



Mainstreaming Climate Risks into Public Health Policy and Planning

Assoc.Prof.Dr. Uraiwan Inmuong

Department of Environmental Health Occupational Health and Safety
Faculty of Public Health, Khon Kaen University

uraiwan@kku.ac.th



Mainstreaming Climate Risks into Public Health Policy and Planning

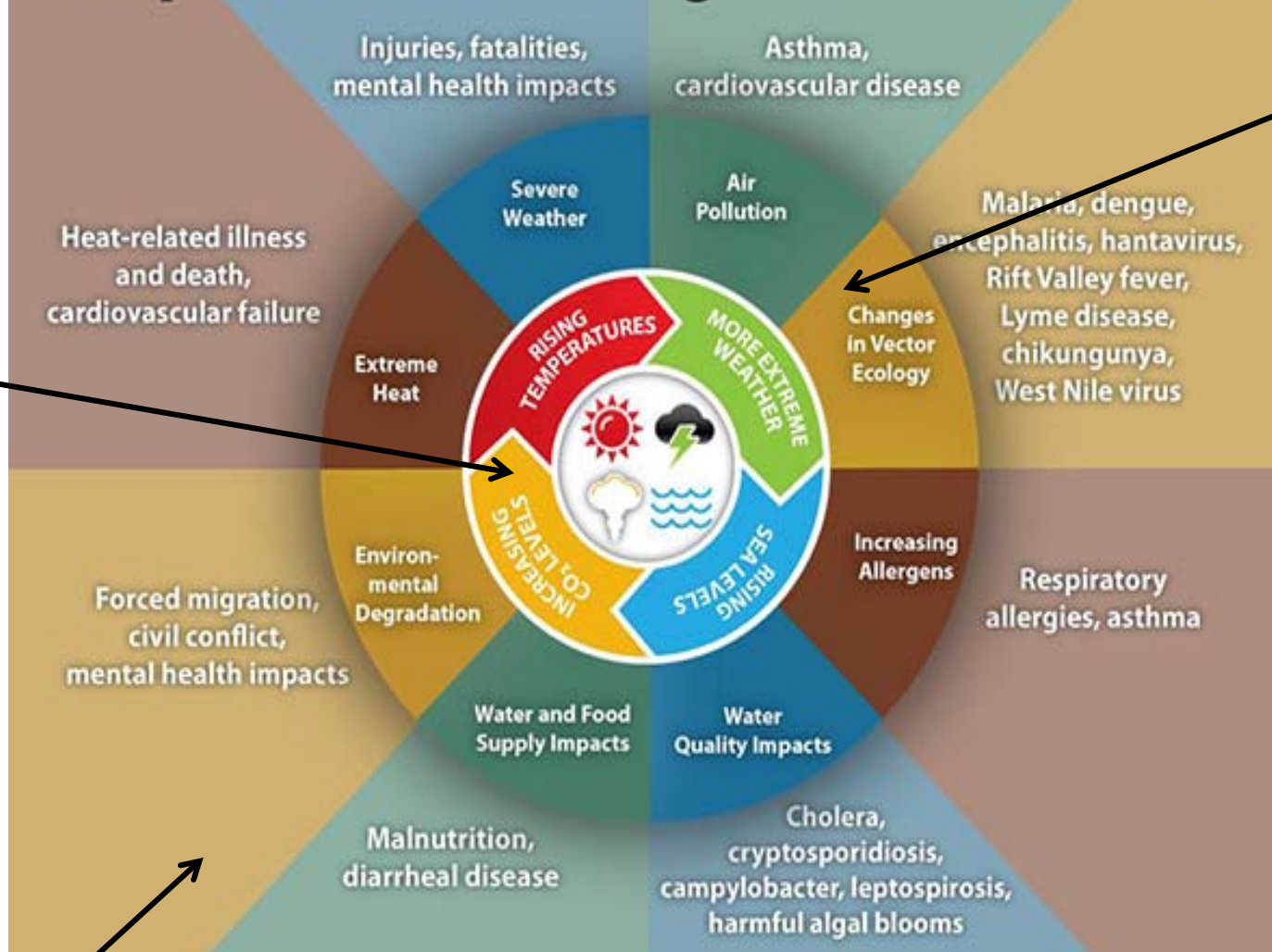
Thailand Health Threats from Climate Change Impacts

(draft) Thailand National Adaptation Plan on Climate Change and Health 2018-2030

Mainstreaming Climate Risks into National and Provincial Health Plans

Needs on Teaching Course Development on Climate Change and Health

Impact of Climate Change on Human Health



Hazards & Exposures

Climate drivers

Health risks & impacts

Source: Modified from the Centers for Disease Control and Prevention, 2014.

