



Sustainability and water



Source 2004

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Water UK represents all the UK water and wastewater service suppliers at national and European level.



Foreword

Whether you attended Source 2004, the national water symposium on 21 October, or are reading about it now for the first time, I am delighted to present this edited and enhanced summary of the event.

Source 2004 was an opportunity for water companies, their regulators and stakeholders to come together to take stock at an important point in the industry's development. In England and Wales we are close to the end of the third periodic review of prices. In Scotland, Quality and Standards 3 is well underway and in Northern Ireland we are beginning an exciting development phase.

Water UK is grateful to Margaret Beckett, Secretary of State, for hosting Source 2004 at Lancaster House and for her wise and wide-ranging speech; an edited version is included here. The contribution made to the symposium by Elliot Morley, Environment Minister, is also much appreciated.

In response, our Chief Executive Pamela Taylor set out a clear direction for industry policy. In the medium term, we must aim at sustainable water resources management, a fuller recognition in public health policy, and a more appropriate regulatory structure. These challenges are explored here, as are the implications of continuing high capital investment for customers, and of accelerating climate change for industry operations.

Finally we have the genuine added value of articles by three eminent people based outside the UK: Marc Danzon of the World Health Organization; Thomas Barrett, European Investment Bank; and Catherine Day, DG Environment at the European Commission.

Water UK works for a strong water industry through integrated environmental, social and economic policy-making. In a real sense, therefore, our interests run 'from source to sustainability' which is a fitting description for this booklet. I hope you will find it of interest.

Roy Pointer
Chairman, Water UK

The Rt Hon Margaret Beckett MP, Secretary of State for Environment, Food and Rural Affairs



The water industry will continue to be a major player in delivering improvements to the environment and will have an important role in improving water quality and addressing the problems of climate change.

As the Prime Minister made clear in his speech in September, climate change is unquestionably the world's greatest environmental challenge. Its effect upon our environment is large and growing, so we must understand it and plan for it.

The water industry is a major energy user, and it is vital that it plays its part by increasing efficiency and tackling demand for energy, and seeks opportunities to use renewable sources such as methane wherever possible.

I am pleased that in their new water resource plans nearly all water companies have made an assessment of the impact of climate change and factored this into future supply provisions. There are other factors too, of course. Rising consumption and local population increases put further pressure on water resources.

Most companies are forecasting an increase in household demand for water over the next 25 years and the development of new resources will be expensive and potentially controversial. As I made clear in my Final Guidance on the Price Review, I would like to see demand management measures making a greater contribution to meeting the supply-demand balance, alongside the development of new resources.

It is up to all of us, whether we are water customers or water companies, to do our bit – whether this is turning the tap off when we are cleaning our teeth, or as a water company, helping householders to use water more efficiently.

But where additional water resources are planned, companies need to be



able to justify the need for this and show that they have fully considered and applied other options such as further leakage control and water efficiency measures.

Climate change extends well into the future our thinking about the adequacy of water resources. There is a shorter term – but still challenging – agenda for the quality of those resources. The Water Framework Directive sets down some exacting ecological objectives for 2015. Implementing this key piece of European legislation is a real opportunity for us to develop a longer term and more integrated approach to

improving our water environment – which in turn should help the water industry and other stakeholders to plan ahead.

It will also drive further improvements in water quality. There have been significant improvements over the past ten years. Drinking and bathing water quality, for example, are currently at record levels. As a result of my Guidance to Ofwat in the current price review, there will be further investment in cost effective schemes to improve the quality of drinking water and of our rivers and estuaries. The Water Framework Directive takes us to the

next level of water management, by setting objectives not just for the chemical and biological content, but also for the ecological and physical characteristics of our waters.

In September, the Environment Agency published its initial analysis of the likelihood of meeting WFD objectives. We now have a fuller and better picture of the ecological health of our water bodies. More importantly, perhaps, we now have a better toolkit for assessing our progress towards the delivery of WFD objectives.

In addition, the links between water quality and environmental health are real. Children are now being encouraged to drink water throughout the school day, as part of a drive to tackle obesity by reducing consumption of fizzy drinks. It also has the benefit, I understand, of helping to raise levels of concentration. Hospital managers and healthcare professionals have known for some time of the links between good hydration and effective medication and other treatment regimes. I think we are all aware that dehydration has been a leading cause

or contributor to hospital deaths among elderly patients; so drinking the right amount of water, including tap water, is good for all of us, and benefits the healthcare and education systems, and the public purse, as a result.

Clearly the water industry will continue to be a major player in delivering these improvements. We also need to address the issue of diffuse water pollution, which is the main challenge we now face.

In the summer, Defra published a consultation paper on potential approaches we could take to tackle DWPA through catchment-sensitive farming. We received about 80 responses, which we are analysing. We will consult further on our ideas for potential approaches we might take.

Regulation is important, but Government needed to ensure it was fit for purpose and to consider alternatives. Working collaboratively with stakeholders is an effective way to ensure better regulation and events such as Source help to achieve this.

