



## **WHO SUBMISSION ON GUIDELINES FOR THE FORMULATION OF NATIONAL ADAPTATION PLANS**

**12 February 2013**

The World Health Organization welcomes the opportunity to provide the UNFCCC with information on the experiences with the application of the guidelines for the national adaptation plan process for least developed countries.

### **Adaptation of the LEG guidance to the health sector needs**

Recalling WHO's submission on national adaptation plans<sup>1</sup>, from 13 February 2012, WHO takes this opportunity to update on latest developments on support to countries in the implementation of the health national adaptation plan process (HNAP) within the overall framework of the national adaptation plan (NAP).

As part of its programmatic and financial support to national adaptation planning, WHO reviewed the LEG technical guidelines for the NAP process<sup>2</sup>, and adapted them to the needs of the health adaptation process at national level.

A first draft of the above mentioned guidance was field tested in the first inter country workshop for the preparation of national plans of action for public health adaptation to climate change in Southern and Eastern Africa, which was held in Windhoek, Namibia, from 17 to 19 December 2012. Representatives from Ministries of Health and Ministries of Environment from 10 countries attended the workshop (Namibia, Lesotho, South Africa, Zimbabwe, Uganda, Botswana, Kenya, Zambia, Malawi, and Swaziland). Participating countries provided valuable inputs to further elaborate the guidance and, as a key outcome of the meeting, they came up with draft health national adaptation plans. Delegates agreed that they will organize meetings at their respective countries with all relevant stakeholders, in order to raise awareness on the links between climate change and human health and also to agree on actions to be taken by governments to strengthen resilience of communities with regards to climate change. WHO expressed its continued commitment to provide technical assistance to participating countries so that they can finalize their plans and initiate implementation in the shortest possible period of time.

It is expected that similar inter country workshops will be conducted in all African countries and Least Developed Countries during the 2013, 2014 period.

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<sup>1</sup> WHO submission on National Adaptation Plans

<http://unfccc.int/home/items/6078.php?q=WHO+submission&cx=009772925632828311246%3Agjvsnghto1u&ie=UTF-8&sa=>

<sup>2</sup> Least Developed Countries. National Adaptation Plans. Technical guidelines. LDC Expert Group, December 2012  
[http://unfccc.int/adaptation/cancun\\_adaptation\\_framework/national\\_adaptation\\_plans/items/6057.php](http://unfccc.int/adaptation/cancun_adaptation_framework/national_adaptation_plans/items/6057.php)

WHO draft guidance to support the implementation of the Health National Adaptation Process (HNAP) is attached for reference. The annex includes a proposed template to support countries in the identification of available resources and identified gaps to ensure public health adaptation to climate change. This annex constitutes the adaptation of the WHO overall guidance to the African process, specifically to the Plan of Action for Public Health Adaptation to Climate Change to minimize the adverse public health effects of climate change in Africa, which was developed by WHO and UNEP in response to the UNFCCC process, and to specific calls from the Ministers, the African Union Commission and the African Development Bank, to provide technical assistance to countries for implementation, and to facilitate access by African countries to existing climate funds, to protect health from climate change. The plan was endorsed by the Ministers of health, and Ministers of environment of Africa<sup>3</sup>. Annex II includes a table summarizing available resources to support countries throughout the different steps of the adaptation planning process.

### **Ongoing support to national health adaptation planning:**

In addition to the above mentioned guidance, WHO keeps on supporting the national adaptation planning through the following activities:

- 1) Awareness raising and guidance to support greater health sector engagement in climate-change adaptation programming at national, regional and global level.
- 2) Technical and policy support for vulnerability and adaptation assessment based on newly-revised guidance produced by WHO and the Pan-American Health Organization, following consultation with health and environment practitioners.
- 3) Integration of adaptation measures within a comprehensive approach to strengthening health systems to protect populations from the impacts of climate change.
- 4) Sharing of lessons learned and technical resources from the range of WHO pilot projects on health adaptation to climate change, through the Nairobi Work Programme and other UNFCCC mechanisms, as appropriate.
- 5) Technical and policy support for new projects and programmes on health adaptation to climate change.
- 6) Technical support in developing national strategies and action plans

### **Steps forward**

WHO would like invite all the major stakeholders (LDCs, donors, LEG and UNFCCC representatives) to share views and ideas on the best way to implement/operationalize the WHO proposed HNAP within the framework of the national adaptation plan process.

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<sup>3</sup> Resolution AFR/RC61/R2 of the WHO Regional Committee for Africa, and Decision SS4/1 of the African Ministerial Conference on Environment, both adopted in September 2011

[http://www.afro.who.int/index.php?option=com\\_docman&task=doc\\_download&gid=6661](http://www.afro.who.int/index.php?option=com_docman&task=doc_download&gid=6661)

# WHO Guidance to support the implementation of the Health National Adaptation Process in Africa

DRAFT

12 December 2012

## Outline of the guidance:

- I. Overview of the NAP process and purpose of the guidance
- II. Health within the NAP process: the Health National Adaptation Process (HNAP)

