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## WATER IS LIFE

### Handbook on Water and Water Needs

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## Erasmus+ Let's Save Water Project

Our project "LET'S SAVE WATER" (LSW) (2022-1-ES01-KA210-ADU-000082276), framed within the Erasmus+ programme, aims to highlight opportunities for water conservation in our respective countries, Spain and Slovakia, with a special focus on water preservation. Water is an essential resource for life, but negligent human action has depleted natural resources and left thirsty and dry landscapes. The time has come to change this situation. In this project, we want to present simple solutions for water retention in fields, gardens and forests.

The partners involved in this project are Pacto Verde from Huelva (Spain) and Pre edukáciu Sabinova from Sabinov (Slovakia). Both Slovakia and Spain are facing water scarcity, a challenge that directly affects our communities. Until a few years ago, lack of water was not a problem in Slovakia, but Spain is experiencing the most significant drought in the last three decades. Water, as a fundamental component of plants acting as natural carbon sinks, becomes our only hope to preserve our planet. Restoration of forests and agricultural land depends on the availability of water, not in the form of floods, but through gradual absorption into the soil.

We aim to highlight various ways of conserving water in our countries, as well as the development of this handbook, which will be available on the [Pacto Verde website](#) and the [Pre edukáciu Sabinova website](#) as well as on popular platforms such as  [Instagram](#) and  [Facebook](#). It is crucial to show the possibilities of water retention through simple measures.



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## Introduction to the methodology

*"We forget that the water cycle and the life cycle are one"*

Jacques Cousteau

In the heart of the Iberian Peninsula, Spain presents itself as a country of surprising geographical and cultural diversity. From the majestic mountains of the Pyrenees in the north to the warm beaches of the Mediterranean in the east and the vast expanses of olive groves and vineyards inland, Spain's geography is as varied as its history and people.

Within this rich nation, we find Andalusia, an autonomous community that stretches across southern Spain. Andalusia is known for its vibrant culture, historic architecture and, of course, its sunny climate. This region, bathed by the waters of the Atlantic Ocean and the Mediterranean Sea, is also a reflection of the constant challenge of managing and preserving one of the most crucial resources for life: water.

In this handbook, we embark on a journey from the importance of water in our lives, both in Spain and in the region of Andalusia, to a detailed exploration of the water cycle and its influence on the Andalusian landscape. Our perspective is a combination of general knowledge about water and personal experiences living in the beautiful city of Huelva, located in the region of Andalusia, where the relationship with water is fundamental to its identity and development.

With this manual, we want to highlight how water enriches our lives, both in general terms and in a more local and specific context. By sharing examples, both positive and negative, of water management in our community, we hope to inspire a greater understanding and appreciation of this precious resource. As we explore the implications of our actions for water conservation, we invite everyone to join us in the quest for a more sustainable future for both Andalucía and Spain as a whole.



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In the sunny region of Huelva, located in the heart of Andalusia, Spain, water has played a fundamental role in the lives of its inhabitants for centuries. This land, rich in history and culture, finds itself in a delicate balance between the need to preserve its water resources and the growing demand for water in an ever-evolving society.

Water is an essential element in our lives, not only for human survival but also for the prosperity of the Huelva region. From the crystal clear waters of the Atlantic coast to the rivers that meander through its fertile lands, water has been a vital resource for agriculture, industry, biodiversity and the daily lives of the local inhabitants.

The purpose of this manual is to explore the importance of water in our lives from a general perspective but with a special focus on our beloved region of Huelva. We will dive into the water cycle, highlight the imperative need to conserve this precious resource and share our personal experiences as residents of this beautiful land. Through positive and negative examples, we will learn together how to care for and preserve water for future generations.

The partners involved in this project, Pacto Verde and Pre edukáciu Sabinova, are committed to the cause of water conservation in Huelva, and throughout this handbook, we will share our knowledge and experiences in the hope of inspiring others to join us on this important journey towards a sustainable future for our region and our planet. Two handbooks will be produced, one per partner, both handbooks will have a final version in English, Spanish and Slovak.

Welcome to this exploration of water and its conservation needs, mainly in the context of  
Huelva, Andalusia!



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## Chapter 1: Water in Our Daily Lives

Water is a fundamental resource that sustains life on our planet. Its importance for the survival of all living things, including humans, is undeniable. In this first chapter, we will explore the significance of water in our daily lives, from its essential role in survival to the many uses it has both in the home and industry. In addition, we will highlight concrete examples that illustrate how water enriches and benefits our lives.

The proper management of water is essential to ensure the sustainability of our environment and the continuation of life as we know it. Its impact ranges from the most basic level, where it is essential for hydration and maintenance of vital functions in organisms, to more complex applications spanning agriculture, energy generation and industrial manufacturing. In the following, we will delve into the multifaceted relevance of water in different aspects of our lives.

### Importance of water for survival

Water is an essential element for life on Earth. Without access to clean water, humans and other living things would not be able to survive. Our bodies are largely composed of water, and we depend on it for several vital functions.

For humans, water is necessary for hydration, digestion, regulation of body temperature and elimination of waste. Lack of access to clean water can lead to dehydration, disease and, in extreme cases, death. Ensuring a constant supply of clean and safe water is therefore a priority for the health and well-being of society.

Water is also essential for the functioning of terrestrial and aquatic ecosystems. Rivers, lakes and oceans support a diversity of life, and many species depend on water for their survival. In addition, natural water cycles contribute to soil fertility and biodiversity in agricultural lands and forests.



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### Biological and human importance

Water, with its universal presence in biology, stands as the essential building block of all living things. In the particular case of humans, this precious liquid not only makes up a substantial percentage of our body weight but also plays a central role in the intricate meshing of vital organ systems. From the masterful regulation of body temperature to the meticulous orchestration of digestive processes, water manifests itself as a key player in the balance and harmonious functioning of the human biological machinery.

The symbiotic relationship between water and the human body goes beyond a mere need for hydration. It acts as a solvent, facilitating the fundamental chemical reactions that maintain internal homeostasis, allowing essential nutrients to be transported to the cells and waste to be efficiently eliminated. In the body's delicate homeostatic balance, water serves as an indispensable conductor, ensuring the proper function of vital systems such as the cardiovascular, digestive and renal systems.

The relevance of water to human health is not limited to the internal; its impact extends to the skin surface, acting as a key element for the integrity of skin and hair. Skin hydration is essential for maintaining skin elasticity and resilience, acting as a natural defence against external factors such as solar radiation and environmental pollution.

### Common uses of water in households and industry

Water is a versatile resource that plays a key role in our daily activities. In the home, we use water for a variety of purposes, from drinking and cooking to cleaning and watering the garden. Clean water flowing from our taps is a luxury we often take for granted, but it is essential to keep our homes clean and healthy.



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The industry also relies heavily on water. From agriculture, where irrigation is essential for growing food, to manufacturing and power generation, where water is used in industrial processes, its importance is undeniable. For example, in the food industry, water is used to clean and process food. In energy production, it is used in power plant cooling.

In Huelva, a region that has historically been known for its agricultural production and chemical industry, water plays an essential role in the local economy. Farms in the area rely heavily on irrigation to grow a wide variety of crops, from citrus fruits to olives and strawberries. In addition, the chemical industry, which has a strong presence in the region, uses water in its manufacturing processes.

