

Climate Change and Health Priority targets in Georgia

Geneva, 27-28 October 2009

Climate change is recognized as one of the defining challenges of the 21st century, and protecting health from its impacts is an emerging priority for the public health community.

The World Health Organization (WHO) has reported: "A warmer and more variable climate threatens to lead to higher levels of some air pollutants, increase transmission of diseases through unclean water and through contaminated food, to compromise agricultural production in some of the least developed countries, and increase the hazards of extreme weather."

THIS PRESENTATION

1. HOW GEORGIA IS REACTING TO CLIMATE CHANGE CHALLENGES FOR HEALTH PROTECTION

- **Government acts**
- **National Response Plan (2008)**
- **Country Health Priorities and extreme events**

1. EMERGENCY SITUATIONS IN GEORGIA

2. TARGETS AND OBSERVED HEALTH IMPACTS: VECTOR DISEASES

3. WATER RELATED DISEASES MANAGEMENT IN GEORGIA

4. THE ADDED VALUE OF THE GUIDANCE

1. HOW GEORGIA IS REACTING TO CLIMATE CHANGE CHALLENGES FOR HEALTH PROTECTION

- **Government acts**
- **National Response Plan (2008)**
- **Country Health Priorities and extreme events**

What has been done in Georgia regarding The Climate Change

- In 1994, Georgian Parliament ratified the United Nations Framework Convention on Climate Change (UNFCCC), adopted by leaders of 158 states at the Earth Summit in Rio de Janeiro in 1992.
- In 1996, after the approval of the National Climate Change Program by the President of Georgia, the National Climate Research Centre (NCRC) was set up at the Department of Hydrometeorology for the implementation of the program. Despite the fact that Georgia has no strict obligations to investigate the main trends of climate change over its territory, the National Climate Change Program envisaged carrying out some research activities on the regional level of general forecast for the global warming.
- In 2000 the National Climate Change Agency has been established at the Ministry of Environment in order to coordinate activities on Climate Change Problem going on in Georgia and to present their results abroad.
- In 2005, European Standard Emergency Management Department was established, including fire service (executive personnel only. Fire forces are under municipal system).
- In 2007, Law of Georgia on " Protection of population and territory against natural and manmade emergency situation" was adopted.
- In 2008, the National Response Plan (NR) of Georgia has been approved by President decree #415
- Along with the Ministries of Energy, Agriculture, Economic Development, The Municipalities of Tbilisi and some other large cities, a number of academic institutes are involved in the Georgian Climate Change activities.
- Rescue teams and instructors have been prepared by international experts in different spheres.

What is the National Response Plan (NRP) of Georgia?

NRP of Georgia is submitted agreement between Ministries and Agencies, which:

1. Regulate emergency situation operations plans, which are created for the actual danger:
2. Provide help in this direction to existed laws in the Country;
3. Provide assistance and coordination of resources delivered for regional and local authorities on the national level.

When is the National Response Plan (NRP) activated in Georgia?

1. In case of any event, when national level assistance is needed. If this event is declared as an emergency situation;
2. When serious danger is expected and assistance is needed on the national level.

How the emergency situation works

1. This Plan covers functional approach, which unify 17 functions of national level assistance types, which can be the most useful for the damaged region;
2. Management of each function is made by structure, which has convenient power, resources and capabilities in this sphere;
3. The functions are implemented with the representatives of the local authorities in case of necessity.

Assistance function # 6 of National Response Plan is related to the medical assistance in emergency situations.