- III. Principles of the health adaptation process
- IV. Elements and steps of the health adaptation process
  - A. Laying the groundwork and addressing gaps in adaptation capacity
    - 1.1. Initiating and launching the HNAP process: institutional arrangements
    - 2.1. Stocktaking: assessment of available information on CCH and identification of gaps
    - 3.1. Identification of links between national development and health needs and strategies and health adaptation to climate change
  - B. Preparatory elements
    - 1.1. Health vulnerability and adaptation assessment, including short-, medium- and long-term health adaptation needs
    - 2.1. Development of National Strategy on Health Adaptation to climate change and Health National Adaptation Plan (HNAP)
  - C. Implementation strategies
    - 1.1. Implementation of concrete health adaptation measures: policies, projects and programmes
  - D. Reporting, monitoring and review
    - 1.1. Monitoring and evaluation of the implementation of the HNAP
    - 2.1. Periodic reporting on progress made and effectiveness of the health adaptation process

## **Annexes**

Annex I: Template for the development of a health adaptation plan

Annex II: Available tools and resources to support countries during the implementation of the health adaptation process (HNAP)

## **List of acronyms**

CC – Climate change

CCC – Country Coordination Committees

CCH – Climate change and health

COP – Conference of the Parties

GCF - Green Climate Fund

GFCS – Global Framework for Climate Services

HNAP – Health component of the National Adaptation Plan process

LEG – Least Developed Countries Expert Group

LDC – Least Developed Countries

LDCF – Least Developed Countries Fund

M&E – Monitoring and evaluation

NAP – National Adaptation Plans

NAPA – National Adaptation Programme of Action

UNDP – United Nations Development Programme

UNEP – United Nations Environment Programme

UNFCCC – United Framework Convention on Climate Change

VBD – vector-borne diseases

DRAFT

## I. Overview of the NAP process and purpose of the guidance

Sustainable development became a formal global process in 1992, when the three Rio Conventions (on biodiversity, climate change and desertification) were adopted in the Earth Summit.

The 1992 United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol, adopted in 1997, refers to the legal framework that maintains the international climate change process and agenda. Both legal instruments are serviced by the secretariat, also known as the Climate Change Secretariat or UNFCCC secretariat<sup>4</sup>. The Secretariat is accountable to the Conference of the Parties (COP) to the Convention, which meet annually to negotiate and further discuss the climate change international agenda and related commitments from countries.

Created under the global UNFCCC climate change agenda, the NAP process builds on the previous National Adaptation Programmes of Action process (NAPA), which was designed to support Least Developed Countries (LDCs) to identify priority actions to respond to their urgent and immediate adaptation needs as part of the LDC work programme, adopted by COP7, held in Marrakesh in 2001. Also in COP7, it was decided the establishment of a least developed country expert group (LEG), which was mandated to support LDC with their NAPA process. Since the NAPs process is intended to provide support for medium and long-term adaptation needs, the LEG is also supporting LDCs to properly plan their adaptation needs, by inter alia, developing NAP technical guidelines<sup>5</sup>.

Having the UNFCCC in general and the NAP process in particular as a framework, the present guidance aims to ensure that the health sector follows a systematic process to:

1. Engage in the overall NAP process at national level
2. Identify strategic goals for building health resilience to climate change in the case they haven't do it so far (e.g. through a National Health Adaptation Strategy)
3. Develop a plan with prioritized activities to achieve these goals, within a specific period of time and given available resources.

This guidance has been developed adapting the LEG technical guidelines for the NAP process to the needs of the health adaptation process. Although the guidance relates to the process to be followed by the health sector in order to ensure the above mentioned goals, a template on how to plan the health adaptation work at country level is also proposed, as a key output of such health adaptation process. The template is included in annex I and builds on the "Adaptation to climate change in Africa: Plan of Action for the Health Sector 2012-2016"<sup>6</sup>.

## II. Health within the NAP process: the HNAP

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<sup>4</sup> UNFCCC. The Secretariat [http://unfccc.int/secretariat/history\\_of\\_the\\_secretariat/items/1218.php](http://unfccc.int/secretariat/history_of_the_secretariat/items/1218.php)

<sup>5</sup> NAP technical guidelines [http://unfccc.int/cooperation\\_support/least\\_developed\\_countries\\_portal/items/7279.php](http://unfccc.int/cooperation_support/least_developed_countries_portal/items/7279.php)

<sup>6</sup> Adaptation to climate change in Africa: plan of action for the health sector 2012-2016.

As introduced in the overview, this guidance relates to the process that has to be put in place in order to ensure that health sector's response to the adverse health impacts of climate change is designed and implemented in a systematic and coordinated way with the overall NAP process.

An assessment of health considerations within NAPAs for climate change in least developed countries and small island states was conducted by WHO in 2010. The assessment concluded that 39 out of 41 (95%) NAPAs reviewed included health as a sector impacted negatively by climate change. 30/41 (73%) of these plans included health interventions within adaptation needs and proposed actions, and only 50 out of 459 (11%) selected priority projects focused on health<sup>7</sup>. Although health was recognized by countries as a priority sector for adaptation to climate change, approximately 4% of the Least Developed Countries Fund (LDCF) funds allocated to supporting the NAPA process targeted health adaptation<sup>8</sup>.

Potential explanations for the lack of support to the health sector include that the health community was largely absent from the NAPA process; the fact that the health sector was not submitting proposals; and the limited technical guidance provided to ensure that proposals on health adaptation were developed fulfilling minimum technical requirements.

