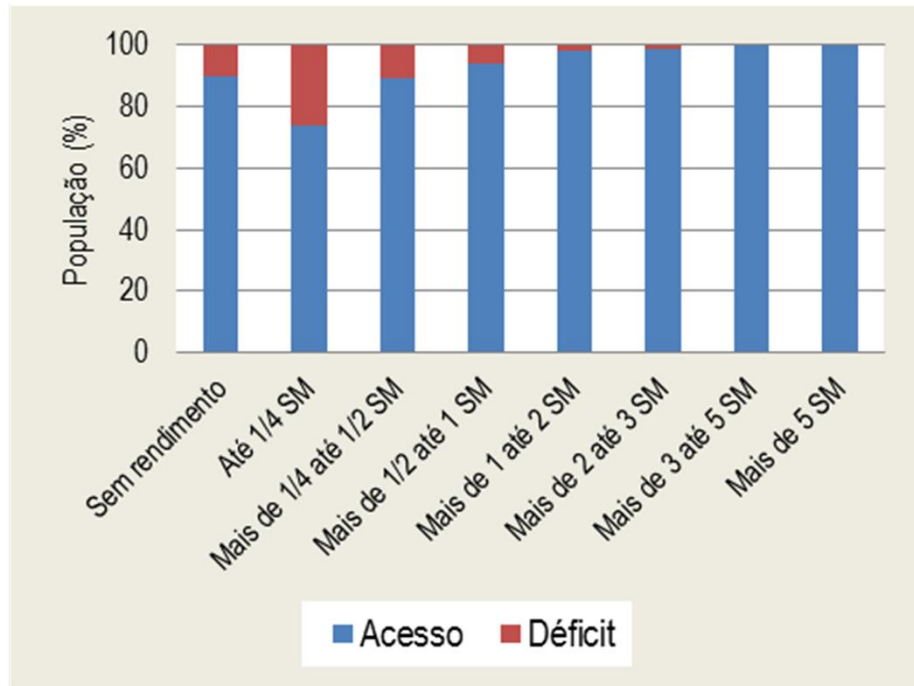
Coverage according to solution, 2008 (proportion of population)

Water supply



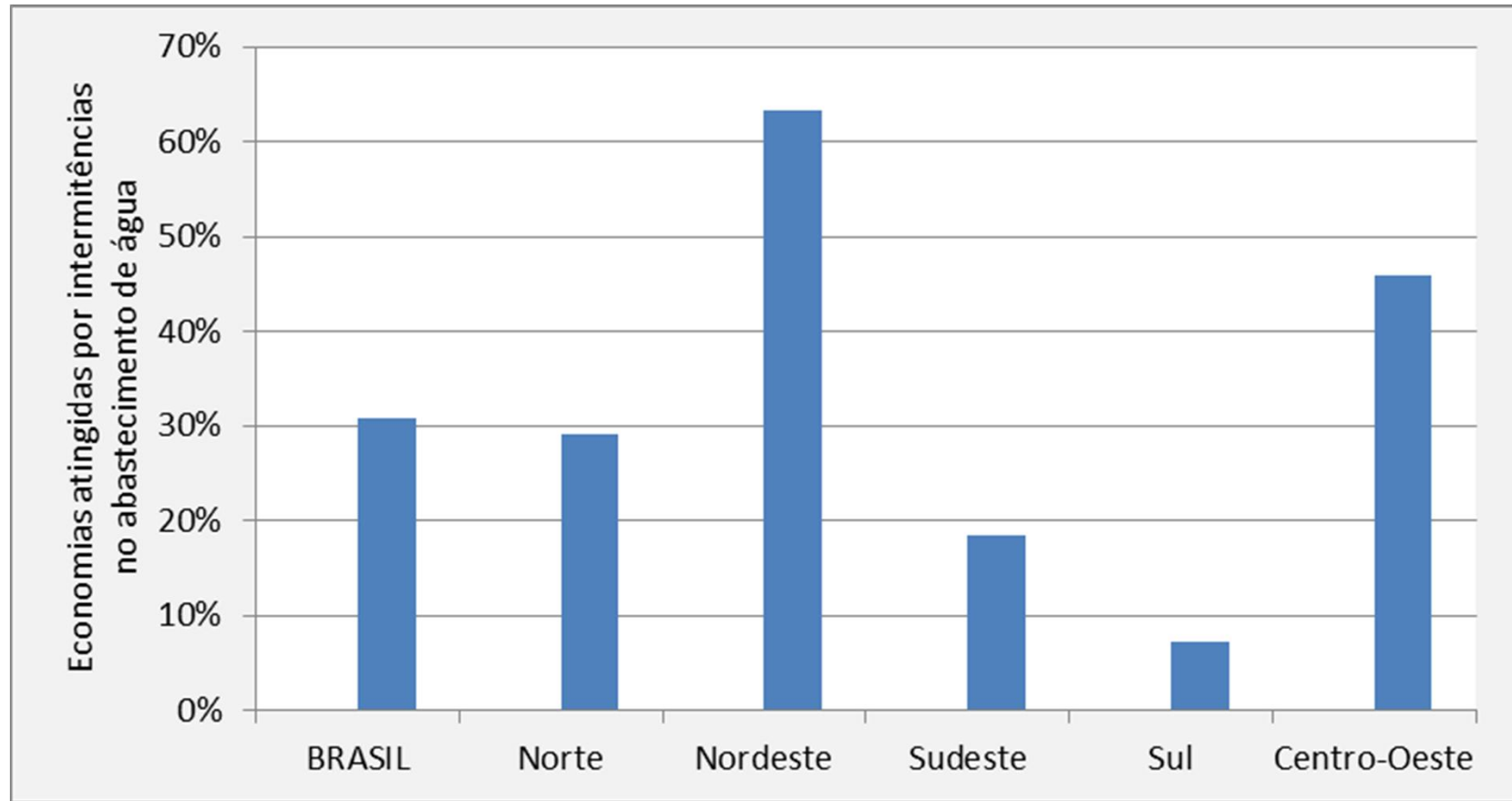
Deficit according to solution and to urban/rural status, 2008