### Examples of how water benefits our lives

To fully understand the importance of water, it is useful to look at how it enriches our lives in many ways. Here, we present some concrete examples of how water benefits people, communities and the environment:

- **Health and Nutrition:** Water is essential for health and nutrition. Drinking enough water helps keep our bodies hydrated, which improves the function of our organs and systems. In addition, water is essential in food production. In Huelva, fruits and vegetables grown in the region, such as strawberries and citrus fruits, depend on irrigation to grow and thrive, contributing to people's healthy diets.
- **Biodiversity:** Aquatic ecosystems, such as rivers and lakes, are home to a large number of plant and animal species. In Huelva, the mouth of the Odiel River is home to important biodiversity, including waterbirds and fish. These ecosystems are fundamental to the natural balance of the region and provide opportunities for wildlife observation.
- **Recreation and Tourism:** The water also has recreational and tourism value. Huelva's beaches on the Atlantic coast attract tourists from all over the world, offering



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opportunities for swimming, surfing and sunbathing. In addition, the region's rivers and reservoirs provide places for fishing and outdoor activities.

- Sustainable Energy: Water plays a role in sustainable energy generation. Hydropower, which uses the energy of moving water, is an important source of electricity in many regions, although it is not as common in Huelva. However, the region has explored other sources of sustainable energy, such as solar and wind power, which rely indirectly on water to maintain a healthy climate for agriculture and wildlife.

In short, water is a precious resource that impacts all aspects of our lives, from our health and well-being to our economy and environment. In the next chapter, we will explore in detail the water cycle and its influence on the landscape of Huelva and the Andalusia region.



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## Chapter 2: The Water Cycle

The water cycle is a fundamental natural process that governs the distribution and circulation of water on Earth. In this chapter, we will explore in detail this amazing cycle, which involves evaporation, condensation, precipitation and infiltration. Through a full explanation of the water cycle and an illustrative diagram, we will understand how this process is essential for life and the environment, especially in the region of Huelva, Andalusia, Spain.

### Explanation of the water cycle

The water cycle is a continuous process in which water changes form and travels through the Earth. It begins with evaporation, which occurs when the sun's heat warms the water in oceans, rivers, lakes and other bodies of water, transforming it into water vapour that rises into the atmosphere.

As water vapour rises in the atmosphere, it encounters condensation. The water vapour particles clump together and become clouds as they cool. This process is similar to vapour condensing on the outside of a glass of cold water on a warm day.

The next stage is precipitation, which occurs when the water droplets in the clouds clump together enough to fall to the ground as rain, snow or hail. Precipitation is crucial for the recharge of freshwater sources such as aquifers and rivers.



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Once the water touches the ground, infiltration begins. This is the phase in which water penetrates the soil and recharges the water table, which is an underground reservoir of water. Water can also flow over the surface in streams and rivers, which eventually returns it to the ocean, completing the cycle.

### Illustrative diagram of the water cycle

An illustrative diagram of the water cycle can help to visually understand this process. Imagine a circular cycle with four main stages: evaporation, condensation, precipitation and infiltration.

- **Evaporation:** In the diagram, the sun shines on bodies of water such as oceans, rivers and lakes, generating upward arrows that represent the evaporation of water. These arrows carry the water towards a representation of the atmosphere.
- **Condensation:** In the atmosphere, arrows representing condensation form clouds. The clouds are connected to the evaporation stage, showing how the cycle is a continuous process.
- **Precipitation:** In the diagram, clouds release downward arrows representing precipitation, which falls back onto the Earth's surface as rain, snow or hail.
- **Infiltration:** Arrows falling on the ground show how water infiltrates into the ground and recharges underground sources, while other arrows flow on the surface, representing the flow of water in rivers and streams.



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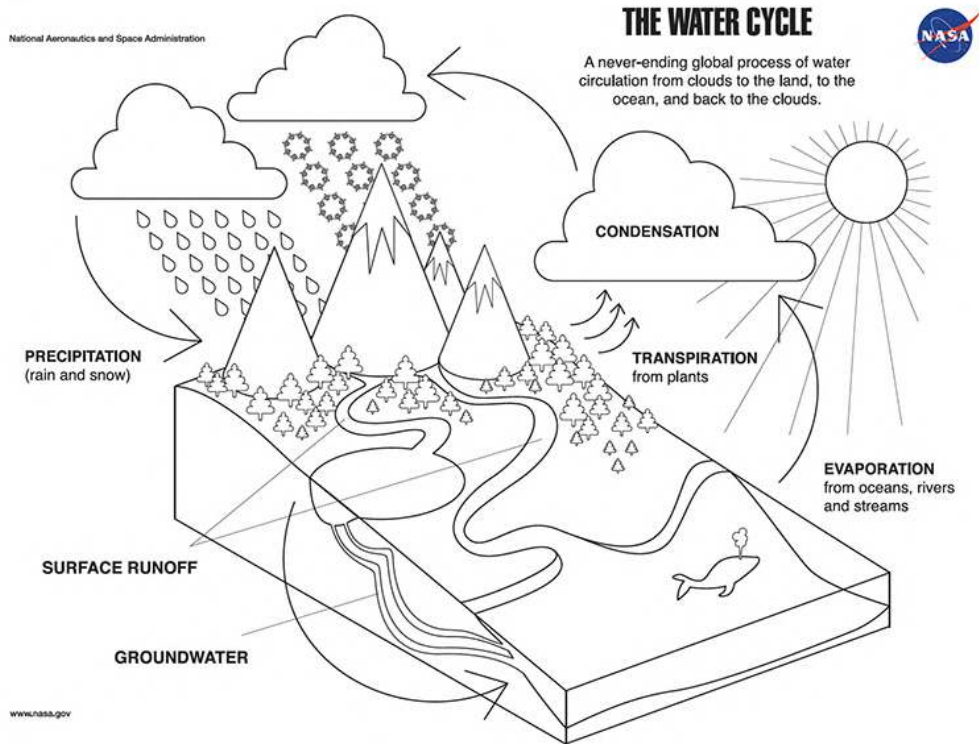


Image 1. The water cycle. Taken from: NASA Global Climate Change

This diagram illustrates how water constantly circulates through these stages, maintaining a vital balance on our planet. The water cycle, also known as the hydrological cycle, is a fundamental process in physical geography and hydrology that describes the continuous, cyclical movement of water on Earth. It is composed of a series of interconnected stages including evaporation, condensation, precipitation, infiltration, storage and flow. In Huelva, where water preservation is essential, this cycle is of particular importance for the region and its inhabitants.

