

MINISTRY OF HEALTH

CLIMATE CHANGE
RESPONSE ACTION PLAN OF THE HEALTH SECTOR
IN THE 2019-2030 PERIOD WITH THE VISION TO 2050

*(Promulgated in conjunction with Decision No. /QD-BYT dated, 2018
by the Minister of Health)*

Hanoi, 2018

CLIMATE CHANGE

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FOREWORD

The global issue of climate change has strong impacts on the environment, socio-economic development, and public health, representing one of the biggest challenges to mankind. Climate change which entails disasters and extreme weather events (the increase in storm frequency and intensity, global warming, sea level rise, etc.) is set to become a global threat in the 21st century and has affected almost every aspect of life. Due to the shift in worldwide weather phenomena, the global socio-economic development and security are expected to undergo comprehensive and profound changes in various fields including energy, water, food, society, employment, diplomacy, culture, economy, trade, and health care. The World Health Organization (WHO) estimated the global burden of diseases attributable to climate change. Malnutrition kills some 3.5 million, diarrhea kills 2.2 million, and roughly 60,000 people die as a result of extreme weather events like heat waves and temperature shocks per year. Between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year¹.

Vietnam is one of the countries most vulnerable to and severely affected by climate change². The combined impacts of climate change, disasters and a boom in Vietnam's economic development are apparent in many areas and localities across the Southeast Asian country. They are droughts, salinity intrusion, floods, landslides, environmental pollution, water scarcity, etc., affecting the health care system and public health. As projected by the Ministry of Natural Resources and Environment (MONRE) in the revised climate change and sea level rise scenarios for Vietnam in 2016, temperatures in the country's Northern part will increase at a quicker pace than those in the South while coastal regions will have slower temperature rise than inland areas. The respective temperature increase will likely be 4.0⁰C-4.5⁰C and 2.0⁰C-2.2⁰C in the Highest Emission Scenario and the Lowest Emission Scenario³. Vietnamese studies in international journals

¹ WHO (February 1, 2018). WHO fact sheet on Climate change and health.

² World Bank (2010)

³ Ministry of Natural Resources and Environment (MONRE) (2016). Climate Change, Sea Level Rise Scenarios for Vietnam, Vietnam Publishing House of Natural Resources, Environment and Cartography, Hanoi.

show that higher temperatures contribute to an increased risk of dengue, diarrhea, hand-foot-and-mouth disease (HFMD), and hospitalization rates, especially among the elderly and children. A 1⁰C rise in the temperature will result in a 3.4-4.5% increase in the hospitalization rate for children, 7-11% increase in the risk of dengue, 5.6% in the risk of HFMD and 1.5% in the number of diarrhea cases. The elderly hospitalization rate will expand by 13% during heat wave days. Changing climatic conditions like humidity, precipitation, and temperature will likely increase infectious diseases and emerging infectious diseases such as dengue fever, malaria, influenza A (H5N1), H1N1 flu, Zika fever (also known as Zika virus disease). New diseases which are linked to climate change are foreseen in Vietnam.

In a bid to cope with climate change, enhance citizens' health protection, promote internal potentials and advantages, and create driving forces for socio-economic development, the 6th Meeting of the 12th Central Committee promulgated Resolution No. 20-NQ/TW dated October 25, 2017 on enhancement of citizens' health protection, improvement, and care in new situation. Accordingly, the health sector holds responsible for developing a climate change adaptation plan for the 2018-2025 period with the vision to 2030 in order to mitigate the impacts of environmental pollution and climate change on human health. In Decision No. 1670/QD-TTg dated October 31, 2017 on the approval for the Target Program for Climate Change Adaption and Green Growth for the 2016-2020 period, the Vietnamese Government also directed ministries, sectors, and localities to develop and revise the action plan for responding to climate change in 2021-2030 with the vision to 2050. The Government promulgated Resolution No. 120/NQ-CP on November 17, 2017 on sustainable and climate-resilient development of the Mekong delta and requested ministries, sectors, and localities to develop implementation plans. Based on the tasks assigned by the Government and under the guidance of the Ministry of Natural Resources and Environment, the Ministry of Health develops the Climate Change Response Action Plan for the 2019-2030 Period with the Vision to 2050 with the following contents:

SECTION I. LEGAL BASIS FOR THE ACTION PLAN DEVELOPMENT

The development of the Climate Change Response Action Plan of the Health Sector is grounded on relevant Government's legal documents, including:

- Decree No. 75/2017/ND-CP defining functions, tasks, powers, and organizational structure of Ministry of Health;

- Resolution No. 20-NQ/TW dated October 25, 2017 of the 6th meeting of the 12th Central Committee on enhancement of citizens' health protection, improvement, and care in new circumstances;

- Resolution No. 139/NQ-CP dated December 31, 2017 promulgating the Government's program of action for implementation of the Resolution No. 20-

NQ/TW dated October 25, 2017 from the 6th meeting of the 12th Central Committee on enhancement of people's health protection, care and improvement in new circumstances;

- Resolution No. 120/NQ-CP dated November 17, 2017 on sustainable and climate-resilient development of the Mekong Delta region;

- Decision No. 2139/QD-TTg dated December 05, 2011 approving the national strategy for climate change;

- Decision No. 1670/QD-TTg dated October 31, 2017 on the approval for the Target Program for Climate Change Adaption and Green Growth for the 2016-2020 period;

- The Prime Minister's Decision No. 1052/QD-TTg dated August 21, 2018 on the 2018 State Budget Allocation for the Climate Change Response Component within the Target Program for Climate Change Adaption and Green Growth.