Now that the NAP process is in place, and considering the fact that it builds in the previous NAPA process, from which the health sector was absent, it is critical to ensure that health is properly represented. Although in some cases the health sector is more advanced in analyzing and planning adaptation than the overall NAP process at national level, it is key to ensure that the health component feeds into the overall process at country level. This will ensure proper access to adaptation funds made available at national level from different adaptation funds such as the LDCF and the green climate fund (GCF). Furthermore, coordination will also ensure that the health sector maximizes synergies and promote health co-benefits across health determining sectors, such as energy, agriculture, housing and water.

For the purpose of this document, the HNAP is considered as the **health adaptation process** at national level, which includes as an output the development of a detailed **health adaptation plan**, as an organized programme of actions designed to achieve the national health adaptation goals, within a specific period of time and given available resources.

### III. Principles of the national health adaptation process

The HNAP process follows the same principles stated in the LEG guidance for the overall national adaptation plan process. These include:

- The HNAP is a country driven process and is to be owned by the countries.

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<sup>7</sup> Manga, L., Bagayoko, M., Meredith, T. and Neira, M., 2010. Overview of health considerations within National Adaptation Programmes of Action for climate change in least developed countries and small island states. [http://www.who.int/phe/Health\\_in\\_NAPAs\\_final.pdf](http://www.who.int/phe/Health_in_NAPAs_final.pdf)

<sup>8</sup> The Global Environment Facility (GEF). Least Developed Countries Fund. Financing the preparation and implementation of NAPAs in response to urgent and immediate adaptation needs. <http://www.thegef.org/gef/LDCF>

- Ensuring that health adaptation planning is based on evidence. Any adaptation plan will also aim at strengthening the development and availability of evidence, and build up the data and knowledge gaps, so to inform relevant policies.
- Building on/ taking into account existing national efforts on health adaptation to climate change, including assessments, policies and programmes developed or implemented from local to national levels.
- Integrating health adaptation to climate change into national health planning processes, strategies and existing monitoring systems.
- Providing for a flexible and context specific approach to health adaptation to climate change. National circumstances and available information and experience on health and climate change will determine the scope, institutional arrangements and resources required to properly implement the health component of the NAP.
- Maximizing synergies across sectors, mainly across the health determining ones. This relates also to monitoring systems and the need to develop health related indicators within their adaptation monitoring systems.
- Ensuring that the health adaptation plan feeds into and coordinates with the overall national adaptation process.
- Piloting approaches that promote an iterative process for health adaptation to climate change which produces time-bound plans.
- Promotion of inter country collaboration and harmonizing adaptation approaches at sub-regional level.

#### IV. Elements and steps of the health adaptation process

Four elements and a number of proposed steps under each of them are proposed for the health adaptation process. These follow the structure of the technical guidelines developed by the LDC Expert Group<sup>9</sup>, prepared to support least developed and developing countries to plan national adaptation.

Elements refer to laying the groundwork, preparatory elements, implementation strategies and reporting, monitoring and review, which could be broadly related to the phases of the project cycle (identification, formulation, implementation and monitoring and evaluation). A brief guidance for each of the proposed steps is included below.

##### A. Lay the Groundwork & Address Gaps in Adaptation Capacity

**Step 1. Initiating and launching the HNAP process:** Identification of institutional arrangements for coordination and leadership on health adaptation within the overall NAP process.

This first step is key to ensure coordination with the overall adaptation to climate change process at national level while promoting sustainability of health adaptation efforts. Supported by the LEG, the UNFCCC and other relevant partners (e.g. UNDP, UNEP, WHO, development agencies and NGOs) countries will start planning their mid- and long-term priorities to build resilience to climate change across all climate sensitive sectors.

Although the health sector specifically has already started to assess and plan its adaptation strategies in most contexts, the disconnect with the overall national process is to be avoided.

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<sup>9</sup> NAP technical guidelines [http://unfccc.int/cooperation\\_support/least\\_developed\\_countries\\_portal/items/7279.php](http://unfccc.int/cooperation_support/least_developed_countries_portal/items/7279.php)



Institutional arrangements for health adaptation to climate change have been put in place in most of the countries. These are determined by the regional and national processes and plans of actions and have to be properly strengthened to facilitate the sound implementation and sustainability of the health adaptation process. If we consider Africa as an example, the regional process has been jointly determined by Ministers of Environment and Health and is reflected in the 2008 Libreville Declaration on Health and Environment<sup>10</sup>, the 2010 African Ministers of Health and Environment Joint Statement on Climate Change and Health<sup>11</sup> and the recent “Adaptation to climate change in Africa: Plan of Action for the Health Sector 2012-2016”<sup>12</sup>. These key inter-ministerial steps facilitated the creation of relevant institutional arrangements, the Country Coordination Committees (CCC) as the mechanism with the mandate to promote health adaptation to climate change.

