

IMPACT OF AIR POLLUTION CAUSED BY ENERGY USE ON PUBLIC HEALTH: A CASE FROM MONGOLIA

“SPACE TOOLS FOR MONITORING AIR POLLUTION
AND ENERGY USE FOR SUSTAINABLE DEVELOPMENT”

Graz city, Austria

12 September 2006



Mongolia



Territory: 1,564,100 sq km

Population: 2.4 million

Density: 1.6 per sq.km

Climate: Continental, warm rainy summers and extremely cold winters. Sharp seasonal fluctuations and variations.

From the Constitution of Mongolia

Article 16.

.....The Citizen of Mongolia has a right to live in the healthy and safe environment and to be protected against environmental pollution and ecological imbalance....



But the air pollution has been a significant environmental problem in urban areas of Mongolia, particularly in Ulaanbaatar, capital city

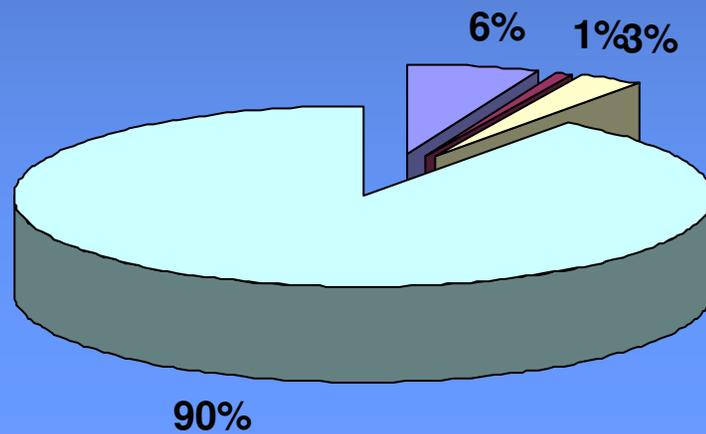


Main air pollution sources

- ***Combined Power and Heat stations - 3***
- ***Heat only boilers (HOBs) – 400***
- ***Vehicles – 75 000***
- ***Coal burning household stoves - 120 000***



Air Pollution by sources



Ger



Smoke from
household
stove

Traditional home/
Ger



Air pollution research result

City Village	Dust / mmg/î³ /	Sulphide / mmg/î³ /	Nitric dioxide NO2 /mmg/î³ /	Sulphuric hydrogen / mmg/î³ /
Ulaanbaatar	121	122	122	116
Tunkhel rural center	6	6	6	6

Source: Scientific laboratory of Ecology and environment, Mongolia

The air pollution of Ulaanbaatar is more than Tunkhel in 20 times on the table.

