

SVS

SECRETARIA DE VIGILÂNCIA EM SAÚDE

Ministério
da Saúde



International Perspectives on Air Quality: *Risk Management Principles for Policy Development*

Air Quality and Health Management in Brazil

Ministry of Health, Brazil

Cuernavaca, Mexico, January 31, 2005

Historical and Legal Aspects

Air Pollution became a public and government issue since the 70's

Legislation

- **General Provision based on EPA and WHO**
- **The National Environmental Policy - 1982**
- **and the Federal Constitution - 1988.**

Air Pollution Control Legislation

Ministerial Acts

National Environmental Council

1972

**Monitoring
Starts**



Since 1972, CETESB, the Environmental Agency of the São Paulo State started the air quality monitoring in the Metropolitan Region of São Paulo and in Cubatão, due to the alarming air pollution caused by the industry, mainly the petrochemical.

National Air Quality Control Program - PRONAR

Objective

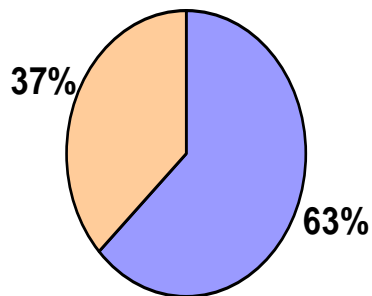
- To seek social and economical development of the country based on environmental protection

Strategies

- To define the Maximum Values of a set of pollutants
- To adopt the national air quality standards
- To monitor the air quality
- To manage and give permission to the air pollution sources
- To produce National Surveys of sources and air pollutants
- To develop policy and management tools ;
- To promote air quality technology, science and capacity building

Air Quality Monitoring in Brazil by States

**From the 27 states, 18 do
monitoring**



■ Estados com monitoramento
■ Estados sem monitoramento

11 states do public monitoring

9 states do private monitoring

2 states do public and private monitoring

10 states do no monitor

Air Quality Management in Brazil - Major Characteristics

- The regulatory framework addresses the classical pollutants
- The data analysis by state produces conservative information once it represents heterogeneous conditions
- There is no transboundary air pollution assessment
- The private sector has increased its role in the air quality monitoring process
- Some states and municipalities have reduced their institutional capacity to follow the program



Secretaria de Vigilância em Saúde

Air Quality Indicators Distribution by States

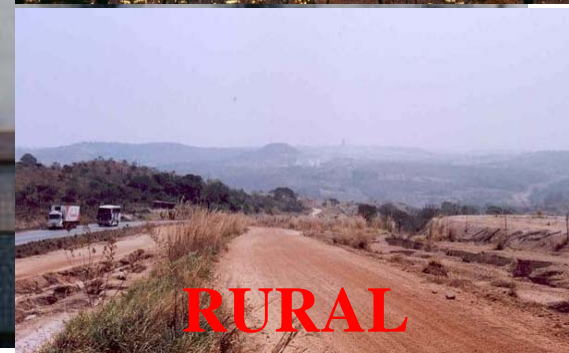
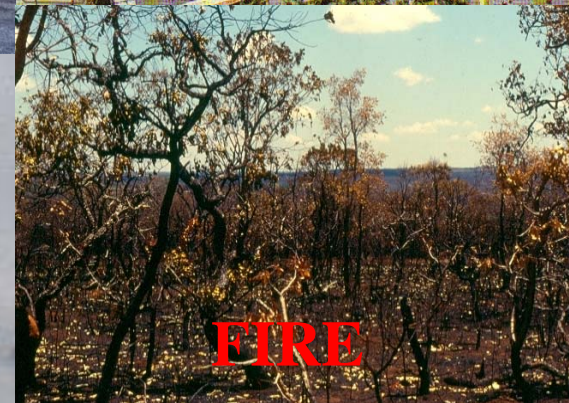
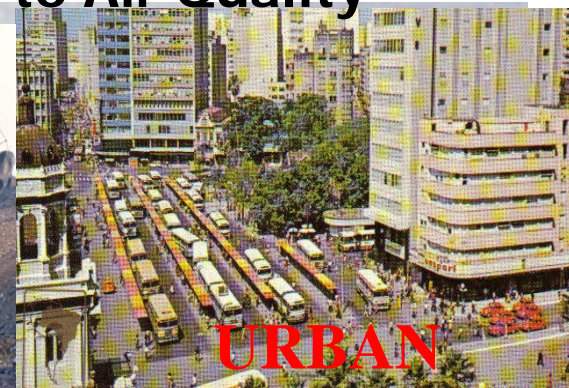
Public and Private Measurements (2004)

