

## HEALTH PREPAREDNESS FOR EL NIÑO EVENT 2015-2016

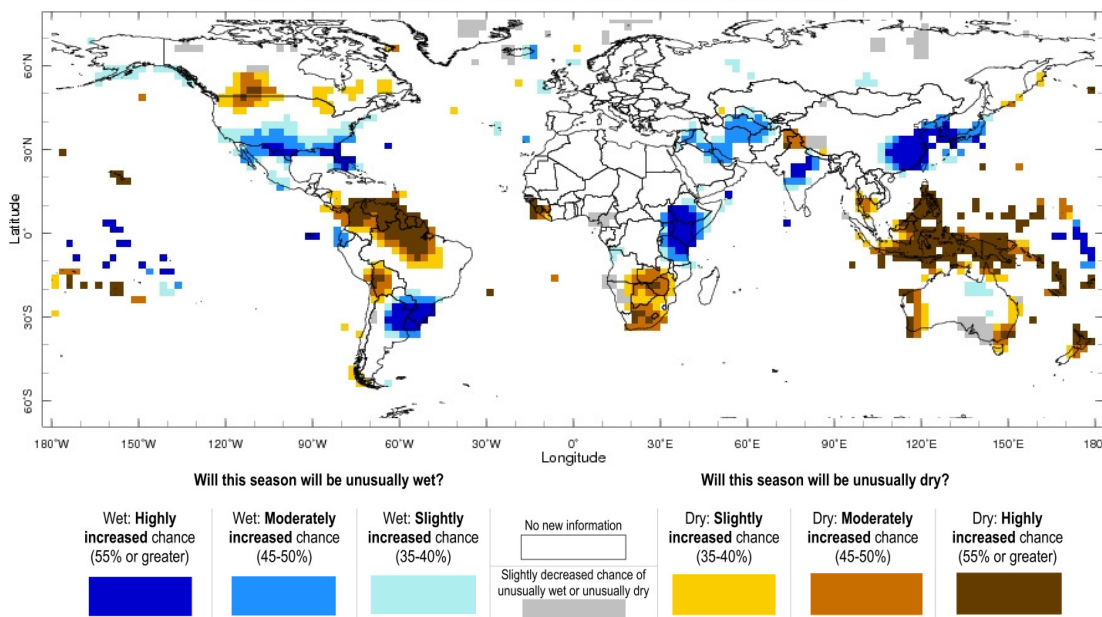
### Global Situation Assessment of El Niño-related Health Risks

WMO has confirmed reports that a mature and strong El Niño is present in the tropical Pacific Ocean<sup>1</sup>. International climate models suggest that the 2015/2016 El Niño will strengthen further before the end of 2015 and become one of the strongest El Niño events in the past twenty years.

The El Niño phenomenon is a major concern to global public health as it has the potential to exacerbate health risks associated with extreme weather in different parts of the world. The last major event of similar magnitude in 1997-1998 resulted in significant health impacts across multiple WHO Regions<sup>2</sup>, for example:

- in Eastern Africa, extensive flooding led to food insecurity associated with widespread economic losses in agriculture and livestock, as well significant destruction of health infrastructure throughout the region;
- in Djibouti, Kenya, Mozambique, Somalia, Uganda and the United Republic of Tanzania unusually high rainfall triggered major outbreaks of cholera in, as well as unexpectedly large outbreaks of Rift Valley Fever (RVF) in Kenya, Somalia and Tanzania, for example, in Garissa District, Kenya (population 231,022) alone, there were 170 deaths from haemorrhagic fever and an estimated 27,500 infections;
- in Latin America, Peru and central Ecuador experienced rainfall more than 10 times the usual levels, with consequential flooding and extensive landslides that resulted in widespread destruction of homes and infrastructure;
- the Pacific Island region was hit by a drought so severe that 50% of Fiji's population required government water delivery, and the sugarcane harvest was slashed by 50% with widespread economic impacts.