When strengthening institutional arrangement there are three components to be addressed, which correspond to the functional needs of climate change adaptation:

- **Mainstreaming** climate change adaptation into the national health planning process. The HNAP is envisaged as a process to be embedded within national health processes and programmes already in place rather than as an independent process. Climate variability and change will mainly impact t on the diseases and other public health conditions which are already affecting the country. In most cases, national public health programmes are already established to reduce the burden of such diseases and public health conditions (e.g. national malaria control programmes, maternal and child health programmes, nutrition, water and sanitation, etc...). Adaptation intervention and activities that would have been identified within the HNAP will subsequently have to be uptaken and implemented through the above various programmes. Every country will have to define its own specific process, through which such mainstreaming of climate change adaptation strategies and interventions within specific public health programmes will be undertaken. Therefore strategies and actions to build resilience through those public health programmes will have to be implemented by the respective operational levels.
- **Implementation** of health adaptation responses. Although responses may be designed by a concrete team of climate change and health experts, the responsibility for implementation will be shared throughout the different public health operational plans, and by the various teams at the local, regional and national levels.
- **Coordination** of the overall health adaptation process. Since there are different stakeholders of the health adaption plan, there will have to be a coordination entity to ensure that all adaptation work related to public health is done in accordance to the HNAP. Countries will have to define the nature of this entity within the Ministry of Health (e.g. establishment of a specific unit for this purpose, or designation of an existing unit). This coordination function will be defined and delivered on the basis of

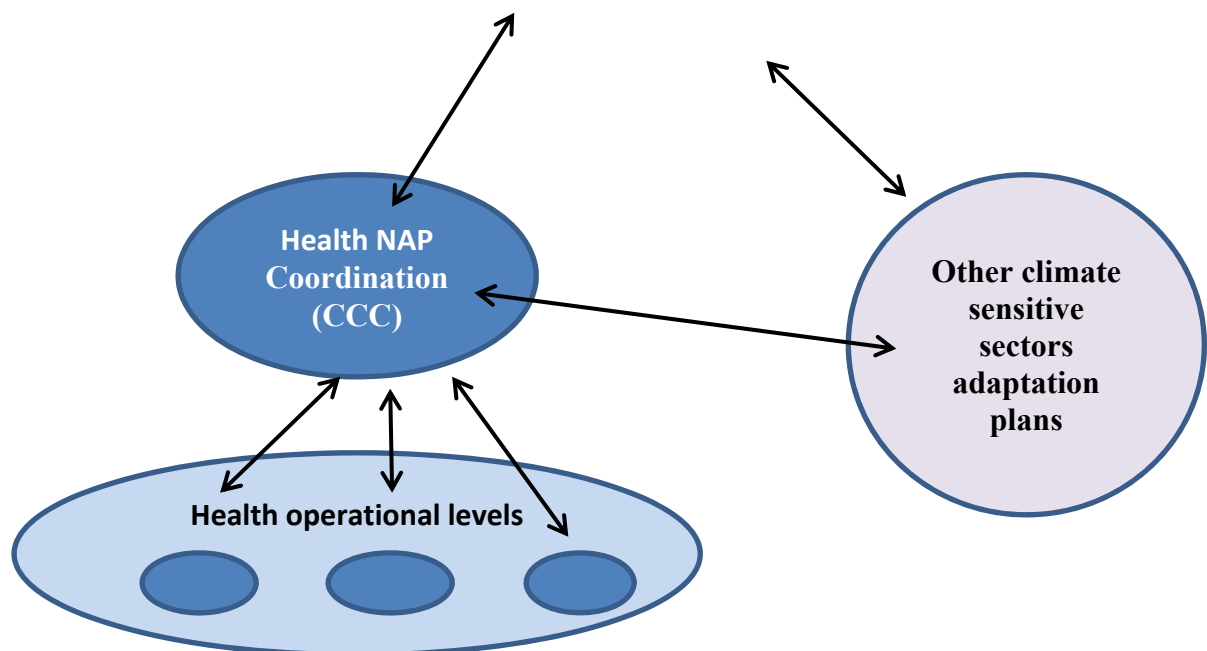
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<sup>10</sup> <http://www.afro.who.int/en/clusters-a-programmes/hpr/protection-of-the-human-environment/highlights/second-inter-ministerial-conference-on-health-and-environment-in-africa.html>

<sup>11</sup> <http://www.afro.who.int/en/clusters-a-programmes/hpr/protection-of-the-human-environment/highlights/second-inter-ministerial-conference-on-health-and-environment-in-africa.html>

<sup>12</sup> Adaptation to climate change in Africa: plan of action for the health sector 2012-2016.

each national context. However, Ministers of Health and Ministers of Environment have decided jointly to establish country coordination committees to support implementation of the Framework for Public health Adaptation to Climate Change in Africa. Every country will have to consider establishment or strengthening of such committees for the above purpose.



It is the responsibility of the health sector to effectively communicate and reflect its own institutional arrangements within the overall arrangements made to plan and implement adaptation to climate change at national level. Since it is expected that most of the LDCs will have access to adaptation funds through the NAP process, having health represented in the overall arrangements will facilitate the access to those funds by the health sector.

In order to raise the profile of health adaptation within the overall NAP process, it is recommended to conduct different awareness raising activities (e.g. briefings or presentations) on the health impacts of climate change targeting the representatives of the national institutional mechanism in charge of coordinating the overall NAP process. These include UNFCCC focal points, Ministries of Planning, Finance, Environment and health determining sectors.

**Step 2. Stock-taking:** Assessment and desk review of available information on health impacts, vulnerability and health adaptation measures undertaken to address climate variability and change, and identification of capacity gaps, at the national and regional levels to undertaking the HNAP process.

