



European
Commission

A Water Blueprint for Europe

Environment

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"The trouble with water is that they're not making any more of it."

Marq de Villiers: 'Water: The Fate of our Most Precious Resource'

Foreword

by Janez Potočnik, EU Environment Commissioner



EU water policy has successfully contributed to water protection over the past three decades. However, in many regions in Europe, this precious resource is coming under increasing pressure, in particular from economic activities. We need to make sure that EU legislation is fit to respond to these new challenges.

This is why the Blueprint to Safeguard Europe's Water Resources, presented by the Commission in November 2012, reiterates the need to place the management of Europe's water resources into a wider perspective, addressing all users of water as well as water's interactions with other resources, such as land and energy. If not sustainably managed, water use may exceed the carrying capacity of our environment, thereby damaging or destroying aquatic ecosystems, while having negative impacts on human health. This is why it is important that all sectors that use water resources, such as industry, agriculture, tourism, urban development and energy production, are sustainably managed. It is only by working across

these sectors that we can ensure the availability of good-quality water for present and future generations. This goal is already enshrined in the EU Water Framework Directive adopted in 2000. The Water Blueprint facilitates its implementation by identifying remaining obstacles and ways to overcome them.

The Blueprint proposal, which has been endorsed by EU Member States in their conclusions of December 2012, is now reflected in the Work Programme of the Common Implementation Strategy under the Water Framework Directive. This is an open and participatory process in which the Commission, Member States and stakeholders work together to improve the implementation of EU water policy.

The Blueprint has set the EU water policy agenda for the years to come. It is now time to work together at all levels to ensure better implementation, increase policy integration and close remaining policy gaps.

A handwritten signature in black ink, reading "Janez Potočnik". The signature is written in a cursive, flowing style with a long horizontal line extending to the right.



Why does Europe need to take action?

Water is the source of life. Both human activities and the natural world depend on it, and in recent years we have become increasingly aware of the need to protect it. To make sure that enough good-quality water is available in the long term, at the beginning of the millennium the EU adopted ground-breaking legislation, the Water Framework Directive (WFD), aiming to achieve 'good status' for all Europe's waters by 2015.

But water is still under growing pressure from domestic demand, economic activities, urban development and climate change. It is dammed to generate energy, polluted by chemicals, hemmed in by flood protection barriers, and drained off for irrigation and farmland. Assessments conducted by the European Commission and the European Environment Agency (EEA) show a number of problems:

- ◆ Unless stronger action is taken, 47% of EU surface water will not meet good ecological status by the 2015 deadline;
- ◆ There is a lot of uncertainty related to the chemical status of surface waters due to information gaps;
- ◆ About 25 % of groundwater is still expected to suffer from poor chemical status in 2015;
- ◆ 60 % of European cities over-exploit their groundwater resources and 50% of wetlands are endangered.

Sixty per cent of the EU's territory lies in trans-boundary river basins. The hydrological cycles are so interconnected that land use in one country

can affect precipitation beyond its borders. Moreover, the European market, EU common policies and Member State policies all have significant impacts on water status. Therefore, action at EU level is needed to face the water challenges of the 21st century.

The EU Water Framework Directive: a timetable for progress

The 2000 WFD is one of the most comprehensive and ambitious pieces of EU environmental legislation. Its main objective is to achieve 'good status' for all EU waters, including fresh, transitional (river mouths) and coastal waters, by 2015.

The WFD is complemented by a number of other laws governing specific aspects of water policy which all contribute to achieving good status. These include urban waste water, nitrates, industrial emissions, pesticides, bathing and drinking water.

Under the WFD, water management is organised through a network of river basins, many of which cross frontiers between Member States. For example, the Danube international river basin district is the largest in Europe, touching on ten Member States and nine neighbouring countries.

The WFD sets out a clear timetable for implementation, based on six-year management cycles. Member States were required to draw up River Basin Management Plans by 2009 and will need to update them in 2015. Public consultation and participation in the development of the plans is obligatory.

In 2012, the Commission published its implementation report, assessing all the plans that Member States have delivered.

Water quality or water quantity?