Water supply



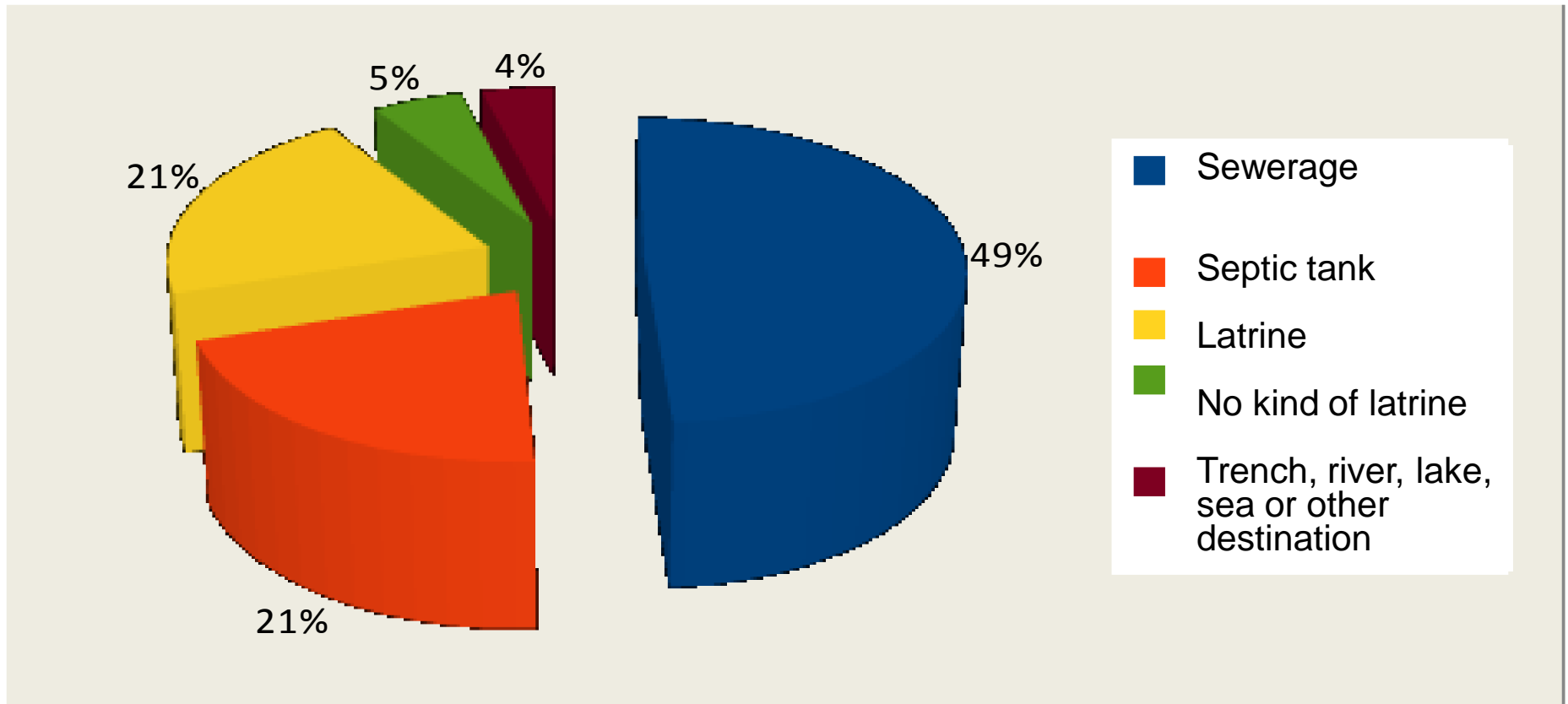
Water supply according to monthly household income per capita and years of study, 2008