HEALTH SECTOR ROLE IN RESPONSE PLAN

Medical assistance in emergency situations among other functions serve also to strengthen health systems and build institutional capacity on climate change in relation to:

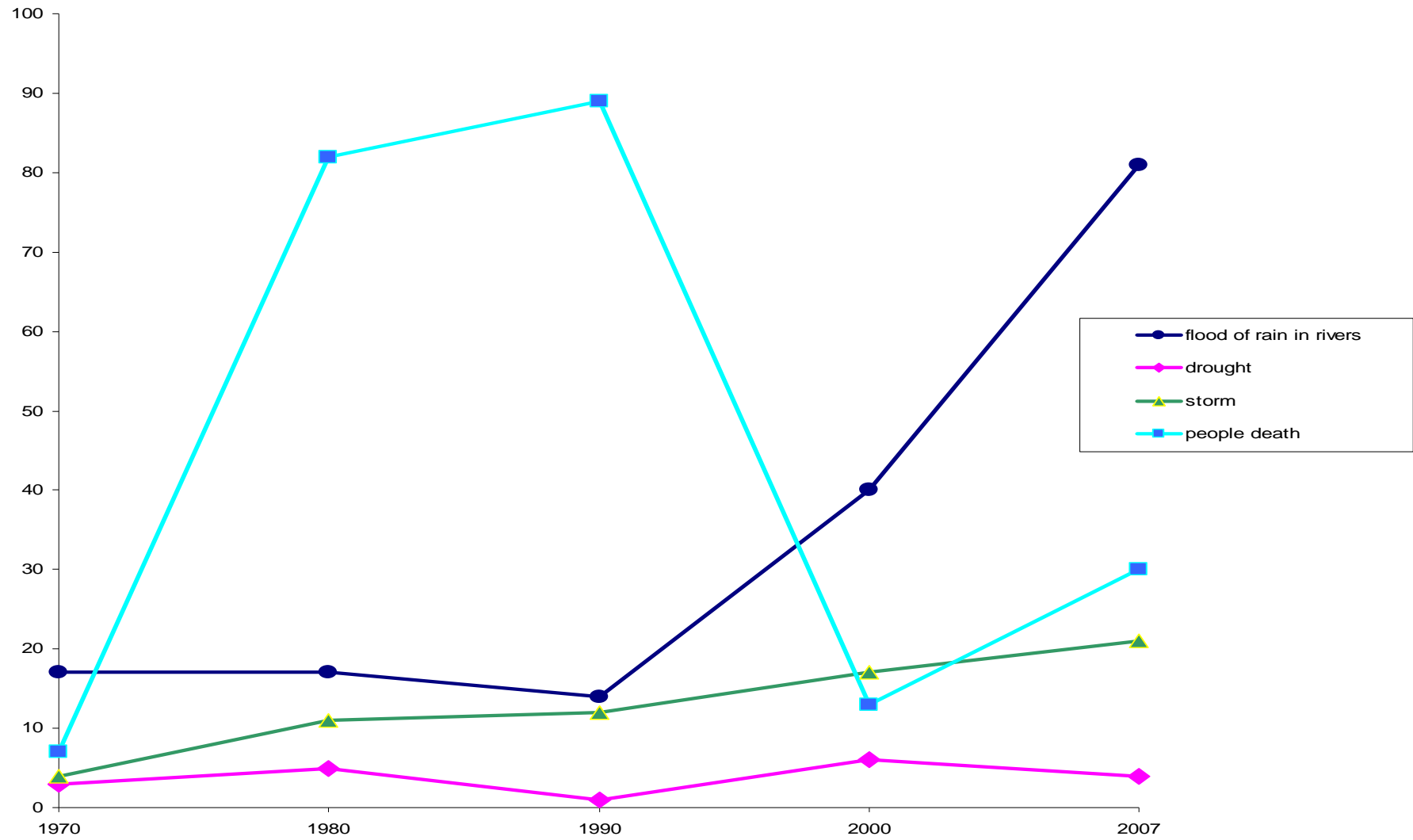
- extreme weather events preparedness and response;
- communicable diseases surveillance and response;
- respiratory diseases early detection and response;
- water, food safety and malnutrition;
- exchange of knowledge and experience on effective adaptation and mitigation measures.

