CIEAH Update

International Chair for Advanced Studies on Hydration
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EDITORIAL

HEALTHY AND SUSTAINABLE HYDRATION

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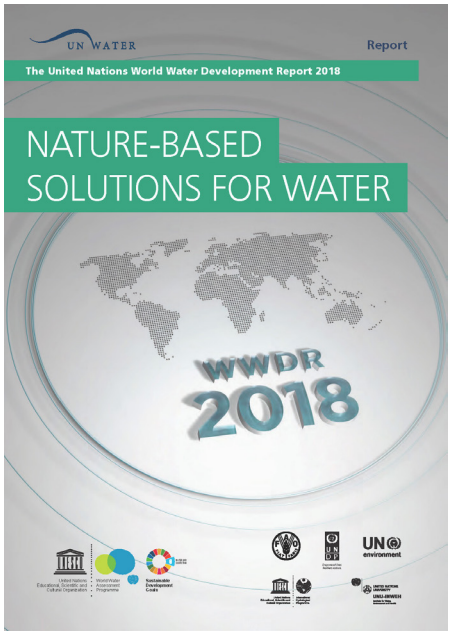
Water is a physiological necessity for human survival. Total body hydration and the balance between input and output of water are under homeostatic control by mechanisms that modify excretory pathways and stimulate intake (thirst). Adequate hydration is essential for health and wellbeing. Every cell in the human body needs water. Hydration is central to the most basic physiological functions, such as regulating blood pressure and body temperature, hydration and digestion.

Scientific evidence about the relation between hydration and health demonstrates, on the one hand, the link between adequate water intake and survival, improved health, physical and mental performance, safety and productivity at work, chronic illnesses such as headaches and constipation, and even cancer, and on the other hand, contemporary water management challenges across all sectors, particularly regarding water for agriculture, sustainable cities, disaster risk reduction and water quality. With a rapidly growing global population, demand for water is expected to increase by nearly one third by 2050. In the face of accelerated consumption, increasing environmental degradation and the multi-faceted impacts of climate change, we clearly need new ways to manage competing demands on our precious freshwater resources.



Goal 6 of the 2030 Agenda for Sustainable Development recognises the importance of ensuring availability and sustainable management of water and sanitation, and Goal 14 recognises the importance of oceans to drive global systems that make the Earth habitable for humankind. How we manage this vital resource is essential for humanity as a whole, and to counterbalance the effects of climate change. Over three billion people depend on marine and coastal biodiversity for their livelihoods. However, today we are seeing 30 per cent of the world's fish stocks overexploited, reaching below the level at which they can produce sustainable yields. Oceans also absorb about 30 per cent of the carbon dioxide produced by humans, and we are seeing a 26 per cent rise in ocean acidification since the beginning of the industrial revolution. Marine pollution, an overwhelming majority of which comes from land-based sources, is reaching alarming levels, with an average of 13,000 pieces of plastic litter to be found on every square kilometre of ocean.

The SDGs aim to sustainably manage and protect marine and coastal ecosystems from pollution, as well as address the impacts of ocean acidification. Coinciding with the publication of the United Nations World Water Development Report 2018, the CIEAH, through its director, would like to combine efforts to promote sustainable use of water in the framework of the United Nations 2030 Agenda for Sustainable Development. It should be noted that the CIEAH is integrated into the IUIBS, which is part of the **Spanish Network for Sustainable Development (REDS)** of the worldwide Sustainable Development Solutions Network (SDSN).

