

DELIVERING WATER IN THE 21ST CENTURY

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Policymakers weigh options for EU water pricing



Putting a price on water is essential to encourage savings but EU policymakers are cautious not to spark a social backlash with a one-size-fits-all solution. "Pay more if you use more" is, however, a model which could work, the MEP in charge of water issues told EurActiv.

"Should Europe really be the front runner in increasing water prices? I am not sure that is the right way to go," said Austrian MEP Richard Seeber (European Peoples Party), who is in charge of water issues at the European Parliament.

"The political message is very tricky", Seeber told a Fondation EurActiv workshop on 10 May.

While Seeber understands that businesses have to cover the costs of collection, storage, filtering and distribution, he believes the final price for consumers should remain low.

"It is also a social issue," Seeber said. "I don't want poor people not to be able to afford water anymore".

EU directive introduced pricing obligation

The EU's Water Framework Directive, adopted in 2000, requires EU countries to introduce water-pricing policies by 2010 to provide an incentive for users to use water more efficiently.

In order to justify possible price increases, the directive required EU countries to ensure that the costs related to water treatment, distribution and infrastructure maintenance are fully recovered and reflected in the final price.

But EU member states have been slow to introduce pricing policies and many are still lagging in implementing this aspect of the directive.

Governments have traditionally provided large subsidies to ensure that all citizens have access to affordable drinking water. But experts say this has prevented change in wasteful behaviour and has held

back much-needed investments in water distribution networks.

"Many of the water systems in the major cities around the world, including the developed world, have losses of 30-40%," said Lars H. Thunell, executive vice president and CEO of the International Finance Corporation (IFC), a member of the World Bank Group. "And that's not viable, we have to make sure that we invest," he told EurActiv in an interview.

Hans Telgen, president of the European Plastic Pipes and Fittings Association (TEPPFA), agreed: "If you look to the efficiency question, then if the price for water is low there's no drive for efficiency," he told EurActiv in an interview.

The World Bank also supports pricing policies but says this must be done in a socially responsible way. "In a world where you have scarcity, you have to have a price on things," said Thunell. "But you also have to take the social dimension into consideration."

Paying more for swimming pools

Present water withdrawal amounts to 300-600 litres per day per person in industrialised countries, according to UNESCO. However, some countries voluntarily take action to reduce that amount.

In Germany, for example, over the past 20 years, consumption decreased by 17% to 122 litres per person per day in 2009. This drop was primarily due to the use of water-saving household appliances and fittings, better consumer awareness, and a water price generally linked to consumption, according to a recent report of the Federal Ministry for the Environment.

But as these efforts are not shared by all member states, Seeber envisions a 'pay more if you use more' system for the EU as a whole.

Under the scheme, consumers would be entitled to a daily volume of water at a low price – around 200 litres

per day – to cover basic needs. The extra amount could be considered as being used for non-essential purposes such as irrigating a garden or filling up a swimming pool, and should be priced differently, he said.

IFC's Thunell supports the idea: "I like, for example, the South African model where they say that you get a certain amount of free water every day, but if you want to use it for industrial purposes or filling a swimming pool or taking ten showers a day, you have to pay for it."

However, Seeber refrained from making the proposal in a report he drew on behalf of the European Parliament. "At this stage it is not wise to ask the Commission to come up with a model for that," Seeber said. "Differences are huge, we have just the principles and the Commission is not planning to come forward with such a thing," he explained.

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No 'one-size-fits-all' solution on pricing

The main reason for the Commissions and Parliament's reluctance is the "huge" differences in water issues encountered across EU countries.

"The social-economic costs for losing a cubic meter of water will never be same in Finland as for example in Cyprus," said Henriette Faergemann, who leads the European Commission's 'scarcity and drought' unit.

"Leakages both between and within member states are significant but there is no one-size-fits-all solution," she stressed, saying "We have found differences from 7% in one state to 48% in another country".

Seeber agreed, saying water

losses due to bad infrastructure can be as high as 50% in Bulgaria but less than 5% in Germany. "Many ideas are as good as the other, but none convincing enough to be a one-size-fits-all," Seeber said. He added that a correct price mechanism would value water based on consumption, and not at fixed rates set by water suppliers.

This is not the case in all member states. For example, prices in the UK are usually calculated yearly at a flat rate, and often stay the same for several years. Individual households do not have a choice of water provider and often companies can alter the price in order to pay for their investment costs. Early this year (2012), the UK industry regulator, Ofwat, announced an increase of £20 (€25) in annual bills, claiming the increase was 10% smaller than that asked

for by water suppliers.

While keeping water prices at affordable levels is a must for governments, pressure is growing to raise prices for environmental reasons.

Studies by the European Environmental Agency (EEA) show that all users alter their water consumption patterns in response to increasing water charges. The EEA says price signals have a clear impact on water use by households, especially in Eastern Europe, where they were previously subsidised.

In Estonia, a fivefold increase in prices between 1994 and 1999 had a "noticeable" effect on consumption, the EEA noted. In Hungary, prices increased from €0.2 to €0.5/m³ after state subsidies were removed in 1992.

