

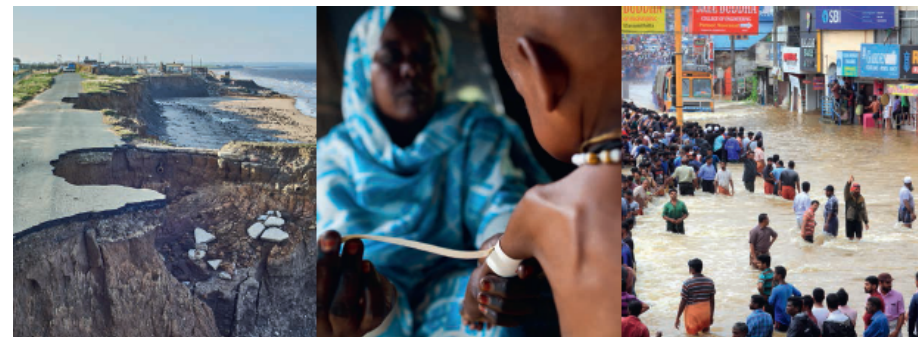
Keynote, BSF 2019, Basel, Switzerland

Addressing Health Adaptation Gaps: Synergies between Sustainable Development Goals

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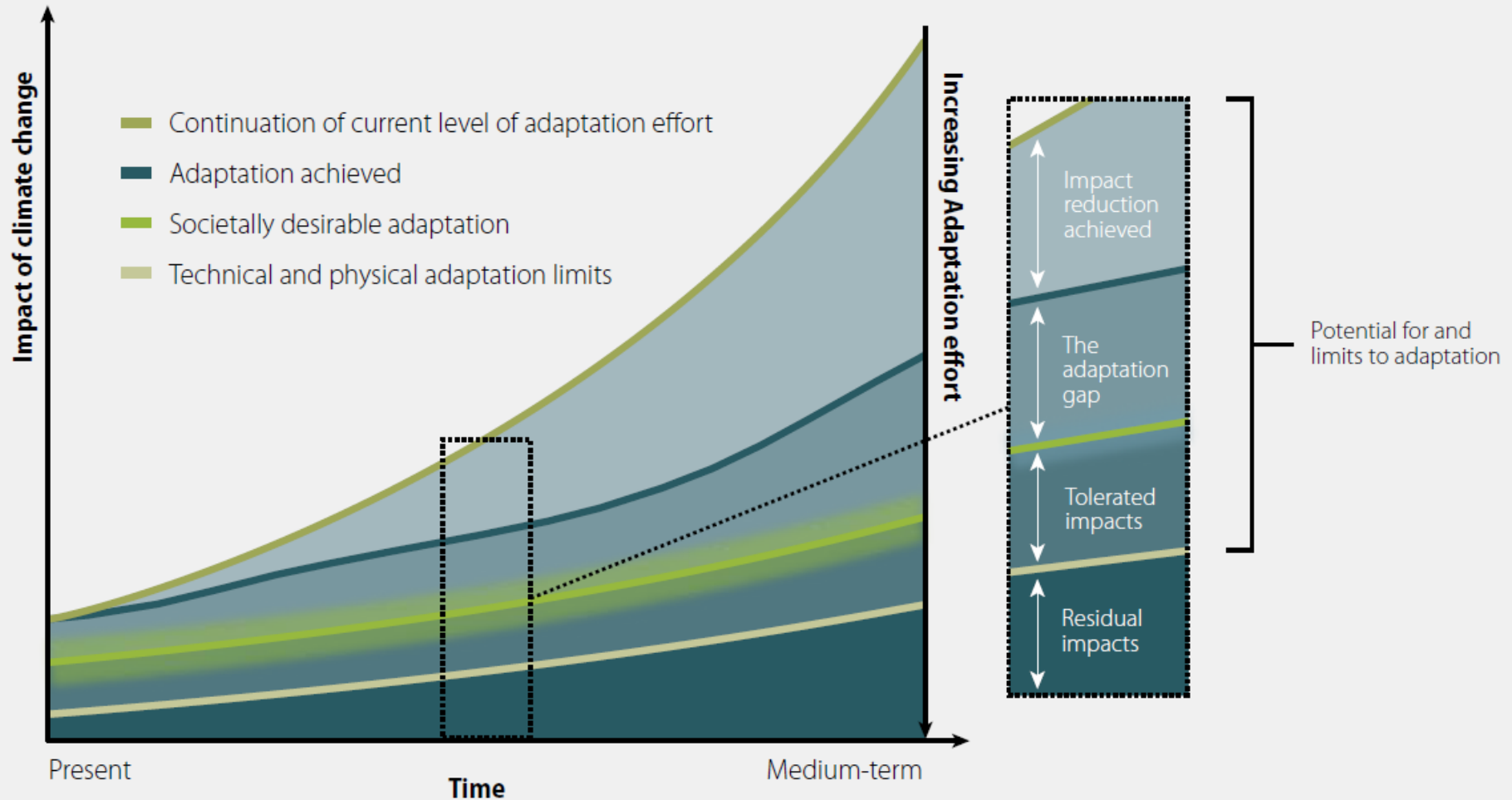


