United Nations Framework Convention on Climate Change

UNFCCC

OVERVIEW OF THE SUBMISSIONS BY PARTIES, NWP PARTNERS AND OTHER RELEVANT ORGANIZATIONS ON

CLIMATE IMPACTS ON HUMAN HEALTH

A background note for the 10th Focal Point Forum of the Nairobi work programme (NWP) on Health and Adaptation

November 9, 2016 – Marrakech, Morocco

1. INTRODUCTION

The 10th Focal Point Forum of the NWP will focus on the topic of health and adaptation, and will be held on 9 November 2016 in conjunction with SBSTA 45 in Marrakech, Morocco. [1]

For informing the focal point forum, the Subsidiary Body for Scientific and Technological Advice (SBSTA), at its 44th session (May 2016), invited submissions from Parties, NWP partners and relevant organizations on recent work in the area of climate impacts on human health, including:

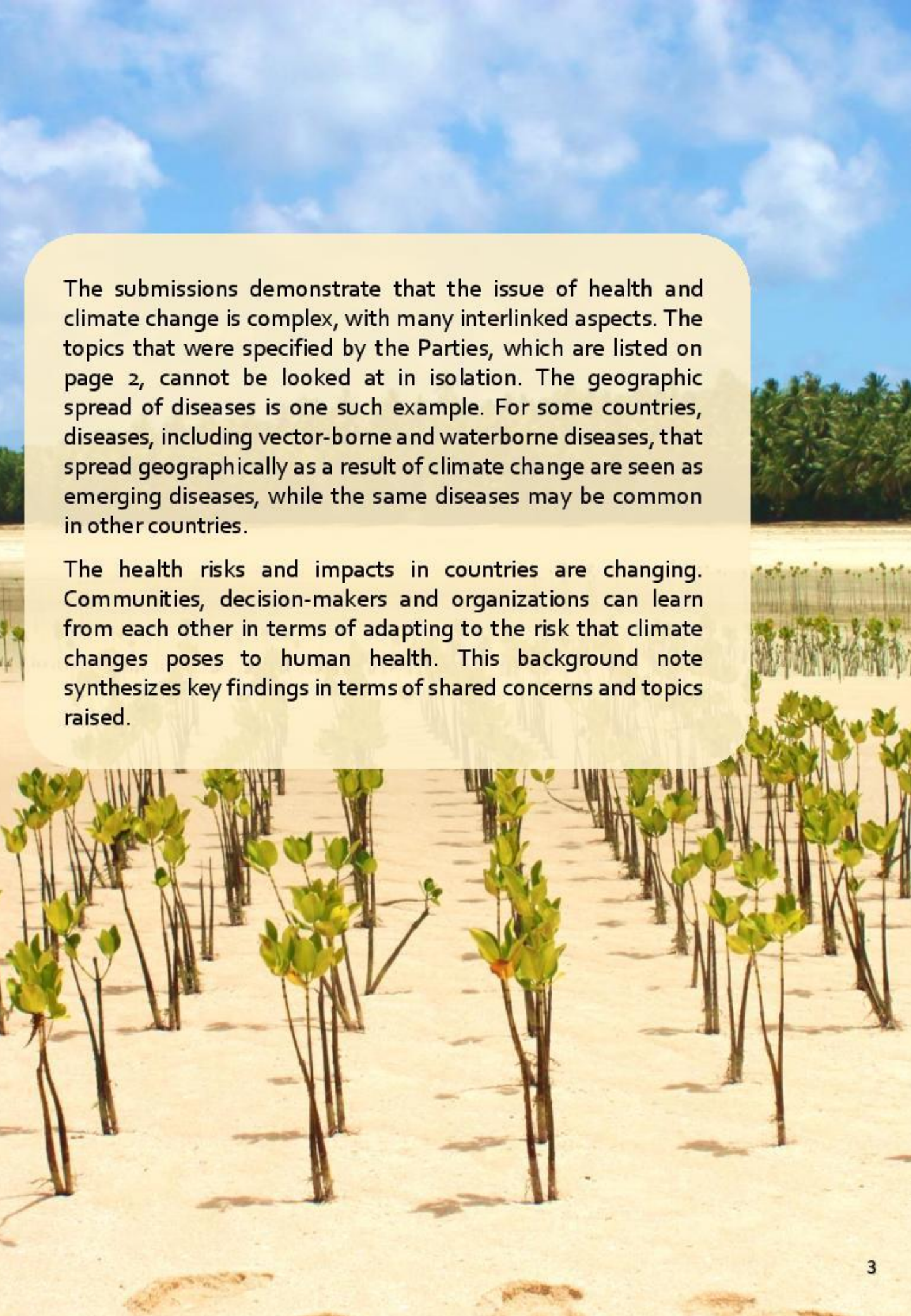
- Changes in the geographical distribution of diseases;
- New and emerging health issues, including tropical diseases and their impacts on social and economic structures;
- The issues of malnutrition, waterborne diseases, vector-borne diseases and disaster impacts; and
- The effects of climate change on health and productivity in the workplace, with implications for occupational health, safety and social protection.