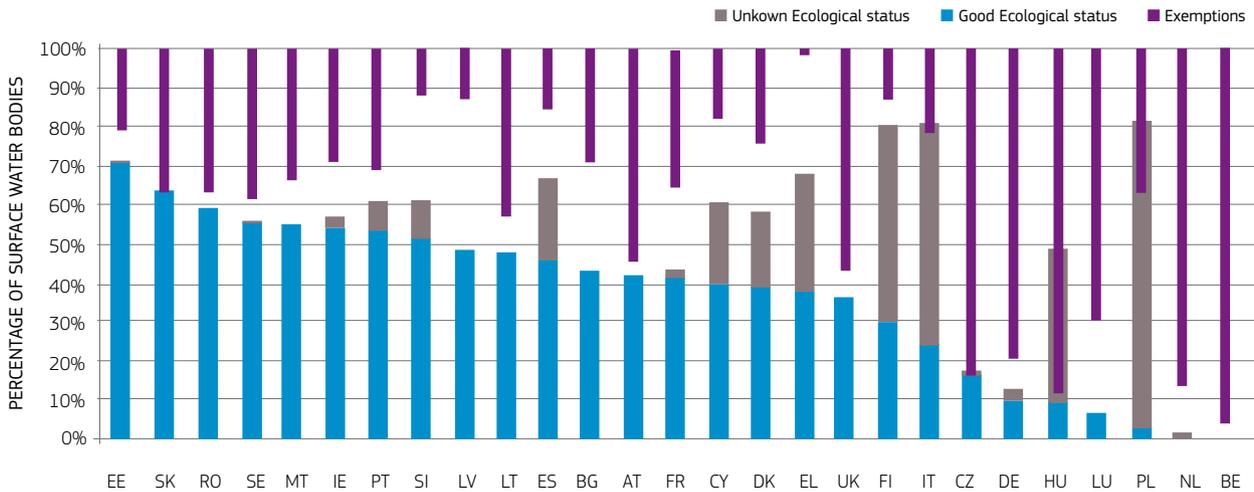
Water quality and quantity are intrinsically linked as they depend on each other. Good water status not only means controlling pollution, but also involves guaranteeing ecological water flow, so that ecosystems can continue to function and provide their essential services. These ecosystem services are of enormous value. For example, wetlands purify water and absorb carbon.

Water also plays an important role in controlling climate and weather patterns around the globe. The EEA estimates that it would cost EUR 2.5 billion a year to do the same job artificially!

River Basin Management Plan (RBMP) assessment (November 2012)

The Commission's latest WFD implementation report found that too many Member States were awarding individual bodies of water 'exemptions' from the 2015 deadline, and this reflected a "lack of ambition". Exemptions often lacked transparent criteria to justify them.

Water status according to the EU Member States' RBMPs, assessed by the Commission – Ecological Status of Surface Water Bodies





“We need to really step up our action a lot in order to get close to the WFD goal. We may be some way from achieving it, but it can be done by working together at all levels.”

Janez Potočnik, European Commissioner for the Environment

According to the WFD, the status of surface waters has two aspects: ecological and chemical. Both play a role in achieving overall good status.

Ecological status indicates the health of ecosystems, measuring aquatic plant life and fish, the presence of nutrients, salinity, pollution and water temperature. It also takes account of morphological features like water flow and depth, and the structure of river beds.

Chemical status is judged by the presence of specific chemicals in water, biota and sediment. Many of these substances are known to be harmful and are controlled by other EU legislation such as REACH¹, and plant protection products and biocides regulations.

Currently, 45 substances have been identified as ‘priority substances’ under water legislation requiring control measures or the phasing-out of emissions, discharges and losses over a 20-year period.

For groundwater, the two aspects taken into consideration are quantitative and chemical status.

1) The EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. It entered into force on 1 June 2007.



What is the Blueprint?

The **Blueprint to safeguard Europe's water resources** sets out to strengthen and fill the gaps in EU water policy, so as to make a real impact right across Europe. It draws on a wealth of research and information, including the RBMPs assessment report, and the European Environment Agency (EEA) State of Water report, as well as a review of policy on water scarcity and drought. Such detailed information has never been available in the past.

The Blueprint proposals, published in November 2012, emerge from a collective effort of consultation and preparation involving the European Parliament, Member States, water suppliers and users in industry, scientists, NGOs and the general public.

It aims to ensure sustainable water use, taking into account the needs of both people and the natural ecosystems they depend on.