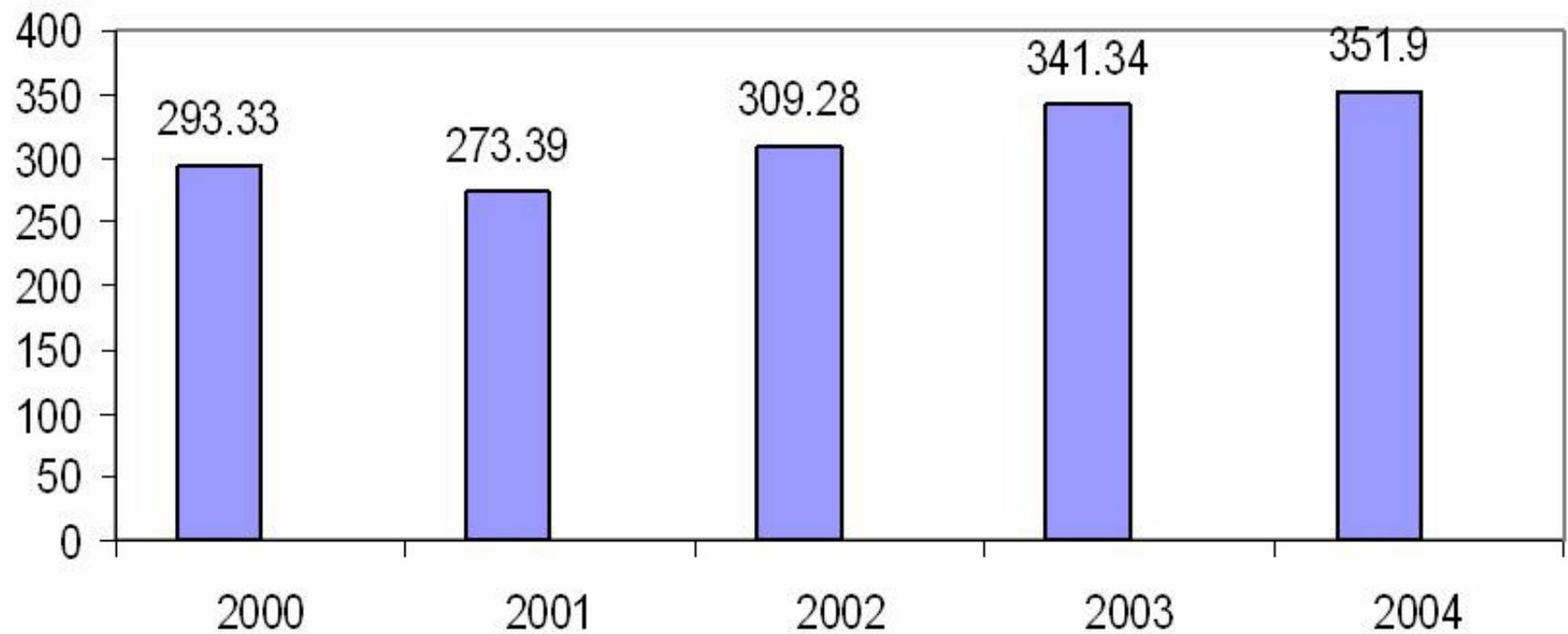


Impacts of air pollution on public health

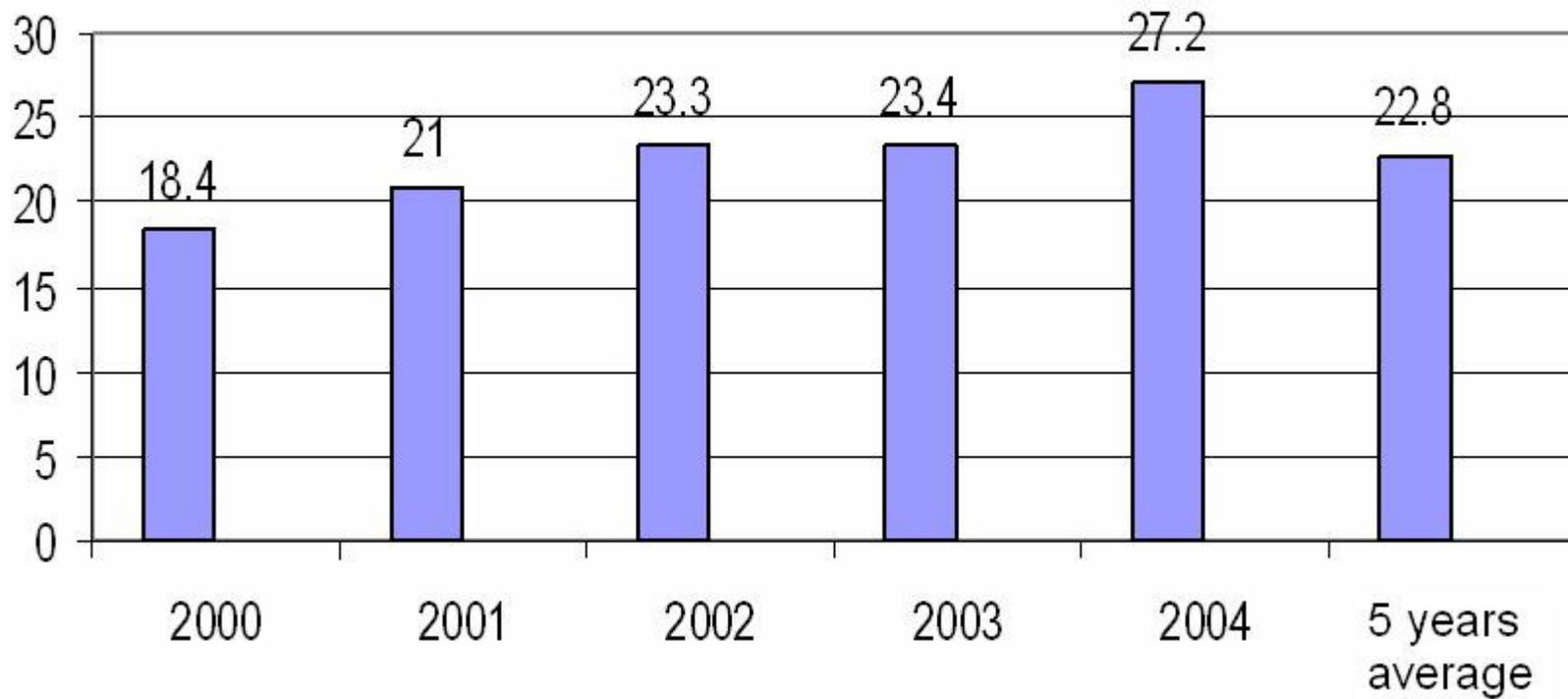
- **Respiratory system illnesses:**
 - Acute, sudden and chronic bronchitis
 - Lung chronic illness
- **Chronic cardiac system defect**
- **The growth and development of body**
- **Allergy**
- **Cancer**
- **All disease is influencing to the immune system**