Water supply

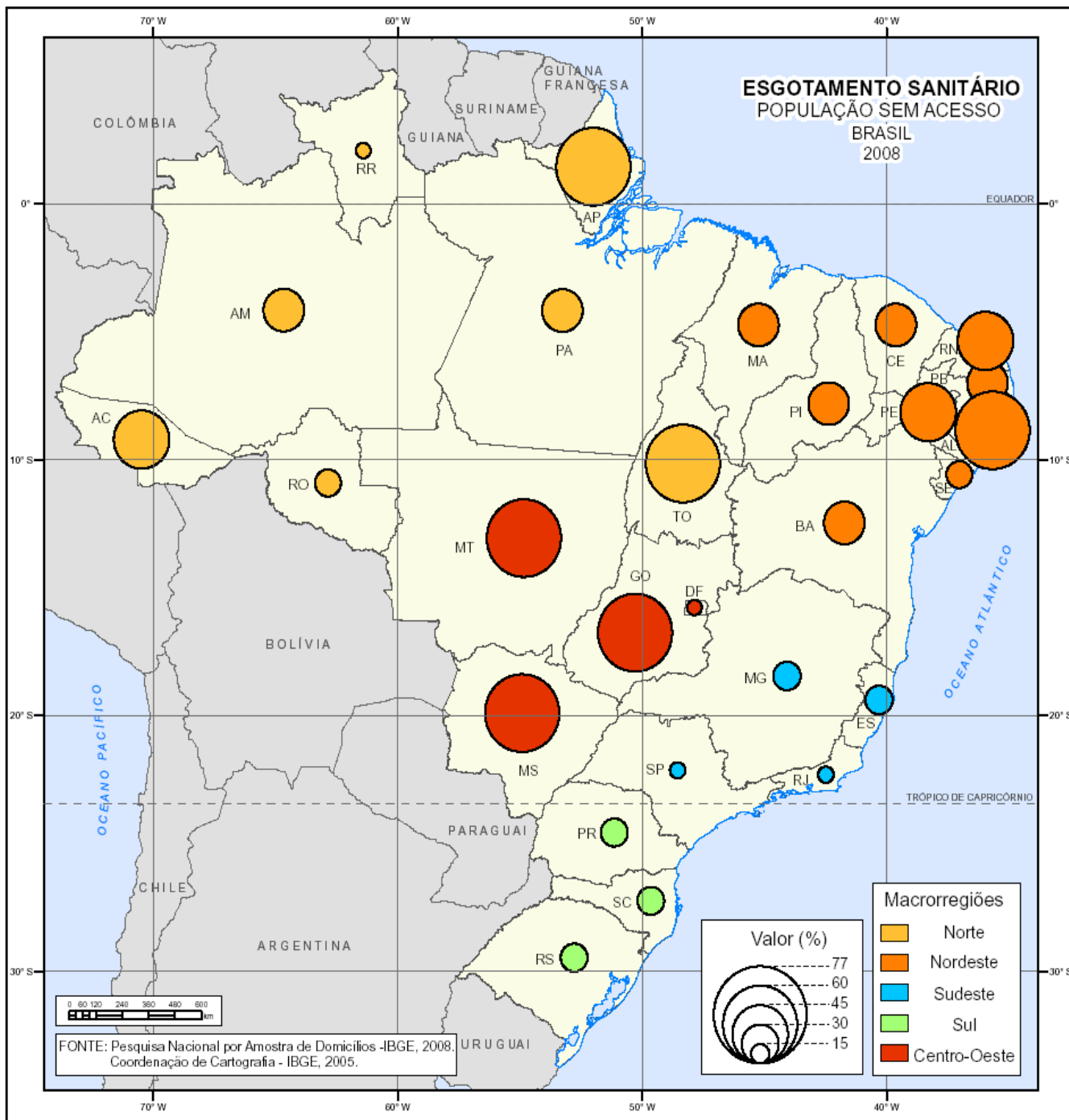


Proportion of connections with intermittent supply, according to macro Regions, 2007