“We forget that the water cycle and the life cycle are one.”

Jacques Cousteau

It does not seek to impose a 'one-size-fits-all' solution on every Member State. Aquatic environments differ considerably across Europe. Instead it emphasises key themes such as land use, pollution, water efficiency and resilience, and governance.

The success of the Blueprint will depend on Member States' willingness to take action, and to involve national and local stakeholders. The Commission will make its own contribution by monitoring progress, helping to develop implementation tools and enforcing EU water law.





‘Something better’: the Blueprint proposals for improving implementation of the law

With the key legislation in place, more effort is needed to make sure it delivers the hoped-for results. The Blueprint sets out specific responsibilities and clear timetables for meeting targets.

The Commission will pay particular attention to enforcing WFD monitoring requirements. Member States should extend nitrate-vulnerable zones and reinforce action programmes under the Nitrates Directive. Together with the Commission, they should prepare implementation plans for the Urban Wastewater Treatment Directive by 2014, and improve compliance rates for wastewater treatment by 2018, through long-term investment planning (including EU funding and European Investment Bank loans). As of 2016, under the Industrial Emissions Directive, Member States should also ensure that emissions permits impose Emission Limit Values (ELVs) in line with Best Available Techniques (BAT) and take account of relevant water objectives.

Water accounts and ecological flow

Managing water is a bit like managing a budget. Just as you need to count the money you have before you can decide how to spend it, we need to know how much water is available in order to distribute it sustainably – and that means leaving enough for nature to survive comfortably. Unfortunately, this knowledge is lacking in many parts of Europe. ‘Water accounts’ are the missing link, so the EU has been working with the EEA to

develop a system for calculating water balances and measuring ecological flows in river basin and sub-catchment areas. The aim is to collect more data and create a common understanding of ecological flow.

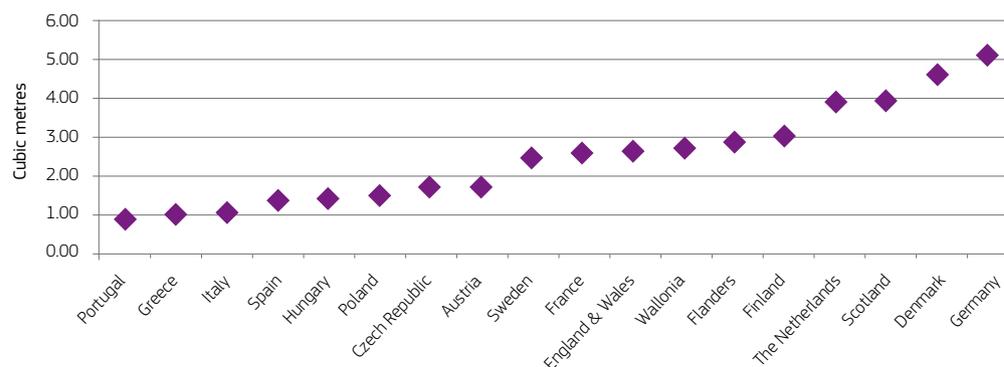
Target setting

The Blueprint proposes that river basin authorities should develop water efficiency targets, taking into account the water stress indicators developed under the WFD Common Implementation Strategy (CIS). This is an open, collaborative process involving national authorities, NGOs and businesses. Targets should cover all water users, including industry, agriculture and households, and should be linked to achieving the good status objective. In order to ensure consistency across Europe, the Commission will develop – together with Member States and stakeholders – a common EU methodology for setting water efficiency targets.

Water pricing

Water pricing – included in the WFD – has to be realistic and take account of environmental costs, but at present, in many cases, it is not working. It should be an incentive for domestic consumers, farmers and businesses to use water more carefully; but for that to happen, Europe needs adequate pricing levels based on water-metering. The EU wants to put in place a common methodology for cost-recovery calculation, which would take account of the polluter pays principle.

Examples of the cost of water (in EUR) per cubic metre, in EU Member States (residential/domestic water prices)



Water trading

Another implementation tool proposed in the Blueprint is water trading: buying and selling water access rights. Administrative costs are relatively high, and the scheme would probably only be cost-effective at river basin level, not as an EU-wide initiative. However, it could help to counter water stress and improve efficiency, and the Commission proposes to develop CIS guidance for Member States that wish to take up this option.