Key Health Threats from Climate Change Impacts: Thailand

Disaster-related Deaths and Injuries

Heat-related Illness and Death

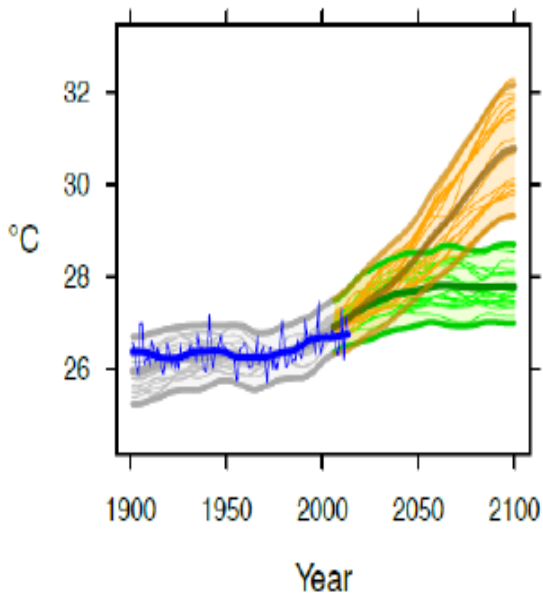
Insect-borne Diseases

Food- and Water-Borne Diseases

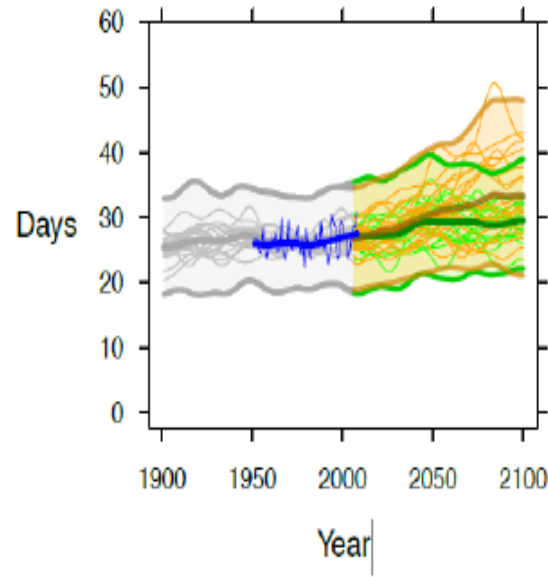
Respiratory Diseases

Climate Scenarios: Implication for Health Impacts

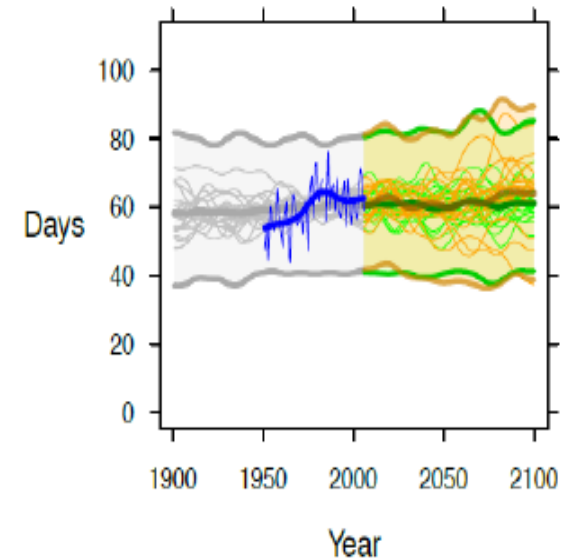
MEAN ANNUAL TEMPERATURE



DAYS WITH EXTREME RAINFALL ('FLOOD RISK')