Sanitation

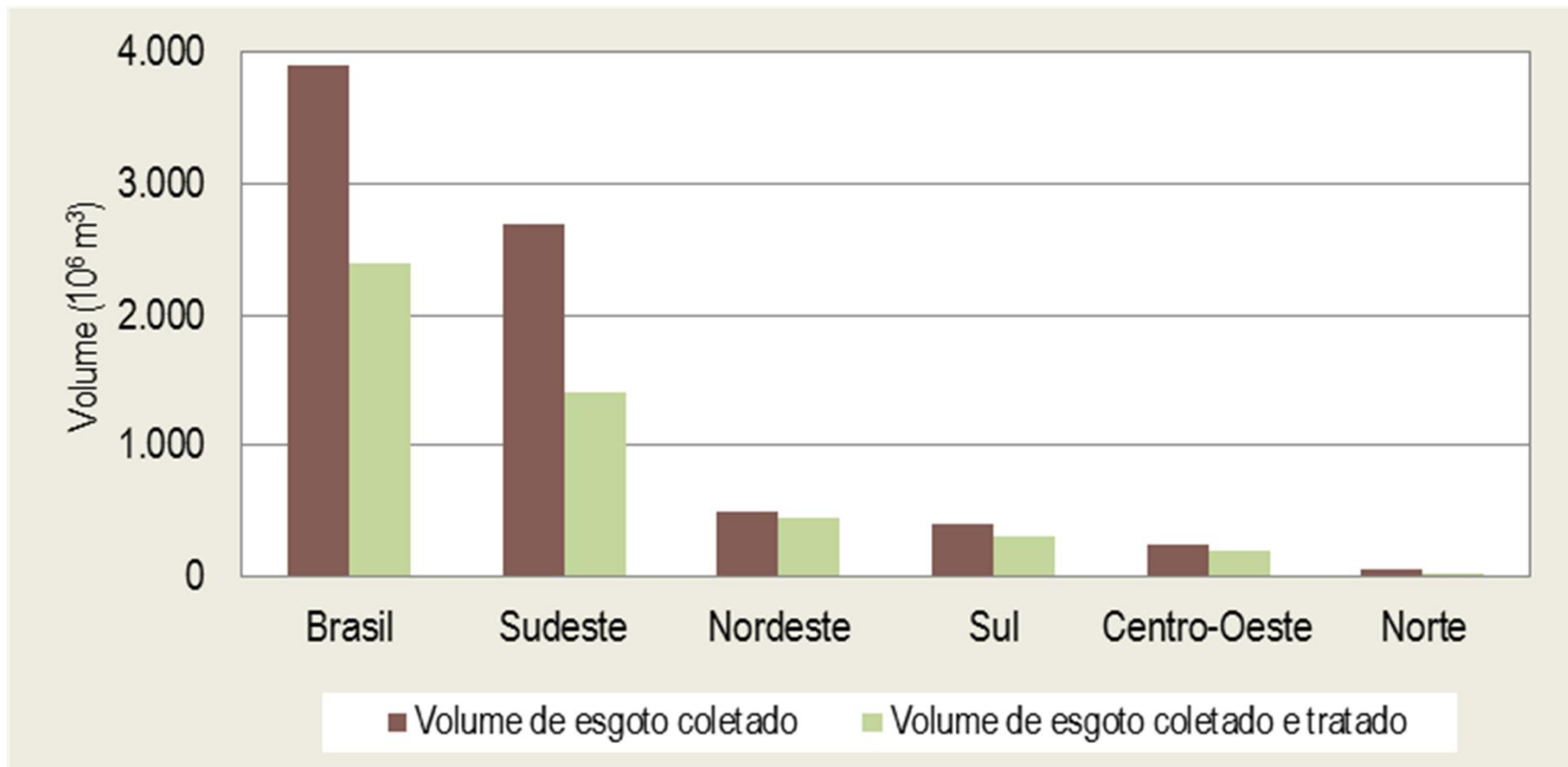


Forms of wastewater disposal, Brazil, 2008 (proportion of population)



**Deficit of access
to sanitation
according to the
proportion of
the population
of States**

Sanitation



Volume of wastewater collected and treated according to macro Regions, Brazil, 2007