Respiratory disease, in 10000 people



Tuberculosis, in 10 000 people

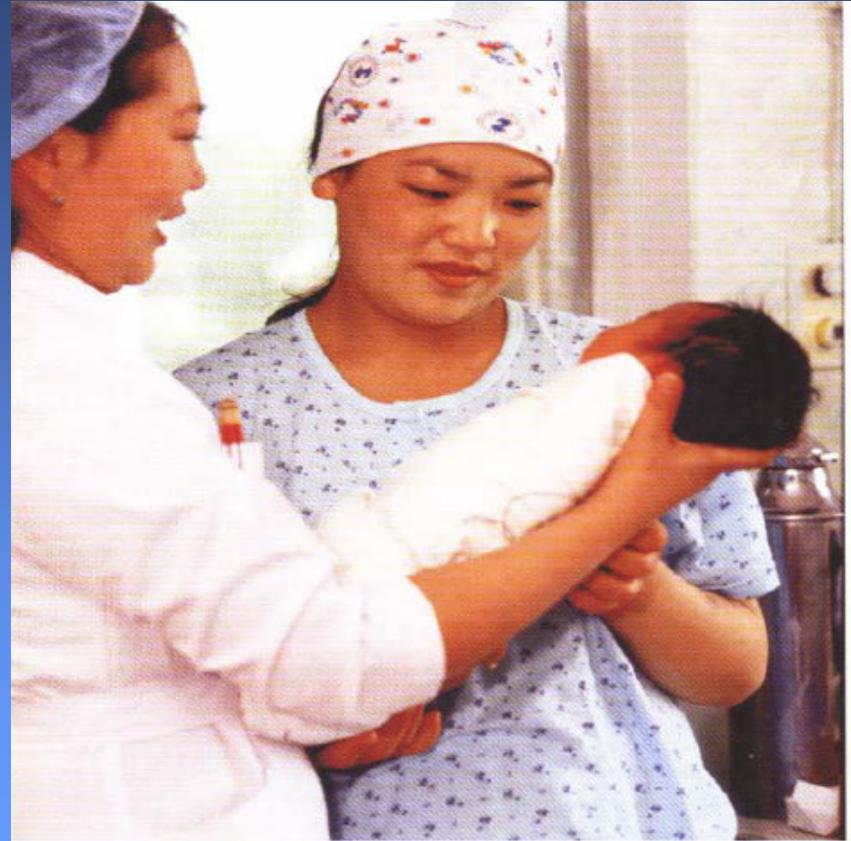


**Children in Ulaanbaatar,
are taken bronchitis in
1.4-2.7 times and
bronchitis asthma in
5.5-7.9 times more than
children who are living
in rural areas of less air
pollution.**