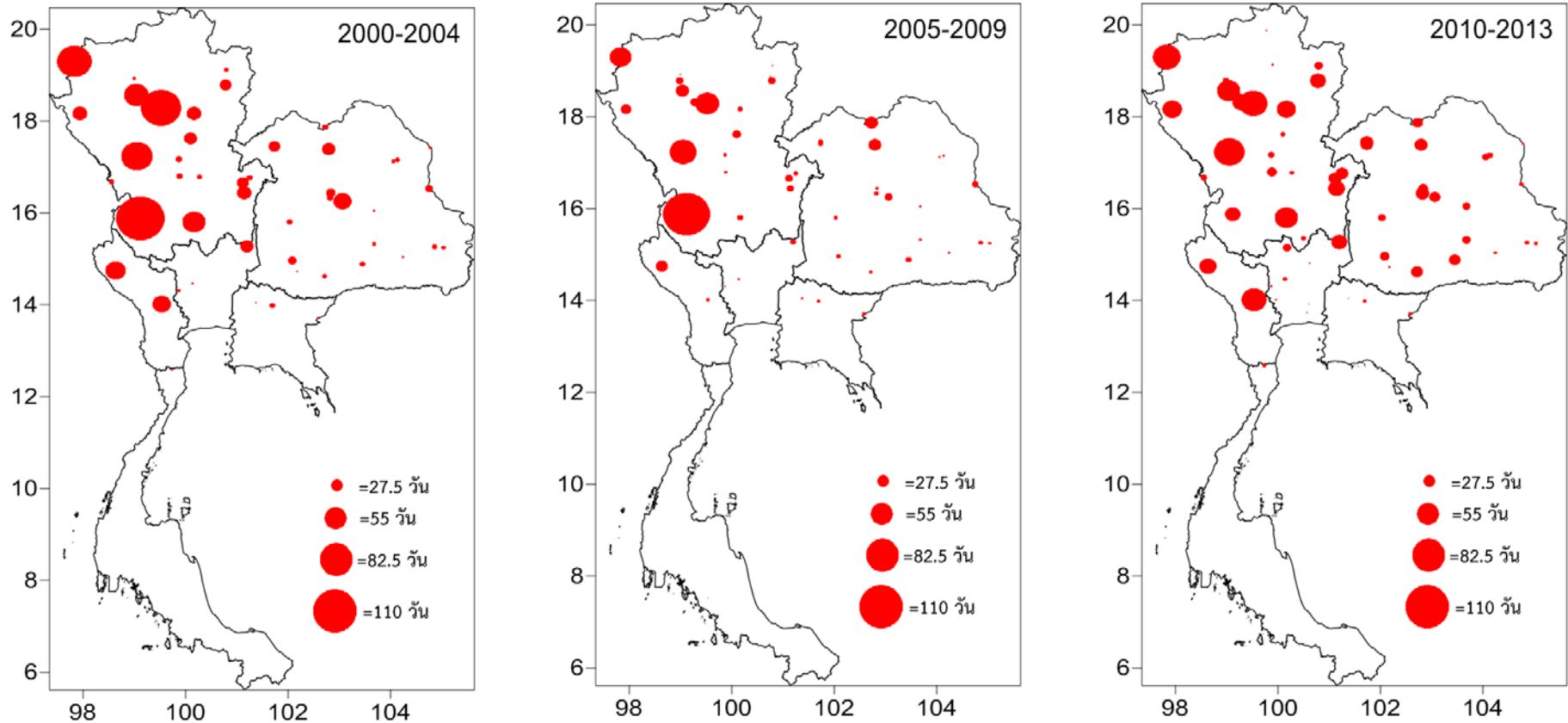


CONSECUTIVE DRY DAYS ('DROUGHT')



Temperature extreme across Thailand

(no. of days with highest temperatures $> 40^{\circ}\text{C}$)



