

Olcay Ünver, Ph.D.

Vice-Chair, UN-Water

10th Water Research Horizon Conference

Keynote speech: Water and food security – pathways that leave no one behind and those that do.

18-19 June, 2019, Hannover, Germany

Ladies and Gentlemen,
Friends and colleagues,

I am extremely pleased to be here today and honored that I was asked to give this key note speech – and on a topic I could talk about for a long time: water and food! I guess that's the effect of having worked for many years at the Food and Agriculture Organization of the United Nations.

But it is not in my capacity representing FAO that I am here today, but as Vice-Chair of United Nations Water. For those who do not know UN-Water, it is the coordination mechanism in the UN for all water and sanitation related issues. As there is no single entity or Specialized Agency for water, this is instead how the UN coordinates its work among Agencies, for example like WHO, FAO, UNESCO, and UN Environment– just to mention a few.

There are in fact 32 entities in the UN family that have water and sanitation programmes. UN-Water also consists of international organizations – some of them research oriented like you: such as International Water Management Institute and the International Association of Hydro-Environment Engineering and Research.

I would like to start this presentation by asking who here in this room has seen the film 'the Matrix'?

It's a science fiction film from 1999 where we get to follow a group of heroes who fight a desperate war against machine overlords that have enslaved humanity in an extremely sophisticated virtual reality system.

For those who raised their hands, you probably remember when the hero, Neo, gets asked to choose between a red pill and a blue pill. If he chooses the blue pill he will forget what he has started to understand and live a life in a blissful – yet dishonest - illusion of the harsh reality. On the contrary, if he chooses the red pill, he will get the brutal truth, the reality and desperate freedom.

In many ways, this is what this key note speech is about. Right now, we are at a cross roads. Billions still lack safe water and sanitation, water pollution is worsening, there is too little funding, agriculture places enormous stress on water and our governance systems are weak.

We have a choice: We can choose the blue pill, do business as usual, forget about people's realities. Or we can choose the red pill and act to make a difference.

The blue pill is the path that leaves billions behind. The red pill is the one that creates a future we want for our children and our grandchildren.

Last year, UN-Water released the SDG 6 Synthesis Report 2018 on Water and Sanitation. This was a report that we produced for the High-level Political Forum on Sustainable Development in New York. This is the mechanism where countries review and follow-up on progress made on the Sustainable Development Goals.

Our report does not paint an encouraging picture and argues that we are off track to achieve Sustainable Development Goal 6 by 2030. It shows that countries are facing a range of water issues, from increasing water scarcity to water-related disasters and from inadequate access to safe water and sanitation, to cross-border issues of water resource management.

We found that there are seven main issues:

1. **Billions of people lack safe water, sanitation and handwashing facilities:** 2.1 billion people lack safely managed drinking water and 4.5 billion people lack access to safely managed sanitation. Diarrhoea caused by unsafe water and sanitation kills a child under five every two minutes. The impact on society is massive. Diarrhoeal illnesses caused by unsafe water, poor sanitation and hygiene is linked to 50% of child undernutrition, which can lead to stunted physical and mental development. And, loss of productivity due to those same illnesses is estimated to cost many countries up to 5% of GDP.
2. **Water pollution is worsening:** Water pollution is increasing in many parts of the world with profound impacts on the quality of water available to meet human needs and sustain ecosystems.
3. **Funding is lacking:** Over 80% of countries have insufficient financing to meet national WASH targets.
4. **Governance structures are weak and fragmented:** Political, institutional and administrative practices and processes are inadequate in many countries, particularly those where pressures on water resources are greatest.
5. **Agriculture puts enormous pressure on water:** Agriculture accounts for nearly 70% of global freshwater withdrawals. Although its share of global withdrawals has decreased over the past decades, it increasingly contributes to global water consumption owing to a growing population and changing lifestyle patterns.
6. **Capacities are insufficient:** A serious lack of institutional and human capacity across the water sector is constraining progress, particularly in least developed countries.
7. **Ecosystems and their services are in continuous decline:** The world has lost 70% of its natural wetlands over the past

century, with profound impacts on economic development and social and environmental stability.

This is a complicated picture that requires close collaboration across many sectors and decisive action if we don't want to undermine sustainable development across the board.