Country Health Priority targets and activities

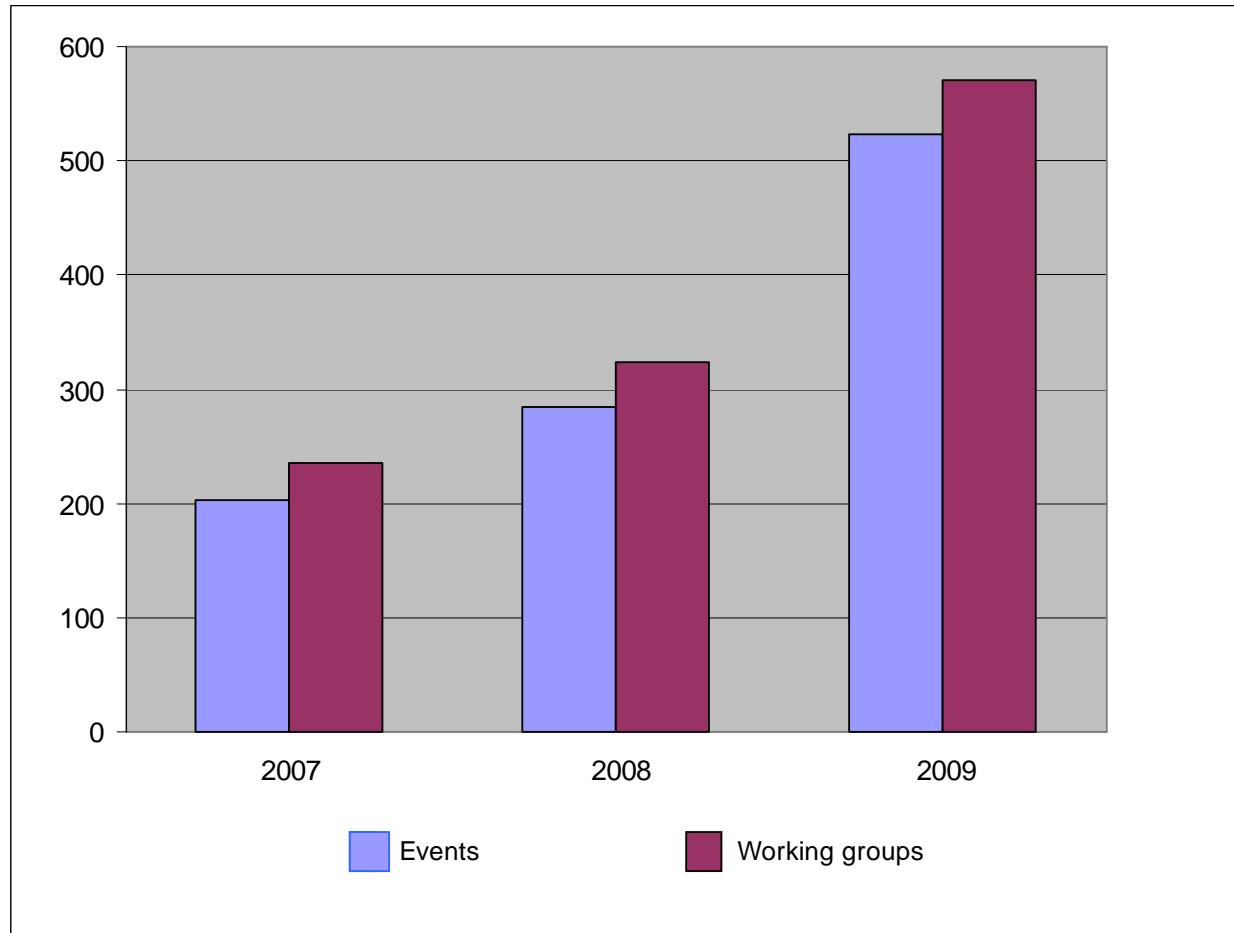
- development of the National Climate Change Health Adaptation Plan for preparedness and response to climate change;
- technology transfer to ensure water security in health care facilities;
- setting up of a climate-environment and health early warning system in district offices; and
- development of contingency plans for hospitals and health care facilities.
- capacity building;

Difficult economic conditions during the past decade have had serious implications for the delivery of health care and the public health infrastructure in Georgia.