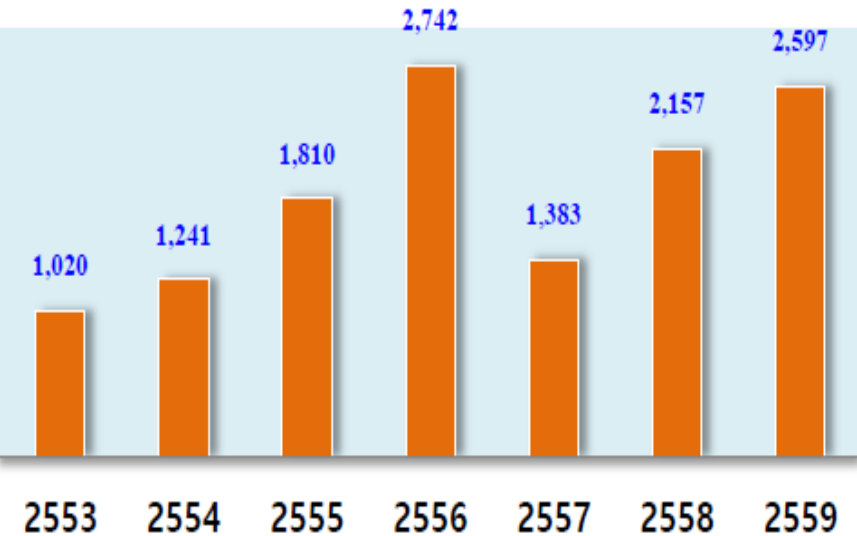
Leading to =>health related illness, insect-water-food borne diseases

Source: Department of Disaster Prevention and Mitigation, 2014.

Heat-related illness

Number of people suspected of being affected by heat stroke (cases)

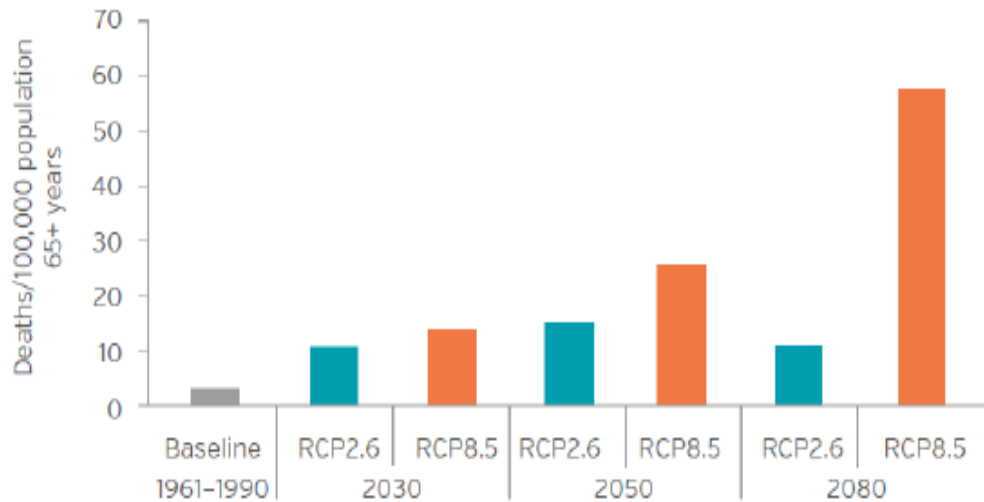
2010 - 2016



Source: MOPH

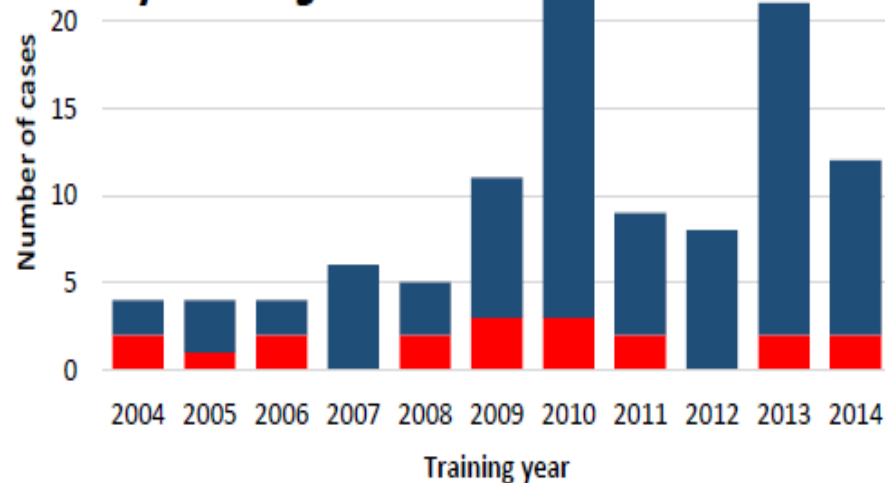
HEAT-RELATED MORTALITY

Heat-related mortality in population 65 years or over, Thailand (deaths / 100,000 population 65+ years)