Região	Estado	SED	FUM	TPS	PI	SO2	O3	CO	NOX	HC	MET	TOTAL
Centro-Oeste	Distrito Federal		5	5		5						15
	Goiás											
	Mato Grosso											
	Mato Grosso do Sul											
	Total de Estações	0	5	5	0	5	0	0	0	0	0	15
Nordeste	Alagoas											
	Bahia											
	Ceará	4	4			4						12
	Maranhão		1	3								4
	Paraíba											
	Pernambuco		1	9		6			5			21
	Piauí											
	Rio Grande do Norte Sergipe											
Total de Estações	4	6	12	0	10	0	0	5	0	0	37	
Norte	Acre		1								5	6
	Amapá											
	Amazonas											
	Pará		1			1						2
	Rondônia											
	Roraima											
	Tocantins											
	Total de Estações	0	2	0	0	1	0	0	0	0	5	8
Sudeste	Espírito Santo	30		11	8	7	4	5	6	3	4	78
	Minas Gerais											
	Rio de Janeiro			20	20	6	5	11	5	5	6	78
	São Paulo		28	12	29	66	15	12	15	5	21	203
	Total de Estações	30	28	43	57	79	24	28	26	13	31	359
Sul	Paraná		4	4	1	8	4		1		4	26
	Rio Grande do Sul			5	9	14	6	5	5		6	50
	Santa Catarina											
	Total de Estações	0	4	9	10	22	10	5	6	0	10	76
Nº Total de Estações		34	45	69	67	117	34	33	37	13	46	495

Environmental Health Surveillance related to Air Quality

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Areas of Concern



Environmental Health Surveillance related to Air Quality VIGIAR

General Objective

To reduce health impact associated to air pollution

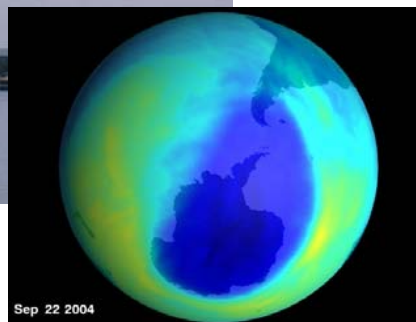
Specific Objectives

- Identify acute and chronic health effects due to air pollution**
- To evaluate the social and economic impacts of those effects**
- To set air quality and health indicators**
- To provide information to guide policies in order to protect health risk posed by air pollution**

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Rationale

- Health Surveillance Enhancement
- Health Sector Response to the air quality regulatory framework
- Health Sector Response to the international protocols - Climate Change among others
- Seeking better scientific knowledge to provide answers and support the regulatory process related to air pollution and health



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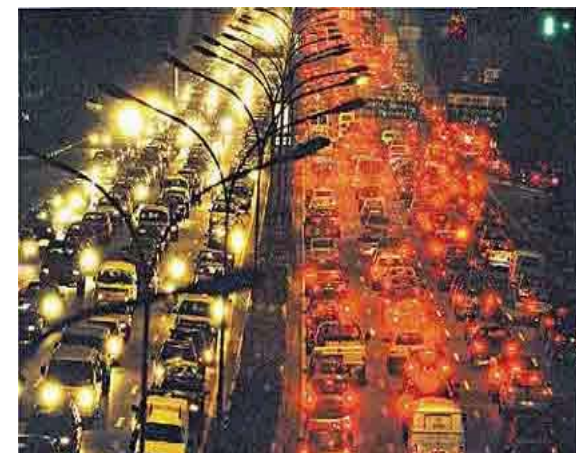
Working Plan with States and Municipalities (6 Pilots)



