

EFBW

Bottled Water

Achieving a Sustainable Life Cycle



About EFBW

The European Federation of Bottled Waters (EFBW) is the voice of the bottled waters industry in Europe. A not-for-profit trade association based in Brussels, EFBW has a membership base of 26 national trade associations which together represent over 500 natural mineral and spring water producers across Europe. EFBW works closely with European and international institutions which regulate bottled water. EFBW is an active member of the European Food and Drinks Association (CIAA) as well as the International Council of Bottled Waters Association (ICBWA).

This first edition of the EFBW sustainability report highlights the industry's long commitment to protecting the environment and showcases the numerous achievements in the field of source protection, recycling and efficient use of energy and water consumption.

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TABLE OF CONTENTS

THE ENVIRONMENT : OUR TOP PRIORITY	1
PROTECTING CATCHMENT AREAS	2-3
WATER EFFICIENCY	4-5
REDUCING CO2 EMISSIONS	6-7
OPTIMISING TRANSPORT and LOGISTICS	8-9
PACKAGING	10-13
CORPORATE SOCIAL RESPONSIBILITY	14-15
CONCLUSION	16
APPENDIX	17-18

PROTECTING THE ENVIRONMENT : OUR TOP PRIORITY

Environmental protection is a key priority for the members of the European Federation of Bottled Waters and the industry as a whole.



During the last ten years considerable improvements have been made along the production process to reduce the industry's environmental impact, through effective water resource management, lowering carbon and water footprints, optimising logistics and transport, reducing waste and packaging, and promoting measures for recycling and reuse of materials.

By implementing ecological policies and putting in place energy efficient measures, the industry is playing its role in tackling climate change and preserving the planet for future generations.

In fact, the sector has a long history of protecting natural resources. Conservation of underground springs began as early as the 19th century and since then, respect, responsibility and care for the environment has remained at the top of the agenda.

Natural mineral and spring waters are a gift of nature and lie at the heart of the sector's activity. Sustainable development is a fundamental objective and a prerequisite to safeguard the future of the industry.

Bottled water companies are continuously driving forward with proactive, innovative solutions to meet the environmental challenge. At the forefront of business sustainability, they are working hard to improve their environmental performance through efficient and strategic resource management.

This study highlights the sector's environmental best practices. The report showcases what various bottled water companies have achieved as well as their ongoing efforts to be environmentally responsible. By drawing on examples, this study hopes to illustrate how the industry has clearly placed environmental protection and the sustainable life cycle of its corporate strategy.

PROTECTING CATCHMENT AREAS

Water - the most precious and vital of natural resources – is the raison d'être of the bottled water industry. Comprehensive ground water management is therefore crucial to ensure protection of the source from contamination and to guarantee both the quality and quantity of natural mineral and spring waters.



Environmental conservation is nothing new for the bottled waters industry. In Europe, bottlers have been protecting catchment areas as early as the 19th century to safeguard the ecosystems through which water filters to its source.

To best protect the natural environment, many producers have established long standing partnerships with local communities and authorities in order to raise awareness on natural habitats, to promote sustainable development

and to advance environmentally-friendly agricultural practices. Protection efforts put in place include limiting human activity, banning the use of pesticides and improved farming techniques.

In addition, effective protection of water resources also includes monitoring spring flows and water levels.

Water is a renewable resource, replenished continuously through the hydrological cycle. Only a fraction of renewable groundwater - merely 0.02 % is abstracted annually for bottled water.

European producers of bottled water have been protecting catchment areas as early as the 19th century!

The Fagne Catchment Area, Belgium

The Fagne de Malchamps catchment area in the Ardennes is the largest in Europe and one of the oldest, established by the Spa Group in 1889. The protection zone comprises 13,177 hectares of deciduous trees, wetlands and rare flora and encompasses some 30 underground sources which feed the 3 Spa Springs (Reine, Barisart and Marie-Henriette).

Since 1967, the Spa Group is in partnership with the region's National Forestry and Waters Commission to optimise silviculture operations. The company has also initiated the use of sand to replace salt for snow removal, waterproofed parking lots and promotes sustainable development within local communities.

In 2006 the company also rehabilitated its former Bru bottling site, investing 1.5 million euro to return it back to nature and the plantation of 400 indigenous shrubs and trees.