As at 3 November 2016, a total of 26 submissions had been received. Of those, 14 submissions were made by Parties and one by a group of Parties, and 11 submissions were made by organizations. 8 of the latter are NWP partner organizations. [2]

The outcomes of the 10th Focal Point Forum and the information contained in submissions relating to health and adaptation will be captured in a synthesis report for consideration at SBSTA 46 (May 2017).

[1] Further details of the 10th Focal Point Forum are available at <http://unfccc.int/9926.php>.

[2] Submissions from Parties are available at <http://www4.unfccc.int/submissions/SitePages/sessions.aspx?showOnlyCurrentCalls=1&populateData=1&expectedsubmissionfrom=Parties&focalBodies=SBSTA> and submissions from NWP partner organizations and other relevant organizations are available at <http://unfccc.int/7482>.



The submissions demonstrate that the issue of health and climate change is complex, with many interlinked aspects. The topics that were specified by the Parties, which are listed on page 2, cannot be looked at in isolation. The geographic spread of diseases is one such example. For some countries, diseases, including vector-borne and waterborne diseases, that spread geographically as a result of climate change are seen as emerging diseases, while the same diseases may be common in other countries.

The health risks and impacts in countries are changing. Communities, decision-makers and organizations can learn from each other in terms of adapting to the risk that climate changes poses to human health. This background note synthesizes key findings in terms of shared concerns and topics raised.

2. KEY FINDINGS OF THE SUBMISSIONS

2.1 CLIMATE CHANGE IMPACTS ON HEALTH: THE CHANGING GEOGRAPHICAL DISTRIBUTION OF DISEASES, AND OTHER NEW AND EMERGING HEALTH ISSUES

The impacts of climate change on health are already occurring, and will become increasingly prevalent. According to the submission made by the World Health Organization (WHO), climate change lengthens the transmission season and expands the geographic range of many diseases. Many of the submissions refer to such phenomena, for example diseases moving northwards in the Northern Hemisphere due to rising temperatures and changing rainfall patterns; or appearing in tropical areas that are subject to devastating extreme events. There is also one reference to the potential regional extinctions of some existing diseases as a result of changing climatic zones.

The **emerging nature of diseases** is the focus in the majority of the submissions.

The emerging **vector-borne** diseases that are mentioned most frequently in submissions from countries in Asia, Africa and Latin America include those spread by mosquitos, particularly malaria but also dengue, West Nile fever, chikungunya, Ross River virus and the Zika virus. There was also mention of a predicted increase in leishmaniosis, carried by sand-flies.

Numerous submissions, including from Europe and the Russian Federation, also mention diseases spread by ticks, particularly Lyme disease, but also tick-born encephalitis, tularaemia and babesiosis. There is also a concern about malaria in Europe, as the disease will spread geographically.