Pamela Taylor



Source 2004 profiles the UK water industry. But water has no national boundaries and I want to start by recognising our global context and responsibilities.

Today 1.2 billion people still have no access to safe drinking water. 2.4 billion lack adequate sanitation. More than 5 million, mostly children, die each year from water-related diseases.

These are frightening statistics. We need a huge coordinated effort to tackle them. The Secretary of State has spoken about Defra's 'Partners for Water and Sanitation' initiative, the kind of partnership between government, society and business that can make a real impact. The industry is a strong supporter of WaterAid, the only major charity dedicated to providing safe domestic water, sanitation and hygiene in the developing world. WaterAid's work reminds us how fortunate we are.

I also want to highlight four aspects of our industry: current performance; the crisis of identity I believe we are experiencing; the challenges we face; and two issues which will need constant attention from now on.

Industry performance

How are we doing? Active partnerships are at the heart of all activity. We work with Defra and other sectors, on pollution for example. European legislation guides our approach on many issues and is in turn influenced by the World Trade and World Health Organizations.

Sustainability is our overall objective. We are not simply a utility, delivering efficient service to customers. As a sector we are Europe's foremost environmental investor. We work with others on economic and social matters such as affordability and cost recovery. And this focus is bearing fruit. In the 15 years to 2005, the industry, and more recently the City, will have invested around £50 billion in the country's water and sewerage infrastructure. This investment has produced cleaner rivers and high quality drinking water.

If the environment is right, economic and social urban regeneration will follow. This is encouraging but also challenging. We must keep up the pace and even increase it.

Identity – who are we?

We work closely with many partners, so much so that our identity as an industry is sometimes blurred or merged with others in the public's eyes and our own. We often have to manage conflicting expectations of what the industry is now and should be in the future.

The problem is that we are unique. There is no model to follow, so we must forge our own fit for the 21st century. Are we a business or a public service? Private ownership and funding is widely seen as a success. But other forms are also working: a mutual company in Wales, public ownership in Scotland and Northern Ireland. However we are funded, government and regulators determine our objectives. We are, in effect, a hybrid of public and private sectors. We are service providers, but have no contract with customers, some of whom either cannot or will not pay. We have achieved a lot, but still lack "impact" with the public. Some even see us as environment tax collectors.

We are also something of an enigma in the financial markets. We have funded

large investment through private capital. But our profile is changing. Companies are more highly geared and have less scope for efficiencies. Preserving credit quality is now a major objective. Philip Fletcher's stewardship of the regulation process has helped our investment credentials. The trick now is to ensure we remain attractive and fit for future challenges. This certainly means reaching a clear understanding of who we are the role we should be playing say 10 years from now. Water UK and its members have been working on this and will shortly publish a range of scenarios for wider debate.

Future challenges

In this programme we look at the challenges of sustainable water resources, maximizing public health



benefits, and defining regulation better suited to the needs of customers and the environment. Finally I want to raise two overriding issues.

Climate change will be a challenge for the foreseeable future. We can expect more intense rainfall, more flooding, but also longer periods of drought. With new weather patterns, there will be changes in supply-demand balance and consumer behaviour, with increased tourism in some parts of the country.