Overview

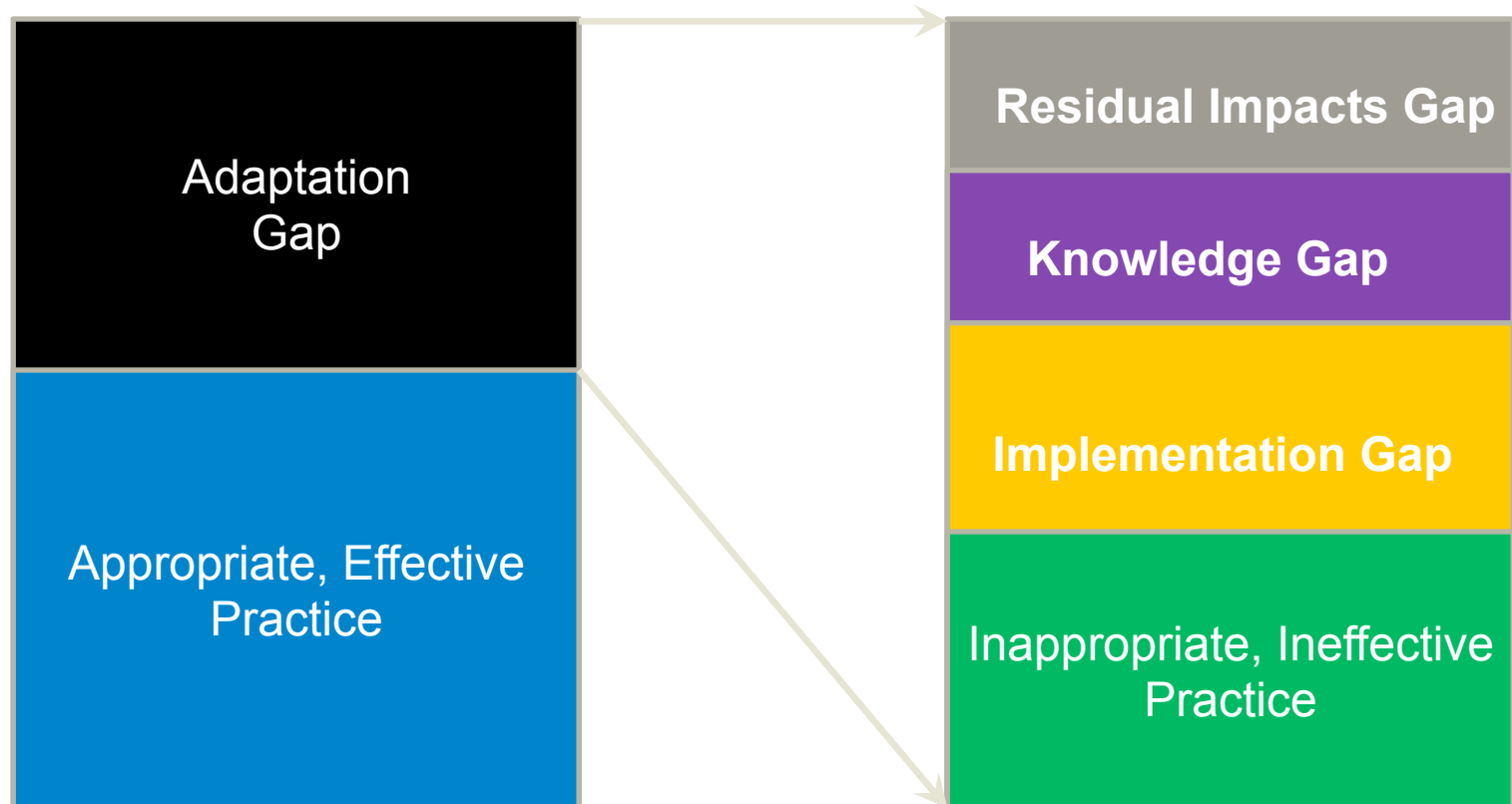
- Insights from the UNEP Adaptation Gap Reports
- UNEP Gap Report 2018: focus on health (Infectious diseases, Heat, Nutrition)
- How to address health adaptation gaps
- Highlights of synergies needed from SDGs