Volta Redonda - RJ



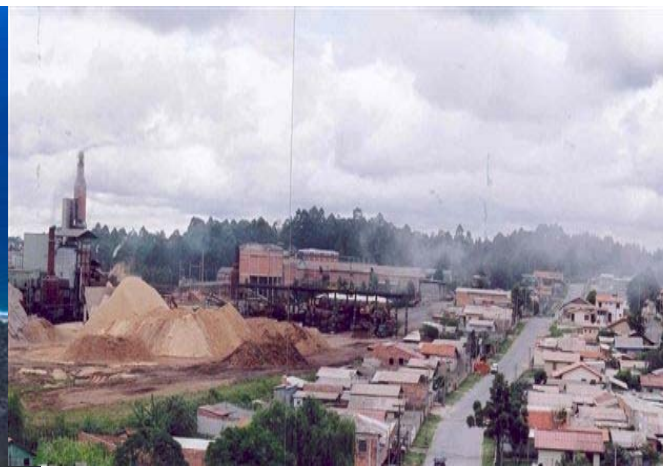
Vitória - ES



São Paulo - SP



Camaçari - BA

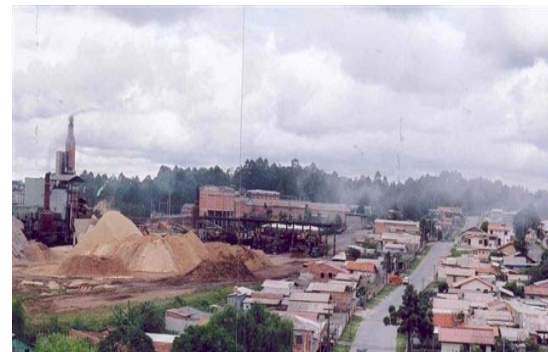


Araucária - PR

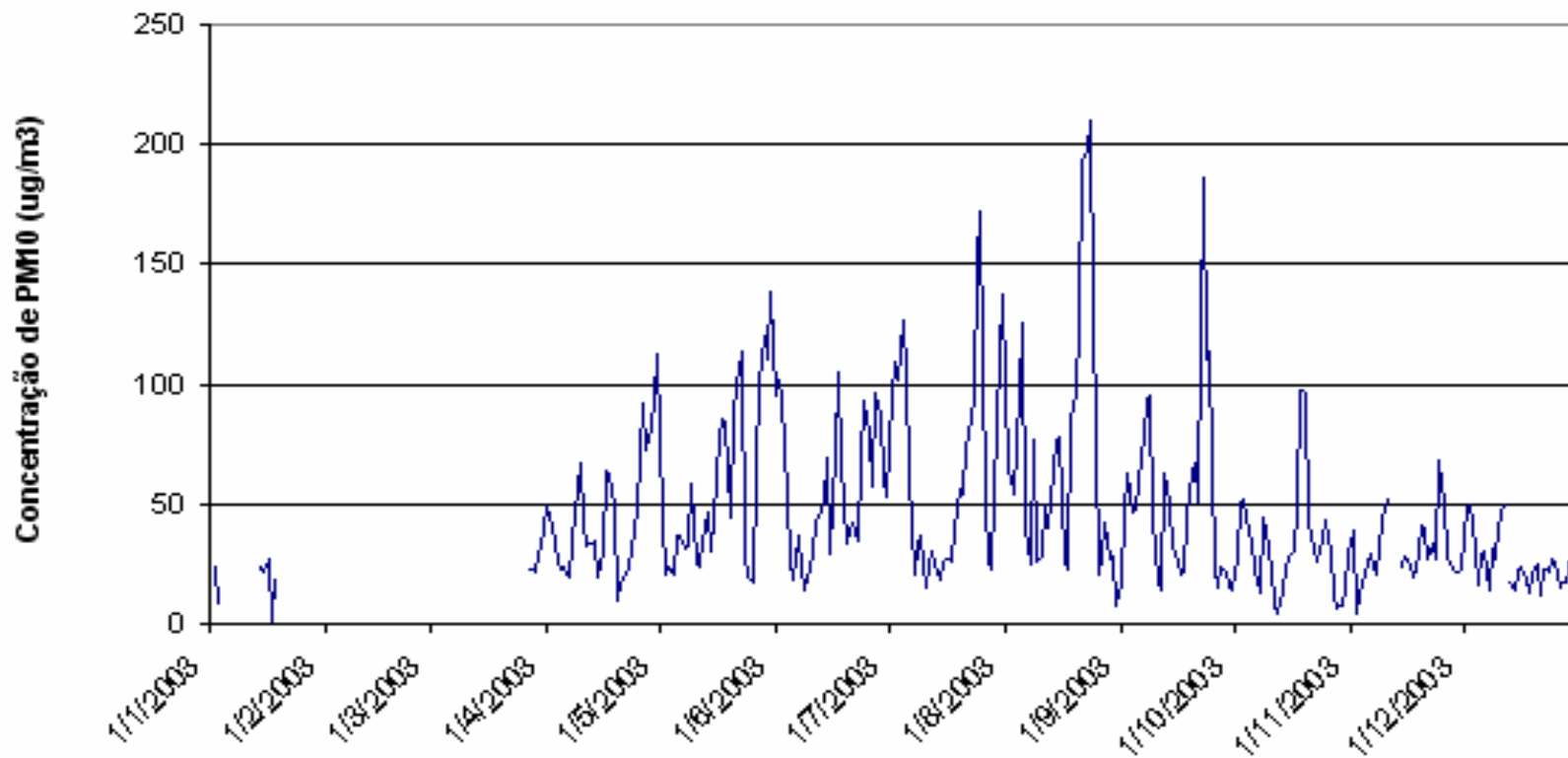


