

Implementation of the Heat-Health Action Plan of the former Yugoslav Republic of Macedonia ^[1]

The National Heat-Health Action Plan has been developed within the National Strategy for Adaptation for the health sector to implement adaptation measures and prevent health consequences associated with extreme heat due to climate change.

Its goal is to decrease morbidity connected with heat waves through issuing heat and health warnings, to encourage planning in the relevant sectors, to mainstream health in all policies, and to raise the public and health sector workers' awareness, as well as to mobilize the resources for managing the heat effects.

Case Study Description

Challenges:

Models project an increase of mean annual temperature in the former Yugoslav Republic of Macedonia of between 2.5°C and 3°C by the end of the century. Periods of very cold weather are projected to become less common, and periods of very hot weather (heat-waves) more common. Application of the epidemiological concept of "attributable risk" to meteorological data allows assessing the extent to which human influence on climate has contributed to the risk of a specific weather event. Using this approach, a significant role for human influence can already be identified, for example, the case of the mega summer heat-wave that contributed to over 70,000 premature deaths in Western Europe in 2003 or of the Balkan summer heat-wave that contributed to over 1000 premature deaths in the former Yugoslav Republic of Macedonia in 2007. The absolute highest air temperatures in the former Yugoslav Republic of Macedonia were recorded in July 2007: 43.5°? in Štip, 45.3°? in Gevgelija and 45.7°? in Demir Kapija (the highest recorded temperature since continual meteorological recording and surveillance in the country). The city of Skopje is the only urban agglomeration in the country that experiences a "urban heat island" effect. The difference in total average monthly mortality in absolute numbers is 30% (from +17 to -13) between January (the month with the highest mortality) and September (with the lowest). The heat threshold temperature for Skopje in summer 2007 was 30.8°C (95th percentile daily mean temperature). Under conditions of heat-wave, an increase of temperature of 1°C above this heat threshold (30.8°C) lead to increase in mortality of 4.8%.

Objectives:

Reduction of heat-wave-related morbidity and mortality through heat health warnings, especially for most vulnerable groups to the effects of heat-waves: the elderly, infants and children up to five years old, the chronically ill, people who are overweight, people in certain professions who work outdoors, people whose socioeconomic status makes them more vulnerable and those who are more vulnerable to the effects of heat-waves because of certain social factors (nationality, profession, education, social isolation, etc.). The health care system in the country has an important role in establishing adaptation, health prevention and response measures to address the health risks related to climate change such as:

- Strengthening existing public health capacities for early detection and adequate response;
- Anticipating the consequences of emerging diseases possibly related to climate change;

- Raising awareness among the population about the possible links between climate change and health.

Solutions:

One of the main proposed solution is the setting up of a structured system for timely announcement of heat waves (Alert system), especially functioning in the period 01 May – 30 September. This included: the set-up of a responsible body, a 24-48 hour heat early warning, specific thresholds for action, and priorities for vulnerable populations, workers' health and communication. The Alert system is part of the broader approach designed by the National Heat-Health Action Plan. Further elements are:

- Coordination body for implementing the plan;
- Plan for informing (communication) the public and the health and social sectors about protection during heat waves, in particular in relation to the recommendations given by the Ministry of Health, addressed to the health workers, the population and risk groups;
- Recommendations for reducing exposure to heat inside health and social institutions (medium-term and short-term strategies), and special protection plans for vulnerable population groups;
- Long term planning for preparedness of the health and social care systems, including: planning and training of personnel, appropriate health protection, creating green areas, improving the energy efficiency of the hospitals and reducing the emission of greenhouse gases;
- Monitoring and evaluation of the plan.

An application for Android mobile phones was also developed; it provides heat and health warnings and related recommendations to the users.

Importance and relevance of the adaptation:

Case developed and implemented and partially funded as a CCA measure.