Water bills have also traditionally stayed considerably lower than gas

or electricity bills, which have tended to rise in recent years after the liberalisation of the EU energy sector.

Households to be targeted last

For the World Bank, the assumption is that the cost of water services should never exceed 5% of household income.

Pricing policies should therefore chiefly target industry and agriculture, Thunell believes. "We have to address the issue of water efficiency in industrial processes, we have to address it in agriculture because 70% of the water that is used is for agriculture."

Seeber agrees and insists that water use in households should not be the main focus of water-saving policies. A much higher potential lies in amount of water used in agriculture and

by industry, especially thermal plants, he said.

"Households consumption should really be the last issue. We should pay more attention to the greater concerns," Seeber said, pointing to more water-efficient irrigation techniques could help save water in agriculture.

He added that future pricing proposals should look first at the water used in cooling thermal plants, which use water for free at the moment.

But once again, there can be no one-size-fits-all solution in Europe, said the Commission's Faergemann. "In some place it may be more cost-effective to save water in agriculture than in industry or elsewhere," she said. "Water-pricing mechanisms are extremely important and they need to be right and the pricing structure needs to be right in order to frame the right incentives."

Desalination: Solving water problems or creating a new one?



Faced with water shortages in its sunny south, Spain has become a European trendsetter in harnessing seawater for human use and is an industrial leader in desalination.

In other increasingly dry regions of southern Europe, desalination offers promise for farmers and households that compete for freshwater, say advocates who also see the technology as both economically vital to the European Union and an answer to its long-term water security.

"Without it, you're lost," said Miriam Balaban, secretary-general of the European Desalination Society in Rome. "There's only one other source of water and that is the reuse of water [from manufacturing],

but some people don't want to drink that."

The European Commission is due to issue its blueprint for safeguarding water supplies later this year, a document that is expected to examine the drought and scarcity risks and alternatives to tapping rivers and aquifers to meet competing demands.

Water providers in Spain – as well as Italy, Greece and Malta – are increasingly turning to desalination to address freshwater needs in dry periods and as rivers and reservoirs become more stressed due to climate change along with farm and household demand.

Cyprus gets more than 60% of its drinking water from desalination plants, government

figures show, while rainy places like London and Amsterdam treat brackish water for municipal consumption.

Europe accounts for 10% of the world's desalination capacity – the Middle East is the global leader, with 70% of capacity – and Spain's production doubled in the last decade. Balaban's group lists some 180 European companies involved in the manufacture and supply of plants and technology.

Spanish companies including Aqualia, Acciona and Bifesa along with multinationals like Dow Chemical, Siemens, Veolia and General Electric are among the global leaders in managing and building desalination operations.

A curse or a blessing?

With mounting concerns about water scarcity in parts of Europe, desalination may be one answer.

But desalination also raises environmental concerns – making seawater drinkable is an expensive and energy-intensive process depending on the salinity levels in the water.

Treating seawater requires thermal technology using heat and pressure to extract salt and costs some three times as much as treating water with a reverse-osmosis system that uses membranes to remove impurities.

Environmental groups including WWF and the European Environmental Bureau have for years raised concerns over the expansion of desalination plants and their potential harm to coastal habitats and generate far higher levels of greenhouse gas than conventional water plants.

A recent report by the European Environment Agency (EEA) adds weight to such concerns. The EU agency warns that the desalination process also produces chemical waste and brine – a byproduct that is heavier than seawater and can damage bottom-dwelling sea life when the discharged brine settles.

The energy needed to purify water is another concern, the report says, noting that plans to use desalination to address water challenges "could jeopardise the reductions in energy use planned under the EU's climate and energy package."

Cleaner water – and air

The desalination industry says it is working to reduce its environmental impact. Manufacturers of the membranes used in purification are taking steps to cut energy consumption in the production process, and new technologies will make purification more efficient, said Santi Talo, the

Barcelona-based sales director in Europe, Africa and the Middle East for Hydranautics, a membrane producer.

"Energy consumption is critical, and [desalination] companies are working to reduce energy and make production more efficient," Talo said in a telephone interview.

Balaban, of the European Desalination Society, dismisses criticism about the environmental impact and says EU policymakers are doing little to promote a technology that could help address growing water scarcity. For example, the European Innovation Partnership on Water, announced on 14 May, does not list desalination amongst its proposals to address future needs.

Renewable energy could address concerns about carbon emissions, said Balaban, with renewables making water purification cheaper over the long term.

And she says that the cost of purifying water from the sea is reaching price parity because the price of treating river and groundwater will grow because of pollution and contamination.

"Conventional water is rapidly becoming more expensive and desalination is becoming less expensive," Balaban said, "so it's almost crossing over."

Brussels rules out EU-wide water efficiency target

Huge water leakage differences between member states make an EU-wide water efficiency target “not necessary”, says an EU official working on the directive for the European Commission.