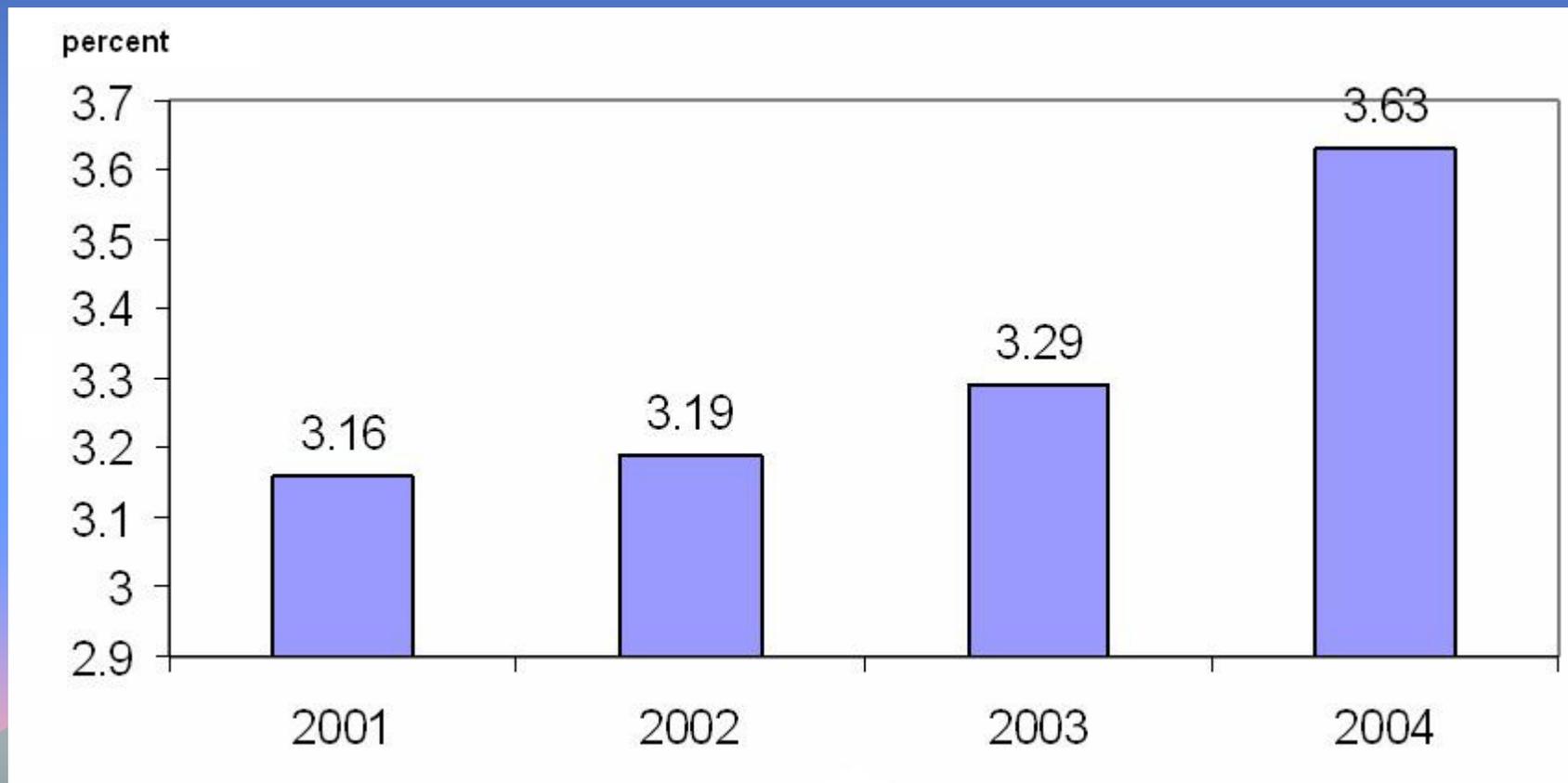


Source: Study result of Social Health institute of city,
2003

**The air pollution is
influenced to the