Additional Details

Stakeholder engagement:

The institution with overall responsibility for implementing the Heat-Health Action Plan is the Ministry of Health. Within the Ministry of Health, the Commission for Monitoring Heat-Health Consequences has been operational since July 2007, while the Climate Change and Health Commission was established in June 2009. This latter participates in the carrying out, and surveillance of, a wide range of activities connected to climate change and health. Both commissions have participated in the preparation of the National Heat-Health Action Plan and they cooperate in the execution, surveillance and evaluation of the Plan. The Climate Change and Health Commission functions as coordinating body and is responsible for the coordination of the involvement of institutions during the implementation of the activities outlined in the Plan, as well as promoting multi-sectoral cooperation. The Commission for Monitoring Heat-Health Consequences oversees practical implementation of the activities, especially those connected with the provision of timely information to the public and health workers. It is responsible for implementing actions and activating the Plan. It is recommended that when necessary, people from other relevant institutions are included in this Commission and in the Plan implementation, as: Public Health Institute and Public Health Centres, the Occupational Health Institute - WHO Collaborating Centre, Crisis Management Centre, Hydrometeorological Institute, Directorate for Protection and Rescue, Departments for improving the living environment within the municipalities (in the first phase, active participation of the City of Skopje), Ministry of Transport and Communications, Ministry of Labour and Social Policy, Ministry of Education and Science, Macedonian Red Cross, Media, Non-governmental sector.

For the preparation of this plan the World Health Organization in collaboration with the Ministry of Health organized two workshops: (i) First workshop for preparing the health action plan for hot weather, 21-22 May, 2009, Skopje; (ii) Second workshop for revising and supplementing the work version of the plan, 21 October, 2009, Skopje.

In the current implementation phase this collaborative approach has proven to work well. For instance, in order to strengthen preparedness for crisis situations and climate change related emergencies, a simulation exercise

took place on 22 May 2013, in Strumica Region in the country. The key stakeholders were Ministry of Health, Strumica General Hospital (an important regional hospital centre), Emergency Medical Services, Crisis Management Centre, the Red Cross, fire-rescue units, the Ministry of the Interior, the Ministry of Defence and WHO. Prior to the simulation exercise some preparatory meetings were held to establish the parameters of the exercise such as expected casualties, trigger indicators for activating the emergency response plan, triage and patient traffic flow as well as the responsibilities of hospital and emergency medical services staff. The simulation allowed the authorities to test general preparedness and also the implementation of the National Heat-Health Action Plan.

Success and limiting factors:

The first pilot implementation was in summer 2010 and the Plan was endorsed by the Government in 2011. Lessons learning during the process 2009-2011 can be summarised as follow: (i) information on climate change impacts needs to be translated from the scientific research domain into language and time scales relevant for policy makers; (ii) the needs for national data were very important as well as recognition of limited human capacity; (iii) all relevant stakeholders need to be involved, but their needs for information may vary. More broadly, strengthening health security would require:

- Maximizing synergies with existing instruments, including the Heat-Health Action Plan;
- Preparing health and social care sector workforce to respond to health-related consequences of climate change and strengthening of health services to address climate-related events in a timely manner;
- Promoting consideration of the health issues and related responses within other sectors;
- Building capacity in the health and social care sector workforce.

Budget, funding and additional benefits:

The former Yugoslav Republic of Macedonia took part in a two-year (2009-2011) WHO project "Protecting health from climate change", a 7-country initiative (Albania, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, the former Yugoslav Republic of Macedonia and Uzbekistan) funded by the International Climate Initiative of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. The overall goal of the project was to strengthen capacity in understanding and responding to the health risks of climate change as well as to develop the Heat-Health Action Plan. Within the Project a WHO study in the country showed that it is possible to compare the damage costs of the increase in disease cases and deaths that were not averted with the costs of adaptation; moreover a partial reduction in health impacts is an expected benefit as a result of adaptation measures implemented. The annualized costs of heat-health adaptation measures were estimated at 12 million local currency units (LocalU) compared to health damage costs of 170 million LocalU per year (Climate change and health: a tool to estimate health and adaptation costs. Copenhagen, WHO Regional Office for Europe, 2013).

Legal aspects:

The National Heat-Health Action Plan was endorsed by the Macedonian Government in 2011.

Implementation time:

The Heat-Health Action Plan was adopted by the Government in 2011 and is now fully established, following the successful piloting of specific heat-protection actions in summer 2010.

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<http://www.toplotnibranovi.mk> [3]

<http://www.euro.who.int/en/countries/the-former-yugoslav-republic-of-mac...> [4]

Sources:

The Heat-Health Action Plan of the former Yugoslav Republic of Macedonia and website of the project "Protecting Health from Climate Change"

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