

Protecting health in an environment challenged by climate change



Dr Bettina Menne
19/7/2010
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WHO European Region



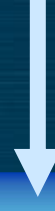
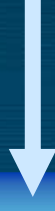
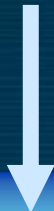
1,000 Kilometers



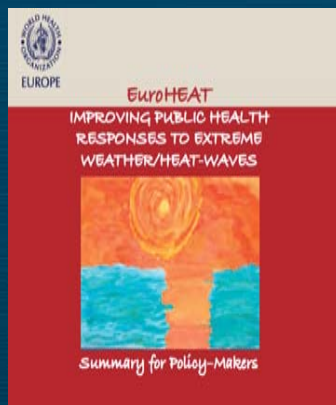
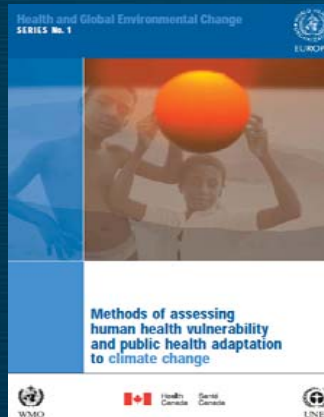
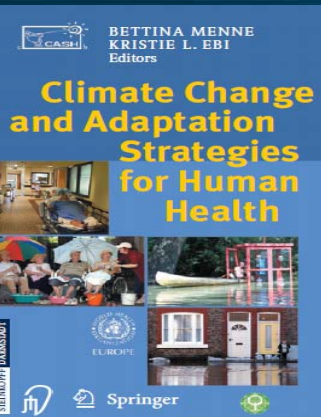
challenged by climate change:
European Regional Framework for Action



Triggers



1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

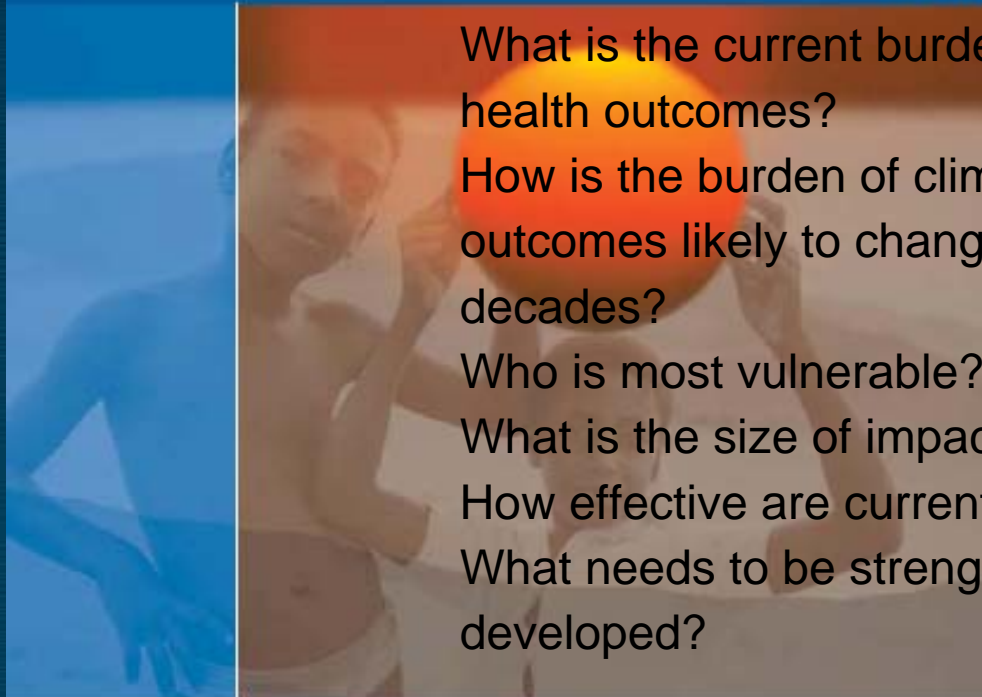


PHASE 1: National health impact and vulnerability assessments



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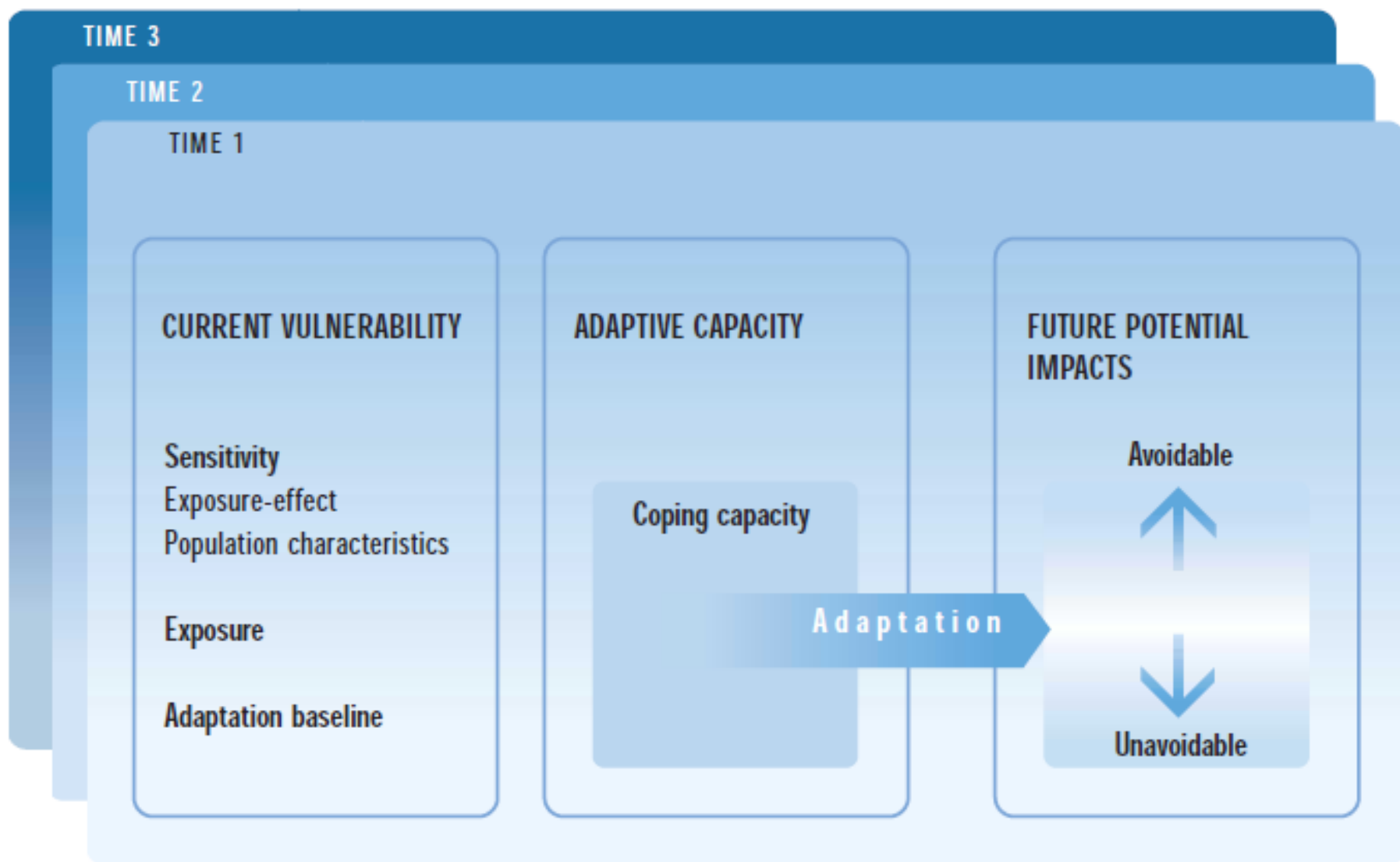