SECTION II. VIEWPOINTS

The following viewpoints and principles are guaranteed in the Climate Change Response Action Plan for the Health Sector:

1. Climate change is among the biggest global threats to human health. Active responses to climate change and environmental protection are crucial to people's health protection and improvement.

2. The Health Sector's Climate Change Response Action Plan for the 2019-2030 period with the vision to 2050 (hereinafter referred to as the Action Plan) shall be implemented across the sector with a strong emphasis on: environmental and community health, disease prevention, medical examination and treatment (ME&T), medical equipment and health works, disaster and catastrophe prevention, food safety, and nutrition.

3. Essential to the implementation of the Action Plan is the close coordination between the Ministry of Health and relevant agencies, the interest and involvement of the Party central- and local-level committees and authorities, and the active participation of health care workers and the public.

4. The Action Plan serves as the basis for directing, guiding and organizing response activities in the health sector nationwide. Based on the Plan, provincial and municipal response action plans will be developed, promulgated, and executed. The Action Plan shall be consistent with relevant strategies, programs, schemes, plans, local actual situations, and climate change scenarios.

5. While the implementation of the Action Plan is accommodated by resources resting on the central budget, local budgets, and other lawful sources of funds, it is important to enhance integration measures, take full advantage of all resources, and bolster international support and social resource mobilization.

SECTION III. OBJECTIVES

1. Overall goal

To enhance the health sector's response capacity with the view to prevent and mitigate environment and climate-related risk factors that affect the health care system and people, contributing to people's health protection, care and promotion.

2. Specific goal and targets until 2030

a) Specific goal 1: To develop and improve mechanisms and policies of the health sector in responding to climate change.

Specific targets:

- Climate change response is set to be integrated in at least 70% of official documents promulgated by the Ministry of Health on environmental and community health, ME&T, disaster and catastrophe prevention, medical equipment and health facilities, disaster prevention, food security, and nutrition.

- All provinces and centrally-controlled municipalities shall promulgate provincial response action plans for the health sector.

b) Specific goal 2: To raise awareness and enhance the capacity of health workers and communities in health protection and climate change adaptation.

Specific targets:

- All local health workers are communicated of and trained on climate change response actions in the health sector.

- All provinces and centrally-controlled municipalities organize education and communication activities on climate change and public health.

c) Specific goal 3: To strengthen the health care systems' adaptive capacity with priority given to the grassroots level.

Specific targets:

- At least 80% of newly built health facilities apply measures to counter climate change impacts.

- 70% of health stations at commune/ward/town levels in vulnerable areas to climate change have sufficient capacity and facilities to ensure effective responses to disasters and extreme weather events.

3. The Action Plan's vision to 2050

By 2050, climate change response is set to be integrated in periodical and annual health care policies, strategies, schemes, and plans. It will be guaranteed that the health care system will have sufficient capacity and resources to facilitate active and efficient responses to health impacts of climate change;

there will be popular use of green and renewable energy for the mitigation of greenhouse gas (GHG) emissions from health facilities.

SECTION IV. CHALLENGES AND OPPORTUNITIES

1. Challenges to the health sector

The following difficulties were recorded in the implementation of climate change response activities in the health sector in the 2011-2017 period:

- The knowledge, awareness, and interest of leaders, officials in the health care and relevant sectors on climate impacts on human health were inadequate.
- There was a lack of a surveillance, prediction and early warning system of climate impacts on human health for prompt responses.
- Funding for climate change response in the sector, especially in local level, failed to meet requirements.

2. Opportunities for the sector

- The issue of climate change response and the prevention of environmental pollution factors towards people's health protection and promotion claimed attention and received consistent directions of the Central Executive Committee, the Government, and the Ministry of Natural Resources and Environment.

- Upon developing and implementing the Action Plan, the health sector had a chance to review, evaluate, invest in and execute plans and schemes on comprehensive development of the health care system in response to climate change impacts.

- As climate change poses the biggest global threat to human health the Action Plan helps to draw attention and bolster cooperation, resources and technical supports from international organizations, Vietnam's development partners, and sponsors for implementing climate change response activities in the health sector.

SECTION V. RESPONSIBILITIES AND SOLUTIONS

1. Policies and organization management

a) To review, establish, and implement synchronous policies and solutions, integrate people's health protection and improvement against climate impacts in relevant central and local strategies, programs, plans, proposals, and projects.

b) To gradually improve planning policies, develop a national health care network, invest in upgrading health facilities and equipments to accommodate disease prevention and control, and ME&T which adapt to climate change and extreme weather events. A strong focus and priority shall be given to vulnerable areas and the Mekong Delta region.

c) To propose the promulgation and implementation of policies on attracting domestic and foreign resources to effectively perform climate change

response activities in the health sector; policies on clean and renewable energy use for environmental protection and greenhouse gas emission reduction at health facilities.

d) To consolidate the sector's organizational systems, review and amend climate change response functions and responsibilities of relevant health care agencies.

dd) To promote the use of health information technology (IT) with a view of building a forecasting and early warning system of climate impacts on human health which is integrated with health information systems (HIS).

2. Communication, education, and training for capacity building

a) To create and implement a sectoral communication plan on climate change and incorporate communication activities on health protection and climate change response in the sector's communication plans.

b) To develop a wide range of communication materials and organize various communication activities on climate change and health which are regionally appropriate and the Mekong Delta area shall be prioritized.

c) To prepare short-term and long-term programs and training materials on climate change and health for health workers and students at medical, pharmaceutical and environmental universities.

d) To conduct adaptive capacity enhancement training courses for government health care and non-health care officials at all levels.

dd) To organize events, forums, and field trips accommodating local and international experience exchanges on climate change response.