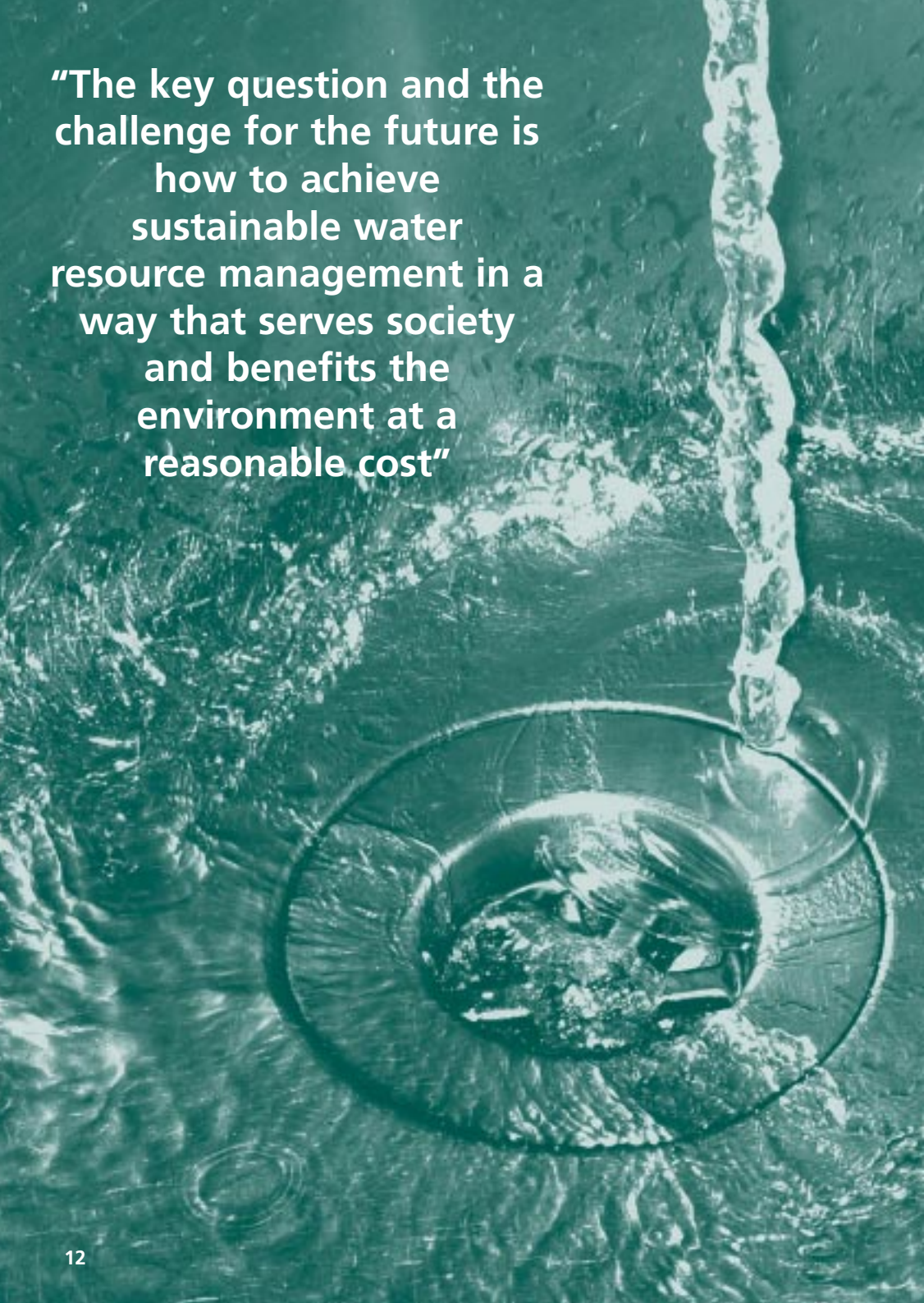
This means working with others to reduce emissions, conserve energy, and develop renewables and more funding for improving infrastructure. Managing demand is essential, but we may also need new reservoirs and dams for additional storage and coping with increased flows. The wastewater system must have greater capacity and new treatments to meet changing river ecology and an increase in eutrophication.

Affordability is the subjects of an eagerly awaited report from a government-sponsored group. Last

year 3% of household water charges – some £164 million – was not recoverable. We have no contract with our customers, and limited access to information about them, so it is hard to separate ‘can’t pays’ from ‘won’t pays’. We provide practical support for ‘can’t pays’, such as help-lines, flexible payment plans, and charitable trusts. But we can’t always identify those in need. The ‘won’t pays’ are more difficult. We have to develop retail sector style relationships to ensure the industry is not sidelined as more customers prioritise household bill payments.

The water industry has come a long way. We are beginning to understand who and what we are, where we are going and the challenges we must face. At Source 2004 we take a further step on a long road. Thank you for traveling with us.

Pamela Taylor is grateful to Maurice Terry, Chairman of WaterVoice, the writer Hugh Aldersey-Williams and WaterAid for their participation at key points in her speech.

A teal-tinted photograph of water splashing into a glass, with a stream of water falling from above. The water is captured in motion, creating a dynamic and textured scene. The glass is partially filled with water, and the splash is visible on the surface. The overall mood is fresh and clean.

“The key question and the challenge for the future is how to achieve sustainable water resource management in a way that serves society and benefits the environment at a reasonable cost”

Water resources

To achieve sustainable management of water resources

In the UK we are in danger of taking water for granted. It may sound obvious, but water is the lifeblood of the water industry.

Management of water resources is the most important issue for water and wastewater service companies.

Restriction or failure of public water supply brings a heavy price in terms of political standing, finance and public perception. It could be argued that the circumstances surrounding the drought in 1995/6 contributed to the 1997 water summit, the windfall tax on utilities, the harsh 1999 periodic price review, and a lot of bad publicity.

In recent years the industry has achieved a much more positive position as one of the most reliable utilities. However a reputation for reliability has a downside.

Floods and droughts are an increasing part of life in Britain, but these natural phenomena are rarely seen to impact on water services. For example, we don't experience large-scale interruptions to supply; our tap water is among the best in the world; and it is available to all at low cost. In short, for us, turning on the tap is almost a reflex act. Why not? Surely most of the time we have plenty of rain.

Supply and demand

In fact we do not have plenty of water. The UK has less water per head of population than any other major European country. The balance between supply and demand is tight in many parts – in the North and West as well as the drier areas of the South East.

And known drivers are likely to make the situation even more difficult:

- Climate change will result in less available water in summer.
- Population shifts will lead to localised supply problems.
- Lifestyle changes will continue to increase peak demand.
- Increased pollution of raw waters, combined with higher quality standards, will result in less available water or higher treatment requirements.
- Greater focus on environmental protection will spotlight the effects of water abstraction for public supply and lead to relocation of many company sources.