Canoas - RS

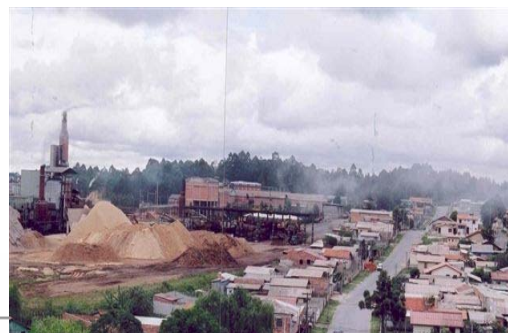
VIGIAR - Araucária - PR



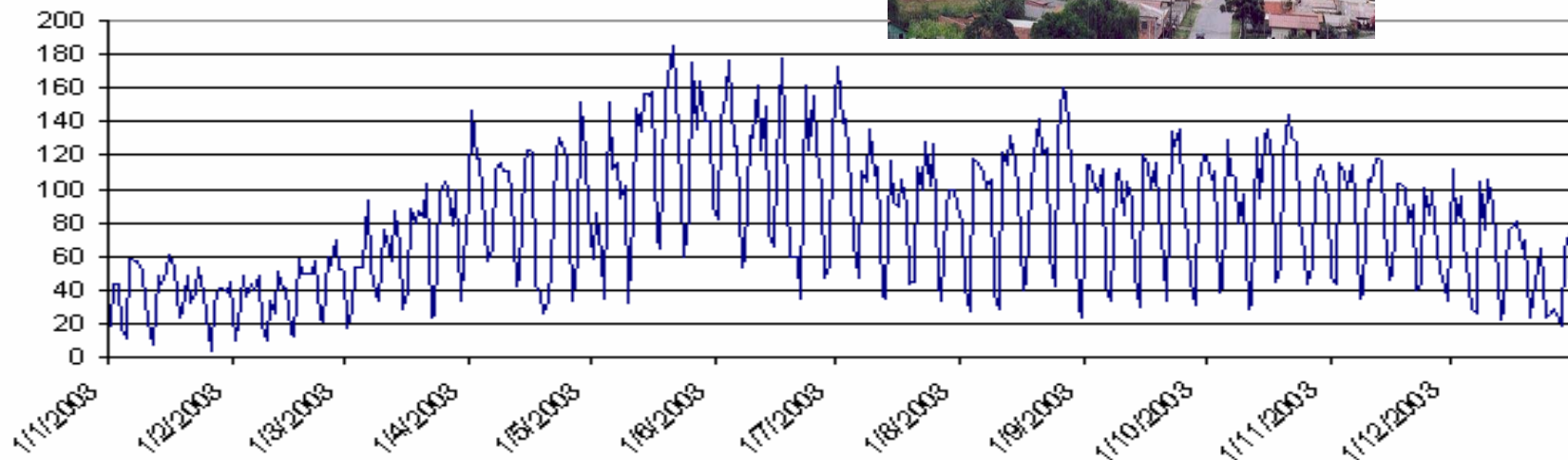
Concentração de Poluentes ao longo do ano de 2003 ¶