3. Developing and replicating models responding to climate change and extreme weather events

To develop and replicate response and mitigation models against adverse climate impacts on human health in different areas and communities (with priority given to vulnerable areas to climate change like the Mekong Delta region, coastal and mountainous areas):

- Communication models equipping health workers and communities with information and solutions and sharing experiences on climate change response.

- Effective community-based response models to climate change, sea level rise, and other extreme weather events of hurricanes, floods, droughts, salinity intrusion, and heat waves.

- The model of health organizations meeting community's health protection and care demand against the backdrop of climate change.

- Emergency models responding to disasters and catastrophes like accidents, injuries, and epidemics.

- Managing and monitoring models for epidemics and diseases connected with changes in weather and climate elements.

- Climate-resilient environmental sanitation and clean water models for communities and health facilities.

- Application models of environmentally friendly technologies, renewable and clean energy technologies in health facilities.

4. Enhancing scientific research

To enhance scientific research on climate change impacts on human health and response solutions for the health sector, focusing on solutions to improve the response capacity in the Mekong Delta region:

- To study and assess the impacts of climate change on the health sector and its adaptive capacity.

- To study the evidences for such impacts of climate change and extreme weather events on human health and adaptive measures as: Heat- and heat waves-related illnesses; digestive and respiratory diseases; diseases associated with nutrition and food safety; vector-transmitted diseases and emerging diseases connected to climate change.

- To study and propose effective models on patient accommodation and treatment during the outbreak, climate change-related diseases.

- To study technological solutions, equipment, and facilities for the management and control of epidemics and diseases in the context of climate change, especially after natural disasters, floods, and droughts.

- To study technological solutions, apply green technology, and promote clean energy use for greenhouse gas emission reduction in health facilities.

5. International cooperation and social resource mobilization

- a) To participate in global, trans-regional, and national initiatives, policies, and solutions to adapt and mitigate climate impacts on human health.

- b) To promote international cooperation to learn, exchange experiences, share information on adaptive policies, science and technology, models, and solutions.

- c) To develop programs and projects in order to mobilize technical and financial resources of international community and enterprises for climate change mitigation and adaptation in the health sector.

6. Financial solutions

- a) The State allocates funds to implement the health sector's Action Plan at central and local levels.

- b) Health care agencies take an active role in accomplishing climate change response integration tasks into their relevant programs, projects, schemes, and plans.

c) International organizations, non-government organizations (NGOs), domestic and foreign individuals, and private enterprises are to be encourage to invest in climate change response activities in the health sector.

7. Inspection, supervision and evaluation

a) To establish monitoring and evaluation indicator systems in line with the practical conditions.

b) To perform regular and irregular inspection, supervision and evaluation of the implementation of the health sector's climate change resilience Action Plan at central and local levels.

c) To develop and guide the sector's implementation of reporting on climate change adaptation activities; synthesize results, report the Action Plan implementation before June 15 and December 15 every year, and summit to the Vietnam Health Environment Management Agency (VIHEMA).

d) To bolster coordination among Ministry units and agencies according to their assigned functions, tasks, and activities.

The list of priority tasks and projects to implement the Climate Change Resilience Action Plan in the health care sector for 2019-2030 with the vision to 2050 is available in Appendix 1 attached.

SECTION VI. IMPLEMENTATION ROADMAP

1. Implementation roadmap for 2019-2025

a) To develop and improve the health sector's adaptive mechanisms and policies.

b) To organize activities to raise awareness and enhance climate change and extreme weather events adaptive capacity.

c) To inspect and evaluate the health sector's adaptive capacity to climate change and extreme weather events and propose solutions.

d) To bolster scientific research on climate change and human health and the health care system.

dd) To develop and pilot effective community-led adaptive models.

e) To develop and pilot green technology application and clean energy using models with the view to cut down on greenhouse gas emissions in health facilities.

f) To develop and pilot a database system for monitoring, forecasting and giving early warning on climate impacts on human health.

g) To examine, monitor and evaluate the Action Plan implementation.

2. Implementation roadmap for 2025-2030

a) To maintain strengthened guidance and direction on enhancing the implementation of adaptive policies and tasks in the health sector.

b) To map out plans and invest in the health facility and equipment system, accommodating medical examination and treatment and climate change, extreme weather event resilience.

c) To enforce the wide application of forecasting and early warning database on climate impacts on human health.

d) To replicate effective health care system-led and community-led climate change resilient models.

dd) To replicate green technology application and clean energy using models to reduce greenhouse gas emissions in health facilities.

e) To promote social resource mobilization in the health sector's climate adaptation.

f) To examine, supervise, review and evaluate the Plan implementation.

3. Implementation resources

a) At central level

- The Vietnam Health Environment Management Agency (VIHEMA) acts as the focal point, coordinating with relevant units under the Ministry of Health including the Department of Medical Examination and Treatment, the Vietnam General Department of Preventive Medicine, the Department of Medical Equipment and Health Works (DMEHW), the Administration of Science, Technology and Training (ASTT), the Planning and Finance Department, the Legal Affairs Department, preventive medicine institutes, hospitals and other related agencies to implement policies and mechanisms, examine the health sector's capacity in terms of adaptation, scientific research and piloting climate resilience models. VIHEMA shall work in cooperation with the Department of Communication and Emulation, news agencies, newspapers, ministries, unions and the provincial Centers for Disease Control and Prevention (CDC) to implement communication activities and enhance the sector's adaptive capacity. Preventive medicine and research institutes under the Ministry of Health should also be involved in researching, capacity building training, model building and activity monitoring.