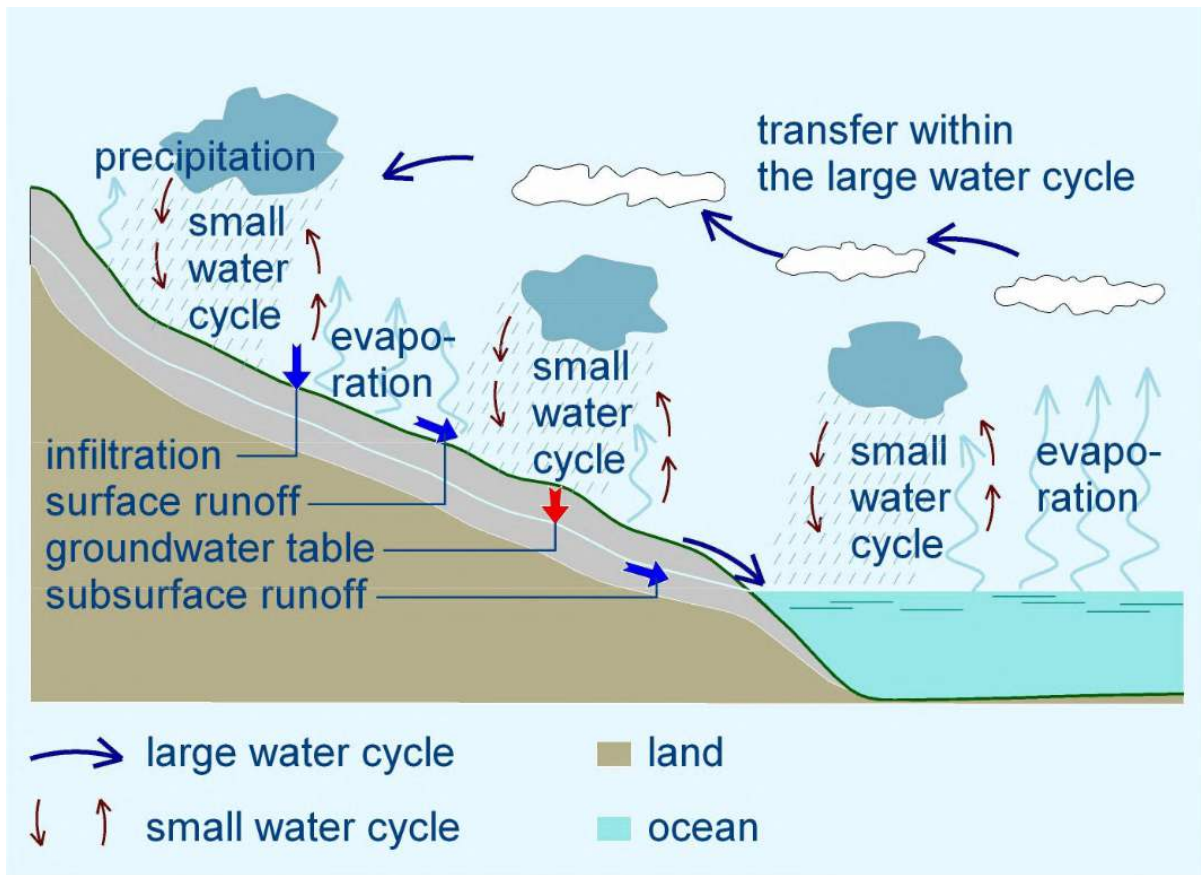
Small water cycle & Large water cycle



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Source: *Water for the Recovery of the Climate: A New Water Paradigm*

The “small water cycle” is water in the atmosphere from evapotranspiration from land. The “large water cycle” is the atmospheric moisture/rainfall that blows onto the landmasses from the ocean. Rainfall that floods off a landscape quickly and back to the sea serves only once. Water held in the landscape, transpired by the vegetation falls again as rain farther into continents and then if caught and transpired again water can be recycled multiple times. It is estimated that water which falls on the ocean side of the Amazon can be re-transpired by the Amazonian forest 7 times before it reaches the Andes. This conveyor belt of evapotranspiration moisture can help green up drylands in continental interiors. This large increase in vegetative cover on the planet and rehydration of soils will result in enough carbon sequestration to bring atmospheric levels of carbon dioxide back to pre-industrial levels.



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### Impact of the water cycle on landscape and environment

The water cycle has a profound impact on the landscape and the environment, both in Huelva and worldwide. Here are some of how this cycle influences the Huelva region and its surroundings:

- **Landscape Formation:** The water cycle plays a crucial role in the formation of landscapes. Erosion caused by precipitation and runoff can shape mountains, valleys and canyons over time. In Huelva, rivers such as the Odiel and Tinto have shaped the landscape, creating fertile valleys and wetlands that support a rich biodiversity.
- **Aquifer recharge:** The infiltration of water into the ground recharges underground aquifers, which are essential sources of fresh water in Huelva. These aquifers supply local communities, agriculture and industry. The water cycle ensures that these resources remain viable.
- **Sustaining Aquatic Ecosystems:** Rivers, lakes and wetlands are critical habitats for many plant and animal species. The water cycle ensures the availability of water in these ecosystems, supporting local biodiversity in Huelva and providing refuge for migratory birds and fish.
- **Water Supply for Agriculture:** Agriculture is vital to Huelva's economy. The water cycle, by providing water for irrigation, enables the cultivation of various agricultural products, such as strawberries, citrus and olives, which are essential for the region and its exports.
- **Climate Change and Variability:** The water cycle is also linked to climate change. Precipitation and evaporation patterns can be affected by changes in global temperatures. In Huelva, as in other parts of the world, it is important to understand how these changes can influence water availability and to take measures to adapt to them.

In conclusion, the water cycle is an essential process that affects the Huelva region and the whole world in a significant way. Understanding this cycle and its influence on the



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landscape and the environment is fundamental to ensure sustainable water use in the region and to preserve its natural resources for future generations. In the next chapter, we will explore the importance of water conservation and how each of us can contribute to this crucial cause.



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### Chapter 3: Water Conservation Needs

Water is a precious and limited resource on our planet, and its conservation is essential to ensure a sustainable future for generations to come. In this chapter, we will explore in depth the fundamental reasons to conserve water, present examples of water conservation practices and highlight how small changes in our daily behaviour can make a big difference in preserving this vital resource.

The term water conservation refers to all activities, practices and techniques aimed at consciously and sustainably using the freshwater available on our planet, as well as protecting and preserving freshwater sources such as rivers, lakes, aquifers, groundwater and wetlands.

Of all the water contained on the planet, only 3% is freshwater; of this amount, only 0.5% is potable and available. The main objective of water conservation is to protect natural ecosystems and to ensure the long-term availability of this vital resource to meet human needs.

#### Reasons to conserve water

Water conservation is essential for many crucial reasons that affect both the local and global levels. Here, we list some of the most prominent reasons:

- **Water Scarcity:** Globally, water scarcity is a growing problem. As the human population increases and water demand intensifies, many regions face the threat of running out of enough freshwater to meet basic needs. In Huelva, despite its proximity to the sea, freshwater is also a limited resource and responsible management is essential to ensure a sustainable supply.
- **Environmental Impact:** Overuse and pollution of water can have a devastating impact on aquatic and terrestrial ecosystems. Overexploitation of freshwater sources can lead to the degradation of natural habitats and the extinction of species. In Huelva, water



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conservation is essential to protect local ecosystems, such as the Paraje Natural Marismas del Odiel, home to numerous species of waterbirds.

- **Human Health:** Water quality is essential for human health. Access to safe drinking water is essential to prevent waterborne diseases. Water pollution can have serious effects on the health of local communities. In Huelva, water conservation is essential to ensure that the water reaching households is safe and free of contaminants.
- **Agriculture and Economy:** Agriculture is vital to Huelva's economy. Water conservation is essential to maintain sustainable agricultural production and to ensure a constant supply of water for irrigation. Proper water management is also important for local industry and employment.
- **Climate Change:** Climate change can alter rainfall patterns and freshwater availability. Water conservation is an important measure to adapt to climate change and ensure that communities are resilient to droughts and other extreme weather events.
- **Preserving Future Resources:** Water conservation is an investment in the future. By using water responsibly and sustainably, we are ensuring that future generations have access to this essential resource and can enjoy the same benefits as we do.

### Examples of water conservation practices

The following are examples of water conservation practices that can be applied at both the individual and community level:

- **Repairing leaks:** One of the most common water wastage problems in households and industries is leaks. Timely detection and repair of leaks in taps, pipes and irrigation systems can prevent the loss of large amounts of water.
- **Efficient use in the garden:** In the Huelva region, where gardening is popular, it is important to use efficient irrigation practices. Drip irrigation, choosing drought-resistant plants and watering at cooler times of the day can help reduce water consumption in the garden.