Source: WHO 2015

Military training situation



Source: Phramongkutklao College of Medicine

Flooding 2006- 2015

Year	No.of flood	Provinces affected	Damages		
			Injuries (persons)	Deaths (persons)	Amount (million baht)
2006	6	58	1,462	446	9,627.41
2007	13	54	17	36	1,687.86
2008	6	65	16	113	7,601.79
2009	5	64	22	53	5,252.61
2010	7	74	1,665	266	16,338.77
2011	4	74	33	1,026	23,839.21
2012	3	47	-	14	716.00
2013	4	74	17	134	1841.22
2014	4	58	8	31	323.58
2015	5	49	-	11	162.06

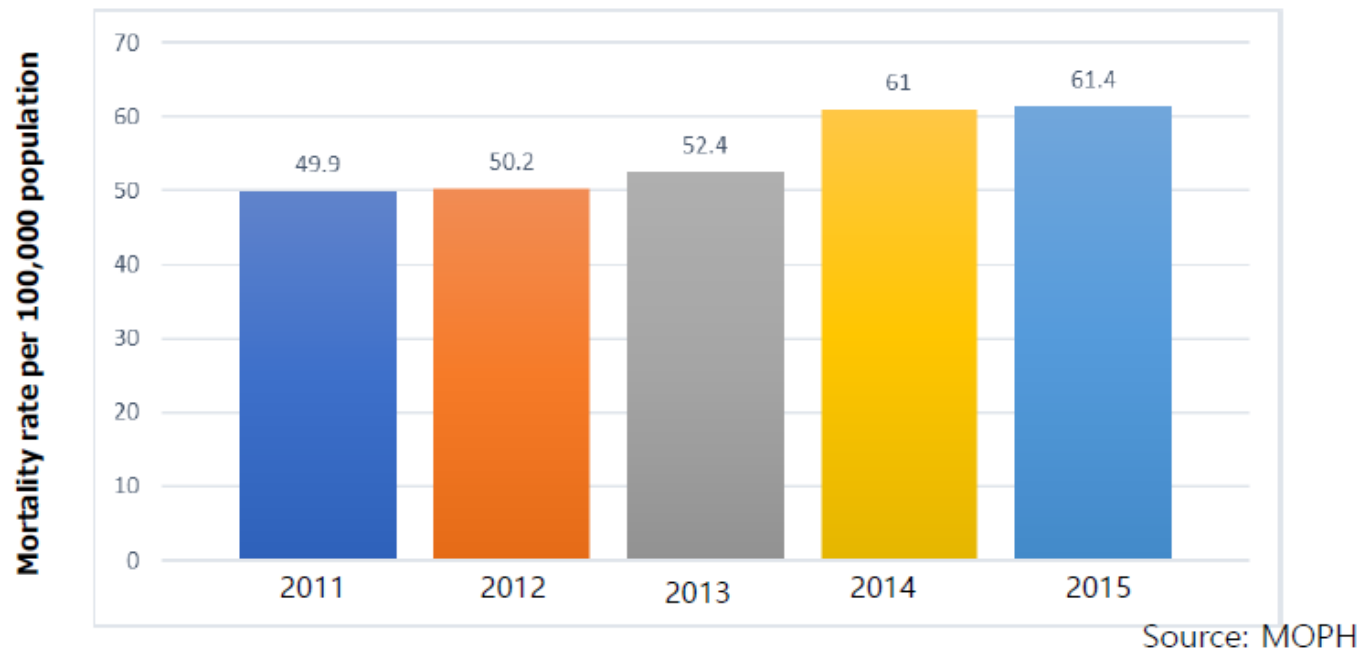
Source: NESDB 2016

**Unusual heavy flooding in some years:
Causing more number of deaths**

Source: DOH, Thailand (2017)