Water is becoming a more and more prized resource, with droughts and water scarcity increasingly affecting European countries.

More than 11% of Europeans and 17% of Europe’s territory have been affected by water scarcity in recent years, the Commission wrote in a recent policy review, costing the EU an estimated €100 billion in damages and lost economic potential.

In the EU, the public water represents some 20% of the total water use, with homes and buildings accounting for the largest use, according to the Commission.

However, some critics say the water-saving potential has not been tapped evenly by member states and existing EU legislation has not yet been implemented everywhere.

“The Water Framework Directive has not been applied,” said Sarolta Tripolszky, from the European Environmental Bureau (EEB), an NGO. Speaking at a Fondation EurActiv workshop on 10 May, she said conservation groups have been asking the Commission to take further steps under the landmark law that is intended to protect Europe’s water resources.

The Commission is expected

to publish in November a detailed plan for water policies needed by 2020, called the “Blueprint to Safeguard Europe’s Water Resources”. Whilst this paper is meant to address water security, the ball will remain in member states’ courts, EU officials said.

Leaking infrastructure

“The main purpose of the blueprint is to reduce leakage, but we have found substantial differences between member states, so targets are not necessary,” said Henriette Faergemann, leader of the “scarcity and droughts” team at the European Commission.

Austrian MEP Richard Seeber (European Peoples Party), who serves on the European Parliament’s environment committee and is a leading voice on water issues, said figures shows that leakage levels in Bulgaria soar to 50%, whilst in Germany, they are kept at only 3-4%.

“We shouldn’t be too prescriptive with member states,” he said, “but I will ask them to proceed with implementing the existing directive, which is a good one.”

But it is not just poorer EU countries with outdated infrastructure that are the culprits. The European Water Partnership, a non-profit organisation, says some Italian cities have leakage rates of up to 70% and London up to 35%.

Industry officials also say



more needs to be done to invest in infrastructure that can reduce waste, such as replacing older cement pipes. “With new materials available, we can reduce the leakage rate dramatically,” Hans Telgen, president of the European Plastic Pipes and Fittings Association (TEPPFA), told EurActiv.

Setting water-efficiency standards?

The Commission is looking beyond targets to technology, management of water in planning and is also studying whether water-efficient products are a better way to tackle efficiency in buildings.

Water-stingy shower taps, currently waiting to be introduced in the EU’s Ecodesign Directive, are an example of products that could increase the overall efficiency of

buildings and reduce water bills. “This is a low-hanging fruit and it can be done very easily,” said green campaigner Tripolszky.

However, Seeber thinks such a measure is not necessary, since efficient taps are already on the market and consumers can choose to buy them if necessary.

“We should not tell people what shower heads to use,” said Seeber, adding that domestic water consumption is only 7%, compared to more water-intensive areas, such as agriculture of the manufacturing.

Leakage levels may be different across the EU, but what member state have in common is research and innovation, said Luisa Prista, head of environmental technologies for the Commission’s Research and Innovation section.

“Challenges at EU level are huge, but needs are very diverse

and the ways of managing are different,” Prista told the Fondation EurActiv workshop.

Implementing existing technology

Whilst the EU is a global leader in water policies, its implementation is lagging behind in member states.

“We’ve spent over €500,000 on water innovation technology, now it’s time we implemented the findings,” Prista said.

“We’re passing from developing technology to demonstrating technology, to implementing technology,” she added.

For this, she suggested a cross-sectorial approach and said there is a need to coordinate EU action with the regional and local authorities: “We need partnerships at EU level.”

Meanwhile, plastic pipe manufacturers said the EU should be encouraging innovation and efficiency that the industry is already employing through, for example, water reuse in buildings and conservation measures.

“I think maybe the European Commission does not even know that we are doing these types of things,” said Telgen of TEPPFA. “If they are put in either legislation or directives... so that either member states, municipalities or villages are – I wouldn’t say forced, but are being directed to these types of products – then definitely drinking water, rainwater, but also energy can be used in a much more efficient way.”

Europe urged to ‘radically transform’ water policy



The European Union needs to “radically transform” the way it manages water, energy and land to ensure the needs of the poorest people are met and the environment is protected, according to the new European Report on Development.

The flagship report, “Confronting scarcity: managing water, energy and land for inclusive and sustainable growth”, calls on the EU to adopt an integrated approach to managing the three elements to achieve universal access to water and energy, and sustainable food security.

An estimated 1 billion people are still undernourished, around 900 million have no access to safe water and 1.5 billion have no electricity. The demand for

water and energy is expected to rise by 40% by 2030 and by 50% for food. Badly managed or scarce resources tend to hit the poorest people hardest.

“Co-ordination failures between policies on water, energy and land need to be addressed to avoid the negative impacts of these interlinkages,” said the report, published 16 May, which aims to “shape global action” in the run-up to next month’s Rio+20 UN conference on sustainable development.

“A drop of water, a piece of land, or a kilojoule of renewable energy cannot be seen through the single lens of one sectoral policy or management system. What might appear to be an efficient policy in one

dimension can be harmful for others,” it said.