Resources to be used in order to undertake this desk review include National Communications (NCs), NAPAs, SANAs on the Libreville Declaration for African countries, vulnerability and adaptation assessments, pilot projects on health adaptation to climate change and any

additional relevant information developed by the health or other sectors. Information gathered with the desk review will be made available to relevant stakeholders through different methods. These may include making it available through the database that is expected to be created within the framework of the overall NAP process at country level.

The information gathered from the desk review will serve as a baseline to identify gaps and projected needs for assessment and capacity development, and therefore will facilitate the scope of further assessment that may be required. When designing capacity development areas of need, different areas of expertise within human resources should be considered (e.g. climate data analysis, epidemiology, surveillance and response).

This step will be concluded with a SWOT analysis that will guide the development of the national adaptation plan. Strengths, weaknesses, opportunities and barriers to health adaptation to climate change will have to be properly considered prior to the designing of the plan.

### **Step 3. Identification of links between climate change adaptation planning process and national health related development goals**

Health system strengthening (HSS) is a priority development objective for most countries, including all African ones. HSS may therefore be the main entry point for planning for health adaptation interventions. Health systems building blocks may be used as a framework to link climate change adaptation planning to national development goals (i.e. service delivery; health workforce; health information systems; access to essential medicines (includes infrastructure); financing; and leadership/ governance<sup>13</sup>).

Coordination with health determining sectors is also critical as a way to identify potential synergies and promote health co-benefits from their adaptation responses. An option to ensure this coordination is the inclusion of health indicators within the monitoring systems of those sectors. Further details on indicators will be made available under the WHO conceptual framework for indicators to support health-oriented climate change adaptation.

Since coordination and engagement are key to ensure success and sustainability of health adaptation options, relevant activities have to be properly planned and budgeted.

## **B. HNAP Preparatory elements**

### **Step 4. Health vulnerability and adaptation assessment, including short-, medium- and long-term health adaptation needs**

Building on available information and knowledge gaps as identified under the stock-taking phase, this step refers to the comprehensive assessment of vulnerabilities, impacts and adaptation options. It may not always be possible to conduct a full vulnerability assessment prior to the development of the national adaptation plan. In this case, vulnerability assessment will be one of the main activities to be included in the plan.

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<sup>13</sup> WHO. Monitoring the building blocks of health systems. A handbook of indicators and their measurement strategies. WHO, Geneva, 2010.

Most of the countries have conducted some form of vulnerability and adaptation assessment but just some of them were comprehensive. Differences are also evident across regions. For example the Pacific island countries were supported by WHO to conduct V&As and plans while most of the African countries have started to conduct their SANAs, which represent an initial assessment on vulnerability to climate change. In some cases countries built their national strategies on the data gathered through the V&A assessment, while others didn't have the capacity and resources required to conduct a comprehensive assessment and therefore built their strategies on initial evidence.

The scope of the assessment will be determined by national circumstances and should include relevant stakeholders. Given the technical nature of this assessment, involved stakeholders may differ from the ones involved in the overall NAP process. These could include national research institutions, public health organizations and universities and NGOs.

Some of the categories included in the assessment may include the following health risks: vector-borne diseases (VBD); Nutrition and food-borne diseases; Water-borne diseases; Air-borne and respiratory diseases; Occupational health; Extreme weather events (e.g. extreme temperatures, droughts, floods). Cross-cutting issues to be considered include: environmental determinants of health (e.g. different geographical settings (e.g. urban, rural)); gender (and equity) and other social determinants of health; and health systems resilience. This category should be analyzed considering the six pillars of health systems mentioned above.

While the vulnerability assessment relates to the assessment of current burden of climate-sensitive diseases and therefore to the establishment of baseline conditions, the impact assessment refers to the projection of future health risks and impacts under climate variability and change scenarios. Lastly, the adaptation assessment aims to identifying and prioritizing adaptation policies and programmes to address current and projected health risks.

Countries should define which process to follow in order to conduct this assessment. Different available tools are included in Annex II. In the African region, it is important to highlight the Informal consultation on public health vulnerabilities of African countries to Climate Change, which was held in Addis Ababa in July 2012. In that meeting a set of steps for the process of analyzing historical trends and variations of climate factors, improvements in health systems and relevant epidemiological indices was proposed. The summary report of that meeting is also included in Annex II.

Data and information gathered with the vulnerability and impact assessments will inform the design of appropriate responses under each of the above mentioned categories. Categories are illustrative rather than exhaustive. Countries will decide if all categories of health risks are relevant in their specific contexts and will reflect their priority areas of intervention within the plan (in terms of allocation of resources and time frame).

Assessment is an iterative process rather than a stand-alone activity and has to be properly reflected in the health adaptation plan. This iterative process will allow making adjustments needed to effectively build resilience of the health systems.

### **Step 5. Development of National Strategy on Health Adaptation to climate change and Health National Adaptation Plans (HNAP)**

Under this step the need to develop a National strategy has been merged with the development of the national adaptation plan. Countries will decide based on their own context and needs, the process they will follow to come up with the proposed strategy and plan to minimize the adverse health impacts of climate change by building resilience of the health system. This guidance has been designed assuming that countries vary in the amount of work undertaken on climate change and health.