Against this background of increased supply risk, we should recall what a secure supply of water really means. Water and sewerage systems are the most important public health requirements. At the same time, water is essential for functioning other service and industry sectors. Manifestly (though it is

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still worth saying) without a guaranteed water supply our infrastructure and economy would collapse.

Therefore it is essential that as a society we debate the future of water resources.

Should we develop new sources of supply, such as reservoirs and abstraction boreholes? Should we prioritise reducing demand? Or should we seek alternatives such as aquifer storage and recovery, wastewater reuse, or desalination? Such questions are not simply a matter of engineering. All solutions have other impacts, societal, environmental and financial. The key question and the challenge for the future is how to achieve sustainable water resource management in a way that serves society and benefits the environment at a reasonable cost.

This is under constant consideration by

the water industry. Yet once we look in detail it is obvious that the industry cannot, and should not, make the decisions alone. Future water resources management is inextricable from the future health and prosperity of the UK's people and environment.

Collaborative decision-making

We welcome moves towards public involvement in decision-making laid out in the Water Framework Directive and the government's decision to put water resource and drought planning on a statutory basis. More public engagement will help the industry achieve the aims of sustainability as long as thinking goes beyond single issues and recognises the need for solutions that have multiple benefits.

There are many examples – sites where biodiversity benefits, water quality improvements and flood risk reductions are delivered simultaneously. There are

projects that are enhancing farm incomes, rural cohesion, environment protection, and water quality. And there are towns and cities where the quality of urban life is directly linked to the quality of urban waters. The water industry is playing a part in most of these but keen do more. Multiple water benefits depend on an integrated approach to catchment management and this requires, above all, partnership.

The future of water resources is being shaped today. We are witnessing a shift from separate water quality and quantity solutions to integrated approaches. This applies for example in planning to deal with floods. In the past we asked engineers to solve the problem for a single town and they built flood defences; now we are asking for catchment management to reduce the impact of flooding and they build green spaces that double as

storage in times of flood. Instead of working against nature, we are now starting to work with natural processes. The same is happening with water resources. Instead of looking solely at abstraction, there are moves to consider it in the wider context of catchment management, which holds out the chance of also enhancing recharge of the aquifer and making better use of the water we have.

For more information please contact:
Jacob Tompkins 020 7344 1817

Water UK is grateful to the following for their participation in this challenge at Source 2004:

- Walter Menzies, Chief Executive, Mersey Basin Campaign
- Arlin Rickard, Director, Association of Rivers Trusts
- Graham Wynne, Chief Executive, RSPB

Challenges

Health

To realise the potential public health benefit of low cost, high quality drinking water by improving access, awareness and perception

Understanding of the role water plays in a healthy lifestyle has grown fast in recent years. No modern discussion of the nation's diet would be complete without consideration of the importance of fluid to normal bodily functions.

Medical research shows that drinking water has positive effects in physical performance, diabetes, obesity, urinary infections; reductions in certain cancers; lowered physical aggression; improvements in concentration, oral hygiene, cardio-vascular health and many other areas.

Water UK facilitates a group of health promotion organisations – The Water for Health Alliance – active in promoting drinking water. Alliance partners manage campaigns in their own areas, but share a common view of the benefits of drinking water in public health. The partners work closely with government and other stakeholders to influence policy on access to drinking water and awareness of its benefits.

IMPROVING ACCESS

Schools

Probably the greatest recognition of the benefits has been seen in schools. Water companies have taken a leading part, but many challenges remain:

- Many children and teachers still have poor access to water when required.
- Legislation is needed to ensure facilities are correctly installed, located and maintained to hygiene and building standards.
- Drinking water must be fed from the mains, not storage tanks.
- All schools should have a drinking water policy.
- Update the Healthy Schools Standard to include defined water provision requirements, and not simply provision for hot and cold water with paper towels.
- Encourage the very young children of today to grow up with an acceptance of drinking water as second nature.

Care homes for the elderly

Many of the typical symptoms of adult dehydration – dizziness, confusion, fainting, falls, headaches, constipation, urinary tract infections, pressure sores and others – are also not surprisingly conditions found regularly in the elderly. Dehydration contributes to dizziness and fainting that can lead to falls, which are among the most common accidents experienced by elderly people. This happens due to a diminished thirst response or as a side

effect of diuretics from medication or poor dietary application.

At present the standards that govern the work of Care Homes (Care Standards Act 2000 March 2001) are inadequate, only requesting that hot and cold drinks are freely available. There is no mention of water and so many care plans show caffeine, sugar and alcohol as effectively the only drinks on offer. But tea, coffee, high-sugar and fizzy drinks are not recommended anywhere else in public health.

Hospitals

The NHS now accepts dehydration as a serious problem, especially in older hospitals that have little ventilation and warm, crowded wards. Policy-makers see drinking enough water as a key part of their approach to good nutrition.

Yet in many hospitals patients and staff still suffer from a lack of facilities or must put up with bedside jugs of warm, unappealing water. Accident and Emergency facilities often discourage water provision, due to concern about patients drinking prior to triage or



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treatment. However while mains-fed water is rarely available, facilities normally allow access to vending machines, kiosks and cafes serving caffeine-based and sugary drinks.