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- Water use and conservation in agriculture: In agriculture, water conservation is essential. This can be achieved by implementing efficient irrigation practices such as drip irrigation and soil moisture monitoring, selecting drought-resistant crops, applying soil conservation techniques, recycling treated wastewater, and providing training to farmers on sustainable water use practices. These measures not only preserve a valuable resource but also ensure the sustainability of agriculture and food security in the region.
- Use of efficient technology: Installing water-efficient appliances and plumbing systems, such as washing machines and low-flow faucets, can significantly reduce household water consumption. Some examples of the best water-saving technologies are faucet aerators, efficient showerheads, smart faucets, efficient cisterns or hot water recirculation, among others.
- Water recycling: In industry, water recycling systems can be implemented to reuse water in industrial processes. For example, in the food industry, where large quantities of water are used in production processes, many companies are already implementing water recycling systems. Another example is the textile industry, which uses large volumes of water in the dyeing and washing of fabrics, some textile companies have developed more efficient dyeing and washing methods that require less water and energy, thus reducing their water footprint. This not only conserves water but also reduces operating costs.
- Education and awareness: Education and public awareness are key. In Huelva, awareness campaigns can be carried out to promote water conservation and encourage responsible water use practices in both households and businesses. For example, the Coastal Protection Awareness Campaign carried out by Pacto Verde together with the project Protection of the Huelva Coast and its resources (2021-2-ES02-KA210-YOU-000047880), a campaign that was carried out through social media and face-to-face workshops where topics such as climate change, marine litter, the Doñana National Park and the Huelva Forfoyesos were discussed.



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- Water management policies: The implementation of sound government policies and the regulation of water use are essential for sustainable management. This may include the allocation of water rights and the imposition of restrictions in times of drought. Examples in the autonomous community of Andalusia include:
  - [Hydrological Plan for the Andalusian Mediterranean Basins](#): This plan, drawn up in compliance with the European Union's Water Framework Directive, establishes a framework for integrated water management in the Mediterranean basins of Andalusia. It defines objectives and measures for sustainable water management, including the protection of aquatic ecosystems and the promotion of water use efficiency.
  - [Wastewater Sanitation Programme](#): Andalusia has worked to improve the infrastructure for sanitation and wastewater treatment to ensure adequate treatment of water before it is discharged into the environment. This contributes to the conservation of water quality in rivers and coasts.
  - [Drought Management Plan](#): Andalusia has developed drought management plans to address water shortages that occasionally affect the region. These plans establish measures for the efficient management of water resources during periods of drought, such as the restriction of non-essential uses and the promotion of water saving.
  - [Efficient Irrigation Programmes](#): In agriculture, programmes have been implemented to promote efficient irrigation, such as the adoption of drip irrigation systems and soil moisture management. These programmes help reduce water demand in agriculture and conserve water resources.
  - [Incentives for Water Efficiency in Industry](#): Incentives and regulations are in place to encourage water efficiency in industry, including the reuse of treated wastewater and the implementation of water-saving technologies.
  - [Protection of Natural Areas and Aquifer Recharge Zones](#): Andalusia has established policies for the protection of natural areas, such as wetlands and forests, which act as flow regulators and sources of aquifer recharge. The



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conservation of these areas is fundamental to guarantee a sustainable supply of fresh water.

- Protection of water sources: The conservation of natural areas, such as forests and wetlands, is fundamental to the protection of freshwater sources. These areas act as natural filters and flow regulators.

### How small changes can make a big difference

Water conservation can sometimes seem like an overwhelming challenge, but small changes in our daily behaviour can make a big difference in the amount of water we use and waste. Here are some ways each of us can contribute to water conservation:

- Turn off the tap when not in use: When brushing your teeth or washing your hands, turn off the tap when it is not needed. Leaving it running unnecessarily wastes water.
- Collect rainwater: Install a rainwater harvesting system in your home or garden to use for irrigation and cleaning.
- Replace faucets and showerheads: Replace old faucets and showerheads with low-flow models, which use less water without sacrificing performance.
- Save water when washing dishes and clothes: Use washing machines and dishwashers only when you have full loads. Use low-water settings if available.
- Water efficiently: Water the garden early in the morning or late in the evening to avoid rapid evaporation. Consider installing drip irrigation systems for more efficient water use.
- Report leaks: If you notice leaks in public pipes or in your home, report them and fix them as soon as possible.
- Raise awareness: Talk to friends and family about the importance of water conservation and share tips on how to reduce water consumption in everyday life.
- Community involvement: Join local groups and organisations that focus on water conservation and participate in community projects to preserve local water resources.



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- Support sustainable policies: Support politicians and policies that promote sustainable water management and water conservation in your area.
- Continuing education: Stay informed about current water issues and conservation practices through continuing education and research.

In summary, water conservation is a shared responsibility that requires individual and community efforts. Small changes in our daily behaviour can make a big difference in the preservation of this essential resource. In Huelva, as elsewhere in the world, water conservation is fundamental to ensure a sustainable and healthy future for all. In the next chapter, we will share personal experiences of water conservation in the Huelva region and highlight positive and negative examples of water care.



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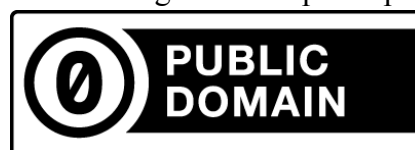
## **Doñana: A Treasure in Danger**

Within the context of Huelva, we cannot overlook one of the most precious and emblematic natural treasures: the Doñana National Park. This sanctuary of biodiversity, declared a World Heritage Site by UNESCO, is home to an astonishing variety of flora and fauna species, including migratory birds, Iberian lynx and fish populations in its wetlands and marshes. Unfortunately, however, this natural paradise is in a critical state due to several threats, including human pressure and illegal uses that are putting its survival at risk.

Despite its incalculable ecological importance, Doñana National Park faces a constant struggle against the overexploitation of its natural resources, unregulated urbanisation in its surroundings and the pollution of its waters. Illegal exploitation of resources, such as groundwater extraction for unauthorised agricultural irrigation, poaching and illegal logging, has put devastating pressure on this fragile ecosystem.

Doñana is not only a treasure of Huelva; it is a heritage that belongs to all humanity. This park plays a critical role in stabilising the global environment and mitigating climate change while serving as an invaluable sanctuary for the conservation of endangered species.

Doñana National Park faces a constant struggle against overexploitation of its natural resources, unregulated urbanisation in its surroundings and pollution of its waters. Illegal exploitation of resources, such as groundwater extraction for unauthorised agricultural irrigation, poaching and illegal logging, has put devastating pressure on this fragile ecosystem. To protect and preserve this priceless natural heritage, concrete measures are needed, such as strict restrictions and regulations on groundwater abstraction in the areas near Doñana to avoid overexploitation, control of urban development in the vicinity of Doñana to avoid degradation of its ecosystems, continue conservation and restoration efforts in Doñana's wetlands and marshes to maintain their biodiversity and ecological functions, continue to invest in research and monitoring to better understand changes in Doñana's ecosystem and take appropriate measures, and encourage citizen participation in Doñana's conservation



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through awareness campaigns and community involvement in decision-making related to its management.

Currently, the Andalusian government has taken legal measures to protect the Doñana National Park, including:

1. Water abstraction restrictions: Strict restrictions and regulations have been implemented on groundwater abstraction in areas near Doñana to avoid overexploitation.
2. Sustainable urban planning: Urban development in the vicinity of Doñana has been controlled to avoid the degradation of its ecosystems.
3. Conservation and restoration: Efforts have continued to conserve and restore Doñana's wetlands and marshes to maintain their biodiversity and ecological functions.
4. Investment in research and monitoring: Continued investment in research and monitoring to better understand changes in the Doñana ecosystem and take timely action.
5. Citizen participation: Citizen participation in the conservation of Doñana has been encouraged through awareness-raising campaigns and community involvement in decision-making related to its management.