- Coordination with other ministries i.e. the Ministry of Natural Resources and Environment, the Ministry of Agriculture and Rural Development, socio-political organizations like the Vietnam Fatherland Front, the Vietnam Women's Union, the Vietnam Farmers Association and the Youth Union, etc. is to be bolstered while more attention should be drawn from the Party committees and local authorities to mobilize funds for climate change response activities in the health sector.

b) At local level

Activities to implement the Action Plan at local level will mainly rely on the health sector's network which includes: the Departments of Health, the Centers for Disease Control and Prevention (CDC)/Preventive Medicine Centers, and provincial-level hospitals; health centers and hospitals at the district level; commune and ward health stations and health workers at the commune and village levels. Close coordination with relevant departments, agencies, and organizations of all levels is also required.

c) Sources of finance for the Action Plan implementation

Financial resources required for the implementation of the Action Plan are mobilized from the central and local State budgets; integrate budgets of related programs, projects, schemes taken care of by central and local medical, non-medical agencies; technical and financial support of domestic and foreign organizations, individuals and businesses, donors, and other legal funding sources. The total budget for priority climate adaptive tasks and projects in the health sector is estimated at VND2,000 billion.

SECTION VII. THE INCORPORATION OF CLIMATE CHANGE IN THE HEALTH SECTOR'S STRATEGIES, PROGRAMS, SCHEMES, AND DEVELOPMENT PLANS

Despite limited adaptive investment in the health sector in recent years contents connected with climate change have preliminarily been integrated and incorporated in a number of industry policies, strategies, programs, and development plans upon the implementation of the National Strategy for Citizens' Health Protection, Improvement, and Care and the National Strategy for Malaria Control and Elimination. At the same time, guaranteeing access to clean water and ensuring environmental sanitation in rural areas against the backdrop of climate change and extreme weather events are incorporated in the sanitation component of the National Target Program (NTP) for Rural Water Supply and Sanitation for 2006-2010 and 2012-2015 periods.

Climate resilience has been integrated in a number of action plans developed by the health sector including the implementation plan of the Vietnam National Patriotic Hygiene and People's Health Improvement Movement, the implementation plan of the Green-Clean-Beautiful health facilities program, the Malaria Prevention Action Plan for 2015-2020, the National Nutrition Action Plan until 2020, and the 2015-2020 Action Plan for Disaster Preparedness and Response for the health sector.

Despite the preliminary integration of climate change adaptation in a number of development strategies, programs, plans, schemes, and projects, low levels of the integration and sustainability have been recorded and the contents have not yet been materialized as intervention activities and there is a lack of financial resources for implementation. The connection and coordination of adaptive activities are absent in the aforementioned strategies, programs, plans,

schemes, and projects. The effectiveness of the health sector's adaptive activities is not yet monitored and evaluated.

In the coming period, climate change is likely to be incorporated in a number of health care programs, planning activities, and development plans including planning on medical examination and treatment facilities, plans to improve latrines for households in the Mekong Delta region, and plans for preventing diseases like dengue fever, and hand-foot-and-mouth disease (HFMD) (*See Appendix 2*).

SECTION VIII. IMPLEMENTATION ORGANIZATION

1. At central level

1.1. Ministry of Health

a) Vietnam Health Environment Management Agency

- To act as the focal point for developing and implementing the health sector's Climate Change Response Action Plan; direct and guide the sector's climate change adaptation at central and local levels.

- To review, establish or coordinate to establish legal adaptive documents, mechanisms, and policies for the health sector.

- To train and enhance multi-scale adaptive capacity for the health sector.

- To assess the sector's climate vulnerability and adaptive capacity; to propose adaptive measures and protect people's health against climate change impacts.

- To build and manage databases, maps of areas whose citizen's health is affected by climate change, and software for monitoring, forecasting and early warning of climate impacts on human health.

- To boost the integration of activities which guarantee clean water access, environmental sanitation, personal hygiene, minimizing the harmful effects of air pollution, adapting to climate change within the framework of the Vietnam National Patriotic Hygiene and People's Health Improvement Movement, household sanitation and personal hygiene improvement, water quality monitoring and other associated programs and projects; to develop, pilot and replicate models of clean water management and sanitation, energy saving technologies, waste management technologies for GHG emission mitigation in health facilities.

b) Vietnam General Department of Preventive Medicine (GDPM)

- To direct, guide, and support the prevention of infectious, emerging, and non-communicable diseases which are sensitive to climate change and climate fluctuations; the supervision of and responses to epidemics, the reduction of infectious disease acquisition and mortality; perform quarantine activities at the

nation's borders focusing on infectious, emerging, and non-communicable diseases associated to climate factors and climate change.

- To direct, guide and support the establishment and development of the preventive medicine system, the disease control system at all levels to be sufficiently capable of preventing infectious, emerging and non-infectious diseases; monitor and respond to epidemics and diseases against the backdrop of climate change.

- To review, develop and amend regulations and guidelines on preventing climate-related infectious, emerging, and non-communicable diseases; monitor and respond to epidemics and diseases against the backdrop of climate change.

c) Agency of Health Examination and Treatment

- To review and plan the national medical examination and treatment facility network which is capable of meeting climate change and sea level rise scenarios; ensure patient accommodation and treatment ability at the outbreak of diseases related to extreme weather events and climate sensitive illnesses.

- To review, amend, and develop adaptive regulations for health facilities.

- To take the lead in reviewing and amending guidance on diagnosing and treating climate-sensitive non-communicable and infectious diseases and implementing adaptive integration in programs and plans associated with health examination and treatment.

d) Department of Food Safety

- To take the lead and coordinate with relevant agencies in managing food contamination risks, preventing food poisoning and food borne illnesses caused by factors associated with climate change and extreme weather events.