Political-institutional assessment

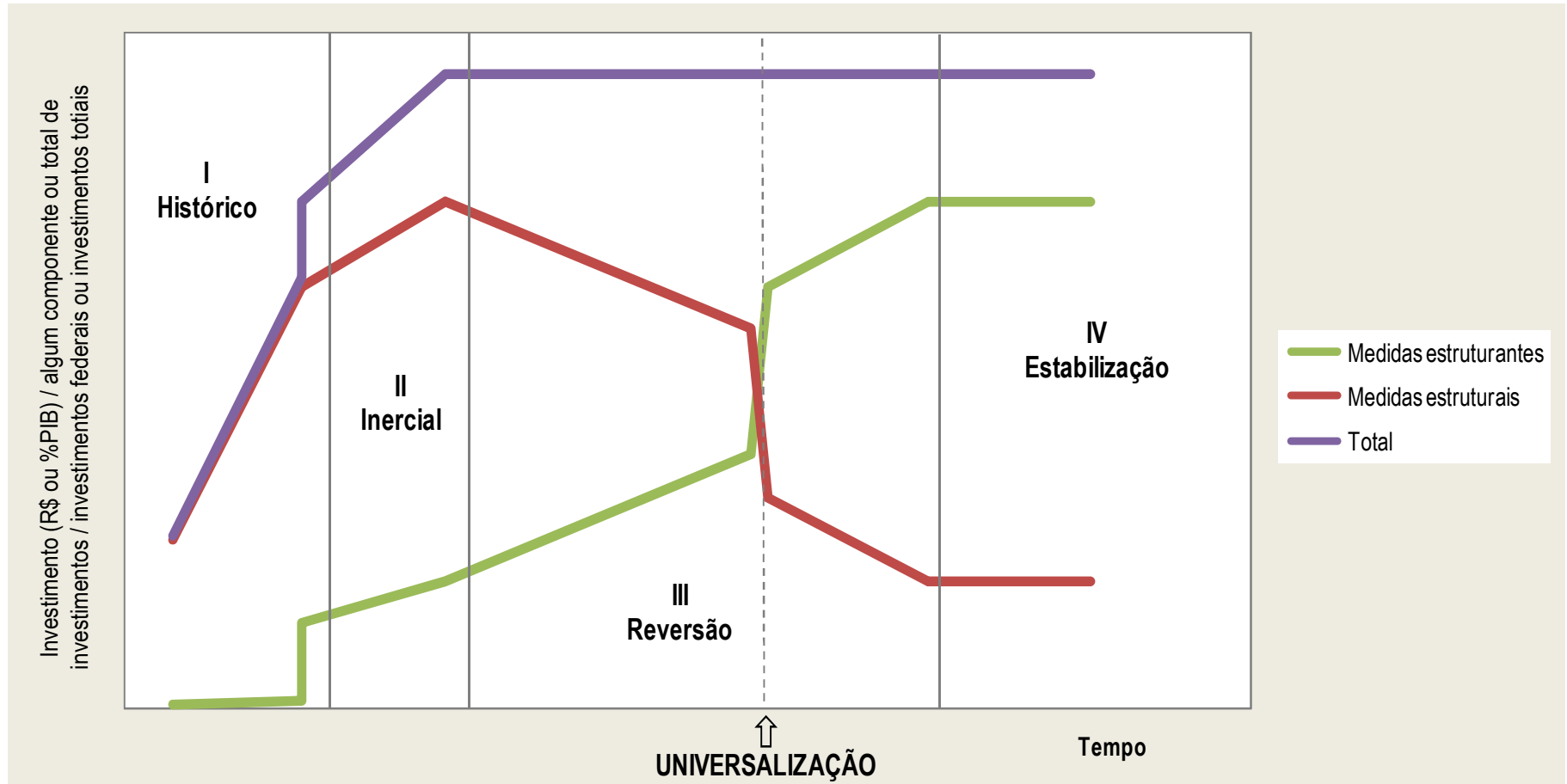
- General characteristics of the policies that influence services management
- Regulation
- Tariff models and the role of social tariffs
- Democratic control
- Associated management of the services: the question of public consortia
- Intersector approach: urban development; water resources; environment; public health
- Services provision and the nature of providers



Needs of investments according to basic sanitation components and achievement of targets (billions of reais)

MEASURE/ SOURCE		STRUCTURAL					STRUCTURING					TOTAL				
		Total	Federal agents		Other agents		Total	Federal agents		Other agents		Total	Federal agents		Other agents	
			R\$	%	R\$	%		R\$	%	R\$	%		R\$	%	R\$	%
2030	WS	73.7	51.6	70	22.1	30	31.4	9.4	30	22.0	70	105.2	61.0	58	44.1	42
	Sanit.	140.1	107.9	77	32.2	23	17.4	4.0	23	13.4	77	157.5	111.9	71	45.6	29
	SWM	12.1	9.6	80	2.4	20	4.4	-	-	4.4	100	16.5	9.6	59	6.8	41
	Drain.	21.8	17.5	80	4.4	20	33.3	10.0	30	23.3	70	55.1	27.4	50	27.7	50
	General	-	-	-	-	-	86.6	43.3	50	43.3	50	86.6	43.3	50	43.3	50
	Total	247.7	186.6	75	61.1	25	173.1	66.7	39	106.4	61	420.9	253.2	60	167.5	40