2. EXTREME EVENTS IN GEORGIA



Emergency Situations of Civil Service of City Hall of Tbilisi



I would like to show some examples of floods in Tbilisi, May, 2009









NCDC of Georgia has great interest to provide several surveys in this regard:

- I. To carry out epidemiological and academic public health research, including research on exposure-response relationships, on estimating the current and potential future health impacts of climate change and understanding risk perception and risk communication.
- II. To identify strategies and actions to protect human health, particularly of the most vulnerable groups: raising awareness of the effects of climate change on health, in order to prompt action for public health measures, in order to support the preparation of the necessary documentation at country's level.
- III. To Assess the burden of disease attributable to climate change (direct and indirect effects) , including emergencies related to extreme weather events.
- IV. To Identify and develop indicators to monitor climate change-related health outcomes within surveillance systems, in order to access the necessary financial and political support to implement effective health adaptation responses to climate change.

TARGETS AND OBSERVED HEALTH IMPACTS: VECTOR BORN DISEASES

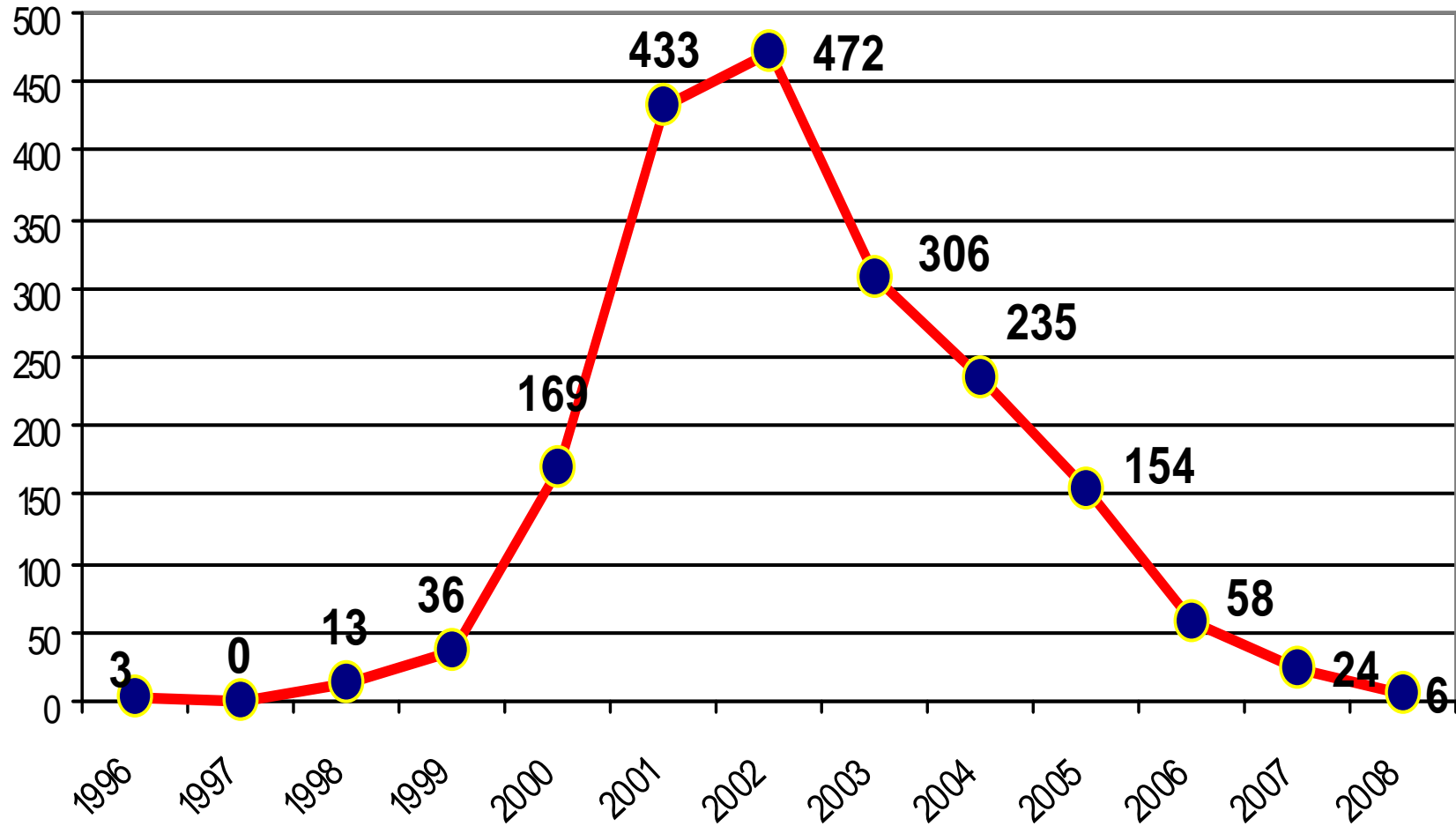
Malaria

Malaria has been widespread in Georgia since ancient times, as the geographical location of the country and existing climatic conditions have been favorable for malaria transmission. At those times malaria often appeared as national disaster causing enormous economic and human loss.

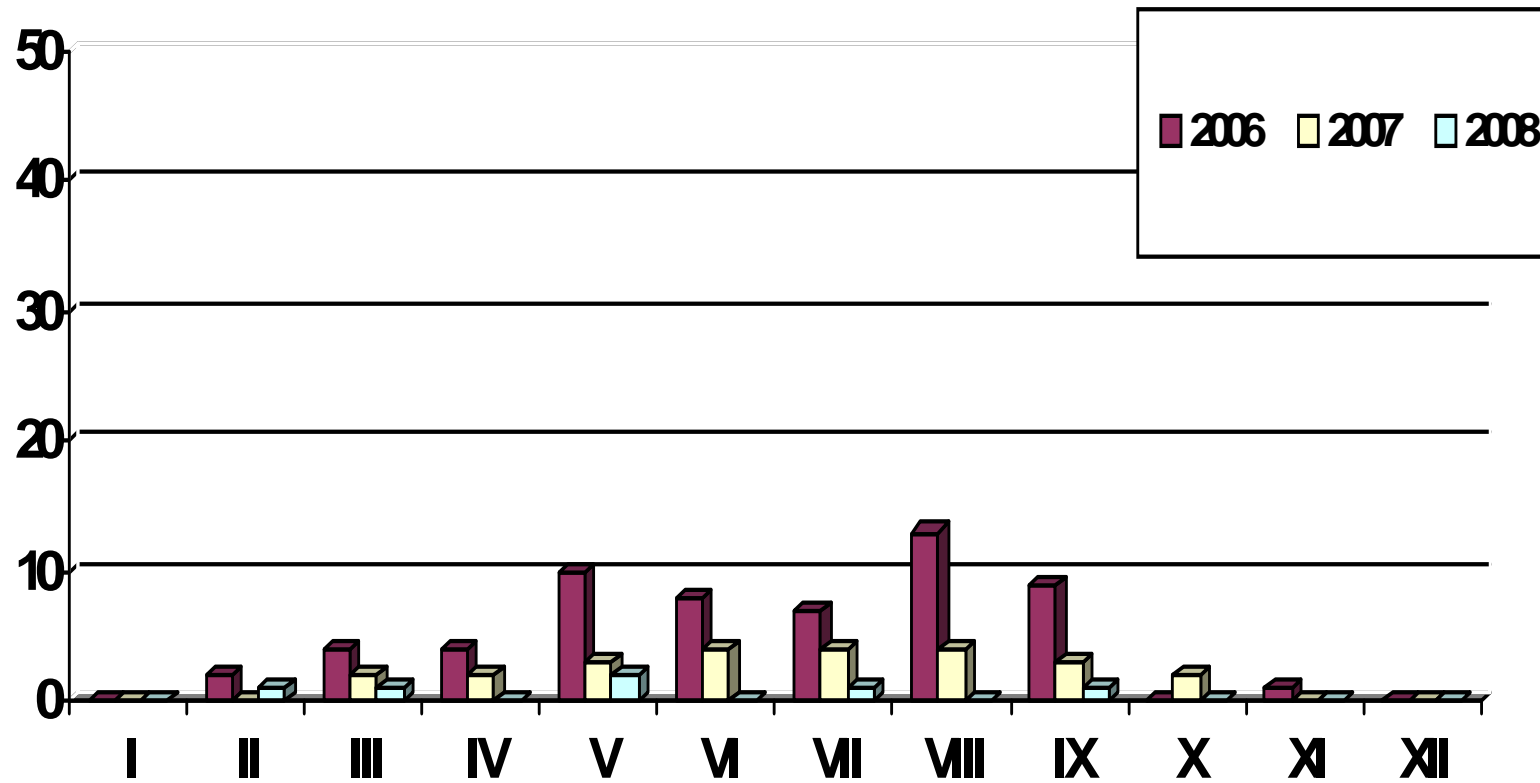
Due to complex measures against malaria undertaken by the Institute of Parasitology and Tropical Medicine and specialized medical network a sharp decrease in morbidity by the year 1954 was achieved. By 1961 malaria was practically eliminated, and by 1970 - complete and sustained elimination were achieved.