Forecast for Nov 2015 - Jan 2016, Forecast Issued Oct 2015



Source: Columbia University IRI [http://iridl.ldeo.columbia.edu/maproom/IFRC/FIC/prcp\\_fcst.html](http://iridl.ldeo.columbia.edu/maproom/IFRC/FIC/prcp_fcst.html) (Oct. 19, 2015)

<sup>1</sup> [https://www.wmo.int/pages/prog/wcp/wcasp/enso\\_update\\_latest.html](https://www.wmo.int/pages/prog/wcp/wcasp/enso_update_latest.html)

<sup>2</sup> WHO Factsheet : El WHO Fact sheet on the El Niño Southern Oscillation (ENSO) and health UPDATE OF NO.192 (2000)

The effects of the current El Niño are starting to be observed in various countries. The situation in Vanuatu and Papua New Guinea, where water and food shortages are starting to impact on nutritional and health status with associated morbidity and mortality, are immediate concerns. Indonesia has declared a state of emergency in several regions due to water shortages, fire conditions and drought. Tanzania and Democratic Republic of Congo are experiencing large outbreaks of cholera which could be exacerbated by extreme conditions. The signs are that the situation in some countries will worsen as the full effects of El Niño are felt.

## Heightened Health Risks Associated with El Niño Conditions 2015-2016

El Niño affects rainfall patterns and temperatures in many parts of the world but most intensely in the tropical regions of Africa, Asia-Pacific, and Latin America which are particularly vulnerable to natural hazards. The degree to which the El Niño will exacerbate seasonal conditions locally will additionally be moderated by regional climate phenomenon, such as the Indian Ocean dipole, which may dampen or heighten the effects of El Niño. Local forecasts should be sourced from National Meteorological authorities.

For weblinks of National Meteorological Hydrological Services, please visit:

[http://www.wmo.int/pages/members/members\\_en.html](http://www.wmo.int/pages/members/members_en.html)

For information on WMO Regional Climate Centres (RCCs) and links please visit:

<http://www.wmo.int/pages/prog/wcp/wcasp/RCCs.html>

Generally, the expected areas of unusual wet or dry conditions for November 2015 – January 2016 are shown in the map produced by Columbia University IRI and summarized below:

- **Africa:** Wetter conditions in equatorial East Africa during the short rainy season; drier than normal conditions in Southern Africa and some areas in the Sahel. Most parts of the equatorial sector of the Greater Horn of Africa are likely to receive near normal to above normal rainfall.<sup>3</sup>
- **Asia-Pacific:** Reduced rainfall expected across South-East Asia and the southwest Pacific (from southern Papua New Guinea southeast to the southern Cook Islands) and enhanced rainfall in eastern China, the central and eastern Pacific (e.g. Tuvalu, Kiribati, Tokelau and Nauru). Above normal risk of typhoons for most parts of the Pacific islands region, with the exception of the Coral Sea. (Note: El Niño historically affects the number of tropical cyclones and preferred tracks, so risk of extreme rainfall events even where drier than normal conditions are forecast is possible)<sup>4</sup>.
- **Latin America:** Above average rainfall is expected in Mexico, coastal Ecuador, northern and northwestern Peru, central and eastern Paraguay, southeast Brazil, Uruguay and northern Argentina. Below normal rainfall is expected across Central America, Venezuela, northern Colombia, northeast and eastern Brazil; eastern Bolivia and northern Chile.<sup>5</sup>
- In **Central America** diverse sea-surface temperature conditions in the Atlantic and Pacific Oceans will result in diverse conditions on the eastern and western regions of Central American countries. (I.e., Atlantic cyclone season is expected to be less active than normal, whereas Pacific cyclone season can be anticipated to be more active. In Panama, Pacific coast is anticipated to be drier than usual, with the Caribbean side wetter than normal<sup>6</sup>)

The magnitude of health impacts associated with El Niño will vary depending on local health vulnerabilities and preparedness and response capacities, as well as how intensely El Niño influences the local climate of an area. However, health consequences associated with extreme weather conditions are known to include:

- Both droughts and flooding may trigger food insecurity, increase malnutrition and thus enhance vulnerability to infectious diseases.
- Damaged or flooded sanitation infrastructure may lead to waterborne diseases.

