Developing a National adaptation strategy in Health Sector due to Climate Change

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Intergovernmental Panel on Climate Change 4\textsuperscript{th} Assessment

- Health impacts due to climate change are occurring
- Impacts will increase with increasing climate change
- Mitigation and adaptation needed now
Opportunities to highlight work at different levels

- Positive effects will only come from national level action
- Contributions of "front-line" experiences to resource base
- Demonstrations of success necessary to stimulate further support
Republic of Macedonia and UNFCCC

GOAL:
to obtain stabilization of GHG concentration in the atmosphere on levels which would prevent dangerous anthropogenic (human induced) impact on the climate system

PRINCIPLES:
• Equality and shared, but differentiated responsibilities
• Acknowledging requirements and circumstances of developing countries
• Precautionary principle
• Promotion of sustainable development

1998, Party to the UNFCCC
Non-Annex I Party
Vulnerability in the Republic of Macedonia

UNDER THE SECOND NATIONAL COMMUNICATION ON CLIMATE CHANGE /2008/

More information can be found on:
www.moepp.gov.mk
www.unfccc.org.mk
Climate scenarios

- The largest increase of air temperature up to year 2100 is expected in the summer season, associated with a strong decrease in precipitation.
- Almost no change in precipitation is expected for the winter season in general, but a decrease is expected in all other seasons
- More vulnerable southeast and central part
Vulnerability assessment
Human health Sector

- Increased risk from food or vector-born diseases, increased frequency and duration of heat waves, other extreme events, increased mortality from cardiovascular diseases

- For some of the winter months decrease of total mortality (expressed as a monthly average) is expected in the country

- For the summer months increase of the monthly mortality rate in the country of 10% average is expected, compared to the period 1996-2000.
1. Mortality
(concerns entire population of Macedonia)
In the period 1960-2005 in the Republic of Macedonia the average number of deaths was 14,425, or 7,808 males and 6,617 females. For the same period, average excess mortality of 18% has been registered among the males compared with females. The difference between total average monthly mortality in absolute numbers is 28% (from +16 to -12) for January (month with highest mortality) and September (with lowest). Due to climate changes, in the next decades, decrease of several percents in some of the colder months is expected regarding the total annual monthly mortality (January 4%, October 4%, November 2%). On the other hand, in the warmer months increase of 4-11% of the total annual monthly mortality is expected (mostly in April, May, June and it will be average 10% higher than the period 1996-2000).

What is adaptation?

• The Intergovernmental Panel on Climate Change (IPPC) defines adaptation as "any adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects which moderates harm or exploits beneficial opportunities".
• Adaptation involves taking action so that we can be more resilient to our current climate, less susceptible to the impacts of future climate change and in a position to take advantage of opportunities
Observed and modelled summer temperatures from Stott et al, 2004
What is an Adaptation Strategy?

- **An Adaptation Strategy aims to increase society’s resilience.** It is a framework for managing future climate risk and offers the potential of reducing future economic, environmental and social costs, particular in the health sector.

- To reach this point, more new knowledge is required on climate impacts, particularly on regional impacts as well as on the economic costs of action/inaction.
Protecting health from climate change in southeast Europe, central Asia and the northern Russian Federation

A seven-country initiative

**Uzbekistan**
- Dust storms
- Droughts
- Water stress
- Food production decrease

**Tajikistan**
- Floods, landslides
- Droughts, aridity of soil
- Food production decrease

**Kyrgyzstan**
- Floods, landslides
- Droughts

**Kazakhstan**
- Increase in aridity of soil
- Heat-waves
- Extreme precipitation events

**Republic of Macedonia**
- Heatwave frequency increase
- Other extreme events

**Albania**
- Heat-waves frequency increase
- Air quality in summer
- Water stress

**Russian North**
- Permafrost melting
- Temperature increases

**Kyrgyzstan**
- Floods, landslides
- Droughts

**Tajikistan**
- Floods, landslides
- Droughts, aridity of soil
- Food production decrease

**Uzbekistan**
- Dust storms
- Droughts
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**Kazakhstan**
- Increase in aridity of soil
- Heat-waves
- Extreme precipitation events
The overall goal of this project is to strengthen the capacity of health systems to protect health from climate change, and in particular:

- to develop capacity, assess the risks and develop national or subnational health adaptation strategies;
- to build institutional capacity on climate change in relation to:
  - extreme weather events preparedness and response;
  - infectious disease surveillance and response;
  - water, food safety and malnutrition;
- to foster innovation in energy efficiency and the use of renewable energy for health services;
- to provide intelligence and facilitate the exchange of knowledge and experiences on effective adaptation and mitigation measures.
## Country activities

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<tr>
<th>Country</th>
<th>Health adaptation strategies</th>
<th>Information sharing</th>
<th>Improved disease surveillance</th>
<th>Extreme events preparedness and safe hospitals</th>
<th>Improving air quality and identifying early respiratory diseases</th>
<th>Food and nutrition action plan</th>
<th>Energy efficiency</th>
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PROJECT IMPLEMENTATION FACILITY (WHO Euro)

Overall management, monitoring and coordination
Provision of common Tools and Methods
Development of common Training package
Provision of web-based information platform
Ad-hoc technical support to project countries
Intercountry meetings
Communication and Dissemination of project and results
(e.g. newsletter, publications, participation in international events)

Uzbekistan
Project implementer
National committee
Project activities

Kazakhstan
Project Implementer
National committee
Project activities

Russian Federation
Project Implementer
National committee
Project activities

Albania
Project Implementer
National committee
Project activities

Republic of Macedonia
Project Implementer
National committee
Project activities

Kyrgyzstan
Project Implementer
National committee
Project activities

Tajikistan
Project Implementer
National committee
Project activities

International Advisory Committee
Action taken

- Establishing the National Committee for climate change and health (June, 2009)
- Organizing the First Workshop for preparing the National Adaptation Strategy for climate change in health sector (June, 2009)
  - Draft Strategy (Dec, 2009)
- In process:
  - 3 working groups for Action Plan priority drafting (Feb-Apr 2010)
  - Second Workshop (May, 2010)
  - Draft Strategy and Action Plan (May, 2010)
A public health approach to strategy development

Public Health Steps to Prevention

1. Create a vision
2. Define and describe the nature of the problem
3. Identify Effective Interventions
4. Develop into Priorities and Strategies
5. Create an Action Plan
6. Evaluate and share learning

Leadership and Advocacy

Working with Stakeholders

Vulnerability and adaptation assessment
**Design**

- Stakeholder engagement

**Assess**

- Vulnerability:
  - Current burden of disease
  - Current health protection programs

- Impacts:
  - Changing burden without climate change
  - Projected health impacts of climate change

- Adaptation:
  - Identify, prioritize additional interventions
  - Identify human and financial resources

**Evaluate**

- Health harms & benefits in other sectors

- Implement, monitor & evaluate
What is the current burden of climate-sensitive health outcomes, including which regions and populations are more vulnerable to climate variability and change?

What factors other than climate determine this vulnerability?

How effective are current programs and activities in addressing the climate-sensitive health outcomes?

How is the burden of climate-sensitive health outcomes likely to change over the coming decades, irrespective of climate change? This includes consideration of demographic trends and development plans.

What are the most likely health impacts of climate change over the next 20 years?

Which regions and populations will likely be at highest risk?

How might planned programs and activities address any additional burden of climate-sensitive health outcomes?

What additional public health interventions will likely be needed? What are the estimated costs and benefits?