However, the receptivity of a great part of the territory remained high and potentially hazardous because of the existence of mosquito vectors and natural climatic and environmental conditions.

Perennial dynamics of malaria cases in Georgia 1996-2008



Seasonal distribution of malaria cases 2006-2008



Leishmaniasis

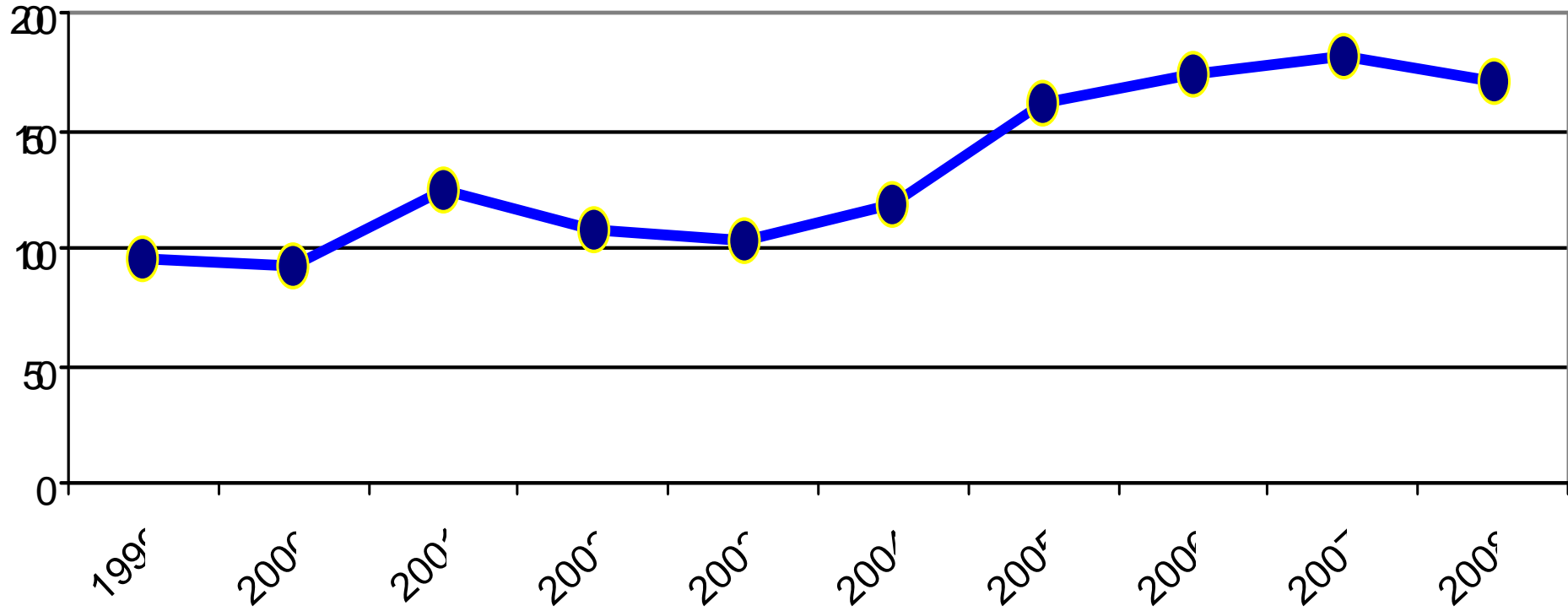
Georgia is a rich country by Phlebotomus genus representatives – 16 species.