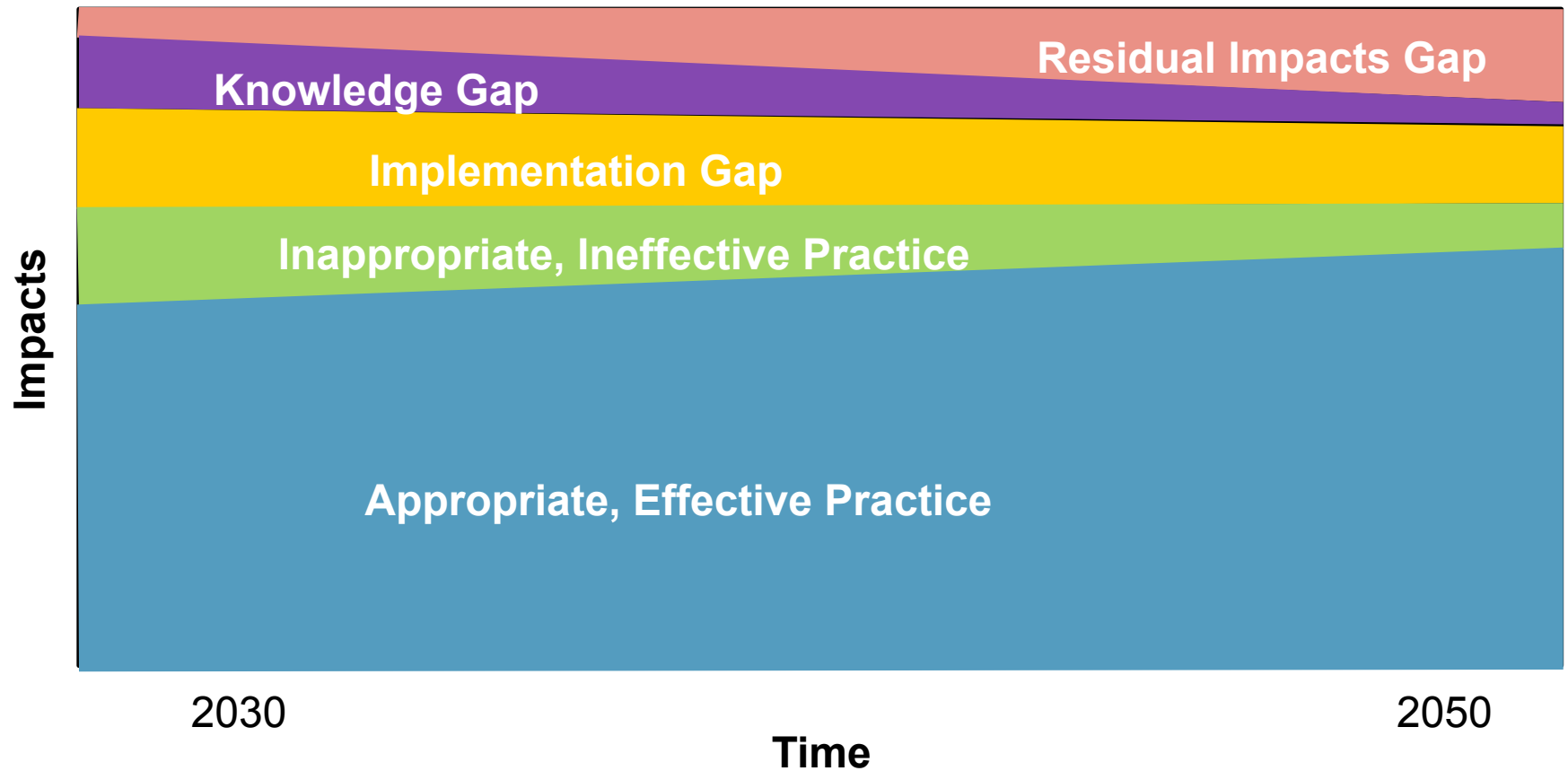
Framework for **Adaptation Gaps**



Adaptation Gap Typology



Adaptation Gap Over Time





Defining **Adaptation Gap**: a challenge

Estimating the **adaptation gap**: more challenging than calculating the **emissions gap**

- **No** globally agreed **goal or metrics** for adaptation
- Adaptation is a **response to specific climate risks and impacts** often local in nature and variable over time
- Need finding ways of **measuring the adaptation gap** so that **progress** towards reducing it **can be monitored**

Funding

Technology

Knowledge

Adaptation **Funding** Gap

Definition

The adaptation funding gap can be defined and measured as the difference between the costs of meeting a given adaptation target and the amount of finance available to do so.

Adaptation **Technology** Gap

Definition

The adaptation technology gap can be defined in terms of perceived gaps by countries, based on available technology needs assessments and requests made to technology support mechanisms.

Adaptation **Knowledge** Gap

Definition

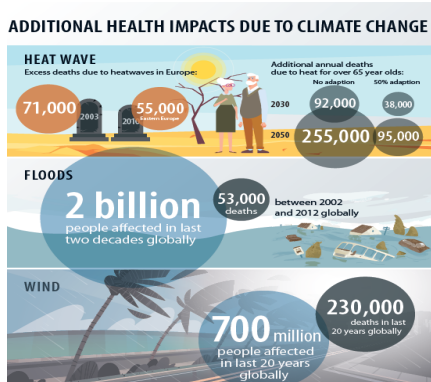
Knowledge gaps can be framed in the context of bridging either the generic adaptation gap or a specific adaptation gap. While they are difficult to quantify, it is possible to set specific and measurable targets for addressing them.

Adaptation gap in health

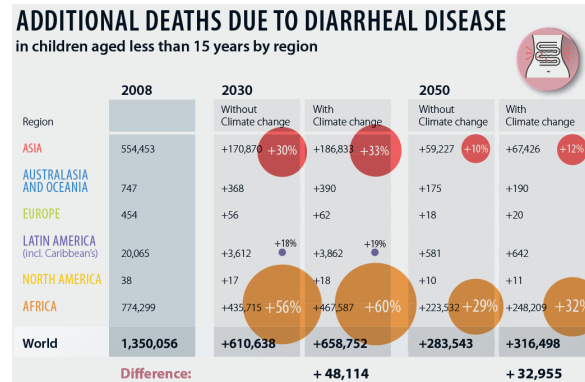
The **difference between** the climate-related health outcomes under **actual adaptation efforts** and the climate-related health outcomes that would occur under **desirable levels of health adaptation efforts**, consistent with a societally set goal for adaptation.