Awareness and perception

Drinking enough water makes real improvements to people's lives. Much has been achieved already in local communities and the whole of society will benefit if people stay healthy. Unfortunately MORI research shows that while a good number of people seem to be aware of the amount of water they should be drinking, and there is some understanding of the health benefits good hydration may bring, they continue to drink too little clear fluid.

At the same time, the perception of water as either boring, or in bottled form expensive, means that many choose not to turn to these products as the first option.

There are many more parts of society that could be better informed about the benefits of drinking more water, for example motorists, those involved in heavy manual labour, air cabin crew and passengers, doctors, universities, pregnant mothers. Continuing research shows a growing list.

The challenge for water companies is to go on building customers' awareness of the benefits, but also to improve perceptions of the high quality tap water that is universally available to them at minimal cost. This will involve more attention to aesthetic qualities such as taste and smell. But it may also take time for everyone to feel they can trust their tap water, especially when it may not be in everyone's interests to encourage this.

For more information please contact Nick Ellins 020 7344 1810.

Water UK is grateful to the following for their participation in this challenge at Source 2004

- Professor Jeni Colbourne, Chief Inspector, Drinking Water Inspectorate
- Jack Jeffrey, Chairman, Royal Institute of Public Health
- Dr Simon Fradd, Founder, Developing Patient Partnership
- Danila Armstrong, Nutrition Programme Manager, Department of Health

Future regulation

To design future water regulation that is better at promoting customer service, environmental protection and economic development

The water industry's strategy for the medium-term is to build a stable future on the back of present success. This means continuing to deliver the economic, environmental and service benefits everyone now takes for granted. The industry can point to a consistent record. We're creating a record of investment and operating success that is transforming our reputation.

Can the industry continue to be successful? Yes, but we have to face some tough issues. For example:

- High investment is set to continue for foreseeable future
- Politically sensitive and vulnerable to political risk
- A heavily regulated industry with the scope of regulation unlikely to decrease

The Government has been active on water issues. The 1997 water summit, in which government set tight controls

and targets for the water companies, showed strong leadership. Defra itself, which brings together water, environment and land-use issues, is a good example of a holistic policy unit. One of its outputs, the policy vision document 'Directing the flow', brings together current and future water issues. Water Act 2003 and the regulations associated with the Water Framework Directive, also show that the Government is committed to progressing water legislation.

Pollution

Floods, droughts, pollution and environmental damage are critical issues for water companies. But obviously they are not just the responsibility of the water industry. Sectors such as farming and transport have major impacts on water quality. Currently these sectors are being subsidised by water customers to the tune of hundreds of millions of pounds a year. Diffuse

Challenges

pollution from farming means that pesticides and nutrients must be removed from drinking water. Pollution from transport and industry is also a serious threat. It is good that Defra has adopted a strategy to tackle the problem; it has issued a consultation on catchment sensitive farming and an urban issues paper is to follow.

Needs change, so should focus

In 1997 the area for action was the water industry. In 2004 things are more complex and action to protect water must also be taken in the transport, farming and planning sectors. And the actors are more complex too. In 1997 it was government that took action. In 2004 we need better co-ordination, co-operation and collaboration; it is now everyone's responsibility to act.

Regulation now must be as streamlined and relevant as possible.

The needs have changed since the big water companies were privatised nearly fifteen years ago. Then, the public's opinion of the industry was poor and a tight economic rein was essential. The environment cried out for an aggressive regime. The quality of tap water was still lower here than in other developed countries. Now, we have some of the best tap water in the world. Rivers and beaches have been restored. And Ofwat says the biggest efficiencies have been achieved.

New direction

There is consensus that a new direction is needed. Policy-makers, regulated

organisations, environmental and consumer groups are looking for answers. There is increasing interest in the idea of sustainable regulation.

The Better Regulation Task Force is influential. Its five key principles – regulation must be proportionate, accountable, consistent, transparent, targeted – have been widely adopted. Other official bodies are involved, including the National Audit Office, the House of Lords Constitution Committee, and various House of Commons committees. They give both regulators and regulated opportunities to express their views.

Then there is competition. The Water Act 2003 clarified policy and increased the number of eligible customers. The industry is contributing to the debate led by Ofwat on how the new provisions should be implemented.

There's also a debate going on outside government. Water UK has identified four issues that will hold up the industry's development if they aren't tackled. The solutions to all depend on greater sharing of interests.

The first is the old mindset based on driving efficiency and low prices by 'sweating the assets'. In future the aim should be investing for long-term value. The second need is to replace 'one-size-fits-all' regulation with common aims but diverse solutions. Third is the need to stop treating water customers as taxpayers. They shouldn't be a convenient source of subsidy to

other industries. Everyone accepts that the polluter pays principle makes sense, but it can be painful to implement. However there is progress with the government's work on diffuse water pollution a significant step forward.

Fourth, we must look at increasing self-regulation and put more focus on outcomes than process. Nobody chooses complex and bureaucratic regulation. It just somehow appears. We'll be working to encourage alternative approaches.