AGRIVAIR for Vittel , Hépar, Contrex, France

In 1992, Nestlé Waters established an independent agricultural advisory body, known as Agrivair, to help protect the catchment areas around the underground water sources of Vittel, Hépar and Contrex in France. For the last 17 years, Agrivair has collaborated closely with local farmers to promote environmentally-friendly farming techniques and encourage sustainable agriculture, such as eliminating the use of pesticides, reducing nitrates and promoting crop rotation. Agrivair also helps farmers with grants, research and technical assistance.

Working with local communities, Agrivair has played an instrumental role in protecting the impluvium – some 10,000 hectares across 12 different communes - by the successful management of farming areas, forests, parks and railroads to help preserve the natural water quality.

Evian Mineral Water Catchment Area, France

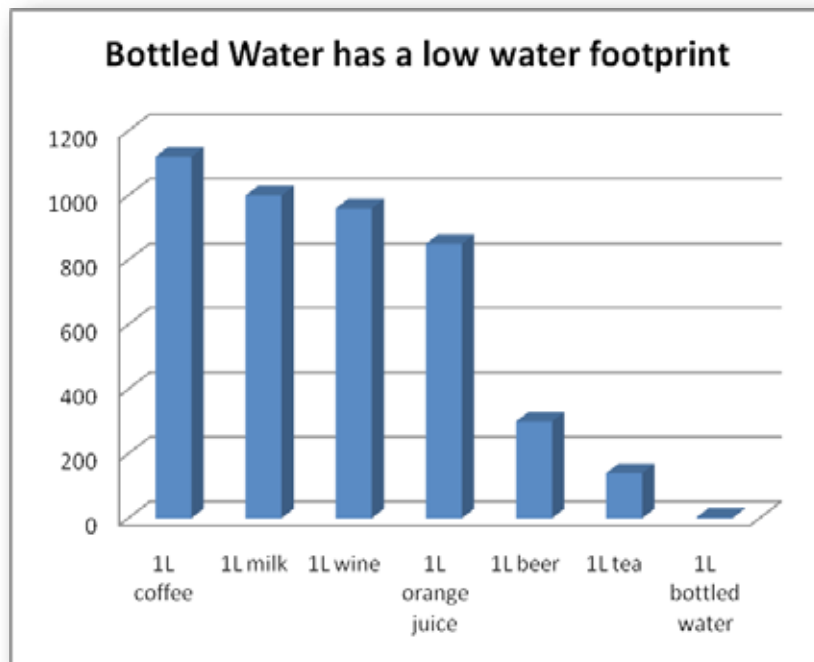
Evian has long been involved in water preservation. As early as 1926, the brand defined a protection zone around the Cachat groundwater source in France in order to limit human activity in the region. Preserving the catchment area composed of forests, meadows and wetlands atop the Gavot Plateau in the French Alps is a key priority for Evian, for this is where rain and snow seep into the ground to then collect and filter to its source.

In 1992, the brand formally created the Association for the Protection of the Evian Mineral Water Catchment Area (APIEME) to encourage cooperation between local farmers, communities and authorities, promoting sustainable development in the 35 square kilometre impluvium and focuses on protecting the area's wetlands.

WATER EFFICIENCY

Typically it takes less than 2 litres of water to produce 1L of bottled water. The industry has by far the lowest water ratio as compared to all other packaged food and drinks. In fact, water usage throughout the lifecycle is continuously decreasing.

Improving water efficiency is an important objective for the sector. European producers actively monitor their consumption of water for on-site industrial operations and have implemented various innovative procedures and technologies to reduce their water footprint.



Source : www.waterfootprint.org

Bottled water has the lowest water footprint of all drink and food products

Evian

Innovative ideas for water savings include replacing industrial water along Evian conveyor belts with an alternative recyclable fluid that is then re-used for cleaning.

Reducing water along the production line fits into Danone's overall commitment to water efficiency. **The group has saved 3.5 billion litres of water in the last 5 years.**

NaturAqua, Hungary

Since 2006, the NaturAqua mineral water bottling plant in Zalaszentgot, Hungary, has implemented a system where waste water goes through a neutralizing system before entering the town's sewage network and then is further treated in the local wastewater plant.

91% of waste water is recycled.

Chaudfontaine, Belgium

Chaudfontaine has lowered the amount of industrial water it uses by approximately 200,000 litres with various water saving techniques, including reusing industrial water to cool its machinery.

In addition, the Coca-Cola Belgian production site in Ghent stocks 100,000 litres of treated water for emergency use, to extinguish fires.

