

In the Name of God





The title of this panel is:

# Water and Health



Institute for Environmental  
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# Water Quality and Health

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# Concept of safe drinking water

Safe drinking water is treated water that has been tested for harmful and potentially harmful substances and has met drinking water quality standards.

# Drinking water quality- Guidelines/Standards

Maximum Contaminant Level (MCL)

Maximum Contaminant Level Goal (MCLG)

- ▶ Physical
- ▶ Biological
- ▶ Chemical

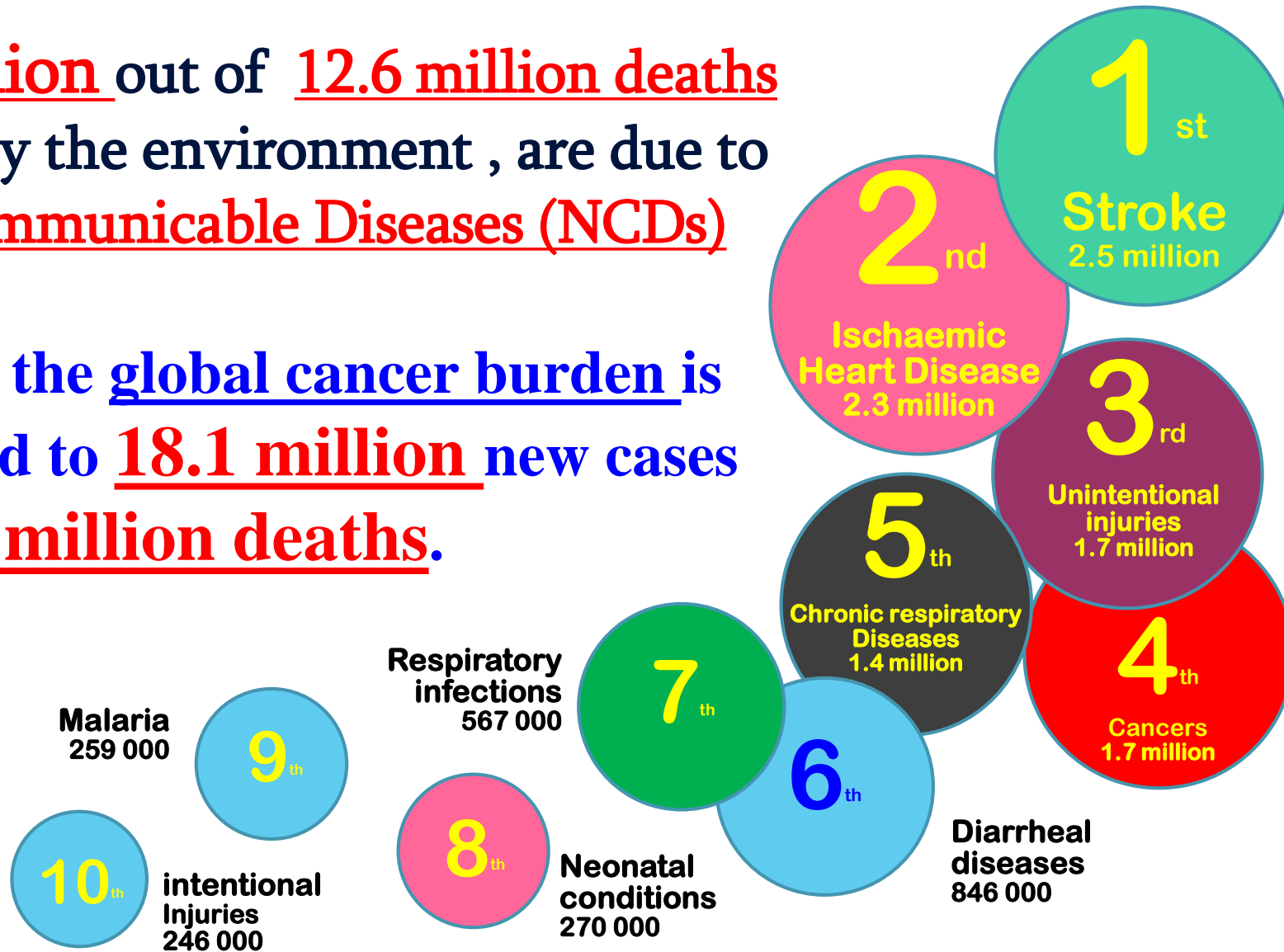
Standard authorities

- ▶ International Guidelines (*WHO, EPA, European Commission*)
- ▶ National Standard (*the first standard for Iran in 1966*)