For more information please contact Robert Weeden 020 7344 1842

Water UK is grateful to the following for their participation in the this challenge at Source 2004:

- Dr Neil Summerton, Director, Oxford Centre for the Environment, Ethics and Society
- Baroness Young of Old Scone, Chief Executive, Environment Agency
- Philip Fletcher, Director General, Office of Water Services



**Based on global statistics,
better management of
water and sanitation would
prevent over 30 million
cases of water-related
disease each year**



Water and sanitation

The World Health Organization (WHO) estimates that some 6% of the global disease burden is water-related. Cases of infectious diarrhoea make up some 70% of this figure, which equates to a staggering 1.7 million deaths each year.

However, WHO has also seen evidence that water, sanitation and health interventions can provide a remarkably effective contribution to reducing this toll – typically, they are able to reduce diarrhoeal diseases substantially, and contribute to considerable reductions in other diseases.

It is for this reason that one of the Millennium Development Goals aims to halve the proportion of people without access to safe drinking water by 2015, and the World Summit on Sustainable Development has called for an equal reduction in the number without access to basic sanitation.

WHO's European Region varies widely in natural resources and socioeconomic development, which means there is an equally wide range of water and health problems across its different areas. It is astonishing to think that some 120 million people in the Region do not have access to safe drinking-water and an even greater number have no access to sanitation. The lack of these basic needs results in waterborne outbreaks of diarrhoeal diseases, hepatitis A and typhoid fever.

Microbial contamination is recognized

as the main concern throughout the European Region. Chemical pollution may also significantly affect health in some areas, though it is recognized as a localized problem. Based on global statistics, better management of water and sanitation would prevent over 30 million cases of water-related disease each year.

Finding solutions for these problems is one of the most significant challenges facing this Region today. WHO's water and sanitation programme has taken a comprehensive approach to the problems of water-related disease by supporting the implementation of the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes. This is an international declaration signed by 40 Member States that aims to "promote at all appropriate levels the protection of human health and well-being through improving water management

The author

Dr Marc Danzon is the World Health Organization Regional Director for Europe.



and through preventing, controlling, and reducing water-related disease”.

The Protocol on Water and Health is the first major international legal instrument intended to prevent, control and reduce water-related diseases in Europe. It was adopted in 1999 at the Third Ministerial Conference on Environment and Health in London.

In adopting the Protocol, the signatory countries have agreed to take all appropriate measures to achieve:

- adequate supplies of wholesome drinking-water;
- adequate sanitation of a standard that sufficiently protects human health and the environment;
- effective protection of water resources used as sources of drinking-water, and their related water ecosystems, from pollution from other causes;
- adequate safeguards for human health against water-related diseases; and
- effective systems for monitoring and responding to outbreaks or incidents of water-related diseases.

In detail, signatories to the Protocol commit to establishing and maintaining comprehensive national and/or local surveillance and early warning systems to be able to prevent and respond to water-related diseases. They also agree to promote international cooperation in establishing joint or coordinated surveillance and early warning systems, contingency plans and responses to water-related disease outbreaks and

incidents as well as major threats of outbreaks.

The Protocol will enter into force, becoming legally binding for all signatory countries, after ratification by at least 16 of the signatories. So far, it has been ratified by 13 countries. Until full ratification takes place, the signatory countries steer the interim implementation of the Protocol through a work plan. WHO's Working Group on Water and Health was established to support the technical implementation of the plan.

WHO is at the forefront of enabling the Protocol to become a key element in reducing the heavy toll taken by waterborne diseases in the Region. Together with the United Nations Economic Commission for Europe (UNECE), it provides the secretariat for the Protocol, co-ordinating activities for its implementation. WHO looks after the health aspects of the Protocol, and UNECE takes care of the legal and procedural elements.

WHO's water and sanitation programme also separately assists Member States by undertaking capacity-building activities at regional, subregional and country level as well as working with WHO headquarters to develop, revise and update manuals and guidelines.

Even if the aspirations of the Protocol are fully realized, there is a constant threat of new challenges to the water environment that must be met in the short, medium or longterm. New and

emerging pathogens, such as *Giardia*, and *Cryptosporidium*, will require the development of cost-effective methods to ensure protection of water networks from these risks. The health effects of long-term exposure to some chemicals present in the water due to environmental pollution need to be better understood and characterized. There is growing concern in the population and in the scientific community that this long-term exposure can be associated with chronic diseases, and this must be addressed properly.

Additional challenges are posed by other phenomena such as extreme weather events associated to climate change. An increasing number of floods has been observed over recent years, requiring the implementation of better control measures to protect water resources from contamination and to prevent disruption of water networks, thus ensuring the continuous provision of this essential commodity to the population. Finally, the threat of terrorism does not exclude water and proper measures have to be put in place to avoid water becoming a vehicle for malicious acts affecting large numbers of people.

WHO will continue addressing the topic of water and health over the next years and decades to ensure appropriate access to sufficient water resources for every individual in the world. This is a fundamental human right that needs to be granted if we want to ensure the proper health and well-being of present and future populations.