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<sup>3</sup>[http://www.icpac.net/wp-content/uploads/2015October\\_EN\\_Bull.pdf](http://www.icpac.net/wp-content/uploads/2015October_EN_Bull.pdf)

<sup>4</sup> Source : Pacific Island Climate Outlook Forum Oct 2015,

[http://www.pacificdisaster.net/pdnadmin/data/original/SPREP\\_PACMet\\_2015\\_Regional\\_statement\\_El\\_Nino.pdf](http://www.pacificdisaster.net/pdnadmin/data/original/SPREP_PACMet_2015_Regional_statement_El_Nino.pdf)

<sup>5</sup> Source: CIIFEN October 2015 Bulletin <http://www.ciifen.org>

<sup>6</sup>[http://www.hidromet.com.pa/documentos/el\\_nio\\_2015\\_08\\_15\\_19.pdf](http://www.hidromet.com.pa/documentos/el_nio_2015_08_15_19.pdf)

- Extremely dry conditions may lead to wildfires and deteriorated air quality
- Droughts, flooding and intense rainfall, including associated with cyclones, may lead to water and vector-borne disease outbreaks and population displacement.
- Extensive rainfall and flooding may close health facilities and restrict regular service delivery activities, as well as trigger landslides, destroy roads, public health and other supportive infrastructure, therefore restricting access to healthcare well beyond the event.

### Examples of El Niño impacts

Environment	Health	Examples of Diseases
<b>Low rainfall and higher temperatures:</b> Droughts and water shortages, food insecurity; population displacement	Death, illness Malnutrition Psychosocial effects Limited access to health services	<b>Vector borne diseases:</b> Malaria, Rift Valley Fever, Dengue , Chikungunya  <b>Mental illness</b>
Heatwaves; Wildfires; Air pollution	Death, injury, illness Heat-related illness Psychosocial effects	<b>Respiratory diseases</b>  <b>Cardiovascular diseases</b>  <b>Heat-stress</b>
<b>Extreme rainfall</b> Floods, infrastructure loss, food insecurity, population displacement	Death, illness, injury Malnutrition Psychosocial effects	<b>Water borne diseases;</b> diarrheal diseases - Cholera, giardia, cryptosporidium, typhoid fever - Leptospirosis  <b>Vector borne diseases:</b> Malaria, Rift Valley Fever, Dengue, Chikungunya  <b>Trauma – drowning</b>

### What Ministries of Health and WHO are doing for country and regional preparedness for El Niño

WHO is acutely aware of the high risk conditions of 2015 and providing support to WHO Member States and partners to enhance preparedness measures for the current El Niño event. The health sector should prepare for the specific risks associated with the El Niño event. This event also provides the opportunity to reinforce all-hazards preparedness of communities and countries, and the readiness of WHO, the Global Health Cluster and other national, regional and global actors for health emergencies.

WHO supports countries to develop national strategies and action plans to build health system resilience and manage risks of all types of emergencies, including those associated with climate-related hazards and diseases. The WHO provides assistance to countries by improving awareness and evidence of climate impacts on health, strengthening local capacities to manage consequential health risks, and through international response mechanisms, such as the Global Outbreak Alert and Response Network (GOARN), Global Health Cluster, Foreign Medical Teams and the application of the International Health Regulations (2005).

At national level, WHO Country Offices and WHO Regional Offices are providing support and guidance to Ministries of Health and partners on risk assessments and the development of contingency plans. In countries such as Uganda and Ethiopia, and in the Pacific sub-region, WHO is contributing to UN interagency and UN Country Team planning and supporting Ministries of Health contributions to national intersectoral plans and preparedness for El Niño as members of national disaster management committees.