References

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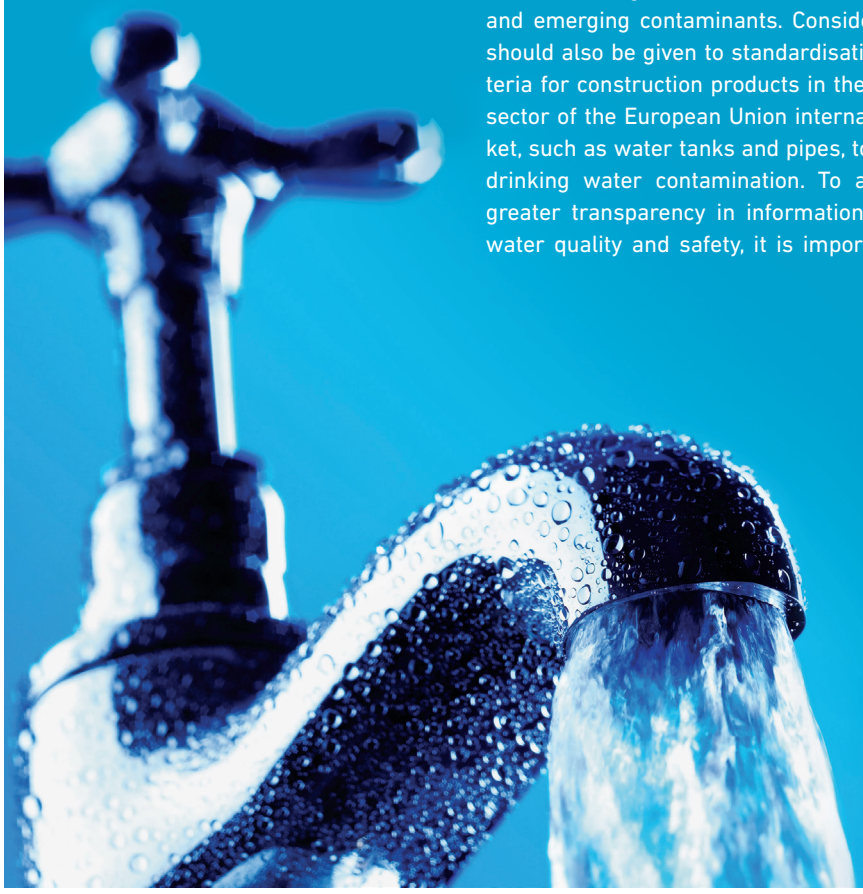
HYDRATION SCIENTIFIC LIBRARY

NEW CHALLENGES IN WATER FOR HUMAN CONSUMPTION

Dr. José Jaime Sadhwani Alonso Professor in Environmental Technologies. University of Las Palmas de Gran Canaria. Science Advisory Board of the International Chair for Advanced Studies on Hydration.

The European Union has continually harmonised legislation through various directives on the quality of water intended for human consumption. Drinking water is typically defined in regulations as water that meets a series of organoleptic, physical and chemical characteristics in terms of undesirable substances, toxic substances, microbiological substances and radioactivity, with maximum allowable values for a series of parameters. These maximum values correspond to the minimum admissible quality in drinking water. Control measures for the quality of water for human consumption are based on compliance with health criteria and installations that allow supply from catchment to consumer. They aim to ensure the wholesomeness, quality and cleanliness of water to protect human health from the adverse effects of any type of water contamination. Recent scientific evidence and the need to incorporate a new approach to improve the quality and safety criteria of water for human consumption are likely to lead to changes in regulations. The World Health Organisation has even recommended including safety criteria on legionnaire's disease, chlorate and emerging contaminants. Consideration should also be given to standardisation criteria for construction products in the water sector of the European Union internal market, such as water tanks and pipes, to avoid drinking water contamination. To achieve greater transparency in information about water quality and safety, it is important to give the public more specific and easily accessible data (including on line) about the quality of drinking water and its supply in the area where they live. This will increase confidence in tap water and significantly reduce plastic from bottled water, helping to reduce the CO_2 footprint in line with Goal 6 of the 2030 Agenda for Sustainable Development and the Paris Climate Agreement. The future of quality and access to water intended for human consumption should be considered with the public in mind and include the concept of environmental sustainability; that is, from the perspective of providing even more guarantees about safety and health increasing transparency in information about tap water for consumption. These measures would lead to more efficient management of available water resources and reduce the environmental impact on our planet.



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WEBSITE NEWS

ACCESS THE NEW MATERIAL ON THE MULTIMEDIA CONTENT SECTION OF OUR WEB SITE

In this section you can access the full content of the CIEAH scientific session "Hydration and Health in 21st Century Europe", held on 22 March 2018 at the Royal European Academy of Doctors.

More information on our website ***www.cieah.ulpgc.es***

HEALTH PROFESSIONALS CORNER

WATER AS A KEY FACTOR IN ASSESSING SUSTAINABLE DEVELOPMENT GOALS

Dr. Javier Benayas Professor in Ecology, Autonomous University of Madrid. Member of the Advisory Council of the Network for Sustainable Development (REDS/SDSN Spain).

In the next decade, Spain and 192 other countries face the most ambitious challenge in social, economic and environmental development: the commitment to achieving the 17 Sustainable Development Goals (SDGs) established by the United Nations through a development agenda to be implemented by 2030. Two of these goals are closely linked to water: SDG 6 is about access to water as a resource and SDG 14 is about the state of marine and aquatic ecosystems. Other goals are also indirectly related to the valuable resource of water.

