1. Background

The current outbreak of Ebola Virus Disease (EVD) in West Africa, first reported to the World Health Organization (WHO) in March 2014, is the worst outbreak of EVD recorded in history, with a large number of cases distributed over a wide geographic area. This is the first time an outbreak of EVD has been reported in this part of Africa. The outbreak is evolving faster than the response efforts to contain it due to several factors in the affected countries including: inadequate health systems and infrastructure; transmission in urban settings; poor economies due to recent civil war, cultural practices which facilitate transmission and community fear and ignorance of EVD. Countries are struggling to control this unprecedented crisis, the complexity of which is resulting in the rapidly rising number of cases and deaths. There are estimates that the aggregate case numbers could exceed 20 000 over the course of this emergency.

On 8 August 2014, under the International Health Regulations (2005), the WHO Director General declared this outbreak a **Public Health Emergency of International Concern (PHEIC)**. The current outbreak of EVD in West Africa is unprecedented in its scope, severity and complexity. It is no longer a public health emergency: it is now a humanitarian crisis.

In the WHO Western Pacific Region, no confirmed cases of EVD have been reported. In Member States (MS) in the Western Pacific Region, there is a high awareness and sensitivity to the ongoing EVD outbreak in West Africa. A number of MS in the Western Pacific Region have reported the detection and investigation of sick travellers returning from Ebola-affected countries, all of which were found not to be EVD. Confirmation of the first imported case in Lagos, Nigeria by air travel during this outbreak has provided evidence that the virus can be spread by international travel, placing every city with an international airport at potential risk of an imported case.

Based on the ongoing EVD outbreak in West Africa, a risk assessment was conducted by the WHO Regional Office for the Western Pacific. The objective was to assign the level of risk of EVD in the Western Pacific Region, and hence direct and prioritize preparedness planning in the Western Pacific Region **for the next 6-9 months**. The results of the assessment may change as new information becomes available.

2. Risk Assessment

Overall, the risk assessment concluded that the chance of a travel-related case of EVD occurring in a MS of the Western Pacific Region, before the outbreak is declared over in West Africa is low, but possible.
Despite a low likelihood of importation, the consequences of EVD transmission would be major, due to: the high case fatality rate; the possible infection of Health Care Workers (HCWs); stress on health systems; and reputational damage to relevant Government authorities, including loss of confidence.

Hence, vigilance and preparedness planning in countries of the Western Pacific Region are important. It is essential for WHO to support preparedness efforts in MS to ensure our readiness to respond to EVD, and mitigate any negative impact.

3. Possible Scenarios in the Western Pacific

The three scenarios considered for the next 6-9 months involve:

1. A single case of EVD without ongoing human-to-human transmission
2. A localised cluster due to human-to-human transmission in a health care facility and/or among household contacts
3. Widespread and intense transmission

Scenario 1: A single case of EVD without ongoing human-to-human transmission

The likelihood of a case occurring in the Western Pacific Region is dependent on the epidemiological situation in West Africa. As the EVD outbreak increases in magnitude, so does the likelihood of a travel-related case occurring in another country, including a MS in the Western Pacific Region. Since August 2014, there has been an exponential increase of cases in Guinea, Liberia and Sierra Leone. Moreover, travel-related cases have occurred in a number of countries such as Nigeria, Senegal and the United States of America, highlighting the possibility of case importation. Based on one recent modelling prediction, if current control measures remain in place, the number of cases is expected to increase to 20,000 by November 2, 2014.\(^1\)

The incubation period of 2-21 days (typically 5-7 days) facilitates long distance travel prior to symptom onset, so it is possible that a travel-related case could occur in the Western Pacific Region. Although there are no direct flights between the Western Pacific Region and West Africa, there still is a possibility of a travel-related case occurring.

Based on the above information, the likelihood of a travel-related case of EVD in the Western Pacific Region is low, but possible. Preparedness activities based on key components of the Asia Pacific Strategy for Emerging Diseases (APSED 2010) and the International Health Regulations (IHR 2005) core capacities are ongoing in MS of the Western Pacific Region, suggesting that the region will be ready to respond to EVD and mitigate adverse consequences. Given the level of preparedness in the Western Pacific Region, the consequence of a single suspected, probable, or confirmed case of EVD (without ongoing transmission), would be minor to moderate on clinical and public health services which are expected to continue operating within normal parameters. The consequence would be moderate for risk communications because of community concern and national and international media interest.