In relation to **waterborne diseases,** the main concern from both developed and developing countries was on the increase, and geographic spread, of diarrheal diseases. Submissions refer specifically to gastroenteritis, and to other waterborne diseases like cholera, typhoid, and dysentery.

There was a strong link between water and vector-borne diseases, given that many vectors live and/or breed in stagnant water, e.g. mosquitos (malaria etc.) and snails (bilharzia, schistosomiasis etc.).

Other emerging diseases mentioned in submissions include meningitis, respiratory diseases (different types of influenza), zoonotic diseases (like foot and mouth disease, avian influenza), food-borne diseases (including Salmonella), bacterial diseases and chronic diseases (like cardiovascular disease and asthma). The effects of climate change on allergies was also noted. In addition, health issues that are not linked to diseases were mentioned and attributed to the impacts of climate change, including mental illness, post-traumatic stress, injuries, and bacterial infections.

It was noted that the socio-economic cost of emerging diseases, as a result of climate change, is considerable. Certain groups are more highly impacted by climate-sensitive diseases, including women, children and the elderly. As one example, pregnant women are more vulnerable to Zika. As another example, according to the WHO, the spread of disease due to climate change will result in 48,000 additional deaths from diarrhea for children under 15 years and 60,000 from malaria by 2030.

Malnutrition was highlighted as a concern from a number of developing countries in Africa, Asia and Latin America, which discussed the impacts of climate change on food security, particularly in relation to floods and drought. Disaster-impacts on food systems and the crises wrought thereby were a major concern.

According to the submission made by the Office of the United Nations High Commissioner for Human Rights, malnutrition could lead to 3 million additional deaths per year globally. The global impact is highlighted in another submission: climate change can push up global food prices, leading to the exacerbation of malnutrition in both developed and developing countries.

In terms of **disaster impacts**, in developing countries, flooding emerged as one of the main concerns. In addition, drought was a high concern, particularly in African countries. In developed countries, the main extreme event that was mentioned was heat-waves. Throughout the submissions, numerous other disaster impacts are also mentioned including wildfires, landslides and storms. The health issues linked to disasters are both physical (injuries, loss of life, loss of health infrastructure etc.) and disease-related.

A number of submissions mention issues related to the impacts of climate change on **productivity in the workplace, occupational health, safety and social protection**. One of the main topics noted in submissions from different regions across the globe is the impact of climate-induced heatwaves on workers. It was mentioned that workers in certain industries are particularly vulnerable, including farmers, construction workers, and those working in tourism and transportation. Heat stress can lead to lower productivity, unbearable working conditions, and an increase in the risk of cardiovascular, respiratory and renal diseases.

It was also noted that climate change impacts on people's work can lead to mental health problems, such as depression. Suicide rates can increase when workers are not able to undertake their work and provide for themselves and their families, for example in the agricultural sector.

2.2 ACTIONS ON THE GROUND

The submissions highlight that a large number of activities are already being implemented on the ground. These activities range from policies that are planned and implemented by governments, to various actions undertaken by intergovernmental organizations, non-governmental organizations, and communities.

Some of the specific actions focused on health and adaptation, mentioned in the submissions, include:

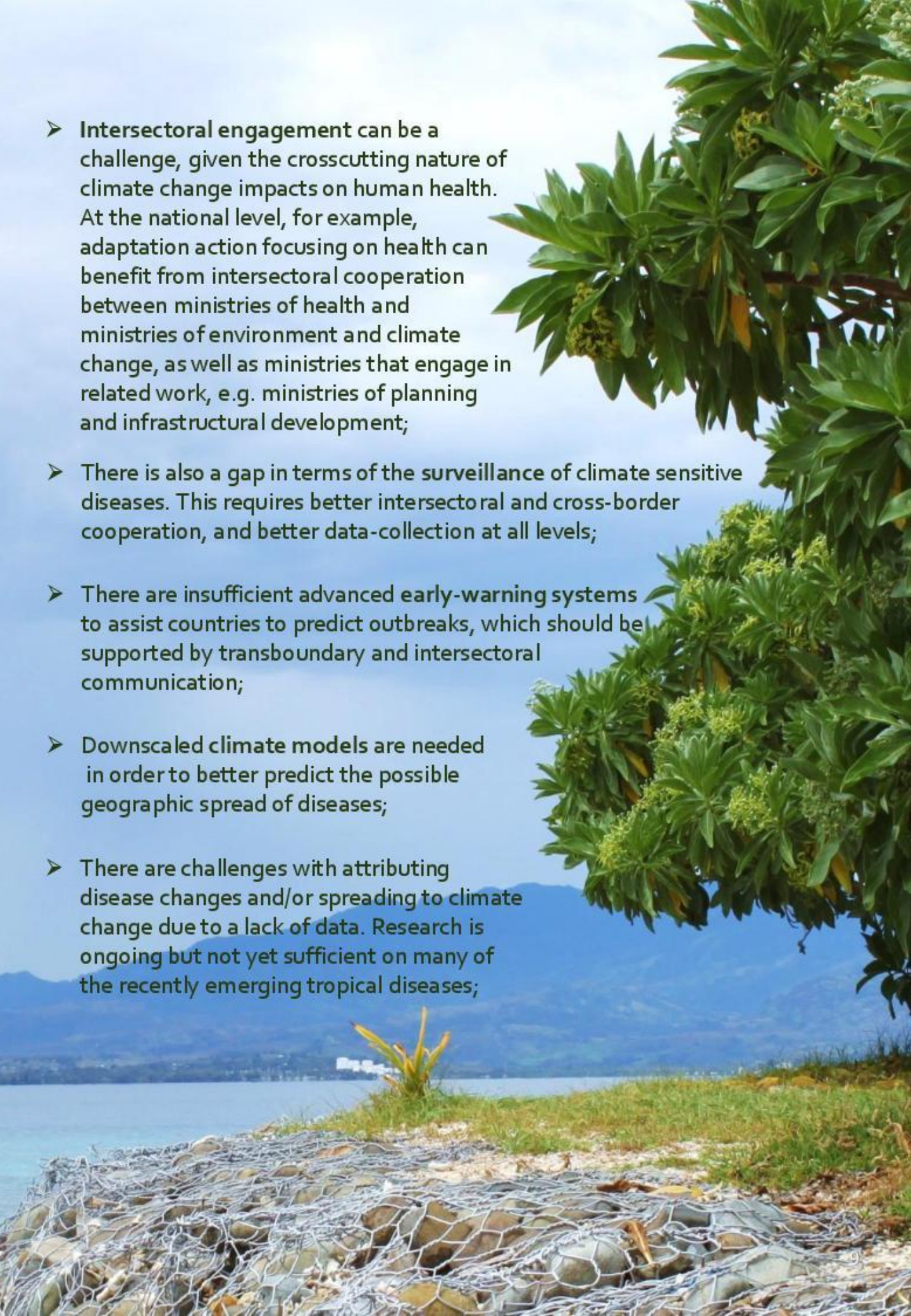
- National health adaptation plans, and national plans for adaptation that include a health component;
- Disaster-management plans and disaster risk-reduction frameworks for the health sector;
- Data exchange platforms/knowledge sharing initiatives; knowledge products and publications; research programmes; impact reports;
- Disease monitoring and epidemiological surveillance networks;
- Partnerships with climate services;
- Tools for climate change health-risk assessments;
- Vulnerability and adaptation assessments that include a health component; and tools and algorithms to calculate the influence of climatic factors and seasonal variability on health and to calculate risk factors;
- Projects to adapt communities on the ground to negative health impacts of climate change, infrastructure projects to make health facilities more resilient to climate change, and projects aimed at preventing illnesses and negative health impacts in the workplace as a result of climate change;
- Capacity building and training of health-care professionals on the topic of climate change;
- Awareness-raising and courses on climate change and health for the general public;
- Awareness-raising campaigns on preventative measures to avoid health problems and climate-sensitive diseases; and
- Programmes and legal instruments that include a gender component, gender-sensitive analysis tools, and activities that seeks to include women in planning and decision-making at the community level.

