

PROTECTING HEALTH FROM CLIMATE CHANGE

A seven-country initiative

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ABSTRACT

This publication presents the results of a seven-country initiative of the WHO Regional Office for Europe aimed to protect health from climate change through addressing adaptation, strengthening health systems and building institutional capacity in Albania, Kazakhstan, Kyrgyzstan, Russian Federation Tajikistan, the former Yugoslav Republic of Macedonia and Uzbekistan.

This project is part of the International Climate Initiative (ICI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag.

Keywords

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CONTENTS

4	Foreword
5	Acknowledgements
6	Summary of results: at a glance
8	Overview
8	Introduction
9	Governance, stakeholder engagement and management
10	Common activities
10	Development of national health adaptation strategy or action plan
13	Assessment of health vulnerability, impact and adaptive capacity
16	Capacity development and national outreach
17	Research and innovation
18	Intercountry exchange of knowledge and good practices
20	Pilot countries
20	Albania
22	Kazakhstan
24	Kyrgyzstan
26	Russian Federation
28	Tajikistan
30	The former Yugoslav Republic of Macedonia
32	Uzbekistan
34	Afterword
35	List of publication

FOREWORD

Over the past decade, there have been significant advances in understanding the effects that climate change can have on health. Such impacts have been observed and documented in several countries of the WHO European Region, but their scale is continuously changing. This situation is compounded by the additional stresses that climate change exerts on already strained resources and fundamental determinants of good health such as food security, water safety and air quality. It is within this context that the WHO Regional Office for Europe undertook the largest pilot project on climate change and health.

This seven-country initiative aimed to protect health from climate change through addressing adaptation, strengthening health systems and building institutional capacity in Albania, Kazakhstan, Kyrgyzstan, Russian Federation Tajikistan, the former Yugoslav Republic of Macedonia and Uzbekistan. The project was supported financially by the International Climate Initiative (ICI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

Several countries have introduced multisectoral processes to address climate change and health within their implementation of the United Nations Framework Convention on Climate Change (UNFCCC). Such processes are promising when linked to a wider array of health and development themes but there has been a call for scaling up work in countries in an effort to tackle climate change. Creation of resilient communities was identified as a priority area in the WHO Regional Office for Europe's *Health 2020: policy framework and strategy* (2012). Within this theme, one of the seven-country initiative's major strengths is the all-society approach to awareness raising, capacity building and intersectoral policy development.

Health systems' potential for adaptation has not yet been fully realized. Most current health systems can deal with existing problems but must be prepared for the challenges of a changing climate. This need for relevant adaptation has been widely recognized at the ministerial conferences on environment and health. Member States of the WHO European Region declared their commitment to act on environmental health, including climate change, at the most recent conference in Parma in 2010.

Albeit a pilot, the seven-country initiative has already provided a wealth of valuable information and policy lessons for the whole WHO European Region. The methodology and tools developed throughout this initiative are based on well-established frameworks and adapted to country-specific needs and requirements. The experiences and the development of good practices are transferable and documented, allowing for use by other countries.

This new publication presents what has been learnt and achieved. It is hoped that this initiative is only the beginning of broader efforts, and that many more countries within and beyond the WHO European Region will follow and learn from the valuable results.



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Regional Director
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ACKNOWLEDGEMENTS

This initiative has involved several hundred people within all seven countries and at the intercountry coordination level. They deserve recognition as these results would not have been achieved without their hard work and dedication. Here we acknowledge the many significant contributions by highlighting the various groups of technical experts, decision-makers and stakeholders involved in this project.

We would like to thank our colleagues at the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) for their assistance in donor coordination and collaboration, and the International Climate Initiative (ICI) for providing financial support to this project.

A national steering committee in each country guided project implementation. Many thanks are due to all the members of these committees – for their role in establishing priorities and securing political support for the initiative; and in acting as a liaison between technical implementation and national governments to ensure that the resulting vulnerability assessments and strategies received appropriate recognition. In addition, many hundreds of technical experts contributed to the assessments and drafting of the final publications. Without this support it would not have been possible to achieve such detailed and thorough assessments of the impact of climate change, nor to develop such tailored health adaptation strategies for each of the seven countries. We are extremely grateful to all those involved at different stages of project development and implementation.