- To incorporate food safety and adaptive activities in relevant programs and projects.

dd) Administration of Science, Technology and Training (ASTT)

- To develop, implement, and integrate adaptation in training programs to strengthen health workers' adaptive capacity.

- To study and recommend regionally applicable technologies for climate change adaptation, energy saving, and GHG emission mitigation in the health sector.

- To boost international cooperation in research, adaptation and mitigation technology exchange and transfer in the health sector.

e) Department of Communication and Emulation

- To act as the focal points and coordinate with the Vietnam Health Environment Management Agency (VIHEMA) and relevant agencies in planning and implementing communication activities aimed at raising people's

awareness on periodical and annual climate change adaptation in the health sector.

- To guide and direct central and provincial centers for health communication and education, CDC's Departments of Health Communication and Education to support communication techniques and implement communication adaptive activities in the health sector.

- To work in coordination with relevant agencies in compiling, developing and disseminating standardized communication materials on responding to climate change and mitigating adverse climate impacts on human health with an aim to raise health workers' and public awareness.

f) Planning and Finance Department

- To take the lead and coordinate with VIHEMA and relevant agencies in climate change integration in strategies, schemes, projects, and development plans for the sector and grassroots health care centers.

- To take the lead and work in coordination with VIHEMA and relevant agencies and units in mobilizing and allocating international and domestic financial sources from the society, the private sector, and official development assistance available for the Action Plan implementation.

- To foster the health care network and meet the prevention demand for climate-related epidemics, illnesses, and emerging diseases in alignment with grassroots health facility planning.

g) Department of Medical Equipment and Health Works (DMEHW)

- To review, amend, and establish regulations, technical standards for medical equipment and health works which are able to adapt to climate change, sea level rise scenarios entailing disasters, catastrophes, floods, droughts, and salinity intrusion.

- To review and increase investment in medical equipment and health works to cope with climate impacts on human health and health care activities.

h) Department of International Cooperation

To take the lead in performing international cooperation missions to mobilize and call for adaptive support and cooperation from governments, international organizations, and donors.

i) Legal Affairs Department

To perform cooperative review and development of sector-specific legal adaptive documents, mechanisms, and policies.

k) National Health Communication and Education Center

To work in coordination with relevant agencies to implement communication adaptive activities in the health sector with priority given to vulnerable areas, women and girls.

l) Preventive medicine institutes, universities, hospitals and agencies under or directly under the Ministry of Health

- To map out internal adaptive activities, take an active role in GHG mitigation and the use of clean energy and renewable energy.

- To bolster research on impact evidence of and solutions for climate change and extreme weather patterns on public health and the health care systems.

- To coordinate in training and enhancing adaptive capacity for medical and non-medical workers.

- To implement authorized adaptive programs and projects; direct, monitor, and provide technical guidance for agencies based in the authorized areas to perform adaptive tasks in the health sector.

1.2. Coordination of relevant ministries, sectors, and organizations

a) Ministry of Planning and Investment (MPI): To take the lead and coordinate with the MOH, relevant ministries and industries in the allocation of investment for the Action Plan implementation based on the State mid-term and annual budget balance; mobilize domestic and foreign funding for health care adaptive activities.

b) Ministry of Finance: To take the lead and coordinate with the MOH in approved State budget allocation for implementing health care adaptive activities, programs, and projects; guide, inspect, and monitor the budget expenditure in accordance with Vietnam's Law on State Budget and current regulations; coordinate with the MOH, relevant ministries and sectors to develop a mechanism of fiscal policy to promote the mobilization of social resources, finance sources other than the State budget and stimulate institutional and individual investment in climate change.

c) Ministry of Natural Resources and Environment (MONRE): To integrate health care adaptive activities in national target programs and CC projects; guide local-level implementation; coordinate with the MOH to share weather and climate databases, map areas with human health affected by climate change; enhance waste management, GHG emission mitigation, use of clean energy and renewable energy in health facilities; and implement measures to mitigate the impacts of air pollution on public health.

d) Ministry of Agriculture and Rural Development: To direct the implementation of the 2016-2025 National Target Program (NTP) for Rural Water Supply and Sanitation, with priority given to water supply for health facilities and areas affected by climate change; direct to effectively implement the National Target Programs for New Rural Development which covers nutrition interventions for stunting reduction, clean water, and rural environmental sanitation.

dd) Ministry of Education and Training: To work in coordination with the MOH in implementing training and human resource development programs on climate impacts on human health; coordinate with the health sector to track and monitor nutrition conditions, nutrition interventions and health care for children and students in areas affected by climate change.

e) Ministry of Information and Communication: To coordinate with the Ministry of Health and relevant ministries and industries to boost mass media and press communication on climate impacts on human health.

g) Socio-political organizations and associations: Committee of the Vietnam Fatherland Front, Committee for Ethnic Minority Affairs (CEMA), Vietnam General Confederation of Labor (VGCL), Vietnam Farmers' Union (VNFU), Committee of the Vietnam Women's Union, Hochiminh Communist Youth Union, Vietnam Association of the Elderly, occupational associations and other social organizations shall: work in close coordination with the medical industry and multi-level People's Committees to direct the implementation of communication activities and knowledge dissemination on climate change resilience and health at all levels.

2. At local level

a) Municipal People's Committees

- To direct the development and execution of the health sector's Adaptive Action Plan and associated local programs, ensure sufficient allocation of the State budget, human resources, and infrastructure for local-level implementation of the Action Plan to prevent and mitigate health impacts brought about by climate change, extreme weather events, and disasters.