2.3 GAPS, NEEDS AND CHALLENGES

In their submissions, Parties and organizations mentioned a number of gaps, needs and challenges in terms of, inter alia, understanding the interlinkages between climate change and health, and their capacity to undertake adaptation action.

The submissions pointed out the following aspects:

- There is a **lack of implementation** of health adaptation plans and projects, and of early-response systems, related to a lack of sustainable financial resources;
- It was noted that there are **gaps in knowledge** about the following, inter alia:
  - How changes in ecosystems influence the epidemiology and distribution of infectious diseases;
  - How and where diseases are spreading, and what exacerbates this change;
  - The current and projected climate information, so as to better predict geographic changes in diseases;
  - The current and future impacts of climate change on malnutrition, waterborne diseases, vector-borne diseases and disaster impacts; and
  - How to estimate the costs of health-resilience measures;



- **Intersectoral engagement** can be a challenge, given the crosscutting nature of climate change impacts on human health. At the national level, for example, adaptation action focusing on health can benefit from intersectoral cooperation between ministries of health and ministries of environment and climate change, as well as ministries that engage in related work, e.g. ministries of planning and infrastructural development;

- There is also a gap in terms of the **surveillance** of climate sensitive diseases. This requires better intersectoral and cross-border cooperation, and better data-collection at all levels;

- There are insufficient advanced **early-warning systems** to assist countries to predict outbreaks, which should be supported by transboundary and intersectoral communication;

- Downscaled **climate models** are needed in order to better predict the possible geographic spread of diseases;

- There are challenges with attributing disease changes and/or spreading to climate change due to a lack of data. Research is ongoing but not yet sufficient on many of the recently emerging tropical diseases;

- A lack of **sub-national information** on health impacts of climate change was also reported. Information is not adequate and not always easy to access. There is a need for targeted field observation, community discussions, and regional and district level analyses. Such information is necessary for assessing new and emerging health issues, including tropical diseases and their impacts;
- There is a lack of **awareness on the part of many health-care professionals** about the impact of climate change on health and on health infrastructure;
- There is a lack of **public awareness** about climate change impacts and how it can affect health. There is also a need for more public guidance on how to act in the event of climate change impacts such as heat-waves and storms;
- There are gaps in terms of **occupational health and safety protection measures to safeguard against climate change impacts**, and to protect the human rights of workers;
- There are **capacity needs in the health sector,** including laboratory diagnostic capacities to analyze large samples and potentially find as yet unknown pathogens; capacities to use available climate information with health relevance; and capacities to cost health adaptation efforts; and
- There are inadequate **tools/expertise for climate information product development** and the use of climate services in the health sector.

THE ROLE OF THE NAIROBI WORK PROGRAMME

FROM ADAPTATION KNOWLEDGE TO ACTION

The NWP, through its diverse range of modalities, provides unique opportunities for linking relevant institutions, processes, resources and expertise outside the Convention to respond to some of the gaps, needs and challenges identified in the submissions. In addition to fostering learning during the focal point forum, the NWP also facilitates collaboration among, inter alia, policy makers, research and scientific communities, practitioners and financial institutions in order to close health adaptation knowledge gaps at the regional, national and subnational levels.

Additional technical work on a number of relevant issues including, inter alia, human settlements, ecosystems and water resources, economic diversification and indicators of adaptation and resilience are planned to be undertaken under the NWP in collaboration with NWP partners, relevant organizations and experts.[3] This work will inform adaptation planning and action at the regional, national and subnational levels, including by providing support to the process to formulate and implement national adaptation plans (NAPs).[4] In addition, activities under the NWP will integrate the consideration of vulnerable communities where appropriate.