Achieving this joined-up approach will involve the public and private sectors, and the EU. The public sector would provide the regulatory and legal frameworks for change, including those that make for a more conducive environment for private sector investment, as well as some of the money.

The private sector should create more sustainable practices in accessing and consuming natural resources, while the EU will support poorer countries through aid and its wider development policy.

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Launching the report in Brussels, the European commissioner, Andris Piebalgs, said: "This report is particularly relevant and timely ahead of the UN Rio+20 conference and the international year for sustainable energy for all. Water, energy and land are crucial resources for development and human wellbeing, and scarcity cannot be overcome by piecemeal actions."

The annual report, compiled by the Overseas Development Institute, the European Centre for Development Policy Management and the German Development Institute, sets out ideas for governments, business and the EU to consider. To strengthen water security for poor communities,

for example, it suggests that national governments are supported to implement integrated water resources management programmes.

It calls for a significant reduction in the environmental footprint of consumption in developed countries – though not exclusively.

The report also urges governments to ensure land investments contribute to economic development and that deals are not at the expense of weakening ecosystems or people's livelihoods. It argues for strengthened land tenure to protect customary and collective rights.

Initiatives that protect the environment, such as halting deforestation, should be rewarded with payments, says the report, offering as an

example a scheme operating around Lake Naivasha in Kenya under which companies pay local smallholders who put their land to good use.

The sentiments of the report chime with an increased focus on joined-up approaches to the challenges of water, land, energy and food security. In March, the ministerial declaration from the World Water Forum called for a greater recognition of the links between water, food and energy in decision-making to improve the "sustainable management of these scarce resources".

In November, a report by the International Institute for Environment and Development made an explicit link between water and land. It said African governments were signing away water rights to land investors,

who want to profit from water fees and improved agricultural yields and revenues.

These "water grabs" show little regard for their impact on people, said the report. "Water managers must seriously consider the extent to which water rights should be linked to land in this way before setting a long-term precedent that could compromise sustainable and equitable supply to all users in the future," it said.

The report was issued two days after foreign ministers endorsed the European Commission's Agenda for Change policy, under which more money will be targeted towards the world's least developed countries and budget support will be made dependent on governments' human rights and governance

records.

The new agenda makes clear the EU's desire to see sustainable, inclusive growth and development, and to increase the involvement of the private sector, which includes allowing them access to development aid.

Critics have argued that the private sector role lacks clarity. "Will it be local firms in developing countries or foreign multinationals who get access to funds? EU countries need to make sure they don't divert essential aid support away from those most in need," said Olivier Consolo, director of the European NGO confederation Concord.

Last month, the EU pledged €50 billion to support clean energy projects in developing countries.

Industry chief: Pricing, policies should promote water efficiency

Having safe drinking water should be a basic human right, but consumers and governments also have a duty to set a price high enough to encourage efficiency, says Hans Telgen, who heads Europe's plastic pipe industry trade association TEPPFA.



Hans Telgen is president of the European Plastic Pipes and Fittings Association (TEPPFA). He was interviewed at a 10 May at a workshop on water efficiency by EurActiv's television affiliate, EUX.TV, and EurActiv Editor Frédéric Simon.

What do you see as the biggest challenge in the area of water efficiency?

There are two areas actually. There's drinking water and drinking water leakage, especially in the leakage of transportation pipes. Every cubic meter of drinking water that can be saved is something that we need definitely in

Europe, not just in Europe, but actually in the world. If you look at the pipe systems we are using nowadays, which are very old sometimes using traditional materials. With new materials available, we can reduce the leakage rate dramatically.

What do you think is the role of infrastructure in this whole debate?

The pipelines in themselves are infrastructure so ... you create infrastructure by laying these pipelines, new trenches, or renewing pipelines by the [modern] methodologies, so the infrastructure of plastic pipelines is what we are talking about.

Another area of infrastructure is also water elements where rainwater has been collected. I think collecting rain water and reusing that is something that we should do more and more, because rain water falls out of the air, it's virtually clean, so why not reuse it?

Our industry has many systems to reuse it. It can not be reused in every area, but for sure be reused for flushing toilets, but also making sure that ground water levels are secured because pumping up ground water for drinking water use definitely creates ground water level reduction. So with infiltration you could bring that ground water level up again.

If you could choose one policy to ensure water

efficiency, what would that be?

If you look to the policies that the European Commission has already started to implement, but are also developing with respect to energy-neutral buildings, I think our industry is very capable of supplying say [that] not just in terms of water, but also in terms of energy savings.

In Belgium, buildings have been build with big plastic pipes underneath the building itself and air is being circulated, and in summer the heat that is coming from the building itself is being put in the ground and in the wintertime it's still warm and [with] some heat recovery you could even heat the building. ... Public buildings are frequently being renewed, therefore if you could instal this type of energy recovery, that would be great.