In addition, incentives and regulations have been established to encourage efficient water use in industry, programmes have been implemented to promote efficient irrigation in agriculture, and sewerage and wastewater treatment infrastructures have been improved to ensure adequate treatment of water before it is discharged into the environment. These measures aim to ensure sustainable water use in the region and to preserve this vital resource for future generations.

In this handbook, we highlight the urgent need to take concrete measures to protect and preserve this invaluable natural heritage. We will highlight the efforts needed to stop illegal uses that undermine the integrity of Doñana and underline the importance of ensuring



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a sustainable future not only for this park but for the whole region of Huelva. The conservation of Doñana is not only a duty to nature and future generations, but a shared responsibility that we must all embrace with seriousness and commitment.



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## Chapter 4: Consortium experience

In this chapter, we will discuss lessons learned from the negative as well as positive water-related experiences of both partners constituting the project consortium. Through these personal experiences, we hope to inspire and motivate others to take concrete steps to conserve this vital resource.

### Positive examples of water conservation in everyday life

#### Example 1: Efficient use in irrigation

To have a sustainable use of water in the household, efficient watering practices should be carried out to reduce water consumption in the garden. Use a drip irrigation system that delivers water directly to plant roots, minimising evaporation and water waste. Also, select native and drought-resistant plants that require less watering. These measures significantly reduce the water footprint and demonstrate that it is possible to have a beautiful and healthy garden without excessive water consumption.

#### Example 2: Education and awareness

Education on water conservation should be an integral part of teaching. Organise classroom activities and field trips to places such as the Doñana National Park so that students can appreciate the beauty of nature and understand the importance of its preservation. Also encourage participation in community projects to clean up rivers and beaches, where young people can see first-hand the impact of water pollution and take action to improve it. We can affirm that education is a powerful tool to inspire positive change in our society.

#### Example 3: Water reuse

Water reuse is an effective strategy to conserve this vital resource. One example is the installation of rainwater harvesting systems on the roofs of houses, which collect rainwater and store it for use in tasks such as irrigation or cleaning. Water used in washing machines



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can also be reused for watering plants. Encouraging water reuse at home and in businesses can significantly reduce drinking water consumption and help preserve our water resources.

#### Example 4: Sustainable gardens and climate-adapted plants

Encouraging the creation of sustainable home gardens is an excellent way to conserve water. By choosing plants that are native or adapted to the local climate, the need for constant watering is reduced, as these plants are more resilient to local conditions and require less water to remain healthy. In addition, incorporating sustainable gardening techniques, such as using organic mulch to retain moisture in the soil, can help conserve water and maintain a beautiful and thriving garden.

#### Example 5: Summer leisure options and responsible use of swimming pools

In the summer months, many people look for ways to cool off and enjoy time outdoors. A good water conservation practice is to opt for activities that do not consume large amounts of water, such as visiting the beach instead of using a swimming pool at home. Swimming pools require significant water consumption to fill and maintain, and their excessive use can contribute to the depletion of water resources. Enjoying the beach or other outdoor leisure options is not only more sustainable but also allows for the appreciation and preservation of natural environments.

Through these personal experiences, we aim to inspire and motivate others to take concrete steps to conserve this essential resource. Starting with positive examples of water conservation in everyday life, we highlight the case of a household where timely detection and repair of leaking taps and pipes became routine, avoiding the waste of large amounts of water. Also, in the Huelva region, the successful implementation of efficient gardening practices, such as drip irrigation and the choice of drought-resistant plants, has reduced water consumption in the garden. In addition, the adoption of efficient technology, such as low-flow appliances and plumbing systems, has proven to be effective in reducing household water



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consumption. These examples exemplify how individual awareness and action can make a significant difference in water conservation.

### Lessons learned from negative water-related experiences

#### Lesson 1: Awareness of the water cycle

*"Awareness of the water cycle is essential to understanding the importance of water in Andalusia. As a hydrogeologist, I have spent years studying the water cycle in our region. In my work, I have observed how our daily actions directly affect the availability and quality of water in Andalusia. The water cycle in our land is a vital resource that we must protect and conserve. In the last decades we have been able to observe how our Andalusian waters are screaming at us, we have a problem already recognised by the Andalusian government, and it has been understood that the problem of drought in Andalusia can be very limiting in the future"* - Antonio Castillo Martín, hydrogeologist of CESIC and UGR (Consejo Superior de Investigaciones Científicas y de la Universidad de Granada)

#### Lesson 2: Community responsibility

*"Community responsibility in water conservation is fundamental for the sustainable future of Andalusia. As an active volunteer, I have been privileged to see first-hand how our community can make a difference in protecting our local water resources. Through collaboration and collective action, we can ensure water quality and the preservation of our aquatic ecosystems in Andalusia"* - Juan Rodríguez, volunteer for "Sin agua la vida se complica", a campaign run by the Huelva-based company Aguas de Huelva to encourage responsible water consumption.

#### Lesson 3: The connection between water and life in Andalusia



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*"The connection between water and life is undeniable in our beautiful Andalusia. As a marine biologist with experience in the region, I can state with certainty that water is the pillar of biodiversity in our land. Our rivers, coasts and wetlands are home to an amazing variety of species. Protecting and conserving aquatic ecosystems in Andalusia is essential to ensure the richness of our biodiversity". - Manuela Pomares Morgado, Marine Biologist and Scientific Manager of the Environmental and Aquaculture Education Centre FOREDUNES.*

In conclusion, our personal experiences have led us to be passionate advocates of water conservation. Through education, individual action and community collaboration, each of us can play a vital role in protecting this essential resource. Our stories are a reminder that even in the Huelva region, where water seems abundant, we must care for it responsibly and with a love of nature. In the next chapter, we will explore concrete examples of positive and negative water care practices in our region, highlighting how these experiences can influence water conservation.



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## Chapter 5: Dyeing Water: Environmental Pollution from the Textile Industry

The intersection between water pollution by the textile industry and the global water crisis intensifies the environmental challenges we face. As demand for textiles continues to increase, pressure on water resources intensifies, exacerbating water scarcity in already vulnerable regions. Some additional aspects that highlight the link between water pollution in the textile industry and the water crisis include:

- **Regional water scarcity:** In many areas, textile production is concentrated in regions already suffering from water scarcity. Over-abstraction of water to meet the needs of the textile industry further aggravates the local water crisis, affecting communities and the availability of water for various uses.
- **Impact on agriculture:** Water pollution from the textile industry can affect the quality of water used for crop irrigation. Chemicals released during the textile process can enter water sources used in agriculture, compromising food security and the health of farming communities.
- **Threats to aquatic biodiversity:** Chemical waste and microfibres released into water bodies during textile production pose a direct threat to aquatic life. The loss of biodiversity in aquatic ecosystems weakens the resilience of these environments to environmental change.
- **Impacts on vulnerable communities:** The most vulnerable communities often experience the most severe impacts of water pollution and water scarcity. These communities, who are directly dependent on water resources for their daily needs, face increased insecurity and diminished quality of life due to the combination of water pollution and the water crisis. Examples include Palos de la Frontera, a town that is in close proximity to industrial activities and whose residents face significant challenges in terms of access to clean and safe water. Another example is the Sierra de Cazorla, a mountainous region of Andalusia which relies heavily on local springs for its water needs.