We also extend our appreciation to all the government ministries, national institutions and external stakeholders that supported and contributed to the project. Although too many organizations to mention by name, their contributions to the project, whether great or small, were essential for achieving the final outcomes.

Particular thanks go to the staff of the WHO country offices in Albania, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, the former Yugoslav Republic of Macedonia and Uzbekistan. Implementation of the project was coordinated by a national project officer in each of the country offices. They also served as a focal point between national collaborators and WHO technical staff. The staff of the WHO country offices and their colleagues were the constant driving force in the project: seeking out technical expertise where needed, and liaising between all the partners involved. We particularly acknowledge the spirit of collaboration between the national project officers which allowed sharing of experiences and lessons learnt.

Finally, thanks to the WHO Regional Office for Europe technical staff in Bonn and Copenhagen for their coordination oversight and expert contributions that led to significant capacity development in the project countries, with tangible results.

This publication reports the successes achieved over the past few years. These would not have been possible without the hard work of those acknowledged above.

Climate Change, Green Health Services and Sustainable Development
WHO Regional Office for Europe

SUMMARY OF RESULTS: AT A GLANCE

This publication presents the results of a pilot seven-country initiative of the WHO Regional Office for Europe aimed to protect health from climate change through addressing adaptation, strengthening health systems and building institutional capacity. The project was supported financially by the International Climate Initiative (ICI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

In 2008, the ICI selected seven WHO European Region countries, based on various criteria: climate-related exposures; severity of projected health effects; existing collaborative mechanisms between WHO and the national government; and eligibility for official development assistance (ODA). Their geographical and climatic features include arid and semi-arid water stressed areas (Uzbekistan, Kazakhstan); high mountainous areas (Tajikistan, Kyrgyzstan); Mediterranean countries (Albania, the former Yugoslav Republic of Macedonia); and a sub-Arctic region in the northern Russian Federation.

The overall aim of the pilot initiative was to protect health from climate change through strengthening health systems. It was planned to achieve this by building capacity in assessing vulnerability, impacts and adaptive capacity in each country. In turn, this would form the basis for developing a national health adaptation strategy or action plan; carrying out awareness raising activities; and facilitating the sharing of knowledge and experiences. In addition, pilot activities specific to each country aimed to address current climate change vulnerability. These included strengthening preparedness and response for extreme weather events; increasing surveillance and response for climate-sensitive infectious diseases; developing water safety plans; reducing the risk for respiratory diseases; fostering innovation in energy efficiency and use of renewable energy for health services; and air quality monitoring.

Some overarching success themes in the implementation approach highlight the innovative nature of the project and are outlined in the following paragraphs.

Multisectoral approach

It is well understood that coherent multisectoral action is necessary if the challenges posed by climate change are to be tackled effectively. Hence, national implementation of the project was guided by multisectoral national steering committees. Appointed by the respective governments, the steering committees represented a broad spectrum of policy-makers and stakeholders. This method of fostering dialogue between the various sectors and government departments made it possible to achieve not only a broad scope in strategy development but also political commitment to implementation.

Whole-of-society approach

Capacity development and outreach activities within the project were targeted at a very broad range of society: from training of medical professionals to awareness raising among the general public. As much as possible, a whole-of-society inclusive approach was sought in order to stimulate the creation of more resilient communities. Training programmes within the education systems were developed, young journalists were engaged to write informative articles on the health effects of climate change and village health committees were informed on actions for health. Policy-makers, civil society and the private sector were also involved in the outreach programme, often as project stakeholders.

Creation of resilient health systems

As a result of climate change, health systems and services will need to prepare for gradual changes in outcomes, sudden extreme events (e.g. heat-waves, flooding, infectious disease outbreaks), increasing

burden of disease and potential new conditions. Although specific needs varied between the seven countries, they all undertook actions to strengthen preparedness, including: (a) strengthening primary health care; (b) building capacity in the workforce; (c) strengthening health security; (d) strengthening monitoring, surveillance and early warning; (e) assessing capacity, impacts and developments; and (f) strengthening energy security through renewable and clean-energy technologies to reduce hospitals' vulnerability to disruption in case of intermittent energy supply or natural disasters.