At the beginning of 2015 the **Spanish Network for Sustainable Development (REDS)** was created. The goal of the Spanish chapter of the global SDSN (Sustainable Development Solutions Network) is to drive application of the SDGs. One of the REDS studies with greatest impact is the publication of the SDG Index, a ground-breaking report prepared annually by the SDSN and the Bertelsmann Stiftung that ranks 157 countries by their level of compliance with the SDGs. The results of the index are very interesting because they show that all countries, whether they are wealthy or developing, must act urgently to achieve the sustainable development goals, because no countries comply with all 17 SDGs. The SDG Index provides an overview of where we started from and where we're headed, through quantitative data and a presentation with colour panels that's highly visual and easy to understand.

In the case of Spain's results, the two goals most closely associated with water have completely different scores. Goal 6 has a score of 9 out of 10, indicating that a high percentage of the population has good access to drinking water and an efficient water treatment network. In contrast, goal 14 is the only one of the 17 SDGs under par, with a score of 4.5 out of 10. Although Spain has a high percentage of marine reserves, levels of overfishing, contamination of coastal waters and the state of their biodiversity leave plenty of room for improvement in the future. The overview of compliance with these two SDGs is similar in other European and OECD countries. Developing countries tend to obtain better results in the indicators associated with social content than with environmental goals. The most important challenges these countries face are in the fight against climate change (SDG 13), preserving ecosystems (SDG 14 and 15) and correcting consumption and production systems based on unsustainable practices (SDG 12). More advanced countries also face major challenges and must actively contribute to achieving a better and more sustainable world by ensuring global wellbeing through the 17 SDGs.

CIEAH EVENTS

MEETING OF EXPERTS ON HYDRATION AND SUSTAINABILITY

On 12 and 13 May 2018 a meeting of experts will be held in Bilbao on **"Hydration and Sustainability"**. Organised by the CIEAH in collaboration with the Spanish Society of Community Nutrition (SENC), the Spanish Nutrition Foundation (FEN), the Foundation for Nutrition Research (FIN), and the Physiology of Obesity and Nutrition Online Research Group, the meeting will include the participation of a multidisciplinary group of Spanish experts. The aim is to join forces to promote sustainable use of water in the context of the United Nations 2030 Agenda for Sustainable Development. The event will be held as a run-up to the **III INTERNATIONAL V SPANISH HYDRATION CONGRESS**, on in Bilbao from 13 to 15 May.

CIEAH NEWS

SCIENTIFIC SESSION BY THE CIEAH AT ROYAL EUROPEAN ACADEMY OF DOCTORS, BARCELONA, ON "HYDRATION AND HEALTH IN 21st CENTURY EUROPE"

Coinciding with World Water Day (22 March 2018) and aiming to raise public awareness about the importance of adequate hydration, the CIEAH held a scientific session on "Hydration and Health in 21st Century Europe" at the Royal European Academy of Doctors (RAED), Barcelona. Moderated by Prof. Dr María dels Angels Calvo Torras, Chair of the RAED Health Sciences Section, the session included a presentation by Prof. Dr. Lluís Serra Majem, Director of the CIEAH and Professor of Preventive Medicine and Public Health, University of Las Palmas de Gran Canaria (ULPGC), on scientific evidence of the relationship between hydration and health, in which he outlined the current challenges of water management in all sectors. Prof. Dr Javier Aranceta Bartrina, Latin America Director of the CIEAH, spoke about hydration recommendations in the Spanish and international dietary guidelines. The session also included the participation of Dr Rafael Urrialde de Andrés, Nutrition and Health Director of Coca Cola Iberia, who spoke about the vision of the industry in his presentation "Water and other ingredients in the hydration process". Faustino Muñoz Soria, Sommelier and Director of Barcelona's emblematic delicatessen Colmado Quílez, closed the session with a talk on "Water in cooking and the restaurant industry". Full information about the session is available on our web site:

cieah.ulpgc.es/en/events-barcelona-2018

WHAT'S NEW?

SPECIAL EDITION OF THE JOURNAL BEVERAGES: "BEVERAGE INTAKE IN VULNERABLE POPULATION GROUPS"

Dr Maria Kapsokefalou, member of the CIEAH Scientific Committee and guest editor of the special issue of the journal Beverages, invites you to submit a manuscript to this special edition, *"Beverage Intake in Vulnerable Population Groups"*.

In this Special Issue we will present new approaches and new data that fulfill the information gap and increase awareness on the importance of beverage intake in children, pregnant or breastfeeding women, individuals with physical or mental disabilities, elderly, ethnic minorities, refugees or financially deprived individuals.

Detailed information about the special issue is available at the following link:

www.mdpi.com/journal/beverages/special_issues/Beverages_Intake_Vulnerable_Population

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