Climate Change and Respiratory Illness

Respiratory Mortality Rate in Thailand from 2011- 2015

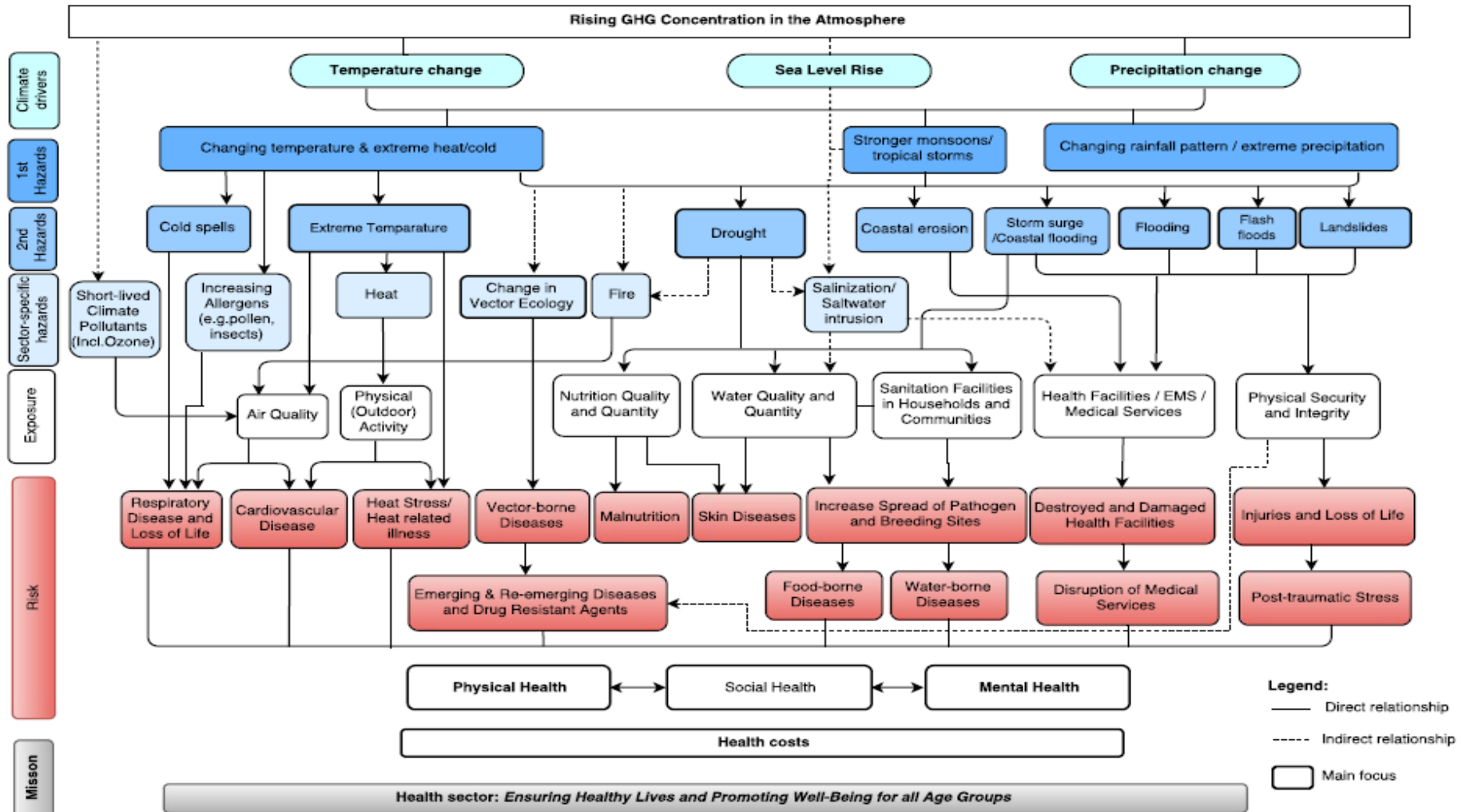


By 2030, an **estimated 2,600 annual premature deaths** due to outdoor air pollution may be avoided and near-term climate change mitigated by implementing 14 short lived climate pollutant reduction measures.