But also we had a debate about the shower heads and taps. ... There is another thing in this respect. If you take a shower, there's hot water coming from you. We have [ways] in our industry that take the heat from the water in the sewer itself and it is then being reused again in the house itself. If you look to the internal heat of sewer water, we could recover 10% of that internal heat. Our industry is already developing products to regenerate that energy from the sewer.

So we are developing a lot in the industry. I think maybe the

European Commission does not even know that we are doing these types of things. If they are put it in either legislation or directives... so that either member states, municipalities or villages are - I wouldn't say forced, but are being directed to these types of products - then definitely drinking water, rain water, but also energy can be used in a much more efficient way.

Going back on pricing policies, the water framework directive that was talked about during the debate today, has got this requirement that all costs should be recovered. How does that apply to the pipe sector and what are your arguments for local authorities, or people involved with laying down these networks, about cost recovery issues and cost efficiency?

Well, there are actually two things. Costs associating with drinking water - which of course includes the installation of pipes and of course the production of drinking water is of course being put forward to the consumer. Nowadays there is a lot of subsidy coming from governments to make sure that every single inhabitant has water at a cheap level. If you look to the efficiency question, then if the price for water is low there's no drive for efficiency.

From one standpoint we

should increase the price for drinking water because that drives the need for reducing leakages and making sure that we definitely have the right quality of water. Every single member state at this moment has... not the same specification on drinking water. That means that definitely the price of that water is also varying per country. For me it's clear that if you are increasing the price, the leakage rate would go down. I think there is a one-on-one relation to that.

We heard some of the speakers during the debate today saying that drinking water is a human right. Is that something that you support?

Definitely. I think that a human being should have the availability of clean water.

How does that fit with the pricing issue? Isn't there a trade-off?

Well, there's a few things. If you have the right of having drinking water, and people are not able to afford that, then there should be a support. But that support should also be - I would say - dependent on the amount of leakages that you have. Because the cost of the water that is then being subsidised if you allow for leakages is too high. So there's always this trade-off I would say.

World Bank exec: 'Investment in water has been totally lagging'

Many of the water systems in major cities around the world, including in developed countries, have losses of 30-40%, says Lars H. Thunell of the World Bank's International Finance Corporation (IFC). And that's not viable, he insists, so we have to make sure we invest.



Lars H. Thunell is executive vice-president and CEO of the International Finance Corporation (IFC), a member of the World Bank Group. He spoke to EurActiv's editor Frédéric Simon.

The World Bank has consistently supported public-private partnerships in the water sector. But this policy has drawn criticism for putting profits ahead of people on access to safe drinking water and sanitation. What is your response to this?

First of all, I think water is a key part of the whole food-energy-water nexus. They all tie together and they are very interdependent.

And the fact of the matter is that people have just been using more and more water without really thinking about how we use it. And now we're getting to a point, where there is more and more water scarcity in the world, and we've got an enormous problem in front of us.

The other thing with water is that it's local. It's hard to move water around very much. You have to find the solution for water in the various water basins around the world.

With the population growing from 7-9 billion to maybe 10-11 billion by 2050, we really have a problem.

We've done studies together with McKinsey and the World

Economic Forum showing that the water gap can be closed but we can't only work on the supply side. We also have to work on the demand side.

Now, we also have to recognise that a certain amount of water every day is a human right. And that's a fact of life. But we should remember that only about 1.5% of all the water that is used is used for those purposes.

But we just can't let that fact – the need to have a certain amount of water at a very low price or free – to stop us from addressing the water issue in general.

You support having some sort of specific social tariff for water?

I like, for example, the South African model where they say that you get a certain amount of free water every day but if you want to use it for industrial purposes or filling a swimming pool or taking ten showers a day, you have to pay for it.

Is that a principle that you are promoting around all the projects that the IFC is supporting?

No, I think every government has to decide what type of model they want. What we can do is show different models and this is one I think which addresses both the problem of making sure that you've got water for the poor people who need it but also the fact that we are heading for a world of water scarcity.

Many countries are already there. The minister of Jordan has said they're already in the world of water scarcity. So we have to address the issue of water efficiency in industrial processes, we have to address it in agriculture because 70% of the water that is used is for agriculture.

But again it is different in different countries. China uses more water for industrial processes, India it is very much agriculture, South Africa is somewhere in between.

For you, is pricing is the key to getting there, to work on the demand side?

In a world where you have scarcity, you have to have a price on things. But you also have to

take the social dimension into consideration.

And in this case this means governments need to make sure that the people have their basic needs – that is their human right – enforced.

But it is also important that you don't waste the rest of the water.

So you do support the principle of water as a human right? That is something that the World Bank adheres to?

Absolutely! It's a convention that has been adopted by the UN and we follow that. But as I say, there is a lot of leeway and various governments have to decide on how they implement that policy.

But as a general statement of course we support it.

In developed countries – the United States, the UK – water prices have tended to increase dramatically over the past years, even up to 58% in Canada. Is it something that you see as a positive development or does that worry you in a way?

Well, one has to understand that that may create hardship for people and I have respect for that.