- To enhance effective inter-sectoral cooperation among the health care, natural resources and environment industries in implementing comprehensive adaptive measures at local level.

- To recommend the People's Councils integrating health protection against climate change impacts and relevant targets in local socio-economic development plans.

- To strengthen social and other resource mobilization, join inter-sectoral cooperation in disseminating, propagating, and encouraging active health protection and climate change response at local level.

- To direct the examination, supervision, progress and result reporting of the local Action Plan implementation.

b) Departments of Health

- To evaluate vulnerability and adaptive measure; develop local adaptive plans for the health sector for the 2019-2030 period with the vision to 2050, and submit the municipal Peoples' Committees for approval based on climate change situations and scenarios, local conditions, and the health sector's Adaptive Action Plan for the 2019-2030 period with the vision to 2050.

- To develop an annual adaptive plan for the medical industry, provide the provincial or city's People's Committee with consultation on climate change integration in the health sector in local general work plans, and propose budget for the plan execution.

- To organize adaptive activities of the health sector in accordance with approved plans, make semiannual and annual report before June 15 and December 15, respectively and submit the municipal People's Committees and the Ministry of Health (with the Vietnam Health Environment Management Agency (VIHEMA) acting as the focal point) on a yearly basis.

MINISTER OF HEALTH

Nguyen Thi Kim Tien

APPENDIX 1.
LIST OF PRIORITY ADAPTIVE TASKS FOR THE HEALTH SECTOR
FOR THE 2019-2030 PERIOD

NO.	Task	Final outcome	Implementa- tion time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
I	Developing and improving adaptive mechanisms and policies for the health sector.		2019-2030	12	State budget and assistance		
1	Reviewing the medical examination and treatment facility system; proposing climate resilience policies and mechanisms; integrating resilience in medical examination and treatment policies, programs, projects, plans, and schemes.	Review reports and documents for issuance	2019-2030	3	State budget and assistance	Agency of Health Examination and Treatment	VIHEMA, DMEHW, Department of Personnel and Organisation, Legal Affairs Department, and relevant agencies
2	Developing climate impact guides and regulations for health facilities	Promulgating additional climate-related regulations for health facilities.	2019-2030	3	State budget and assistance	Agency of Health Examination and Treatment	VIHEMA, DMEHW, Department of Personnel and Organisation, Legal Affairs Department, and relevant agencies

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
3	Reviewing and emending climate change adaptation issue for non-infectious and infectious disease diagnosis and treatment	Adaptation guidelines for non-infectious and infectious disease diagnosis and treatment	2019-2030	3	State budget and assistance	Agency of Health Examination and Treatment	VIHEMA, GDPM, ASTT, and relevant agencies
4	Reviewing, amending, and developing adaptation guidelines and regulations on medical equipment and health works.	New or amended documents on adaptation for medical equipment and health works.	2019-2030	3	State budget and assistance	Department of Medical Equipment and Health Works	VIHEMA, Agency of Health Examination and Treatment, ASTT, Legal Affairs Department, and relevant agencies
II	Raising awareness of climate change and extreme weather events and enhancing adaptive capacity		2019-2030	750	State budget with the integration of programs, projects, and assistance		
1	Improving climate and health awareness for health workers and communities		2019-2030	300	State budget with the integration of programs, projects, and assistance		

NO.	Task	Final outcome	Implementa- tion time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
1.1	Developing and distributing communication sample materials (videos, footages, banners, posters etc.) on climate impacts on human health and mitigation solutions and models	Communication materials appraised and approved by the Ministry of Health	2019-2030	30	State budget with the integration of programs, projects, and assistance	Department of Communication and Emulation	VIHEMA, National Health Communication and Education Center, relevant agencies, departments and units
1.2	Developing communication plans to enhance awareness on health protection and climate change adaptation for health workers and communities.	Communication plans to enhance awareness on health protection and climate change adaptation for health workers and communities which are appraised and approved by the Ministry of Health	2019-2030	3	State budget with the integration of programs, projects, and assistance	Department of Communication and Emulation	VIHEMA, relevant agencies, departments and units
1.3	Organizing community-based communication activities on climate change and health	Specific communication activities for enhancing public involvement	2019-2030	100	State budget with the integration of programs, projects, and assistance	Department of Communication and Emulation	VIHEMA, CDC/National Health Communication and Education Center,

NO.	Task	Final outcome	Implementa- tion time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
							relevant agencies, departments and units
1.4	Organizing communication activities across the mass and social media.	Media content on central, local press and media stations and the social media	2019-2030	80	State budget with the integration of programs, projects, and assistance	Department of Communication and Emulation	VIHEMA, CDC/National Health Communication and Education Center, relevant agencies, departments and units
1.5	Organizing communication training and knowledge enhancement for officers in charge at provincial and district levels	All provincial and district communication officers are trained.	2019-2030	87	State budget with the integration of programs, projects, and assistance	Department of Communication and Emulation	VIHEMA, CDC/National Health Communication and Education Center, relevant agencies, departments and units
2	Enhancing adaptive capacity		2019-2030	450	State budget	VIHEMA	