Radenska, Slovenia

By making changes in its production processes – such as installing a new bottle washer, Radenska in Slovenia has reduced its industrial water by 188 000 m³ since 2003.

The amount of producing 1 L of water has now been reduced to 1.67 L in 2008 down from 2.08 L in 2003.



REDUCING CO2 EMISSIONS

The sector has put forward ambitious targets to reduce its carbon footprint – one of the key indicators of environmental performance.

The carbon footprint measures the amount of greenhouse gases produced through the burning of fossil fuels emitted over the full life cycle of the product – from bottling, packaging, distribution, recycling to final disposal.



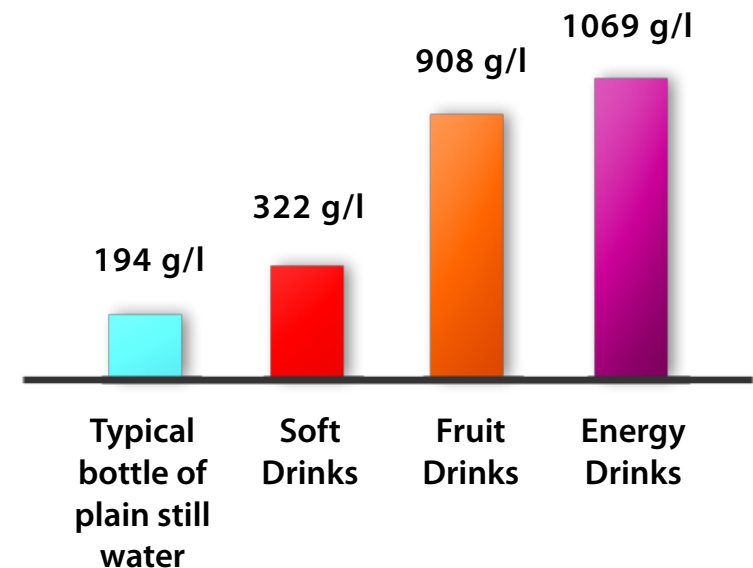
Though bottled water is considered to have the lowest carbon footprint of all foods and of all packaged beverages, producers are working continually to make further improvements such as using new technologies and energy saving measures.

Energy Efficiency

The European bottled waters sector strives to optimise operations in order to be as energy efficient as possible. The last decade has seen genuine engagement with significant results. Initiatives include:

- Voluntary reduction of energy use
- Fuel switching and renewable energy
- Using new energy efficient and low carbon technologies
- Participation in national or industry-wide energy efficiency schemes
- Energy audits and feasibility studies

INDICATIVE MEASURE OF CO2 g/l PER BEVERAGE



Source: Danone

REDUCING CO2 EMISSIONS – CONTINUOUS IMPROVEMENTS

Spa, Belgium

Spa Monopole has reduced CO2 emissions by 40% since 1990 by making changes throughout its production process.

Initiatives include replacing fuel with natural gas and improving insulation; Spa headquarters in Brussels as well as its plants (Spa Monopole, Bru in Belgium and Brecon in Wales) use electricity from renewable energy.

In 2008 the Spa Monopole factory installed a 2 MW CHP (co-generation) unit, reducing the CO2 emissions associated with the site's global energy consumption by 13%.



Randegger, Germany

Initiatives such as sourcing all its power from a regional hydroelectric power station and by using wood granules for heating have allowed Randegger to reduce its overall energy impact.

700 tons of CO2 were saved in 2008 due to a switch in renewable energies.

Nestlé Waters

Since 2002 Nestlé Waters achieved an 11% reduction in energy consumption at factory level and in the last 5 years has cut CO2 emissions by 30% for every litre of bottled water produced. Since 1998, the production volume has almost doubled, resulting in a greenhouse gas eco-efficiency improvement of 55%.

Chaudfontaine

Energy consumption at the Chaudfontaine plant has dropped 50% due to the installation of a new geothermal station which recuperates the mineral water's natural heat (37°C at source).

With ventilators, the heat is recovered and then redistributed to warm the production site throughout the year.

The geothermal system is also used to cool Chaudfontaine mineral water to 15°C.