By 3 years investigation results (in Tbilisi, Kvemo Kartli and Kutaisi) the main role in transmission of Visceral Leishmaniasis takes only 5 species: Phlebotomus kandelakii; Phlebotomus halepensis; Phlebotomus balcanicus; Phlebotomus wenioni ; Phlebotomus sergenti.

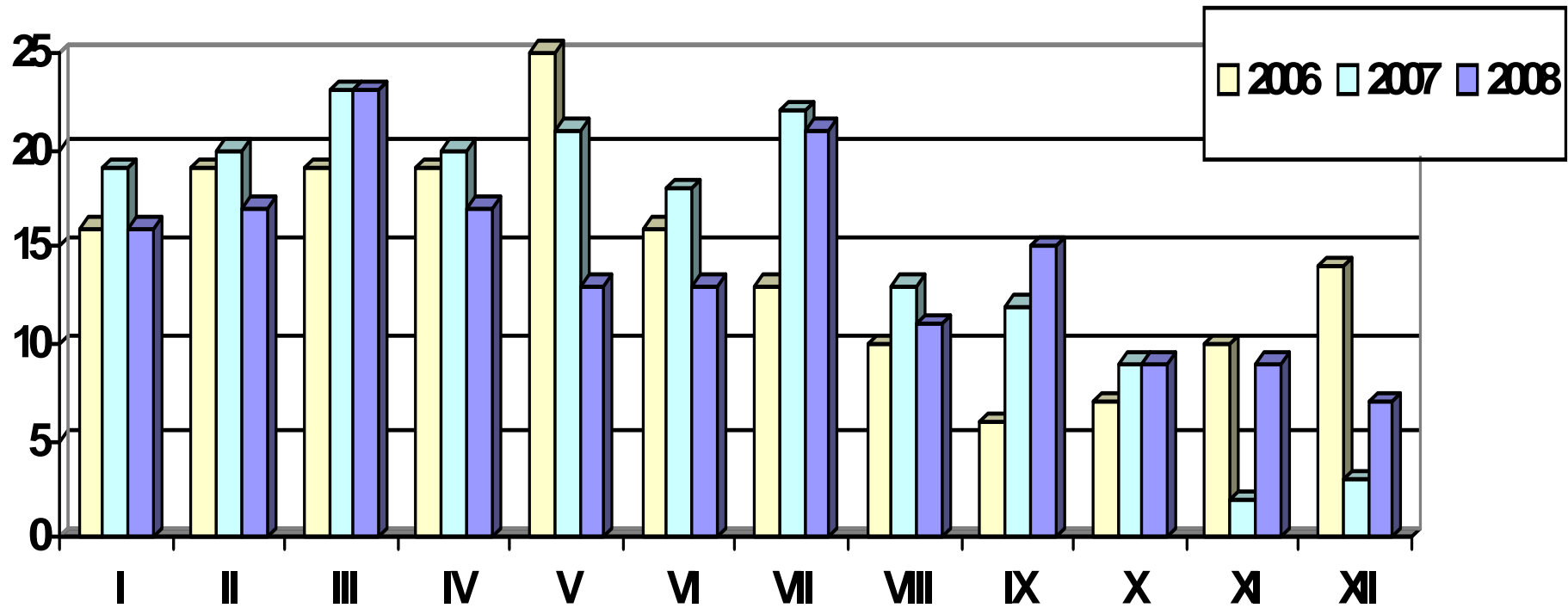
Tbilisi the capital of country is an active and most affected focus of Visceral Leishmaniasis (VL) with a high prevalence of infection both in humans and dogs. The relatively high percentage of adult cases indicates that this disease is re-emerging from an endemic to an epidemic situation.