If we move over to **food security**, the picture does not get any better: At the current rate of progress, the world will not meet the zero hunger target by 2030, despite major advances since 2000. The 2018 report on State of Food Security and Nutrition by FAO, IFAD and WFP tells us after almost a decade of steady decline, those facing chronic food deprivation, has increased to nearly 821 million in 2017, from around 804 million in 2016, taking us back by nearly a decade in our fight with hunger. What makes the picture even more alarming is the simultaneous rise in obesity, in all regions, regardless of level of development.

There are three major problems:

1. **Malnutrition affects an alarmingly high number of children under age 5:** Far too many children under age 5 are stunted, wasted or overweight—all of which are manifestations of malnutrition. These conditions put children at greater risk of dying from common infections, jeopardize their cognitive development, and increase their vulnerability to non-communicable diseases later in life.
2. **Foreign and domestic investments in agriculture are lagging:** Investing in sustainable agriculture is one of the most effective ways to alleviate poverty, improve food security and reduce hunger and malnutrition. However, both foreign and domestic official investment in agriculture has been declining. The share of aid to agriculture in sector-allocable aid from member countries of the OECD Development Assistance Committee has fallen from nearly 20 per cent in the mid-1980s to only 7 per cent in 2015.

- 3. We need to feed 9 to 10 billion people by 2050:** More than 2 billion people live in countries experiencing high water stress. The share of agriculture in water withdrawals can go up to 90% in some arid countries. FAO estimates that the global food demand will be 50% more than that in 2013. As populations come out of poverty, consumption patterns often change towards more water intensive production. Saving just a fraction of this can significantly alleviate water stress in other sectors; therefore, we consider increasing water efficiency and productivity in agriculture an important part of the solution. This is also true for the energy sector and its increasing water demand, and vice versa, the energy consumption of the water sector continues to rise as well. However, it is also important to underline that standalone, sub-sector solutions do not make a lasting impact in isolation from the solutions needed for the broad or connected sectors and issues such as reduction of food loss and waste, sustainable intensification and diversification of agriculture, and sustainable diets, among others. We know that most of our actions have multiple consequences, positive or negative, intended or unintended. A recent study looking at target-level interactions of four SDGs (zero hunger, good health and well-being, affordable and clean energy, and life below water) identified 316 interactions of which only 12 were neutral. While 238 were found positive, 66, or 20 percent of all interactions were negative. This implies that 1 in every five actions in these four sectors could be setting us further behind. Food-water-energy-zero poverty nexus contain many interactions like this.

We need to be able to look beyond the boundaries of sectors and geographies, see the broad picture and act accordingly to avoid pathways that can compromise the future that we all want. A recent scenario study by FAO on food pathways is quite enlightening in this regard. The *business as usual scenario*, which leaves the challenges unaddressed, was accompanied by what the study calls “*stratified societies*”, which maximizes interests and protects the position of those with decisional power, and “*towards sustainability*”, which aims to ensure equity in access and sustainability. The *stratified societies scenario* maximizes the gross agricultural output and produces as much

as the projected food demand while hunger is left unaddressed, actually worse than in the business as usual scenario. It does this by putting additional strain on land, water, and soil resources, compromising biodiversity and ecosystem integrity and substantially increasing GHG emissions. The “towards sustainability scenario” results in lower agricultural gross output but if we were able to be proactive, decrease food loss and waste while sustainably intensifying agriculture, we could prevent the negative impacts of the other scenarios, help enhance our natural resource base. Such a scenario would also have positive consequences in fighting with hunger, and decreasing GHG emissions. A recent scenario by IEA and OECD has similar features in terms of meeting the energy demand and the respective GHG emissions.

I hope this has given you an overview of the situation we're facing.

Remember, the blue pill or the red pill. We still have a choice.

But there is one issue that doesn't get factored in as often as it should be. And that is migration and its links to water and peace.

This year, the World Water Day campaign and the World Water Development Report carried the theme of 'Leaving no one behind' and put a special focus on migration. This is an area that needs urgent focus in the context of water and food security.

Migration, be it due to war, conflict, poor governance, climatic extremes, or absence of natural resources or in search of a better life, is becoming more and more a topic on the global agenda.