OPTIMISING TRANSPORT and LOGISTICS

It is estimated that between 15%-30% of the industry's carbon footprint is due to transport. Fully aware of the challenges faced, the sector is pursuing a wide range of initiatives to increase transport efficiency and sustainability, including decreasing miles, using alternative and less polluting modes of transport such as rail and sea, introducing fuel efficient fleets, maximizing deliveries and distance travelled, as well as collaborating with supply chain partners.



Bezoya, Spain

Bezoya has significantly improved transport efficiency by improving the routing system and optimising both the assignement of orders and loads.

By supplying its mineral water directly from the source in Spain, the company has reduced the number of kilometers covered in one year by 6.2% and reduced transportation by 10% overall, by increasing the load rates. Furthermore, Bezoya has taken measures to use vehicles propelled by compressed natural gas (CNG) or liquefied petroleum gas (LPG).

Danone by river, rail and sea

Danone has put in place an integrated approach for the global distribution of its mineral water brands. Arriving by train to the French cities of Macon and Lyon, bottles are loaded onto container barges to journey along the Saône-Rhône river to the port of Marseille.

Maritime transport is then used to ship the bottled water on to its final destinations worldwide. In 2006, river freight kept 5000 trucks off the road and allowed more than 100 million bottles of water to be transported.

OPTIMISING TRANSPORT and LOGISTICS

Buxton

To boost transport efficiency and reduce empty road miles, Nestlé Waters UK is working closely with its suppliers to increase the load of Buxton mineral water in each delivery vehicle.

A new partnership with Sainsbury's has reduced empty journeys dramatically, to only 5%. In addition, the company has increased deliveries directly from the source to 55% in 2008, up from 3% in 2004.

Coca-Cola, Belgium

Taking action to reduce environmental impacts, Coca-Cola Belgium has initiated the use of hybrid vehicles that combine both a diesel engine with an electric motor. This innovative technology is particularly well suited for short distance travel with many stops and starts, reducing fuel consumption, emissions and noise pollution.

Vittel and Contrex

By replacing transport from trucks to trains, Nestlé Waters has succeeded in reducing emissions by 90% for the Vittel and Contrex factories in France and Antwerp, Belgium.

Prior to 2006, empty containers were transported by truck from Belgium to France, where they were filled and transported by train to Antwerp. 6000 trucks have been kept off the road and now 143 trains filled with pallets travel to Antwerp every year.



Did you know?
Diesel/electric delivery trucks can reduce fuel consumption by 25%-30% and cut CO2 emissions by as much as 40%.



PACKAGING – REUSE AND RECYCLING

Packaging plays a vital role in protecting the integrity of a product and ensuring the quality and safety of food.



All packaging used by the bottled water industry is 100% recyclable - be it plastic, glass or aluminum cans. The sector supports comprehensive recycling solutions to reduce waste and to maximize the re-use of materials.

The recycling rate is growing steadily across Europe. In parallel, continuous efforts are being made by the industry to reduce the amount of plastic in water bottles and to minimize packaging as a whole.

Though recycling rates vary across Europe, there has been a steady increase in the capture of PET bottles, from 35% in 2005 to 48% in 2009. In fact PET bottles largely contribute to meeting EU recycling targets for plastic packaging. Companies are working closely with local authorities to raise awareness and encourage national recycling schemes. Simultaneously, water bottlers are investing in new recycling technologies to use greater amounts of recycled materials in packaging.

Valvert

Valvert packaging uses 100% recycled cardboard and paper labels. The introduction of 25% material made from recycled PET to produce the Valvert bottle, means 1400 tonnes fewer CO₂ emissions, 4200 fewer barrels of petrol used and 4500 trees saved every year.

Chaudfontaine

In 2006, Chaudfontaine was awarded the Bronze Star at the Starpack Industry Awards for introducing a fully recyclable transparent label for its glass water bottle. Made of polypropylene, the label easily rinses off with water and can be recycled for reuse.

Recycling

Recycling is a critical step towards environmental protection. Processing used materials into new products reduces resources, saves primary energy, prevents pollution and lowers green house emissions.



The industry has long been involved in advancing recycling strategies and some of the sector's leading companies were amongst the first to initiate the "green dot scheme".

While materials used by the bottled waters industry are 100% recyclable (glass, plastic, caps and labels) the significant challenge to the sector is recovery.

PACKAGING – R-PET

R-PET

Recycling PET (polyethylene terephthalate) plastic bottles is also an important step forward in reducing packaging waste.