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To address this complex issue, it is essential that the textile industry adopts more sustainable practices and that a global awareness of the need for responsible water management is promoted in all sectors. Finding innovative solutions, implementing sustainable technologies and collaboration between industry, governments and communities are critical steps towards mitigating water pollution and building a more sustainable future amid the growing global water crisis.



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Mountain of unwanted clothing from the UK hits Ghanaian beaches. Source: La Verdad Noticias

The intersection of water pollution by the textile industry and the global water crisis requires comprehensive and sustainable solutions that address both the specific problems of textile production and the broader challenges related to water availability. Below are many solutions to mitigate these impacts and move towards a more sustainable future:

1. **Advanced Wastewater Treatment:** Implement advanced wastewater treatment technologies in textile production facilities to effectively remove chemicals and pollutants before wastewater is released into the environment. This may include filtration systems, advanced oxidation processes and the adoption of biological treatment technologies.
2. **Use of More Sustainable Dyeing Technologies:** Develop and implement dyeing methods that use less water and chemicals. The adoption of dry dyeing technologies, batch dyeing and dyeing processes that recirculate water can significantly reduce the water footprint of the textile industry.



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3. Encourage Sustainable Materials Research: Invest in research and development of more sustainable and environmentally friendly textile materials. Explore alternatives to synthetic fibres, such as organic and recycled materials, to reduce the release of plastic microfibres during washing and promote more sustainable fashion.
4. Environmental Certifications and Standards: Encourage the adoption of environmental certifications and standards in the textile industry. Certifications such as the Global Organic Textile Standard (GOTS) and the Environmental Management System standard (ISO 14001) can help ensure more sustainable and responsible practices from production to distribution.

- Global Organic Textile Standard (GOTS):

Description: GOTS is an international standard that applies to textile products, ensuring that products are environmentally and socially responsible throughout the entire supply chain, from sourcing of raw materials to production, labelling and distribution.

Key criteria:

- Organic: Requires at least 95% of textile fibres to be of organic origin.
- Environmental Sustainability: Sets standards for the responsible use of water and energy, as well as the prohibition of certain chemicals.
- Social Responsibility: Includes labour standards that advocate safe and fair working conditions.

- Environmental Management System Standard (ISO 14001):

Description: ISO 14001 is an international standard that sets out the requirements for an effective environmental management system. It applies to any organisation, regardless of size or sector, and seeks to help organisations improve their environmental performance.

Key criteria:

- Environmental Policy: Requires organisations to establish and maintain a documented environmental policy.



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- **Planning:** Includes the identification of environmental aspects, applicable legislation and stakeholder requirements, as well as the planning of environmental objectives and targets.
- **Implementation and Operation:** Focuses on organisational structure, training, communication and documentation of the system.
- **Performance Assessment:** Includes monitoring and measurement of environmental performance and assessment of legal compliance.

Both GOTS and ISO 14001 standards are designed to promote sustainable and responsible practices in the textile industry and in other organisations, respectively. Obtaining these certifications demonstrates an entity's commitment to sustainability and environmental management.

5. **Educate and Raise Industry and Consumer Awareness:** Develop education and awareness programmes targeting both textile industry stakeholders and consumers. Raising awareness of the environmental impacts of textile production and encouraging informed decision-making when choosing sustainable products can generate a significant shift in market demand.
6. **Sustainable Water Resource Management:** Implement sustainable water resource management practices in textile production facilities, prioritising water efficiency and seeking alternative supplies that do not deplete local sources. In addition, encourage the reuse and recycling of water within the facilities to minimise the extraction of freshwater resources.
7. **Collaboration between Industry, Government and Communities:** Facilitate collaboration between the textile industry, local governments and affected communities. Active participation of all stakeholders is essential to develop and implement effective policies, as well as to ensure that solutions adequately address local needs and concerns.
8. **Economic Incentives for Sustainability:** Establish economic incentives that reward businesses that adopt more sustainable practices. This could include tax benefits,



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subsidies for the implementation of sustainable technologies, and recognition of companies that lead in adopting environmentally friendly practices.

9. **Supply Chain Audits and Transparency:** Require environmental audits and transparency throughout the textile supply chain. Ensuring that sustainable practices are applied throughout the entire chain, from raw material production to final manufacturing, is crucial to comprehensively addressing environmental challenges.
10. **Investing in Research for Innovative Solutions:** Allocate funds to research and development of innovative technologies and solutions that can revolutionise the way the textile industry addresses environmental problems. Technological innovation can play a key role in creating more sustainable methods.

In conclusion, tackling water pollution by the textile industry and contributing to the mitigation of the global water crisis requires a multi-faceted approach and active collaboration. By implementing these solutions, the textile industry can move towards more sustainable production, while contributing to the preservation of water resources essential for life on the planet. Awareness, collective action and the adoption of responsible practices are key to forging a future where fashion and sustainability coexist harmoniously.



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## Chapter 6: The UN's call for action to save the Earth's water

A UN report identifies key actions that must be taken urgently to protect freshwater on the planet. The world's water resources are suffering from rampant degradation due to many factors, but these are multiplied by climate change. The impact on people is increasingly evident.

"Water-related disasters are becoming more frequent and serious. Freshwater ecosystems are deteriorating rapidly. In the face of the devastating effects of the global water crisis on people's lives, health and human rights, remedial action must be taken swiftly and systematically". These are the words of David Boyd, UN Special Rapporteur on human rights and the environment.

The global water crisis is one of the most pressing problems facing humanity, and Boyd calls for a "strong and swift" global response. A response that must address the reality that climate change has become a "risk multiplier" that exacerbates water pollution, scarcity and disasters.

Boyd has submitted a report to the Human Rights Council, highlighting that human water use, pollution and degradation of aquatic ecosystems continue to accelerate due to population growth, economic growth, climate emergency, land use change, extractive industry activities, inefficient water use and poor planning, regulation and enforcement. This 'Boyd report', entitled 'Human rights and the global water crisis: water pollution, water scarcity and water-related disasters' (2021), reveals that three out of every four natural disasters recorded in the last twenty years were water-related, including floods, landslides and other extreme weather events.



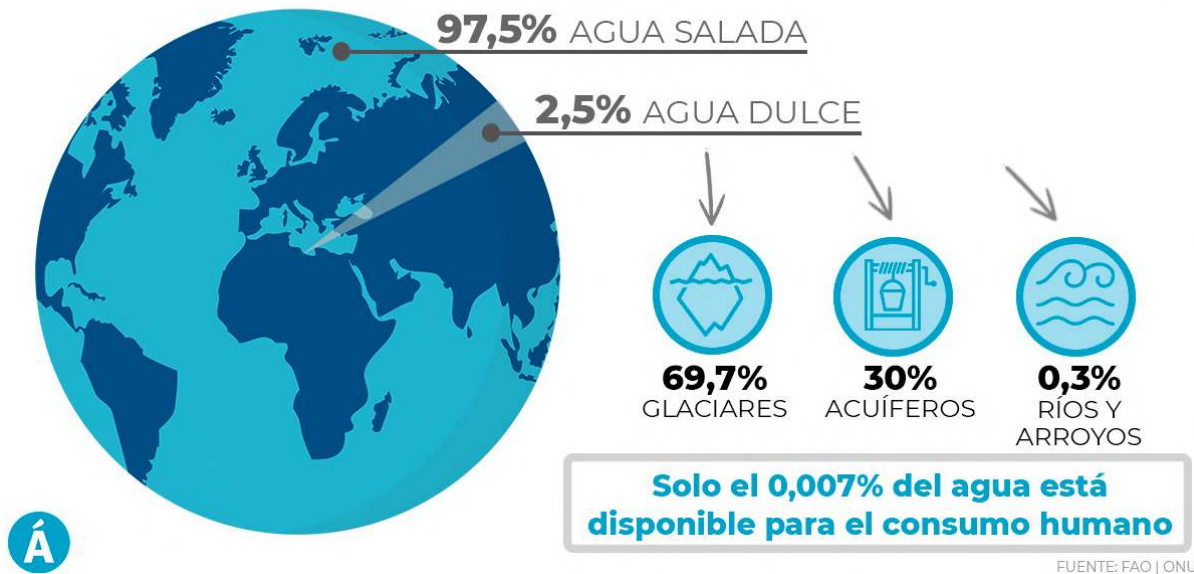
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**Los mares y océanos son solo el 0,023% de la masa total del planeta**



(2021, David R. Boyd).

