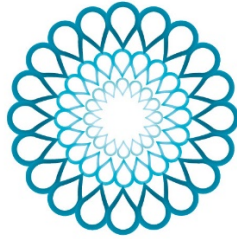




TURKISH WATER INSTITUTE  
**SUEN**  
TÜRKİYE SU ENSTİTÜSÜ

## **Third Session of Islamic Conference of Ministers Responsible for Water**



**THIRD SESSION OF THE ISLAMIC  
CONFERENCE OF MINISTERS  
RESPONSIBLE FOR WATER**  
17-19 May 2016 | ISTANBUL

**Draft Concept Paper**

**Panel Discussion on Prevention of Waterborne Diseases**

**Istanbul, Republic of Turkey,  
17 – 19 May 2016**

## **Rationale:**

80% of diseases in developing countries and 88% of diarrhea cases worldwide are directly related to unsafe water, inadequate sanitation or insufficient hygiene<sup>1,2</sup>. Waterborne diseases are the main cause of morbidity and mortality around the world, particularly in children under 5 years of age, as they are more vulnerable than adults. Each year more than 840 thousand people in low- and middle-income countries die from waterborne diseases, representing 58% of total diarrheal deaths<sup>3</sup>.

Adequate access to clean water and sanitation services is central for preventing deaths caused by water-borne diseases. Diarrhea due to infection is widespread throughout the developing world and it is still one of the leading causes of children mortality. In Southeast Asia and Africa, diarrhea is responsible for as much as 8.5% and 7.7% of all deaths respectively<sup>4</sup>. The lives of 1.5 million children a year could be saved if improved hygiene practices are adopted and they receive access to sanitation and a safe water supply<sup>5</sup>.

According to WHO definition, “improved sanitation includes sanitation facilities that hygienically separate human excreta from human contact”<sup>6</sup>. Presently, 2.4 billion people (more than 32% of the world’s population) lack access to improved sanitation<sup>7</sup>. According to the latest WHO estimates, 663 million people in the world still lack access to safe water<sup>8</sup>.

Within the OIC member states, water supply and sanitation service (WSS) coverage ranges from very low to very high due to varying socio-economic conditions. According to the OIC Water Vision document, good progress has typically been made in the provision of access to improved drinking water sources, however there is still much to do to protect human health from water-related diseases resulting from lack of access to improved sanitation facilities.

In order to understand the relation between improved sanitation and occurrence of water-borne diseases, the data published by WHO and UNICEF were assessed and compiled in the Figures 1 and 2<sup>9,10</sup>. In these graphs, percentages of diarrhea and malaria-caused deaths are presented in the respective OIC member states.

According to WHO and UNICEF reports, the sanitation levels are defined in four categories: 1) improved sanitation, 2) shared sanitation, 3) open defecation, and 4) other unimproved. In these graphs, improved sanitation level is taken as the basis to demonstrate the sanitation - water-borne diseases occurrence relation.

The data show that there is a clear correlation between low sanitation level/open defecation and number of cases of malaria and diarrhea. In some African OIC countries, the prominent causes of deaths are mainly water-related diseases. In the areas where open defecation is

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<sup>1</sup> <http://www.un.org/waterforlifedecade/sanitation.shtml>

<sup>2</sup> [http://www.who.int/water\\_sanitation\\_health/facts2004/en/](http://www.who.int/water_sanitation_health/facts2004/en/)

<sup>3</sup> <http://www.who.int/mediacentre/factsheets/fs392/en/>

<sup>4</sup> [http://www.who.int/water\\_sanitation\\_health/diseases/diarrhoea/en/](http://www.who.int/water_sanitation_health/diseases/diarrhoea/en/)

<sup>5</sup> <https://www.wsp.org/featuresevents/features/sanitation-saves-lives>

<sup>6</sup> [http://www.who.int/water\\_sanitation\\_health/monitoring/jmp2012/key\\_terms/en/](http://www.who.int/water_sanitation_health/monitoring/jmp2012/key_terms/en/)