R-PET is PET that has been previously used in bottle manufacturing and then collected and recycled for re-use. A truly sustainable material, R-PET requires less energy to produce than brand new bottles and minimizes natural resources.

Giving a second life to PET plastic bottles has seen a wide range of uses. R-Pet can be integrated into new plastic water bottles, converted into other plastics (such as pipes, canisters, and containers) or made into textile fibers (including carpets, blankets, and insulation and fleece sweaters). The content of R-PET varies across brands, from very small quantities to up to 50%. The average amount of R-PET content in new water bottles is around 25%.

Spa

Since 1998, Spa PET bottles contain **25% R-PET** which represents a saving of 16,416 tonnes of virgin materials for bottle production and 41,000 tonnes of reduced CO2 emissions as of 2000.

Font Vella

This brand of Spanish mineral water has reduced plastic packaging by 15% since 2000, saving 8 million tons of PET.

Font Vella is also the first brand in Spain to incorporate **25% R-PET** into the manufacture of its new bottles.



PACKAGING – LIGHT WEIGHTING

Light Weighting

Reducing the weight of bottles means reducing the amount of plastic used and the lighter the bottle, the less emissions are released during transportation. Since 1996 there has been a 17% reduction in the overall weight of PET bottles used by the sector.

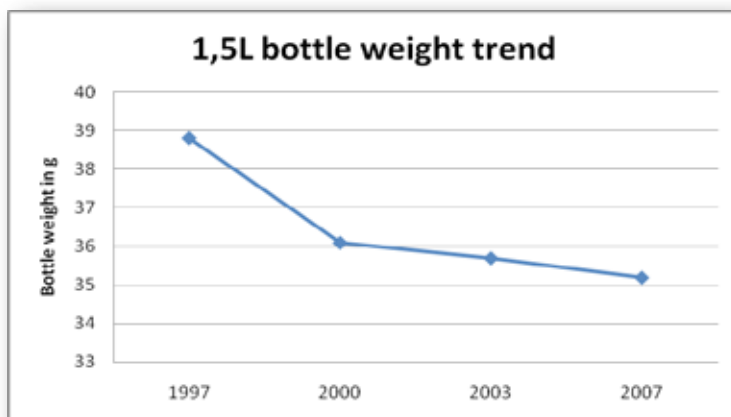
Spa Group 30% reduction in bottle weight since 1992

Bezoya Water 35% reduction in bottle weight since 1996

Cristaline Water 30% reduction in bottle weight since 1996

Danone 35% reduction in bottle weight since 2001

Nestlé Waters 20% average weight reduction in bottle weight from 2004-2008



Source : ADEME France

Radenska, Slovenia

This brand of Slovenian natural mineral water has saved 2400 tonnes of PET material between 2002 and 2008 by optimising the design of the bottle neck and by reducing the bottle weight. The use of PET material for 1 L bottles was reduced by 12% from 2002 and 2008.

The company has also optimised its thermo-shrink film by reducing its thickness and width for a savings of 25 tons annually and resulting in a 14% decrease in the weight of the thermo-shrink film per package since 2004.

Coca-Cola

2L PET bottles have been reduced by 32% since they were initially introduced in 1991.

Changes in manufacturing and package redesign have contributed to a saving of 10,000 tons of PET globally.

PACKAGING – ECO DESIGN

Other Innovative Means

Eco Design

The shape and design of plastic and glass bottles have undergone numerous changes over recent years. Optimising the format of water bottles to reduce packaging waste is an ongoing priority. European bottlers are leading the way in reducing the amount of plastic and glass used for their water bottles.

Bio Plastics

Biodegradable and compostable plastic made from organic materials are still subject to study. Pilot projects are being carried out to test their viability.



Spa

Spa has optimised the design of its reusable glass bottle, decreasing the weight by 30% all the while providing a further 25% increase in volume. This action has significantly reduced environmental impacts per filling volume.

There is now a 48% increase of the volume placed in a pallet which has directly led to a reduction in transport operations.

Spa's initiative was recognised by the European Association of Beverage Wholesalers which distinguished the company with the European Refillable Award in 2008.

CORPORATE SOCIAL RESPONSIBILITY

Danone-Evian Fund for Water Resources

Wetlands play a key role in sequestering carbon from the atmosphere. Since 1998, Danone has been an active partner of the Ramsar Convention on Wetlands, an intergovernmental treaty for the protection and conservation of wetlands, adopted in Ramsar, Iran, in 1971.