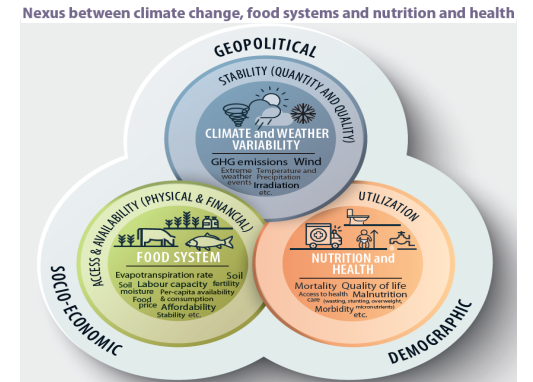
Adaptation GAR 2018: Focus on Health



Chap 6- Heat & EEs



Chap 7- Inf. Disease



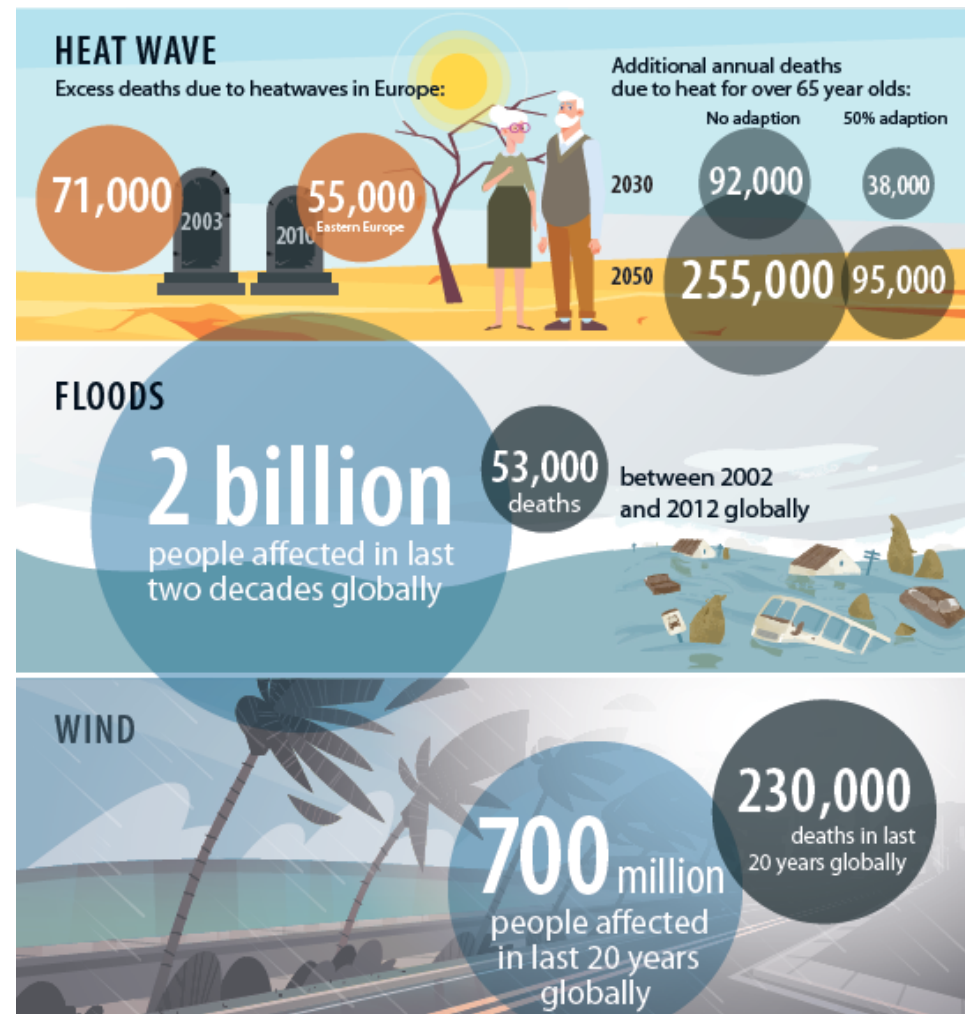
Chap 8- Nutrition

- Baseline situation: a **significant**, largely preventable, **current burden** of climate-related illness and mortality
- Projections
- Addressing gaps

Heat and Extreme Events

Current impacts already threaten health of vulnerable populations in many regions

Projected **increases in heat and extreme weather** events and **changing socio-demographic trends** will further increase exposure and risks



Heat and Extreme Events

Sendai Framework for Disaster Risk Reduction 2015-2030

Disasters, many of which are **exacerbated by climate change** and which are increasing in frequency and intensity, significantly impede progress towards sustainable development.



Heat and Extreme Events

Vulnerable Groups

- The **elderly** from dysfunctional thermoregulatory mechanisms, chronic dehydration, medication and pre-existing diseases
- **Pregnant women and foetuses**; extreme heat is a risk factor for adverse birth outcomes such as low birth weight and premature birth
- Patients with **chronic diseases**; for example, people with diabetes, who are obese and those with cognitive impairments
- **Outdoor seasonal workers**
- **Travellers Socially disadvantaged or isolated groups**
- **Migrants, refugees and internally displaced people**



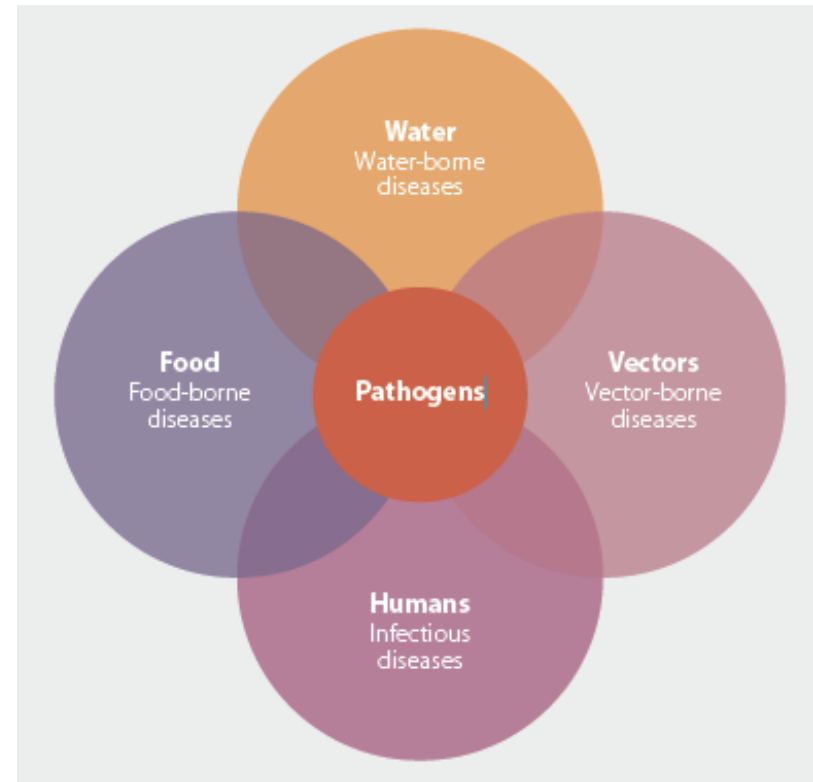
Infectious diseases

Infectious diseases : #20 percent of the global burden of disease (Murray *et al.*, 2012).

Three important categories of infectious diseases sensitive to climate change:

- (i) water-borne diseases (WBDs);**
- (ii) food-borne diseases (FBDs); and**
- (iii) vector-borne diseases (VBDs)**

Adaptation gap associated with infectious diseases, focus on **WBDs** and **VBDs**.



Current burden and projections for WFBs and VBDs

Exposure/ outcome

Current impacts

Projected impacts

Water- and food- borne disease

- In 2016, **diarrhea** caused around **1.7 million deaths**, including almost **450,000 in children** younger than five years (Troeger *et al.*, 2017).
- **600 million food-borne illnesses** and **420,000 associated deaths** in 2010 (WHO, 2015b).
- In **Europe**, the most prevalent **water- and food-borne disease** is **campylobacteriosis**, which is highly sensitive to climate (ECDC, 2012).

- Global projections (WHO, 2014): **48,000 additional deaths** per year in children aged under 15 years are projected due to diarrheal disease for the **year 2030** and **33,000 deaths for 2050**.
- In **Europe in the 2080s**, climate change could induce an additional **40,000 cases of salmonella** annually (Watkiss *et al.*, 2009).