The European Investment Bank

The European Investment Bank is committed to continuing its current role as a significant source of long-term finance to the water sector throughout EU25 to finance capital investments that comply with EU objectives. In the United Kingdom, the EIB's finance diversifies the funding available to the sector, the cost of which is incorporated by the Regulator in the weighted average cost of capital (WACC) and enables the sector to meet the substantial investment challenges of continued improvement of public services and environmental standards.

The EIB, as the long-term financing institution of the EU, is driven by the policy objectives of the European Union. In the field of environment, notably water, the Bank finances projects that protect and improve the natural and built environment and promote sustainable development. In 2003, EIB's lending to the sector accounted for 5% of its total lending of GBP 30 billion.

The EIB has been a major source of financing to the UK industry since the 1970s, preceding the privatisation of 1989. Its policy is to allocate financing to capital investments that comply with objectives as set out by the Drinking Water Inspectorate and Environment Agency that reflect the requirements of EU Directives. The aim of investments selected is to ensure that borrowers can comply with national and EU environmental standards. EIB finance can also be used for major sector investments that contribute to

economic development in areas classified by the European Commission as regional development areas. The Bank has financed investments that meet these objectives with all ten regulated companies in England and Wales. Comparable investments in Scotland and Northern Ireland are also under consideration.

The Regulator, in his draft determination published August 2004, has given weight to ensuring customer benefits through the cut back of tariffs as well as ensuring the sector's ability to finance its needs through the debt and equity markets and maintaining a solid investment grade rating. The Bank expects the industry's aggregate cash flows to remain inherently stable and predictable. Nevertheless, the challenges for the industry are substantial given the continuing need to make additional investment and to meet increased operational efficiencies consistent with the health and safety



requirements. While the underlying business risk of the sector can be considered low as a result of the regulatory framework, the actual outcome for each company in the coming regulatory period will vary and be highly dependent on the performance and managerial effectiveness of each company.

Following the Regulator's previous price

review for 2000-2005 that strongly emphasised tariff reductions, a variety of financing models emerged for the sector that aimed to use increased debt financing given the perceived low return to equity. The result of both these developments was that the sector's credit quality gradually migrated downwards and the rating agencies downgraded their assessments from mid to high single A ratings to a mid

By invitation

and low single A range, in some cases dropping into the BBB category. Due to this development, the regulated water companies can now be broadly divided into three clusters:

- (i) companies with the traditional equity model with ratings in the single A range;
- (ii) a middle layer with ratings falling to triple BBB, but still based on the equity model;
- (iii) the low or non-equity highly geared companies.

The EIB has followed this evolution of the sector and will continue to do so, subject to investments meeting the Bank's policy objectives. The Bank can add value and assist the development of the sector as it is one of the lowest-cost providers of long-term funding and contributes to diversification of funding to the industry. In addition, the benefit of EIB long term financing in lowering the overall cost of capital is ultimately passed on to the consumer throughout the WACC set by the Regulator and is reflected in consumer tariffs.

The water sector will be challenged further in the future by more stringent EU standards envisaged by the Water Framework Directive. The Directive establishes the objective of achieving highest minimum ecological quality of inland surface waters; transitional waters and groundwater by 2015. The ramifications of the quantum of

investments required by the industry are still being investigated. However it is likely that substantially higher funding will be needed to increase tertiary treatment, reduce the frequency of storm overflows and reduce the impact of abstractions on low flows in rivers. The Directive's introduction of incentives for more efficient water use may also encourage higher levels of customer metering. Some are concerned that the objectives are so extensive there may be insufficient time to meet them before the 2015 deadline.

In future the focus of EIB lending to the sector will increasingly be towards new member states and others that must make major investments to catch up with EU environmental standards. The UK industry sees an important continuing role for EIB in the sector, and for its part the Bank is prepared to continue in partnership with UK water companies as while this shows value-added similar to that achieved by investments in higher standards over the 30 years since the UK joined the European Union.

The author

Thomas C Barrett, Director,
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Operations, European
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European Commission

The EU Water Framework Directive marked a new stage in the development of EU environmental legislation when it was adopted in 2000. It established a new method of continuous co-operation between Member States and the Commission, which has allowed more dynamic cross-border co-operation than under more traditional legislation. The hopes placed in this new approach are being fulfilled and there is widespread agreement that this is an effective way to deal with complex issues such as integrated river basin management.

So where do we go from here? First of all we need to ensure that existing legislation is properly implemented. While the Water Framework Directive will continue to be the main focus of our work, we will also invest in making sure that the urban waste water treatment directive, the drinking water directive, the bathing water directive and the nitrates directive are implemented in a consistent manner across all 25 Member States.

For the Water Framework directive, the Common Implementation Strategy will be the main delivery mechanism, backed

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up where necessary with legal action. We have already initiated legal proceedings against those Member states that have not transposed the directive according to the deadline of December 2003 required in the directive: we will be equally vigilant with regard to the other implementation deadlines. Member States should not abuse the possibilities for derogations and time extensions allowed in the directive: while we hear the arguments against so called "gold plating", we expect all Member States to make genuine efforts to achieve good status by 2015.