What is the current burden of climate-sensitive health outcomes?
How is the burden of climate sensitive health outcomes likely to change over the coming decades?
Who is most vulnerable?
What is the size of impact if no action taken?
How effective are current activities?
What needs to be strengthened or newly developed?

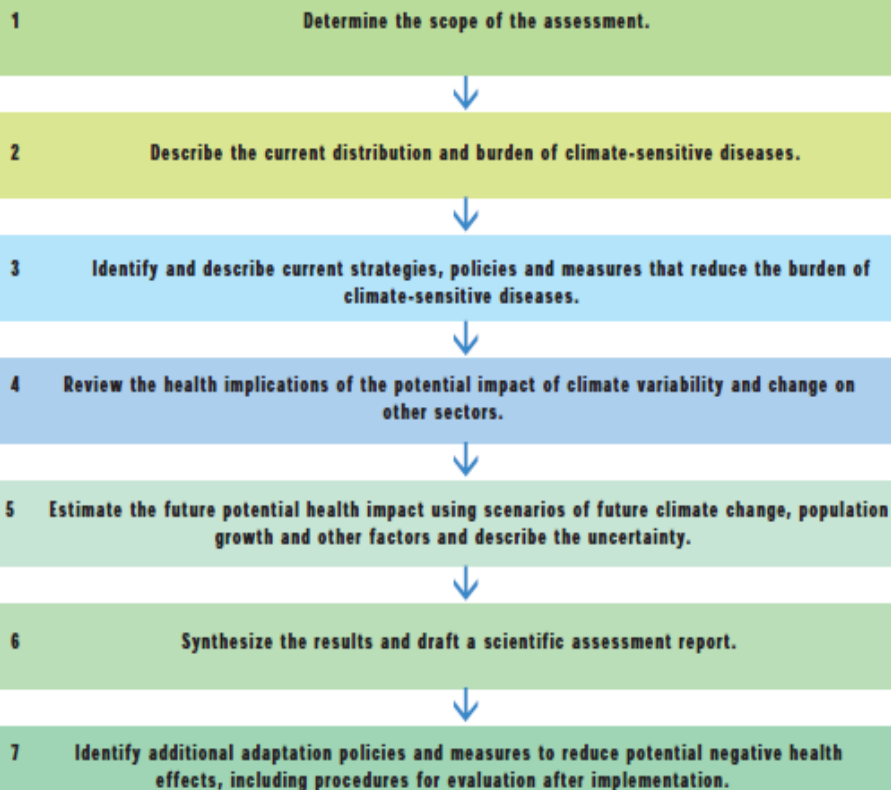
**Methods of assessing
human health vulnerability
and public health adaptation
to climate change**

Fig. 2.1. Schematic of relationships between vulnerability, adaptive capacity and potential health impact



Steps in assessing vulnerability and adaptation

Box 2.1. Steps in assessing vulnerability and adaptation



- Building on lessons learnt in assessments carried out;
- Equal weight to process and content, e.g. stakeholders;
- Building on a step wise approach;
- Building on/in risk management;
- Revise over time
(WHO meeting in Victoria (2001) and Geneva (2002))

The process

- **Stakeholders**
- **Management of the assessment**
- **Levels of the assessment**
- **Peer review**
- **Communication and dissemination**

Stakeholder involvement



INTEREST - how much interest you think the stakeholder legitimately has in your policy objectives, irrespective of whether or not they are aware of the policy/proposals or have any views on it

INFLUENCE - how much influence the stakeholder can exert on the Department's ability to deliver the policy or proposal and implementation of the objectives.



- **INFORM**
- **CONSULT**
- **INVOLVE**
- **PARTNER**



Part II

Generality

- **Attributing health effects**
- **Literature review**
- **Scenarios**
- **Describing and quantifying uncertainty**