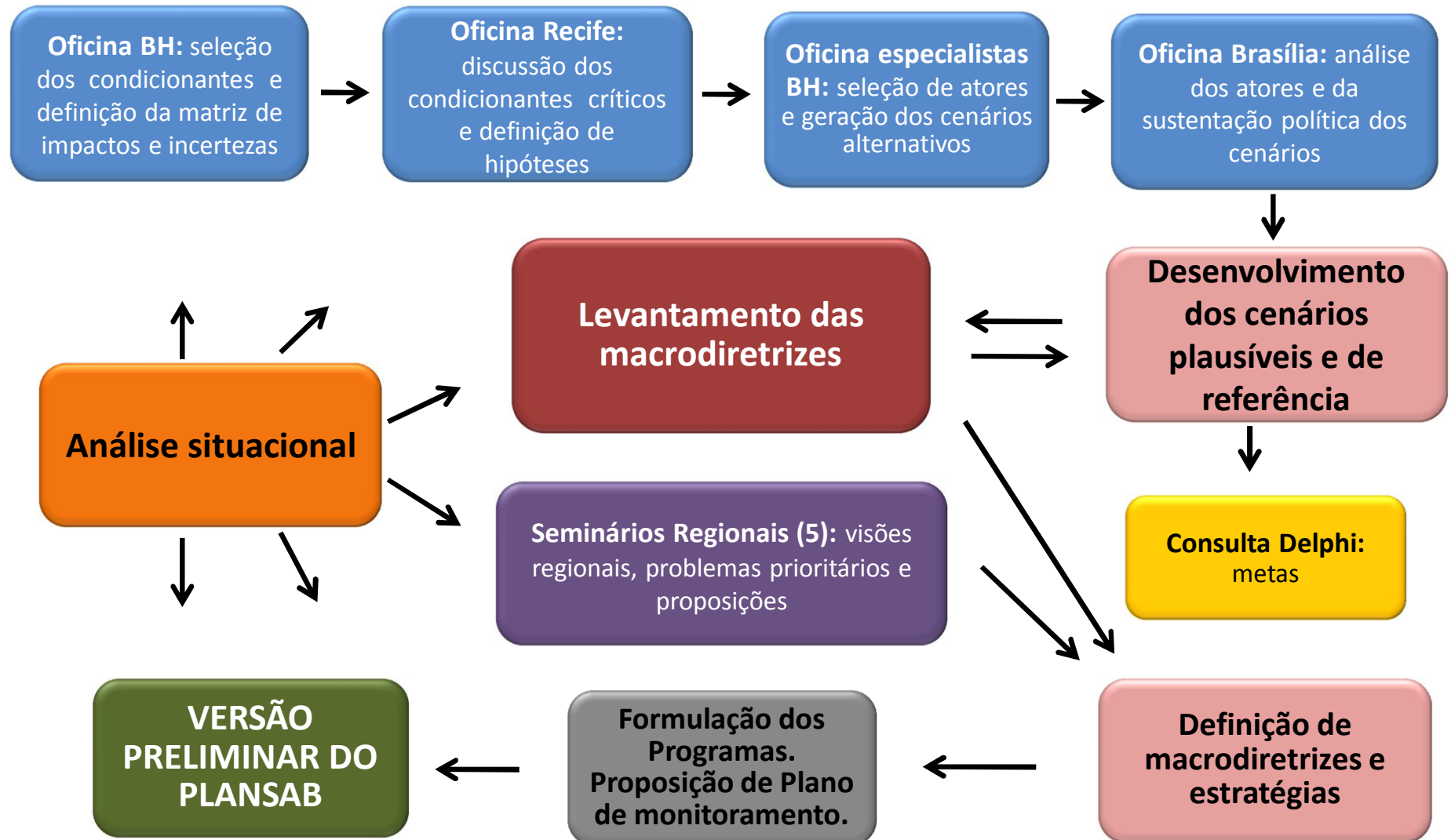
Structural vs. structuring measures





Strategic vision

Methodological diagram

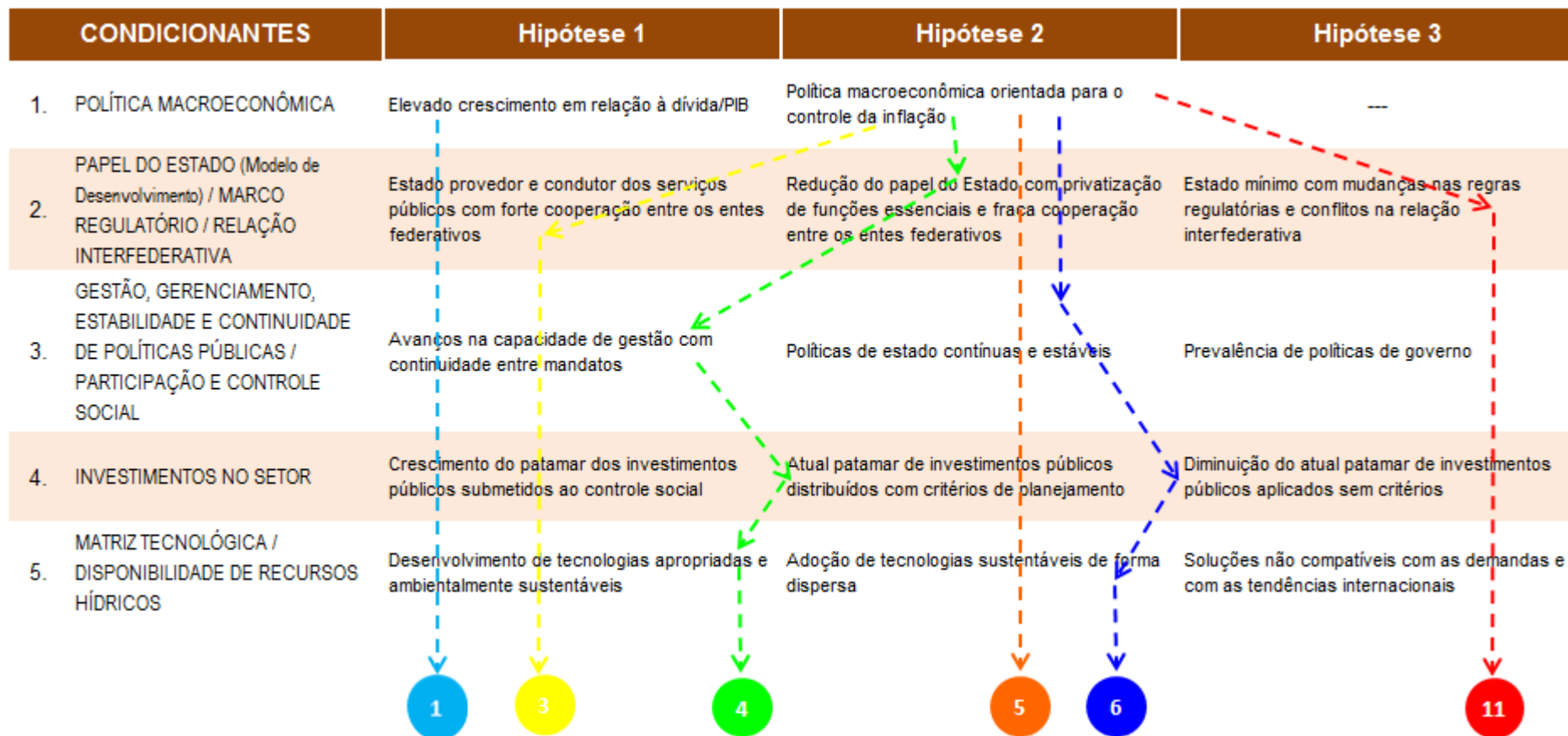




Constraints and hypothesis

CRITICAL CONSTRAINTS		HIPÓTESE 1	HIPÓTESE 2	HIPÓTESE 3
1	MACROECONOMIC POLICY			
2	MANAGEMENT OF PUBLIC POLICIES			
3	STABILITY AND CONTINUITY OF PUBLIC POLICIES			
4	ROLE OF THE STATE / DEVELOPMENT MODEL			
5	REGULATORY FRAMEWORK			
6	INTERFEDERAL RELATIONSHIP			
7	INVESTMENTS IN THE SECTOR			
8	PARTICIPATION AND DEMOCRATIC CONTROL			
9	TECHNOLOGICAL MATRIX			
10	AVAILABILITY OF WATER RESOURCES			

Scenario building





Goals: Management issues (%)

INDICADOR	BRASIL			Norte			Nordeste			Sudeste			Sul			Centro-Oeste		
	2015	2020	2030	2015	2020	2030	2015	2020	2030	2015	2020	2030	2015	2020	2030	2015	2020	2030
G1. % de municípios com órgão de planejamento para as ações e serviços de saneamento básico	30	50	70	20	40	60	20	40	60	40	60	80	40	60	80	20	50	60
G2. % de municípios com Plano de Saneamento Básico ou Ambiental	50	70	90	40	60	80	40	60	80	60	80	100	60	80	100	40	60	80
G3. % de municípios com serviços públicos de saneamento básico fiscalizados e regulados	30	50	70	20	40	60	20	40	60	40	60	80	40	60	80	20	50	60
G4. % de municípios com instância de controle social das ações e serviços de saneamento básico (Conselho de Saneamento ou outro)	50	70	90	40	60	80	40	60	80	60	80	100	60	80	100	40	60	80



Goals: Water supply (%)