Scenario 2: A localised cluster due to human-to-human transmission in a health care facility and/or among household contacts

Given the low likelihood of importation, the likelihood of limited secondary transmission associated with a travel-related case is **moderate to high** if the index case is not detected, exposing first-line HCWs, patients and possibly visitors in healthcare facilities and/or close household or social contacts. The following measures will reduce the likelihood of secondary cases occurring: clinician awareness of EVD as part of health facility preparedness; a well-developed case definition; a clinical triage, testing and reporting protocol; the consistent application of the appropriate level of precautions to manage a case; and strict adherence to Infection Prevention and Control measures and contact management.

A cluster of EVD following a travel-related case in the Western Pacific Region would be of **moderate to major** consequence. Direct health consequences include the high mortality and morbidity of EVD, particularly among HCWs, and the need for rapid and comprehensive contact tracing and management as part of containment strategy. The health system may become over-burdened; there may be financial losses through a fall in travel and trade, and subsequent political consequences, including loss of confidence and reputational damage to the Ministry of Health.

Scenario 3: Widespread and intense transmission

Even if there is a localized cluster, the likelihood of progression to widespread and intense transmission of EVD in the Western Pacific Region would be **very low**, as undetected cases of EVD would need to occur in the community. As EVD is a severe disease, most cases would present to a healthcare facility for treatment.

If widespread and intense transmission were to occur there would be **major** social, economic and political consequences as well as **major** consequences for health services. The high mortality and morbidity of EVD during community outbreaks, potentially affecting entire families, would lead to **major** social consequences. The psychological impact on those directly affected or on those who have responded to the outbreak would be **major**.

The economic and political consequences are also expected to be **major**, including a fall in tourism and trade due to fear of further spread. Furthermore, the social and psychological consequences from stigmatization and racial profiling are possible, not only among nationals from countries affected by Ebola but individuals of African appearance visiting/living in countries in the Western Pacific Region.

4. Recommendations

In the context of EVD, strengthening capacities and capabilities to implement prevention, preparedness and control measures, will decrease the level of risk associated with a travel-related case of EVD. APSED (2010) has provided MS in the Western Pacific Region with a roadmap for strengthening IHR core capacities required for effective preparedness planning for future emerging infectious disease threats, including Ebola. The WPRO Framework for Action document provides MS with guidance for operational planning for their response to EVD where additional actions may be required based on key components of the APSED (2010) Focus Areas under the requirements of IHR (2005).
Summary

The chance of a travel-related case of EVD occurring in a MS of the Western Pacific Region is low but possible, until the outbreak is declared over in West Africa.

Given the low likelihood of importation, the likelihood of secondary transmission in the form of small clusters of EVD following a travel-related case is moderate to high in health care settings or among close contacts, if surveillance systems and clinical triage fail to detect introduced case(s), and appropriate infection prevention and control measures including effective contact management, are not in place.

The consequences of secondary transmission are expected to be moderate to major depending on health system capacities to rapidly contain the outbreak. Secondary transmission may result in infections in HCWs, stress on health facilities and public health services, and loss of confidence in, and reputational damage to, relevant Government authorities. Effective risk communications will be a critical part of emergency risk management in all EVD introduction and transmission scenarios.

Preparedness activities based on key components of the APSED (2010) and the IHR (2005) core capacities, will ensure that the Western Pacific Region is ready to respond to any EVD scenario and will mitigate adverse consequences.

Likelihood is based upon the following:

<table>
<thead>
<tr>
<th>Level</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>Is expected to occur in most circumstances</td>
</tr>
<tr>
<td>High</td>
<td>Will probably occur in most circumstances</td>
</tr>
<tr>
<td>Moderate</td>
<td>Will possibly occur some of the time</td>
</tr>
<tr>
<td>Low</td>
<td>Could occur some of the time</td>
</tr>
<tr>
<td>Very low</td>
<td>Could occur under exceptional circumstances</td>
</tr>
</tbody>
</table>