African governments have approved a framework for public health adaptation to climate change. The framework is the basis for formulating the strategy on health adaptation and national plan.

Using the country institutional mechanism for climate change, the national stakeholder will move on to consider the framework for public health adaptation and adapt it to the national context. Similarly African countries have approved a health sector plan of action for health adaptation to climate change, which will also be adapted to the national context by relevant stakeholders.

Although Annex I includes a template for HNAP, each country will decide which format to follow to plan their health adaptation work.

### **C. Implementation strategies**

#### **Step 6. Implementation of policies, strategies, and plans .**

Once the plan has been designed, in- country implementation mechanisms have to be designed. These may include:

1. Dissemination of the plan to key stakeholders.
2. Development of financing options and inclusion of the health NAP in the national financing instruments.
3. Definition of steps to ensure that actions included in the health NAP will be uptaken in specific public health operational plans. This requires the involvement of relevant operational levels.
4. Definition of feedback mechanisms from operational to national levels and back.

The above guidance will be further developed in consultation with countries.

### **D. Reporting Monitoring and Review**

#### **Step 7. Monitoring and evaluation of the implementation of HNAP**

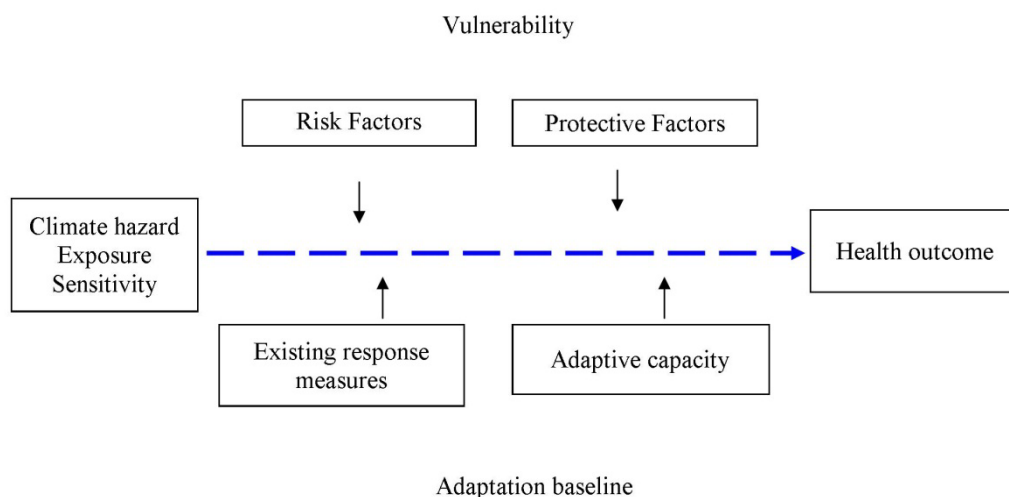
The HNAP process aims to strengthening national health information systems while aligning global monitoring and reporting systems on health impacts of climate variability and change across countries.

When designing the monitoring and evaluation system for health adaptation to climate variability and change at national level, it is key to ensure that both the implementation of the HNAP process and related programmes and projects, and the outcomes and impacts of such interventions are considered. These considerations will determine what is to be monitored and how, implying that a set of climate sensitive disease related -and programme-specific indicators will be designed. Data sources will also be included within the M&E framework. Although quantitative measures and indicators are prioritized for health impacts, the use of qualitative methodologies is also strongly recommended to capture social dimensions such as gender, and also perceptions related to vulnerability and adaptive capacity.

The monitoring related to the implementation of the HNAP process and related responses (programmes, projects or policies), will be structured around the components included in the proposed template for health adaptation plan and in the programme document respectively, and will allow the introduction of corrective measures if needed. Regular progress on the implementation of the HNAP process should use plan or programme output and outcome indicators and it's recommended to clearly define within the M&E framework concrete milestones for monitoring and evaluation of the HNAP and related programmes. Annual, mid-term and final review of the implementation of the NAP and programmes should be considered as least.

When designing the relevant M&E framework at national level, it is key to properly design the measures and indicators that will allow the measurement of health vulnerability and impacts of climate change. Monitoring health outcomes provides the opportunity to assess whether the coping and adaptation measures instated are effective in terms of reducing the climate-sensitive health burden. Monitoring climate-sensitive diseases provides health outcome data essential to evaluating whether adaptation policies, programmes and measures are effective. Health outcome data should be at least age and sex-disaggregated in order to inform about which are the high-risk population subgroups and to facilitate the designing of tailored interventions. Other disaggregation may be appropriate depending on the contexts. Analysis of indicators profiles (including roles, methods, definitions and scale of application) will be included under WHO conceptual framework for indicators mentioned above.

To understand the health impacts posed by climate change, it is needed to analyze and consider the diverse pathways by which climate variability and change affect health and the different factors that will determine the vulnerability to those impacts. In order to properly monitor impacts and vulnerability, information on different factors and variables will have to be collected. Figure 1 represents the pathway by which climate change will be translated into adverse health impacts.