For each health outcome

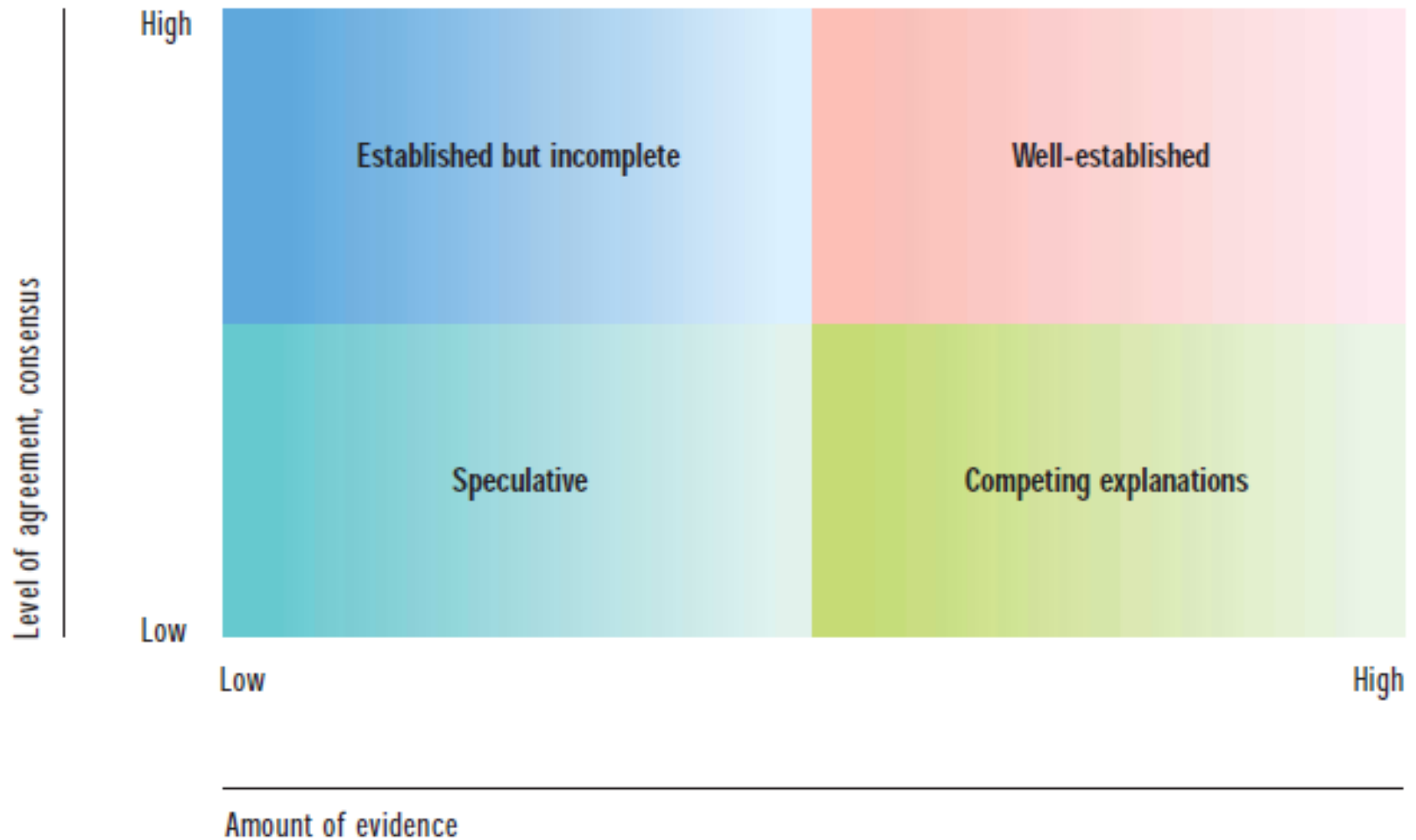
what is the evidence

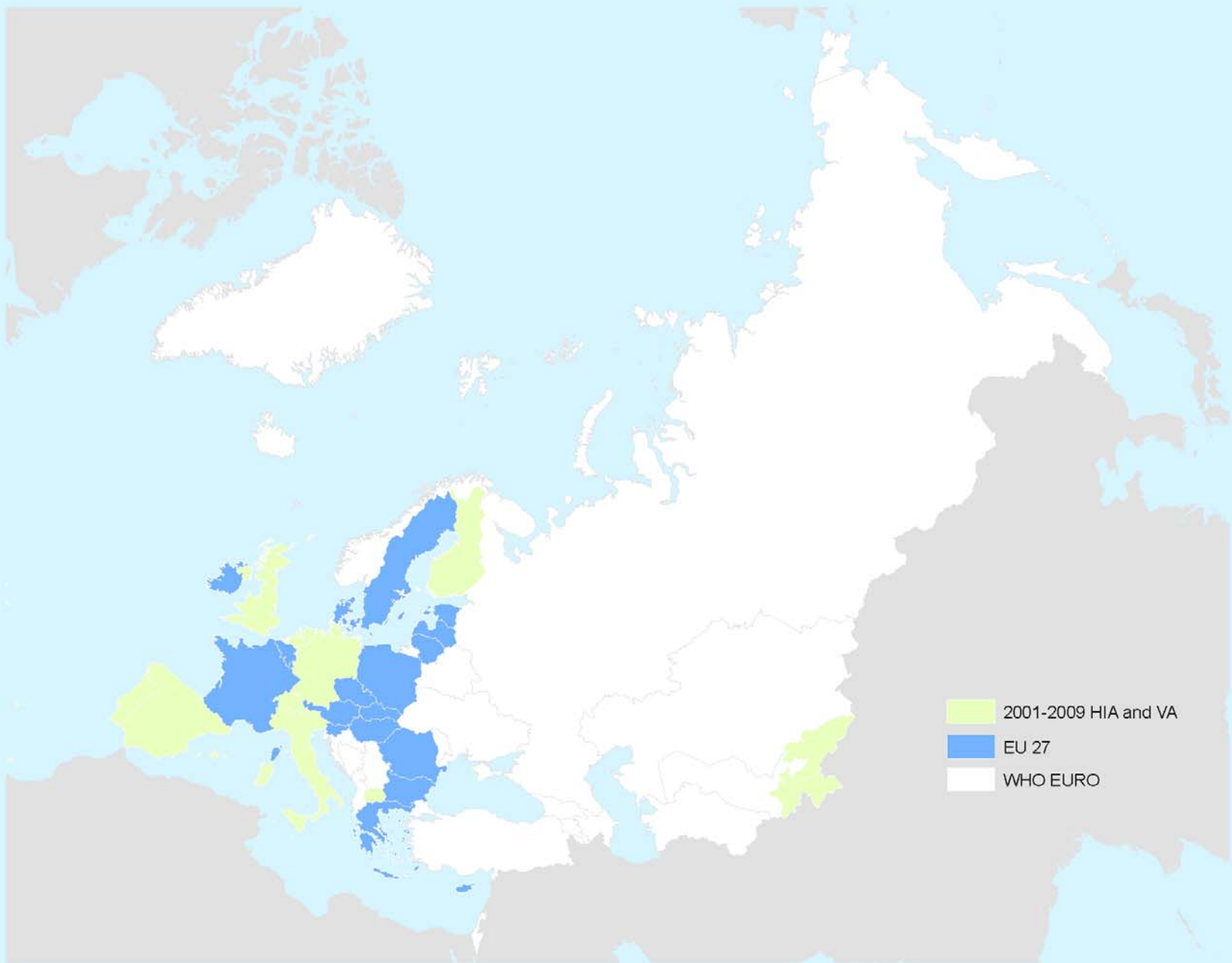
methods for estimating current burden

methods for estimating future effects

measures and policies for adaptation

Fig. 4.4. Qualitative types of uncertainty





S

Strengths

- Knowledge exchange;
- Tackling existing health problems too;
- Broadens the scope of public health;
- International contribution;

W

Weaknesses

- Data quality and scale;
- Few standardized methodologies for analysis available of observed effects;
- Scenarios and narratives;
- Uncertainties;
- Priority setting;
- CO2 intensive;

O

Opportunities

- New alliances;
- multi-sectoral collaboration;
- Upgrades current curricula;
- Building institutional capacities;

T

Threat

- Lack of political interest;
- Non health agencies development of earlier assessments;
- Media attention;
- Decisions under uncertainty

Requests from MS

- Which data do we need?
- What resolution, frequency?
- Give us the analysis protocol?
- How can we get data from meteo free of charge?
- How good are they- a mass – years are missing....
- How do we work with scenarios ..
- How can we estimate costs?
- How can we make decisions under uncertainty...