On the other hand we have to also conclude that investment in water has been totally lagging. Many of the water systems in the major cities around the world, including the developed world,

have losses of 30-40%. And that's not viable, we have to make sure that we invest.

There you have to find the right combination of both public sector investment and the private sector when that makes sense given that it seems that governments don't seem to have much money right now.

How can that negative effect on the population be cushioned, in developed countries as well?

As I said, the whole issue is you've got scarcity and there are only two ways to resolve it. One is either you have to start rationing, which isn't a very effective solution, which also has side effects. Or you've got to raise the price but you've got to do it in a socially responsible way.

More generally, and maybe you can differentiate between different regions, do you see private sector involvement as some sort of guarantee that infrastructure projects are going to go through and meet deadlines and costs?

No I don't think that's a guarantee. We are in a situation where the need for investment in water, whether it's on the supply side or water efficiency, are tremendous and are absolutely necessary to actually get the freshwater to the people. We have to remember that we have 2 billion people who actually don't have access in the poorest countries.

How that happens, I think every government, every country has to decide their combination of public sector water utilities and of the private sector.

But as you do that the fact of the matter is that we're going to have to less and less aid going forward for the poorer countries and governments don't have much money.

So one solution among several solutions is to involve the private sector. It is not the silver bullet. You have to keep the balances straight.

In Europe there's a growing trend it seems to stop water privatisation schemes and put it back in the public domain. We've seen that happening in Paris for example. How do you react to this trend? Is it gaining momentum?

I'm not familiar with the Paris situation. I don't have any opinions on why it's happening and how it's happening.

I know we have a project in Manila where half of the water for the city was privatised, and half was lost.

Now ten years later you can compare and see that the access for water has increased dramatically on the privatised side, so has the quality of the water and the amount of the investment. This has not happened for the publicly-owned utilities.

But there are other countries where privatisation has not worked.

Which ones?

If I remember correctly, in Argentina they re-nationalised the water.

And that was something that was the right decision in your view?

I have no opinions about that. That was their position.

Private management was not efficient?

I didn't say that. These are emotional and very political issues and one has to look in the individual cases. This was ten years ago before I got involved and I don't know the details, I just know they re-nationalised.



Seeber MEP: Improve water efficiency without price spikes

Austrian MEP Richard Seeber (European Peoples Party) says differences in regional needs and infrastructure make it difficult to have a one-size-fits-all approach to water efficiency.



Richard Seeber serves on the European Parliament's environment and regional development committees. He was interviewed at a 10 May workshop on water efficiency organised by Fondation EurActiv.

What do you see as the main challenge in the area of water efficiency?

Water efficiency is first a technical problem we have because with technical measures, I think we can raise quite easily the water efficiency in different sectors of water use.

We have to first target the big users like the energy sector - the whole cooling water issue - agriculture and industry.

From a political point of view, of course we have to create a proper framework, especially in the sense that we have a proper pricing system in place. Then I think the different sectors will act automatically and they will then choose the solution which fits them best.

I think it is not feasible from

a European point of view that we give them the technical solutions – they have to decide what they want. The industry has to provide that and a proper pricing framework could help them make the proper decisions.

If there was one policy you could choose to ensure water efficiency, what would that be?

I think we have to look at the different sectors. In the energy sector, of course I think there are technical solutions like the closed-cycle cooling system [and] in agriculture we have drip irrigation which is very efficient.

In industry there are various technical solutions for the different sectors. In the household sector I think efficiency is more focused on the pipe distribution system. There are huge differences between member states. If you look at Bulgaria, they have a leakage rate of around 50%, in comparison to Germany that has under 10%. So I think there as well we have to look at the different situations in the member states and help them improve their systems.

What is the role of infrastructure in this debate? What are the developments that need to be made?

I think infrastructure at the moment on a European level is mainly a financing problem. There are a lot of member states, even the rich member states, where finding a proper water distribution system and a proper sewage system is a challenge.

We have Article 9 of the

Water Framework Directive saying that we have this full cost recovery principle and the user-pays principle. But nevertheless if we implement that properly – having in mind that the Commission can come forward with an economic model on how we can do it – even if that model would be implemented, I would say water prices would rise dramatically.

And this is a political problem, a social problem, and I think there we have to find a solution. Maybe in the long run it could be possible, but at the moment I don't see a way to do it properly.

Do you believe member states should set a specific water savings target? Do you think that's a good idea, maybe at 'river basin' level?

I think we should first of all have proper data. Because at the moment, we don't know how much water is available in different river basins. So when we have the data, we can start the discussion about whether we should set targets.

I come from a country where we use only 2% of our water supplies, so I'm not sure if it is wise to set water efficiency targets. If you look at Malta, which has a water-stress situation, the situation is absolutely different. So I think we have to take a regional approach, and first of all collect the data, then have a proper discussion where we can come forward with ideas.

Should specific sectors - you mentioned energy and agriculture - adopt such targets? Is that desirable in your view?

EurActiv in an interview.