Vector- borne diseases

- Estimated or reported annual cases of selected vector-borne diseases (WHO, 2017c):
- **Malaria: 212 million.**
 - **Schistosomiasis: 207 million.**
 - **Dengue: 96 million.**
 - **Lymphatic filariasis: 38.5 million.**
 - **Onchocerciasis: 15.5 million.**

- Global projections (WHO, 2014): **60,000 additional deaths** per year from **malaria** for the **year 2030** and **33,000 deaths for 2050**.
- Climate change will continue to increase the **risk of tick- borne diseases** (Stone *et al.*, 2017).

Infectious diseases

Projections for **food and water-borne diseases** (2)

ADDITIONAL DEATHS DUE TO DIARRHEAL DISEASE

in children aged less than 15 years by region



Region	2008	2030		2050	
		Without Climate change	With Climate change	Without Climate change	With Climate change
ASIA	554,453	+170,870 +30%	+186,833 +33%	+59,227 +10%	+67,426 +12%
AUSTRALASIA AND OCEANIA	747	+368	+390	+175	+190
EUROPE	454	+56	+62	+18	+20
LATIN AMERICA (incl. Caribbean's)	20,065	+3,612 +18%	+3,862 +19%	+581	+642
NORTH AMERICA	38	+17	+18	+10	+11
AFRICA	774,299	+435,715 +56%	+467,587 +60%	+223,532 +29%	+248,209 +32%
World	1,350,056	+610,638	+658,752	+283,543	+316,498
Difference:		+ 48,114		+ 32,955	

Infectious diseases

Current burden of **vector-borne diseases (2)**

Table 7.2: Global burden of major VBD, as of March 2017

Vector*	Disease	Estimated** or reported annual number of cases	Estimated annual number of deaths
Mosquitos	Malaria	212,000,000	429,000
	Dengue	96,000,000	9,110
	Lymphatic filariasis	38,464,000	NA
	Chikungunya	693,000 (suspected, 2015)	NA
	Zika virus disease	500,000 (suspected, 2016)	NA
Blackflies	Onchocerciasis	15,531,500	NA
Sandflies	Muco/cutaneous	3,895,000	NA
	Visceral	60,800	62,500
Triatomine bugs	Chagas disease	6,653,000	10,600
Ticks	Borreliosis (Lyme disease)	532,125	NA
Snails	Schistosomiasis	207,000,000	200,000

*Only the VBDs with the largest burdens are included. **Central estimate. Source : (WHO, 2017a).

Infectious diseases

Projections for vector-borne diseases

Most models project an increased risk for VBD transmission at high latitudes during the next century (Tjaden *et al.*, 2017).

Table 7.3: Estimated number of additional deaths due to malaria and dengue by region, for 2030 and 2050* and number of deaths estimated for 2016

Region	Estimated deaths in 2016		2030		2050	
	Malaria	Dengue	Malaria	Dengue	Malaria	Dengue
Asia	75,615	35,014	+2,425	+236	+9,630	+240
Australasia and Oceania	912	7	44	0	32	0
Europe	0	0	0	0	0	0
Latin America (incl. Caribbean)	259	2'463	+163	+16	+107	+33
North America	0	0	0	0	0	0
Africa	643,582	287	+57,459	+7	+22,927	+7
World	720,368	37,774	60,091	259	32,696	280

*Under A1b emissions and a base case socioeconomic scenario. Source: adapted from: (WHO, 2014; IHME, 2018).

Infectious diseases

Address both **implementation gaps** and **knowledge gaps**

- Increase access to **WASH**
- Invest more in **health research** in areas that are most affected by WBD and FBD
- More efforts for **reducing the population of parasites, microbes and vectors**
- Improve **integrated vector management**
- Reduce **human exposure**
- Reduce the **burden of diseases**
- Make progress towards **SDGs**.





Food and Nutritional Security

Unequal exposures and impacts

- Majority of the world's hungry people live in developing countries, where **12.9 per cent of the population is undernourished**.
- Poor nutrition causes nearly **half (45 per cent) of deaths in children under five** – 3.1 million children each year.
- Asia and Africa represent nearly all of the current stunting burden.
- South Asia represents more than half of those wasted.
- **Missed target:** reduce the number of stunted children by 40% as compared with 2012 by 2025.

Food and Nutritional Security

Climate change will makes it worse...

- Mortality
 - 95'176 additional undernourishment related deaths in children under five by 2030 and 84'697 by 2050.
- Undernourished
 - 530-550 million undernourished by 2050 @ 1.5° C
 - 540-590 million undernourished by 2050 @ 2°C
- Stunting
 - 570'000 (under prosperity/low climate change scenario)
 - >1million (under the poverty/high climate change scenario)
 - 7.5 million moderately and severely stunted (2030) and 10.1 m (2050) under base-case socio-economic scenario.