INDICADOR	BRASIL				Norte				Nordeste				Sudeste				Sul				Centro-Oeste			
	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030
A1. % de domicílios urbanos e rurais abastecidos por rede de distribuição ou por poço/nascente com canalização interna	91	93	94	98	75	78	83	91	82	84	88	95	97	98	99	100	97	98	99	100	95	96	97	100
A2. % de domicílios urbanos abastecidos por rede de distribuição ou por poço/nascente com canalização interna	97	99	100	100	87	95	100	100	94	97	100	100	98	99	100	100	98	99	100	100	96	98	100	100
A3. % de domicílios rurais abastecidos por rede de distribuição ou por poço/nascente com canalização interna	62	64	69	77	37	38	42	50	50	51	58	70	87	90	93	100	89	91	94	100	86	86	91	100
A4. % de análises de coliformes totais na água distribuída em desacordo com o padrão de potabilidade (<i>Portaria nº 518/04</i>)	--	(2)	(2)	(2)	--	(2)	(2)	(2)	--	(2)	(2)	(2)	--	(2)	(2)	(2)	--	(2)	(2)	(2)	--	(2)	(2)	(2)
A5. % de economias atingidas por intermitências no abastecimento de água	31	29	27	18	29	28	26	20	63	59	53	30	18	17	16	10	7	7	7	5	46	43	38	20
A6. % do índice de perdas na distribuição de água	47	45	42	32	56	54	49	35	53	51	47	35	44	43	40	30	44	42	39	30	41	40	38	30
A7. % de serviços de abastecimento de água que cobram tarifa	94	96	97	100	85	90	93	100	90	93	95	100	95	97	100	100	99	99	100	100	96	98	100	100



Goals: Sanitation (%)

INDICADOR	BRASIL				Norte				Nordeste				Sudeste				Sul				Centro-Oeste			
	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030
E1. % de domicílios urbanos e rurais servidos por rede coletora ou fossa séptica para os excretas/esgotos sanitários	70	75	80	88	52	59	66	80	53	60	67	80	87	89	91	95	77	81	86	95	45	58	65	80
E2. % de domicílios urbanos servidos por rede coletora ou fossa séptica para os excretas/esgotos sanitários	79	82	85	91	59	66	73	85	67	70	75	85	92	92	93	95	83	86	90	97	49	62	69	83
E3. % de domicílios rurais servidos por rede coletora ou fossa séptica para os excretas/esgotos sanitários	24	37	45	62	26	31	38	50	14	29	37	55	38	54	64	85	44	49	56	70	9	27	36	55
E4. % de tratamento de esgoto coletado	41	54	63	91	45	54	61	80	78	82	86	95	27	43	55	90	46	57	66	90	51	62	71	95
E5. % de domicílios urbanos e rurais com renda até 3 salários mínimos mensais que possuem unidades hidrossanitárias	95	95	97	100	90	92	95	100	87	88	93	100	98	99	99	100	98	98	99	100	97	97	98	100
E6. % de serviços de esgotamento sanitário que cobram tarifa	49	63	70	85	48	61	67	80	31	45	55	75	53	68	75	90	51	66	74	90	86	86	89	95



Goals: Solid wastes and stormwater management (%)

INDICADOR	BRASIL				Norte				Nordeste				Sudeste				Sul				Centro-Oeste			
	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030	2008	2015	2020	2030
R1. % de domicílios urbanos atendidos por coleta direta de resíduos	91	94	96	100	91	92	95	100	81	86	91	100	94	97	100	100	95	98	100	100	94	95	97	100
R2. % de domicílios rurais atendidos por coleta direta e indireta de resíduos	29	39	48	64	21	29	36	50	17	30	38	55	46	57	67	85	46	55	66	85	21	36	45	65
R3. % de municípios com presença de lixão/ vazadouro de resíduos	51	35	23	0	86	58	39	0	89	61	41	0	19	10	0	0	16	10	0	0	73	50	33	0
R4. % de municípios com coleta seletiva de resíduos domiciliares	18	24	30	40	5	10	13	20	5	12	16	25	25	30	37	50	38	43	49	60	7	13	17	25
R5. % de municípios que cobram taxa de lixo	11	35	47	72	8	26	35	55	5	23	31	50	15	44	58	90	15	48	61	90	12	29	39	60
D1. % de municípios com inundações e/ou alagamentos na área urbana	41	--	--	10	33	--	--	6	36	--	--	5	51	--	--	15	43	--	--	17	26	--	--	5



Macro-guidelines and strategies

“ Macro-guidelines grouped in five blocks:

- A. Coordination and planning, as well as inter sector and inter institutional articulations
- B. Services provision and regulation, with a participative approach
- C. Scientific and technological development and basic sanitation in “special” settings
- D. Public investment and funding
- E. Monitoring and systematic assessment of the Plan

“ 133 strategies resulting from macro-guidelines



Programs

- “ Program 1: Integrated basic sanitation

- “ Program 2: Rural sanitation

- “ Program 3: Structuring basic sanitation
 - “ Support to managers
 - “ Support to providers
 - “ Capacity building and technical assistance
 - “ Scientific and technological development



Monitoring, assessment and periodic review

- 1) SCENARIO
- 2) GOALS
- 3) AUXILIARY INDICATORS (Regional goals; structuring measures; capacity building; epidemiological and environmental indicators; etc)
- 4) MACRO-GUIDELINES AND STRATEGIES
- 5) PROGRAMS IMPLEMENTATION