



Water Efficiency

World Plumbing Council

September 2015





1.0 Objective

The prime challenge and objective for water efficiency is in preserving the world's precious and finite water resources. The World Plumbing Council supports the need to "Use Water Wisely and Save Water Safely" and recognises that "without water there is no life and without sanitation life is short".

2.0 Introduction

One hundred and fifty years ago, life expectancy and general health were both short and unpleasant. In the developed countries, the invention of the WC, the supply of wholesome drinking water and the introduction of sewerage systems have transformed lives.

Yet, 40 percent of the world's population does not have access to proper sanitation, a working sewerage system or wholesome drinking water.

According to the Second UN World Water Development Report, if present levels of consumption continue, two-thirds of the global population will live in areas of water stress by 2025. Increasing human demand for water, coupled with the effects of climate change, mean that the future of our water supply is not secure. As of now, 1.1 billion people do not have safe drinking water; added to this are the changes in climate, population growth and lifestyles. The world population is increasing rapidly - 3 billion in 1959, 5 billion in 1987, 6 billion in 1999, 7 billion in 2011 and 7.3 billion in 2015. However, the water available remains the same. There are 330 trillion gallons of water on the planet, 3 percent fresh of which 2 percent is frozen. The remaining 1 percent of our "drinking water" is shared amongst a growing population. Out of the total water consumed, less than 10 percent is for human/domestic consumption - the largest consumers being agriculture and industry. The efforts of the plumbing industry will be generally limited to conservation from this 10 percent!

The World Health Organisation (WHO) believes that "Water is a basic nutrient of the human body and is critical to human life". The WPC has been recognized as a non-governmental organisation (NGO) in relations with the WHO. We have worked closely with WHO on a variety of projects, including the following publications: Health Aspects of Plumbing (<http://tinyurl.com/p5vkts4>) and Water Safety in Distribution Systems (<http://tinyurl.com/o824pww>).

3.0 Statistics

- 748 million people, roughly one in ten of the world's population, have no choice but to get water from wherever they can, including a dirty or contaminated stream, river or pond (WHO/UNICEF Joint Monitoring Programme (JMP) Report 2014);
- Half the hospital beds in developing countries are filled with people suffering from diseases caused by poor water, sanitation and hygiene (UNDP Human Development Report, 2006);
- Nearly half the people who gained access to water between 1990 and 2008 live in India and China (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation 2010);
- The average person in the UK uses 150 litres of water a day. In Australia, it's around 500 litres and in the USA over 570 litres (UNDP: Human Development Report, 2006);
- Water in Accra, Ghana, costs three times as much as in New York (UNDP, 2006);
- Women in Africa and Asia often carry water on their heads weighing 20kg, the same as the average UK airport luggage allowance (UNDP: Human Development Report.)



4.0 Water efficiency – what is it?

Water efficiency is reducing water wastage by measuring the amount of water required for a particular purpose and the amount of water used or delivered. It is different from water conservation as it focuses on reducing waste and not restricting use.

Examples of water efficient steps include: fixing leaking taps (faucets), taking showers rather than baths and installing displacement devices inside toilet cisterns. These are things that fall under the definition of water efficiency, as their purpose is to obtain the desired result or level of service with the least necessary water. However, there are many countries that do not have the luxury of these appliances, meaning that water is an even more precious resource.

Personal hygiene, bathing, showering and toilet flushing account for 60 percent of water used in western households, with a further 20 percent used for washing clothes and dishes. With trends showing a greater increase in western use of potable water and with water stress and scarcity impacting on greater parts of the globe, global governments are seeking to address and adopt water efficient technologies and better practices.

*Worldcount.com.

5.0 Water-saving product schemes

Labelling water-using products is a growing practice across the globe, with many initiatives being implemented. The global map shows the varying schemes already in existence across the continents. Consumer labelling has a pivotal role to play in influencing behaviour change, a fact that is already evident.

Labelling not only provides the consumer with sufficient information to make an informed choice at point of sale, it also provides the manufacturer with a competitive tool and aids research and development for greater sustainable products.

Quality water efficient products, and by its association energy, is only part of the equation. A change in behaviour is primary to driving efficiency measures. Consumers must be encouraged to undertake small changes such as:

- ✓ Turning taps (faucets) off when not in use
- ✓ Maintaining products in good working order
- ✓ Reducing shower times by one minute per shower
- ✓ Don't use the WC as a rubbish bin

There are an increasing number of approved products across the world which are recognised as being water efficient. The schemes recognised by the World Plumbing Council are as follows:

Ref:	Country/Area	Scheme	Scope	Website
1a	Australia	Water Efficiency Labelling Scheme (indoor use)	Mandatory	http://goo.gl/MDRwqs
1b	Australia	Smart Approved Watermark (outdoor use)	Voluntary	http://goo.gl/dRxRxZ
2	Canada	WaterSense	Voluntary	https://goo.gl/lhsiYV
3	China	Water Conservation Certification	Voluntary	http://goo.gl/cBw5i
4	Europe	European Water Label	Voluntary	http://goo.gl/t4WUuU
5	Hong Kong	Voluntary Water Efficiency Labelling	Voluntary	http://goo.gl/v627RH
6	India	Water Efficient Products-India	Voluntary	http://goo.gl/sZdcO8
7	Malaysia	Guidelines Voluntary WEPLS	Voluntary	http://goo.gl/94i7ZZ
8	New Zealand	Water Efficiency Labelling Scheme	Mandatory	http://goo.gl/hyPZu9

9	Portugal	National Plan for Efficient Water Use	Voluntary	http://goo.gl/pAs5zg
10	Singapore	Water Efficiency Labelling Scheme	Mandatory	http://goo.gl/iGkp9w
11	UAE	Emirates Authority for Standardisation and Metrology (ESMA)	Mandatory	http://goo.gl/jvoYT0
12	United Kingdom	ECA Water Technology List	Voluntary	http://goo.gl/XJ8xps
13	United States	WaterSense	Mandatory	http://goo.gl/hp6WuR

The following map details areas across the world where approved water saving appliances are available.

Water Efficiency Schemes Recognised by WPC



1a	Australia	Water Efficiency Labelling Scheme (indoor use)	7	Malaysia	Guidelines Voluntary WEPLS
1b	Australia	Smart Approved Watermark (outdoor use)	8	New Zealand	Water Efficiency Labelling Scheme
2	Canada	WaterSense	9	Portugal	National Plan for Efficient Water Use
3	China	Water Conservation Certification	10	Singapore	Water Efficiency Labelling Scheme
4	Europe	European Water Label	11	UAE	Emirates Authority for Standardisation and Metrology
5	Hong Kong	Voluntary Water Efficiency Labelling	12	United Kingdom	ECA Water Technology List
6	India	Water Efficient Products-India	13	United States	WaterSense

The introduction of effective product labelling promoting the value of using water wisely and demonstrating product efficiency is a positive proactive step to having consumers commit to water efficiency and energy conservation.

We all have a role to play!

6.0 Further information

If you require further information, or wish to provide details of approved water efficiency schemes in a country or area that is not currently listed, please contact Kevin Wellman through the following email: kevinw@ciphe.org.uk. The WPC Executive Board is grateful to colleagues from the Bathroom Manufacturers Association (UK) and IAPMO (US) for their assistance in developing this information on water efficiency.