For further information, visit the Adaptation knowledge portal **http://www4.unfccc.int/sites/nwp/** or email **nwp@unfccc.int**

United Nations
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[3] FCCC/SBSTA/2016/2.
[4] <http://unfccc.int/6057>

Photos:
Pexels.com (pg. 1, 6, 8)
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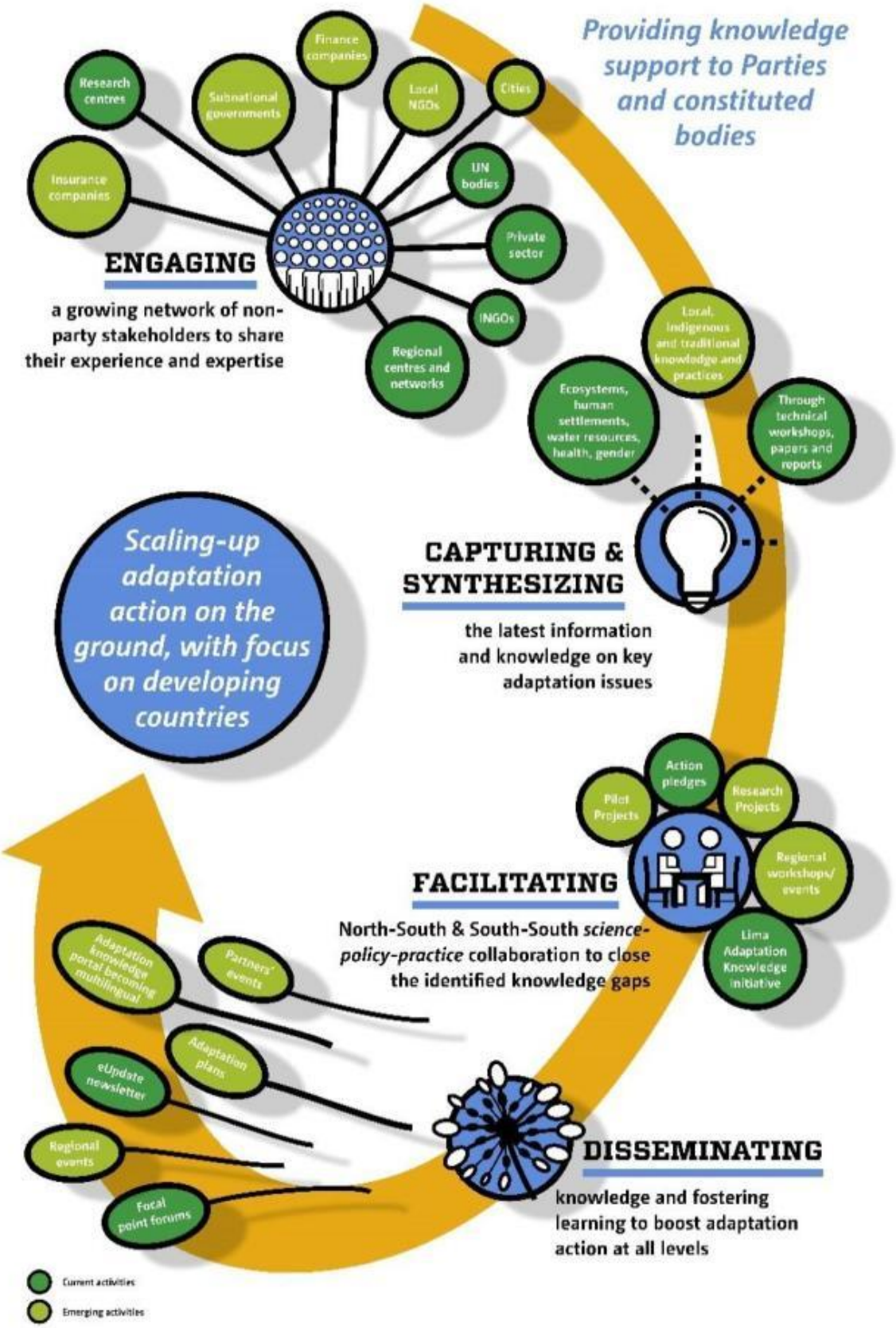
The Nairobi Work Programme

Advancing adaptation action through knowledge



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