What are the potential health risks of adaptation and mitigation measures implemented in other sectors, such as water resources, land use, and transport?
Pathways of climate change affecting human health in Macedonia

Climate change
- Long term changes in climate
- Inter-annual climate variability
- Short-term climate variability
- Extreme events

Environmental conditions

Socio-economic conditions

Direct exposures (extreme events)
- Heat/cold waves
  - Heat stress
  - Cardiovascular failure
- Allergies
- Air pollution
  - Respiratory and cardiovascular diseases
- Vector- and rodent borne disease
  - Leishmania ?
  - CHikungunya ?
  - ?
- Water- and food borne diseases
  - Salmonella
  - Campylobacter
  - Leptospiriosis ?
  - Toxic infections (mycotoxins)
  - Seasonality in gastro-intestinal diseases
- Water stress
- Infectious diseases
- Food security

Indirect exposures
- Water, agriculture, ecosystems, energy

Social & economic disruption

Health systems

Prevention and adaptation

Sustainable development and mitigation
A 7 steps approach

1. Identify and engage stakeholders
2. Identify and describe vulnerability to current climate variability and change
3. Project the health impacts of climate change
4. Identify and prioritize adaptation options to address current and projected health risks
5. Determine the potential health benefits or damages of adaptation and mitigation measures implemented in other sectors
6. Determine the costs of action/inaction
7. Develop monitoring and evaluation systems to evaluate trends and policy outcomes over time.
Examples of Public Health Responses to the Risks of Climate Change

• Reduce exposures
  • Legislative policies
  • Alterations in built environment
  • Alterations in natural environment
• Prevent onset of adverse outcomes
  • Early warning systems
  • Surveillance and monitoring
  • Vector control programs
  • Public education and outreach
• Response / treatment
  • Medical training and awareness
  • Treatment
  • Emergency response
Template for the content of a strategy document for Adaptation and Health

Introduction

1. Introduction
2. Current strategic and legal framework in the R. Macedonia
3. Health impact in the Republic of Macedonia
4. Objective of the Strategy
5. Implementation of the Strategy
   5.1. Involvement of the Institutions, role and responsibilities
   5.2. Monitoring and Evaluation

Action Plan
Template for the content of a strategy for Adaptation and Health

**Background – size and nature of problem**

- **Policy Context** - Links with international and national policy and strategies and climate change predictions
- **Health Impacts of climate change** – current, medium and long-term predictions; size and nature of problem:
  - E.g. Heatwaves and fires
  - Flooding, windstorms
  - Infectious Diseases: including vector-borne, Food-borne and Water-borne disease
  - Changes in air pollution
  - Ultraviolet radiation
  - Food security
  - Migration

- **Vulnerable groups and geographical regions**
- *Summary of priority risks to address in short, medium and long-term*
Protecting health from climate change
activities in cooperation between the World Health Organization and the Ministry of Health

In 2009, the World Health Organization, Regional Office for Europe with support of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, started conducting activities on protecting health from the climate change in 7 countries in the WHO European region (Albania, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, the former Yugoslav Republic of Macedonia and Uzbekistan), that belong to four different geo-climatic areas, with different expected health impacts from climate change...more

HEAT-WAVE ALERT
04.06.2019

HEAT-HEALTH ACTION PLAN

Heat-health action plan to prevent the heat-waves consequences on the health of the population in the Republic of Macedonia.

Activities by phases

PHASE 0
GREEN LEVEL :: NO DANGER

PHASE 1
YELLOW LEVEL :: EMERGENCY / DANGEROUS TEMP

PHASE 2
RED LEVEL :: CATASTROPHIC TEMPERATURES

Temperature thresholds »

Recommendations for protection from heat waves
News and events

Crisis preparedness planning for the health system in the Republic of Macedonia.
PHASE 2
RED LEVEL: CATASTROPHIC TEMPERATURES

Temperature thresholds

Recommendations for protection from heat waves

News and events

Promoting the guideline "Heat-health action plans"...

Crisis preparedness planning for the health system in the Republic of Macedonia...

External links

Contact informations

Protecting health from climate change

e-mail: webmaster@toplistibronovi.mk

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Template for the content of a strategy for Adaptation and Health
Taking actions forward

- Priority actions
- Delivery process
- Timetable
- Roles and responsibilities
- Communication Plan
- Performance management processes
- Monitoring and evaluation
Research and Development

• Evaluation – process, outcome, economic

• Workforce Development – skills and knowledge

• Future research priorities
SUCCESS FACTORS:

BARRIERS