He adds that it is inexcusable to take "rapid and systematic corrective action". And that the priority must be to "improve conditions for the most vulnerable people". It stresses that half of the world's population lives without safely managed sanitation and calls for "urgent action" to help the more than three billion people who lack access to safe drinking water or suffer regular water shortages.

The global water crisis has a serious impact on human rights, including "the rights to life, health, water, sanitation, food, a healthy environment, an adequate standard of living, development, culture and the rights of the child," says Boyd.

The special rapporteur points to several key steps states should take to address the crisis: "Assess the state of water; conduct legal mappings; develop water-related plans that incorporate rights-based approaches; enforce water-related laws, regulations and standards; evaluate progress; strengthen actions to ensure compliance with human rights; and encourage public participation.



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The goal must be "safe and sufficient water" for all, and healthy aquatic ecosystems. Water must be "protected and conserved for a healthy and sustainable future," Boyd said. He urged the Human Rights Council to issue a resolution recognising that all people everywhere have the right to live in a safe, clean, healthy and sustainable environment.

"The right to a healthy environment requires States to prevent pollution and depletion of water resources, to prevent or mitigate water-related disasters, and to protect or restore aquatic ecosystems" (2021, David R. Boyd).

The special rapporteur includes in his report a long list of measures that states and companies should take immediately. These are some of them:

1. Negotiate a new global treaty for the treatment of plastic waste to prevent its proliferation in water resources.
2. Redouble efforts to move towards a circular economy that generates a pollution-free production model.
3. Accelerate the process of moving away from fossil fuels.
4. Enact stricter regulations and standards on wastewater discharges.
5. Tax companies that pollute water and dedicate those revenues to protecting and restoring the health of freshwater ecosystems.
6. Increase investment in wastewater treatment infrastructure.
7. Use nature-based solutions such as wetland restoration and construction, legally required riparian buffer strips and the creation of protected areas.
8. Ban harmful activities such as hydrofracturing, tar sands extraction and coal mining, which pollute water and aggravate the climate crisis.
9. Implement ecosystem-based watershed management to protect both surface and groundwater sources.
10. Promote healthy forests.
11. Reduce the impact of agriculture on water bodies.



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He also calls for rich states to increase their contribution to meet the cost of ensuring the availability of sufficient fresh water and healthy aquatic ecosystems in low-income countries. To avoid exacerbating debt problems, water-related financial aid to low-income countries should be "in the form of grants, not loans", he says.



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## Chapter 7: Sustainable and Positive Practices

In this chapter, we will explore some sustainable and positive practices that can help reduce water consumption, reuse and recycle this precious resource, and promote water awareness in the community. Through concrete examples and effective techniques, we will demonstrate how each of us can play an active role in water conservation in Huelva and elsewhere in the world.

### Examples of how to reduce water consumption

- Installing low-flow taps: Replacing conventional taps with low-flow taps can significantly reduce water consumption in the home. These devices reduce the amount of water flowing without sacrificing pressure and efficiency.
- Efficient shower use: Taking shorter showers and using low-flow showerheads can save a significant amount of water. Taps can also be turned off while lathering the body or hair.
- Repairing leaks: Water leaks in taps, pipes and irrigation systems can waste large amounts of water. Detecting and repairing leaks promptly is essential to reduce waste.
- Invest in efficient appliances: When purchasing washing machines, dishwashers and other appliances, it is important to choose models that are certified water-efficient. These appliances use less water in their operating cycles.
- Rainwater harvesting: Installing rainwater harvesting systems on the roof of your home or in catchment areas can provide an additional source of water for irrigation and cleaning. This practice is especially relevant in regions with irregular rainfall.

### Techniques for reusing and recycling water

- Household water recycling: Implementing grey water recycling systems in your household can reuse water from washing machines, sinks and showers for garden irrigation and toilet flushing. This technique reduces the demand for freshwater for non-potable uses.



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- Wastewater treatment: In some communities, wastewater treatment systems are being adopted to produce treated water that meets certain quality standards. This treated water can be used for agricultural irrigation or to recharge aquifers.
- Reuse in industry: Companies can implement water recycling systems in their industrial processes to reduce fresh water consumption. This not only conserves the resource but also reduces operating costs.
- Smart irrigation: Using drip irrigation systems and demand-based timers can help deliver just the right amount of water to plants, avoiding overwatering and water loss.

### Promoting water awareness in the community

- Promoting water awareness in the Andalusian community, and in Huelva in particular, is essential to ensure the conservation of this vital resource in the region:
- Public education in Huelva: Organising workshops, talks and awareness campaigns on water conservation in Huelva schools and other educational institutions is essential to raise awareness and promote responsible practices among residents.
- Participation in community projects in Huelva: Involving the Huelva community in river, beach and wetland clean-up projects in the region can help people understand the importance of water conservation and take concrete actions to protect local water bodies, such as the Odiel River or the beaches of the Costa de la Luz. For example, the clean-up days in the Paraje Natural Máximas del Odiel in Huelva organised by the Huelva shopping centre in collaboration with the Huelva City Council.
- Water management policies in Andalusia: Encouraging citizen participation in the formulation of water management policies in Andalusia, and more specifically in Huelva, can ensure that decisions are made transparently and that the water-related needs and concerns of the local community are taken into account. In the new political and institutional context of the European Union, two key policy blocks are shaping irrigated agriculture in Spain. On the one hand, the Common Agricultural Policy (CAP) and environmental policies are increasingly oriented towards the protection of the environment and natural resources. On the other hand, the Water



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Framework Directive (WFD), which aims at the good ecological status of all water bodies and the recovery of costs for the provision of water services, has a direct impact on irrigated agriculture in all regions and farming systems. These policies are likely to lead to significant changes in the current paradigm of irrigated agriculture in Andalusia, anticipating a reduction in water consumption, better management of water resources and soil, with consequent impacts on land management.

- Promotion of water culture in Andalusia: Through the promotion of water culture in the Andalusian region, including Huelva, people can be inspired to value and conserve this resource. This can be achieved through art, music, literature and cultural events that highlight the importance of water in the lives of Andalusians, highlighting the relevance of water in emblematic places such as the Doñana National Park and the rich wetlands in the area.

In summary, water conservation is not the sole responsibility of governments or organisations, but a collective effort that involves every individual and community. Through sustainable and positive practices, such as reducing water consumption, reusing and recycling, and promoting water awareness, we can work together to preserve this vital resource in Huelva and around the world. Every small action counts and contributes to a more sustainable and healthy future for all. In the next chapter, we will continue to explore concrete examples of water care, both positive and negative, in our region, highlighting the importance of individual and community responsibility.