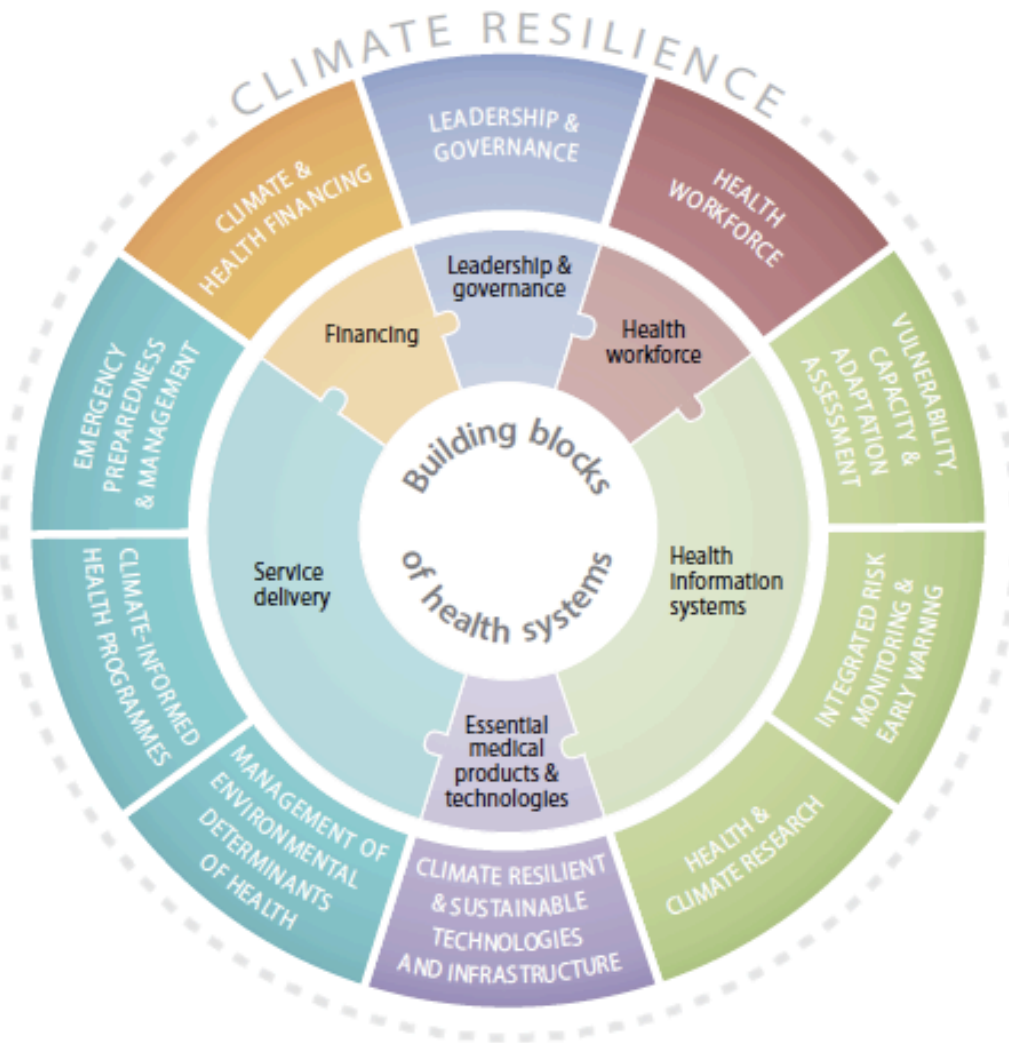
Food and Nutritional Security

CC sensitive
Nutritional Monitoring
and Early Warning
System



Multi-level governance: resources, sectors, and actors

Need Climate Resilient Health Systems



- The overall presence of health-sector activities in international climate adaptation finance stands at **less than one percent**.
- Additional resources are needed to build the capacities of health professionals to deal with climate-related impacts

NEED OF A BROADER DEVELOPMENT PERSPECTIVE

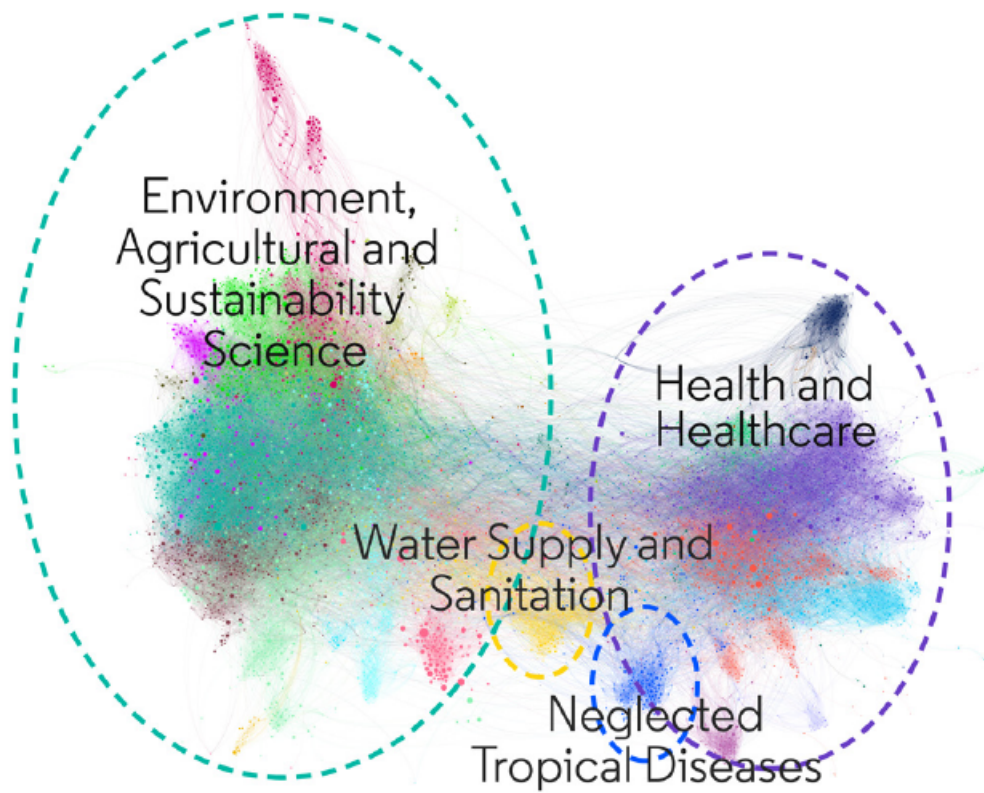


- Accelerated action on basic climate-sensitive determinants of health within SDGs (WASH, evidence-based interventions to avoid malnutrition, etc.)
- Early warning, monitoring and DRR (including building evidence base and improving data coverage)

