



Opening a faucet and having clean water is a banal gesture for most of us. However, for more than 2 billion people worldwide, it is an impossible desire.

# But it can come true.

# THE EXHIBITION

The new exhibition of Pavilion of Knowledge – Ciência Viva Centre gives voice to the basic right to clean water. In an appealing and positive tone, it invites children and adults to enter, explore and discover the many facets of the availability and use of water on our planet.

The 29 interactive exhibits engage the visitors in a call to action, inspiring them to commit for a future with water for all.

The 4 thematic areas of the exhibition explore the contrast between life with and without access to water. Key messages such as the concept of water footprint, the importance of adequate sanitation, the increasing relevance of efficient water management measures in cities, and the crucial role of water in ecosystems and biodiversity are addressed throughout the exhibition.

The exhibition arises in the context of the International Decade for Action - Water for Sustainable Development and in the framework of United Nations Sustainable Development Goal 6: Water and sanitation for all by 2030. The exhibition will open at the Pavilion of Knowledge in March 2021. From October 2022 onwards it will be available for international rentals.

- 4 thematic areas
- 29 exhibits
- Area: approx. 600/700 m<sup>2</sup>
- Trilingual
- Target audience: families, schools, youngsters, and adults

XOS



# PRESENT WITH ACCESS TO WATER

What is the role of water in ecosystems and biodiversity? In this area, water is presented as a daily necessity, made available through supply and sanitation infrastructure. Consumption patterns are explored, with special focus on water footprint, drawing attention to the consumption levels of a significant part of the planet.









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EXHIBITION WELCOMING

Water particles present the title of the exhibition in a playful way.

# WATER=H<sub>2</sub>0

WATER AS AN ELEMENT

Water is a chemical substance. What are its characteristics and specificities?

#### **BLUE PLANET**

THE AMOUNT OF WATER AVAILABLE ON OUR PLANET AND ITS STATES OF MATTER

From space, our planet is blue. However, of all existing water, only about 1% is available for consumption. In this exhibit, we face the limitation of this scarce and valuable resource.











## WATER CYCLE

THE WATER CYCLE AND THE CONSEQUENCES OF HUMAN ACTION

Our action affects the water cycle through deforestation, overextraction or climate change. This exhibit challenges the visitor to discover the human actions that affect the water cycle.











### **WE ARE WATER**

THE NECESSITY OF WATER IN THE HUMAN BODY

#### WATER IS LIFE

WATER ENABLES BIODIVERSITY

### We are water. Without water we wouldn't survive. In a multimedia game we hydrate the brain, lungs and skin of someone dehydrated. Quick, there is no time to lose!

Throughout the planet, ecosystems need water. Mangroves, coastal areas, marshes, rainforests. This exhibit portraits the immense biodiversity of planet Earth.

#### **USES OF WATER**

#### WATER CONSUMPTION IN DIFFERENT ECONOMIC SECTORS

This exhibit presents the amount of water consumed in agriculture, industry and domestic use.

This exhibit presents the urban water cycle and the infrastructures that support it. From the dam to our houses, and then to a wastewater treatment plant, visitors can follow the path of water in augmented reality.









### **URBAN WATER CYCLE**

THE IMPORTANCE OF THE SUPPLY AND SANITATION INFRASTRUCTURES









#### **INVISIBLE WATER**

THE HIDDEN AMOUNT OF WATER NEEDED TO PRODUCE CURRENT CONSUMER GOODS

Almost everything we produce consumes water, but this consumption is not always visible. An eight-meter-high totem built with water bottles, reveals the water that is used to produce a cup of coffee, a steak or a T-shirt.

#### WATER FOOTPRINT

HOW MUCH WATER - VISIBLE OR INVISIBLE - DO WE SPEND DAILY?

In a grocery shop we can choose products that represent services, actions or goods we use daily. After the selection of the products what will be our water footprint?

This exhibit transports the visitor ton an environment where there is no access to drinking water and confronts him with the reality of millions of people worldwide.









## **HUMAN RIGHT TO WATER**

A LARGE PART OF THE WORLD POPULATION DOES NOT HAVE ACCESS TO WATER IN ACCEPTABLE CONDITIONS [SUFFICIENT, SAFE, ACCEPTABLE, PHYSICALLY ACCESSIBLE AND AFFORDABLE]



# PRESENT WITHOUT ACCESS TO WATER

This area explores inequalities in access to water and the physical and social consequences of the unavailability of clean water. It explores political issues and extreme situations such as conflicts / wars / migrations due to the lack of water. On a more positive note, it focuses on the adaptability of some species, exploring the habitats in which water is scarce.











#### PATH FOR WATER

THE DIFFICULTIES AND EFFORTS CAUSED BY THE LACK OF ACCESS TO WATER AT A REASONABLE DISTANCE

About three out of ten people worldwide do not have easy access to drinking water. In this exhibit the visitor is challenged to carry a jerican and find out how long can he walk. His effort is compared to that of a child who spends 8 hours per day fetching water.