Transferability of results

The methodology and tools developed throughout the initiative all have a solid basis in established published frameworks, but have been adapted to country-specific and health-specific needs. By illustrating how climate change adaptation and mitigation measures can be applied to the health sector, this seven-country initiative serves as a true pilot for further development and investment in the field. The processes and methods developed (e.g. performance of vulnerability assessments, strategy development) were transferred between the seven countries. Such proof of concept of transferability indicates that these lessons learnt can be used to stimulate the health adaptation process in other countries.

Illustration of potential

The summarized results of the initiative are presented over the next few pages. Each of the seven national case studies illustrates very different political and climatic circumstances. Above all, this pilot initiative demonstrates the potential for action – the capacity for greater implementation of climate change adaptation and mitigation measures to protect health from climate change. By highlighting how much has been achieved it is hoped that the experiences reported here will serve as a positive stimulus for further action in the WHO European Region and beyond.



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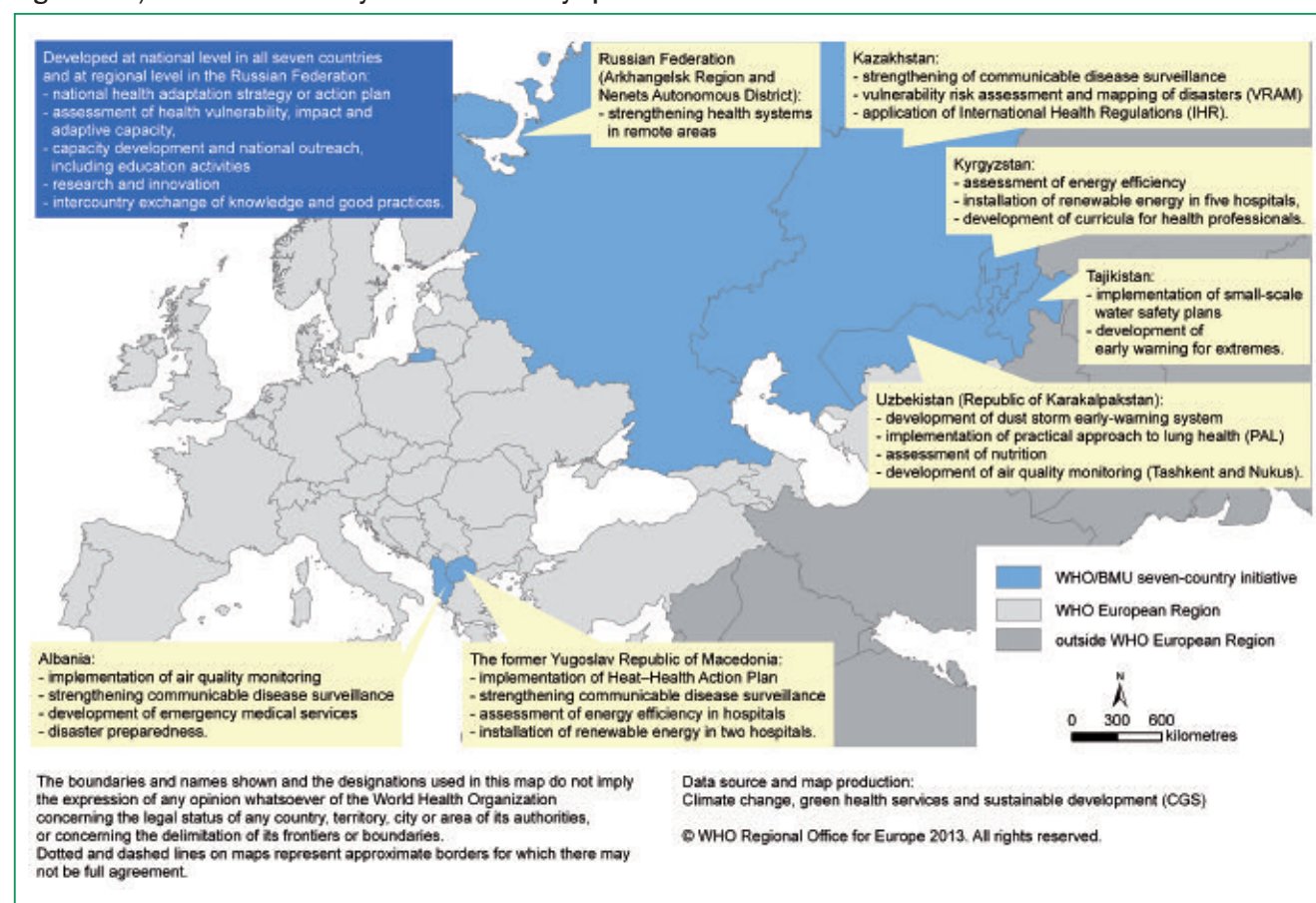
OVERVIEW