While mainly disease related indicators will be used to measure the impact of the HNAP and related programmes, a wide range of information and data will have to be collected to allow the creation of a sound baseline of existing conditions. Baselines will allow for the future monitoring of change and will inform the designing of adaptations. Essential baselines for monitoring the health impacts of climate change include those that will determine different degrees of vulnerability and may be related to health (e.g. priority climate-sensitive diseases), environment (e.g. climatic variables), social (e.g. poverty and demographics), economic (e.g. occupation) and current level of interventions and health systems capacity. Available detailed guidance on how to assess vulnerability in general, and for specific climate-sensitive diseases is included in Annex II.

Following the proposed structure to analyze health vulnerability and impacts, a set of examples of indicators is proposed below. Most of them relate to outcome, while mortality and morbidity indicators for those diseases will reflect the impact of the implementation of the HNAP or related programmes.

#### **Vector-borne disease**

-Use of seasonal climate forecasts (MEWS) to predict malaria epidemics.

#### **Food safety and food-borne disease**

-Existence of early warning of climate services on reduced rainfall and emerging food safety crisis situations

#### **Water-borne disease and access to safe drinking water**

-Use of improved drinking water sources (climate resilient) and use of improved sanitation facilities

-Existence of comprehensive information system for adequate planning and targeted resource use (e.g. Global Information Management System on Health and Environment GIMS)<sup>14</sup>.

#### **Air-borne and respiratory disease**

-% of households using solid fuels.

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<sup>14</sup> Atlas of Health and Climate. WHO-WMO, Geneva, 2012.

-Respiratory/Allergic disease and mortality related to increased air pollution and pollens.

### **Occupational health risks**

-% of heat alerts and/or EWS to minimize heat vulnerability in working environments.

### **Extreme weather events (e.g. extreme temperatures, droughts, floods)**

-Percentage of districts/provinces with heat-health action plans implemented.

- Existence of flood or drought warning systems and response plans

-% of municipal heat island mitigation plans

-Existence of climate sensitive emergency preparedness measures/plans

### Cross-cutting issues to be considered:

**Environmental determinants of health** (e.g. different geographical settings (e.g. urban, rural) and housing)

**Gender, equity and other social determinants of health**

**Resilience of health systems** (e.g. availability and accessibility to health services, climate resilient and health promoting strategies in place in health care facilities, new climate-resilient hospitals built, or built in areas that are not prone to flooding by using climate information/services)<sup>15</sup>.

In addition to monitoring, ex-post evaluation of the implementation of the HNAP and related programmes is highly recommended. This evaluation should provide information on five main criteria, namely relevance, effectiveness, efficiency, sustainability and impact of the HNAP or proposed adaptation responses.

The HNAP process aims to ensuring that climate sensitive health related indicators are properly integrated within the national health information system. Furthermore, it should also facilitate and promote the inclusion of health related indicators within the climate change adaptation monitoring systems of health determining sectors.

### **Step 8. Periodic reporting on progress made and effectiveness of the health adaptation process**

To effectively integrate the health adaptation process within the overall NAP process, it is critical to periodically communicate and report to different stakeholders on the progress made on implementing the HNAP and related programmes. Stakeholders include representatives of the management unit of the overall NAP at national level, the LEG and UNFCCC.

It is expected that the NAP process will clearly define the reporting requirements as well as the timeframe to do so. Reporting requirements established under the relevant climate change processes should be aligned with those in place for health data generation, compilation, analysis, synthesis, communication and use for decision making<sup>16</sup>.

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<sup>15</sup> Atlas of Health and Climate. WHO-WMO, Geneva, 2012.

<sup>16</sup> Monitoring, evaluation and review of national health strategies. WHO and IHP, Geneva, 2011.



In addition to reporting to the overall national adaptation process, it is recommended to also report on progress made on health adaptation relevant reporting processes put in place at global level under the UNFCCC mechanisms, such as through the National Communications (NCs).

As briefly introduced in the previous section, the HNAP process aims to strengthening global, regional and national health information and reporting systems. Basic standards for reporting on health adaptation at national level should be compatible among regions and countries so to allow a global monitoring.

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## Annex I: Available tools and resources to support countries during the implementation of the health adaptation process (HNAP)

The following table summarizes the main information to be included in the guideline. A brief description and guidance will be provided for each of the steps and information on available tools and resources will be provided. The guidance will also facilitate the identification of gaps on support tools.