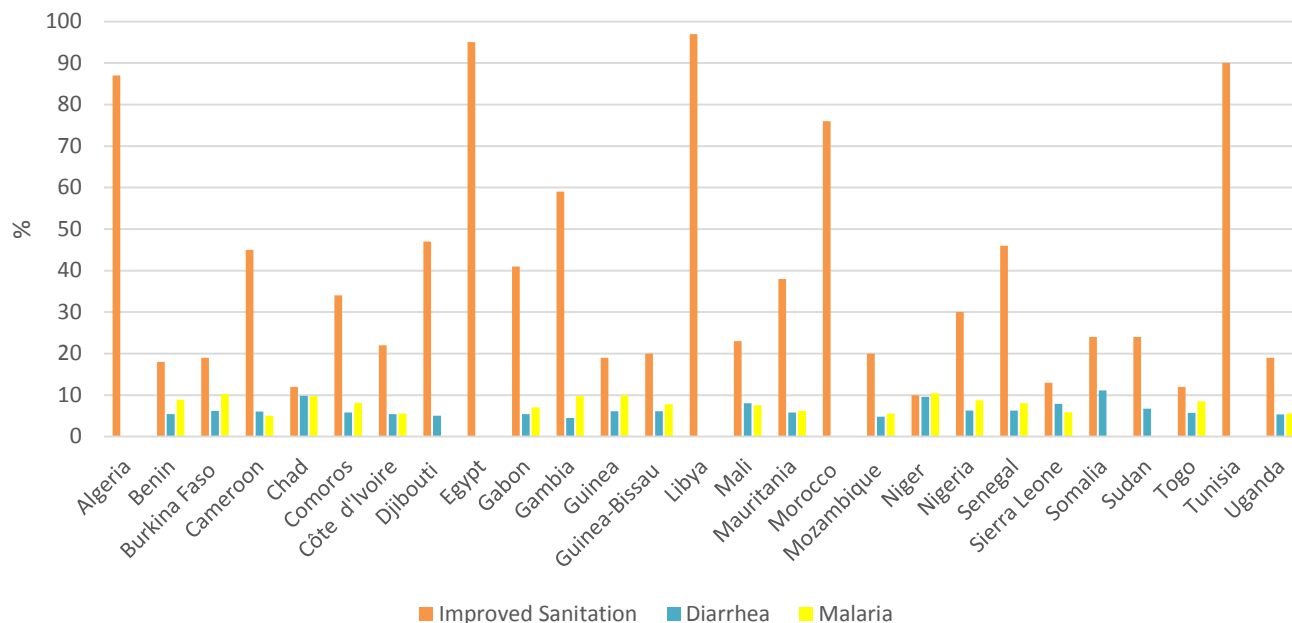
<sup>7</sup> [http://www.wssinfo.org/fileadmin/user\\_upload/resources/JMP-Update-report-2015\\_English.pdf](http://www.wssinfo.org/fileadmin/user_upload/resources/JMP-Update-report-2015_English.pdf)

<sup>8</sup> [http://apps.who.int/iris/bitstream/10665/177752/1/9789241509145\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/177752/1/9789241509145_eng.pdf?ua=1)

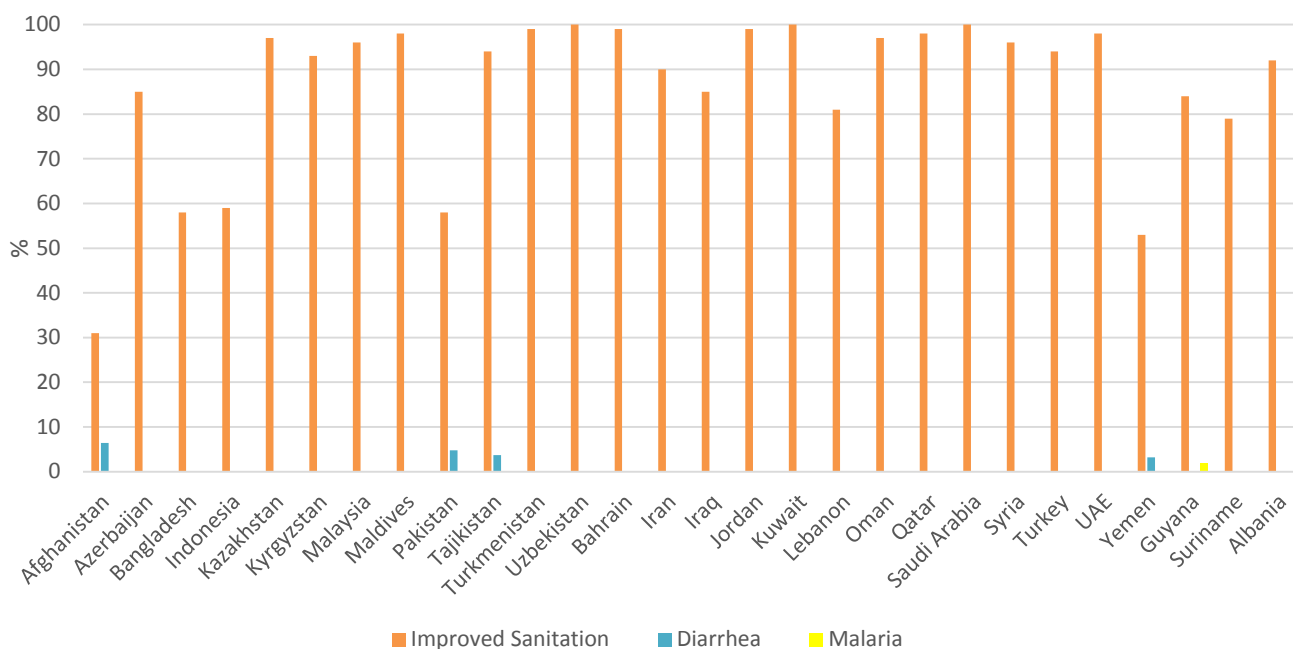
<sup>9</sup> <http://www.who.int/gho/countries/en/>