PHASE 2: Developing national adaptation strategies

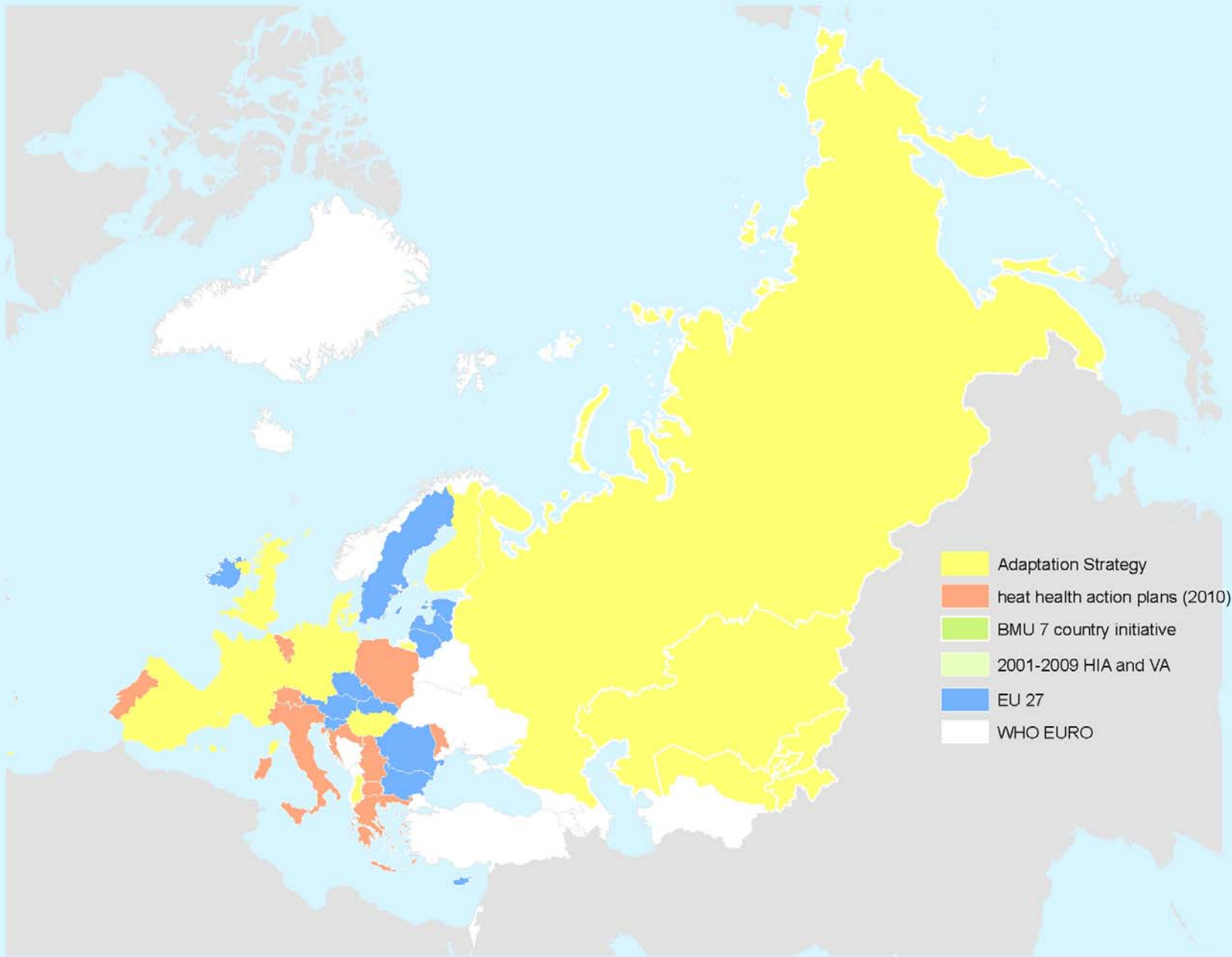


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Elaboration of key issues

- **Driven by scientific evidence**
- **Solution oriented**
- **Anticipatory**
- **Driven by best practice**
- **Leading by example**
- **Replicable and building in evolution over time**



Strengthen health systems to protect health from climate change

Build institutional capacity

1

Extreme weather events preparedness and response;
Infectious disease surveillance and control;
Respiratory diseases early detection and early warning;
Air quality measurement;
Water management plans and small scale,
Food and nutrition action plans;
Energy efficiency and promote renewable energy for health services

Adaptation strategies

2

to assess the health impacts and vulnerability and to develop national or sub-national health adaptation plans

Intelligence and Outreach

3

Steering committees
Stakeholder involvement
Enhancing a national dialogue
Enhancing a regional – national dialogue
Building media capacity
Training young journalists to improve coverage
Increasing Children and youth awareness

National adaptation strategies

- 7 government nominated multi-sectoral steering committees;
- 210 senior officials trained;
- 30 specific working groups established;
- International advisory board;
- A public health framework;
- Technical assistance



Problem definition



Health and Global Environmental Change
SERIES No. 1

Methods of assessing human health vulnerability and public health adaptation to climate change

- What is the current burden of climate-sensitive health outcomes?
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Prioritizing action

- **Size of population at risk of harm**
- **Likelihood of the harm**
- **Timescale of risk: short/medium/long-term (S/M/L)**

- **Identification of interventions:**
 - **Legal, behavioural, institutional, informational....**



Prioritizing action

Governance:

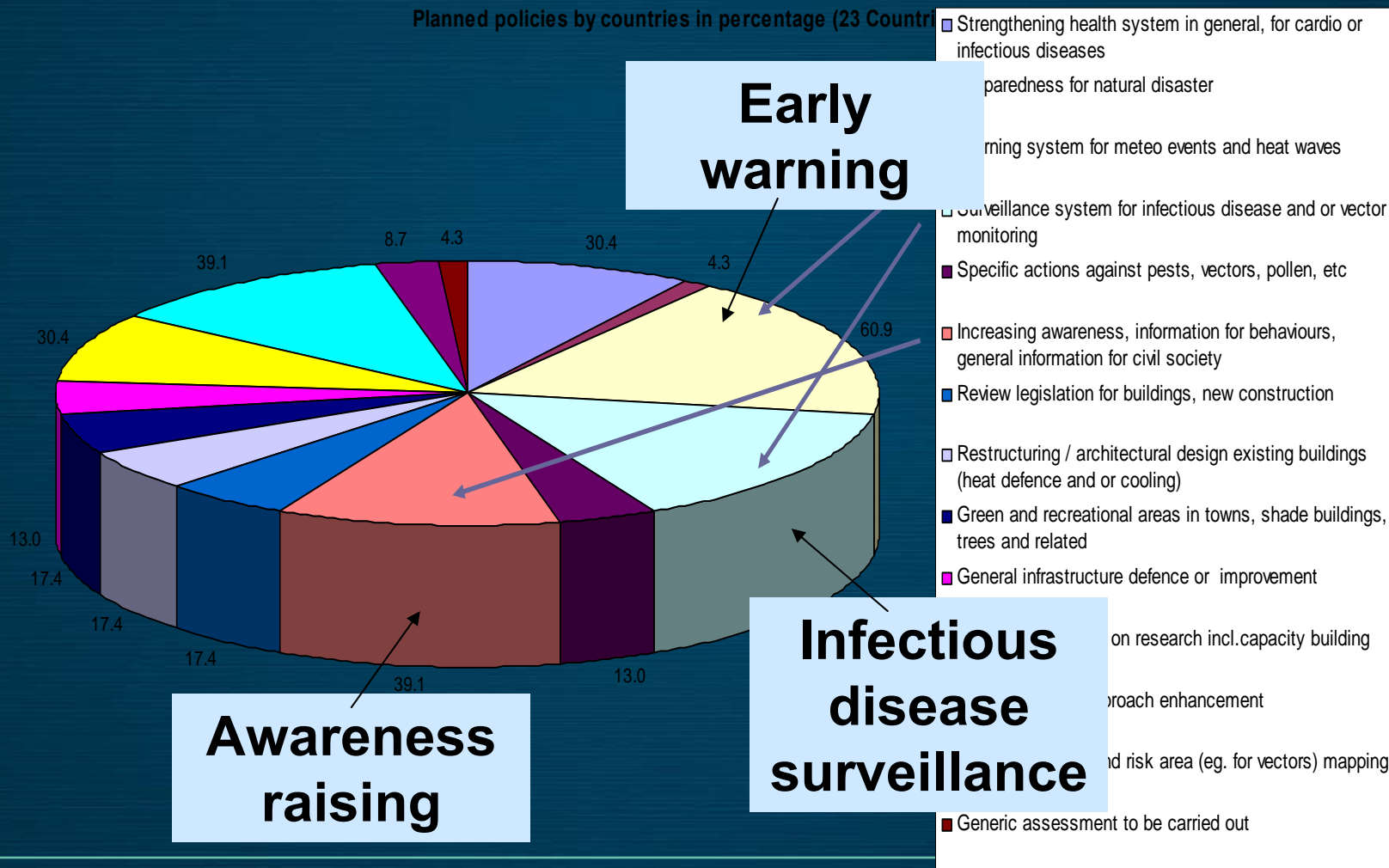
- Are existing institutional mechanisms in place?
- If yes: What is the current coverage?
- What can be newly developed within existing structures or strengthened?
- Which new mechanisms need to be put in place?
- Short-long term feasibility?

Criteria for prioritizing action

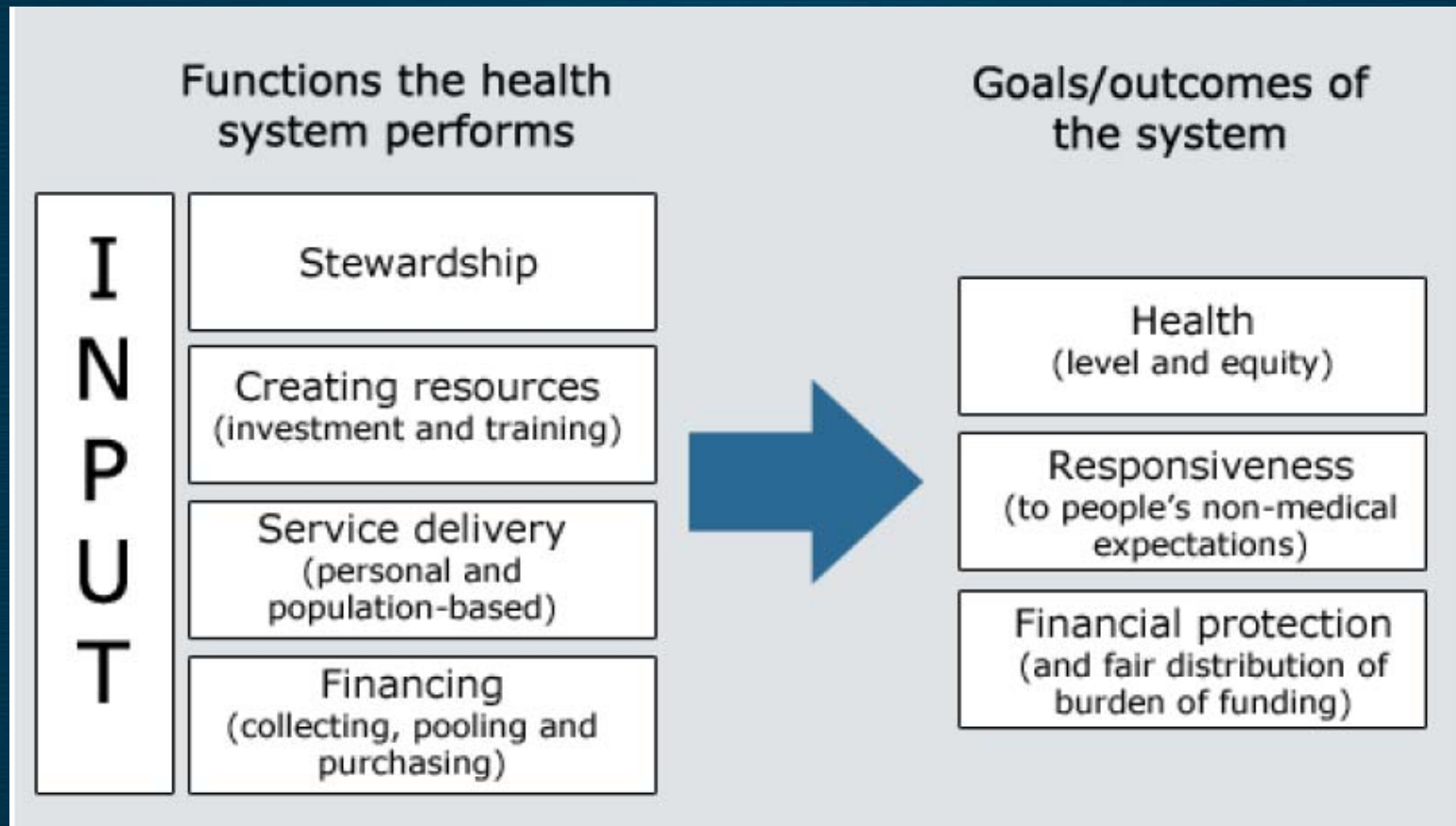
- Feasibility
- Barriers
- Cost-benefits/effectiveness
- Opportunities
- Size of population that benefits
- Environmental, social and economic benefits
- Potential harm