Let's be clear: The relationship between water, conflict and migration is a complex one. Water issues, including droughts and floods, water scarcity and lack of water and sanitation, can contribute to unsustainable conditions that trigger migration and displacements. When combined with poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions, water problems can be the trigger for social disruptions and conflict.

Despite this, the trend is nevertheless clear: water is playing a bigger role in conflict and migration. The number of conflicts where water reportedly played a role has increased three-fold the last decade, showing that water is increasingly a trigger, weapon or casualty of conflict—with significant humanitarian and environmental

consequences. In arid and semi-arid climates, military targeting of water supply points has been used to increase water resource scarcity with the purpose of forced displacement.

It is also clear that environmental issues, climate change and water scarcity will increasingly drive migration. By 2050 between 150-200 million people may be displaced due to increased frequency and severity of climate extremes and weather events, sea level rise, and desertification.

Mass displacement places strain upon water resources and related services, including sanitation and hygiene, at transition and destination points for both existing populations and new arrivals. This can result in marginalization of the displaced population and restricted access to adequate services manifested in a number of ways.

The proper intervention is a concerted response across all levels. We need to strengthen livelihoods and resilience of vulnerable communities in order to ensure that migration always remains a choice for affected populations, not a necessity. We need to reduce hazard vulnerability and address root causes to conflict. And we need to strengthen support to migrants and host communities to ensure no one is left behind – even in the direst of situations.

Not an easy task – but there is hope. And, as the Vice-Chair of UN-Water I have been fortunate to meet one such source of hope first hand. On World Water Day this year, we held an event in Geneva with the High Commissioner of Human Rights, Michelle Bachelet, and the Assistant High Commissioner for Refugees, George Okoth-Obbo. We also had a very special guest to this event: *Maya Ghazal*. Maya is a nineteen-year-old refugee from Syria, a young student aspiring to be a pilot and a vivid advocate for refugees and water. She explained to us how in 2011, when the flame of the civil war in Syria sparked, it was difficult to maintain normal life requirements: water, gas, electricity. She was 12 at the time and with her two younger brothers she was charged with being responsible for water. Children, responsible for something so fundamental, for something we can't live without, for one of our human rights.

To fulfill her duties, she invented five water hacks ranging from installing a water tank on the roof, to limiting showers and being nice to your neighbours - because you never know when you may need to borrow water.

To me, Maya represents the future. Someone who chose the red pill, acted, and became an inspiration for many.

Before I conclude my speech, I'd like to highlight some key messages related to

- 1. Knowing**
- 2. Planning, and**
- 3. Action.**

To **know more** we need to:

- **Better understand the interdependency of the Sustainable Development Goals, particularly SDGs 2, 6, 12, and 15.**
- **Monitor more and get better data:** Less than half of countries have comparable data available on progress towards SDG 6 targets. Additional and better data are required for national, regional and global monitoring of SDG 6. Government efforts Need to intensify and earth observations, citizen science and private sector data can complement that.

To support countries here, the UN-Water is implementing the Integrated Monitoring Initiative, bringing together the eight United Nations organizations that are formally mandated to compile country data on the SDG 6 global indicators.

This joint effort around SDG 6 is especially important with regards to the institutional aspects of monitoring, in particular the integration of data collection and analysis across sectors, regions and administrative levels.

I am also pleased to announce that within the framework of the initiative we are launching the SDG 6 data portal which is a comprehensive website where all the data for SDG 6 are available and where you are able to see global, regional and national progress towards the targets.

To **plan better**, we need to:

- **Adapt to country contexts**

- **Create multi-stakeholder partnerships and strengthen regional integration, and**
- **Implement integrated water resources management.**

To **take action**, we have to

- **Eliminate inequalities**
- **Finance water, sanitation and sustainable agriculture through a new paradigm**
- **Ensure public participation** in decision-making
- **Improve human and institutional capacities, and**
- **Extend the use of smart technologies.**

As we intensify our efforts let's be inspired by the fact that fully and urgently acted upon, water and food security will lay the foundations for a healthier, fairer, more stable, equitable and prosperous world.

I wish you all a fruitful conference and thank you for your attention and patience.