Introduction

The impacts of climate change are already being felt in the WHO European Region. Over many years, people throughout the arid and semi-arid water-stressed areas and high mountain areas of Central Asia have become grimly familiar with the increasing number of environmental emergencies caused by extreme phenomena such as floods and heat-waves, torrential rainstorms, hurricanes, droughts and hard winters. Human society is also feeling the pinch of climate change in the Arctic and sub-Arctic regions – retreating glaciers and melting permafrost are damaging health infrastructure and long-established transport routes. In the Mediterranean basin, extreme weather events (especially heat-waves) and changing distribution of infectious disease are presenting new climate-related risks.

In 2008, the WHO Regional Office for Europe started a pilot initiative aimed at protecting health from climate change. Supported by the BMU, the project was designed to identify and implement adaptation measures in seven pilot countries. The various common and country-specific activities are presented in Fig. 1.

Fig.1. WHO/BMU seven-country initiative: country-specific activities



The following core activities were carried out in all seven countries:

- development of national health adaptation strategy or action plan
- assessment of health vulnerability, impact and adaptive capacity
- capacity development and national outreach, including education activities
- research and innovation
- intercountry exchange of knowledge and good practices.

A number of specific activities were implemented by country, including:

- development of prevention, preparedness and response to extreme weather events
- strengthening of climate-sensitive disease surveillance
- improvement of air quality and reduction of respiratory disease burden
- development of water safety plans
- strengthening of food safety and security.

In addition, some countries identified development opportunities as well as potential for technical innovation. These included the development of energy efficiency and use of renewable energy for health services; development or expansion of early warning systems; and development of air quality monitoring in selected cities.

Governance, stakeholder engagement and management

Governments in each of the seven pilot countries appointed a national steering committee to guide political and technical implementation. Each steering committee identified possible stakeholders (based on interest and influence) and developed a stakeholder engagement plan. Several dialogue workshops were organized in each of the countries.

Within the bilateral cooperative agreements, the WHO Regional Office for Europe coordinated implementation within the seven countries – sharing a common management structure (common logical framework); coordinating with an international appointed advisory committee; building capacity across disciplines; and enabling a mechanism of sharing experiences, methods and tools. A national project officer and assistant were appointed to provide logistical support to the steering committee, follow up day-to-day implementation and facilitate resource management.

Components common to all seven countries and some examples of key results of country-specific activities are presented in the following pages.