HEALTH in the SDG ERA

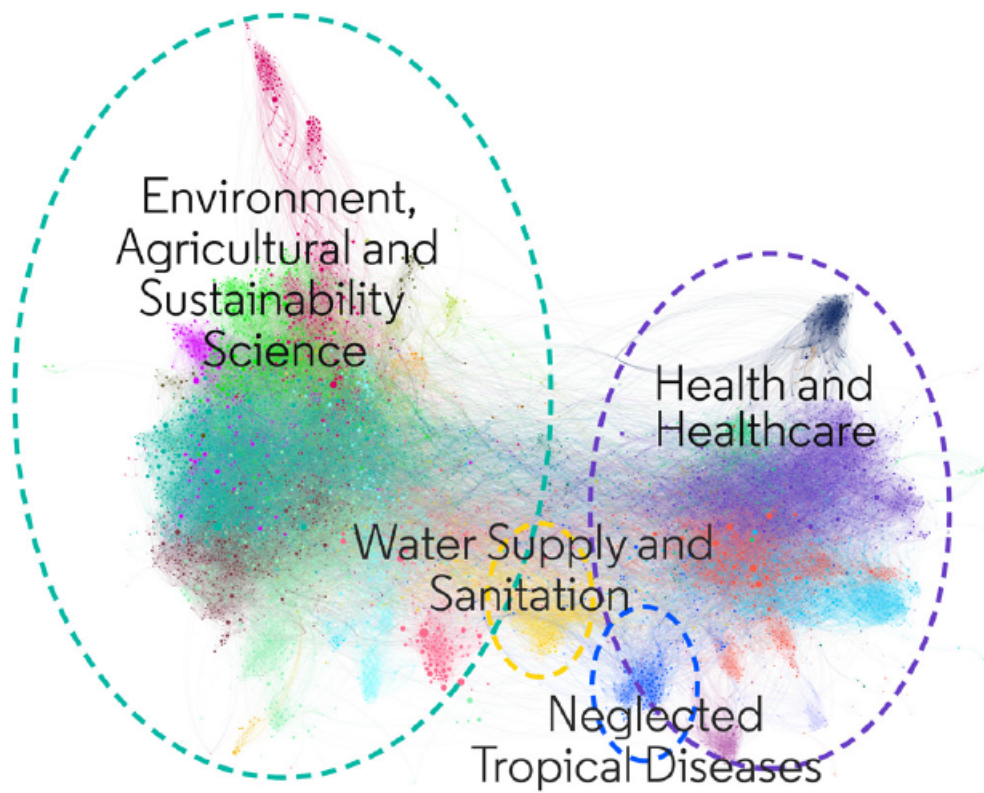


Increase Synergies from SDGs



- Two policy-related clusters are highlighted: **Water Supply and Sanitation and Health and Healthcare** of Indigenous Peoples.
- **Water Supply and Sanitation: a central concern linking Environment and Health**
- **NEED FOR SUSTAINED ACTION**

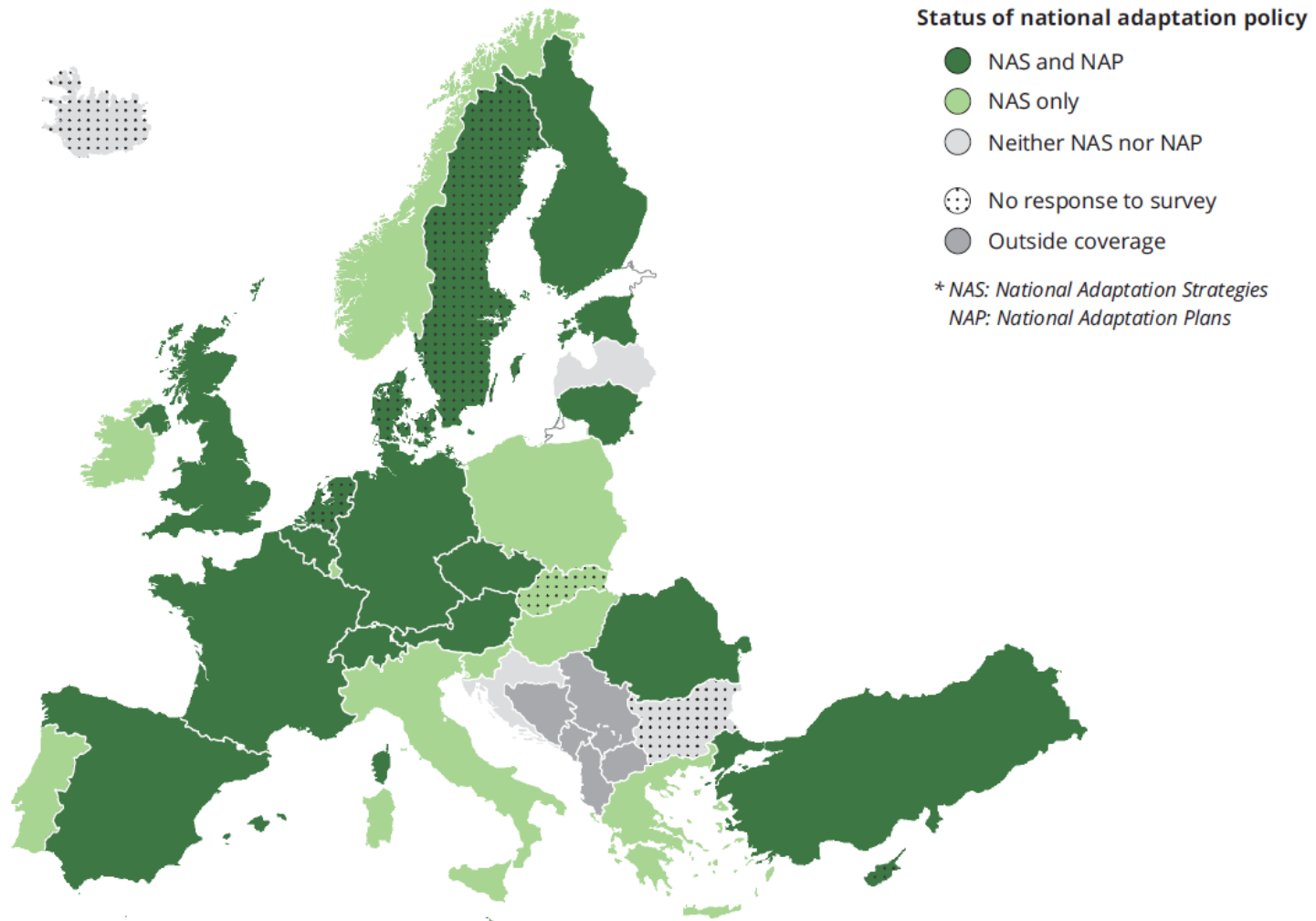
Increase Synergies from SDGs



- Africa, the Arab States, and Latin America are, by contrast, small participants despite the fact that SDGs are key concerns in these regions.
- **European nations dominate** SDGs research, with North America and the Asia & Pacific region contributing less, but roughly similar