Source: WHO 2015

DOH with Support from GIZ & MONRE to Explore Causal Relationship between Climate Change and Health Impacts

Health Impact Chain



(Draft) National Adaptation Plan on Climate Change and Health 2018-2030

Goals

1. To decrease illnesses and deaths caused by climate change through capacity integration from all sectors.
2. To prevent and manage economic, social security and environmental impacts of climate change on public health.
3. To establish Thailand as a center for learning on climate change and health.

(DRAFT) THE NATIONAL CLIMATE CHANGE STRATEGY OF PUBLIC HEALTH VOL.1 2017-2036

(VERSION 4 APRIL 17)

Vision Thailand achieves international excellence and best in class of Asia in managing health and climate risks

" Decrease morbidity, Decrease impacts to the country , and being hub in Asia"

Ultimate Goal

1. Decreasing of morbidity and mortality rate caused by Dengue, Malaria, Heat-related illness, Natural disaster related illness, injuries and death, malnutrition, respiratory diseases, not less than 5%/year
2. 80% of targeted areas on climate change and health management meet the standard
3. Decreasing of economic loss due to climate change related health problems by 20%

Mission

1. Formulate public health policy and direction in response to climate change

2. Establish national excellence on health and climate risks management

3. Enhance cooperation in national, ASEAN and international level on climate change and health management in order to ensure the most benefits to Thailand

4 Strategic issues

Strategy 1:

Developing international excellence public health system dealing with climate change

Strategy 2:

Strengthening public health preparedness in climate change for national driven on economic , social and security

Strategy 3:

Integrating capacity of all sectors to drive public health implementation and climate change and extending supports to ASEAN and Asia

Strategy 4 :

Strengthening community capacity and people skills in health literacy coping with health risks from climate change

Relevant agencies: MoPH/MoI/MoST/M.Digital/MoNRE/M.Education/NIEMS/Private sector

Relevant agencies: MoPH/M.Tourism/MoI/M.Industry/Private sector

Relevant agencies: MoPH/MoEn/MoI/M.Industry/M. Defence/MoFA/M.Education/Public and Private sector

Relevant agencies: MoPH/MoI/MoNRE/M.Social dev./M. Education/MoAC/M. Labor/Public and Private sector



Mainstreaming Climate Risks into Public Health Plan

4 main work packages (Oct 2017- May 2019)