COMMON ACTIVITIES

Development of national health adaptation strategy or action plan

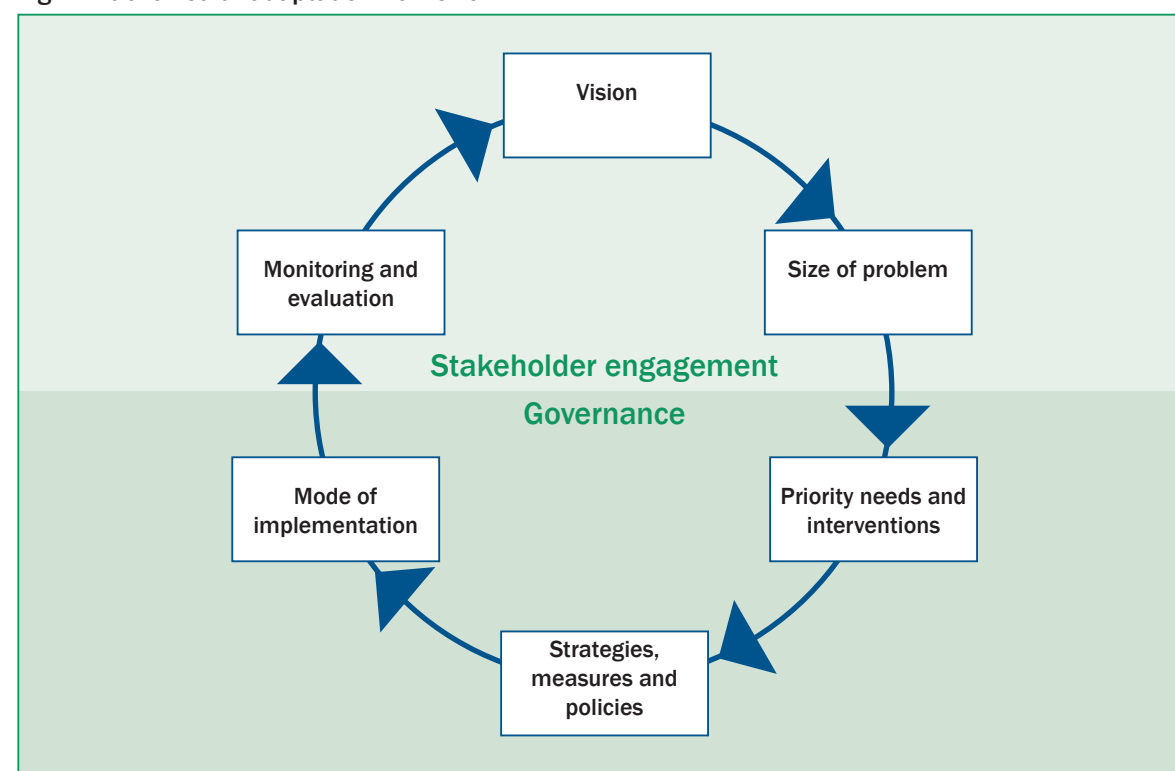
A national adaptation strategy or action plan is intended to reduce vulnerability to climate change and to facilitate integration of climate change adaptation into existing policies in a coherent manner.

At the commencement of the project some countries had plans to develop multisectoral national adaptation strategies, others had not discussed such a plan. The project contributed to formulation of the specific health protecting elements of adaptation in the former and development of national adaptation strategies, with a specific focus on human health, in the latter. Six of the seven countries developed national-level adaptation strategies or plans (four are government endorsed). In the Russian Federation, a regional strategy was developed for the Arkhangelsk Region and Nenets Autonomous District (endorsed by the regional government).

Development of the national/subnational health adaptation strategies/plans followed the guiding principles of the UNFCCC guidelines.¹ Hence, they were: (i) participatory, (ii) multidisciplinary (iii) contributing to sustainable development (iv) inclusive of the most vulnerable, (v) country driven, and (vi) built on sound evidence. Where possible, cost-effectiveness estimations were developed and the flexibility of procedures was considered.