Measures proposed in NAS and NCs (22 countries)

Planned policies by countries in percentage (23 Countries)



Strengthen health systems and services



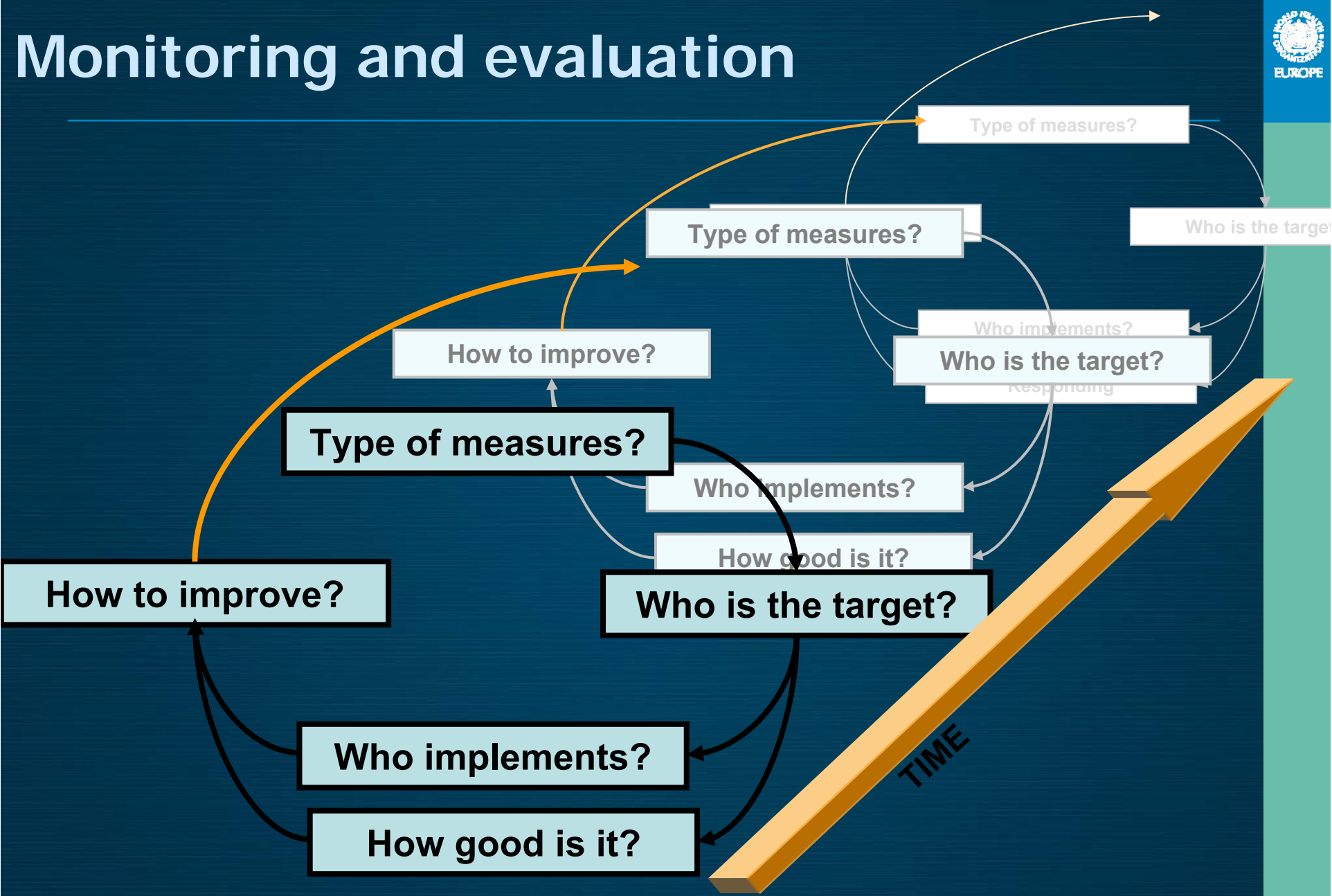


Template for the content of a health adaptation plan

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



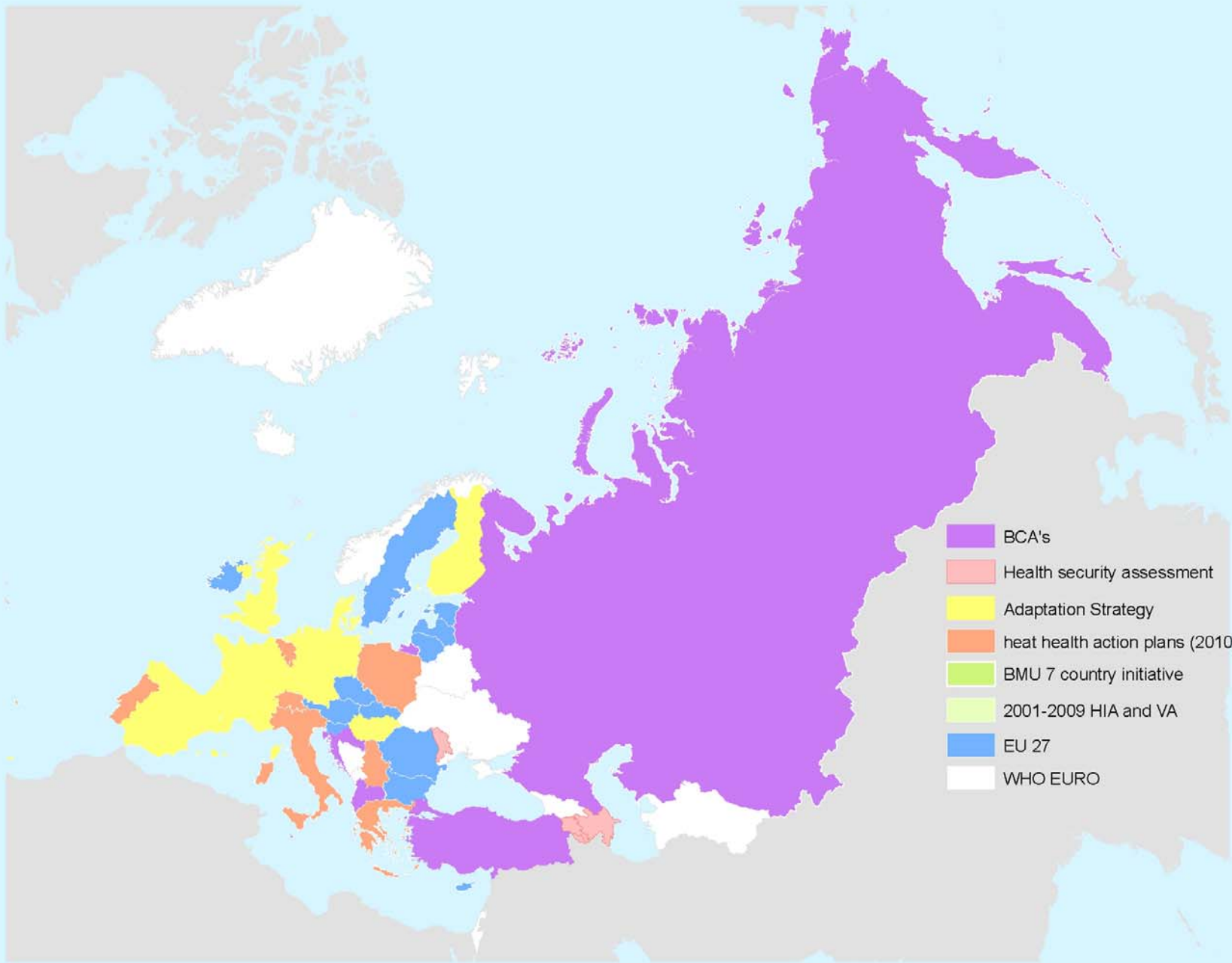
Monitoring and evaluation



Outcome evaluation

A balanced & comprehensive picture of all the EURO Region using inter- & national data

Population exposures	Health effects	Policy actions
• Outdoor air Ozone		
	• Respiratory mortality (monthly)	
• Selected allergen flowering		
• Selected pollen episodes		
• Ragweed		
	• Respiratory morbidity (proxy)	
• Floods		
	• Excess heat-wave related mortality	
		• Heat-health action plans
	• Lyme borreliosis incidence	