Stage (decision 5/CP.17)	Steps	Available tools and resources
<b>A. Lay the Groundwork &amp; Address Gaps in Adaptation Capacity</b>	1. Initiating and launching the HNAP process: Identification of <b>institutional arrangements</b> for overall coordination and leadership on health adaptation within the overall NAP process.	<ul style="list-style-type: none"> <li>• WHO/ EURO stakeholder engagement tool</li> <li>• Examples from countries with different institutional arrangements:</li> <li>• Steering Committee on Climate Change and Health - e.g. GEF pilot projects and Macedonia</li> <li>• Designation of National Focal Points on CCH at Ministry of Health – e.g. African Countries under the Framework of the Libreville Declaration and the Country Coordination Committees (CCCs)</li> </ul>
	2. Stock-taking: Assessment of <b>available information</b> on health impacts, vulnerability and health adaptation measures taken to address climate variability and change, and <b>identification of gaps</b> and needs, at the national and regional levels	<ul style="list-style-type: none"> <li>• Available examples of V&amp;A (e.g. Bhutan &amp; Malta)</li> <li>• Available examples of National Strategies and Plans of Action on CCH</li> <li>• Overview of health considerations within National Adaptation Programmes of Action for climate change in least developed countries and small island states</li> </ul>
	3. Identification of links between national health related development goals and needs and climate vulnerabilities	
<b>B. NAP Preparatory elements</b>	<b>4. Health vulnerability and adaptation assessment</b> <ul style="list-style-type: none"> <li>• Frame and scope the assessment (including stakeholder &amp; communication plan)</li> <li>• Vulnerability assessment: Assess current burden of climate-sensitive diseases and establish baseline conditions</li> <li>• Impact assessment: project future health risks and impacts under climate variability and change</li> <li>• Adaptation assessment: identify and prioritize policies and programmes to address current and projected health risks</li> <li>• Establishment of iterative process for managing and monitoring the health risks of climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Health Vulnerability and adaptation assessment guidance</li> <li>• Process to be used for historical analysis of trends and variations of climate factors, improvements in health systems and relevant epidemiological indices. Process to be used for historical analysis of trends and variations of climate factors, improvements in health systems and relevant epidemiological indices. Summary report Informal consultation on public health vulnerabilities of African countries to climate change. Addis Ababa, July 2012.</li> <li>• Vulnerability Risk assessment mapping (VRAM)</li> <li>• Methods of assessing human health vulnerability and public health adaptation to climate change, 2003.</li> <li>• Examples of V&amp;A (e.g. Bhutan &amp; Malta)</li> <li>• Health damage and adaptation costs tool</li> <li>• Climate change and human health: impact and adaptation. 2000</li> </ul>
	5. Development of <b>National Strategy</b> on Health Adaptation to climate change and/ or <b>Health National Adaptation Plan (HNAP)</b> .	<ul style="list-style-type: none"> <li>• Template for the development of a National Adaptation Plan in Africa <a href="http://www.who.int/globalchange/resources/en/">http://www.who.int/globalchange/resources/en/</a></li> <li>• Country experiences and examples of National Strategies on Health</li> </ul>

		<p>and CC: e.g. Jordan, Morocco, Macedonia</p> <ul style="list-style-type: none"> <li>• WHO Resolution and work plan on CCH</li> <li>• WHO Regional Office for Africa Framework for Public Health Adaptation to climate change in the African Region</li> <li>• Situation Analysis and Needs Assessment (SANA) on the Libreville Declaration on Health and Environment</li> <li>• PAHO/ WHO Regional office for the Americas Strategy and Plan of Action on Climate Change</li> <li>• WHO Regional Office for Europe Resolution on Environment and Health and European Regional Framework for action on protecting health in an environment challenged by climate change</li> <li>• Regional Committee for South-East Asia Resolution SEAR/RC62/R2 on Climate Change and Human Health</li> <li>• WHO Regional Office for South-East Asia Regional Strategy for Protecting Health from Climate Change</li> <li>• Regional Committee for the Eastern Mediterranean Resolution on climate change and health</li> <li>• Available examples of National Plan of Action on CCH (e.g. Macedonia and Jordan)</li> </ul>
<p><b>C. Implementation strategies</b></p> <p>&lt;integrated at the national level&gt;</p>		<ul style="list-style-type: none"> <li>• Guidance on Early Warning and Response Systems (under development)</li> <li>• Using climate to predict infectious disease epidemics</li> <li>• Climate change and human health</li> <li>• Heat waves, floods and the health impacts of climate change: a prototype training workshop for city officials</li> <li>• Protecting health from climate change: connecting science, policy and people</li> <li>• Climate change: quantifying the health impact at national and local levels</li> <li>• Climate change and human health: risks and responses</li> <li>• Introduction and methods: assessing the environmental burden of disease at national and local levels</li> <li>• Gender, climate change and health</li> <li>• Climate and health guides for teachers &amp; students</li> <li>• Climate change and human health: impact and adaptation. 2000</li> <li>• Training course for public health professionals on protecting health from climate change</li> </ul>
<p><b>D. Reporting Monitoring and Review</b></p>	<p><b>7. Monitoring and evaluation</b> of the implementation of HNAP</p> <ul style="list-style-type: none"> <li>• Set up/ strengthen monitoring system on health vulnerability and health system resilience to climate variability and change</li> </ul>	<ul style="list-style-type: none"> <li>• Indicators framework for climate change and health (under development)</li> </ul>

	<ul style="list-style-type: none"> <li>• Inclusion of health indicators within health determining sectors' national monitoring systems (e.g. water, food, air, energy)</li> <li>• Inclusion of indicators on climate vulnerability and health system resilience within national health monitoring systems</li> <li>• Monitoring the HNAP process</li> <li>• Review the HNAP process to assess progress, effectiveness and gaps</li> <li>• Iteratively updating the HNAP</li> </ul>	
	<p><b>8. Periodic reporting</b> on progress made and effectiveness of the HNAP to:</p> <ul style="list-style-type: none"> <li>• National NAP process</li> <li>• the LEG and UNFCCC through relevant reporting processes such as National Communications (NCs)</li> </ul>	<ul style="list-style-type: none"> <li>• UNFCCC Guidelines for preparation of national communications from non-Annex I Parties</li> </ul>