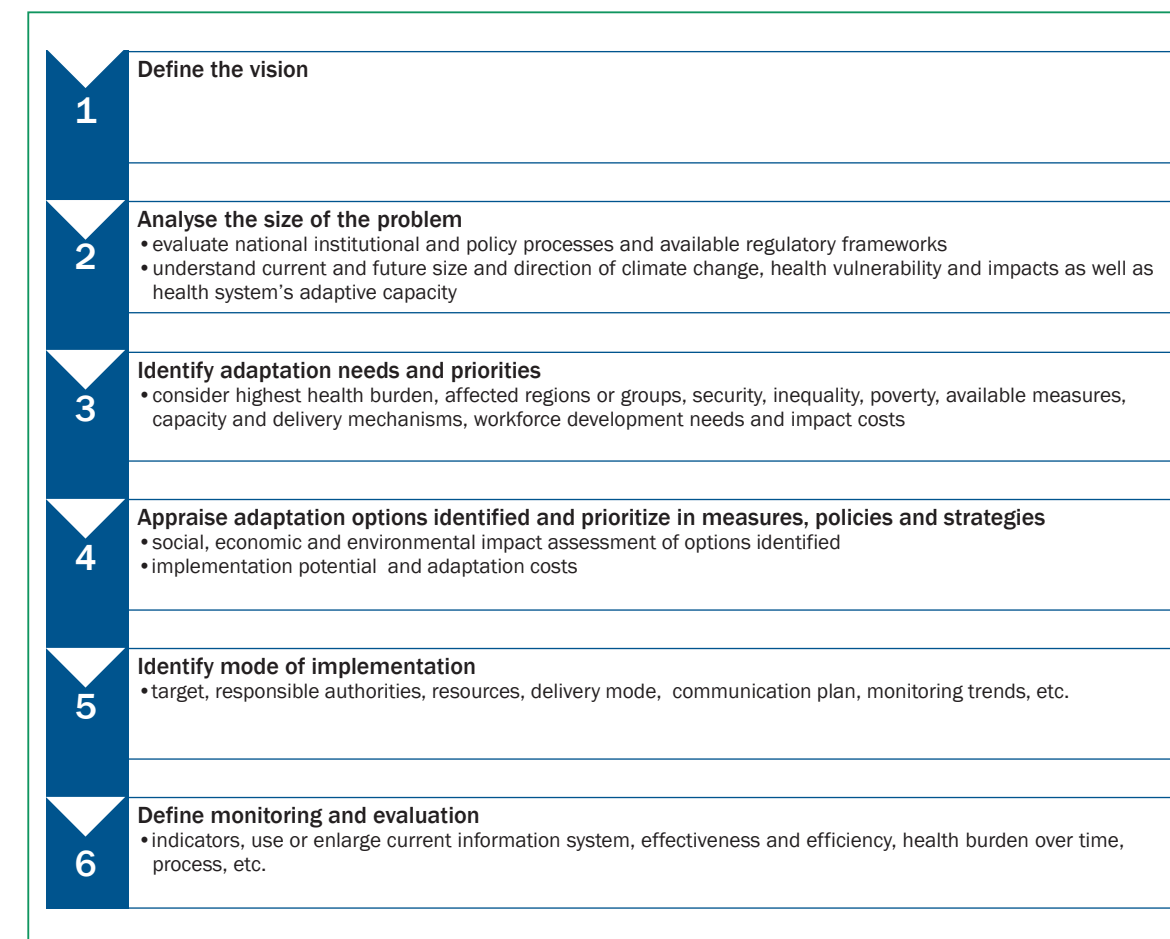
As no specific guidelines were available at the start of the project, the WHO Regional Office for Europe developed a public health framework (Fig. 2) and a stepwise approach (Fig. 3).

Fig. 2. Public health adaptation framework



¹ Least Developed Countries Expert Group (2012). *National Adaptation Plans. Technical guidelines for the national adaptation plan process*. Bonn, UNFCCC secretariat (http://unfccc.int/files/adaptation/cancun_adaptation_framework/application/pdf/naptechguidelines_eng_high_res.pdf, accessed 13 August 2013).

Fig. 3. Stepwise approach for developing a health adaptation strategy/action plan



For each step, guiding questions were debated within the national steering committee and amongst stakeholders. This approach is consistent with the UNFCCC guidelines² and reflects WHO's *European Regional Framework for Action*³ and the World Health Assembly resolution on climate change and health.⁴

Health systems have been shown to be able to deal with existing problems, but need to strengthen capacity for both preventing and managing the health effects of climate change. A number of learning elements were identified across the seven countries.

These include, for example, the need for intersectoral action and cooperation (with each sector knowing their roles and responsibilities) and the need to strengthen public health services, build capacity, retrieve complex information, link various information systems and target individuals. Many countries have promoted sustainable development by using energy-saving technologies, with lessons learnt about their implementation available to other countries.