"One is either you have to start rationing, which isn't a very effective solution, which also has side effects. Or you've got to raise the price but you've got to do it in a socially responsible way."

Water as a human right

Whichever way you look at it, growing water stress around the

I think we have to bear in mind that nobody hinders them from having these targets on their own. I think it's a wise management decision if you improve your efficiency overall. And if you are a big water user, then increase your overall water-efficiency target as well. So it's a management decision.

The question is if we should from a European level impose such efficiency standards, having in mind that the situation regionally speaking and as well in the different sectors, is really totally different. I'm not sure if there's a one-size-fits-all efficiency target for a member state, for a region, or an industry. So the red tape in connection with that is so huge that at the moment I do not see really a proper solution for that.

You mentioned the specific problems of households and social issues. Should that be treated differently, and should the Commission rethink its approach on pricing, for example?

You know we have this general approach in Article 9 of the Water Framework Directive. As we have no proper model in place at the moment, I think the Commission is not starting infringement procedures concerning the implementation of Article 9 in the member states. Which means that it's up to the member states how they make their pricing policy.

And as you know, in the UN charter water is a human right, a fundamental right. We need water like we need air to breathe. And all ideas going in the direction that we raise water prices for drinking water is going

in the wrong direction. I think we need to help households to pay for their water bills, to have proper access to drinking water and wastewater treatment. And in this sense of course economic models can play a role.

But nevertheless the social factor is overarching and here I would really advocate that we help people to save water and not waste so much in the sewage system. I think with these measures we have the same effect as if we tried to raise the water prices, which is wrong.

By economic models, what do you mean?

I mean, for example, a model where you calculate how much costs the whole grid for a proper drinking water system, that you calculate how much energy you use, you calculate the resource itself, the sewage system, and then you divide it by the households and there's a figure. But I'm pretty sure that this figure is so high that it is politically impossible to impose it on households.

So it should be funded by public funding?

It is already funded by public funding! And it's a challenge especially for the new member countries where a very low percentage is connected to the sewage system. How can we fund that? I think this is a question that we all have to answer.

There is some European money on the table, but nevertheless we have to think here about models like private-public partnerships. Is there enough money available? I think this is one of the huge challenges of the future.

World Bank bets on 'socially responsible' water pricing

Making users pay for water should be part of any policymakers' toolkit to manage scarcity, says Lars H. Thunell of the World Bank's International Finance Corporation. But with safe drinking water now officially recognised as a human right, this has to be done in "a socially responsible way," he argues.

With the world population growing from 7 billion to around 10 billion by 2050,

water scarcity is fast becoming a top political concern for decision-makers around the globe.

"We really have a problem," said Lars H. Thunell, a Swedish national who was appointed in 2006 as executive vice-president of the International Finance Corporation (IFC), part of the World Bank Group.

"The whole issue is you've got scarcity and there are only two ways to resolve it," Thunell told

world means that policymakers will have to put a price on the scarce resource, the Swede says.

And since safe drinking water is now officially recognised as a fundamental human right by the United Nations, this means businesses and farmers will have to foot the bill.

"We have to recognise that a certain amount of water every day is a human right. And that's a fact of life. But we should remember that only about

1.5% of all the water that is used is used for those purposes," Thunell said.

The consequence is that pricing measures will have to be introduced to manage the remaining 98.5% of water resources that are used for other purposes – mainly agriculture, home and industrial purposes.

"In a world where you have scarcity, you have to have a

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price on things. But you also have to take the social dimension into consideration," said Thunell.

"I like, for example, the South African model where they say that you get a certain amount of free water every day but if you want to use it for industrial purposes or filling a swimming pool or taking ten showers a day, you have to pay for it."

No one-size fits all solution

However, Thunell insists there should be no one-size-fits-all solution. Because water cannot be moved around easily, solutions have to be found locally at the level of each "river basin".

This is precisely what the EU has tried to do with its Framework Water Directive. Adopted in 2000, the WFD for the first time introduced a model for water management based on 'river basins', or geographical areas, rather than on administrative or political boundaries. The directive provides that, for each river basin, a "river basin management plan" should be established and updated every six years by relevant national authorities working in co-operation.

One key aspect of the EU directive is a requirement for countries to introduce pricing policies. Those should aim at encouraging a more efficient use of water and recover the cost of essential services – such as the treatment of used waters and maintenance of pipe systems.

However, the way governments or private companies recover those costs is a highly political question that needs to be addressed at local level – including the social issues they raise.

"One has to understand that [water pricing] may create hardship for people," Thunell underlined. "On the other hand we have to also

conclude that investment in water [infrastructure] has been totally lagging. Many of the water systems in the major cities around the world, including the developed world, have losses of 30-40%. And that's not viable, we have to make sure that we invest."

Private-sector involvement

This is where Thunell believes investors such as the IFC have a role to play – by financing public-private partnerships on water infrastructure around the world.

With public development aid budgets squeezed by financial and economic crises, Thunell believes the IFC can help mobilise the necessary private funds to invest in water and sanitation infrastructure.