Plugging the leaks

Leakage rates vary enormously between and within Member States. But in some places, as much as 50% of water resources are being lost before they reach the tap. The Commission believes that a case-by-case approach is necessary to evaluate the environmental and economic

benefits of cutting leakage. The water industry will play an essential role in developing and spreading examples of best practice in Sustainable Economic Leakage Levels (SELL), and in agreeing a strategic vision for water infrastructure in a world of climate change and ever-scarcer resources.

Drought observatory

Water scarcity and drought have become growing problems in many parts of Europe over the last 30 years, costing hundreds of billions of euros. Governments need data and indicators in order to set up efficient early-warning systems. The Commission's Joint Research Centre has launched a European Drought Observatory to monitor developments and publish online forecasts while encouraging Member States to factor drought risk into their RBMPs.

Satellite technology

Member States' ability to control and allocate their own resources is undermined by illegal abstraction. Satellite mapping of river basins offers new opportunities for putting an end to what amounts to the theft of water. The Global Monitoring for Environment and Security programme (GMES/COPERNICUS) can help Member States to identify irrigated zones that fail to match legal water-use permits.

Europe is an active partner in building the Global Earth Observation System of Systems (GEOSS), which will gather and share comprehensive, long-term observation data on the water cycle, including precipitation, snow cover, evaporation and water use, permitting better management of resources.

Innovation through Partnership

Europe needs to seize opportunities for innovation. The EU currently holds 30% of the world market in water services, but competition is fierce in a sector expected to be worth 1 trillion euros by 2020, and to double in size by 2030.

In 2012, the Commission launched a European Innovation Partnership (EIP) on Water and one on Agricultural Productivity and Sustainability, designed to encourage private investment and get good ideas on to the market. An increase of just 1% in the rate of growth of Europe's water industry could generate 10 000-20 000 new jobs. The Partnership will help develop networks and facilitate the spread of innovative solutions to water challenges, including by means of web platforms, with the aim of making Europe a global market leader in water-related innovation and technology.

“I have been inspired by the way in which so many different stakeholders have participated in the development of the European Innovation Partnership on Water through the various public consultations and discussions.”

Janez Potočnik, European Commissioner for the Environment





‘Something more’: water should flow through all areas of EU policy-making

Many EU policy areas have an impact on water status and need to make water policy objectives an integral part of their planning. They include agriculture, fisheries, energy, disaster management, transport, and funding policies.

Agriculture

Water management needs to play a key role in the EU’s common agricultural policy (CAP), and farmers must comply with water policy. Agriculture accounts for 24% of water abstraction in Europe, and only about one-third of this goes back into the environment, so it is a crucial sector. The Commission’s proposals for CAP reform would favour the take-up of measures that protect water resources (e.g. crop diversification and the identification of areas excluded from cultivation) while also providing funding to promote more efficient irrigation, if coupled with cuts in water consumption, in line with the WFD objectives.

The EU’s cross-compliance mechanism, which forms part of the CAP and makes direct payments to farmers conditional upon the application of environmental, animal and plant health standards, could also be expanded to include some requirements from the WFD and the Directive on Sustainable Use of Pesticides. This could be a powerful incentive, at farm level, to reduce pressures on water.

“We must act to include water policy objectives much more into other policies.”

*Janez Potočnik,
European Commissioner for the Environment*

Green infrastructure and natural water-retention measures

The Blueprint calls for action to mitigate the impact of flood controls, energy generation, navigation and agriculture by preserving or restoring – also with EU support – natural green infrastructures, such as flood plains, wetlands and buffer strips along river banks. These help to store water, prevent soil erosion and provide a stable environment for biodiversity and ecosystems, in turn supporting the objectives of the EU’s Biodiversity Strategy.

Where hydropower or navigation structures, such as dams or locks, interrupt natural water courses, fish passes and lifts should be put in place to enable migrating fish to breed. Reducing soil sealing and preserving small bodies of water, like fish ponds, also contributes to the prevention of flooding and erosion.

Cohesion and Structural Funds

The Blueprint highlights the importance of funding water-management projects, including natural water-retention measures, water reuse and leakage reduction, through the EU Cohesion and Structural Funds (CSF), and European Investment Bank loans. It recalls the Commission’s proposal that Member States should first put their RBMPs in place and introduce pricing policies, before they can access support for water projects under the CSF. Moreover, new water-supply infrastructure should only be developed as a last resort, once other efforts to reduce demand and maximise efficiency have been exhausted.