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
					with the integration of programs, projects, and assistance		
2.1	Developing national training programs and materials on enhancing adaptive capacity for health workers, provincial and district hospitals, undergraduate and post-graduate students of medical, pharmaceutical and environmental universities.	Approved national training programs and materials on enhancing adaptive capacity	2019-2030	75	State budget with the integration of programs, projects, and assistance	VIHEMA	ASTT, GDPM, Agency of Health Examination and Treatment, institutes, universities, relevant agencies, and localities
2.2	Organizing training courses for core trainers at provincial level, preventive medicine institutes, medical and pharmaceutical universities and, relevant agencies	Health workers and relevant individuals are trained to become core trainers at provincial level	2019-2030	75	State budget with the integration of programs, projects, and assistance	VIHEMA	ASTT, institutes, universities, relevant agencies, and localities
2.3	Providing provincial and district officials with training courses (on planning, communication, supervision, etc.)	100% and 70% of provincial and district officials are trained, respectively.	2019-2030	75	State budget with the integration of programs, projects, and	VIHEMA	Institutes, universities, relevant agencies, and localities

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
					assistance		
2.4	Organizing training courses on climate change impact assessment and adaptation capacity for the health sector, which is aimed at mapping out the coping plans at provincial level	An executive summary report on the number of provinces and trainees accomplishing the approved training programs	2019-2030	75	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, relevant agencies, and localities
2.5	Organizing training courses on the use of clean and renewable energy in order to reduce polluted emissions from health facilities	An executive summary report on the number of health facilities accomplishing the approved training programs	2019-2030	75	State budget with the integration of programs, projects, and assistance	VIHEMA	ASTT, institutes, universities, relevant agencies, and health facilities
III	Reinforcing the database system for monitoring, forecasting and giving early warning on climate impacts on human health		2019-2030	300	State budget with the integration of programs, projects, and assistance		
1.	Developing, managing and sharing database (on diseases and climate), mapping areas undergoing climate	Database, maps of areas undergoing climate impacts on	2019-2030	50	State budget with the integration of	VIHEMA	Electronics Health Administratio

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
	impacts on human health	human health			programs, projects, and assistance		n of Vietnam (EHA), GDPM, Agency of Health Examination and Treatment, institutes, and universities
2.	Developing pilot models for epidemics surveillance, forecast, early warning and hospital admission rates for a number of climate-related infectious diseases (malaria, dengue, influenza, diarrhea and emerging diseases), non-communicable diseases (hypertension, cardiovascular disease (CVD), respiratory illnesses, COPD, child malnutrition) provinces and cities	A report on the pilot models and recommendations for replication	2019-2030	100	State budget with the integration of programs, projects, and assistance	GDPM	VIHEMA, EHA, Agency of Health Examination and Treatment, institutes, and universities

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
3.	Replicating the early forecasting and warning system for infectious and non-communicable diseases against climate change impacts	A nationwide early warning system for infectious and non-communicable diseases	2020-2030	100	State budget with the integration of programs, projects, and assistance	GDPM	VIHEMA, EHA, Agency of Health Examination and Treatment, institutes, and universities
4.	Strengthening the surveillance of epidemics and non-communicable diseases in vulnerable areas before against climate change impacts	Annual surveillance reports	2019-2030	50	State budget with the integration of programs, projects, and assistance	GDPM	VIHEMA, EHA, Agency of Health Examination and Treatment, institutes, and universities
IV	Developing and replicating effective community-based and regionally appropriate response models with priority given to the Mekong Delta area		2019-2025	270	State budget with the integration of programs, projects, and assistance		
1.	Developing and replicating effective community-based response models in areas suffering from storms, floods, and sea level rise	Model implementation reports	2019-2025	45	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, localities, and relevant agencies

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
2.	Developing and replicating effective community-based response models in areas suffering from droughts and salinity intrusion	Model implementation reports	2019-2030	45	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, localities, and relevant agencies
3.	Developing and replicating sanitation and clean water supply models which are adaptive to climate change	Model implementation reports	2019-2030	45	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, localities, and relevant agencies
4.	Coordinating to develop and replicate community-based response models to heat waves and cold weather.	Model implementation reports	2019-2030	45	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, localities, and relevant agencies
5.	Coordinating to develop and replicate medical organization models in order to meet people's health care and protection in island districts against the backdrop of climate change	Model implementation reports	2019-2030	45	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, localities, and relevant agencies

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
6.	Coordinating to develop and replicate adaptive injury and accident prevention models for particular affected areas	Model implementation reports	2019-2030	45	State budget with the integration of programs, projects, and assistance	VIHEMA	Institutes, universities, localities, and relevant agencies
V	Bolstering scientific research on climate change impacts on human health and response solutions for the health sector		2019-2030	510	State budget with the integration of programs, projects, and assistance		
1.	Studying and compiling Guidelines for vulnerability assessment and response solutions in the health sector against climate change impacts with a view to develop response action plans at provincial level	Appraised and approved guidelines for vulnerability assessment and adaptive capacity in the health sector against climate change impacts	2019-2030	60	State budget with the integration of programs, projects, and assistance	VIHEMA	ASTT, GDPM, Agency of Health Examination and Treatment, institutes, and universities
2.	Conducting research on technological solutions of clean and renewable energy use in health facilities	Appraised and approve research findings	2019-2030	75	State budget with the integration of programs, projects, and assistance	ASTT	VIHEMA, Agency of Health Examination and Treatment, DMEHW,

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
							institutes, and universities
3.	Conducting research on climate change impacts on the health care system	Reports on research findings	2019-2030	75	State budget with the integration of programs, projects, and assistance	ASTT	VIHEMA, GDPM, Agency of Health Examination and Treatment, institutes, and universities
4.	Conducting research on the assessment of climate impacts on non-communicable diseases	Reports on research findings	2019-2030	75	State budget with the integration of programs, projects, and assistance	ASTT	VIHEMA, GDPM, Agency of Health Examination and Treatment, institutes, and universities
5.	Conducting research on the assessment of climate impacts on infectious diseases	Reports on research findings	2019-2030	75	State budget with the integration of programs, projects, and assistance	ASTT	VIHEMA, GDPM, Agency of Health Examination and Treatment, institutes, and