One of the top priorities for the Commission over the next few years will be the relationship between the Water Framework directive and agriculture. Diffuse pollution from agriculture in the form of pesticides, fertilisers and animal medicines/food-additives/disinfectants will have to be addressed; as will the other impacts of farming such as erosion and siltation. While it is relatively easy to enumerate the pressures and impacts associated with farming, we need to work with the farming community to identify the necessary remedial measures and



appropriate sources of financing. The Commission is delighted that Defra has taken the lead in a EU-wide working group on the relationship between the WFD and the CAP.

While implementation of existing legislation will be the priority for the next few years there are a number of new initiatives to which I would draw your attention. First of all, in the Environment Council in October there was overwhelming support for further EU action on flood protection. We are now planning, by the end of 2005, to come forward with a legislative proposal establishing an obligation for the development of flood protection management plans in river basins and coastal areas.

The need for improved flood protection as well as the management of drought situations are both manifestations of the greater uncertainty associated with rainfall patterns. While it is possible to debate the reasons behind this increased uncertainty, climate change is certainly contributing to this process. The challenge for Europe is to determine how we respond to this new situation. We could increase storage capacity to increase the margin of protection against droughts and make infrastructure investments to improve our flood defences. However, while civil engineering projects will undoubtedly be part of our response, we must also look at "softer" solutions such as the improved management of water demand, better pricing structures and reduced leakage rates in the case of

water supply and the more systematic use of flood plains, water meadows and wetlands in the case of flood protection.

Finally, in the course of 2005, the Commission will propose a thematic strategy to protect the marine environment. The actions arising from the strategy will "key in" to the actions required under the Water Framework Directive. The Water Framework Directive extends to one nautical mile offshore (further in the case of chemical status) and we want to ensure that monitoring and assessment under the marine strategy are fully consistent with the procedures already being implemented under the Directive. One issue that is going to come into greater focus as a result of the strong links between the Water Framework Directive and the marine strategy is the problem of eutrophication (nutrient enrichment). Rivers and streams carry plant nutrients into the sea but until now we have concentrated mainly on near-shore and estuarine areas. In the future, you can expect that we will be looking in greater detail at the nutrient dynamics in the open sea.

I would like to thank you for the opportunity to contribute to Source 2004 and to share with you our thoughts and perspectives on the next five years of EU water policy. I look forward to continuing to work closely with you in the future and would like to express my appreciation for the professionalism and high quality of the input, which we receive from Water UK.



Industry information

Water UK Members

Water and wastewater

- Anglian Water Services** www.anglianwater.co.uk
- Dwr Cymru Welsh Water** www.dwrcymru.co.uk
- Northern Ireland Water Service** www.waterni.gov.uk
- Northumbrian Water** www.nwl.co.uk
- Scottish Water** www.scottishwater.co.uk
- Severn Trent Water** www.stwater.com
- South West Water** www.swwater.co.uk
- Southern Water** www.southernwater.co.uk
- Thames Water** www.thameswater.co.uk
- United Utilities** www.unitedutilities.com
- Wessex Water** www.wessexwater.co.uk
- Yorkshire Water** www.yorkshirewater.com

Water only

- Bournemouth & West Hampshire Water**
www.bwhwater.co.uk
- Bristol Water** www.bristolwater.co.uk
- Cambridge Water** www.cambridge-water.co.uk
- Dee Valley Water** www.deevalleywater.co.uk
- Folkestone & Dover Water** www.fdws.co.uk
- Mid Kent Water** www.midkentwater.co.uk
- Portsmouth Water** www.portsmouthwater.co.uk
- South East Water** www.southeastwater.co.uk
- South Staffordshire Water** www.south-staffs-water.co.uk
- Sutton & East Surrey Water** www.waterplc.com
- Tendring Hundred** www.thws.co.uk
- Three Valleys Water** www.3valleys.co.uk

Statistics

Water environment

In 2003 70% of rivers in England and Wales were classified as of 'good' biological status, 65% of 'good' chemical quality). This is an improvement of 37% in chemical quality and 30% in biological status since 1990.

In 2004 98.3% of English bathing waters passed the EC mandatory water quality standards. In 1994 the compliance rate was 83%, in 1999 90%.

Drinking water

In 2003 99.88% of 2.9 million tests carried out met all national and EU drinking water standards.

Infrastructure

	Water	Wastewater
Length	325,000 km mains	302,000 km sewers
Properties connected	23.6m	21.8m
Population connected	53m	52m
Treatment works	2500	9000
Replacement value	£74bn	£131bn

www.water.org.uk

Water UK on the web provides up to date news and comment as well as policy positions, Europe Watch and in focus features. Click on 'Resources and Links' for a comprehensive A-Z information connector.

The View from Water UK

If you would like to receive Water UK's monthly stakeholder newsletter, please call Carly Haynes +44 (0)20 7344 1804 or e-mail chaynes@water.org.uk



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