Three of the WHO Regional Offices (AFRO, AMRO/PAHO, WPRO) and Country Offices have shared information on action taken by Member States, WHO and partners to raise awareness and increase preparedness for the impending El Niño conditions.

#### Pacific Islands and Papua New Guinea:

- WHO Office in the South Pacific has been coordinating advocacy and awareness communication, risk assessments, guidance notes and response planning with the WHO Regional Office for the Western Pacific (WPRO) and WHO Offices in the Pacific Island Countries and Papua New Guinea.
- Based on preliminary health risk assessments, Fiji, Vanuatu and Papua New Guinea have identified actions to strengthen health preparedness and response. Measures identified include: establishing El Niño response task forces or committees, drafting drought management plans and mapping water points and vulnerable agricultural areas. Vanuatu and Fiji have drafted El Niño response plans, and are working with National Disaster Management Offices to activate emergency operating centres for situation monitoring.
- In Vanuatu, WHO is working with the MoH to carry out malnutrition screenings in local villages and is preparing to deploy health supplies available in Suva to Vanuatu.
- Other countries such as Solomon Islands and Kiribati have drought standing committees which are putting together awareness plans and gathering data on drought progression.
- More detailed Public Health Risk Assessments for Fiji, PNG, Solomon Islands, Tonga, Vanuatu and Western Samoa are in preparation.
- Information is being collected from other countries in the region.

#### Africa:

- AFRO have issued a WHO Internal regional briefing note on global climate anomalies and potential disease risks (2015-2016) to 47 AFRO countries on 25 September 2015.
- The Ministry of Health in Uganda, supported by WHO and partners, has produced a structured and budgeted Public Health and Nutrition plan as part of National El Niño Preparedness and Contingency Plan coordinated by the Office of the Prime Minister and the Department of Relief, Disaster Preparedness and Management (7 October 2015). Costed activities are detailed against the 5 strategic actions for the public health and nutrition sub-plan:
  - 1) coordination of partners/stakeholders;
  - 2) monitoring of the health response;
  - 3) uninterrupted provision of essential drugs and medical supplies to affected population;
  - 4) health education and community mobilization;
  - 5) epidemic preparedness and response.

Activities are costed at 3,152,000,000 Ugandan Shillings (equivalent to USD875,000/ GBP565,000). The plan will be implemented by the MoH, local governments, development partners, as well as UN-agencies, including WHO, UNICEF, UNFPA.

- Ethiopia has produced a health and nutrition contingency plan based on three scenarios: Worst Case, Middle Case, and Most Likely. Areas of activity are:
  - 1) surveillance, outbreak investigation and response;
  - 2) measles preparedness, case management and treatment protocols,
  - 3) community mobilization,
  - 4) training and orientations,
  - 5) advocacy and resource mobilization,
  - 6) logistics and supply chain management,
  - 7) monitoring and evaluation.

- The budget required to fill the gap is 93,367,279ETB (equivalent to USD 4,450,000S or GBP 2,880,000)
- AFRO, supported by WHO HQ and the WHO-WMO Health and Climate Office, plans to put together a regional operational plan to provide support to WCOs and Ministries of Health.
- WHO, FAO and OIE are developing a joint WHO/FAO/OIE awareness message for Rift Valley Fever and planning joint actions to support and assess human health and animal health preparedness.