#### **HUNTING DOWN CHOLERA**

THE CONSEQUENCES OF PATHOGENS PRESENT IN WATER

Leptospira and Campylobacter are not just funny names for stuffed toys. These are viruses, bacteria or parasites, which thrive with the lack of sanitation. The visitor's mission is to hunt these pathogens and perceive the impact they can have on health.

#### SANITATION

THE IMPORTANCE OF ADEQUATE SANITATION

An animated film focuses on the importance of sanitation. Diseases, gender inequality, and truancy are some of the consequences of its absence. A new culture of water and sanitation is urgent.

This exhibit shows how the access to water is a source of worldwide conflicts.









### WATER AS A WEAPON

WATER IS BOTH A MOTIVE AND A WEAPON IN CONFLICTS GLOBALLY







### **IF I WERE A CACTUS**

SUPER FEATURES ALLOW ANIMALS AND PLANTS TO LIVE IN EXTREME **ENVIRONMENTS** 

In a fun game the visitor can "dress" the humps of a camel, the exoskeleton of a beetle or the ears of a fox and get to know the adaptations of different species to water shortage.

## WATER MACGYVERS

AMAZING TECHNIQUES AND GADGETS USED AROUND THE WORLD TO CAPTURE, CLEAN AND TRANSPORT WATER

Capturing humidity from the air, filtering dirty water or desalinating seawater are some of the techniques currently used to maximize access to water. Get to know them.

pollution.







## **POLLUTION TUNNEL**

#### POLLUTION IMPACTS ON WATER

The visitor crosses a tunnel surrounded by polluted water and rubbish. This exhibit is a call for action in the matter of water



# FUTURE WITHOUT ACCESS TO WATER

After crossing an area that presents the negative effects of human action on the water available for consumption, the visitor is confronted with disaster scenarios related to the water crises: climate change, desertification and extreme drought, flooding, among other extreme and devastating visions of what the world without access to water could be. Its purpose is to raise awareness for the effects of our behaviors and urge the visitors to make a commitment for the future of water.







#### WHAT WILL OUR FUTURE BE?

THE FUTURE OF WATER DEPENDS ON OUR INDIVIDUAL AND COLLECTIVE CHOICES

The visitor enters a labyrinth and is confronted with different paths that reflect future scenarios in water availability.

### **COMMITMENT FOR THE FUTURE**

TO ENSURE A FUTURE WITH WATER FOR ALL IT IS URGENT THAT EVERYONE ACTS

In this exhibit the visitor is invited to commit to concrete actions for securing the future of water.





# FUTURE WITH ACCESS TO WATER

The tour ends with proposals for future solutions based on innovation and technology, encouraging the visitor to adopt responsible consumption behaviours, in line with the commitment previously made.









#### DESALINATION

CAN DESALINATION BE A SOLUTION FOR THE FUTURE OF DRINKING WATER?

Desalination is already common in some parts of the planet as a solution to recurrent water shortages. From environmental impacts to technological requirements, what defines this complex solution?

### **TEA? COFFEE? SWEAT OR TEARS?**

IN A SPACE STATION NOTHING IS WASTED

Discover how astronauts' sweat or urine become a delicious coffee or a comforting soup.

THE IMPORTANCE OF THE EFFICIENT USE OF WATER INSIDE OUR OWN HOMES

In this efficient house the visitor is a plumber. His challenge is to maximize the reuse of water with the right connections. Will it be from the sink to the shower? Or from the washing machine to the toilet?









## **EFFICIENT HOUSE**









#### **EFFICIENT SHOWER**

A SYSTEM TO REUSE THE SHOWER WATER

Feel like an opera singer while you experience a water recycling shower in this exhibition. It's shower time!

#### **FROM SPACE TO EARTH**

WE KNOW FROM SPACE OUR PLANET IS BLUE, BUT WHAT ELSE CAN WE LEARN ABOUT WATER FROM A SPACE PERSPECTIVE?

Satellites are a crucial help to understand how water resources need to be managed. The work of ESA – European Space Agency, shows us what are the current water and biodiversity challenges and shed light on how to tackle them.







#### **ZERO DAYS ZERO**

DAY ZERO IS A REAL THREAT. HOW CAN WE AVOID IT?

A scenario where water ends in a city is not far from reality in some parts of the world. In this exhibit, the inhabitants avoid the day zero, avoiding waste and water leaks in an urban environment.









#### **BALANCED DISTRIBUTION**

THE ROLE OF WATER IN SUSTAINABLE DEVELOPMENT

This exhibit explores the United Nations' Sustainable Development Goals, associated with water (Goal 6). All parts of the game (Goals) are relevant to achieve global balance.

#### THE RIGHT WATER

HOW MUCH WATER IS THE RIGHT AMOUNT OF WATER?

The efficient use of water in agriculture – by far the largest consumer of water globally - is a crucial step for sustainability. Vegetables and fruits cultivated with the "right water" will be a distintive factor for consumers in the future.









#### WATER BAR

NOT ALL WATER IS THE SAME

In this bar we make a toast to water and to its diversity.



The Pavilion of Knowledge – Ciência Viva Centre, in Lisbon, is the largest interactive museum of science and technology in Portugal. Our exhibitions inspire millions of visitors to explore, experience and better understand the world that surrounds us.

#### FOR MORE INFORMATION:

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