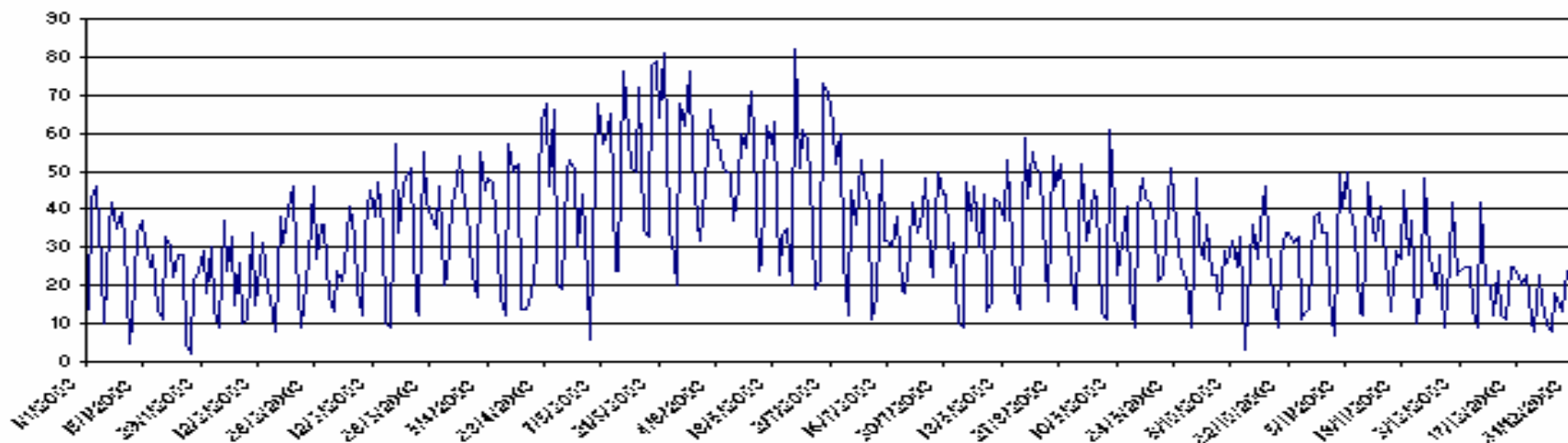
VIGIAR - Araucária - PR



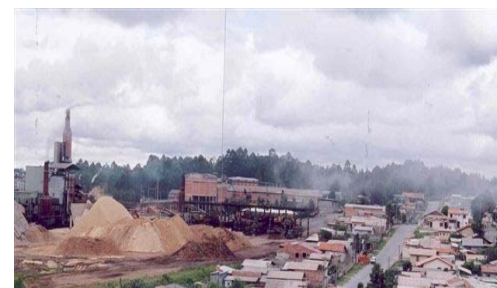
Número de atendimentos de crianças



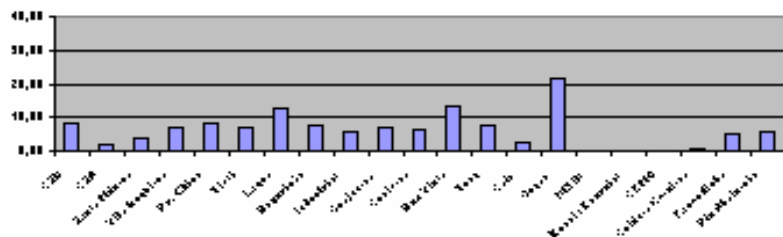
Número de atendimento de idosos



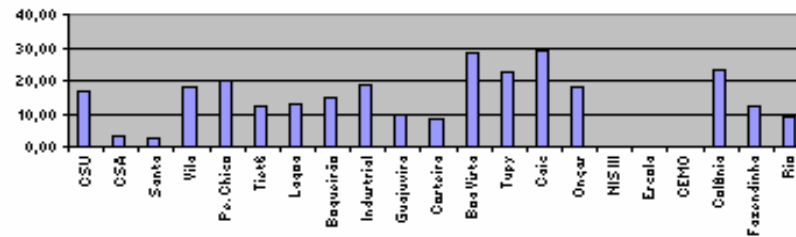
VIGIAR - Araucária



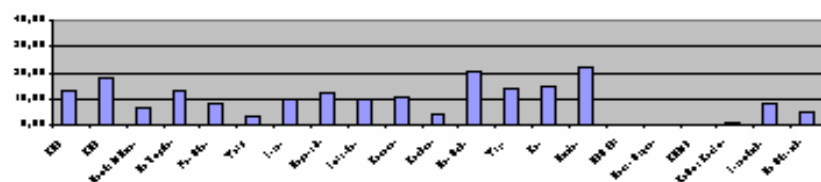
Prevalência nas Unidades de Saúde de Araucária no mês de janeiro de 2003



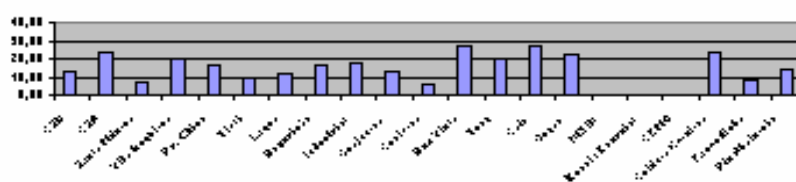
Prevalência nas Unidades de Saúde em Araucária no mês de julho de 2003



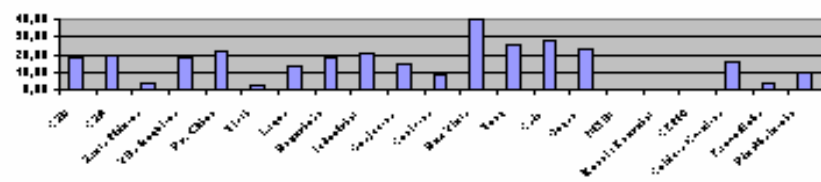
Prevalência nas Unidades de Saúde de Araucária no mês de março de 2003 - Araucária



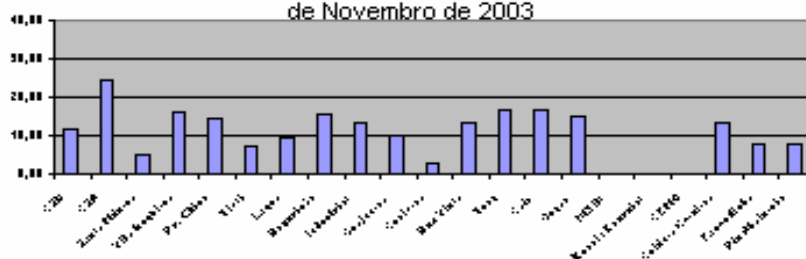
Prevalência nas Unidades de Saúde em Araucária no mês de Setembro de 2003



Prevalência nas Unidades de Saúde de Araucária no mês de maio de 2003 - Araucária



Prevalência nas Unidades de Saúde em Araucária no mês de Novembro de 2003



VIGIAR

Plano de Ação - Metas 2005

- Consolidate 6 pilots



- Expand Vigiar for at least 5 more cities



Cuiabá

Curitiba

Goiânia

Porto Alegre

Recife

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Estratégias - 2005

- Policy (associated to regulation and intersectorial ageements)
- Institutional (capacity building)
- Scientific and technologic support
- Operational (training; guidelines; lab support; enviormental health data collection and analysis)
- Susteinability (financial ans personel)

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Challenges and perspectives

- Reinforce environmental and health political, technical and institutional linkage
- Develop long term intersectorial work, aimed to answer questions such as to define the major polluted areas as well as to review the standards in order to include new public health challenges such as indoor and air pollution caused by cigarette smoking and non industrial air pollution.
- Identify proactive communication strategy and programs .
- Reinforce local networks including the civil society
- Reinforce technical training