Leishmaniasis

Dynamics of Leishmaniasis cases in Georgia 1999-2008



Seasonal distribution of cases Leishmaniasis



4. EXTREMES AND WATER RELATED DISEASES MANAGEMENT IN GEORGIA

By reducing fresh water supplies, climate change affect sanitation systems and lower the efficiency of local sewerage systems, leading to increased concentrations of pathogens in raw water supplies. Changes in rainfall patterns reduce the water available for drinking and washing.

In Georgia :

a) Drinking water receives extensive treatment before it is supplied to the consumer. Large urban populations in main city's of Georgia have access to safe drinking water sources (standpipes or boreholes) or to sanitation services.

In an event of outbreak laboratory investigation is mainly carried out on the laboratory basis of the national center for disease control and public health (NCDC) due to poor logistics of the existing laboratories or unavailability of them at local levels that itself seriously impact early diagnostics of water-born diseases.

The investigation of water-born diseases in extreme weather events in Georgia has not been held.

b) Health issues:

- **Flooding and wind storms become more intense in all parts of Georgia with climate change and affect health through the spread of disease.**
- Data on the diarrhea diseases due to floods and other extreme events are not available.

c) Water supply and sanitation

- No sanitation technology is "safe" when it gets covered by floodwaters and the NCDC provides preventive measures among the population to avoid the harmful water borne diseases causing by floods and storms.
- water supply and sanitation infrastructure has seriously deteriorated in Georgia in the region and even collapsed in some places, with potentially calamitous consequences for human health, economic activity and the environment.
- Georgia developed risk maps (*GIS*) for selected geographical areas and for various hazards, at different magnitude levels.

5.THE ADDED VALUE OF THE GUIDANCE on Water Supply and Sanitation in Extreme Weather Events

HIGHLIGHT the OVERALL LOOK OF THE PROBLEM: raise Government awareness

IMPROVE MULTIDISCIPLINARY APPROACH: enhance possibility of funds and expertise sharing

PROMOTE HEALTH PROTECTION FROM CLIMATE CHANGE

IT IS USEFUL FOR FOCUSING PRIORITY RESEARCH AND ACTION AREAS

Thank you for your attention !

Nana Gabriadze

Head of division of environmental health
and epidemiological standards National
Center for Disease Control & Public Health (NCDC a PH)
9 M. Asatiani st. Tbilisi, 0177, Georgia

Telephone:+995 32 39-89-46;

Fax: +995 32 43-30-59;

mobile: +995-95 45 54 97

gabriadzenana@yahoo.com