‘Something new’: plugging the gaps

The EU's legislation on water is already extensive and well developed. But the Blueprint also identifies areas where more work is needed. To this end, it focuses on two main issues:

Water efficiency in buildings and the Ecodesign Directive

Through the Ecodesign Directive, the Commission is seeking ways to make products more water- and energy-efficient. The aim is not only to save water, but also to develop new technologies that will generate jobs and growth. In December 2012, the Commission published the Ecodesign working plan for 2012-2014, covering an extended list of 12 priority product groups, including water-related products (such as taps, showers and toilets), for which eco-design standards or other measures could be developed.

This option offers several advantages: it is straightforward for consumers who will in future find on the market only more efficient water devices and products, clearly labelled on the basis of their performance. It is based on a progressive approach, as it does not require retrofitting existing buildings, but gradually replacing old products with more efficient ones. It will yield considerable energy savings as a large proportion of the water households consume is heated. Energy savings estimated for taps and showers are equivalent to 10.75 Mtoe in 2020 and around twice that in 2030. These savings are in turn equivalent to around 3.5% of total residential energy use, or around 1% of total energy use, in the EU-27.

Furthermore, to foster water efficiency in construction, the Commission decided to develop voluntary EU Ecolabel and Green Public Procurement criteria for building materials and products.

Water reuse: EU quality standards

The Commission is also examining options for water reuse: recycling the outflow from wastewater treatment or industrial installations for irrigation or industrial use. This has a relatively low environmental impact (compared with desalination or water transfer), and yet is not common in the EU. Among the obstacles are the absence of common EU environmental and health standards for reused water, and potential barriers to the free movement of agricultural products grown in this way, such as consumer or farmer resistance.

By 2015, the Commission plans to propose EU-wide measures to encourage water reuse. It is considering all options including a regulation on common standards. This would help to allay public fears about health risks from eating food crops irrigated with reused water, and could go a long way towards easing pressure in water-stressed areas.



Cross-cutting measures: more knowledge...

The Blueprint aims to strengthen the knowledge base for decision-making. The Water Information System for Europe (WISE) is already an impressive resource, but sometimes information is scattered and not easily accessible to policy-makers. Therefore, the Commission proposes that WISE be better linked and fully interoperable with national databases, helping to build a comprehensive picture of aquatic ecosystems.

The Commission also plans to harmonise reporting cycles under different water directives and facilitate access to key statistics, all with a view to strengthening the link between science and policy-making.

New research developments under the research programmes FP7 and Horizon 2020 will contribute to a better understanding of how our water ecosystems function.

... and the right tools

The EU Joint Research Centre is developing a hydro-economic model to facilitate impact assessment and allow water managers to calculate the cost-effectiveness of measures in their RBMPs.

The Blueprint proposes a simple, voluntary peer-review system to improve the governance of water management. River basin district authorities would share their draft RBMPs with others, allowing for an exchange of good ideas and boosting the quality of plans overall. The Commission will be available to give advice.

To tackle problems like over-allocation and illegal abstraction, the Commission also proposes working with Member States to promote compliance and to establish more effective inspection regimes.

What about economic recovery?

The Water Blueprint stresses that water management is not just about environmental protection, health and well-being. It influences growth and prosperity, too. EU water policy objectives and measures also help to ensure that Europe's water industry can develop and fulfil its potential, and that all the other economic sectors that depend on the availability and quality of water can prosper, generating growth and job opportunities.

In Europe, there are 9000 small and medium-sized enterprises, providing 600000 jobs in water utilities. Other water-related sectors offer the potential for green growth, including in water-using industries and technology development.

Europe needs to harness green growth and become more resource-efficient in order to make a sustainable recovery from the economic crisis and adapt to future climate change.

The Blueprint is closely linked to the EU's 2020 strategy and is the 'water milestone' on the 2011 Resource Efficiency Roadmap. Its objectives support all three strands of the strategy: smart, sustainable and inclusive growth. Resource efficiency needs to form an integral part of EU economic policy within the European Semester governance structure, helping to avoid, for example, unnecessary public subsidies. Therefore, the Commission will look into water-related aspects in the Annual Growth Survey and into country-specific recommendations, where appropriate, for individual Member States, in the framework of the European Semester process.