Capacity Building

**Health Risk
Quantification**

**Monitoring and
Evaluation (M&E)**

Mainstreaming/Finance

KKU contributed an expert to mainstreaming initiative

Mainstreaming: Key Activities

1-Capacity building

2-Risk quantification

3-M&E

4-Mainstreaming

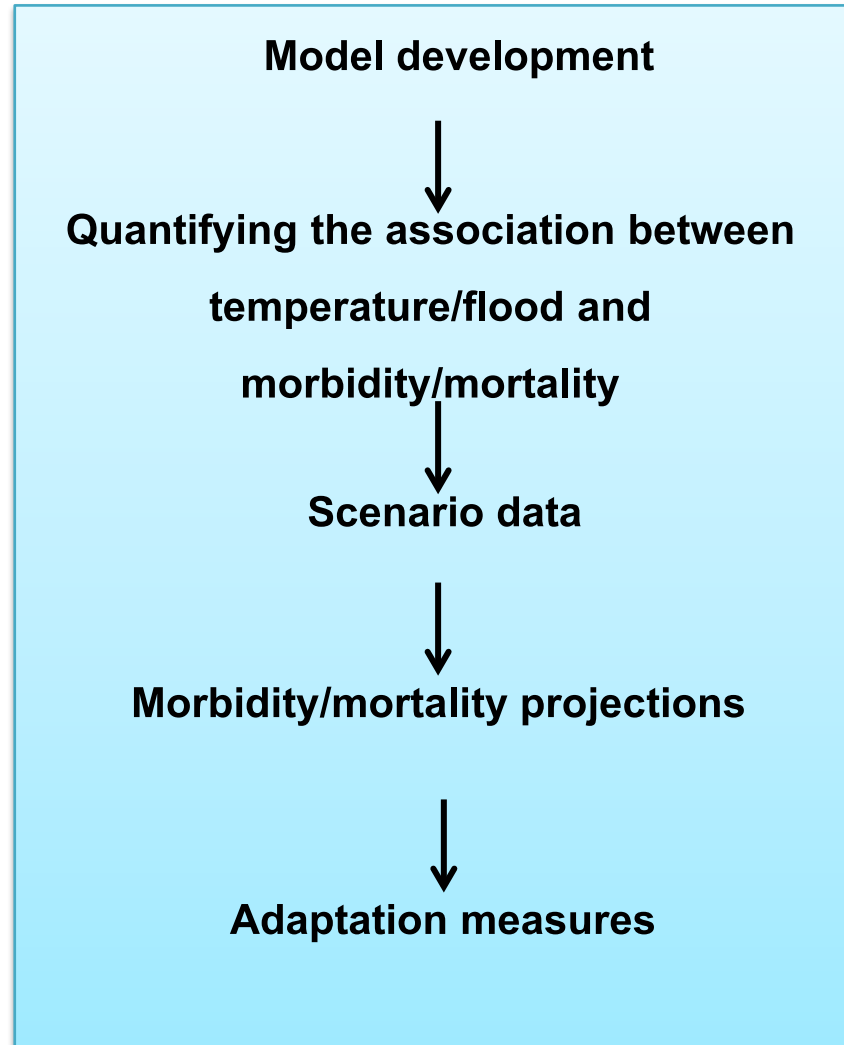
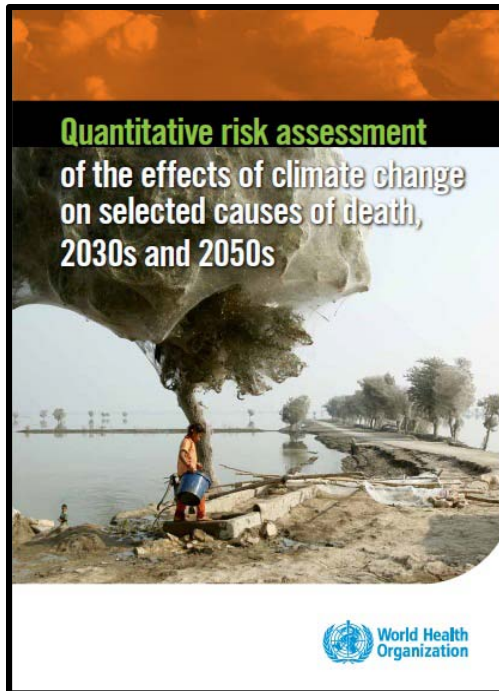
- Training modules/materials
- Conduct ToT course
- Dissemination strategy/Institution for replication
- User-friendly training manual
- Support MOPH delivery of training modules

- Data bank for quantify impact chain factors
- Risk quantification framework
- Qualitative analysis and quantify impact chain factors
- Methodology to prioritize climate related health risks
- Technical guideline for risk analysis for decision-makers

- M&E method
- M&E framework
- Stakeholder discussion on M&E indicators
- Recommendations on assessing and evaluating the adaptation measures & integration in the CC health adaptation plan

- Analysis of the policy and financing framework
- Technical guideline integrating the climate risks into health planning processes
- Criteria and appraisal for funding CC health adaptation

Health Risk Quantification from Climate Change



Piloting Mainstreaming Climate Change into Health Policy and Plan: Two Provinces (Nakorn Sawan and Maha Sarakham)

- Training on climate change and health
- Exploring ways to mainstreaming climate risk into the national and provincial public health plans



Needs on Teaching Course Development on Climate Change and Health

- Most public health professionals have limited knowledge and experiences on 'climate change and health'
- Climate change is increasingly to adversely affect population health at present and even worse in the future



- **Needs on teaching course development on: e.g.,**
 - Understanding climate change and health impact
 - Health risk quantification from climate change
 - Public health responses to climate impacts, including heavy flood and drought
 - Health awareness of climate impact
 - Epidemiological and disease surveillance system in response to climate impacts
 - Etc.



**Thank you for your kind
attention!**