Through the Danone-Evian Fund for Water Resources, the company supports a portfolio of educational programmes to increase awareness on water resources and wetland protection.

Evian Water Protection Institutes which support the protection of some of the world's biggest wetland systems. Current conservation projects are in Argentina, Nepal and Thailand.



Kropla Beskidu Fund

Coca-Cola Hellenic and the Polish Environmental Partnership Foundation are working together to protect the water resources of the Beskidy mountains in southern Poland, from which the pure spring water Kropla Beskidu is sourced. The project includes a range of conservation activities, provides grants to local community groups, and raises awareness on environmental sustainability.

Acqua Panna

Working with AMREF (The African Medical and Research Federation), Acqua Panna has helped to co-finance the construction of a water well in a Kenyan village, where local community groups assist on the adoption of hygiene and health issues.

CORPORATE SOCIAL RESPONSIBILITY

Bezoya, Spain

Bezoya collaborates with the Castilla Leon Natural Heritage Foundation to promote the preservation of the environment in the area of Hoces del Rio in Spain. The foundation develops different programs for the conservation, management, improvement and awareness of Castilla Leon region's natural heritage and its protected areas.

Nestlé Waters

Project WET (Water Education for Teachers)

Since 1992, Nestlé Waters has been an active sponsor of Project Wet, a non-profit organisation that helps to promote awareness and understanding of water resources through the classroom setting. Workshops and training allow teachers to educate children and youth on their natural environment and water sustainability. Project Wet has been implemented in 26 countries.

Żywiec Zdrój, Poland

Żywiec Zdrój mineral waters in Poland have put in place a programme to promote conscious, eco-friendly behaviour among Poles. This project, called Moje Silne Drzewo aims to raise awareness on environmental preservation.

In partnership with NGO's and the University of Warsaw, the project sets out to educate youth on ecological issues. One significant achievement has been the planting of one million trees in the forested region of Poland and the provision of grants and training programs on trees, forest preservation and respect for water.



Spadel Group

Among various initiatives, the Spadel Group collaborates with UNICEF to raise funds for children's access to potable water and supports the organization's water initiative programme, WASH for water education, sanitation and hygiene.

The company is also behind the Spa Foundation which supports medical and scientific research in the field of water and awards a biennial prize for work exploring hydration.

CONCLUSION

While environmental protection has always been an integral part of corporate strategy, bottled water companies in recent years have truly stepped up measures to reduce their impact.

Innovative technology and new production processes have been introduced in the course of the last decade, underlining the industry's continuous commitment to reduce emissions, decrease water use and integrate strategies to reduce packaging.

Though significant strides have been taken across the sector, there is no clear or harmonized method of assessing environmental efficiency. Definitions, rates and standards vary. Reporting, methodology and criteria differ. The industry is working towards developing a coordinated approach using compatible tools to best calculate and gauge environmental performance. Harmonized measures will allow the industry to enhance their improvements and to communicate their achievements better.

EUROPEAN FEDERATION OF BOTTLED WATER www.efbw.org

NATIONAL ASSOCIATION MEMBERS

BELGIUM

The Royal Federation of the Water and Soft drinks Industry www.fieb-viwf.be

BULGARIA

Bulgarian Soft Drinks Association www.bsda-bg.org

CROATIA

Croatian Association of Drink Producers www.giupp.hr

DENMARK

Danish Brewers' Association www.bryggeriforeningen.dk

EUROPE

Bottled Watercooler Association www.ebwa.org

FRANCE

Fédération Nationale des Eaux Conditionnées et Embouteillées :
Chambre Syndicale des Eaux Minérales (CSEM) www.eaumineralnaturelle.fr
Syndicat des Eaux de Sources (SES) www.syndicat-ses.fr

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Hungarian Mineral Water Association and Product Council www.asvanyvizek.hu

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Beverage Council of Ireland www.beveragecouncilofireland.ie

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Association of Bottled Water Producers of Macedonia www.gorska.com.mk

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SPAIN

ANEABE www.aneabe.com

TURKEY-MASUDER

Turkish Association of Mineral Water www.masuder.org.tr

TURKEY-SUDER

Packaged Water Manufacturers Association www.suder.org.tr

UKRAINE

Association of Mineral and Drinking Water Producers of Ukraine - AMDWPU
www.ids-borjomi.com

UNITED KINGDOM

British Soft Drinks Association www.britishsoftdrinks.com