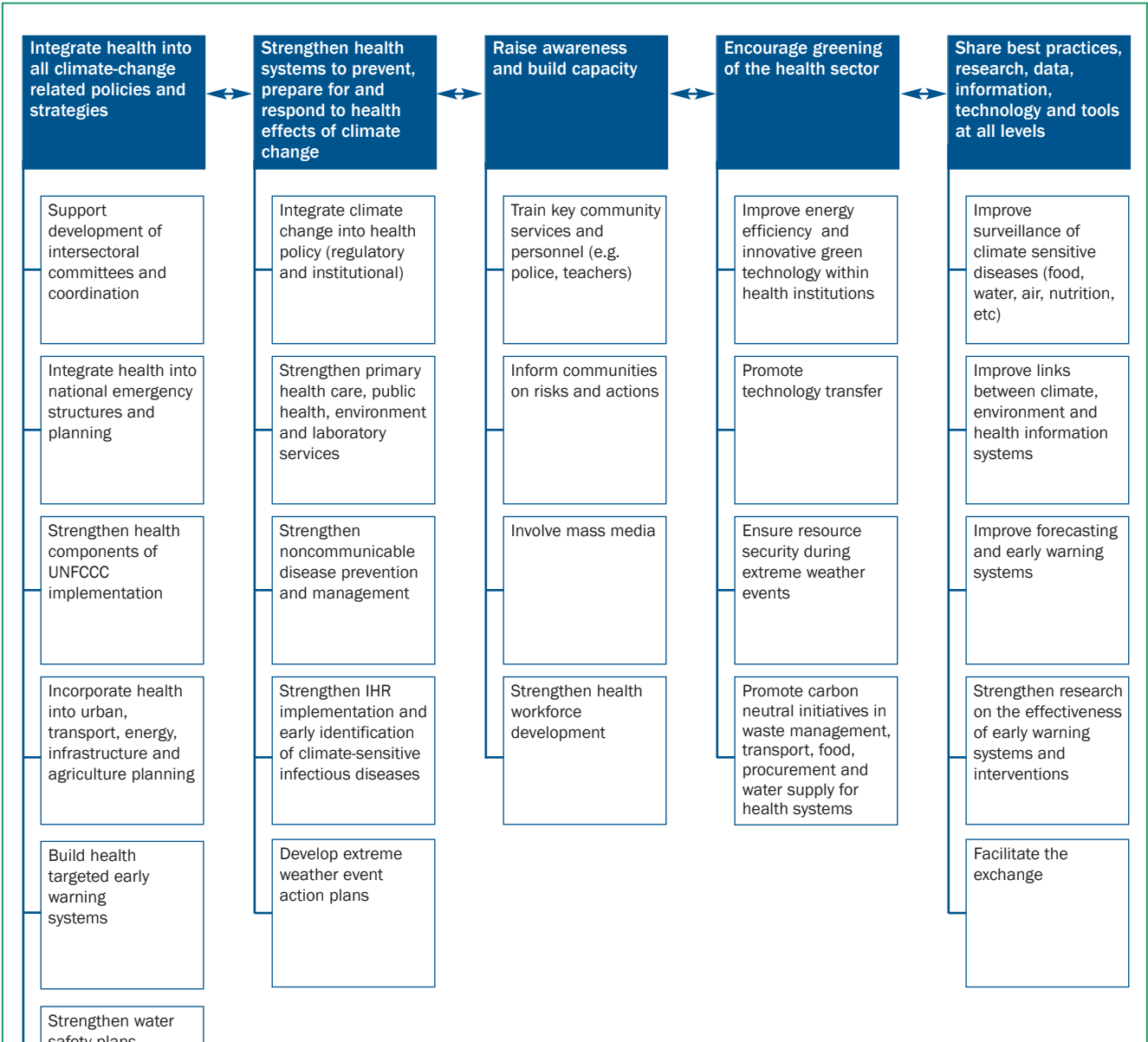
² Ibid.

³ WHO Regional Office for Europe (2010). *Protecting health in an environment challenged by climate change: European Regional Framework for Action*. Copenhagen (<http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/Climate-change/publications/2010/protecting-health-in-an-environment-challenged-by-climate-change-european-regional-framework-for-action>, accessed 13 August 2013).

⁴ WHO (2008). Resolution WHA61.19. Climate change and health. In: *Sixty-first World Health Assembly resolutions and decisions*. Geneva, World Health Organization: 26–28 (http://apps.who.int/gb/or/e/e_wha61r1.html, accessed 13 August 2013).