Water worldwide

The Blueprint focuses mainly on protecting Europe's waters. But water is also a global concern, regardless of frontiers, and closely linked to other problems, such as food security, desertification, climate change and natural and man-made disasters.

The Blueprint reiterates the EU's commitments under international accords such as Agenda 21, the Rio Conventions on desertification, climate change and biodiversity, and the Millennium Development Goals (MDGs), as well as last year's United Nations Rio+20 conference.

In 2010, the UN declared access to safe drinking water and basic sanitation services to be a human right, and the 2012 Rio+20 Declaration reaffirmed this right.

The global community has met the 2015 MDG target of halving the proportion of people without sustainable access to safe drinking water – but

this has not resolved drinking water access problems in many African countries – and 2.5 billion people worldwide still lack adequate sanitation.

Population growth and other factors will increase global water demand by 35-60% by 2025, with potentially serious implications worldwide.

The Blueprint proposes that EU development co-operation on water should continue to prioritise access to safe drinking water and sanitation, sustainable agricultural and improving water governance through integrated water resources management (IWRM) at river-basin level, to foster peace and political stability.

“When the well's dry, we know the worth of water.”

Benjamin Franklin, US statesman (1706-1790)

Reaching the people

Good communication is vital to the Blueprint proposals: the Commission is currently conducting an awareness-raising campaign to encourage water users to behave responsibly and sustainably.²

2) See <http://www.generationawake.eu/>



What next?

The Water Blueprint has set out what needs to be done to safeguard Europe's waters over the coming years. Successful implementation of these measures will depend to a large extent on the commitment of Member States and stakeholders, and on the WFD CIS.

The Commission has pledged to monitor this process through an updated scoreboard. If voluntary approaches turn out to be inadequate, it will consider amending the WFD, by 2019, to introduce additional legal obligations.

An overview of the Blueprint proposals

Blueprint objectives	Proposed measures
Efficiency incentive water pricing (including cost-recovery)	CIS guidance + EU enforcement of current regulation + precondition under CSF as of 2014
Water-use reduction in agriculture	Precondition for some irrigation projects (rural development) as of 2014
Reduction of illegal abstraction/impoundments	National enforcement (relying also on satellite technology) Reinforcing inspections Cross-compliance under the CAP
Awareness of water consumption	Awareness campaigns Labelling and certification schemes
Use of natural water-retention measures (green infrastructure), also to reduce drought and flood risk	CIS guidance + EU funding (CAP and CSF) as of 2014
Efficient water appliances in buildings	Ecodesign, Ecolabel, green public procurement
Reduction of leakages	Best practice + EU funding
Water reuse	(Possible) regulation in 2015 + EU funding as of 2014

Improvement of governance	Peer reviews as of 2014
Implementation of water accounts/ecological flow. Application of target setting	CIS guidance by 2014
Reduction of flood risk	EU enforcement of current regulation
Reduction of drought risk	EU enforcement of current regulation, European Drought Observatory
Better calculation of costs and benefits (together with water pricing)	CIS guidance
Better knowledge base	Interoperability of databases (WISE) by 2015 + adjustment to reporting and statistical requirements under EU law
Support to developing countries	EU funding
Tackling pollution	Enforcement of current regulation + cross-compliance for the WFD
Cross-cutting	Innovation Partnerships, EU Semester recommendations, EU funds

Further reading and links

European Commission DG Environment: http://ec.europa.eu/environment/water/index_en.htm

Water Blueprint: http://ec.europa.eu/environment/water/blueprint/index_en.htm

WFD facts and figures: http://ec.europa.eu/environment/water/water-framework/facts_figures/index_en.htm

Water Information System for Europe (WISE): <http://water.europa.eu/>

European Innovation Partnership on water: <http://ec.europa.eu/environment/water/innovationpartnership/>

European Environment Agency: <http://www.eea.europa.eu/publications/european-waters-synthesis-2012>

Joint Research Centre: <http://ec.europa.eu/dgs/jrc/index.cfm?id=10>

Horizon 2020: http://ec.europa.eu/research/horizon2020/index_en.cfm

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