	• Salmonellosis (changes with T°)	
	• Cryptosporidiosis (per rainfall)	
		• Prevent infectious diseases
		• Secure water safety



- BCA's
- Health security assessment
- Adaptation Strategy
- heat health action plans (2010)
- BMU 7 country initiative
- 2001-2009 HIA and VA
- EU 27
- WHO EURO



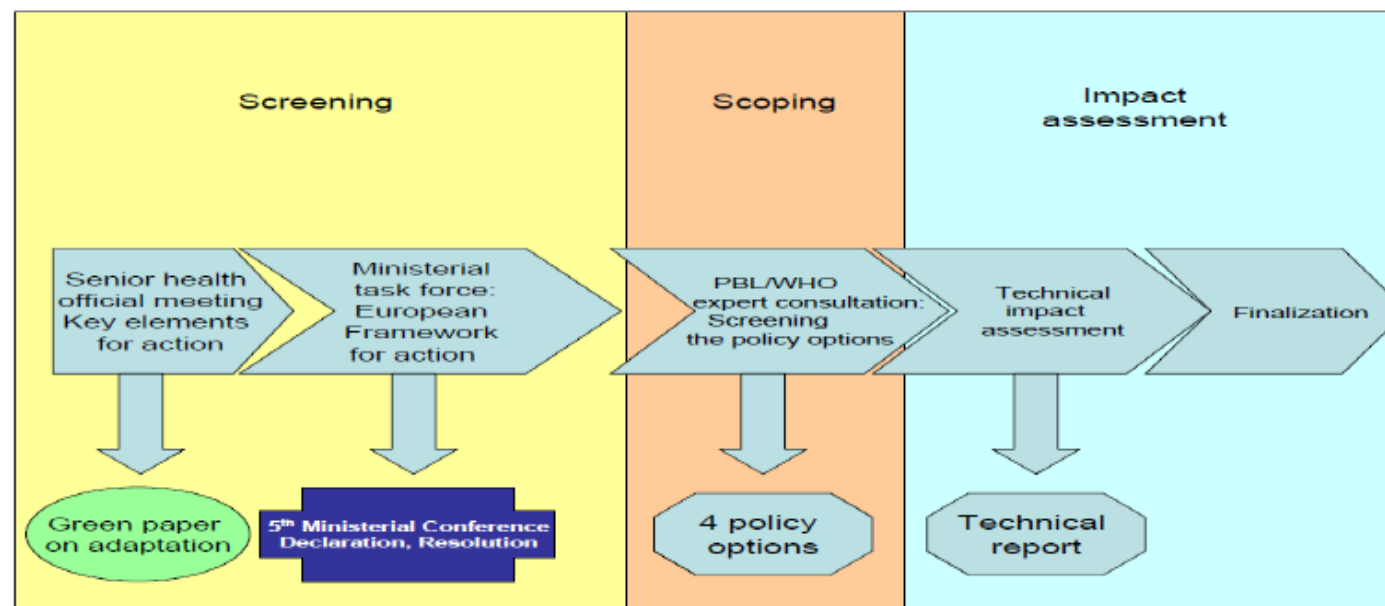
PHASE 3: Example: Impact assessment of policies to protect health from climate change in the European Union



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The process



Four policy options

- **Strengthen intelligence**
- **Mainstream health in mitigation and adaptation policies**
- **Strengthen health systems**
- **Health awareness**

Example of results: health intelligence

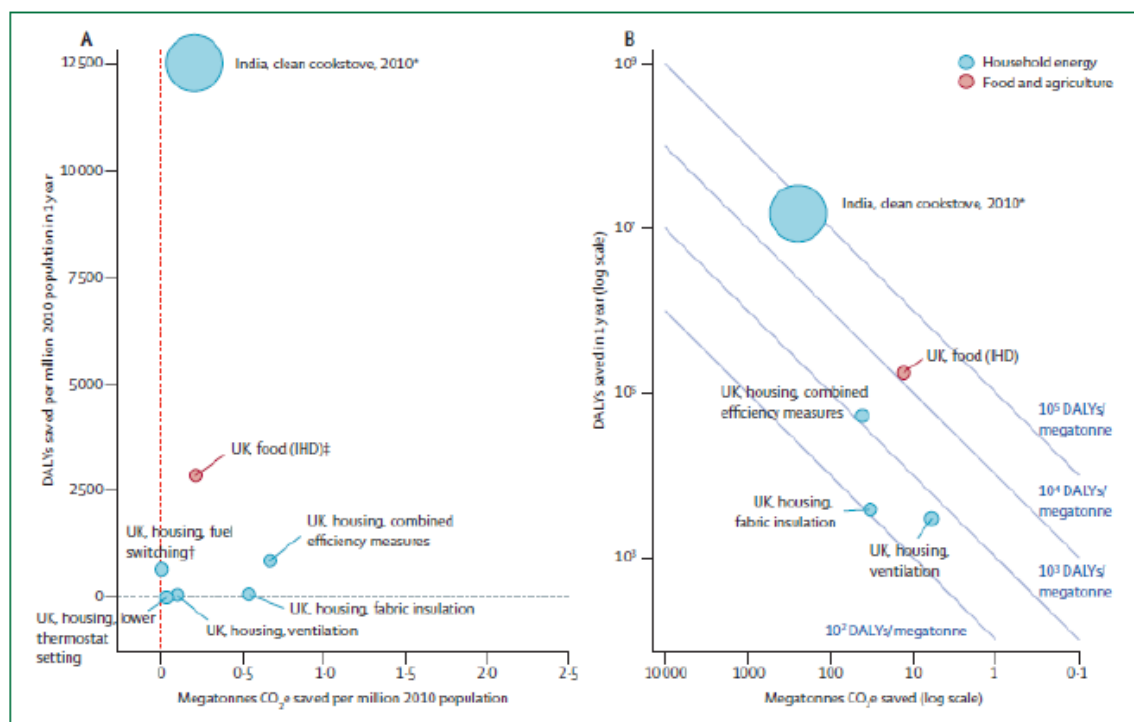
Table 6. Major costs of health intelligence