pregnancy
negatively!!!**

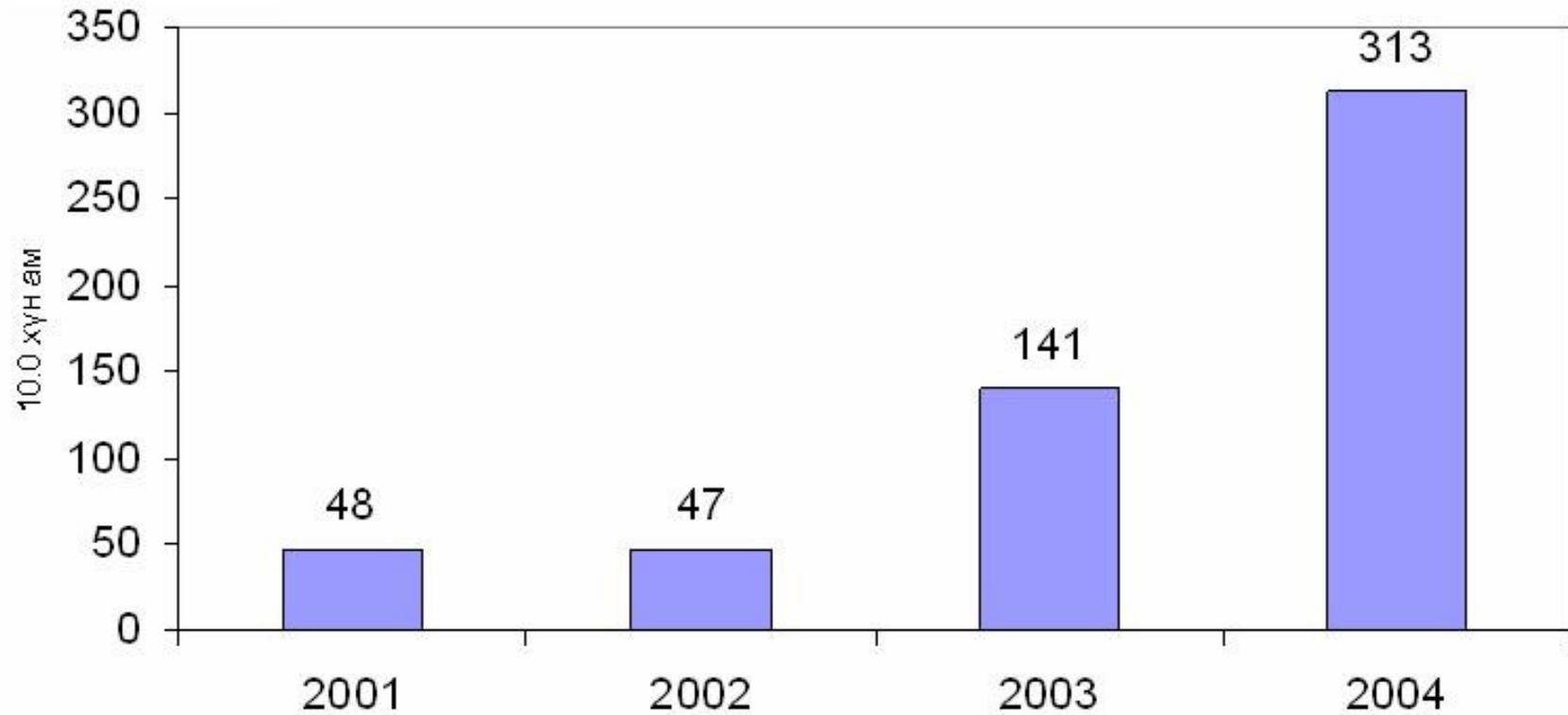


Percentage of new born babies with the shortage of oxygen in all new born babies.