<sup>10</sup> <https://blogs.unicef.org/blog/5-things-you-need-to-know-about-sanitation-drinking-water/>

more prominent, the occurrence of water-borne diseases is significantly high. Similarly, in African OIC Countries with improved sanitation, diarrhea and malaria caused deaths are rarely seen. In Asian, Middle Eastern, South American and European OIC Member States, the percentage of diarrhea and malaria caused deaths drop with improved sanitation levels as well.



**Figure 1.** The relation between improved sanitation and diarrhea- and malaria-caused deaths in African OIC, in 2012<sup>11,12</sup>



**Figure 2.** The relation between improved sanitation and diarrhea- and malaria-caused deaths in Asia, Middle East, South American and Europe OIC, in 2012<sup>13,14</sup>

<sup>11</sup> <http://www.who.int/gho/countries/en/>

<sup>12</sup> <https://blogs.unicef.org/blog/5-things-you-need-to-know-about-sanitation-drinking-water/>

<sup>13</sup> <http://www.who.int/gho/countries/en/>

<sup>14</sup> <https://blogs.unicef.org/blog/5-things-you-need-to-know-about-sanitation-drinking-water/>

Natural or man-made disasters can also be the root of the waterborne diseases due to damages in water and sanitation infrastructures. It is well known that floods and droughts also cause negative impacts on water quality. During extreme weather conditions, sanitation services may become significantly contaminated with chemical and biological pollution. It is essential that Disaster Risk Management (DRM) plans should foresee potential hazards towards water and sanitation services during extreme events.

The UN Sustainable Development Goals include a dedicated goal on water and sanitation (SDG 6) aiming to “ensure availability and sustainable management of water and sanitation for all”. The OIC member countries may overcome the challenge of achieving access to safe drinking water and sanitation and correspondingly preventing waterborne diseases by committing to the implementation of the OIC Water Vision and cooperating on defined focus activities.

### Objectives of the event:

- To highlight the importance of safe drinking water and sanitation services to reduce deaths due to water-borne diseases,
- To advocate on the need for cooperation between OIC member states to reach improved sanitation level,
- To share best practices and discuss technical, political, economic and social solutions.

### Panel information:

Date: 18 May 2016		Time: 14:30
Moderator: <b>Prof. Ahmet Mete Saatçi</b> , President, Turkish Water Institute (SUEN), Turkey		
Rapporteur: <b>Ms. Elif Okumuş Öksüz</b> , Specialist, Turkish Water Institute (SUEN), Turkey		
Session Programme and Speakers:		
No.	Name	Organization
1.	<b>Prof. John Clemens</b>	International Centre for Diarrheal Disease Research, Bangladesh (icddr,b)
2.	<b>Dr. Wan Mansor Bin Hamzah</b>	Ministry of Health of Malaysia
3.	<b>Dr. Ahmed Basel Al-Yousfi</b>	Center of Environmental Health Activities (CEHA) – WHO EMRO
4.	<b>Dr Babiker Ahmed Ali Magboul</b>	Federal Ministry of Health, Sudan



## **Key Questions/Focus Areas to be addressed by Panel Members**

**1. Prof. John Clemens, International Centre for Diarrheal Disease Research, Bangladesh (icddr,b)**



**2. Dr. Wan Mansor Bin Hamzah, Malaysia**

- Facts about waterborne diseases, challenges and necessary actions to overcome them.

**3. Dr. Ahmed Basel Al-Yousfi, CEHA - WHO EMRO**



**4. Dr Babiker Ahmed Ali Magboul, Sudan**