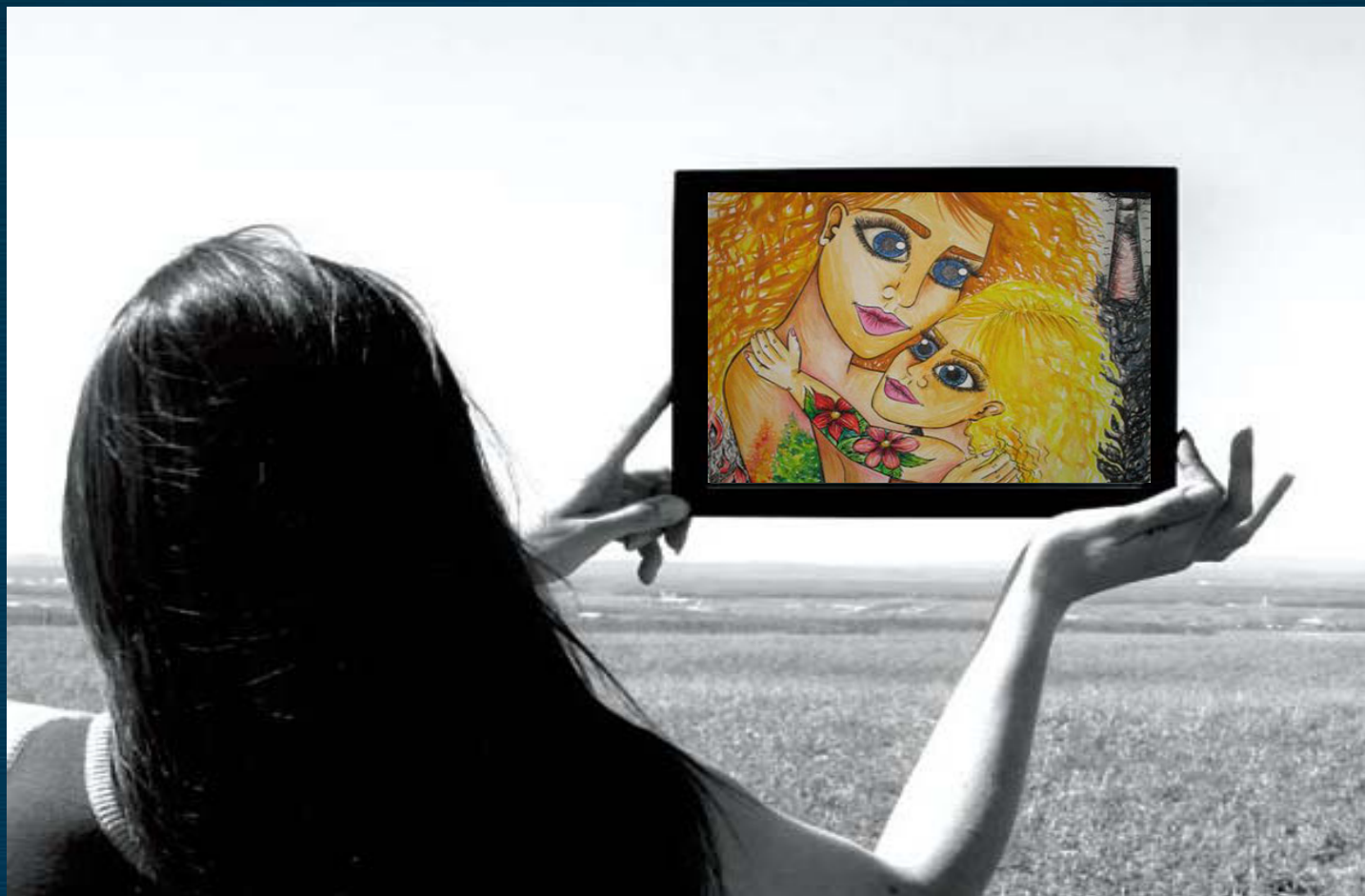
Increased costs of health intelligence	Level of involvement	Approx. commitment budget (per country)
1. Increase institutional capacity to compile and exchange information and conduct research (e.g. PEER study)	Long-term capacity development (see 2-4 below)	See 2 to 4 below
2. National health impact, vulnerability and adaptation assessments	Periodic consultancy	< €100,000 each
3. Conduct research to		
a. Improve risk assessment	Long-term multi-disciplinary research programmes	€1-5 million/year
b. Identify effective and cost-effective interventions		€1-5 million/year
c. Understand co-benefits for health of mitigation & adaptation interventions in other sectors		€1-5 million/year
d. Explore alternatives for infectious disease surveillance	Periodic planning exercise	< €100,000 each
e. Explore alternatives for extreme events health action planning (and other decision-support tools)	Mid-term consultancy	€500,000 each
f. Assess damage and adaptation costs	Periodic consultancy	€100,000 each
4. Integrate or establish an integrated information platform for data, indicators, trends and best practices/policies	Permanent Clearing House	€2 million/year ¹
<i>Implementation costs of health protection measures</i>	<i>See sections 5, 6 and 7</i>	

¹ Utilises capacity of networked institutions. Budget reflects additional coordination and planning costs.

Example: health benefits in mainstreaming health

Figure 7. Attributable reduction in disease burden and in carbon dioxide equivalent emissions for household energy and food and agriculture case studies (A) Disability-adjusted life-years (DALYS) saved and carbon dioxide equivalent (CO₂e) reduction per million of the 2010 population. (B) Reduction in total of DALYS and CO₂e for each country.





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