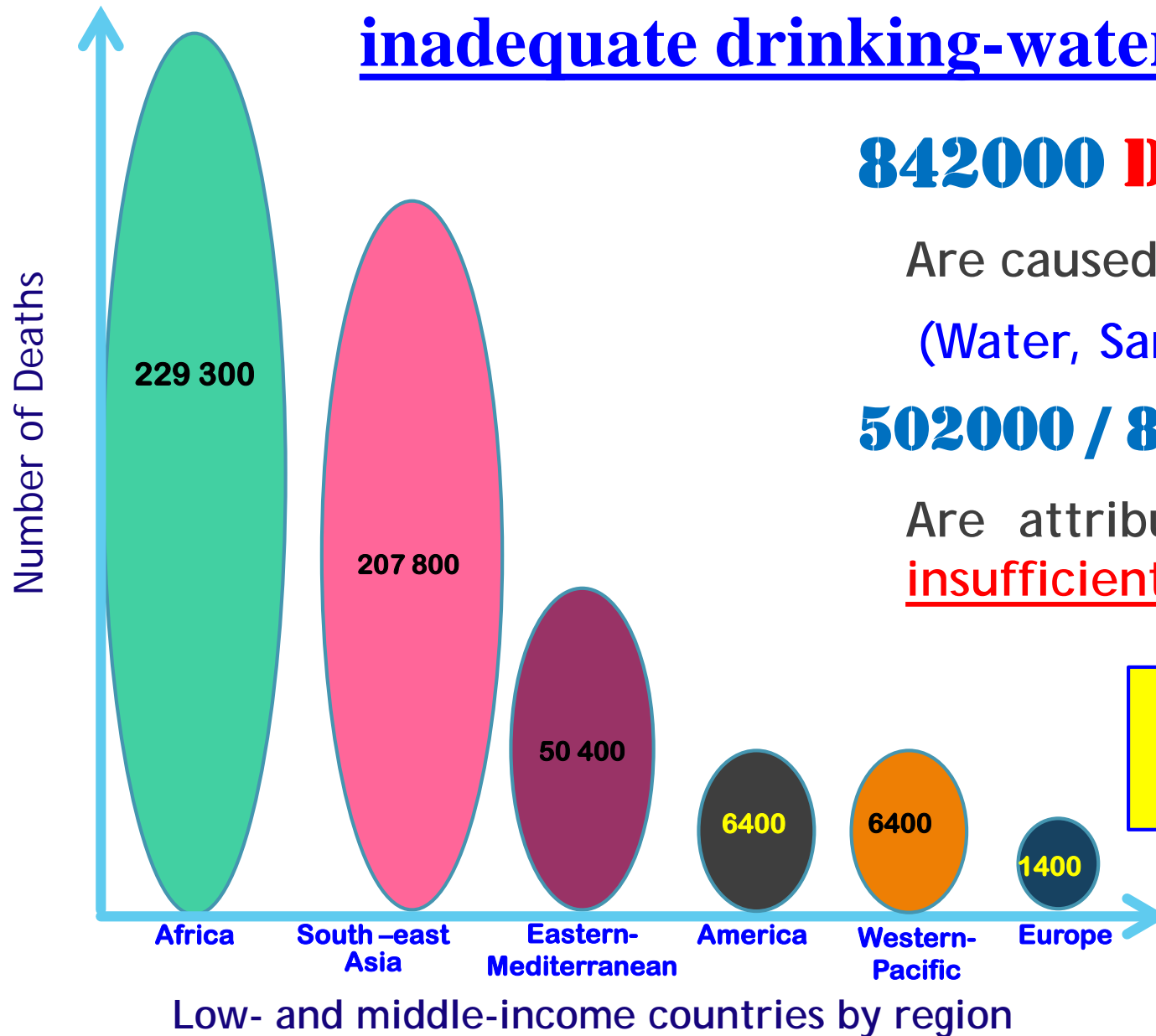
# Top 10 causes of death from the environment

8.2 million out of 12.6 million deaths caused by the environment, are due to Non-Communicable Diseases (NCDs)

In 2018, the global cancer burden is increased to 18.1 million new cases and 9.6 million deaths.



# Death statistics from diarrheal diseases due to inadequate drinking-water



**842000 DEATHS**

Are caused by inadequate **WASH**.  
(Water, Sanitation, Hygiene)

**502000 / 842000 DEATHS**

Are attributed to unsafe and insufficient drinking-water (61%).

Diarrheal diseases account for 1 in 9 child deaths worldwide

# In Iran:

More than **94%** of the people have access to drinking water free from contaminants (Nitrate, fluoride and E.coli):

In urban areas: **97%**

In rural areas: **86%**

**The most important challenge is:**

**No enough integrity in water management .**



## But in the whole **Eastern Mediterranean Region:**

**Inadequate WASH (Water, Sanitation, Hygiene) conditions account for about:**

- ▶ **80,000 annual deaths** from diarrheal diseases.
- ▶ **71,000 annual deaths** occur in *Afghanistan, Pakistan, Somalia, Sudan* and *Yemen*, where WASH conditions are highly deficient.

# Emerging Pollutants and Carcinogens in Water

- ▶ Any synthetic or naturally-occurring chemical
  - pharmaceuticals,
  - personal care products,
  - pesticides,
  - industrial and household products,
  - heavy metals,...
- ▶ Any microorganism that is not commonly monitored or regulated (re-emerging diseases due to resistance to antibiotics)

# Water and Health Panel

## Topics of this panel:

**Water quality and health : Prof. Simin Nasser**

**Water and infectious diseases : Dr. Patrick Smeets**

**Risk of anthropogenic substances in water : Dr. Nicole Nijhuis**

**Water management policies in Iran : Dr. Masud Tajrishi**

**Challenges of water quantity in Iran : Prof. Alirerza Mesdaghinia**

**Water and disasters : Dr. Amir Hosain Mahvi**



**Thanks for your  
Attention**