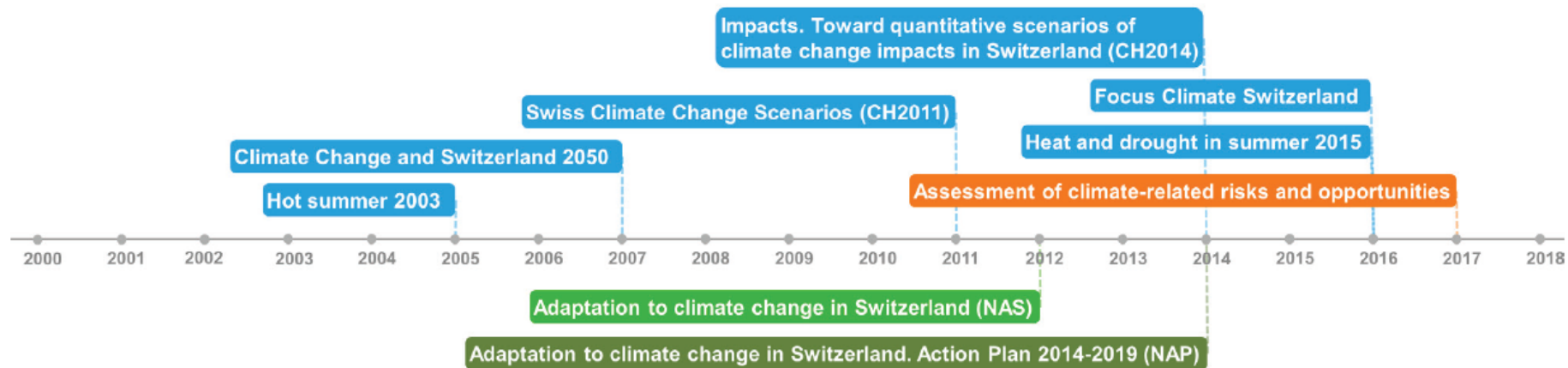
EEA Report No 1/2018

National climate change vulnerability and risk assessments **in Europe, 2018**



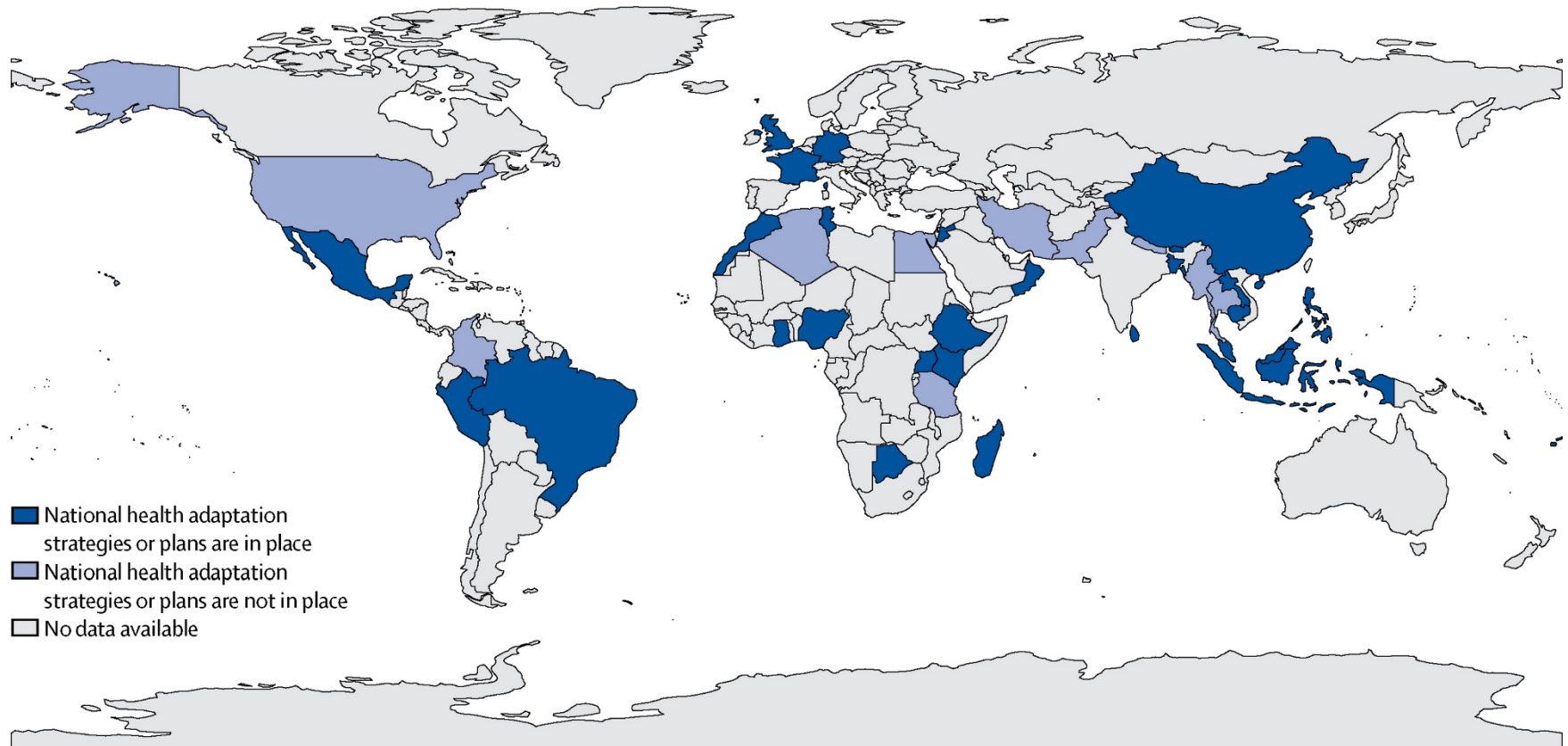
Source: EEA Report 2018

Switzerland



Timelines of CCIV information and adaptation policy developments for Switzerland

Countries to do more for **NAPs & SDGs**



We need:

- **More** of them
- **Better ones**, in some cases
- For the existing ones **to be implemented**

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**Thank you very much for
your attention**

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