Capacity need

- The Capacity Needs Assessment (CNA) was planned, organized and conducted under the auspices of the Climate TRAP Project. The purpose of the assessment was to determine operational capacity needs in providing leadership and coordination, monitoring and implementing activities related to the response to climate change in the public health sector.

- Identifying capacity gaps influencing current results and desired ones (situation analysis);
- Prioritizing the capacity gaps (needs assessment);
- Selecting the most important to work on (action plan).

When to conduct a capacity needs assessment?

This CNA is used for the analysis of capacity-strengthening needs before climate change surprises the public health sector with a substantial impact on the health of the general population. The assessment of needs should not stop after the initial phase. It is a continuous and iterative process, so best considered as part of an ongoing management and programming process.

Stakeholders

At the primary health care level:

The general practitioner and its staff

The pharmacy for medication

Home health care for home ridden patients

At the public health sector:

Public health services with medical staff, with health promotion staff; with policy staff

Vaccination services

Health care insurance organisations

- **At secondary health care sector:**
- Clinicians
- Nursing staff
- Transport and other supportive staff
- Medication and equipment

The CNA has different phases:

- Review
- Analyse
- Document
- Reflect

Primary sector	*No impact on capacity*	*Slight impact on capacity*	*Moderate impact on capacity*	*Substantial impact on capacity*
General practitioner and its staff	-	Only seasonal variation in demand	Increase in patients with 'new' disorders	Structural increase of patients
Pharmacy for medication	-	Increased self-medication	Prescribed medication increase	Disease specific medication increase
Home health care for home ridden patients or nursery home	-	Occasional patient	Each episode increase in patients >2%<5%	Each episode increase in patients >5%
Public health sector				
Public health services with medical staff, with health promotion staff; with policy staff	-	Support in planning of capacity	Some increase in staff demand for episodes of burden by stressors	Structural activities to deal with epidemics, health promotion
Vaccination	-	Only high risk group need vaccination	Vulnerable groups need vaccination	Whole population needs vaccination
Health care insurance organisations	-	Some epidemic costs	Increased costs >2%<5%	Increased costs in health care > 5%

Secondary health care sector				
Clinicians	-	Only seasonal variation in demand	Increase in patients ad hoc	Structural increase of patients
Nursing staff	-	Only seasonal variation in demand	Increase patients with moderate care	Structural increase of patients with high care
Transport and other supportive equipment and staff	-	-	Some diagnostic tools needed	Intense diagnostic tools, transport
Medication and equipment	-	-	Prescribed medication increase	Disease specific medication increase

Stressor	Key figures	Critical actions needed on:	Sectoral capacity	Policy recommendations
Heat	100,000 -131,000 deaths in 2035 Gives 54,000-61,000 increase; 30,000-35,000 respiratory hospital admissions; Additional 0,14% to 1,07% respiratory hospital admissions	Primary health care during heat wave Clinical support Medication Increased hospitalisation	Clinicians, GPs to recognize heat stress. Pharmacies to be prepared for increased medication use. More flexible hospital beds available.	Training Finances Overflow beds available at other institutions
Atopic diseases	Gradient increase of number of morbidity days; Longer pollen season; Shift to other areas (e.g. mites); Increase ragweed pollen; New plants in new areas;	Medication increase Only seasonal variation in demand Increase in patients ad hoc (geographic) Increase of patients with moderate care Testing for allergens	Pharmacies to be prepared for increased medication use. Clinicians, GPs to recognize new allergens. Laboratories to be prepared for more testing.	Finances Training Pollen sampling to be connected to areas with altitudinal and latitudinal plant migrations Adapt planning to prevent water damaged housing.
Vector-borne diseases	Rodent borne viruses risk for limited spread	Increase Post-exposure rabies vaccination Increase Preventive vaccinations	Clinicians, GPs need to know about possible diseases	Training Regulation of agriculture and forestry Reduce the number of rodent pets Hygienic handling of them if present Wet cleaning of weekend houses
	Bat-transmitted viruses spread for limited amount of viruses	Preventive vaccinations Specific monoclonal antibody treatment	Clinicians, GPs need to know about possible diseases spread by bats	Training Reduce the possibility of bat-human contacts Prevent and prohibit the foods prepared from fruit bats Teach the population to avoid contact with guano
	Tick-borne infections: significant increase of its spread to higher altitudes. Increased risk in certain (northern) regions of Europe of tick-borne encephalitis	Increase use of Hyperimmune gamma globulines Vaccination	Clinicians, GPs need to know about possible diseases; about spread in new habitats (Rodent hosts and ticks have to be altered for increased risk); Vaccination campaign via Public Health Services or other institutes.	Training Application of appropriate clothing of tourists Daily control of the bodies to prevent prolonged feeding of ticks Seasonal chemical reduction of tick density; Protection of forest workers
	Mosquito borne Infections: increase of Dengue, Chikungunya cases/outbreaks West-Nile virus outbreaks	Preventive vaccinations Hyperimmune gamma globulins	Clinicians, GPs need to know about possible diseases, e.g. Chikungunya, Usutu virus (Very	Training Meteorological follow up of precipitation Regular usage of repellents, mosquito nets with impregnation

	Sandfly-borne infections:leishmaniasis geographical (increased) spread		limited risk of European spread), West-Nile virus, leishmaniasis Support by pharmaceutical industry.	Usage of air condition in sleeping rooms Reduction of mosquito density by insecticides Reduction of mosquito density by agricultural and ecological means Early warning system with high density (Italian system)
Food-borne diseases	Seasonal increase of salmonella, campylobacter	Some increase in staff demand for episodes of burden by stressors	No special additional training needed (except for new staff)	Food warning system. Overflow hospital capacity during outbreaks. Heat warning system and hygiene protocols available.
Water-borne diseases	Seasonal increase	Some increase in staff demand for episodes of burden by stressors	Clinicians needed who can recognize occurrence of sentinel cases	Training
Flooding	No trend of increased number of flooding. Injuries 6% of the victims. Diarrhoea will occur in 30% (in flooded house) Mental problems children up to 49% in the first year. 28% of the adults	General practitioner and its staff better prepared; more ad hoc personnel needed. Pharmacy for medication Home health care for home ridden patients or nursery home Public health services: Mental health Health care insurance organisations Clinicians Nursing staff Transport and other supportive staff Medication and equipment	Integration of public and curative health care in aftermath of flooding	Training
Air pollution related diseases	Increase in ozone induced mortalities in Southern-, and Central Europe and slight decrease in Northern-Europe. Compared to baseline period (1961–1990) it might indicate that smaller part of the climate induced ozone increase effects have appeared currently and more of them will happen in the future (until 2021–2050 and 2041–2060) and the decline of	Pharmacy for medication Nursing staff Only seasonal variation in demand Public Health Services in areas with higher burden	Public health sector to increase preventive care	Training

	air quality will in turn affect the public health sector as well. ECHAM4 (A2) gave generally larger health impacts for 2021–2050".The estimated increase if up to 0.2% in total mortality and respiratory hospitalizations.			

Table 5

Legend
No impact on capacity
Slight impact on capacity
Moderate impact on capacity
Substantial impact on capacity