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## Chapter 8: The Future of Water

In this chapter, we will explore the future challenges related to water, highlighting the importance of sustainable management of this vital resource. We will also discuss how each individual can contribute to a better future in terms of water conservation. In addition, we will consider the future of Doñana and the measures needed to protect this endangered natural treasure.

### Future water challenges

The future of Huelva, like that of many regions, faces significant water-related challenges. Some of the most pressing challenges include:

- **Climate Change:** Climate change is altering precipitation patterns and freshwater availability. Huelva is expected to experience changes in rainfall and temperatures, which could affect water availability and increase the frequency of extreme weather events such as droughts and floods.
- **Demographic Pressure:** Population growth and urban development may increase water demand. Sustainable urban planning is essential to ensure that communities have access to sufficient quality water.
- **Pollution:** Water pollution remains a problem, with the discharge of harmful chemicals and agricultural pollution threatening water quality in rivers and aquifers.
- **Agricultural Use:** Agriculture is a fundamental part of Huelva's economy, but it can also be a large consumer of water. Sustainable management of agricultural irrigation is essential to avoid depletion of water resources.
- **Conservation of Doñana:** The future of Doñana remains uncertain due to the threats it faces, including overexploitation of groundwater and unregulated urbanisation. The protection of this national park and its environment is vital to ensure the survival of its unique ecosystem.



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### The importance of sustainable water management

Sustainable water management is fundamental to addressing these future challenges and ensuring an adequate supply of water for human, agricultural and ecological needs. This involves:

- **Efficient Use:** Reducing water waste through efficient practices in households, industry and agriculture.
- **Ecosystem Conservation:** Protecting and preserving natural aquatic ecosystems, such as rivers, wetlands and marshes, which play a critical role in regulating the water cycle and biodiversity.
- **Recycling and Reuse:** Encourage the reuse and recycling of water for non-potable uses, such as irrigation and cleaning.
- **Integrated Management:** Implement integrated water management that considers all demands and ensures equitable and sustainable allocation of water resources.
- **Education and Awareness:** Promote public education and awareness of the importance of water and conservation practices.

### How each individual can contribute to a better future

Every individual can play a significant role in building a better future for Huelva and the world in terms of water conservation. Here are some ways in which you can contribute:

- **Responsible use at home:** Continue to practice reducing water consumption in your home, such as turning off the tap while brushing your teeth and fixing leaks immediately.
- **Community involvement:** Get involved in local water conservation groups and community water body clean-up and restoration projects.



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- Education and awareness: Spread awareness of the importance of water conservation through education and awareness in your community and local schools.
- Support sustainable policies: Support politicians and policies that promote sustainable water management and the protection of local aquatic ecosystems, such as Doñana.
- Involvement in reuse projects: Consider implementing water recycling systems in your household or supporting community wastewater treatment projects.

### The future of Doñana

The drought situation in Doñana is a growing concern that threatens the survival of this valuable ecosystem. The lack of water directly affects the wetlands and marshes of Doñana, which are vital for the biodiversity and ecological balance of the region.

To address the drought in Doñana and ensure its future, it is essential to implement effective measures. Among the actions needed are:

- Water abstraction restrictions: It is crucial to establish strict restrictions and regulations on groundwater abstraction in areas near Doñana. Overexploitation of water resources can have devastating consequences for the aquatic ecosystems in the area.
- Sustainable urban planning: Controlling urban development in the vicinity of Doñana is essential to prevent the degradation of its ecosystems. Uncontrolled urban sprawl can lead to the loss of natural habitats and increased stress on water resources.
- Conservation and restoration: Continued efforts to conserve and restore Doñana's wetlands and marshes are essential. This involves the active protection of natural habitats, the reintroduction of threatened species and the appropriate management of natural resources.
- Investment in research and monitoring: Research and continuous monitoring are key to better understanding changes in the Doñana ecosystem. This will provide crucial



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information for informed decision-making and the implementation of timely measures in response to environmental challenges.

- Citizen participation: Involving the local community and society at large in the conservation of Doñana is essential. Awareness campaigns, educational programmes and active community participation in decision-making are powerful tools to boost awareness and action for conservation.

The future of Doñana is closely linked to sustainable water management in the Huelva region and ultimately globally. This call to action highlights the need to address drought and water management in a holistic and collaborative manner. Water conservation is a shared responsibility that requires the serious and determined commitment of society, authorities and environmental organisations.

In short, the future of water in Huelva and elsewhere in the world depends on our present and future actions. Through sustainable management, education and active participation in the community, we can contribute to a better and more sustainable future for all. Water conservation is a shared responsibility that we must embrace with seriousness and determination.



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## Conclusion

In this handbook, we have explored the importance of water in our lives, both globally and locally in Huelva, Andalusia, Spain. We have traversed the water cycle, understanding how this essential resource flows through our existence and its impact on the landscape and the environment. We shared personal experiences, both positive and negative, related to water, and learned valuable lessons about the need to conserve this precious resource. We examined positive, sustainable practices that can help us to reduce water consumption reuse and recycle this resource, and promote water awareness in our community. Finally, we have considered future water challenges and the importance of sustainable water management to ensure a better future. Now, in this conclusion, we will recap the key points and call for action.

### Recapitulation of key points from the handbook

- Importance of water in our lives: Water is essential for the survival and well-being of all living things. Not only is it essential for hydration and personal hygiene, but it also plays a crucial role in agriculture, industry and the balance of ecosystems.
- The water cycle: We understood the water cycle, which includes evaporation, condensation, precipitation and infiltration. This natural process is fundamental to maintaining the Earth's freshwater supply.
- Personal experiences: Through the personal experiences of both partners, we learned how our experiences can influence our awareness of water and our actions to conserve it.
- Sustainable and positive practices: We explored examples of how to reduce water consumption in the home and industry, as well as techniques to effectively reuse and recycle water.
- Promoting community awareness: We discuss how community education and awareness are essential to promote water conservation and active participation in water care projects.



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- Future water challenges: We recognised the challenges facing the future about water, including climate change, population pressure, pollution and the conservation of iconic places such as Doñana.
- The importance of sustainable management: We highlighted the need for sustainable water management including efficient use, conservation of aquatic ecosystems, recycling and reuse, and public education.
- Call to action: We made a call to action for each individual to become an active advocate for water conservation and take concrete steps for a better future.

### A call to action to promote water conservation

Water conservation is not a task that can be delegated to governments and organisations alone. Each of us, as individuals and community members, has a vital role to play in protecting this precious resource. Here are some concrete actions we can all take:

- Continuing education: Keep your water conservation education up to date. Research and stay informed about current water-related challenges and best conservation practices.
- Responsible use at home: Implement water-efficient practices in your home, from installing low-flow faucets to detecting and repairing leaks.
- Participate in community projects: Join community projects to clean up and restore local water bodies. Active participation in your community can make a big difference.
- Support sustainable policies: Support politicians and policies that promote sustainable water management and conservation of aquatic ecosystems.
- Promoting awareness: Share your knowledge about the importance of water and conservation practices with friends, family and colleagues. Awareness is contagious and can inspire others to take action.
- Respect for Doñana: Recognise the importance of Doñana and advocate for its protection. Contribute to efforts to ensure that this natural treasure endures for future generations.



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### Acknowledgements and farewell

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We want a future where water remains abundant and accessible to all, where aquatic ecosystems flourish and where Doñana and other natural treasures are preserved and enjoyed for generations to come. Together, we can make a difference and ensure a sustainable and healthy future for our community, our region and our planet.



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