#### Americas:

- As El Niño caused heavy damage in the Americas in the past, PAHO has conducted regular tele-, video- and web-conferences with relevant officers of the MoH and Country Offices, some with the participation of the Center for the Study of the El Niño phenomenon (CIIFEN) in Ecuador.
- PAHO's Directing Council, at the proposal of Peru, approved a decision urging the countries to speed up mitigation and preparedness for El Niño and requesting the PAHO Secretariat to continue and strengthen its support to Member States.
- PAHO has facilitated the development of the Plan de Accion de la OPS/OMS para enfrentar los efectos del fenomeno El Niño. This plan is made with the participation of the departments of communicable diseases, health systems and services, sustainable development and environment, and administration. The remedial budget and funding gaps for the plan will be identified with health disaster coordinators and PAHO country offices in the week of 26 October 2015.
- Several countries are implementing contingency plans for El Niño as the impact is already being felt in Central America and will have its peak in South America from November to February.
- Peru has declared a sanitary emergency in 20 of its 24 regions in order to implement immediate protective measures in more than 700 hospitals and health centre, purchase and pre-position medicines and critical supplies, and train its medical and public health response teams.

### **Coordination of global action on El Niño preparedness by WHO with partners**

WHO is sharing and collecting information from all of the WHO Regional Offices, Country Offices, WMO, FAO and partners on actions being taken to prepare for and respond to heightened El Niño health risks. The action taken thus far varies from region to region and country to country. This report will be updated and elaborated as more information becomes available.

WHO is closely coordinating internally across relevant programmes, such as Emergency Risk Management (ERM), Pandemic and Epidemic Diseases (PED), Global Capacities Alert and Response (GCR), and the Department of Public Health and Environmental and Social Determinants of Health (PHE).

The WHO/WMO Joint Office for Climate and Health in Geneva, is providing WHO with up to date information from WMOs global and regional expert centres, and supporting risk assessment, coordination, and communications between relevant actors.

WHO HQ in collaboration with FAO HQ and UNICEF HQ will follow up planning for coordinated activities within health, animal health and related sectors/cluster and support for Ministries of Health, partners and our respective offices at country and regional office levels, including risk assessments, strengthening of surveillance systems and other preparedness measures.

IASC and Global Health Cluster: WHO has contributed health-related information on El Niño to the IASC Early Warning Working group to assist the current planning across the humanitarian system. WHO will share advisories and see information on El Niño preparedness with Global Health Cluster partners and with Country Health Clusters.

## General guidance on El Niño preparedness for health actors

WHO, WMO and partners are updating advice to the health sector for recommended actions for general preparedness and for specific situations. The general El Niño advisory covers issues such as the following:

1. Understand, assess and monitor how El Niño can alter health risks in your area, e.g. establish dialogue with partner organizations at the local level (e.g. national meteorological agencies), and monitor seasonal forecasts, real-time conditions, local rainfall and temperature forecasts.
2. Develop strategies and activate emergency preparedness and response measures, e.g. review and revise of health and multisectoral plans and capacities (including health facilities) for climate related hazards; take account of the effects of climate-related hazards on ongoing emergencies (such as outbreaks and conflicts), displaced populations and refugee situations; undertake preparedness measures; strengthen event-based surveillance to detect events that are not commonly occurring (and not targeted by conventional surveillance); and when indicated by key triggers, activate response plans and coordinate the health sector response by government, private, community and international agencies.
3. Develop effective communication strategies, including working with NMAs and other partners (e.g. national disaster management organizations) to establish clear and consistent messages to keep the public and health sector response agencies informed about potential and actual climate hazards.
4. Monitor and evaluate the impact of measures influenced by El Niño advisories and seasonal climate forecasts, e.g. evaluate measures to support evidence based policy, improve national and local health system emergency risk management and prevent avoidable negative health impacts associated with future El Niño events at the global, regional, and local levels.

WHO guidance on specific climate-related events and diseases will be adapted and disseminated to partners in health and other sectors to prepare for the health dimensions of the current El Niño event. This guidance includes drought, flood and infectious diseases, for example, Rift Valley Fever: <http://www.who.int/mediacentre/factsheets/fs207/en/>

### For further information:

WHO offices at country, regional and HQ levels are continuing to take action to rapidly enhance the preparedness for the health consequence of the current El Niño event. More details about plans, preparedness and response actions are available. For further information, please contact:

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