Although each country elaborated its own adaptation strategy or action plan, five common elements were identified, consistent with WHO's European Regional Framework for Action.⁵ Fig. 4 presents a summary of the strategies' common objectives. The five government-endorsed adaptation strategies (or plans) are monitored regularly; the remaining two are awaiting government approval. Overall, the projects have shown that it is possible to act now.⁶

Fig. 4. Common elements in health adaptation to climate change identified by the seven countries

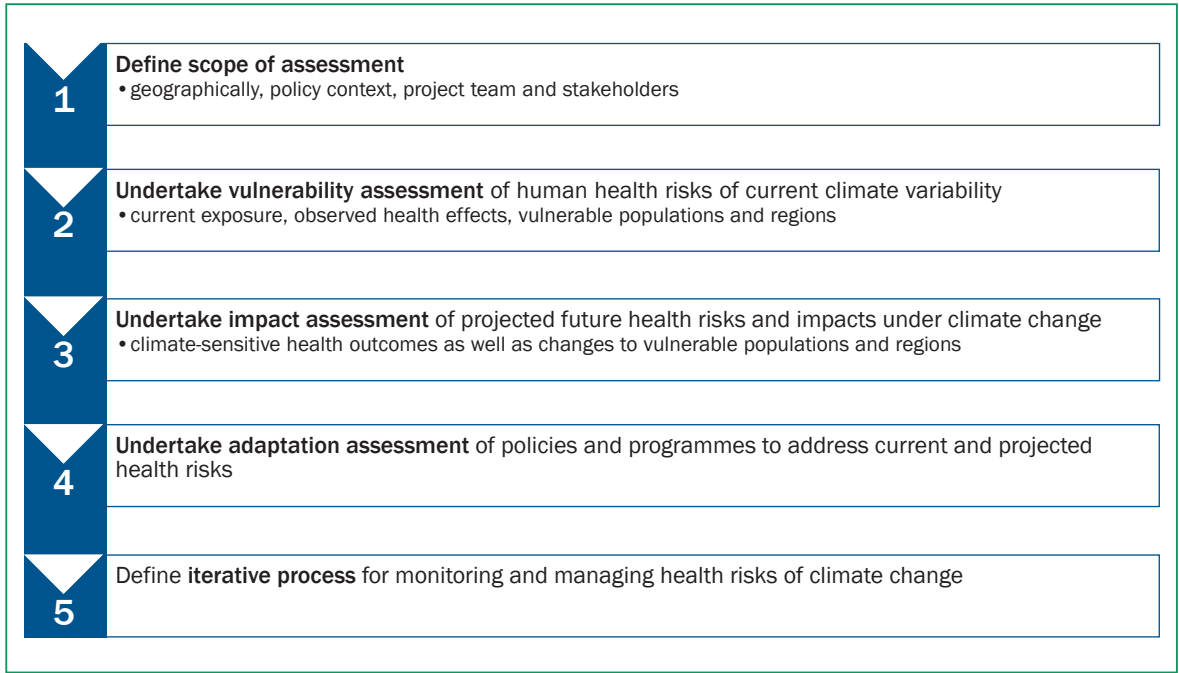


Assessment of health vulnerability, impact and adaptive capacity

A technical and comprehensive assessment of vulnerabilities, impacts and adaptation options was undertaken in each of the seven countries. The aim was to identify not only the type, scale, nature and direction of climate change exposure and health risks, but also the adaptation measures currently in place. The data and information collected were used to establish the evidence base to define the scope of the national adaptation. Each national steering committee appointed a technical working group composed of scientists and professionals from national research institutions, public health organizations, universities and nongovernmental organizations.

The assessment of health vulnerability, impact and adaptive capacities used the methods developed by WHO and its partners in 2004 and 2012^{7,8} (Fig. 5).

Fig. 5. Steps in a health vulnerability, impact and adaptive capacity assessment⁹



Each national steering committee identified major climate change exposures and risks by means of a stakeholders dialogue workshop. Their technical working groups identified readily available data and sources for assessing health risks and impacts. Qualitative and quantitative methods included literature reviews, expert judgement, time series and regression analysis and scenario-based assessment. A summary model of assessed climate change exposures and health impacts is presented in Fig. 6 with the components and overall results summarized in Table 1. Additional research was performed when

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