But he rejects suggestions that private water companies are a guarantee of good management. "No I don't think that's a guarantee," he said stressing that decisions on public or private ownership need to be taken locally.

The IFC's involvement in water projects in countries like the Philippines has proved controversial, with critics denouncing attempts to privatise water distribution in impoverished states.

Thunell himself accepted that some IFC-funded projects could have been more successful. "I know we have a project in Manila where half of the water for the city was privatised, and half was lost."

But he says this should not be a reason to dismiss private-sector involvement altogether.

"One solution among several solutions is to involve the private sector," Thunell says. "It is not the silver bullet," he insists, "you have to keep the balances straight."

"These are emotional and very political issues and one has to look in the individual cases."

Firms scramble to boost water-saving culture

From pet food manufacturing to wastewater treatment, companies show no lack of imagination when it comes to improving water efficiency at this year's annual Green Week event in Brussels.

The world faces a significant freshwater shortfall within a generation without advances in productivity, whether it involves repairing home leaks or finding ways to slash waste in manufacturing.

That is the assessment of water experts at the McKinsey research firm, which projects a 40% global freshwater shortfall in two decades unless sweeping measures are taken to improve agricultural, industrial and home efficiency.

Driven by rising costs and fears of future shortfalls, some companies are pressing ahead with innovations to improve efficiency.

According to a European Commission-backed study, the EU could improve its water efficiency by nearly 40% with technological improvements alone.

Companies are also being urged into action by policymakers, who are tempted to regulate water usage by industry and agriculture in the face of growing water scarcity.

Water-efficient pet food

One effort – backed by European Union funding – involves radically reducing waste in the water-intensive process of sterilising petfood. A pilot project of the Mars food and confection company's petcare division has shown that new techniques in batch sterilisation of food slashes water use.

They company plans to expand methods tested in Germany to plants in Britain, France and Lithuania.

"This involves a big consumption of potable water and of course in Western Europe, this consumption is expensive as well," Thomas Gaartz, a senior engineer at Mars' Verden plant in northern Germany, told EurActiv by telephone.

Thermal sterilisation of pet-food containers requires temperatures in excess of 120 degrees Celsius. Traditionally, freshwater was used for each batch and the used liquid discharged into the sewerage system.

Mars' conservation – or 'reco-water' technique – uses ultraviolet light to purify wastewater and to return it for use in sterilisation chambers, Gaartz said. Recycling

has cut wastewater discharge by 95%, yielding savings in water consumption and treatment of some €300,000 annually at the Verden operation.

The research has been funded by the EU's Competitiveness and Innovation Framework Programme, a €200-million 2008-2013 fund to promote technology and efficiency in manufacturing.

Corporate conservation plans

Like Mars, Dow Chemical is tapping its own water treatment and purification technologies to invest in making its chemical, plastics and other operations more resource efficient.

"Sustainability and profitability are not in opposition," Ilham Kadri, the Dubai-based general manager of advanced materials for Dow, told EurActiv ahead of a speech during the EU's Green Week activities in Brussels. "Water management is not only economical, it is about security of supply."

Dow says it has slashed consumption of public water at one of the US corporation's largest industrial complexes, at Terneuzen in the Netherlands, by collecting wastewater from nearby communities, treating it and using for manufacturing.

Kadri says other petrochemical companies are interested in the process and Dow is transferring the concept to plants in Spain, China and eventually other areas.

The project – the result of co-operation between the local government and the company – is a model of public-private cooperation that could work elsewhere in Europe, the Dow executive contends.

"It's Green Week and I will be bringing a blue message" to EU organisers of the annual event, which this year focuses on water conservation, Kadri said. She added that policymakers in Brussels should promote public-private partnerships in conservation, especially in times of tight financing and government austerity.

Water recycling has an added benefit – reduced treatment needs at Terneuzen cut energy use for water purification by 65%, the company says. Similarly, Gaartz said the Mars sterilisation technique has cut energy use through lower demand for wastewater treatment.

Drinks that need less water

Other companies are being driven by concerns about resource security and cost competitiveness to conserve water – from fixing leaky toilets to reusing manufacturing water for cleaning or watering landscape.

Coca-Cola Europe aims to cut water use 20% through technology and conservation measures. A Coke is 96% water, and the company uses 294 million cubic meters of freshwater each year, three times the amount consumed by the city of London, according to the corporation's environmental responsibility programme.

The soft-drink manufacturer is one of several corporations that have joined the European Water Stewardship Programme, launched in 2010 by the Brussels-based European Water Partnership to promote conservation and efficiency.

The McKinsey study has warned that at current consumption levels, agricultural demand alone could exceed available sources of sustainable ground and surface supplies by 2030, a period coinciding with rising food and domestic demand. Today's emerging markets and developing countries face the largest gap between human needs and available water.

The study – 'Charting our water future' – was released last year during Green Week in Brussels. Addressing water gaps is also part of this year's Green Week which ends on Friday.

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