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
							universities
6.	Conducting research on the assessment of current child malnutrition in particular affected areas	Reports on research findings	2019-2030	75	State budget with the integration of programs, projects, and assistance	ASTT	VIHEMA, GDPM, Agency of Health Examination and Treatment, institutes, and universities
7.	Conducting research on groups vulnerable to climate impacts (according to gender, minority ethnics groups, children, and women) in affected areas	Reports on research findings	2019-2030	75	State budget with the integration of programs, projects, and assistance	ASTT	VIHEMA, GDPM, Agency of Health Examination and Treatment, institutes, and universities
VI	Developing the health care system which is capable of meeting the demand to prevent epidemics and emerging diseases caused by climate change and the Mekong Delta area shall be prioritized.		2019-2030	138	State budget with the integration of programs, projects, and		

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
					assistance		
1.	Reviewing and planning the medical examination and treatment facility network against the backdrop of climate change to ensure patient accommodation and treatment ability	Planning the medical examination and treatment facility network of good adaptive capacity	2019-2025	3	State budget with the integration of programs, projects, and assistance	Agency of Health Examination and Treatment	VIHEMA, GDPM, DMEHW, institutes, and hospitals
2.	Investing in upgrading district- and commune-level health facilities to accommodate adaptive medical examination and treatment	Report on investment portfolios and results in districts and communes vulnerable to climate change	2019-2030	100	State budget with the integration of programs, projects, and assistance	Agency of Health Examination and Treatment	VIHEMA, GDPM, DMEHW, institutes, and localities
3.	Increasing investment on medical equipment for adaptive health examination and treatment in health facilities	Reports on the number of invested medical equipment for adaptive health examination and treatment	2019-2030	35	State budget with the integration of programs, projects, and assistance	Department of Medical Equipment and Health Works	VIHEMA, GDPM, Agency of Health Examination and Treatment, institutes, and localities

NO.	Task	Final outcome	Implementation time	Projected budget *(VND billion)	Source of finance	Governing body	Coordination unit(s)
VII	Examining, supervising, performing preliminary and comprehensive review of the plan implementation		2019-2030	20	State budget with the integration of programs, projects, and assistance		
1.	Supervising the implementation of central- and local-level plans and activities based on their goals	Reports on central and local supervision sessions	2019-2030	15	State budget with the integration of programs, projects, and assistance	VIHEMA	
2.	Writing annual summary reports, a mid-term report in 2022, and a summary report of the entire plan in 2030	Annual reports, 2022 mid-term report, and 2030 summary report	2019-2030	3	State budget with the integration of programs, projects, and assistance	VIHEMA	
3.	Finishing a summary report on fund mobilization at central and local levels, climate change integration programs and projects	A summary report	2019-2030	2	State budget with the integration of programs, projects, and assistance	VIHEMA	
- *Notes: Central source of finance. Local budget estimation is performed in accordance with the plans approved by the People's Committees.							

APPENDIX 2.

LIST OF CLIMATE CHANGE INTEGRATION STRATEGIES/PROGRAMS/PLANS

NO.	List of strategies/programs/plans	Release year	Governing body
I.	List of completed strategies/programs/plans		
1.	The 2012-2015 Vietnam National Patriotic Hygiene and People's Health Improvement Plan	2012	VIHEMA
2.	The national program on rural clean water and environmental sanitation in the 2011-2015 period (the Sanitation component)	2012	VIHEMA
II.	List of ongoing strategies/programs/plans		
1.	The 2017-2020 Vietnam National Patriotic Hygiene and People's Health Improvement Plan	Plan No. 1254/KH-BYT dated November 22, 2017	VIHEMA
2.	The Plan to Practise Green-Clean-Beautiful Health Facilities	Decision No. 3638/QD-BYT dated July 15, 2016	VIHEMA
3.	Joint circular stipulating regulations on biomedical waste	Joint Circular No. 58/2015/TTLT-BYT-BTNMT dated December 31st, 2015, stipulating regulations on biomedical waste management	
4.	Malaria Prevention Action Plan for 2015-2020	Decision No. 4717/QD-BYT dated November 11, 2014	GDPM
5.	The Integrated event-based surveillance plan for dengue fever, disease caused by Zika and Chikungunya viruses in Viet Nam for the period 2017-2020	Decision No. 4607/QD-BYT dated October 11, 2017	GDPM

NO.	List of strategies/programs/plans	Release year	Governing body
6.	The National Nutrition Action Plan until 2020	Decision No. 718/QD-BYT dated January 29, 2018	GDPM
7.	The National Action Plan for Maternal, Neonatal and Child Health Care for the period 2016-2020	Decision No. 4177/QD-BYT dated August 13, 2016	Department of Maternal Health and Children
8.	The Plan for Citizens' Health Protection, Improvement, and Care for the 2016-2020 period	Plan No. 139/QD-BYT dated March 1, 2016	Planning and Finance Department
9.	The Action Plan in Response to Natural Disasters of the Health Sector for the period 2015–2020	Decision No. 646/QD-BYT dated February 13, 2015	Office of the Minister of Health
III.	List of strategies/programs/plans to be implemented		
1.	The Plan on the Health Examination and Treatment Network	To be promulgated in 2020	Agency of Health Examination and Treatment
2.	The Plan to Improve Environmental and Individual Sanitation in the Mekong Delta region	2019-2020	VIHEMA
3.	The Epidemic Prevention Plan	2019-2020	GDPM