WHO global and regional developments

- July 2016 in Paris:  *WHO convenes the 2nd global conference on health and climate change*

- October 2016 in Morocco:  *WHO convenes a consultation of health experts to endorse a working paper on the “public health response to climate change in the Region”*

- At COP22 in Marrakesh:  *WHO convenes regional and global high level event/s on health and climate change*
Climate Change and Water Scarcity: Public Health Vulnerability and Response

Hamed Bakir
Coordinator Environmental Health Intervention
Regional Advisor, WSH and Climate Change
Climate Change and Water Scarcity: Public Health Vulnerability and Response

- Climate change and water scarcity
- Health vulnerability to water scarcity
- Framework for climate adaptation to protect health from water scarcity:
  - In the health sector
  - In the water and environment sectors
- Overview of two completed WHO projects on climate change, water and health
We Live in the Most Water Scarce Region

Some countries cannot meet current water demand: example Jordan & Yemen

The situation will get worse: population increases, per capita water availability falls.

Competition will further intensify over the limited water sources: amongst the municipal, agricultural, industrial and commercial water users

Climate change will worsen the situation: rainfall patterns shift as predicted under climate change
Public Health Will Suffer because:

Cities will suffer:

- Service outages; erratic & frequent emergency drinking water services
- Stress on expensive network and distribution infrastructure.
- Remote & less quality water sources requiring complex treatment and expensive desalination.

Agriculture will suffer: Unreliable water for irrigated agriculture will depress farmers’ incomes.

The economy and security will suffer:

- The economic and physical dislocation associated with the unreliability of supplies will increase.
- will exacerbate tensions within and between communities
Climate Change, Water Scarcity and Health Vulnerability

Climate Change

Water Scarcity

- Water quality degradation & Compromised drinking water safety
- Insufficient & interrupted domestic water supplies
- Delayed extension of water services to the unserved
- Desalination for water supply – unaffordable to many countries
- Unregulated wastewater used in irrigation of food crops
- Reduced food production
- Food insecurity

Water & sanitation related disease

Malnutrition
Water Scarcity, Climate Change, and Health

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Climate Change

Water Scarcity
A Framework for Protecting Health from Water Scarcity

• Water governance for health

• Proactive and preventative water safety management

• Regulated and safe use of wastewater in irrigation of food crops
The public health response: Areas of intervention

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Water Scarcity

Climate Change

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World Health Organization
Water Governance for Health

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Regulatory framework on water resource allocation for health
Regulation, policies and programmes on Water for All
Regulatory framework on preventative water safety management
Regulated and safely managed use of wastewater in irrigating food crops
Water governance for health

**WHY?** Secure the allocation of sufficient water supplies for domestic purposes.

**Public health agencies** to develop and negotiate, within the national water resources governance system, *a national policy on water requirements for health protection*.

**Water supply agencies** to ensure delivery of domestic water requirements for health

**Public health agencies** to monitor the impacts of water scarcity on health
Proactive and preventative water safety management plans

**WHY?** ensure safety of water supplies from source to the consumer.

**Health agencies**, as a regulator and in collaboration with the water supply regulators to update national regulations on water safety management requiring the institutionalizing of *water safety management plans*.

**Water supply agencies** to adopt *water safety management plans* as their modality to safeguarding water supplies from source to consumers.

**Health agencies**, undertake regulatory *monitoring and surveillance* of the application of water safety plans and the safety of drinking water.
Regulated and safe use of wastewater in irrigation of food crops

**WHY?** to ensure safety of workers, their families, the communities and consumers of food

**Health agencies** in collaboration with agriculture and food safety stakeholders to develop and enforce *national standards for regulating the use of wastewater in agriculture and establishing integrated safety management systems.*

**Safe food production systems** adopted by stakeholders – sanitation safety plans approach

**Health agencies** to undertake *monitoring and surveillance on compliance and impacts on food safety and health.*
WHO Projects on Climate Change, Water and Health

WHO/UNDP-GEF Global Project on piloting adaptations to protect health from climate change:

Outcome:
• An integrated national management system for safe use of treated wastewater in irrigating food crops

MDG-F UN Joint Programme on Climate Adaptation to Sustain Jordan’s MDGs Achievements:

Outcome:
• Water Safety Plans introduced to 5 utilities (Miyahuna, Yarmouk, Aqaba, Balqa and the South) serving majority of Jordan’s population
• Scientific evidence generated to support the development of national policy on water requirements for health
Thank you and welcome to the workshop