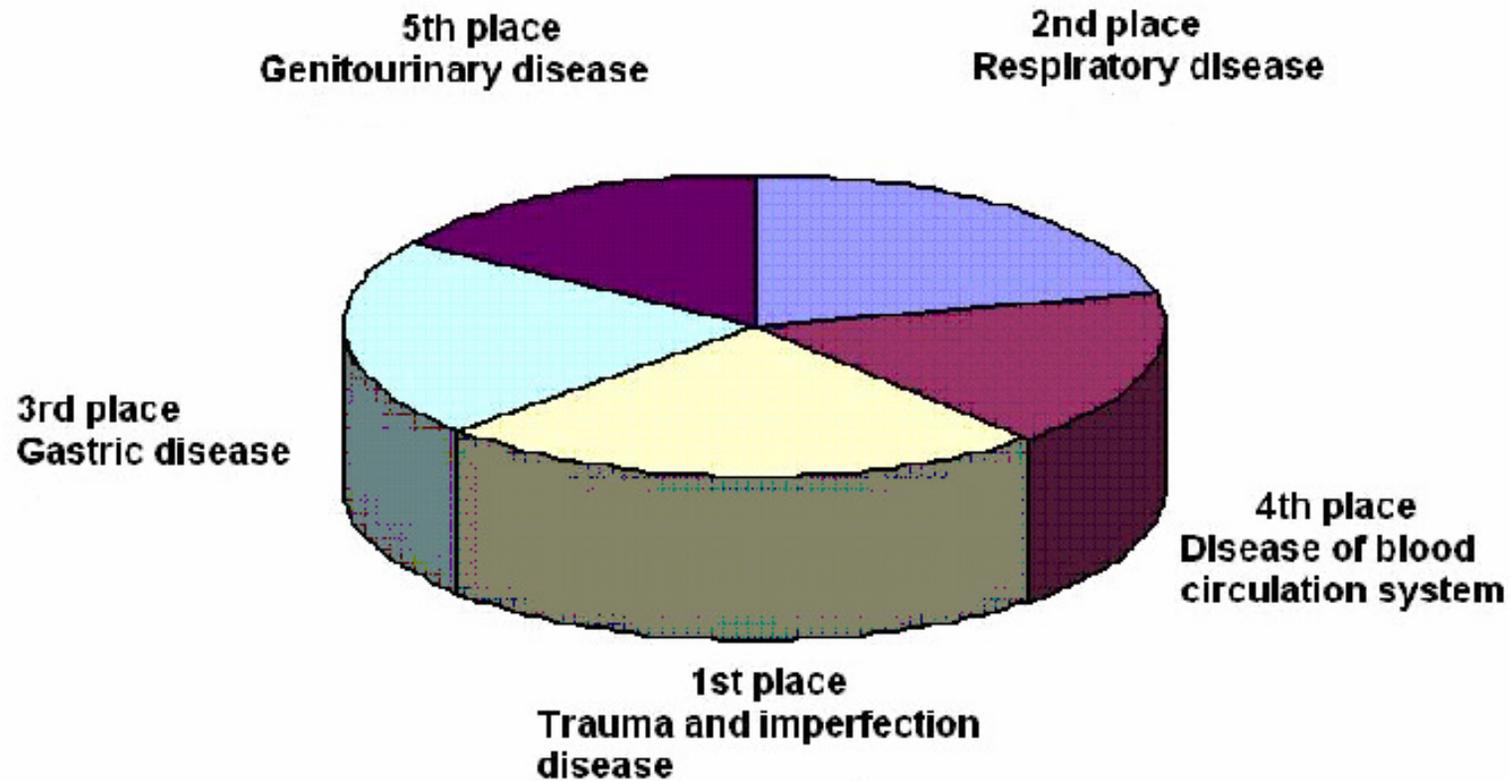


Ratio of the skin mucus disease on years

100 people



5 main reasons of the population disease, 2004



Responses

- The project to replace old household stoves under the assistance of UN GEF/ World Bank
- Emission measurement of vehicles
- Policy to develop the industry and supply of environmental friendly fuel.



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